

Appendix RF Test Data for 2.4G WIFI

Company: : LiveX AI Inc

EUT : Holographic AI Avatar Interactive Display

FCC ID: : 2BV7X-GATEWAY

Model Number : Gateway

Report No. : HTT202604852F01

Reviewed By : Heber He

1. Duty Cycle

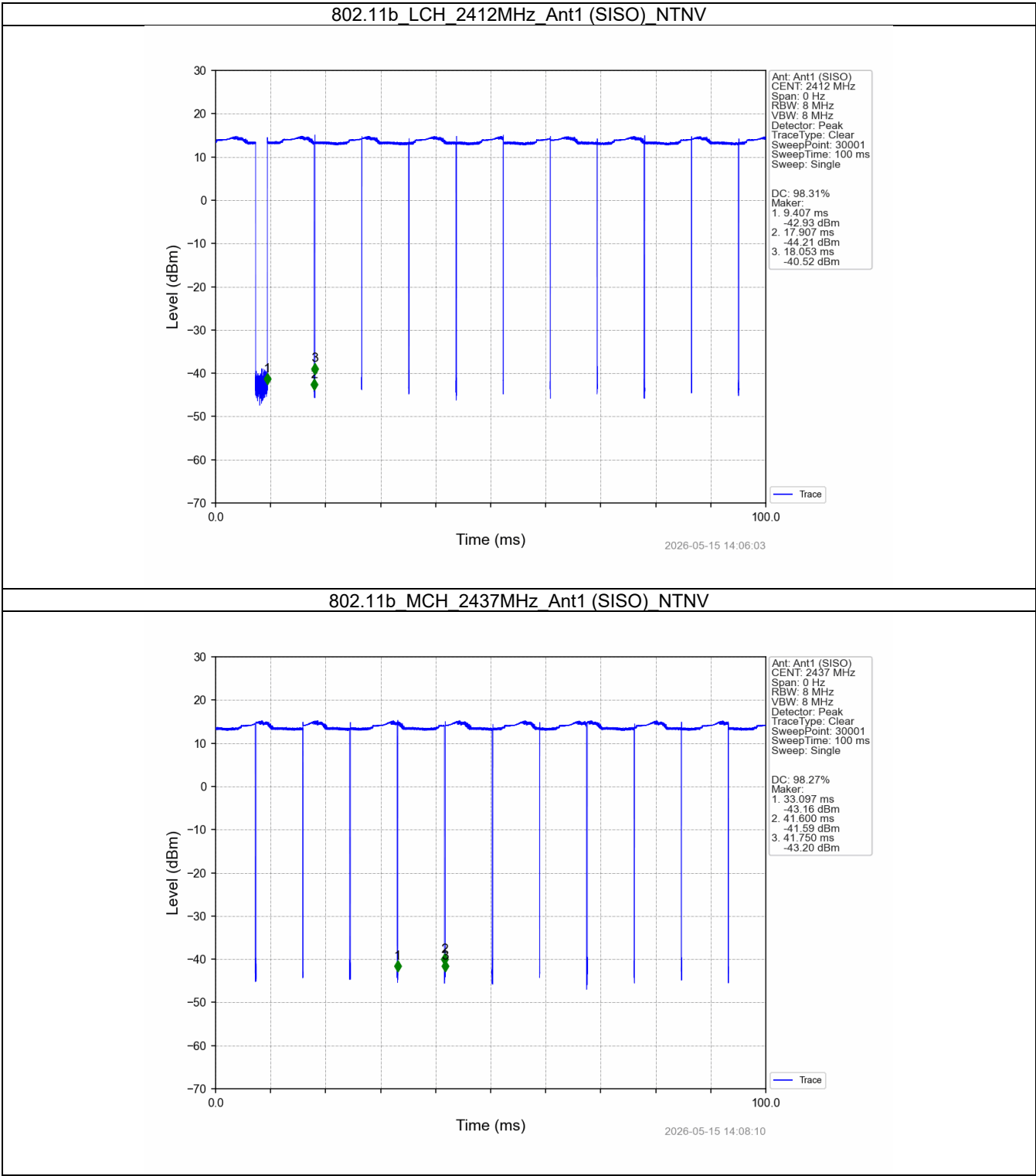
1.1 Test Result

1.1.1 Ant1

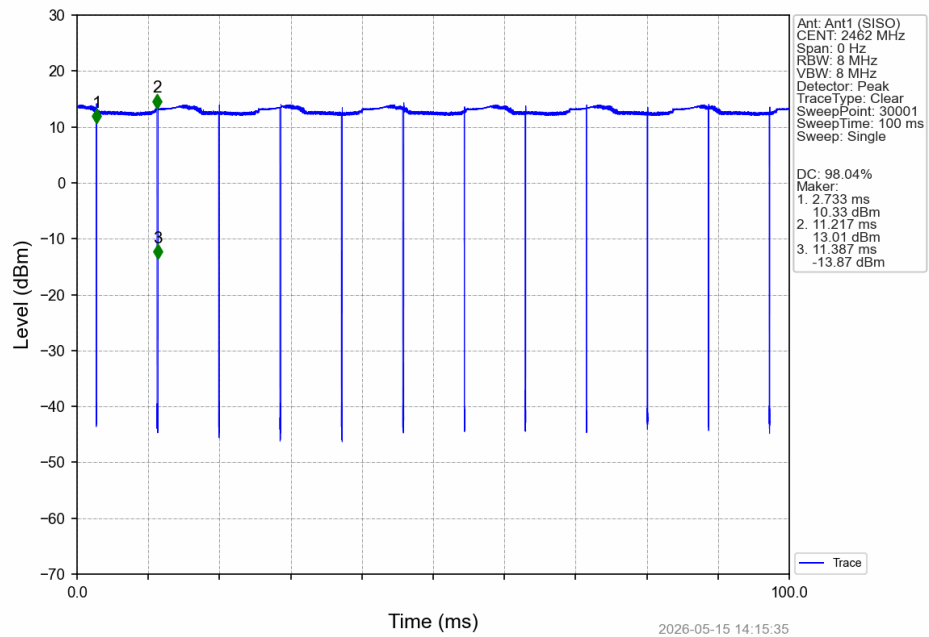
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.500	8.646	98.31	0.07	1.46
		2437	8.503	8.653	98.27	0.08	1.62
		2462	8.484	8.654	98.04	0.09	1.34
802.11g	SISO	2412	1.410	7.648	18.44	7.34	61.69
		2437	1.410	1.665	84.68	0.72	0.03
		2462	1.410	1.581	89.18	0.50	7.77
802.11n (HT20)	SISO	2412	1.317	1.568	83.99	0.76	0.03
		2437	1.318	1.568	84.06	0.75	0.00
		2462	1.318	1.857	70.97	1.49	13.06
802.11n (HT40)	SISO	2422	0.653	1.920	34.01	4.68	8.55
		2437	0.653	1.824	35.80	4.46	8.58
		2452	0.654	2.129	30.72	5.13	12.30

1.2 Test Graph

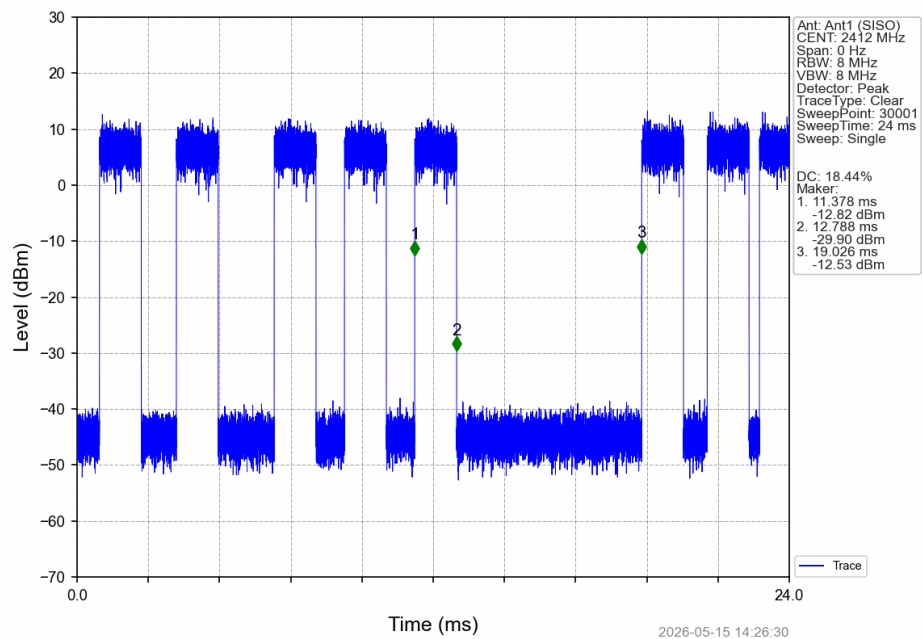
1.2.1 Ant1



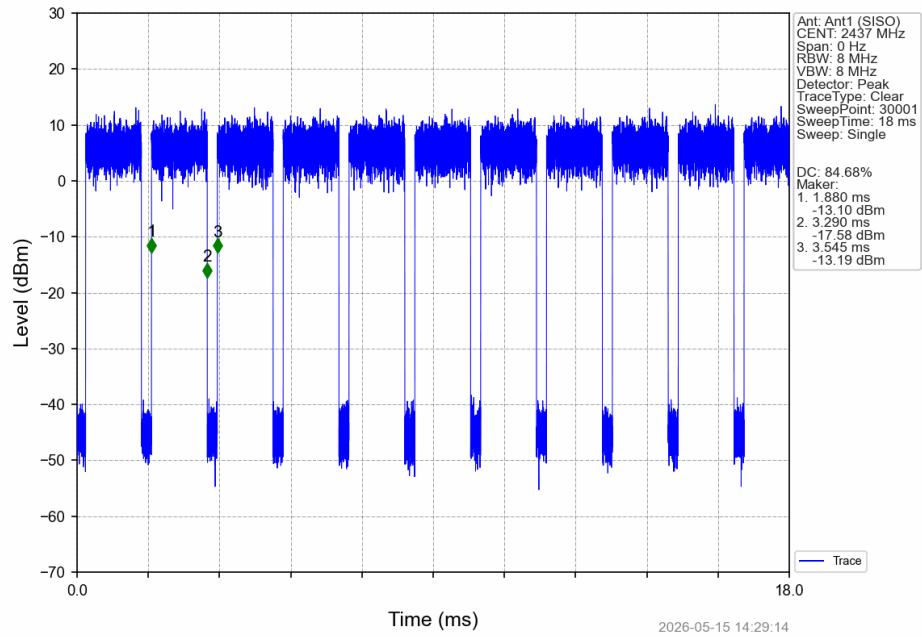
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



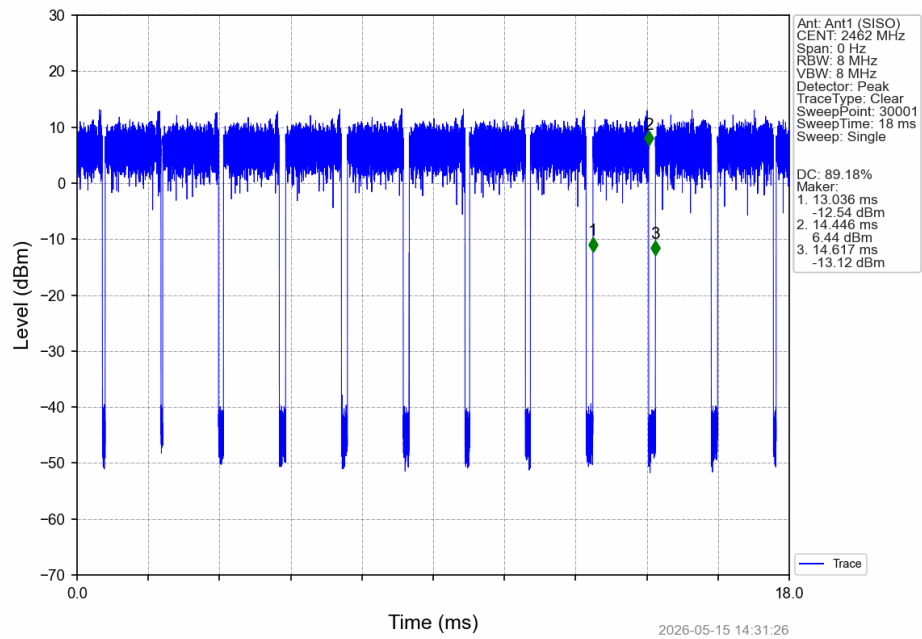
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



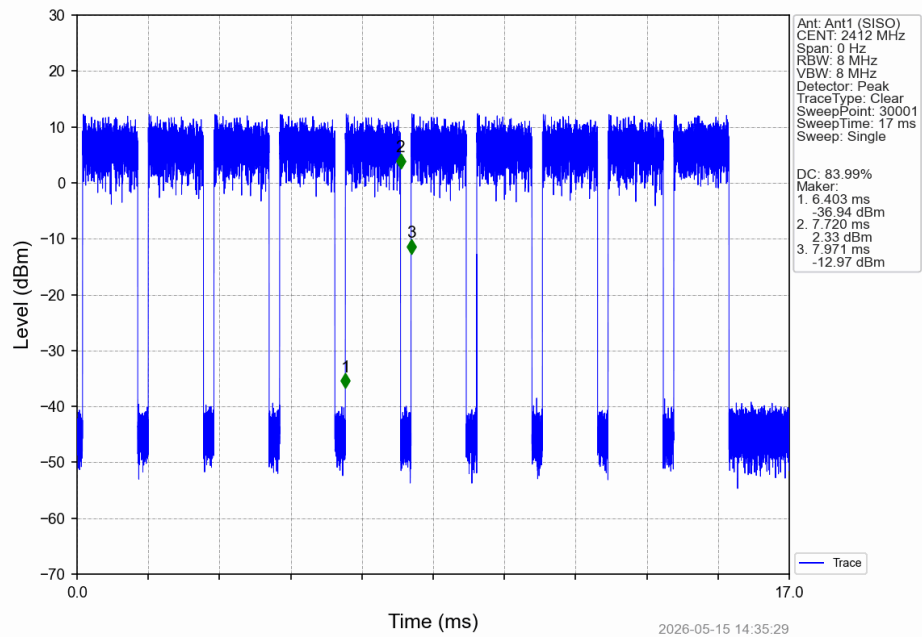
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



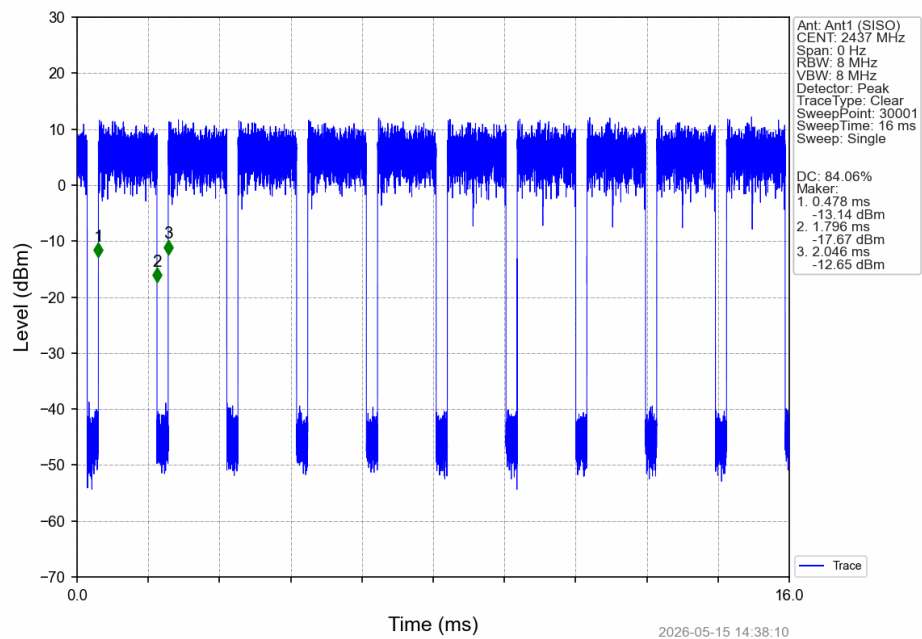
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



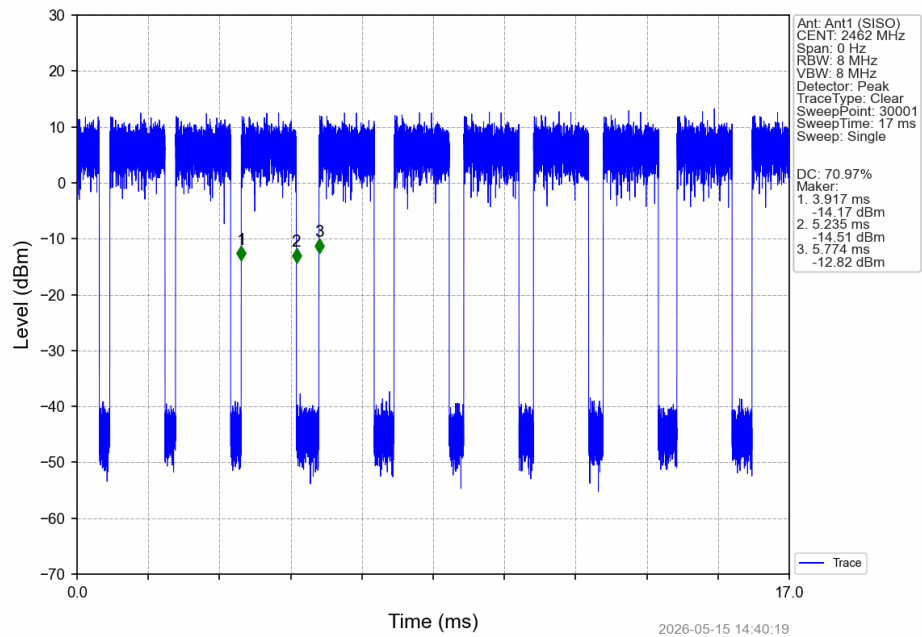
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



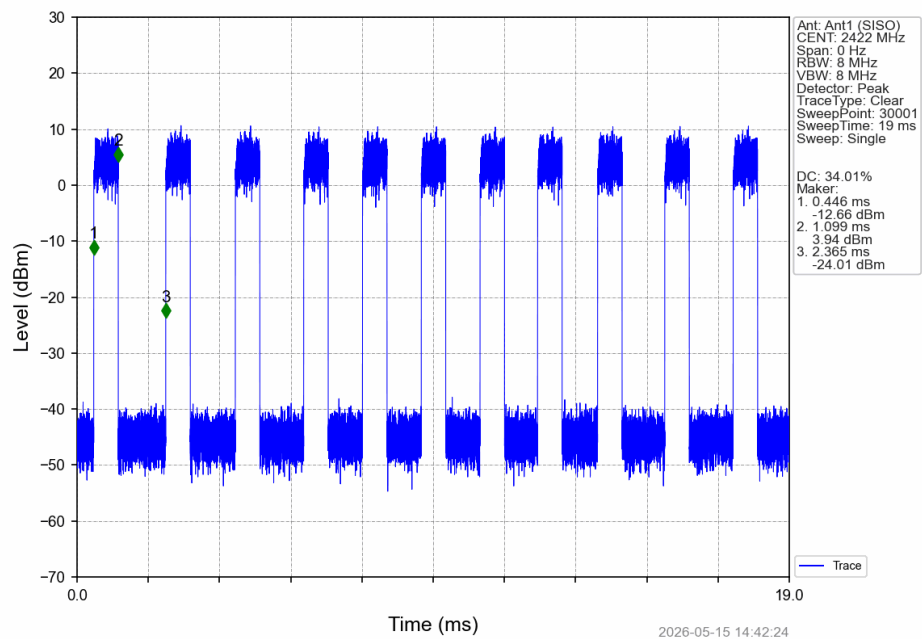
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



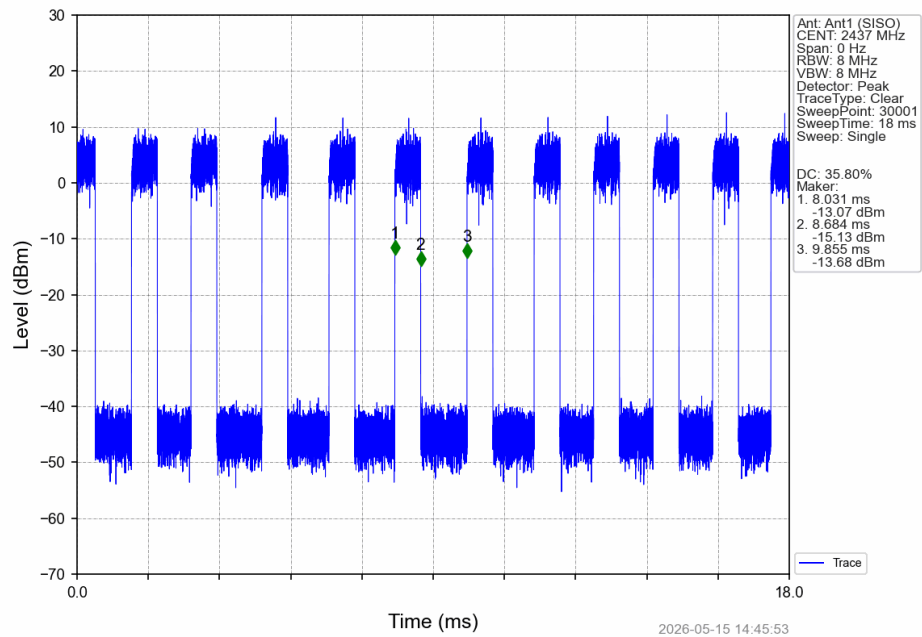
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



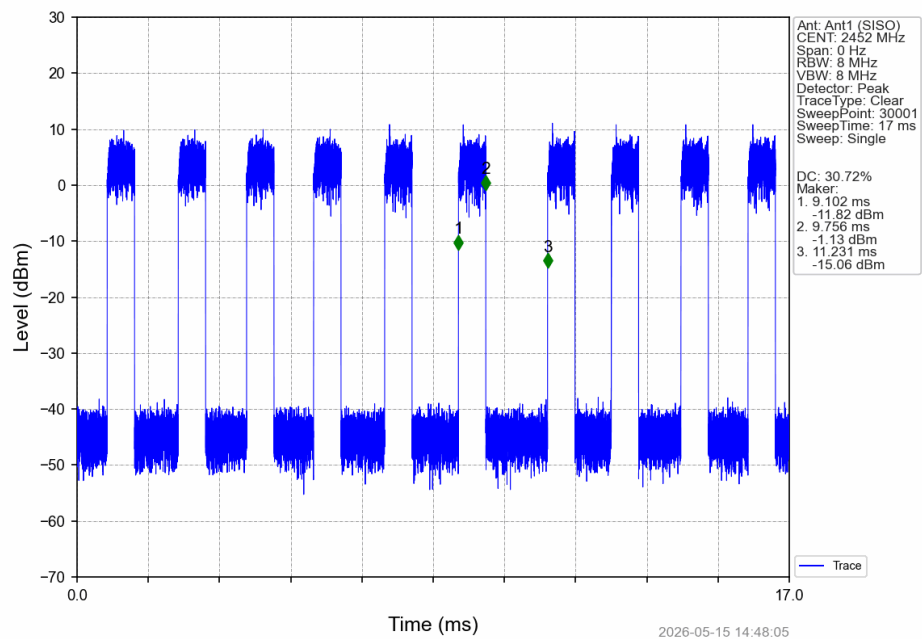
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

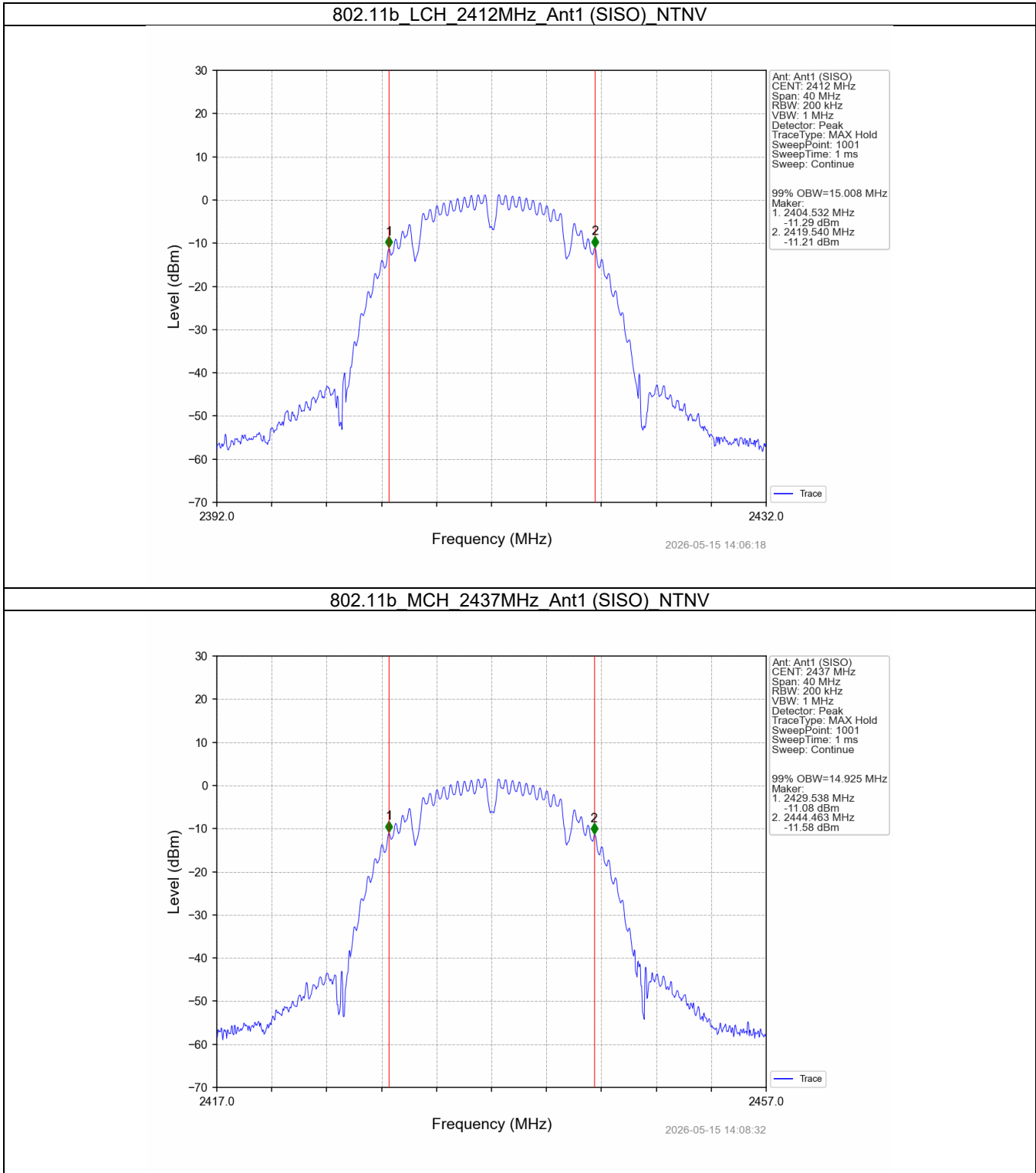
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	15.008	/	Pass
		2437	1	14.925	/	Pass
		2462	1	15.000	/	Pass
802.11g	SISO	2412	1	16.569	/	Pass
		2437	1	16.596	/	Pass
		2462	1	16.600	/	Pass
802.11n (HT20)	SISO	2412	1	17.616	/	Pass
		2437	1	17.649	/	Pass
		2462	1	17.616	/	Pass
802.11n (HT40)	SISO	2422	1	36.355	/	Pass
		2437	1	36.502	/	Pass
		2452	1	36.493	/	Pass

2.1.2 6dB BW

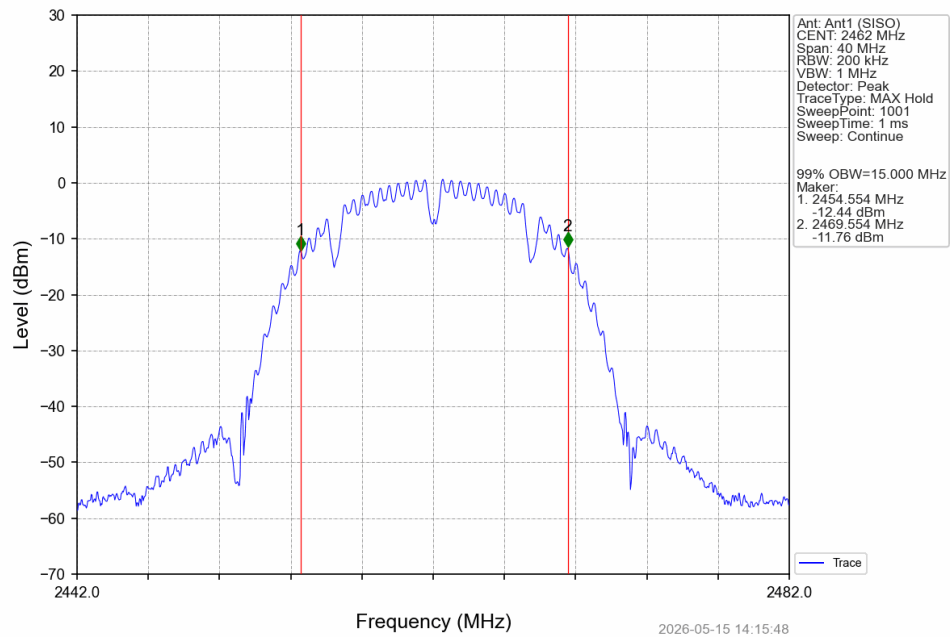
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.212	≥ 0.5	Pass
		2437	1	10.202	≥ 0.5	Pass
		2462	1	10.211	≥ 0.5	Pass
802.11g	SISO	2412	1	16.427	≥ 0.5	Pass
		2437	1	16.463	≥ 0.5	Pass
		2462	1	16.418	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.593	≥ 0.5	Pass
		2437	1	17.513	≥ 0.5	Pass
		2462	1	17.571	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	36.001	≥ 0.5	Pass
		2437	1	36.157	≥ 0.5	Pass
		2452	1	35.966	≥ 0.5	Pass

2.2 Test Graph

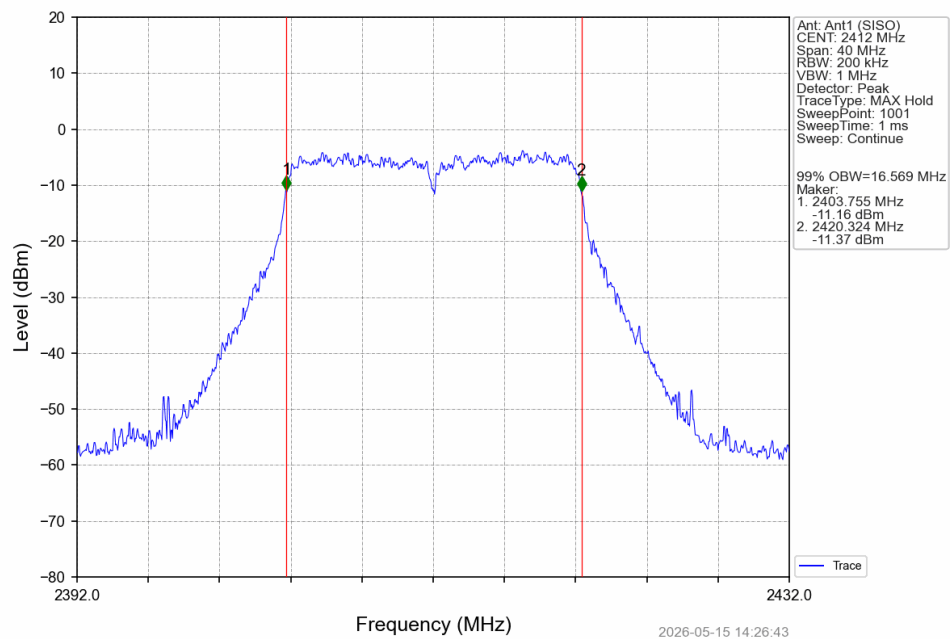
2.2.1 OBW



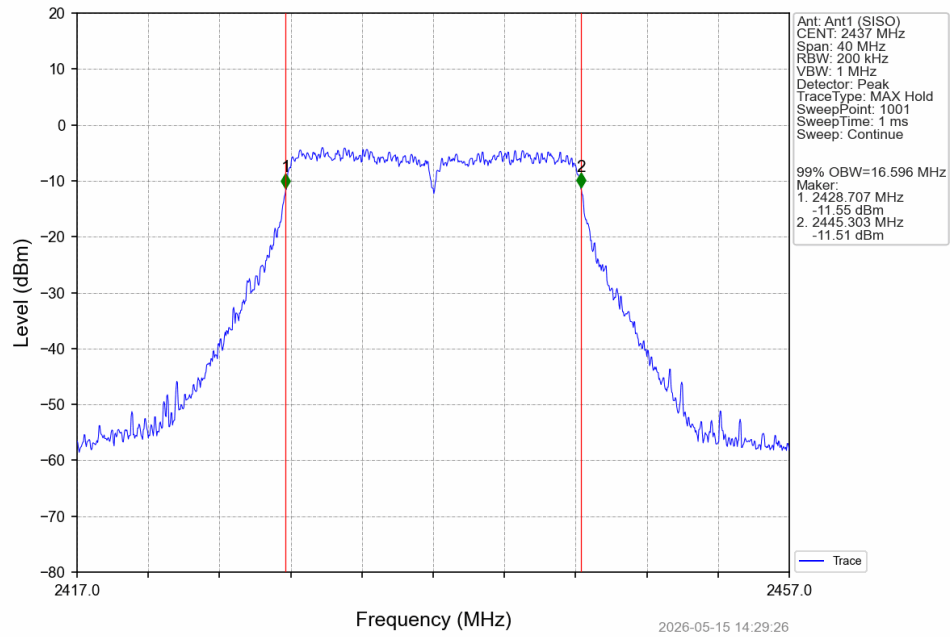
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



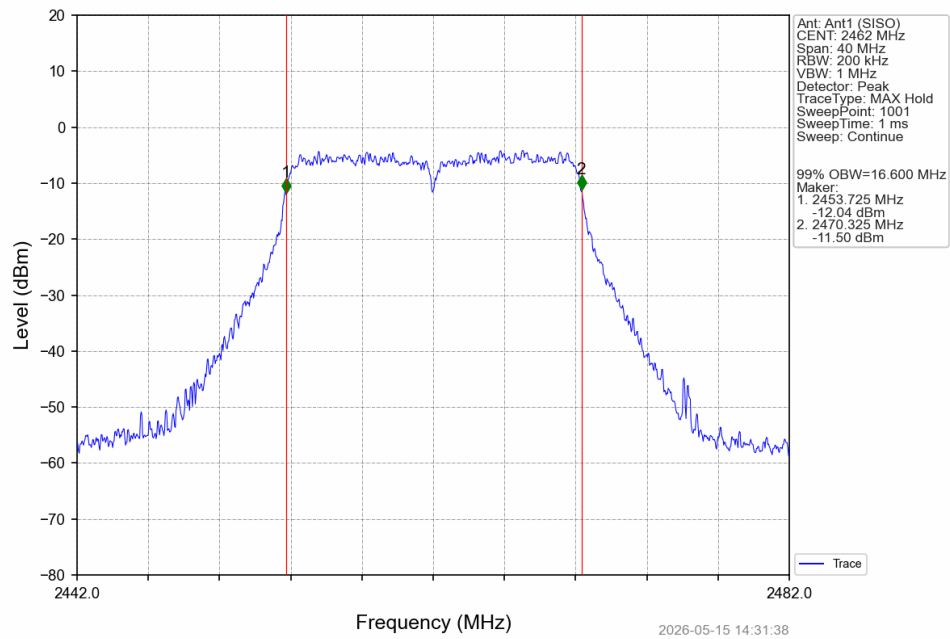
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



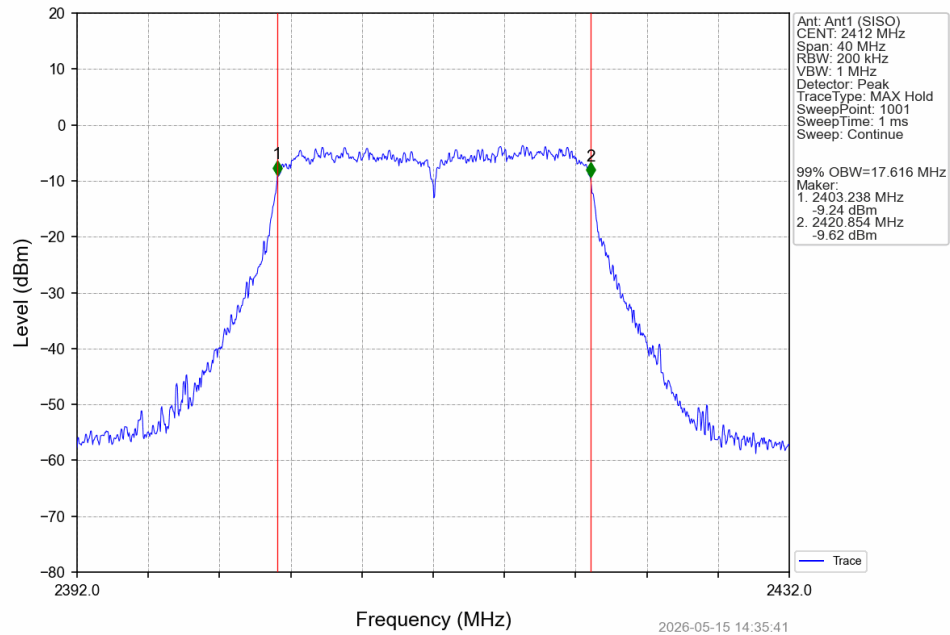
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



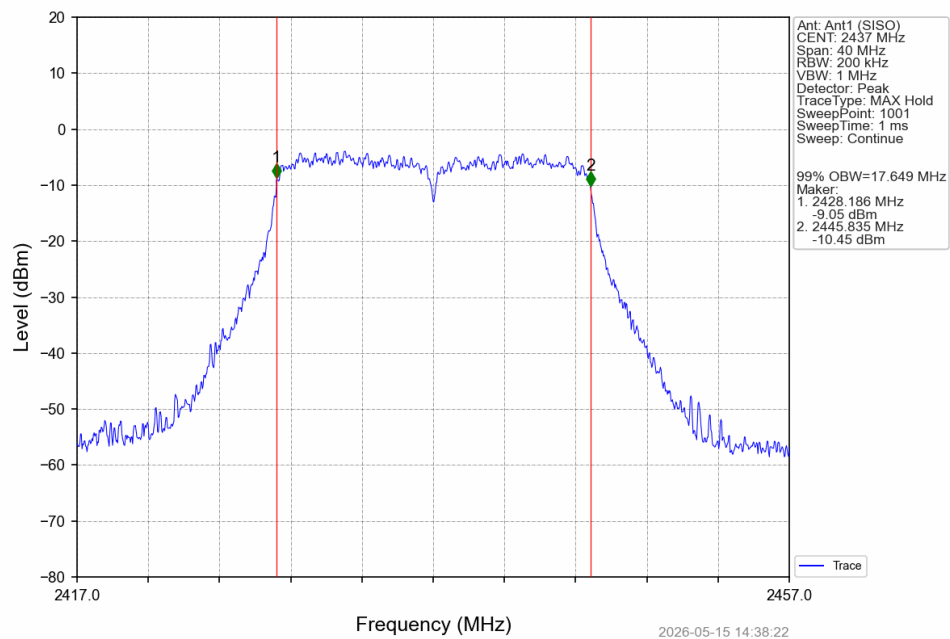
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



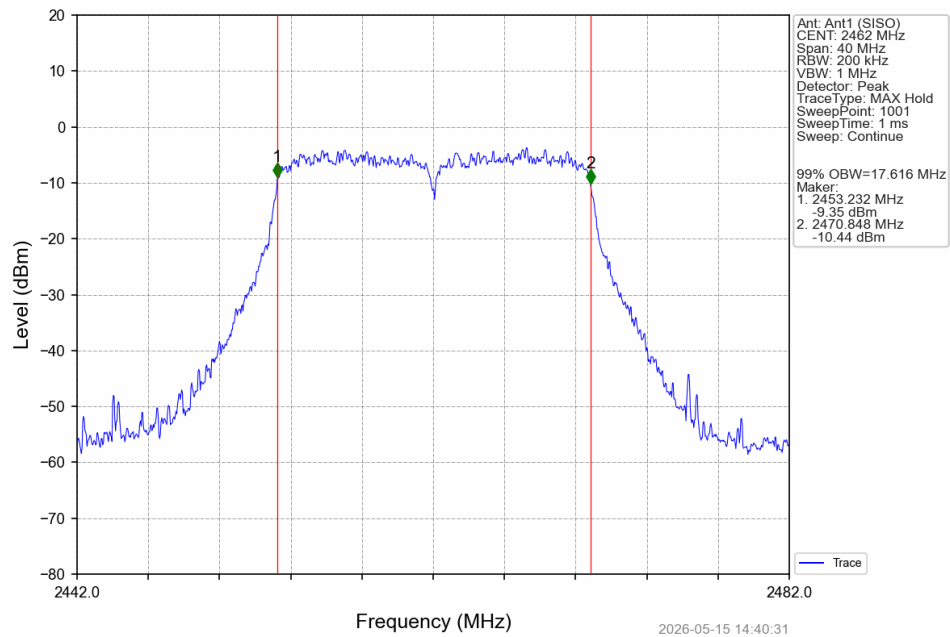
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



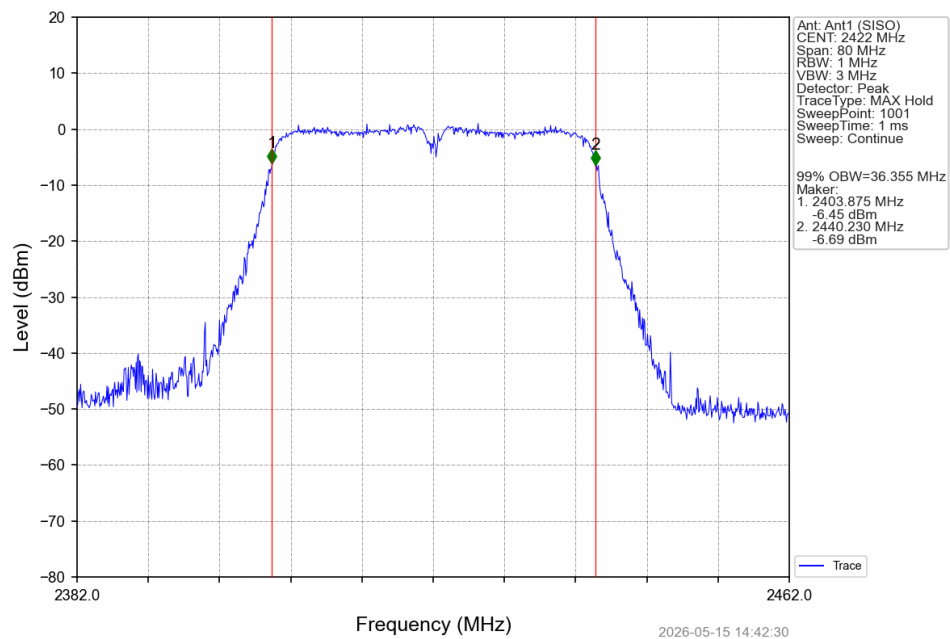
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



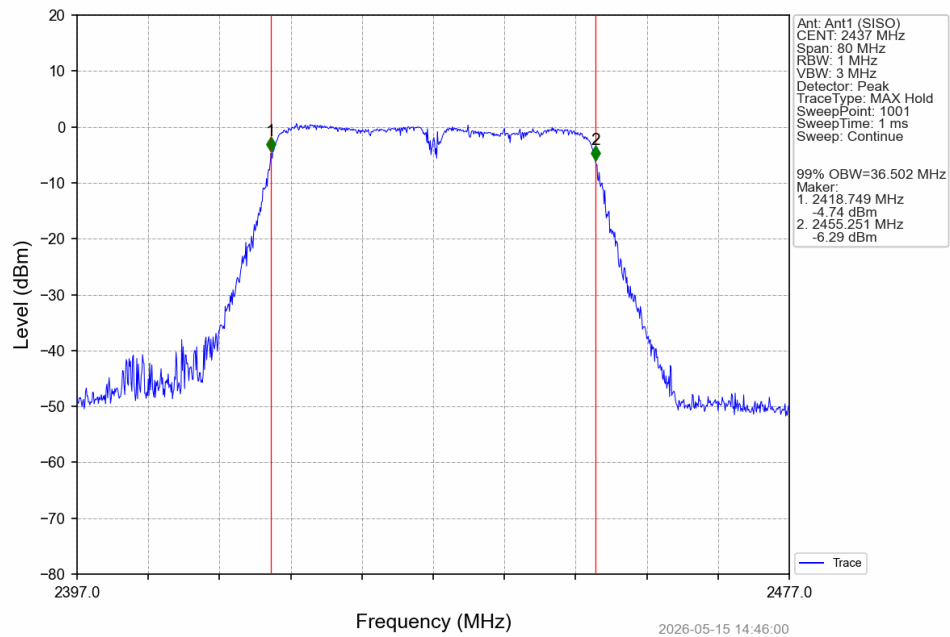
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



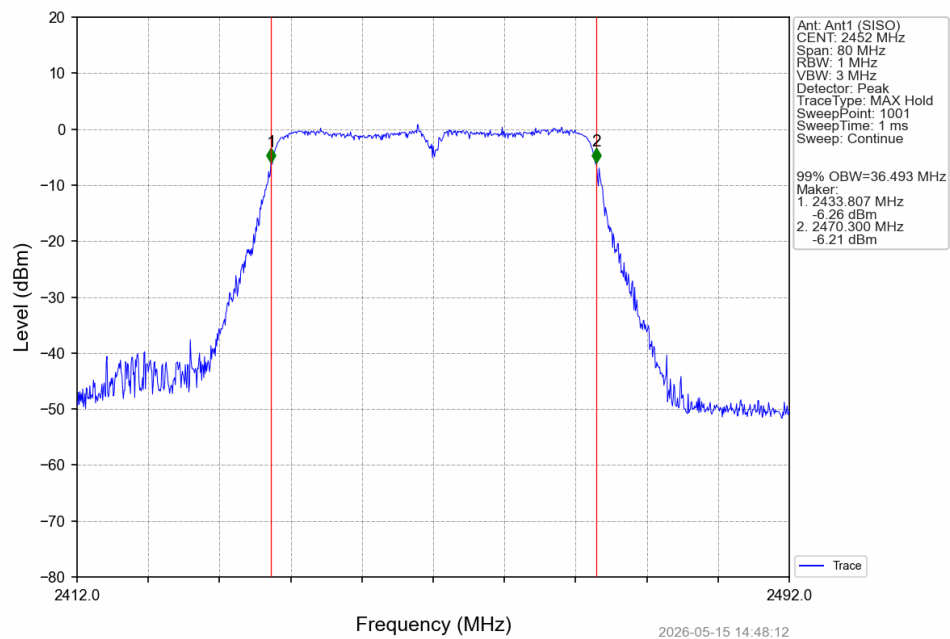
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



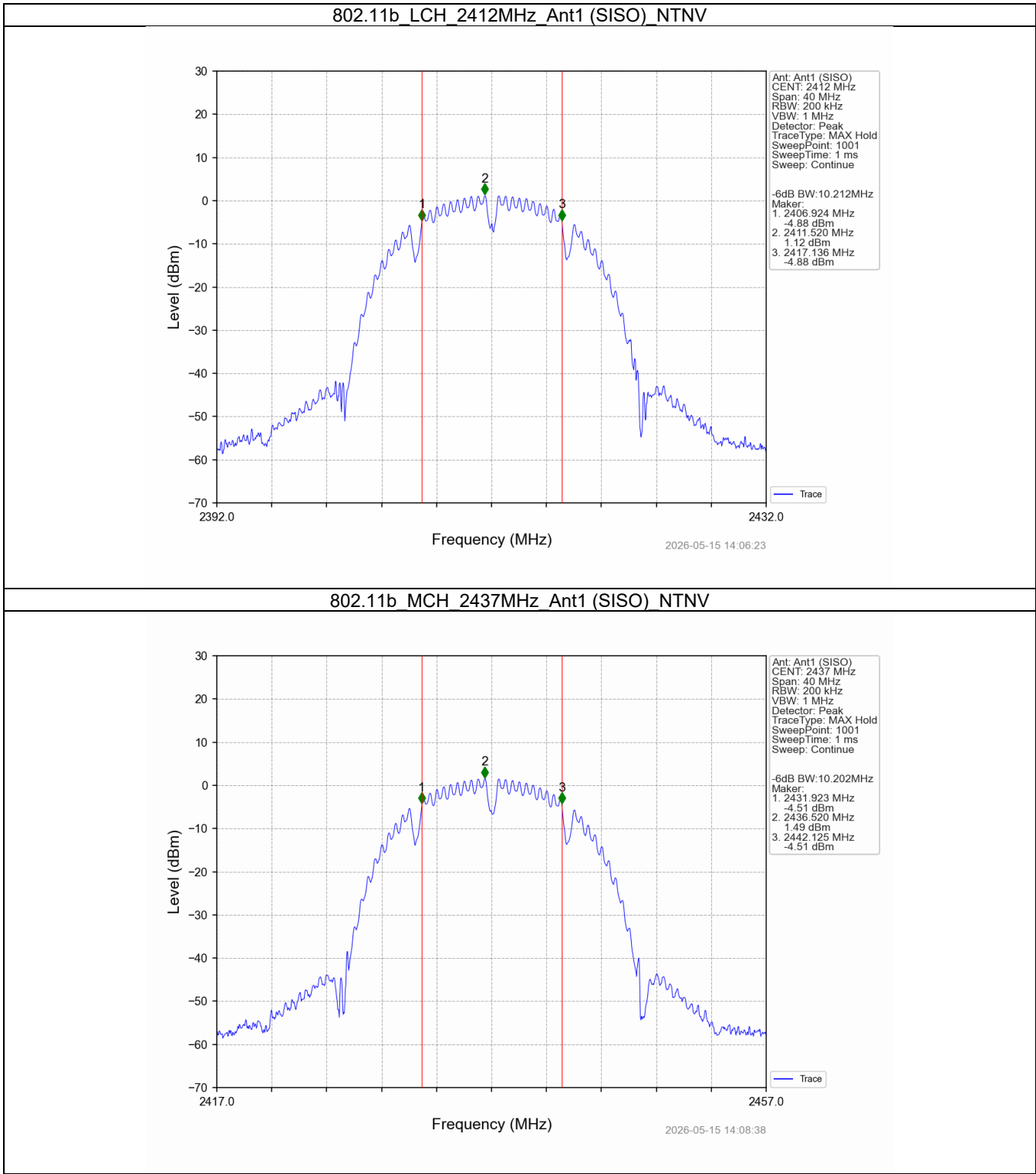
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



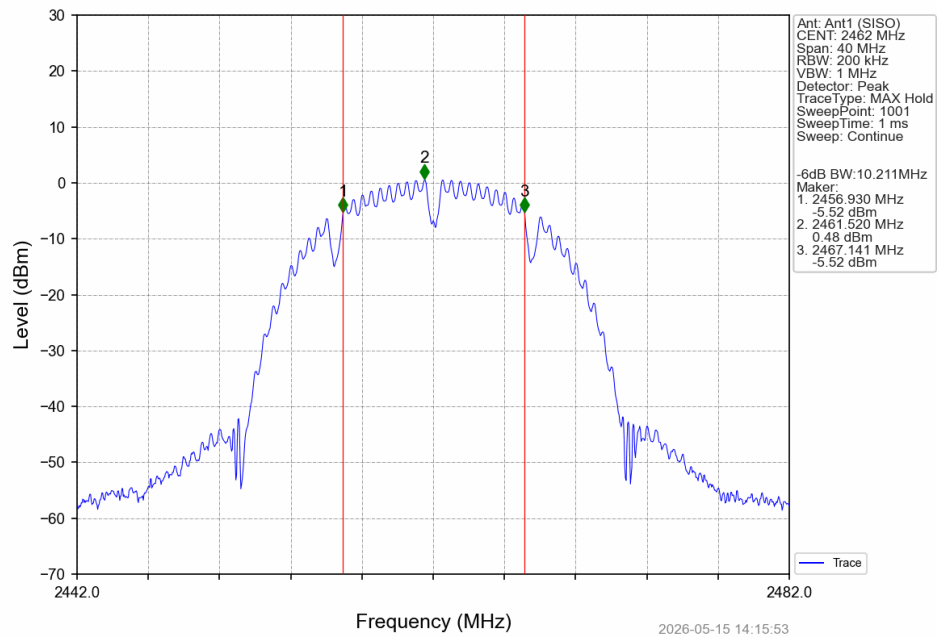
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



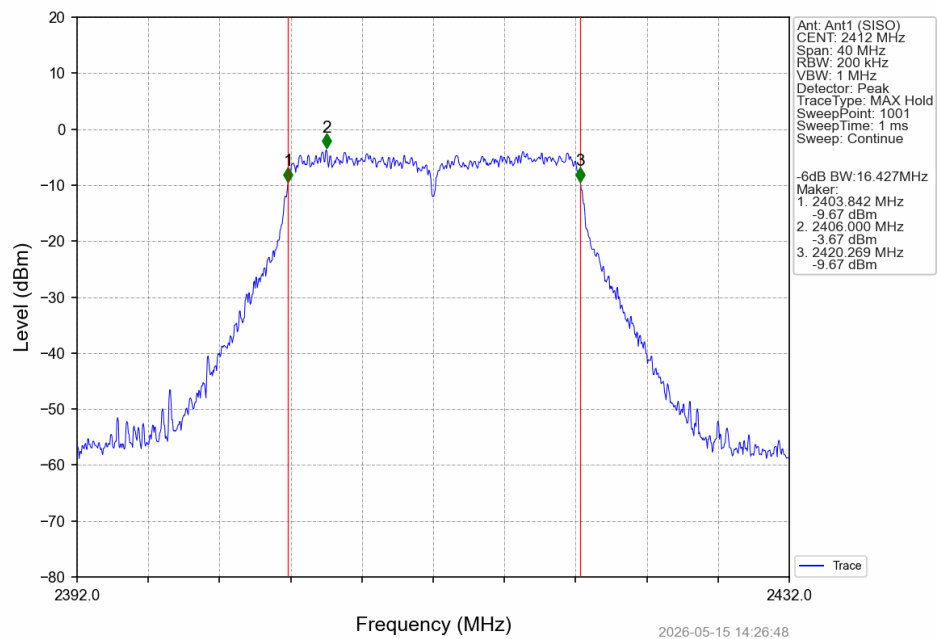
2.2.2 6dB BW



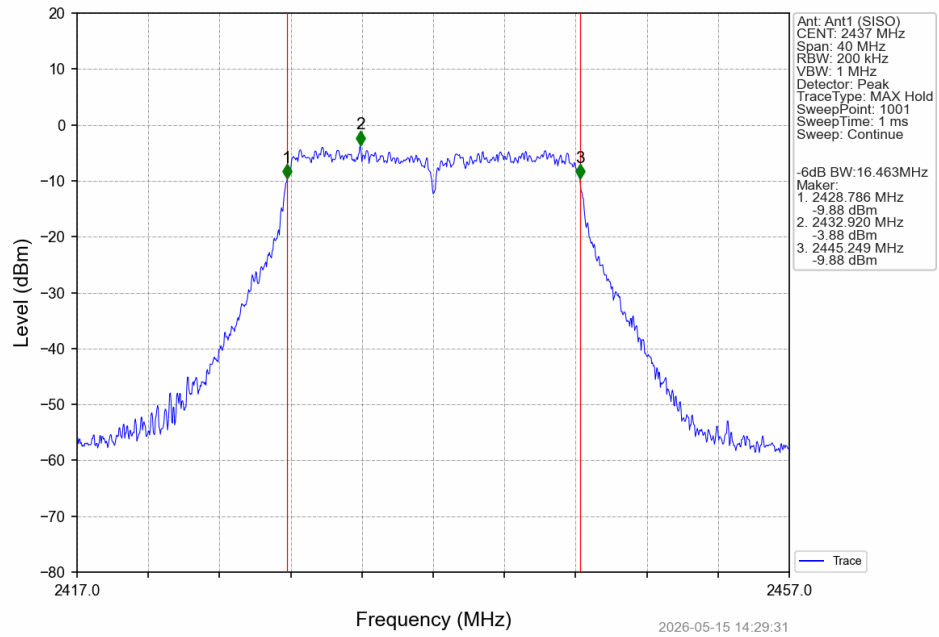
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



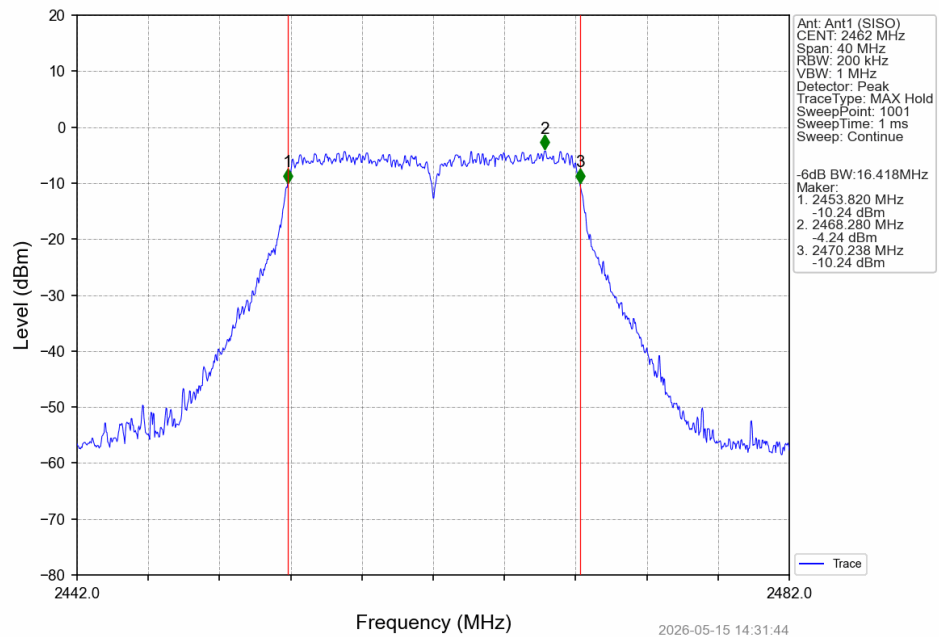
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



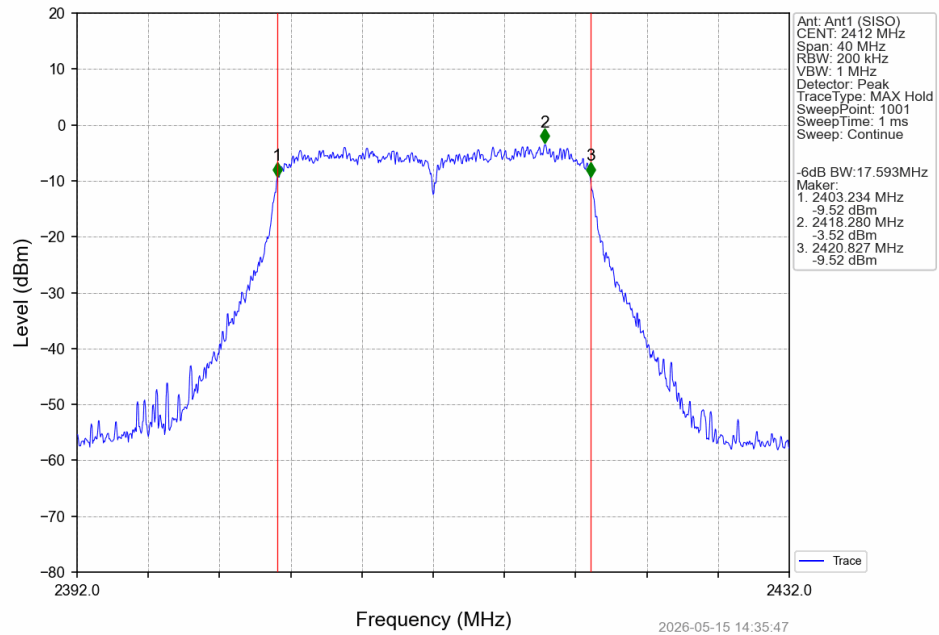
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



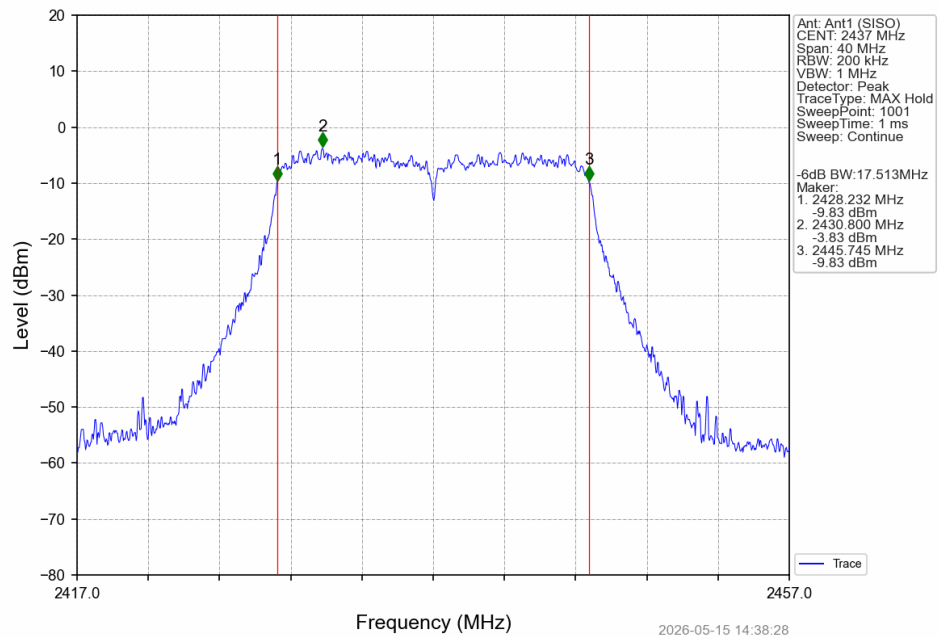
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



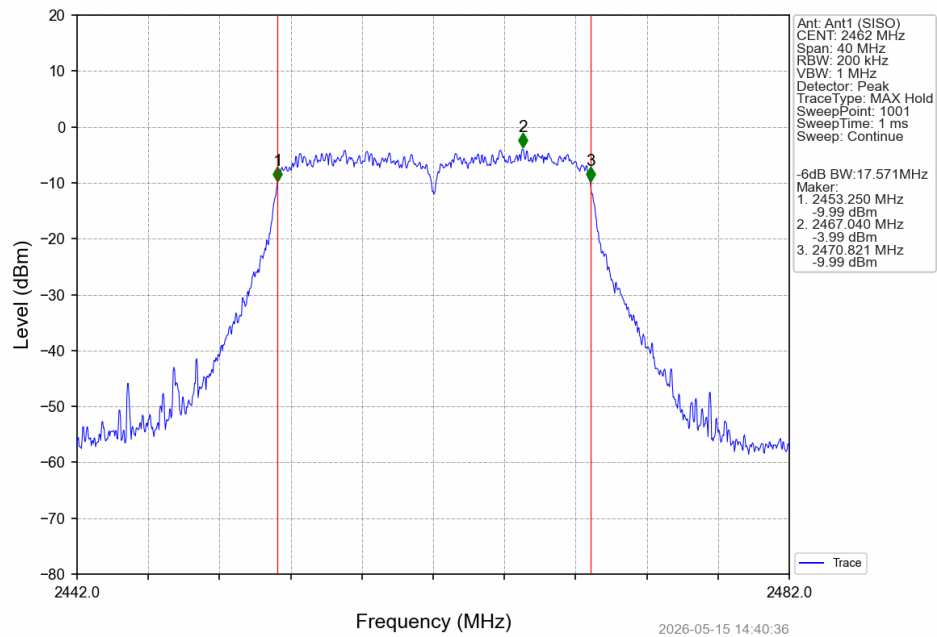
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



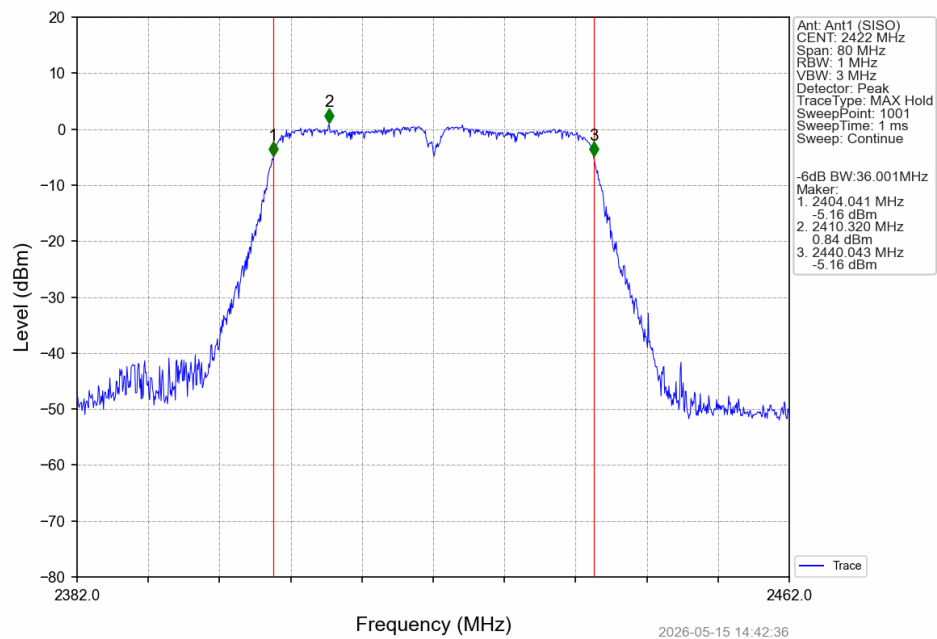
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



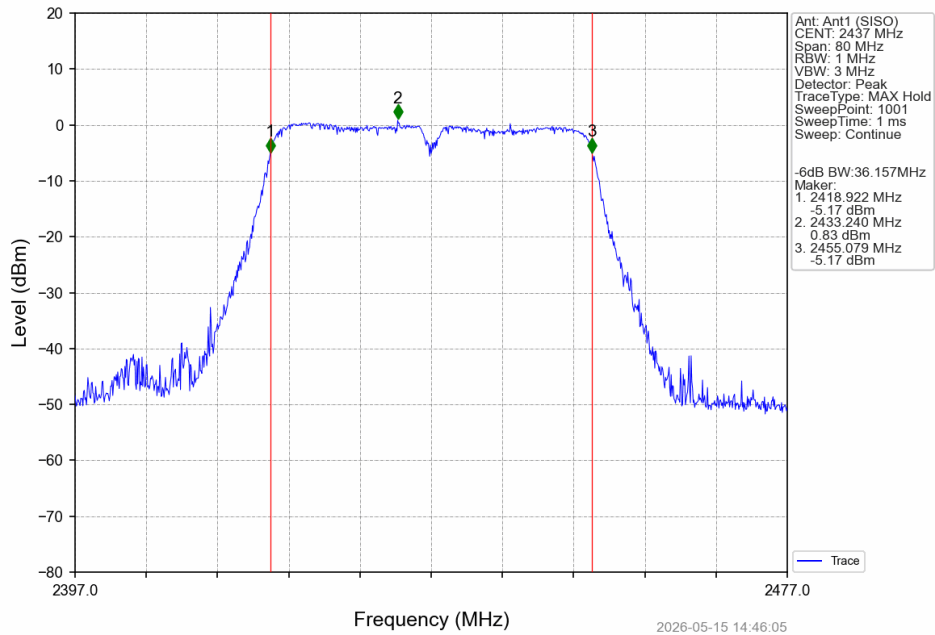
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



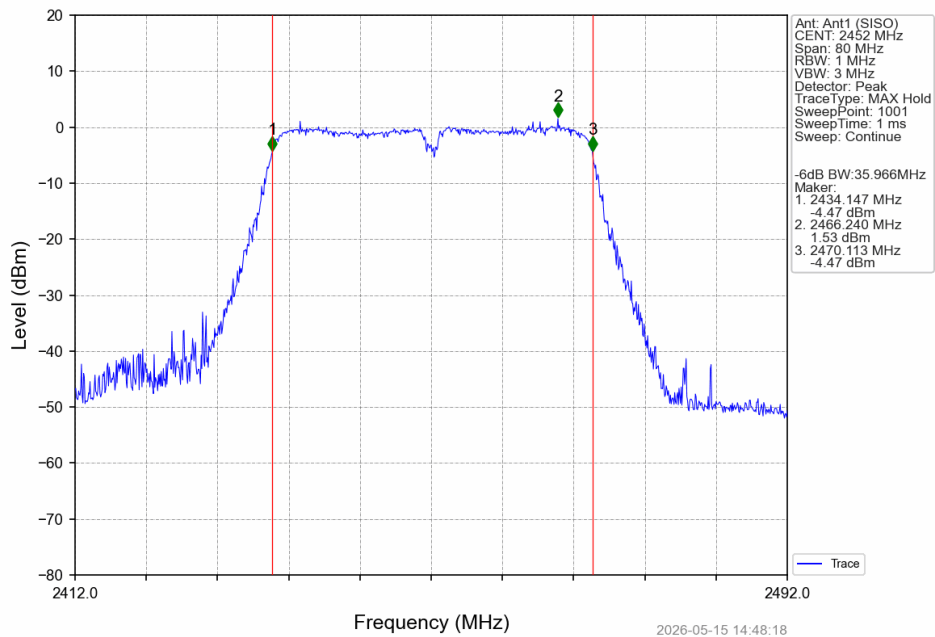
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_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	12.87	<=30	Pass
		2437	13.17	<=30	Pass
		2462	12.30	<=30	Pass
802.11g	SISO	2412	13.88	<=30	Pass
		2437	13.62	<=30	Pass
		2462	13.74	<=30	Pass
802.11n (HT20)	SISO	2412	14.08	<=30	Pass
		2437	13.77	<=30	Pass
		2462	13.81	<=30	Pass
802.11n (HT40)	SISO	2422	14.61	<=30	Pass
		2437	14.45	<=30	Pass
		2452	14.27	<=30	Pass

4. Maximum Power Spectral Density

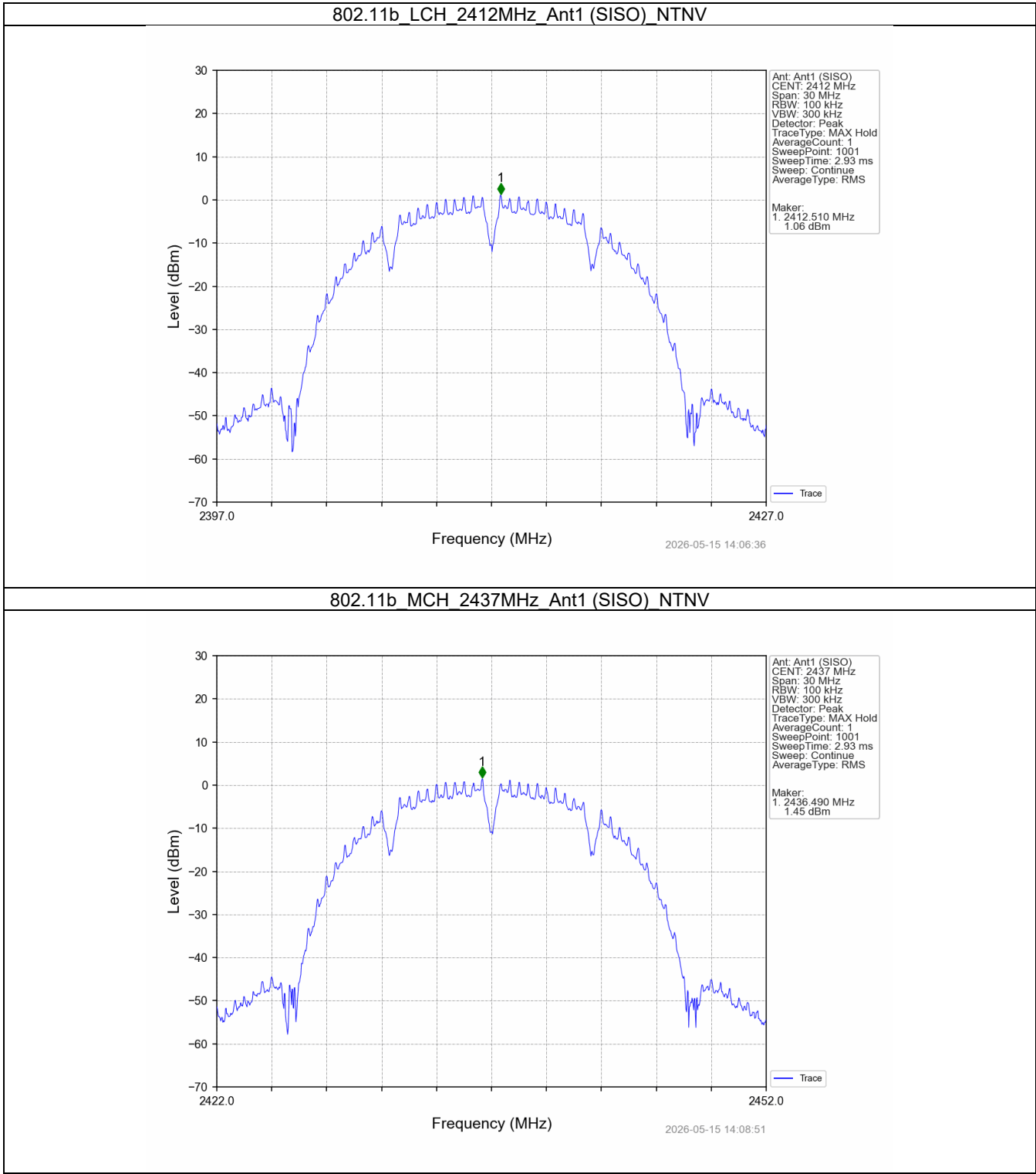
4.1 Test Result

4.1.1 PSD

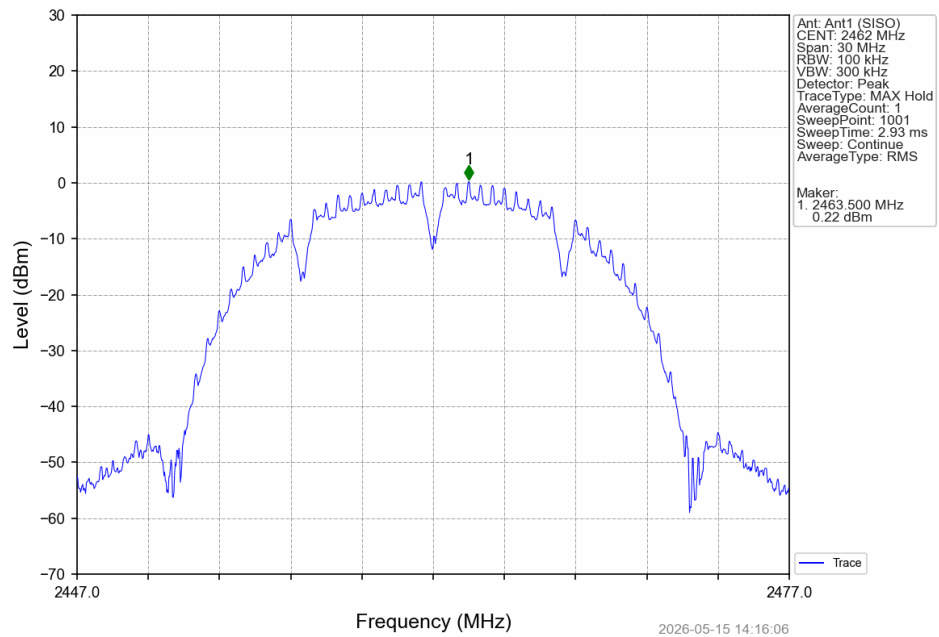
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	1.06dBm/100kHz	<=8	Pass
		2437	1.45dBm/100kHz	<=8	Pass
		2462	0.22dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-4.76dBm/100kHz	<=8	Pass
		2437	-4.89dBm/100kHz	<=8	Pass
		2462	-5.30dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-4.53dBm/100kHz	<=8	Pass
		2437	-4.83dBm/100kHz	<=8	Pass
		2462	-4.85dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-6.76dBm/100kHz	<=8	Pass
		2437	-6.96dBm/100kHz	<=8	Pass
		2452	-7.34dBm/100kHz	<=8	Pass

4.2 Test Graph

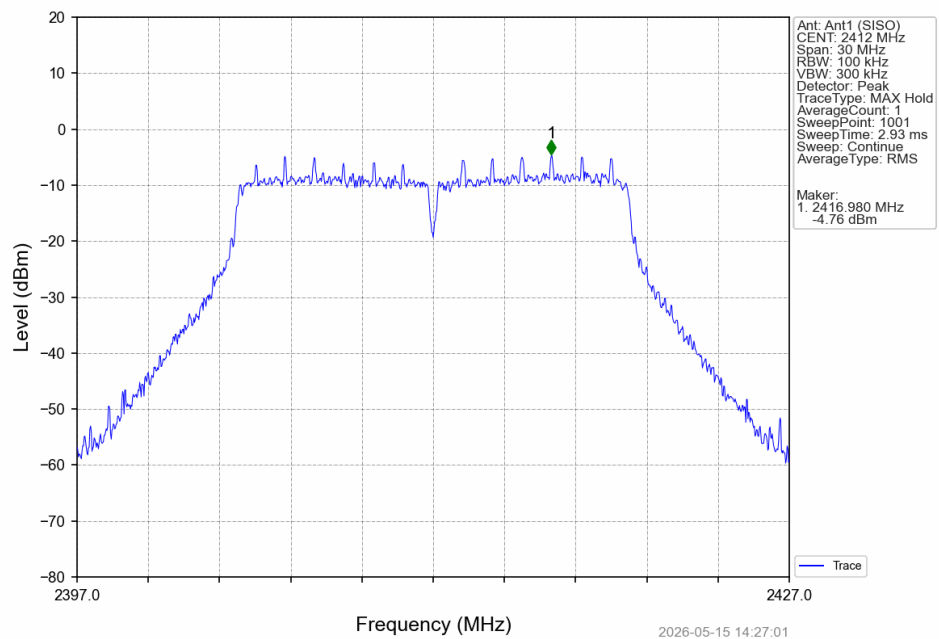
4.2.1 PSD



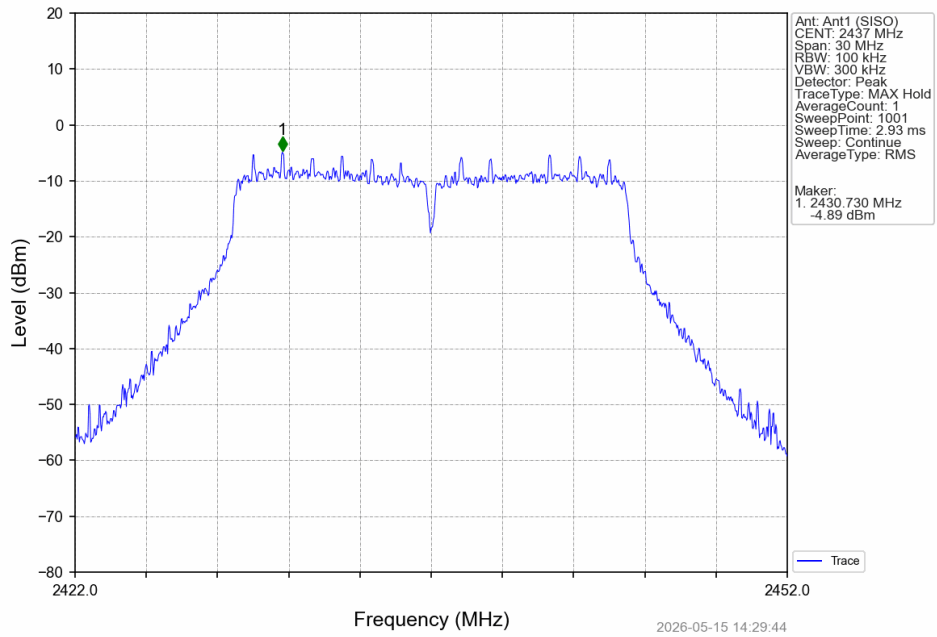
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



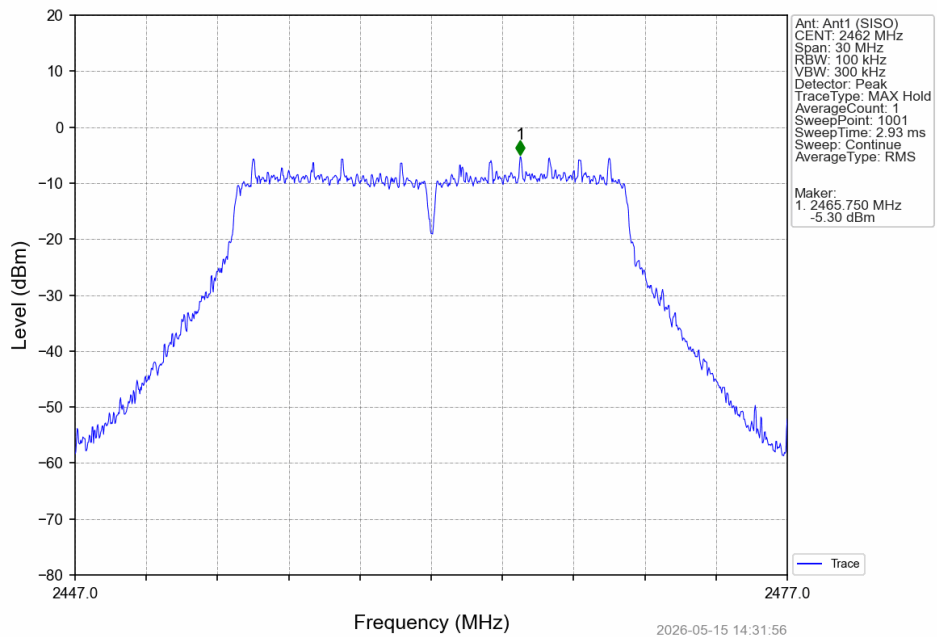
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



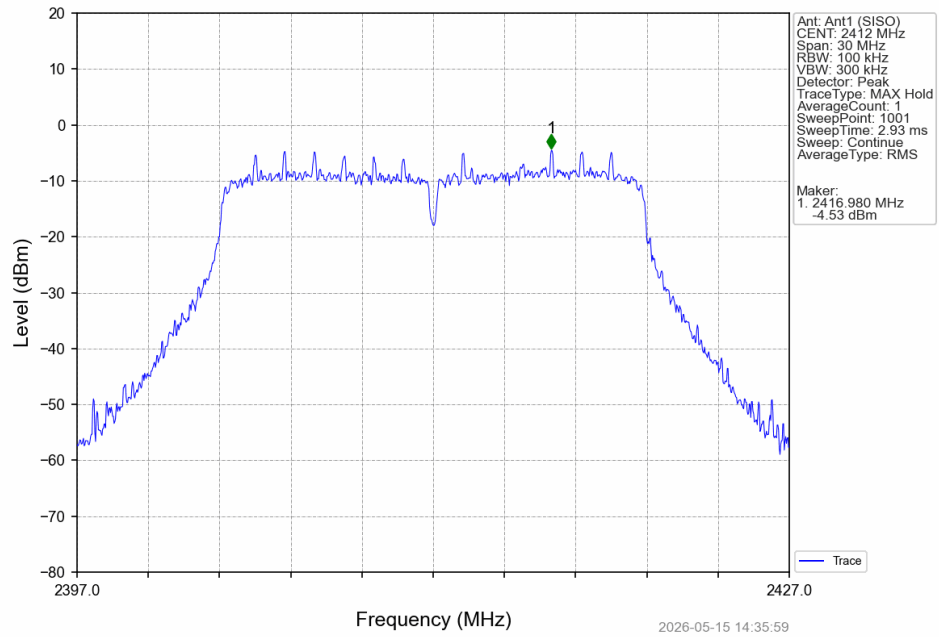
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



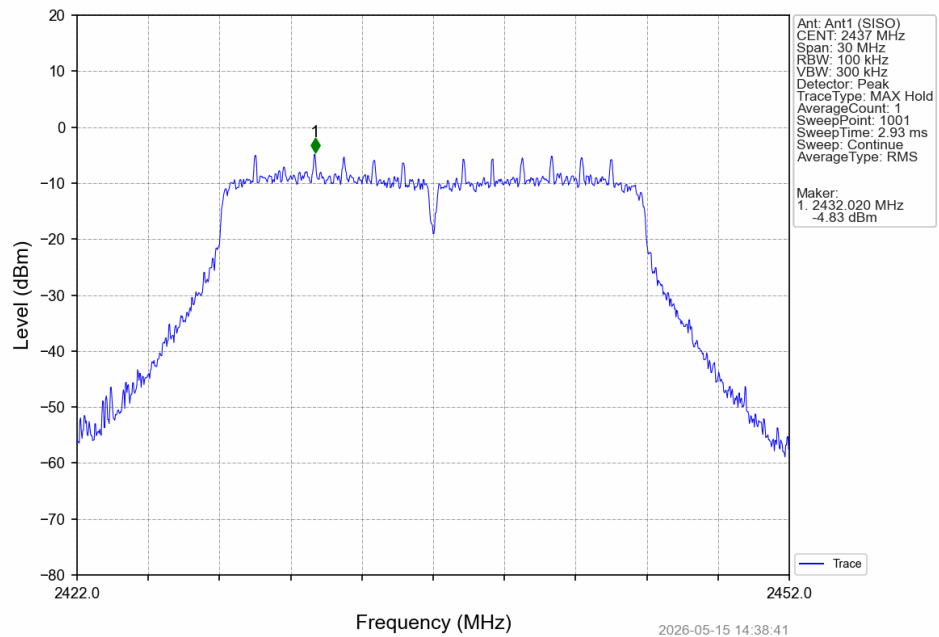
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



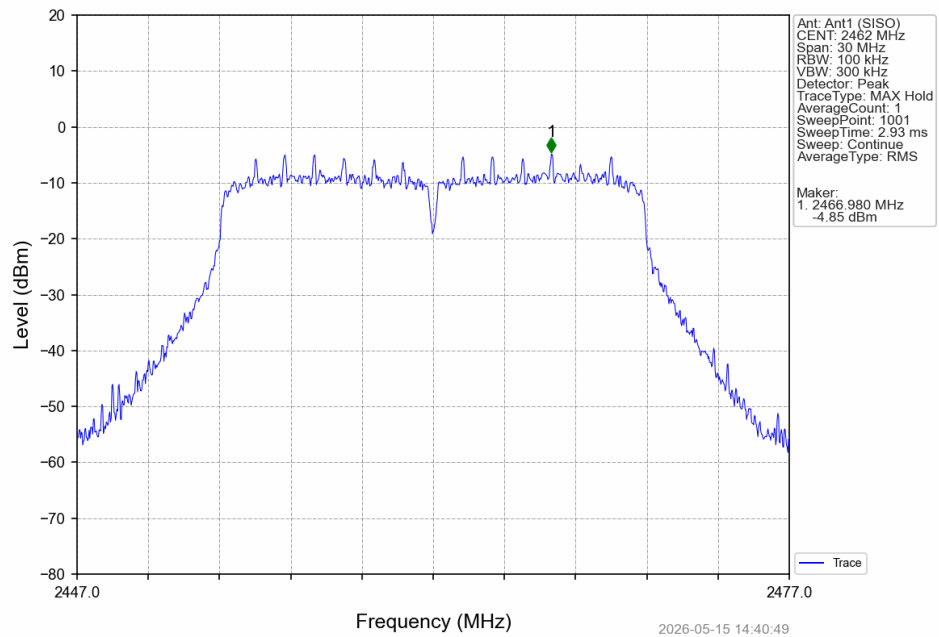
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



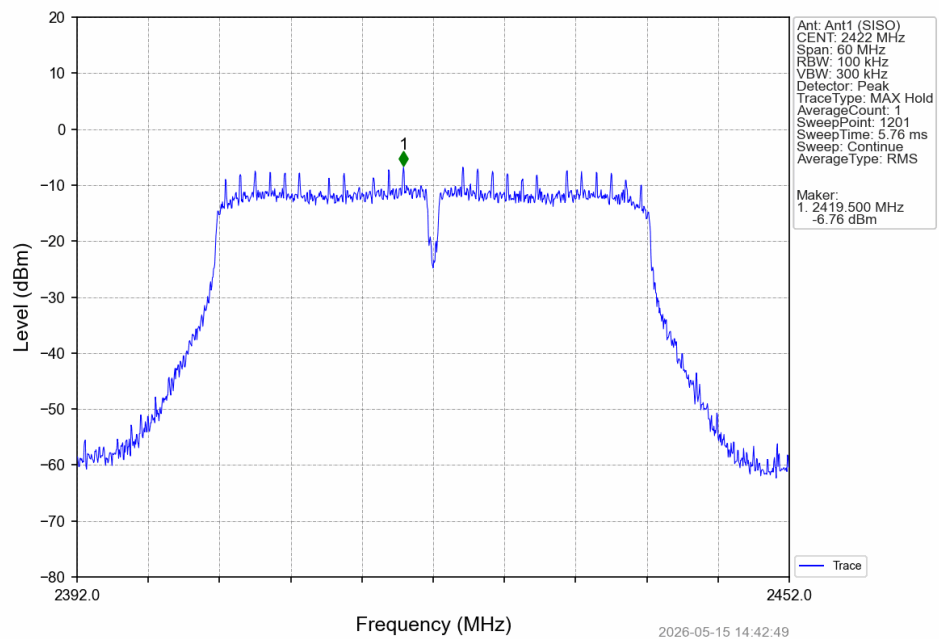
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



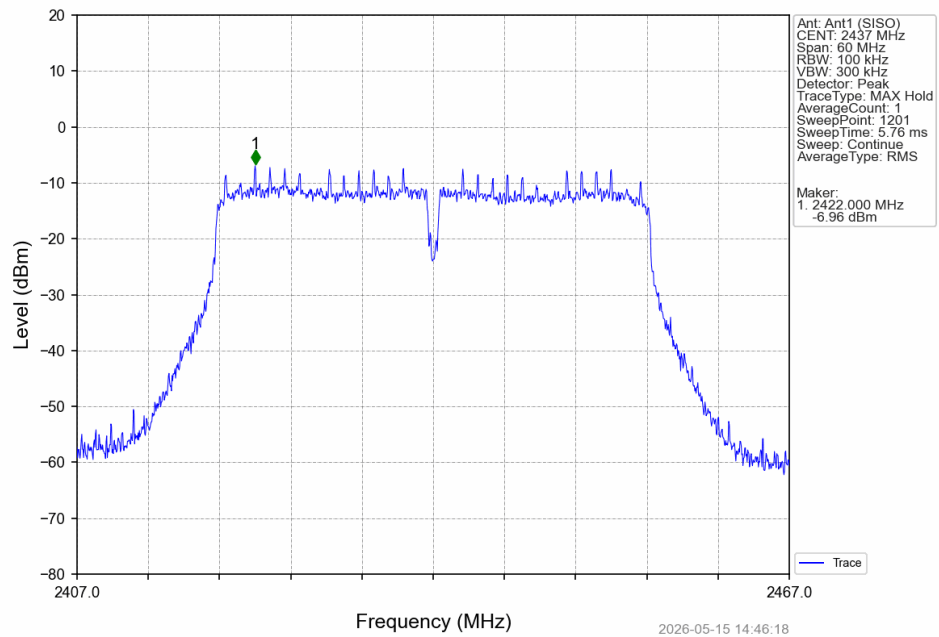
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



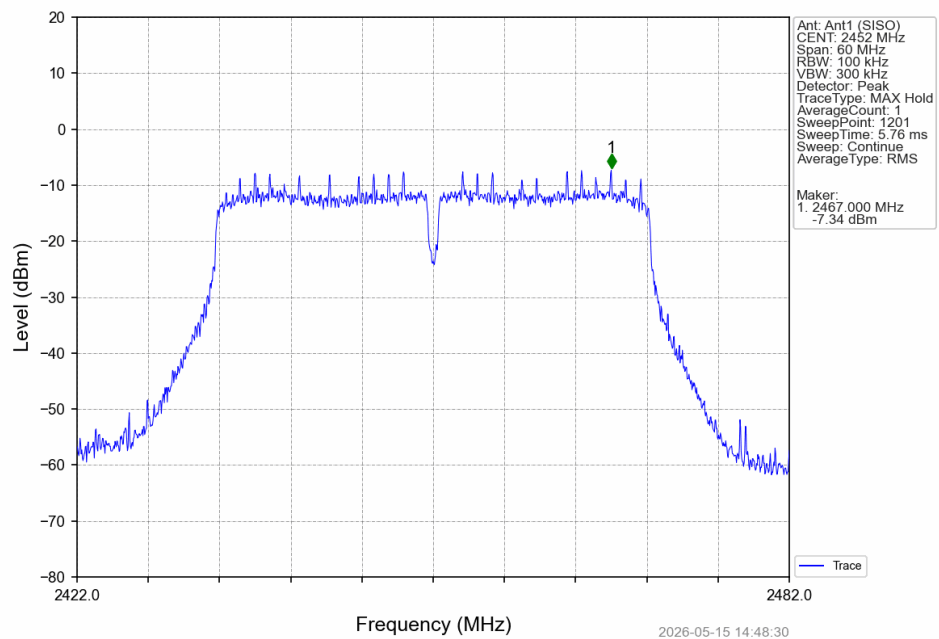
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

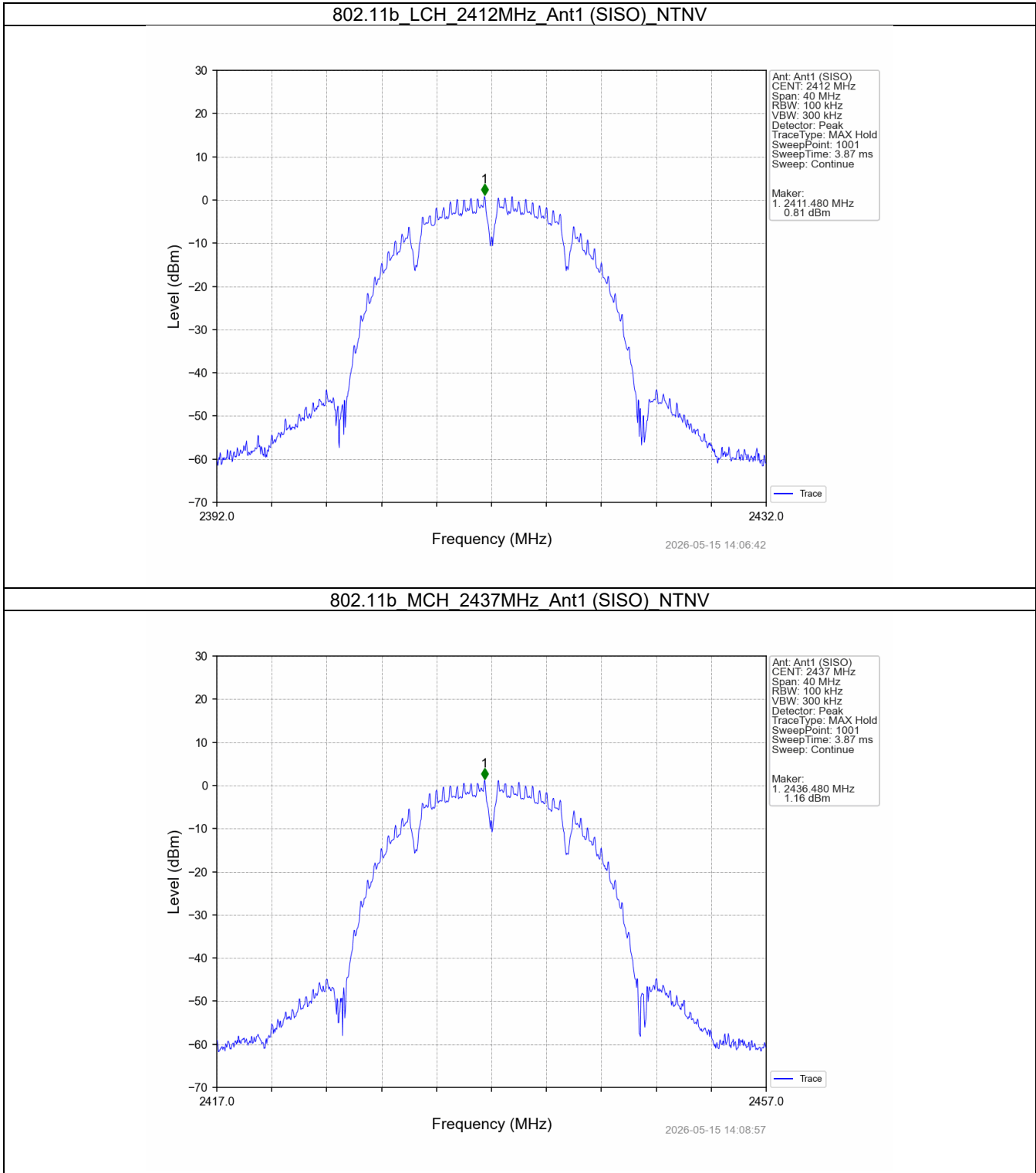
Mode	Tx Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	0.81
		2437	1	1.16
		2462	1	0.38
802.11g	SISO	2412	1	-4.81
		2437	1	-4.78
		2462	1	-4.96
802.11n (HT20)	SISO	2412	1	-4.61
		2437	1	-4.94
		2462	1	-4.99
802.11n (HT40)	SISO	2422	1	-6.80
		2437	1	-6.98
		2452	1	-7.32

5.1.2 CSE

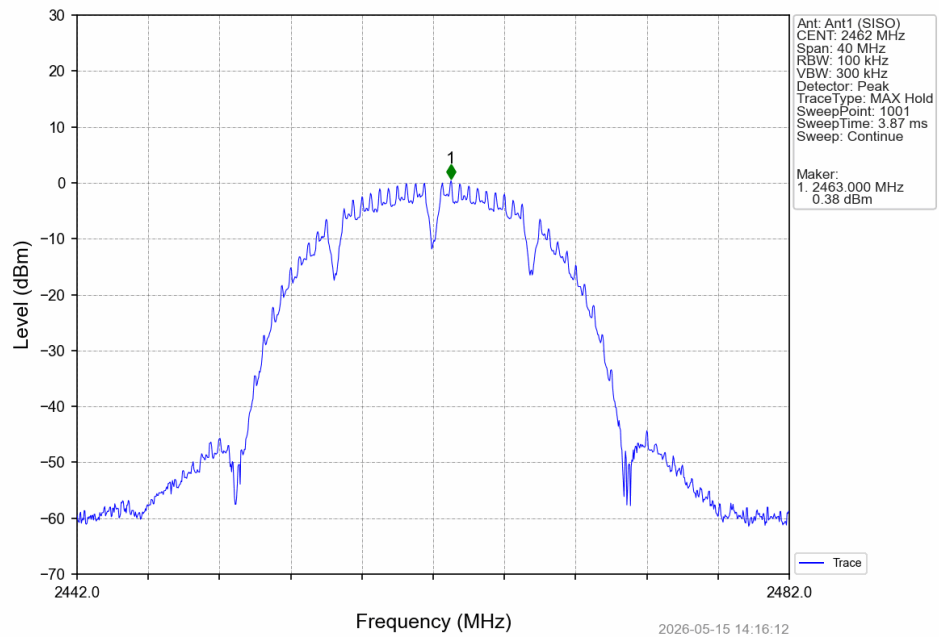
Mode	Tx Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	0.81	-19.19	Pass
		2437	1	1.16	-18.84	Pass
		2462	1	0.38	-19.62	Pass
802.11g	SISO	2412	1	-4.81	-24.81	Pass
		2437	1	-4.78	-24.78	Pass
		2462	1	-4.96	-24.96	Pass
802.11n (HT20)	SISO	2412	1	-4.61	-24.61	Pass
		2437	1	-4.94	-24.94	Pass
		2462	1	-4.99	-24.99	Pass
802.11n (HT40)	SISO	2422	1	-6.80	-26.80	Pass
		2437	1	-6.98	-26.98	Pass
		2452	1	-7.32	-27.32	Pass

5.2 Test Graph

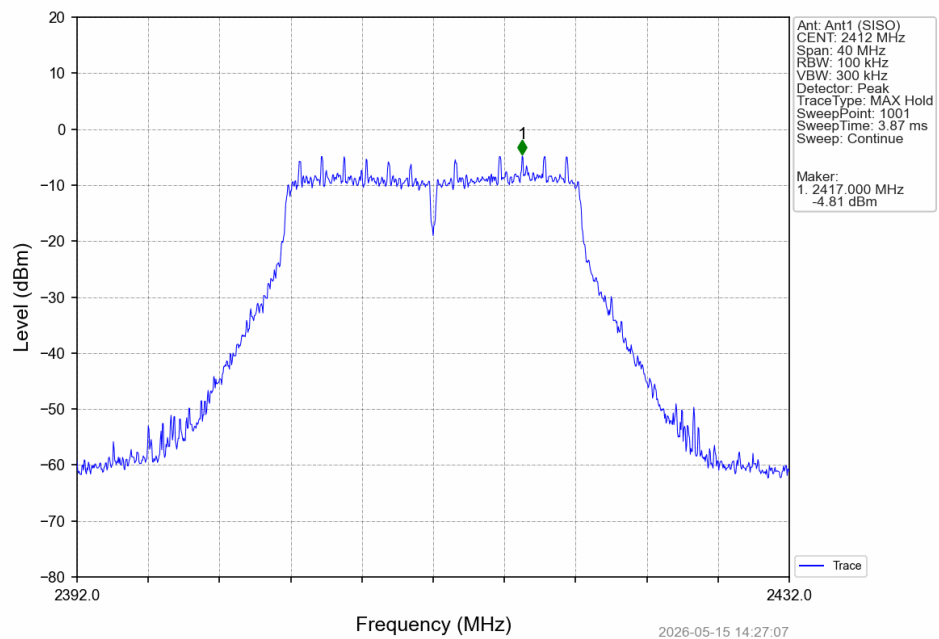
5.2.1 Ref



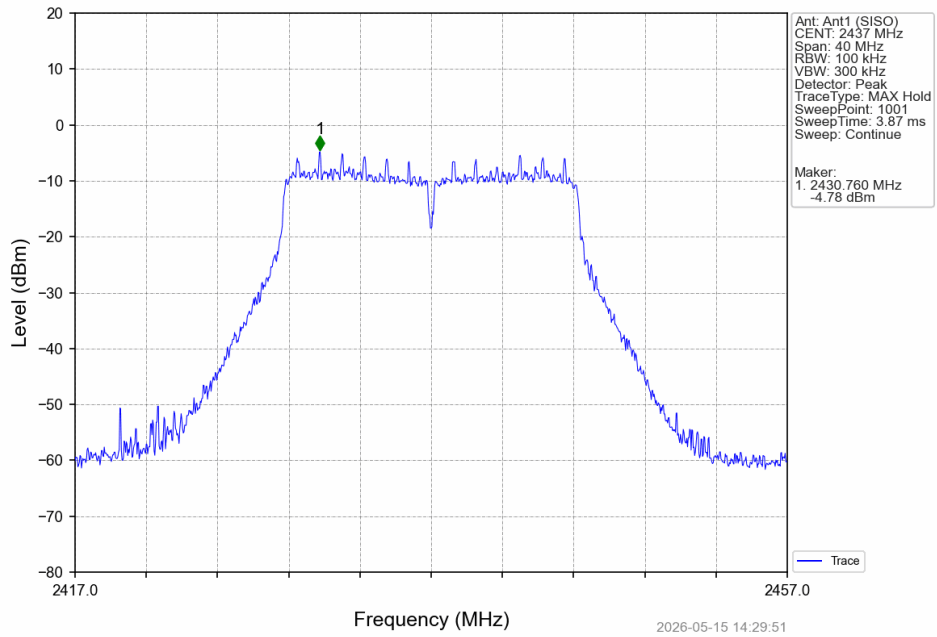
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



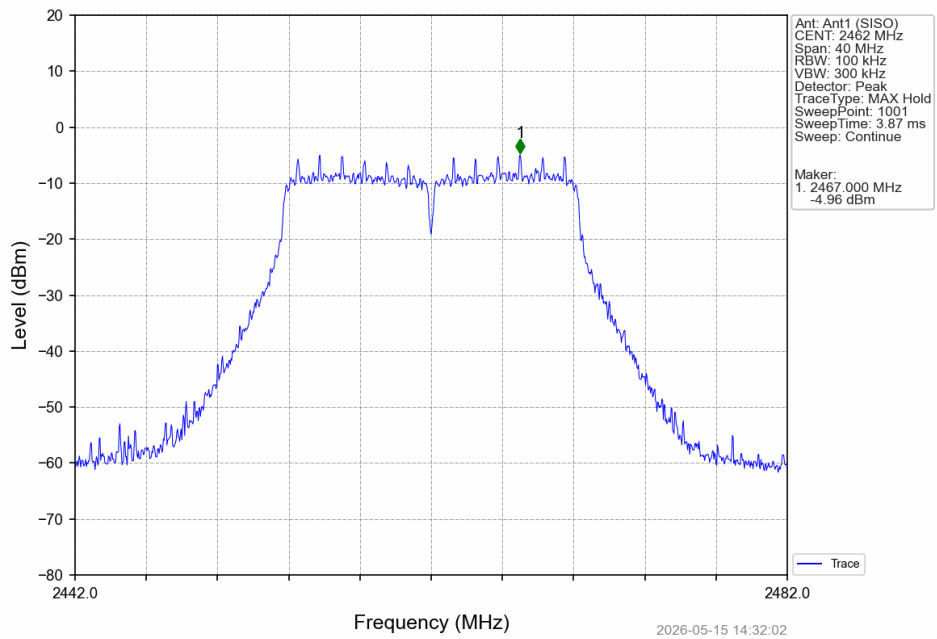
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



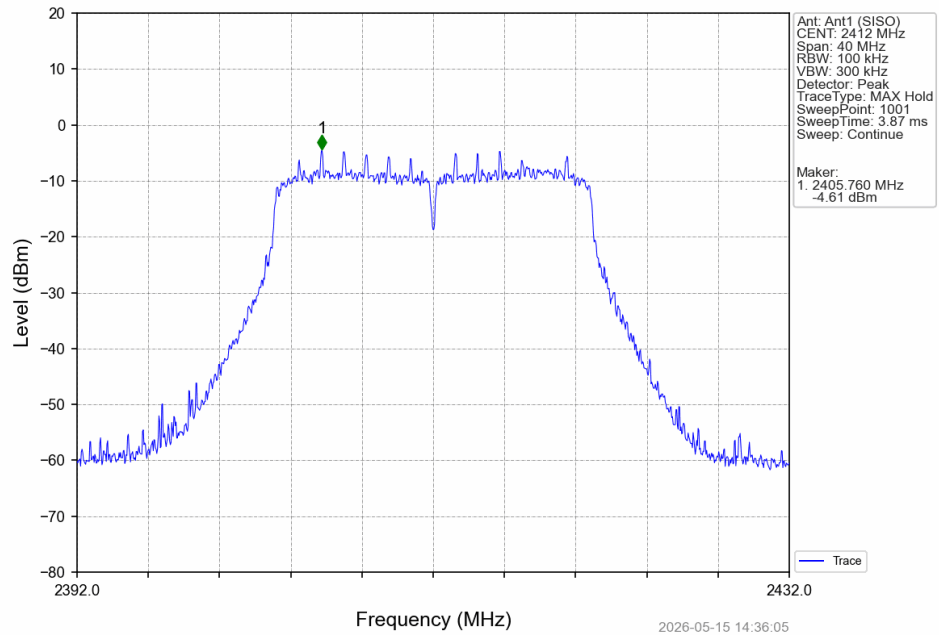
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



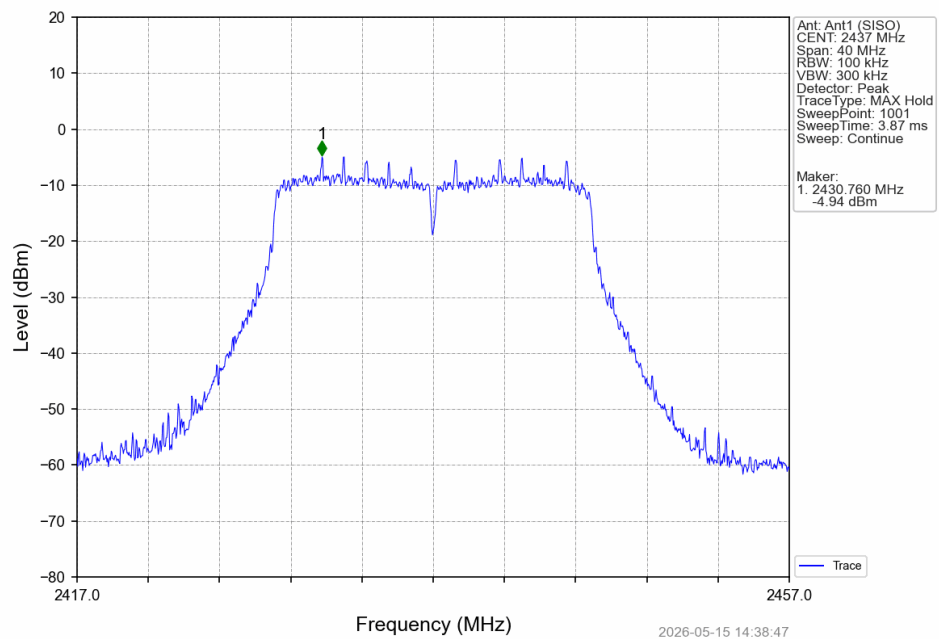
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



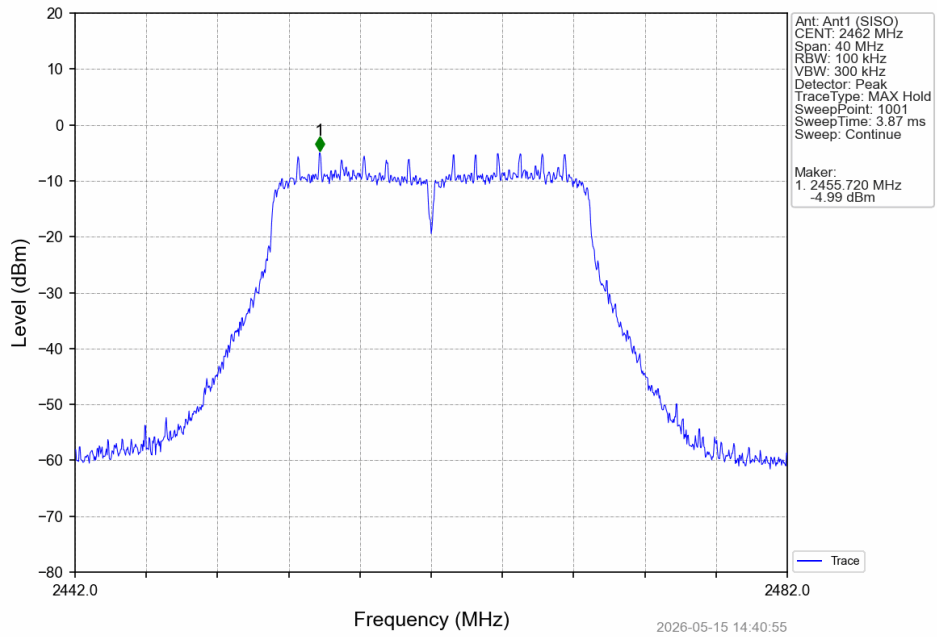
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



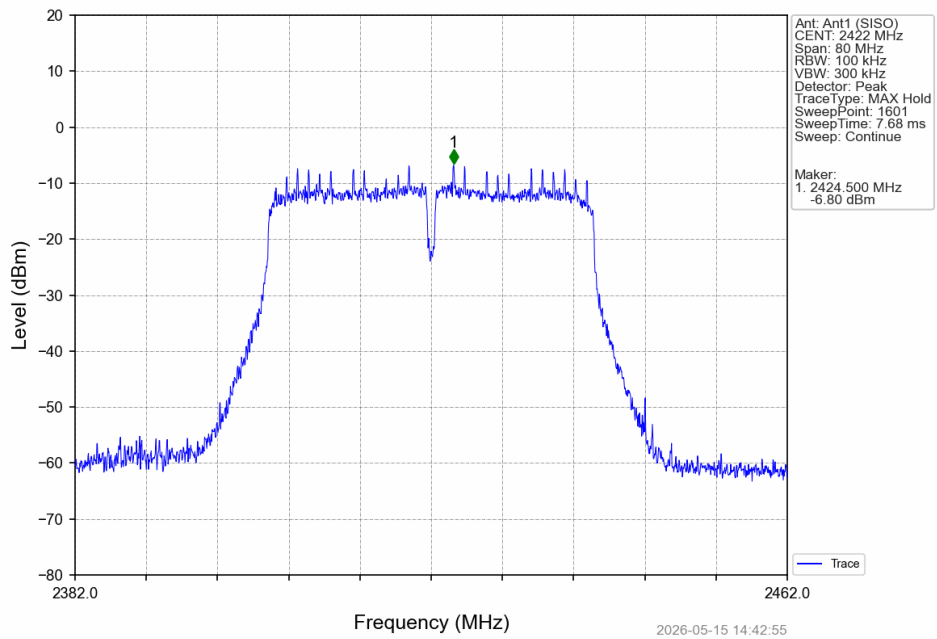
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



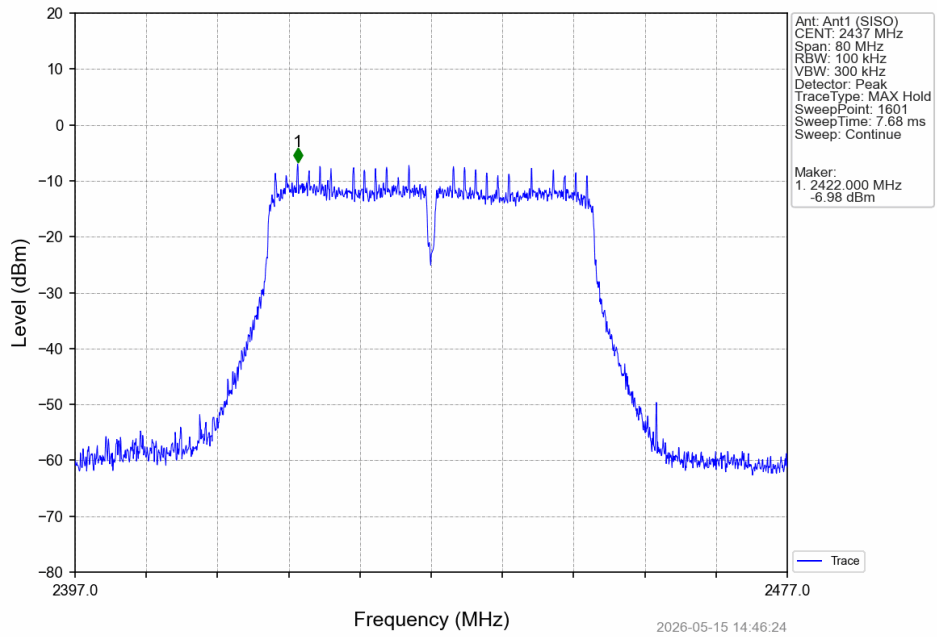
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



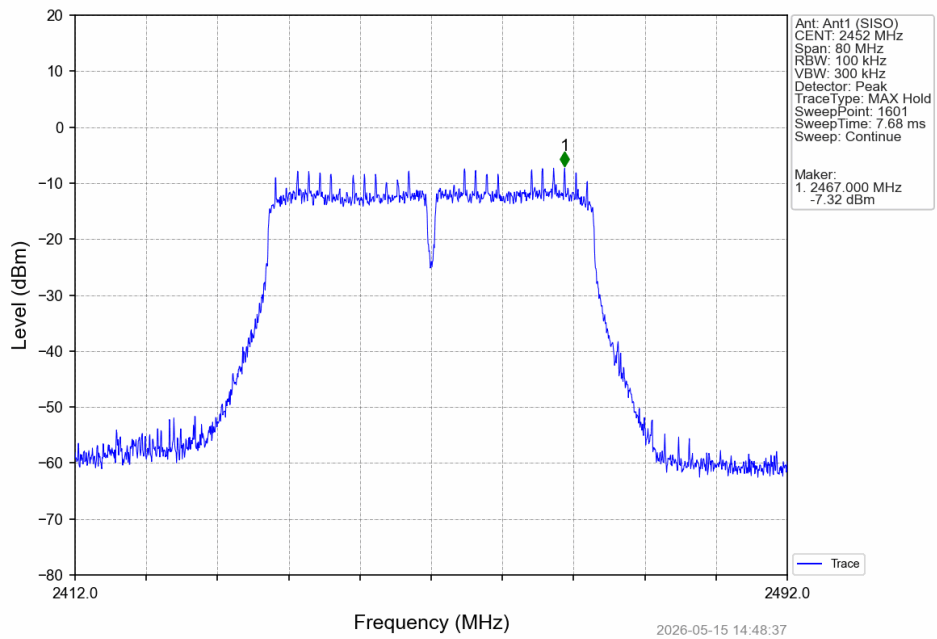
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



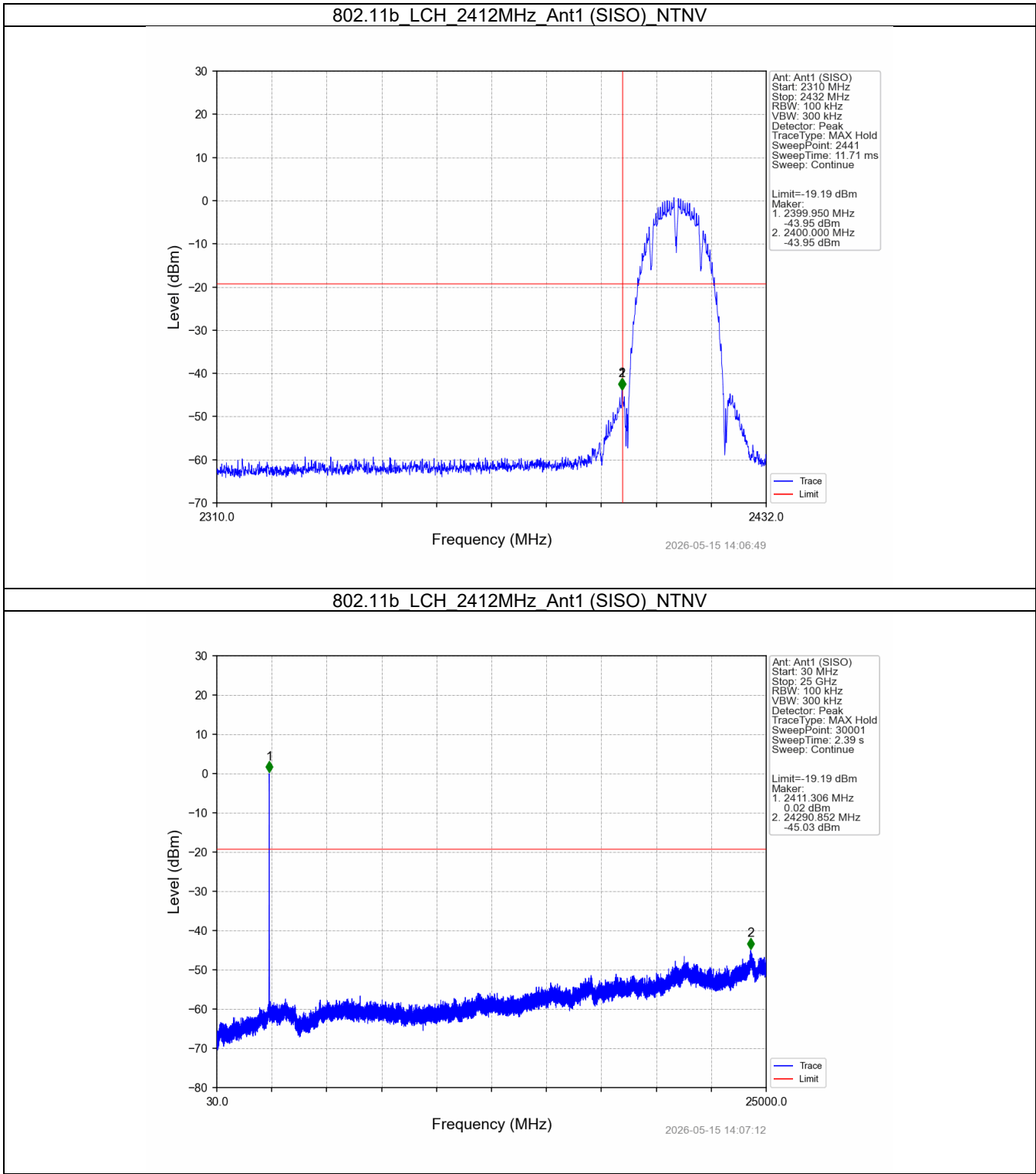
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



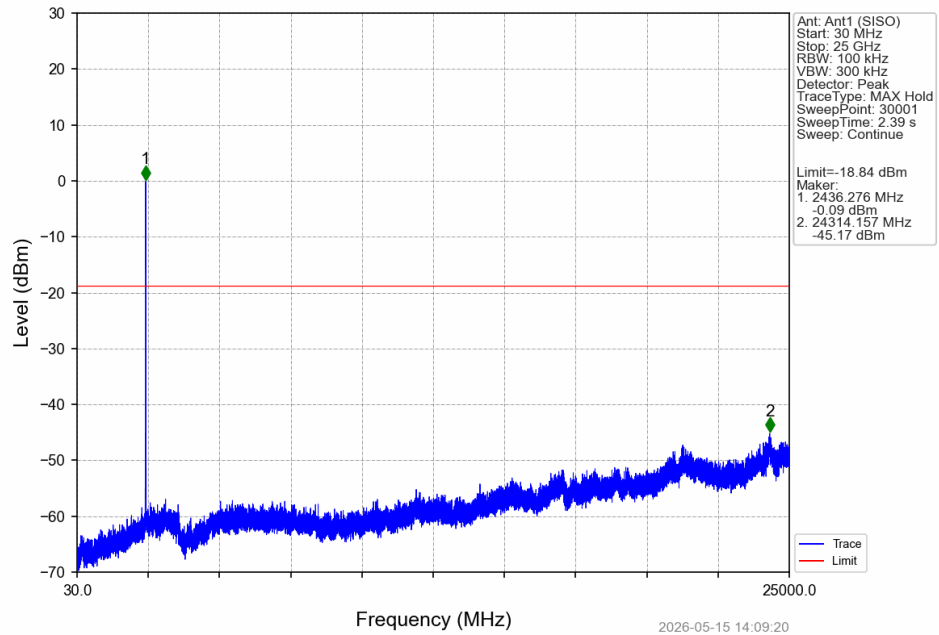
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



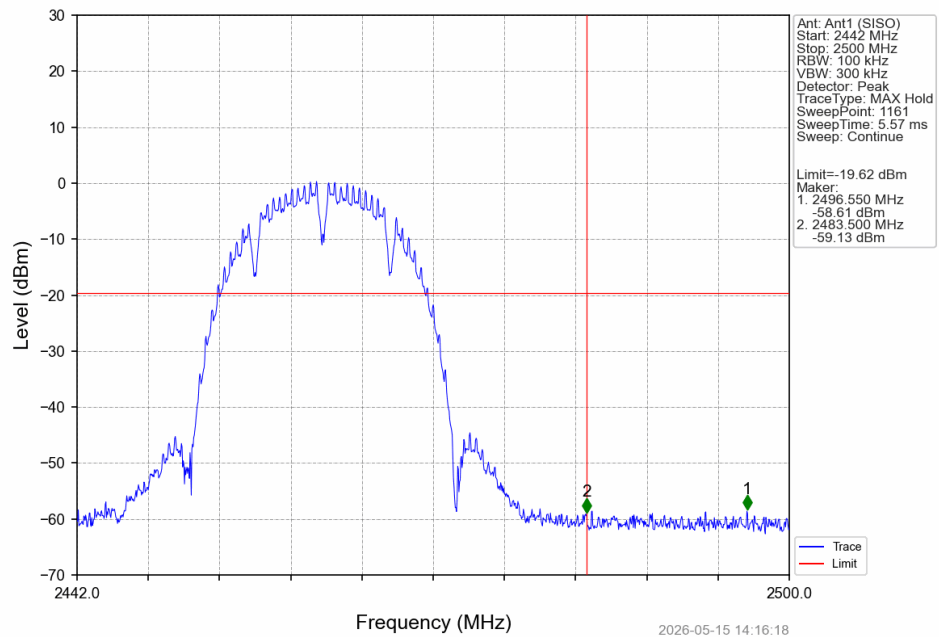
5.2.2 CSE



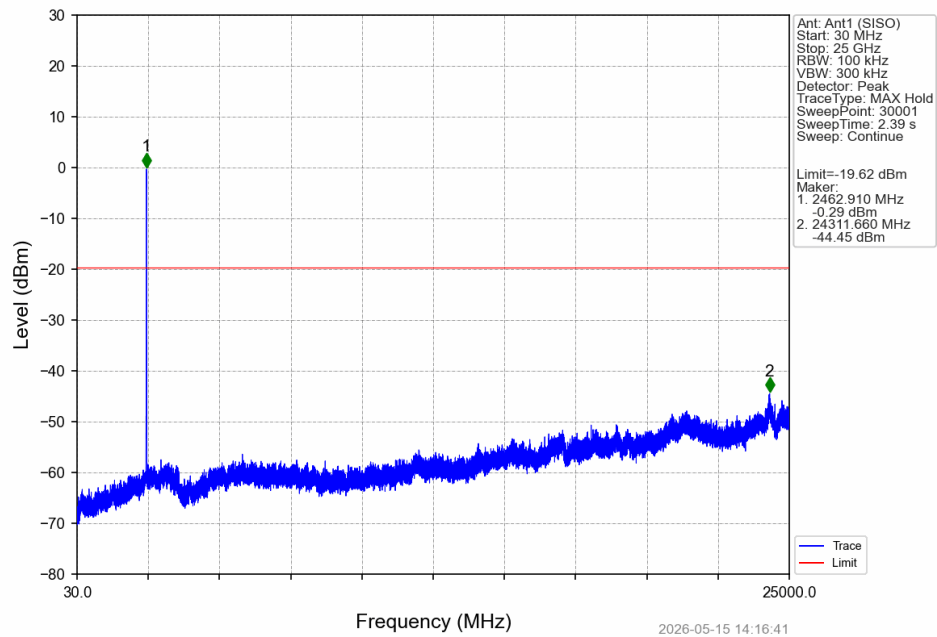
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



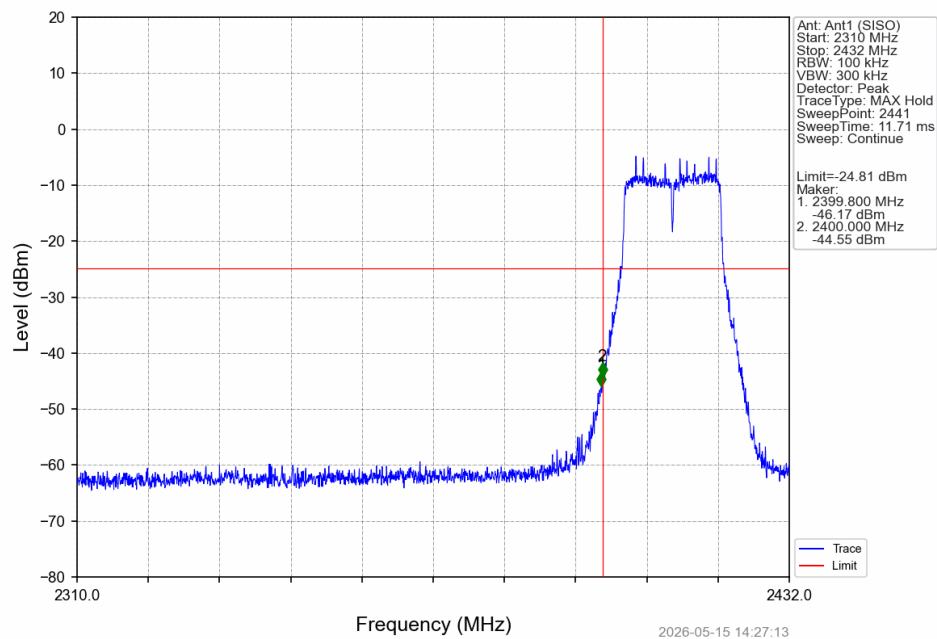
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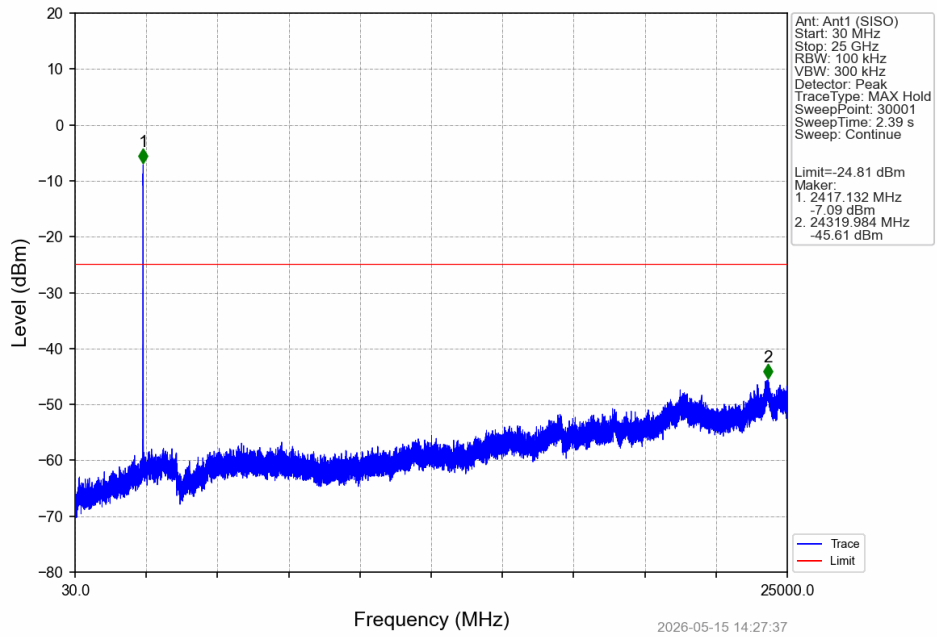
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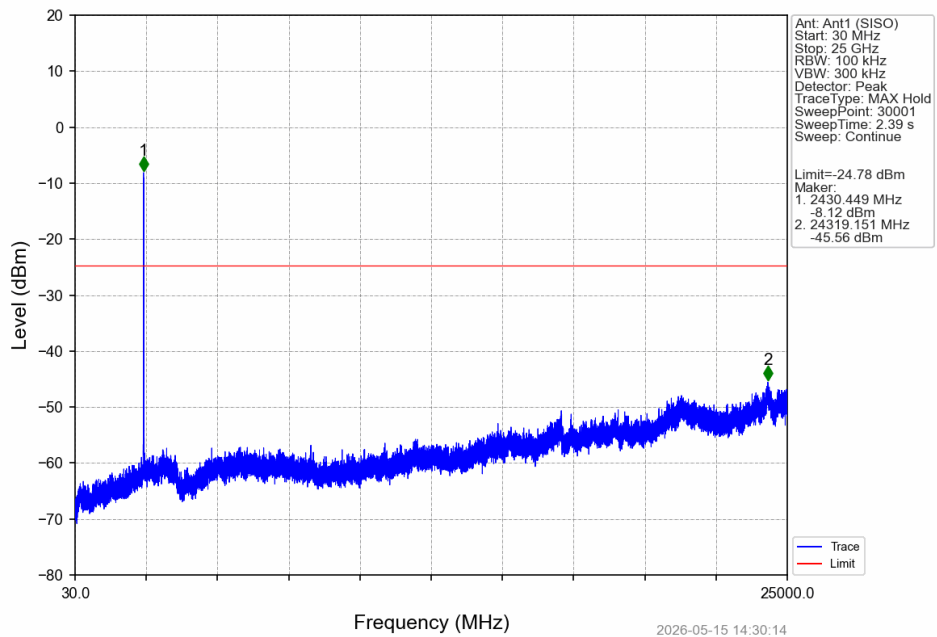
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



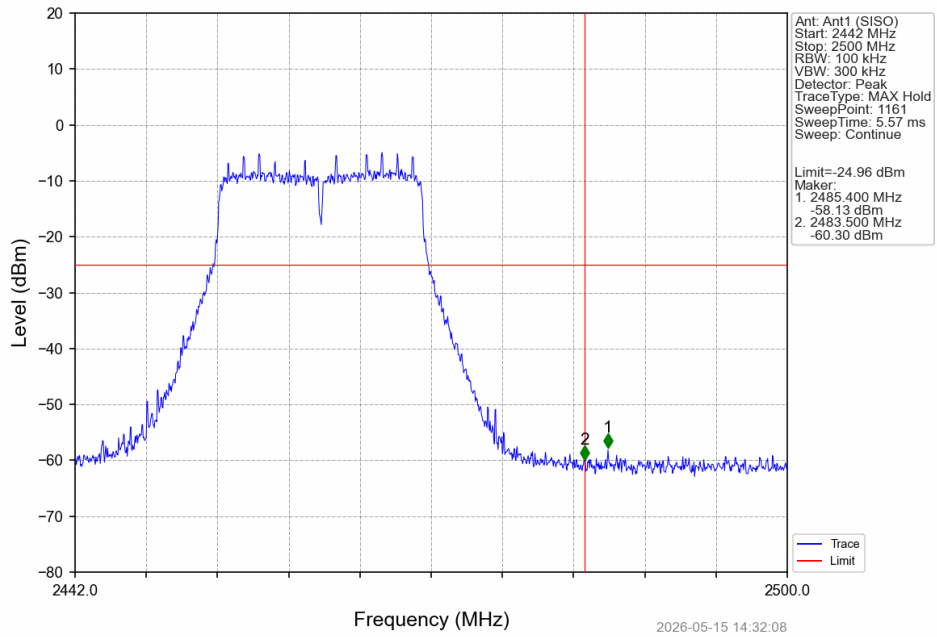
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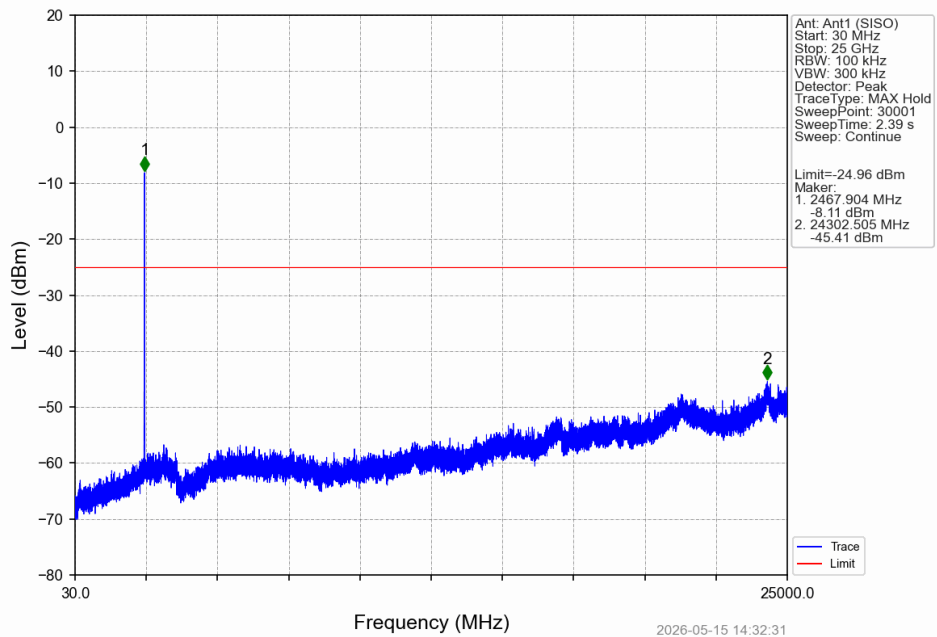
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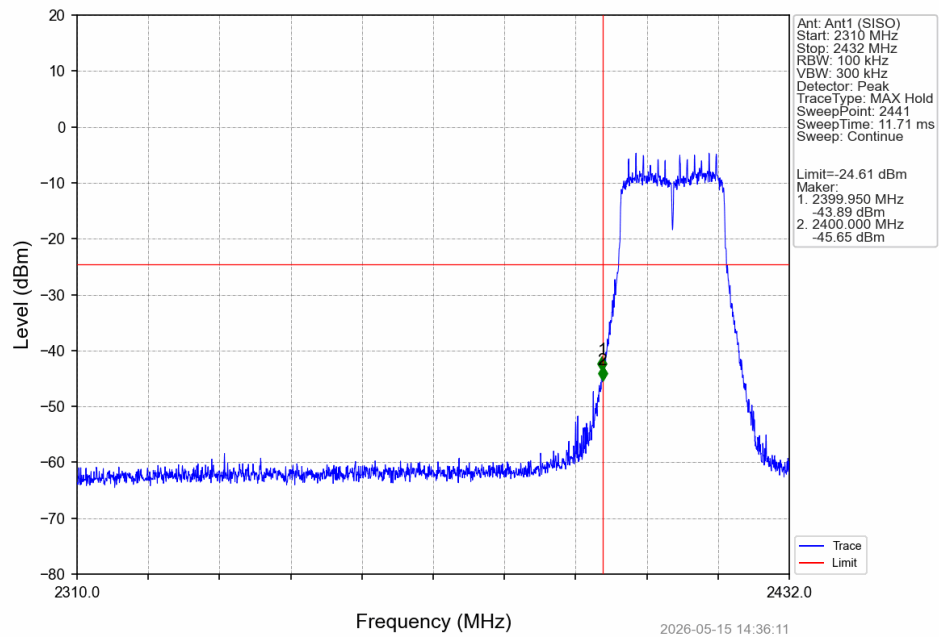
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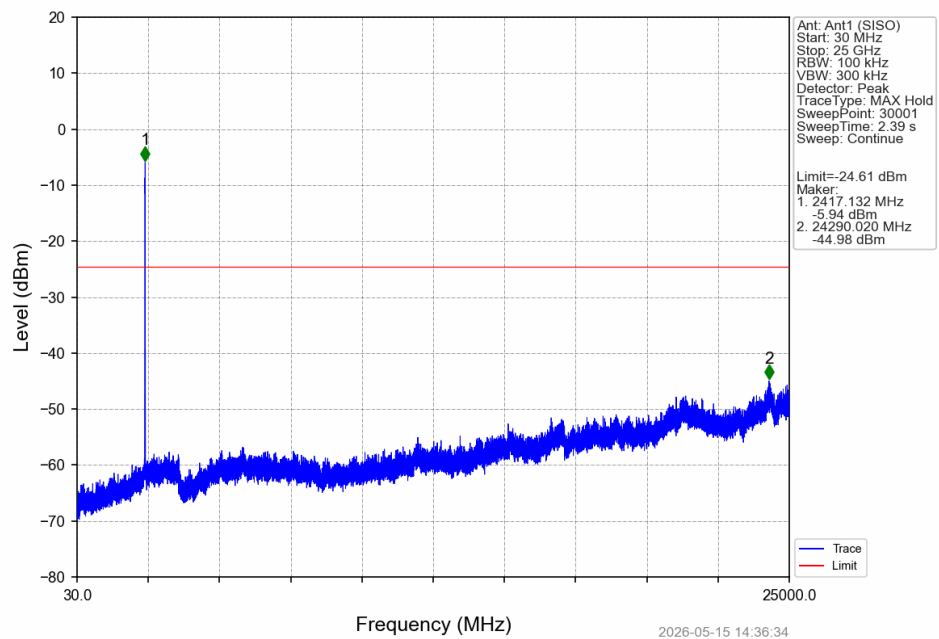
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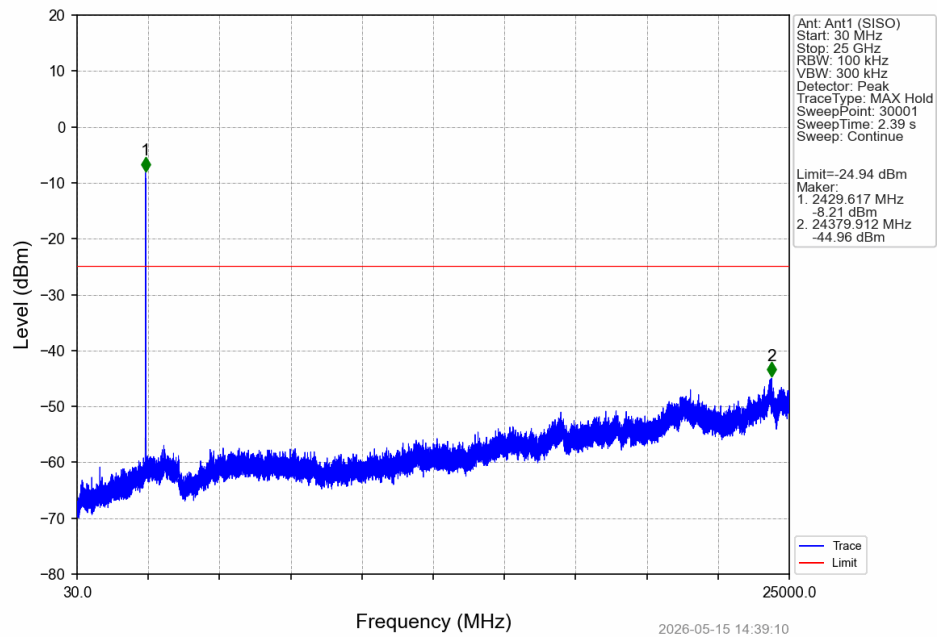
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



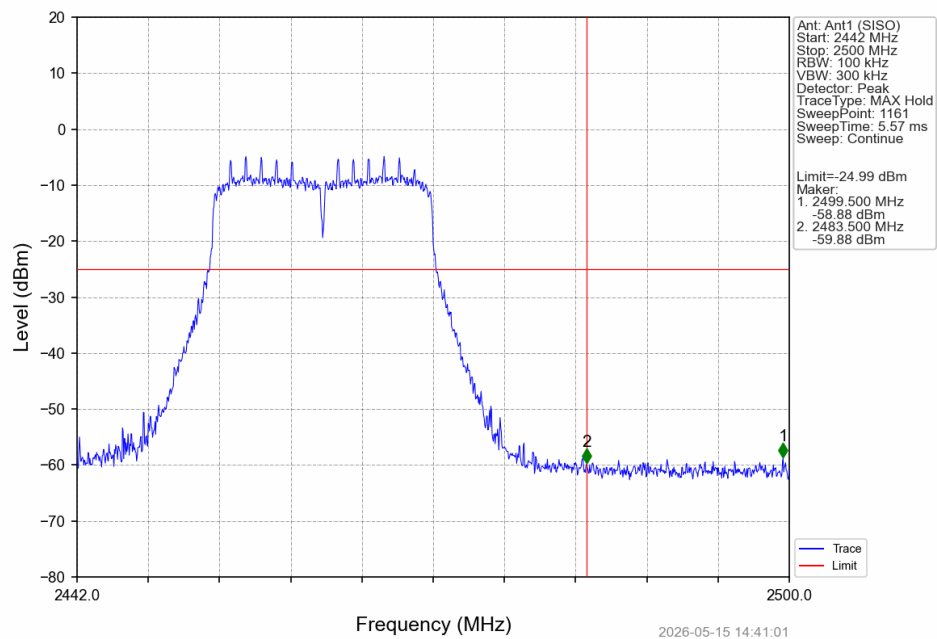
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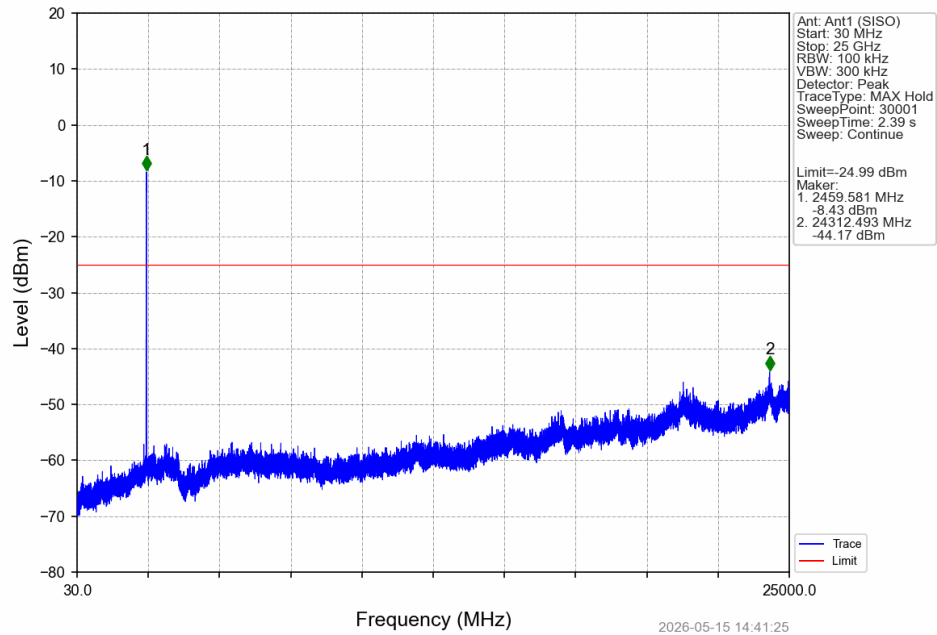
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



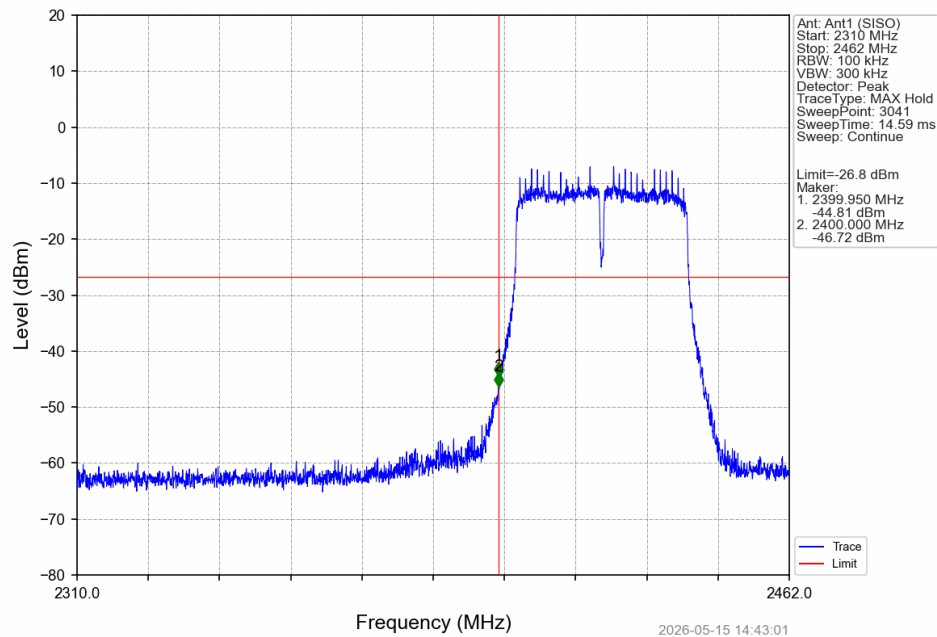
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



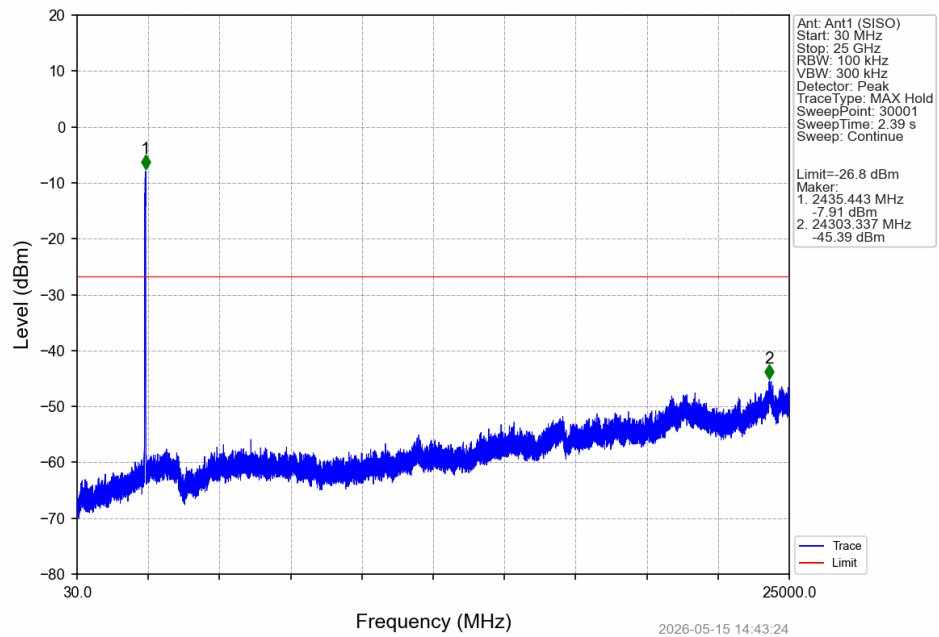
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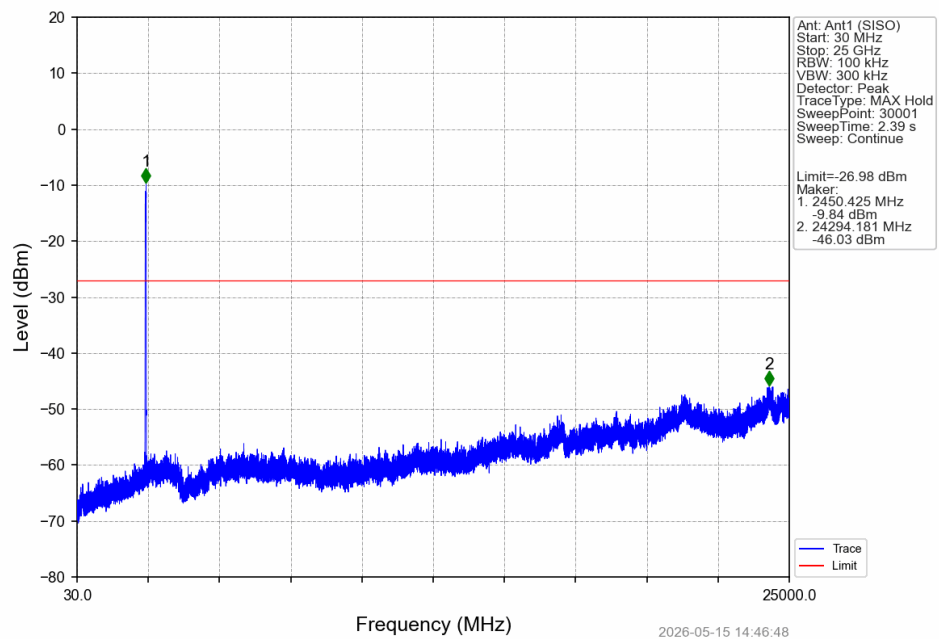
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



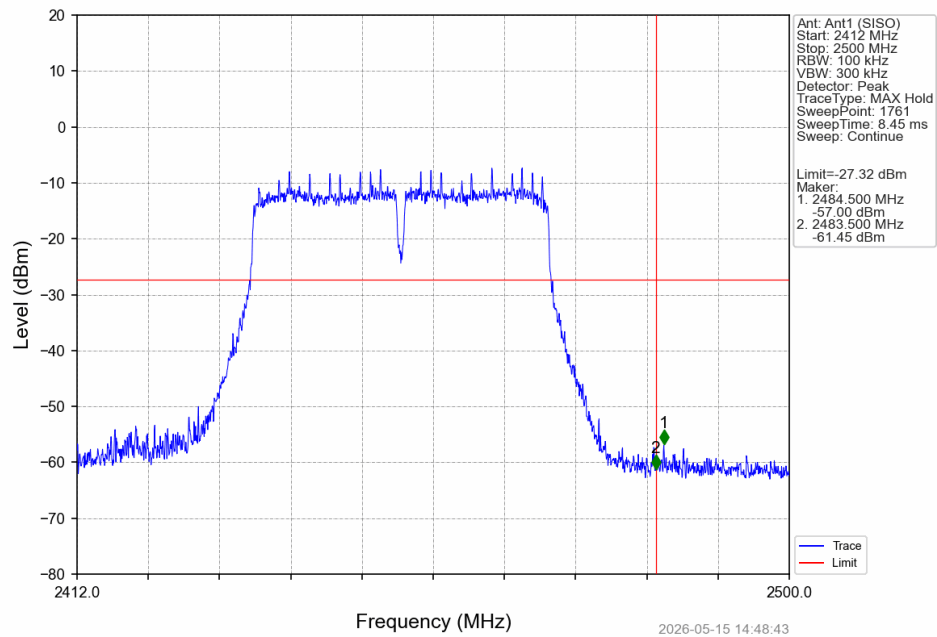
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

