Appendix RF Test Data for WIFI 2.4G

Company:	**:**	**Huizhou Huizhi Technology Co., Ltd**
EUT	**:**	**WIFI MODULE**
FCC ID:	**:**	**2BGY7-HZ02**
Model Number	**:**	**HZ-TA22UV1.0**
Report No.	**:**	**HTT2025061079F04**
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	8.197	8.700	94.22	0.26	0.04
		2437	8.197	8.700	94.22	0.26	0.04
		2462	8.197	8.700	94.22	0.26	0.04
802.11g	SISO	2412	1.362	1.863	73.11	1.36	0.03
		2437	1.361	1.862	73.09	1.36	0.03
		2462	1.361	1.862	73.09	1.36	0.03
802.11n (HT20)	MIMO	2412	1.274	1.775	71.77	1.44	0.02
		2437	1.273	1.774	71.76	1.44	0.03
		2462	1.273	1.774	71.76	1.44	0.03
802.11n (HT40)	MIMO	2422	0.634	1.134	55.91	2.53	0.01
		2437	0.634	1.134	55.91	2.53	0.01
		2452	0.634	1.135	55.86	2.53	0.03

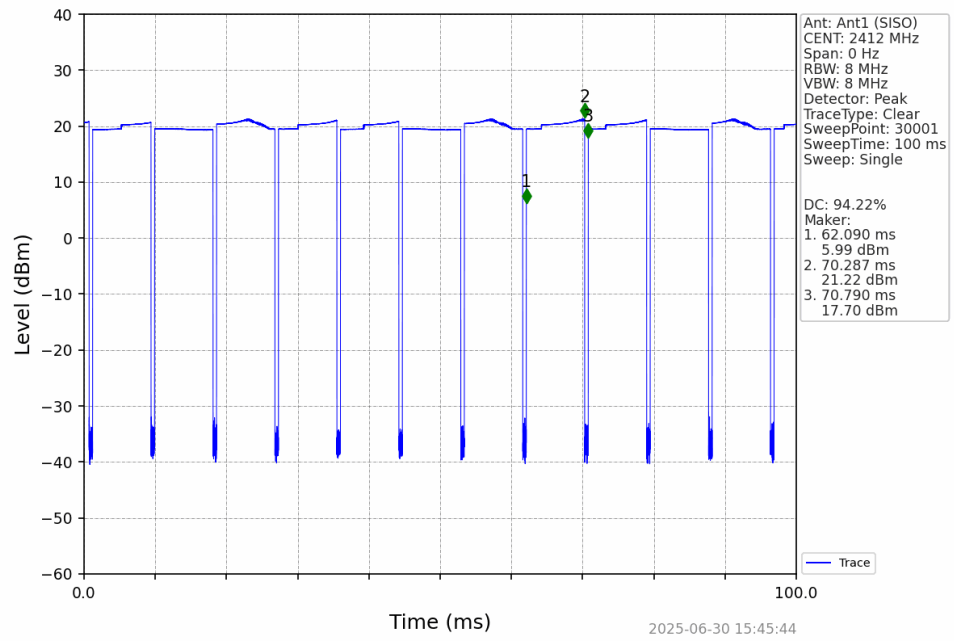
1.1.2 Ant2

Ant2							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.197	8.700	94.22	0.26	0.04
		2437	8.197	8.700	94.22	0.26	0.04
		2462	8.197	8.700	94.22	0.26	0.04
802.11g	SISO	2412	1.362	1.863	73.11	1.36	0.03
		2437	1.362	1.863	73.11	1.36	0.03
		2462	1.362	1.863	73.11	1.36	0.02
802.11n (HT20)	MIMO	2412	1.274	1.775	71.77	1.44	0.02
		2437	1.273	1.774	71.76	1.44	0.03
		2462	1.273	1.774	71.76	1.44	0.03
802.11n (HT40)	MIMO	2422	0.634	1.134	55.91	2.53	0.01
		2437	0.633	1.134	55.82	2.53	0.03
		2452	0.633	1.134	55.82	2.53	0.01

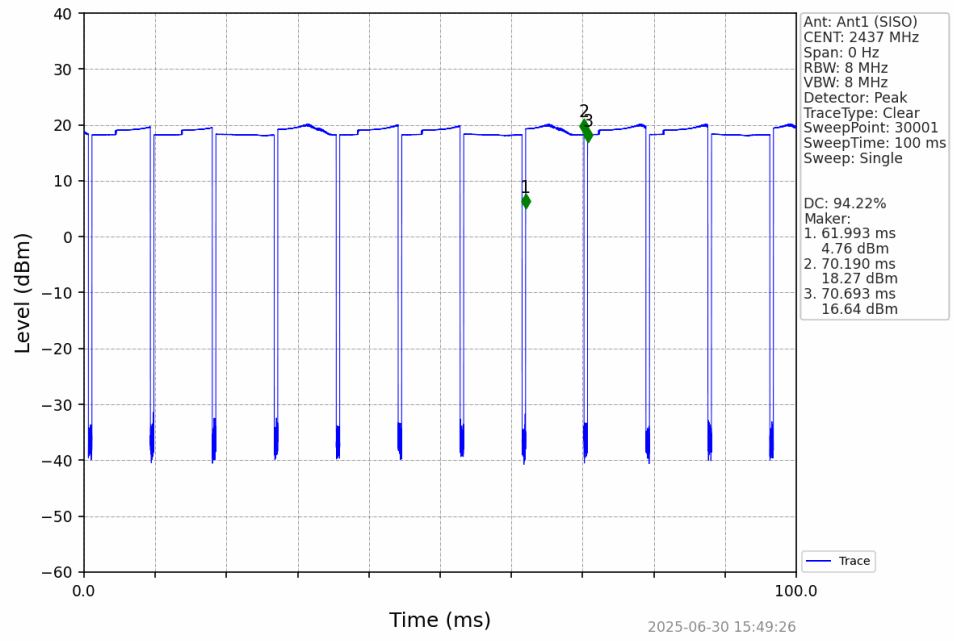
1.2 Test Graph

1.2.1 Ant1

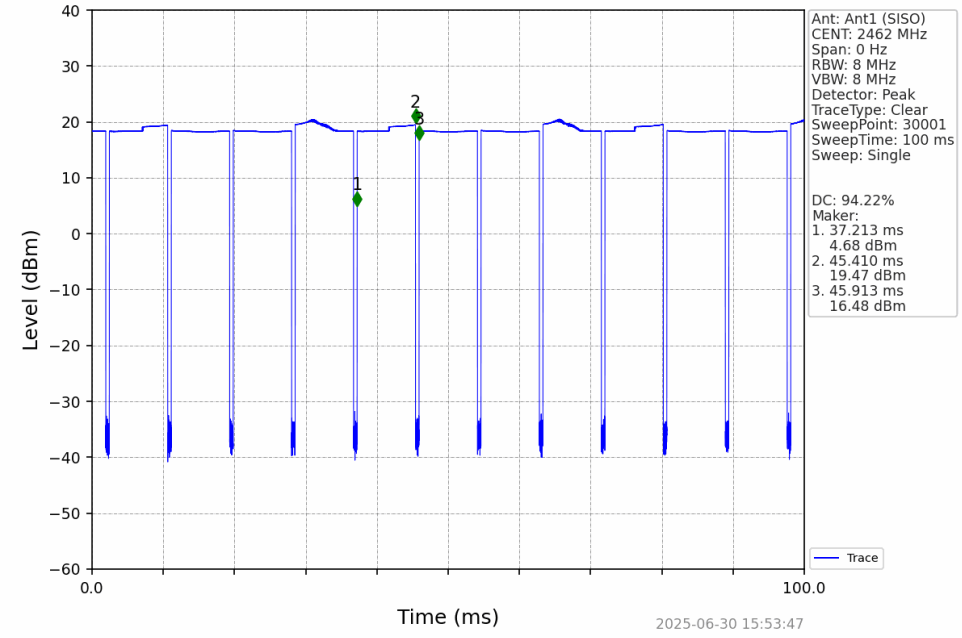
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



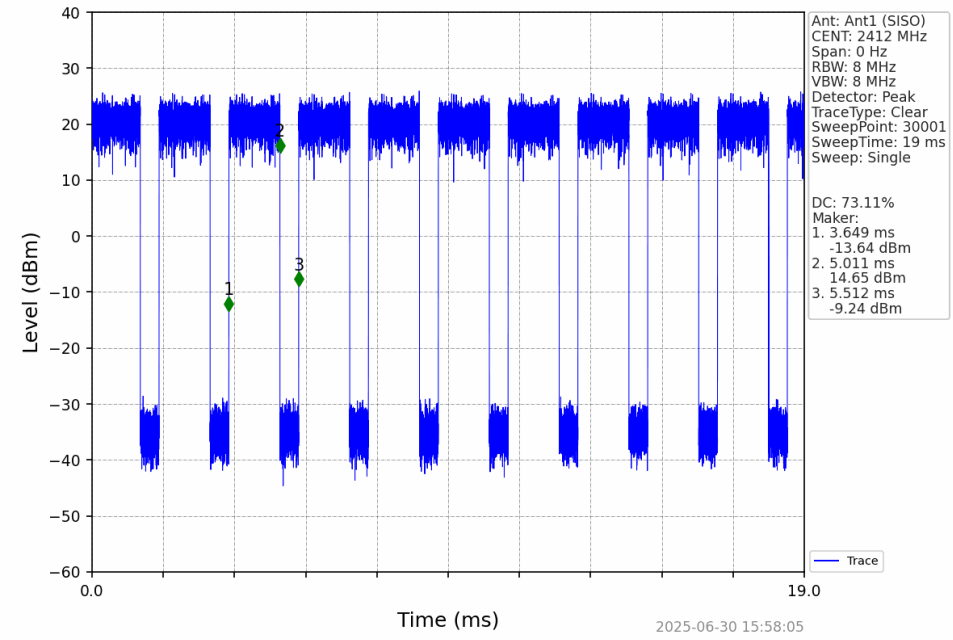
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



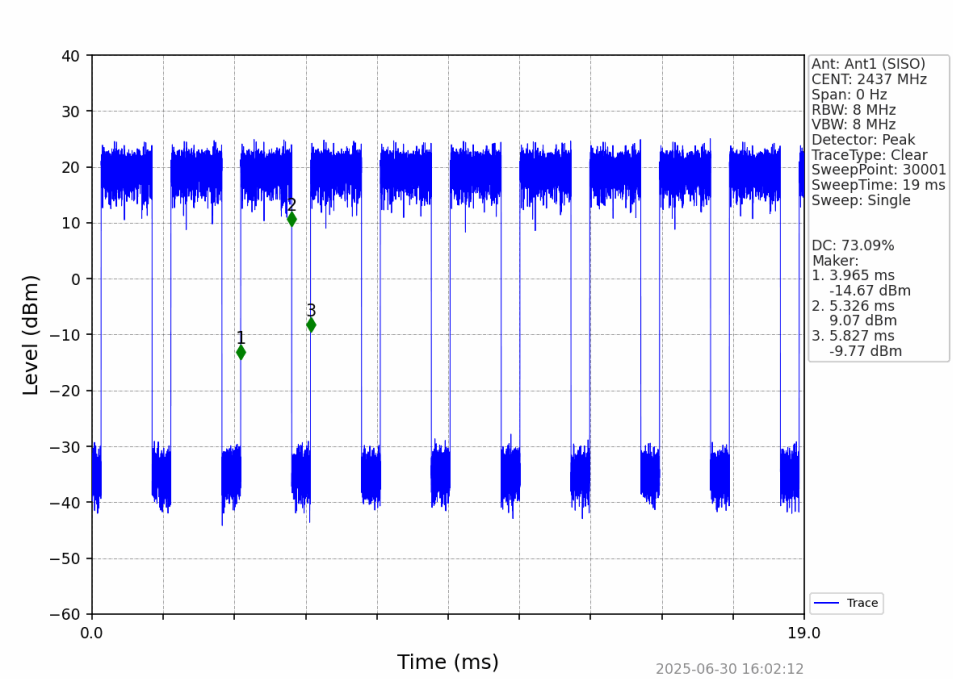
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



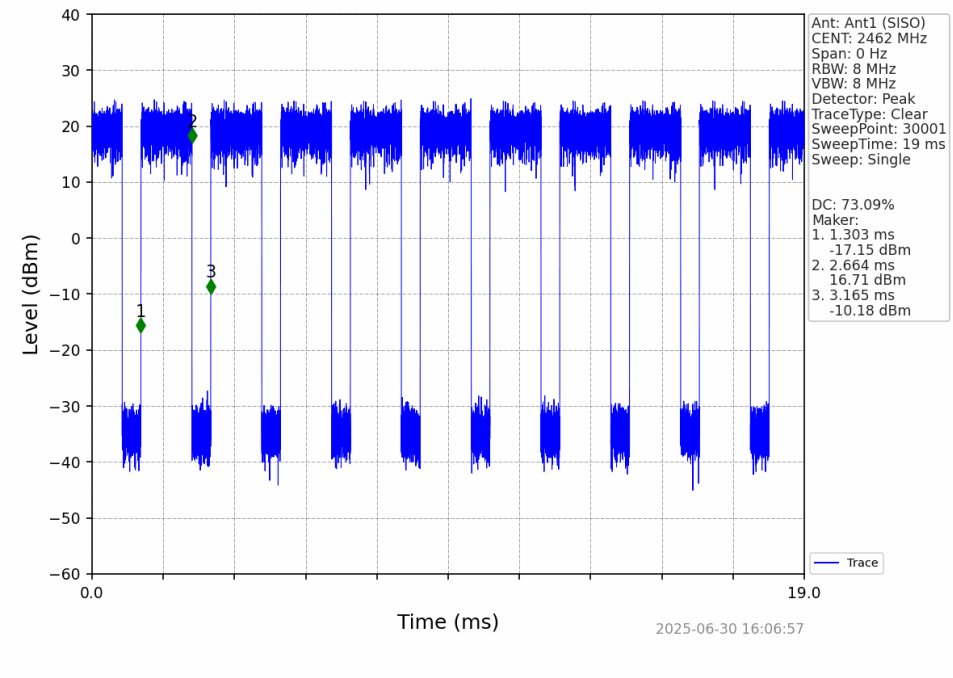
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



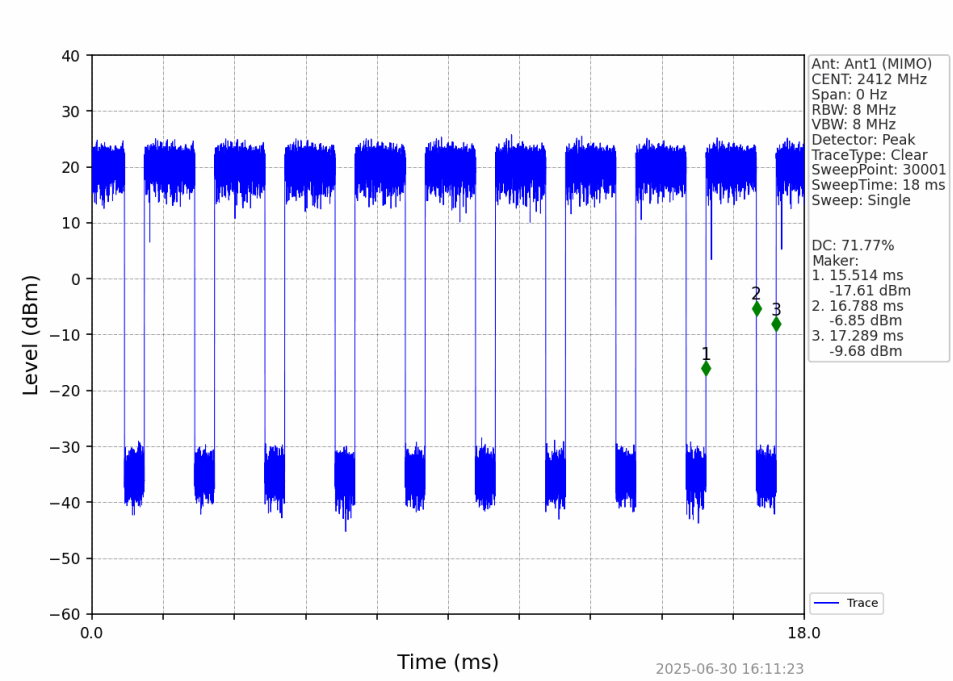
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



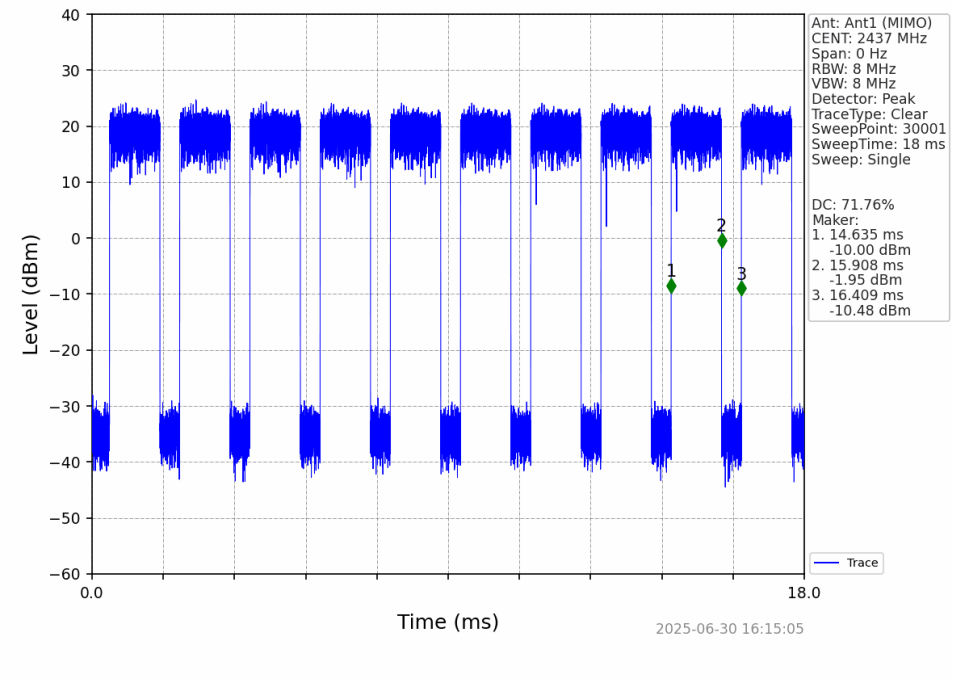
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



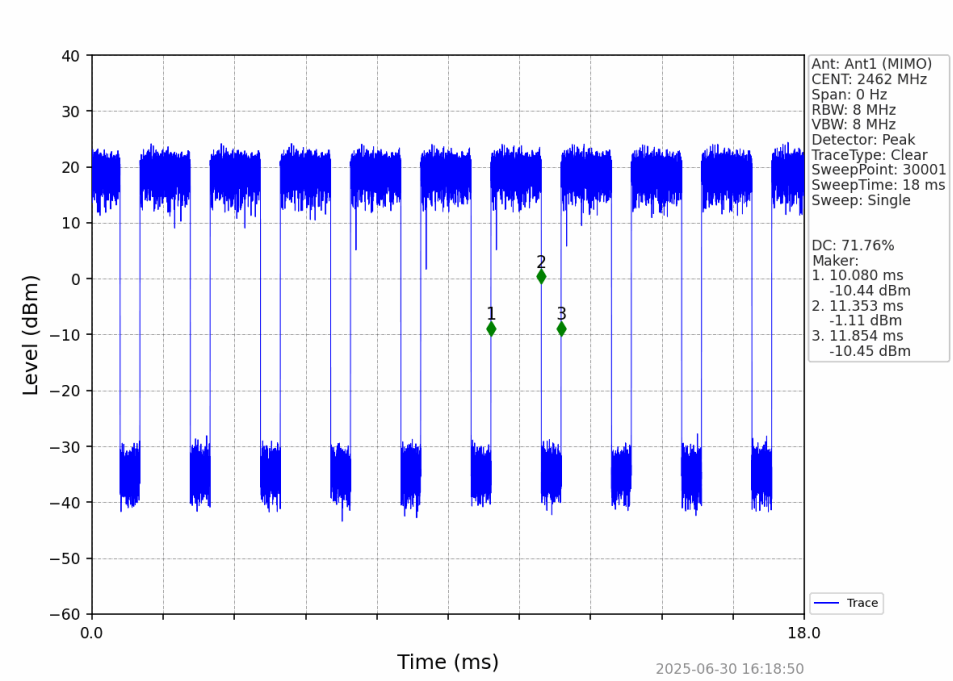
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



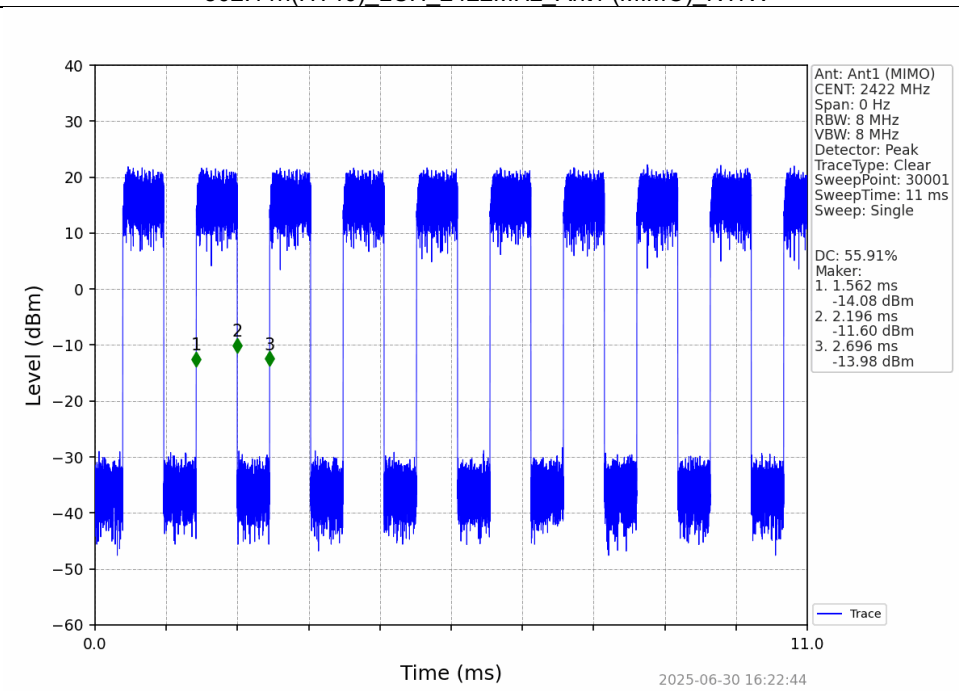
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



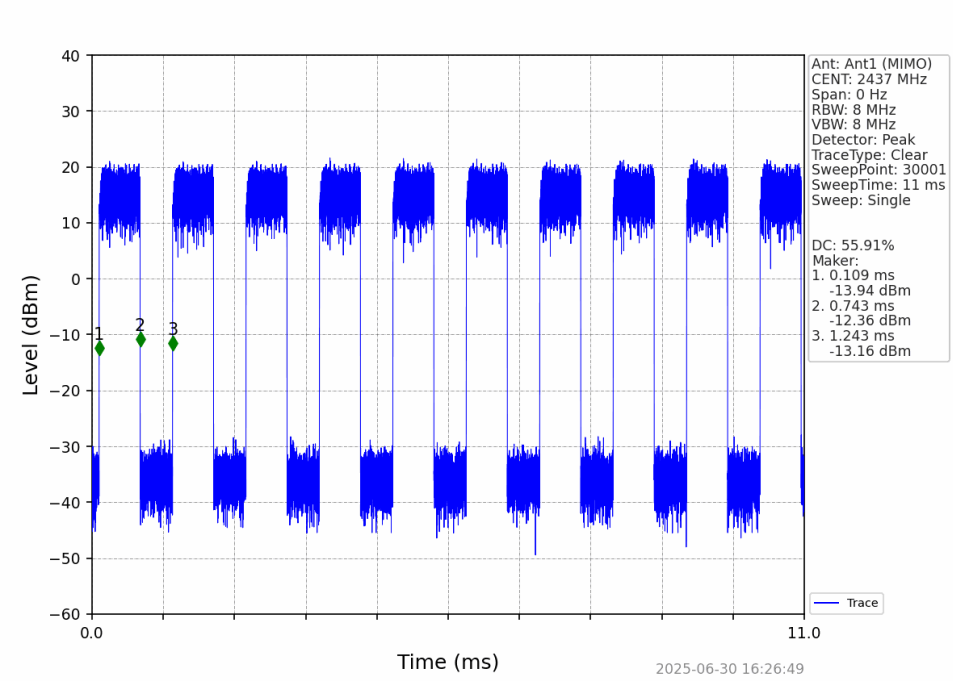
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



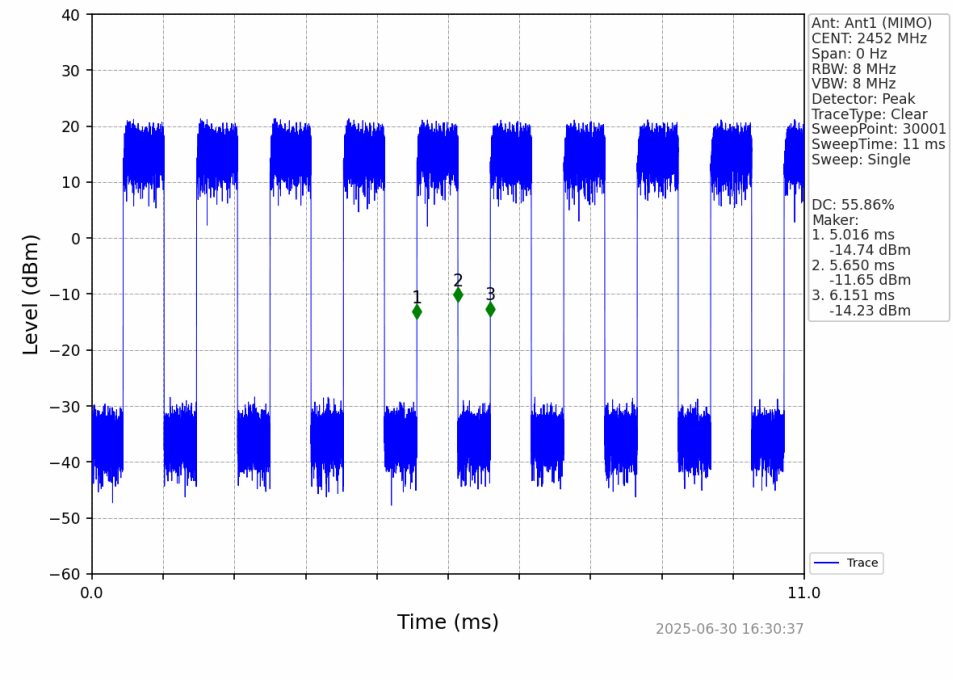
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV

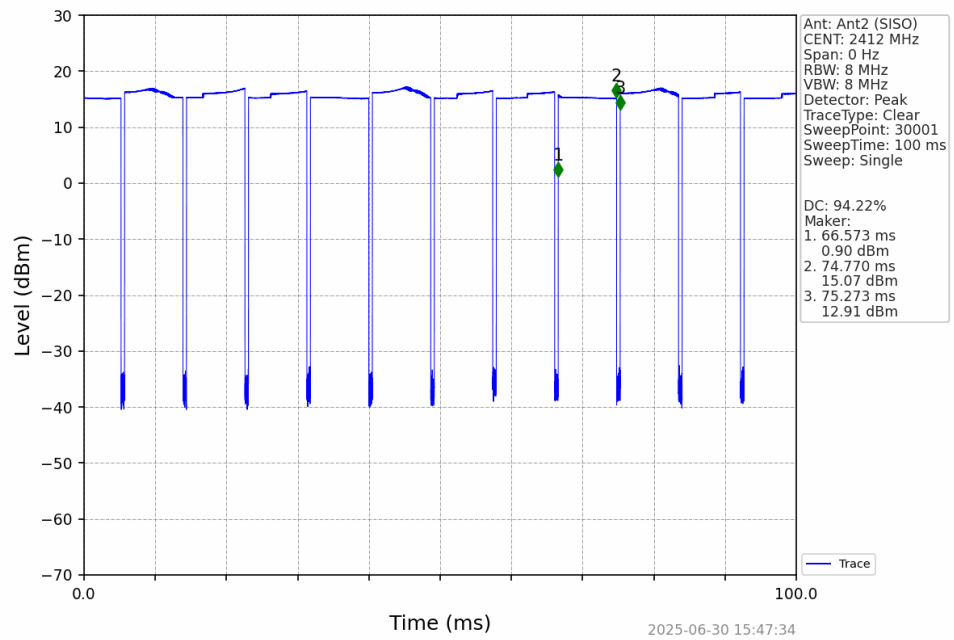


802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

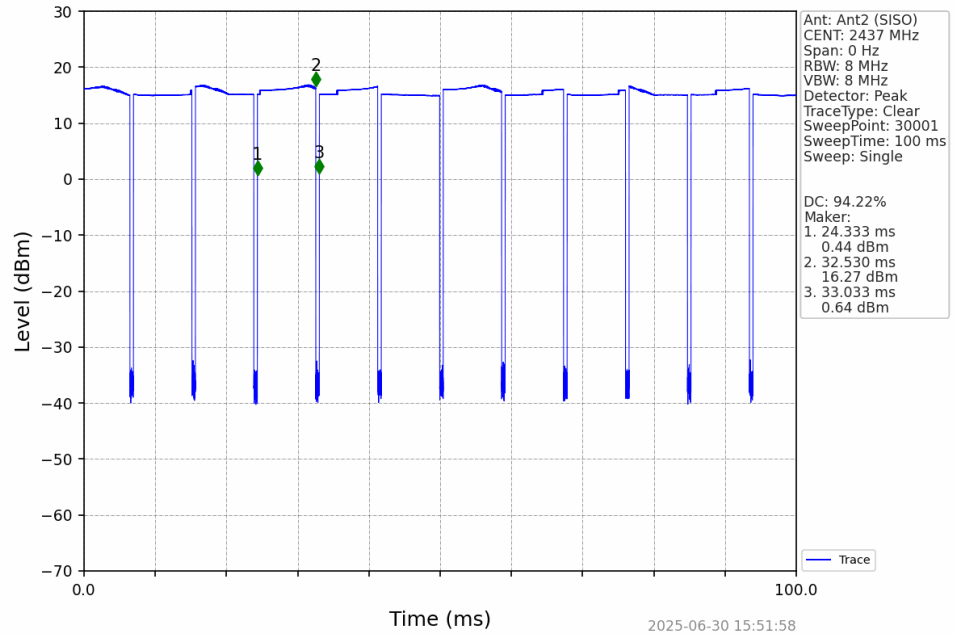


1.2.2 Ant2

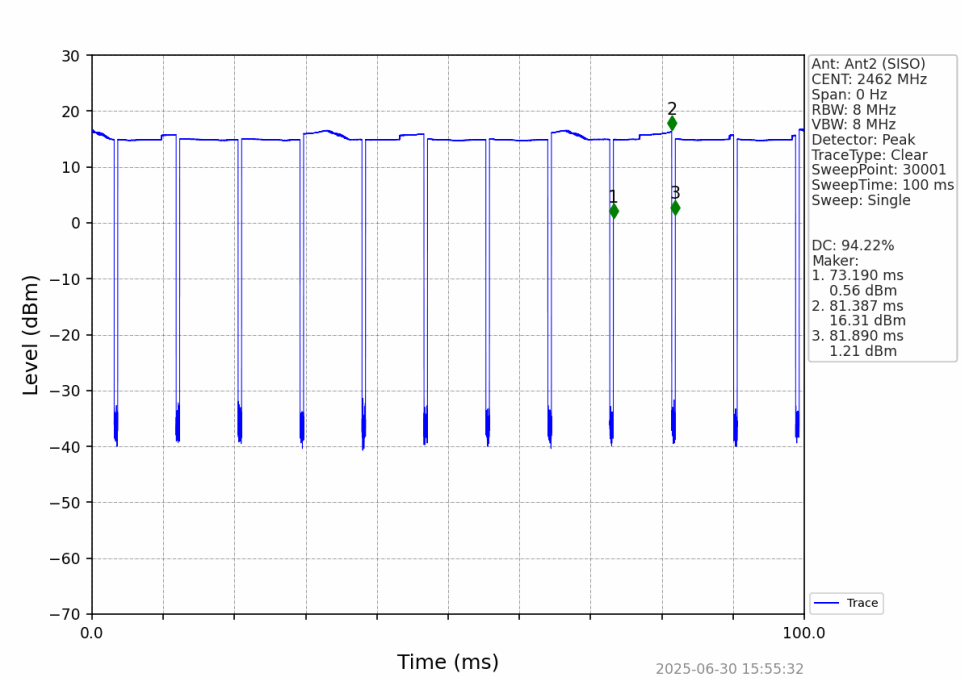
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



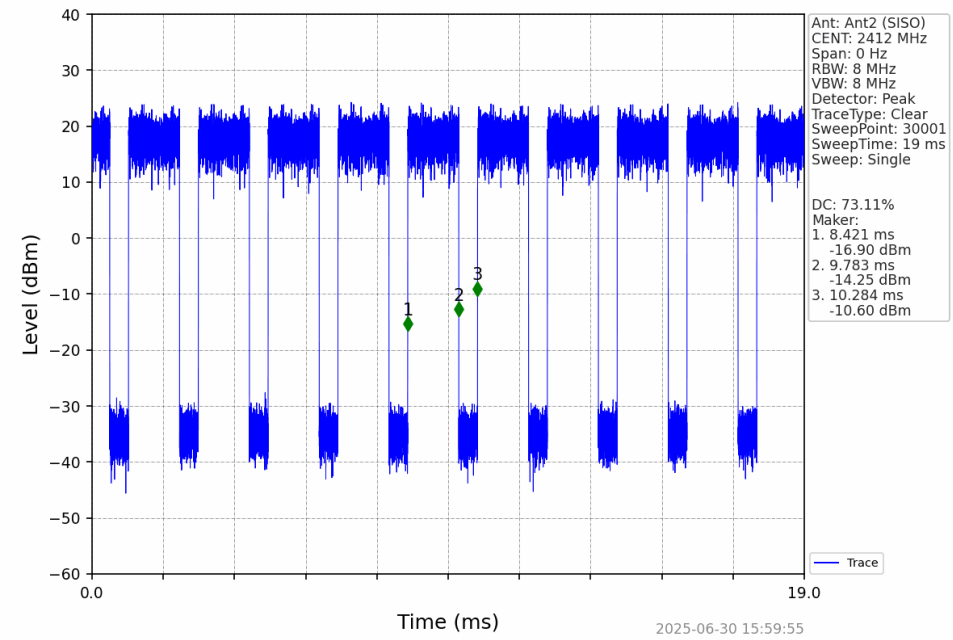
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



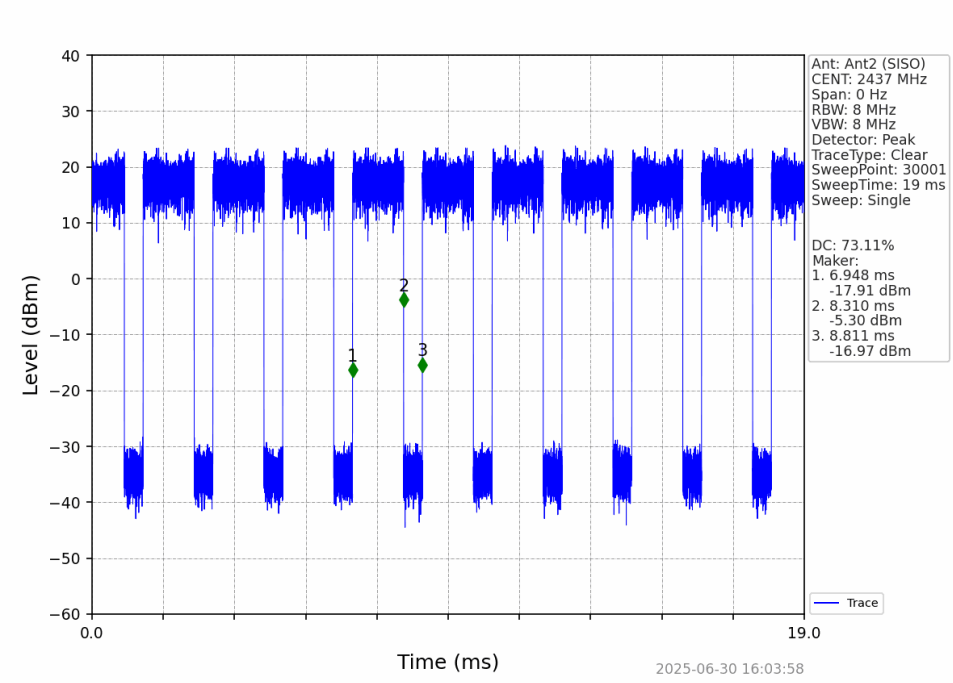
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



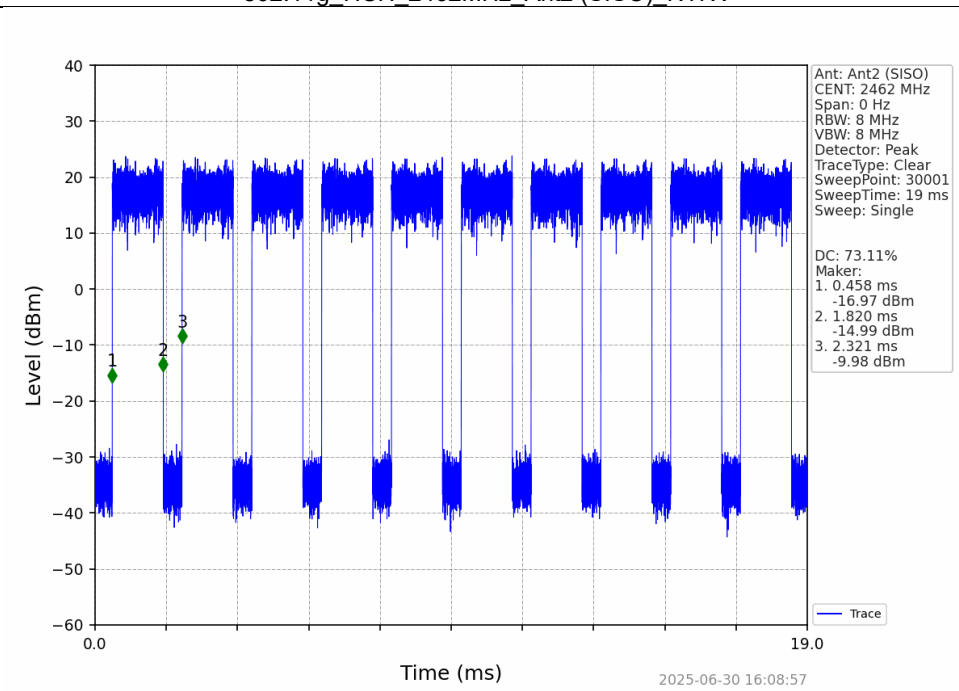
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



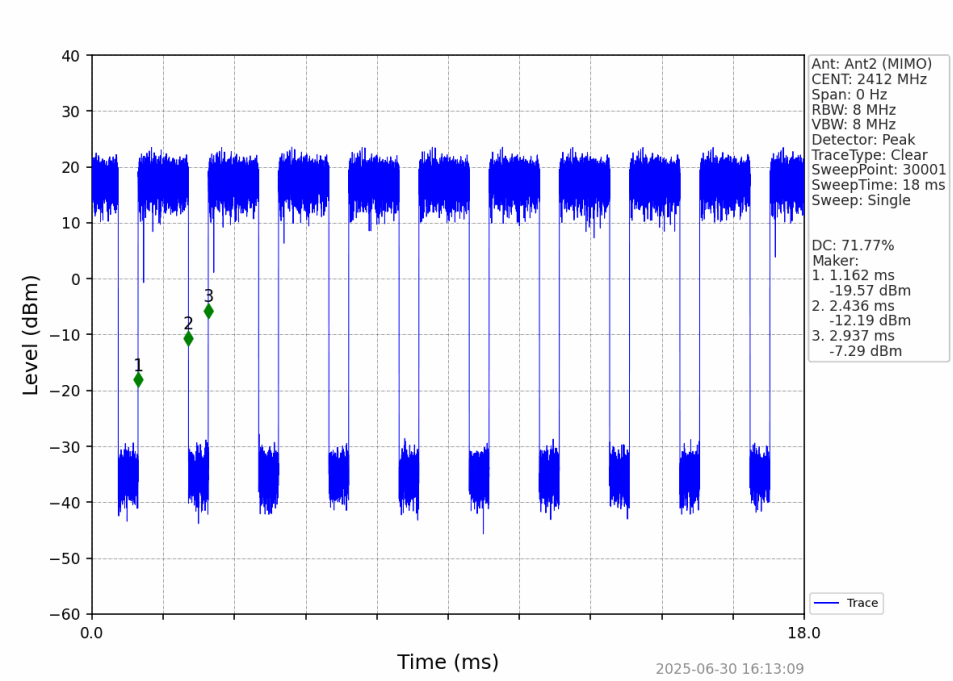
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



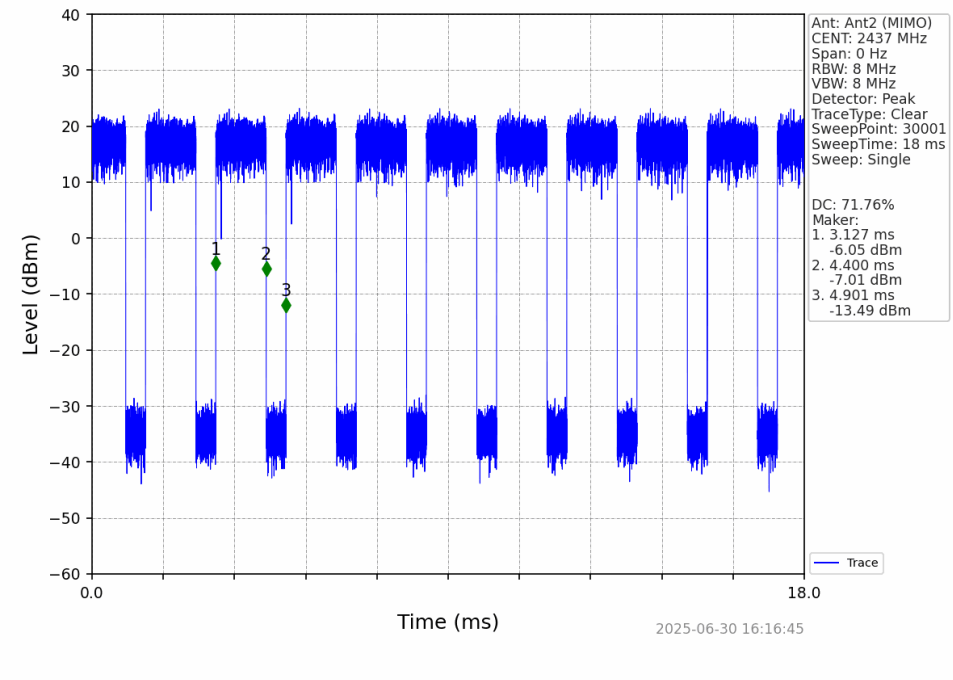
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



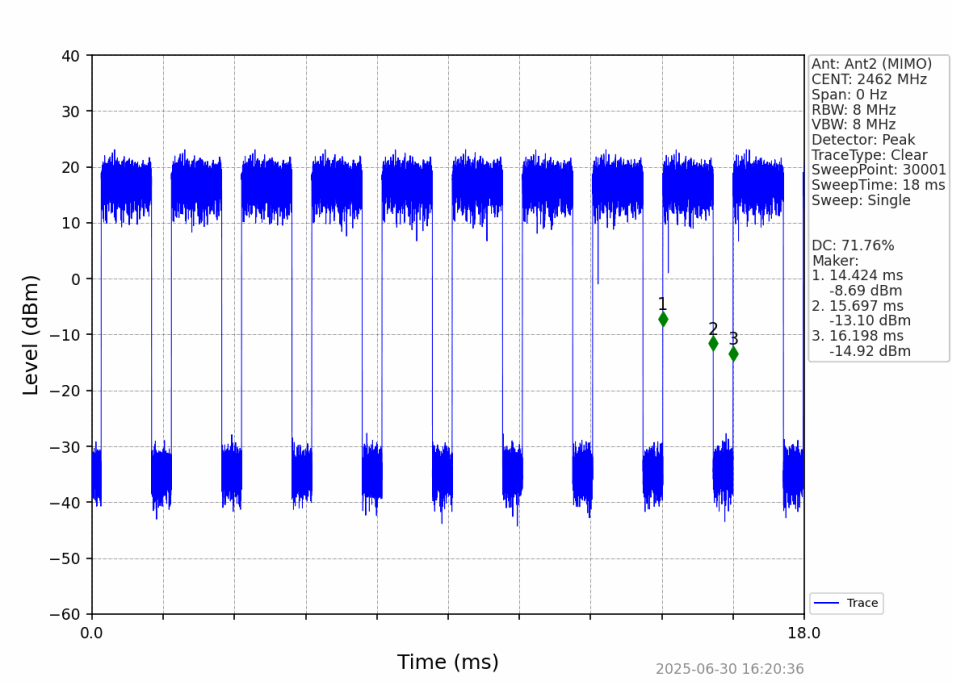
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



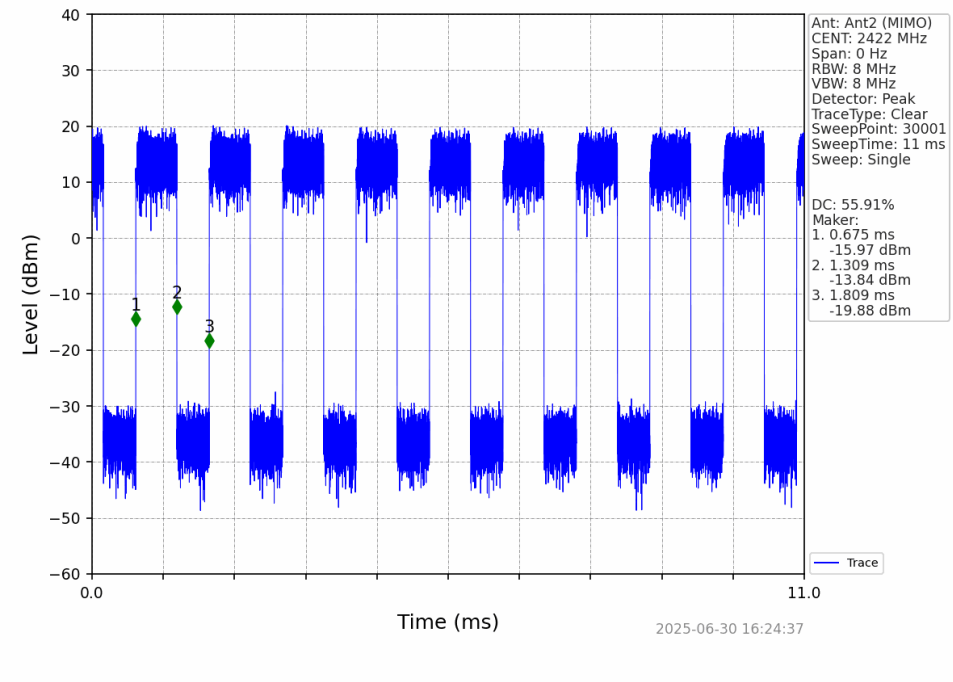
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



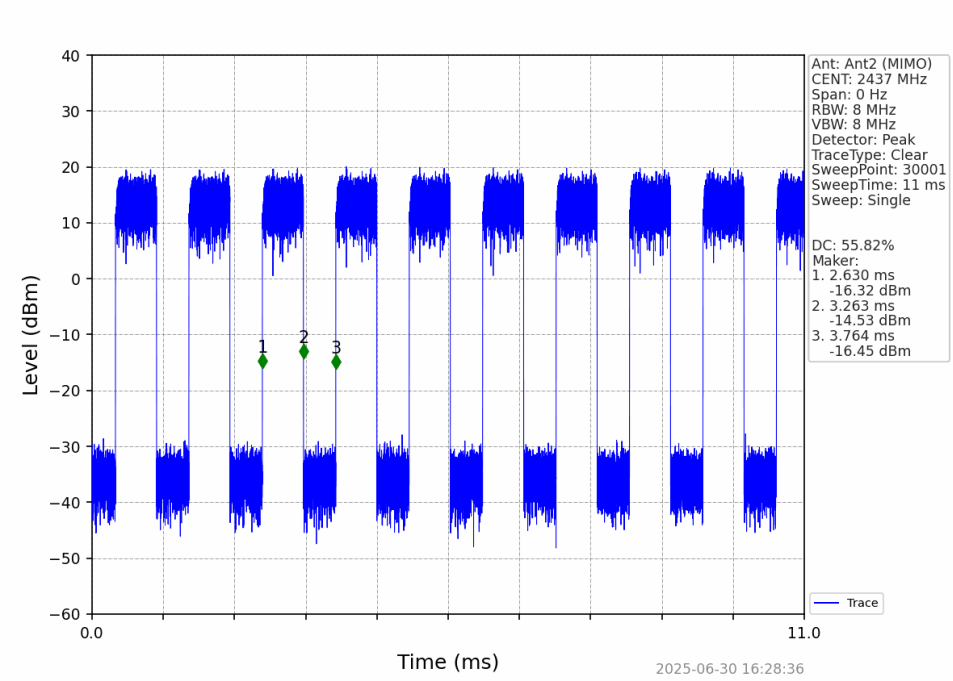
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



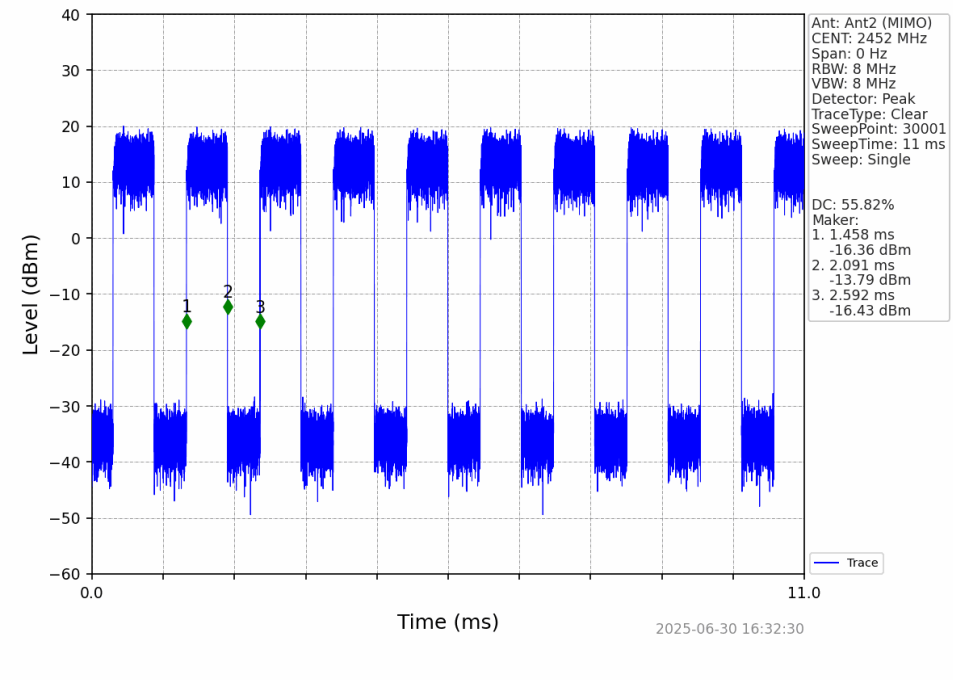
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_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	14.840	/	Pass
			2	14.586	/	Pass
		2437	1	14.863	/	Pass
			2	14.570	/	Pass
		2462	1	14.835	/	Pass
			2	14.614	/	Pass
802.11g	SISO	2412	1	17.694	/	Pass
			2	17.262	/	Pass
		2437	1	17.438	/	Pass
			2	16.877	/	Pass
		2462	1	17.453	/	Pass
			2	16.906	/	Pass
802.11n (HT20)	MIMO	2412	1	18.716	/	Pass
			2	18.298	/	Pass
		2437	1	18.539	/	Pass
			2	18.111	/	Pass
		2462	1	18.527	/	Pass
			2	18.346	/	Pass
802.11n (HT40)	MIMO	2422	1	37.157	/	Pass
			2	36.631	/	Pass
		2437	1	36.954	/	Pass
			2	36.589	/	Pass
		2452	1	36.729	/	Pass
			2	37.052	/	Pass

2.1.2 6dB BW

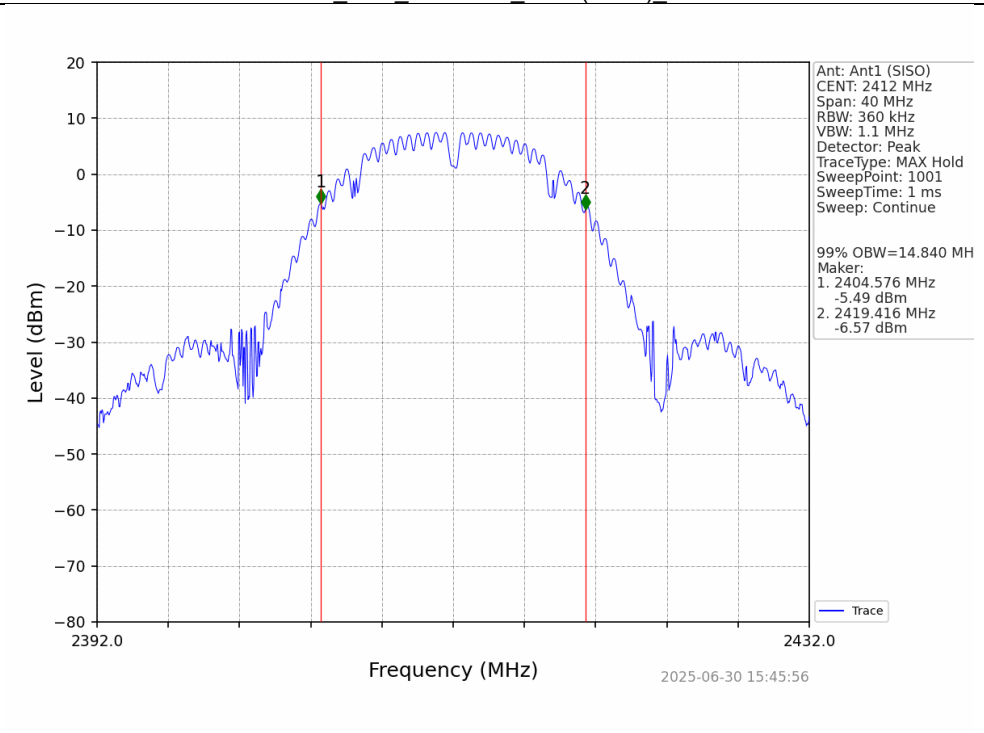
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.130	>=0.5	Pass
			2	10.135	>=0.5	Pass
		2437	1	10.136	>=0.5	Pass
			2	10.135	>=0.5	Pass
		2462	1	10.136	>=0.5	Pass
			2	10.141	>=0.5	Pass
802.11g	SISO	2412	1	15.759	>=0.5	Pass
			2	15.955	>=0.5	Pass
		2437	1	15.768	>=0.5	Pass
			2	16.341	>=0.5	Pass
		2462	1	15.138	>=0.5	Pass
			2	16.347	>=0.5	Pass
802.11n (HT20)	MIMO	2412	1	16.301	>=0.5	Pass
			2	16.329	>=0.5	Pass
		2437	1	15.825	>=0.5	Pass
			2	15.996	>=0.5	Pass
		2462	1	16.056	>=0.5	Pass

			2	16.458	>=0.5	Pass
802.11n (HT40)	MIMO	2422	1	35.124	>=0.5	Pass
			2	35.183	>=0.5	Pass
		2437	1	35.178	>=0.5	Pass
			2	35.184	>=0.5	Pass
		2452	1	35.119	>=0.5	Pass
			2	35.176	>=0.5	Pass

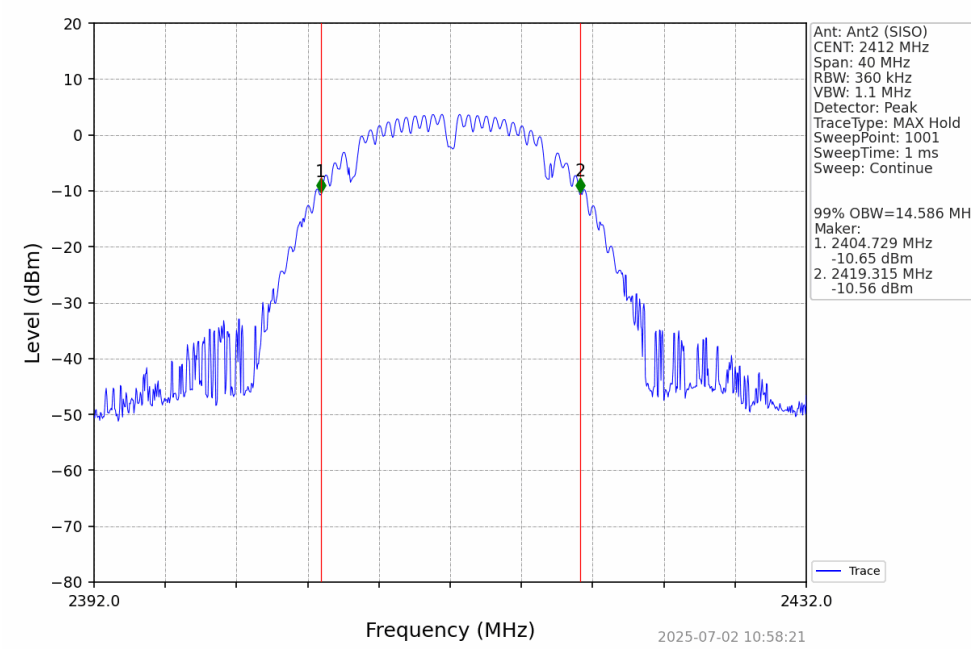
2.2 Test Graph

2.2.1 OBW

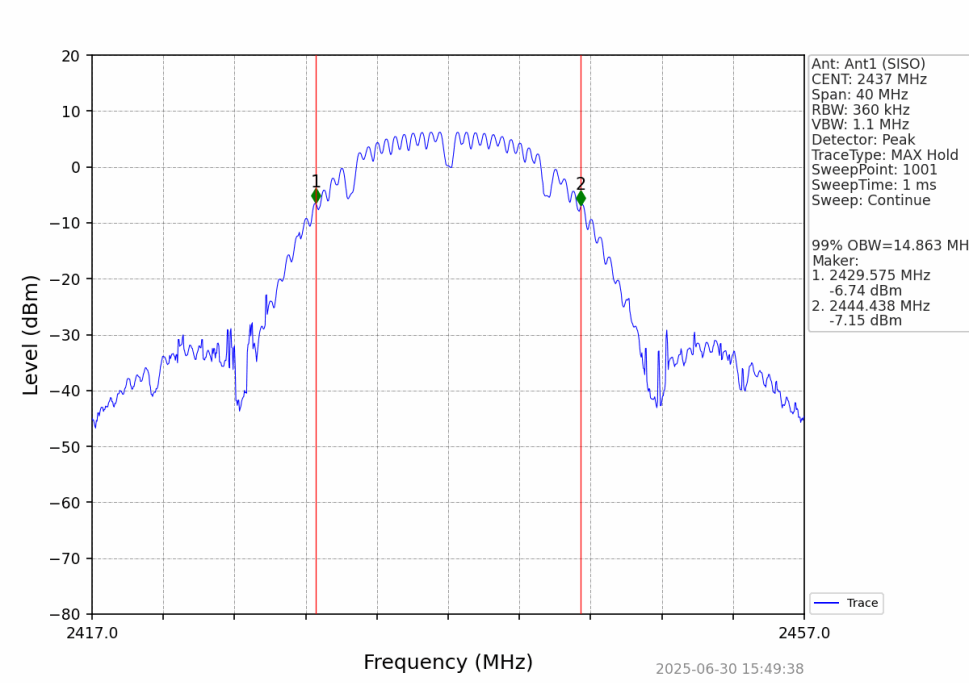
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



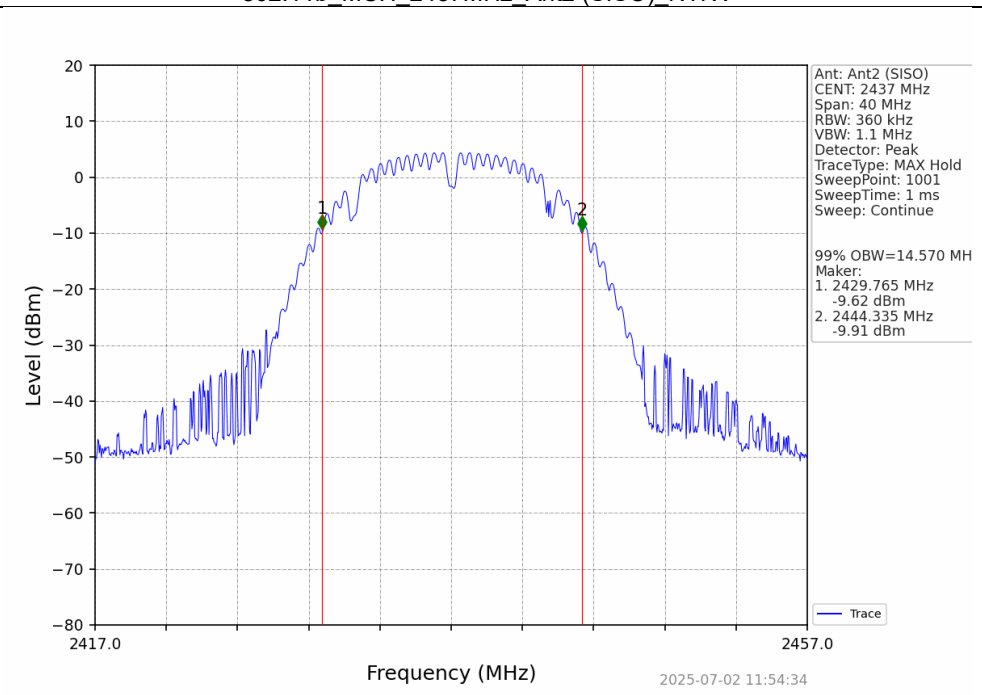
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



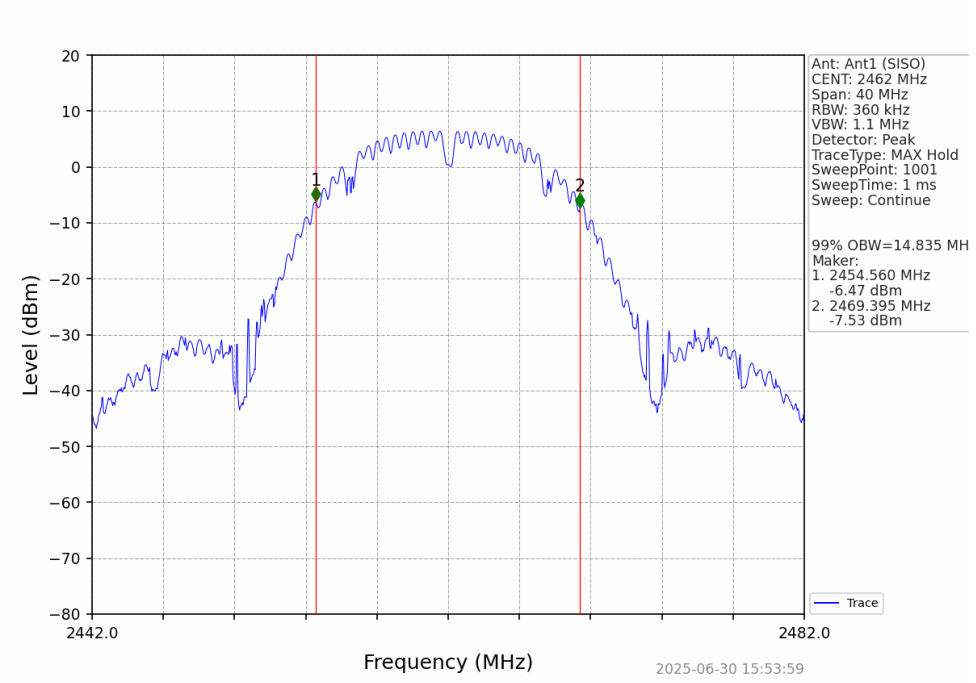
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



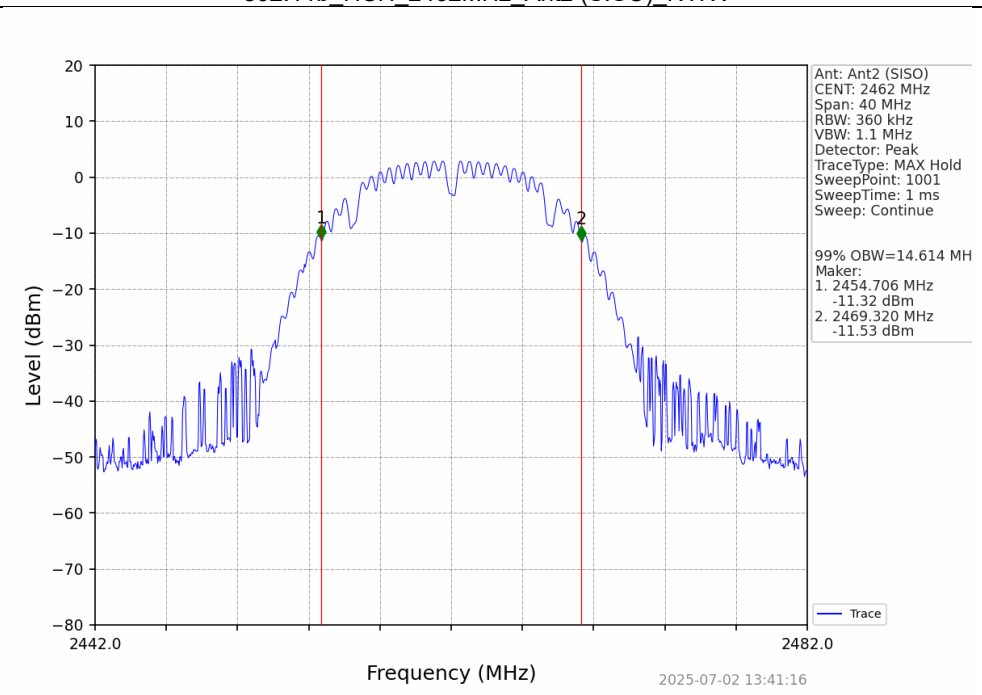
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



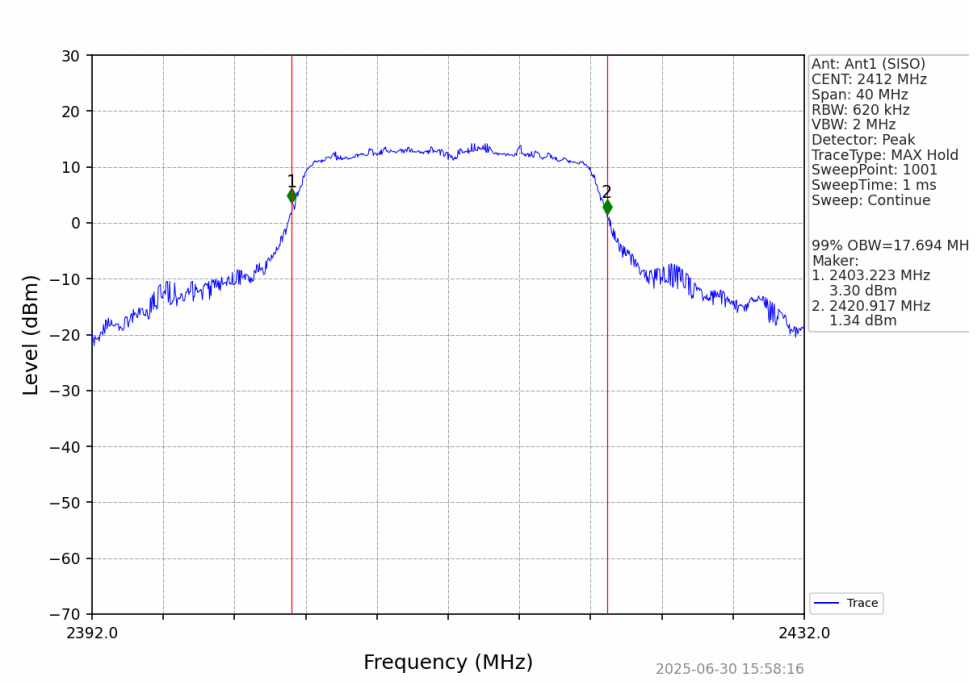
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



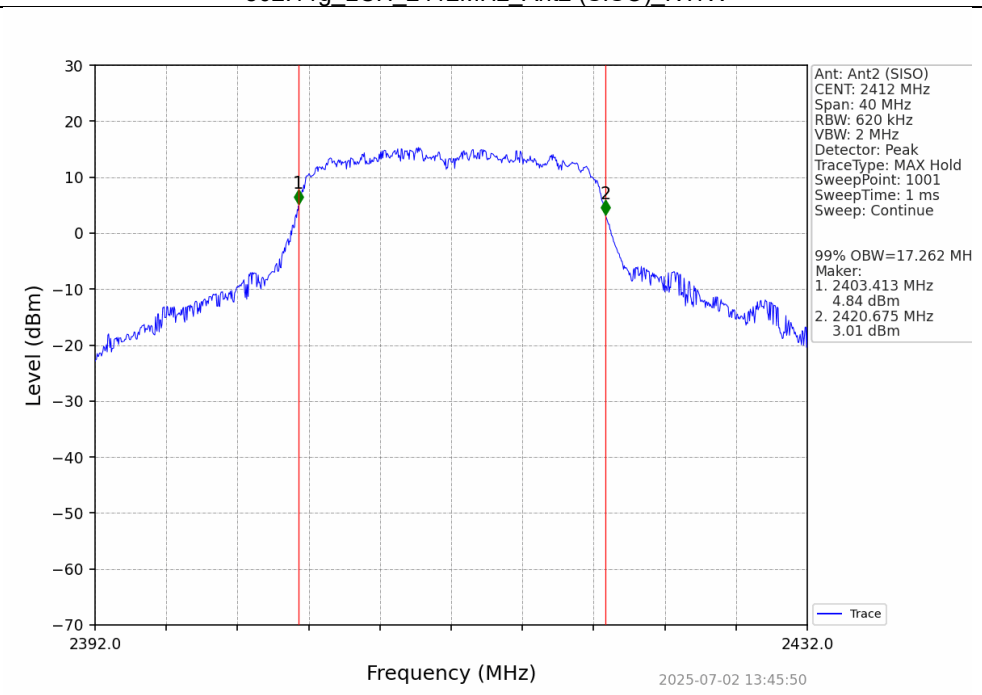
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



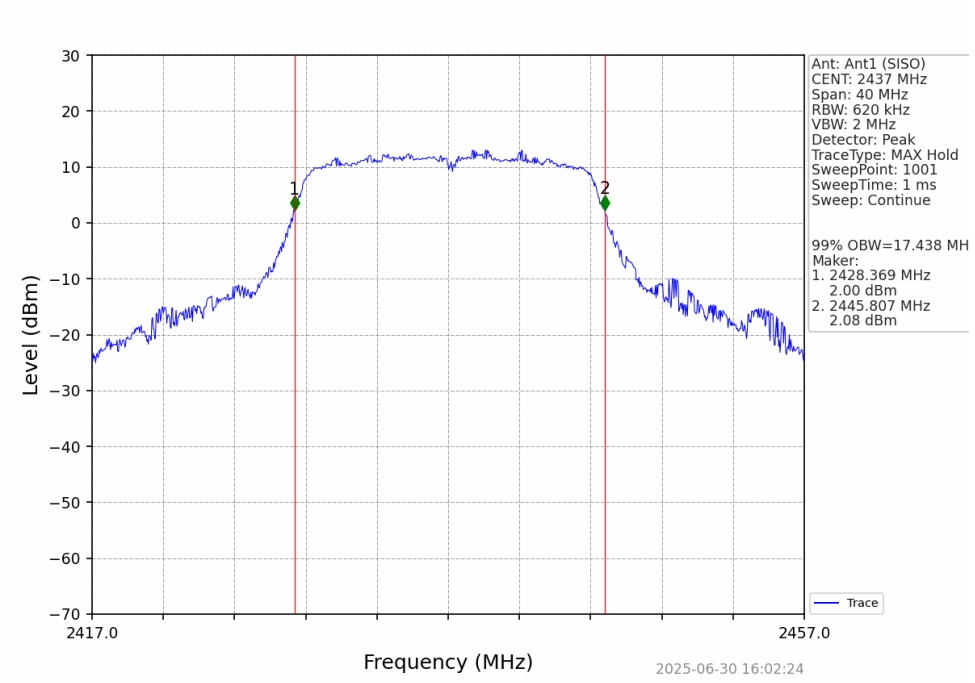
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



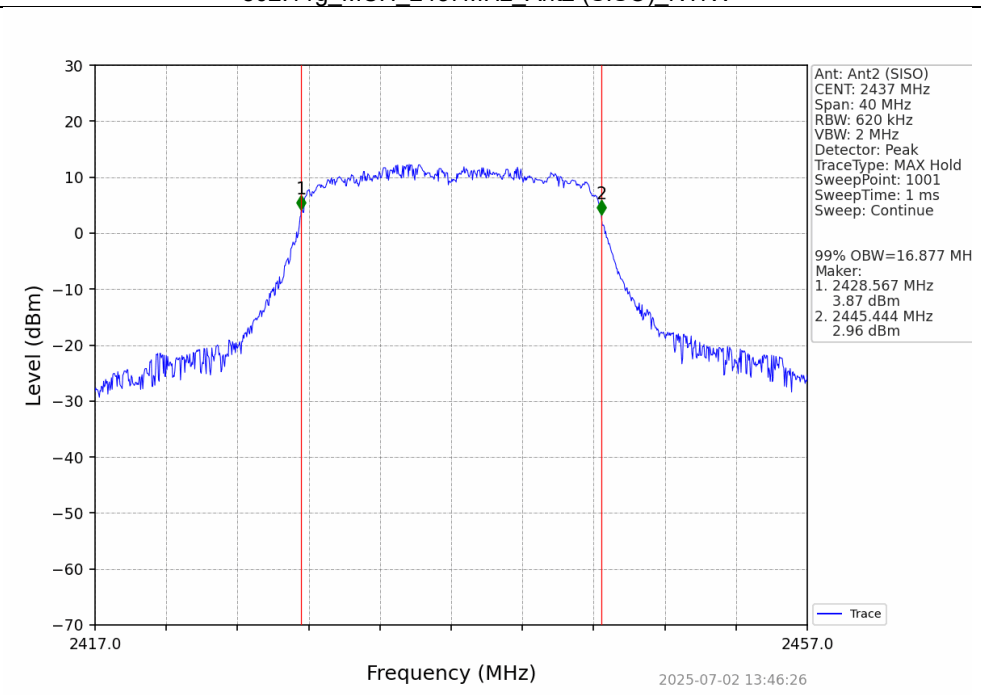
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



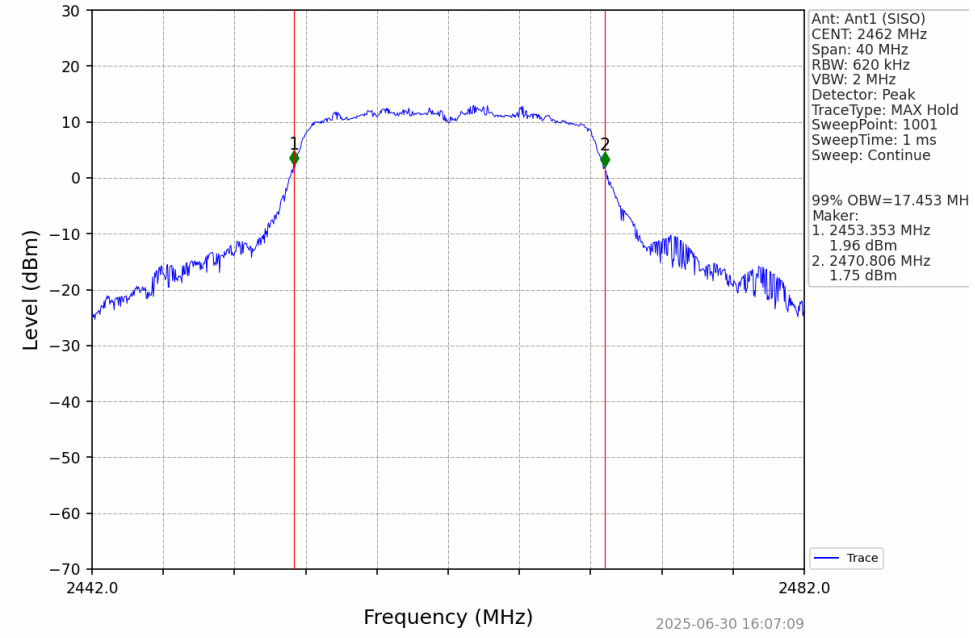
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



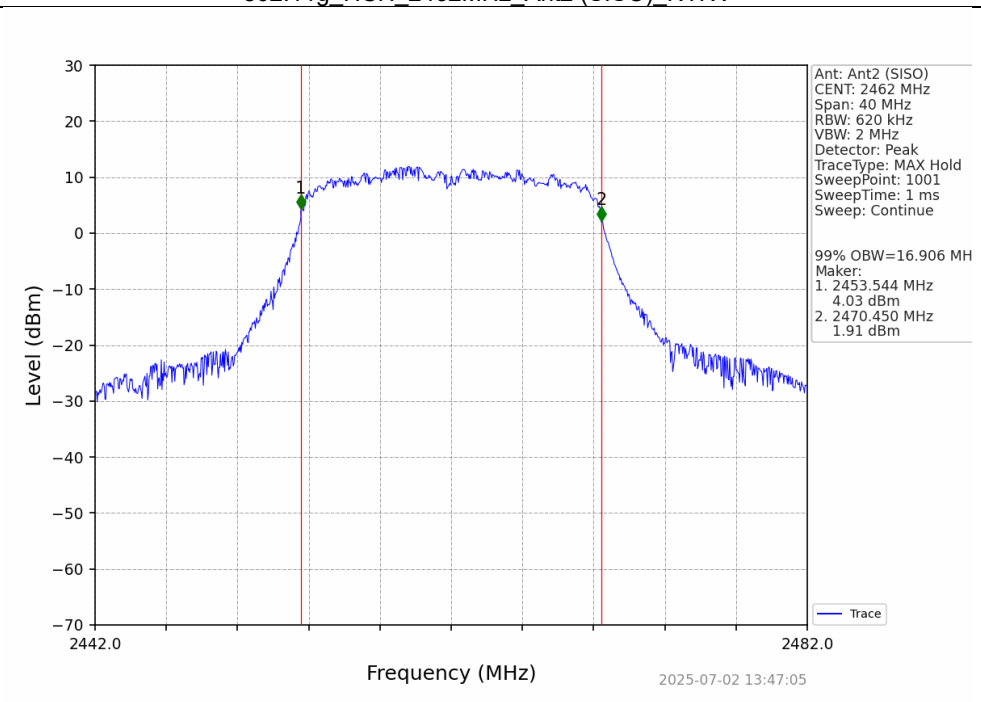
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



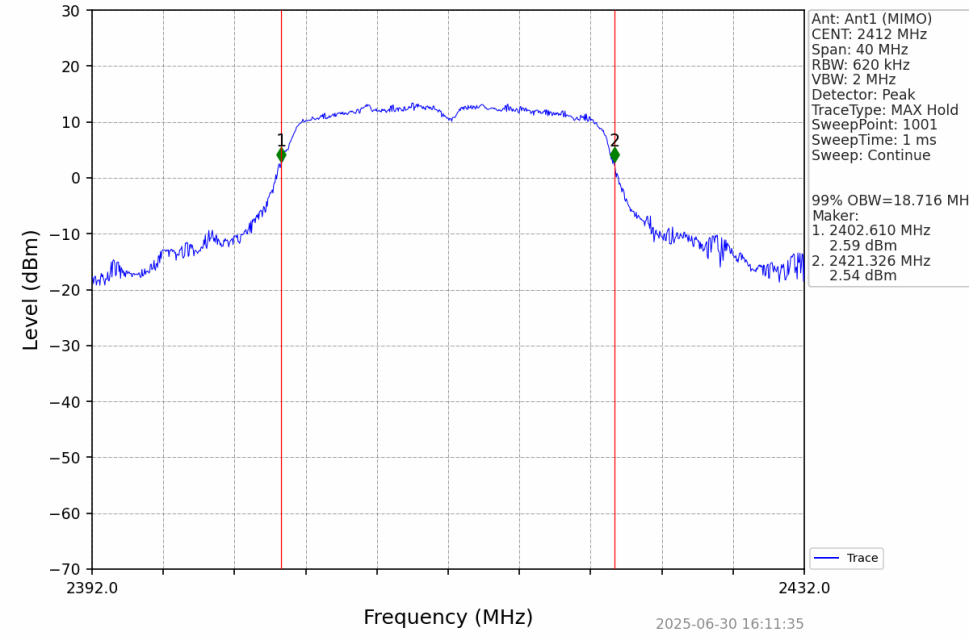
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



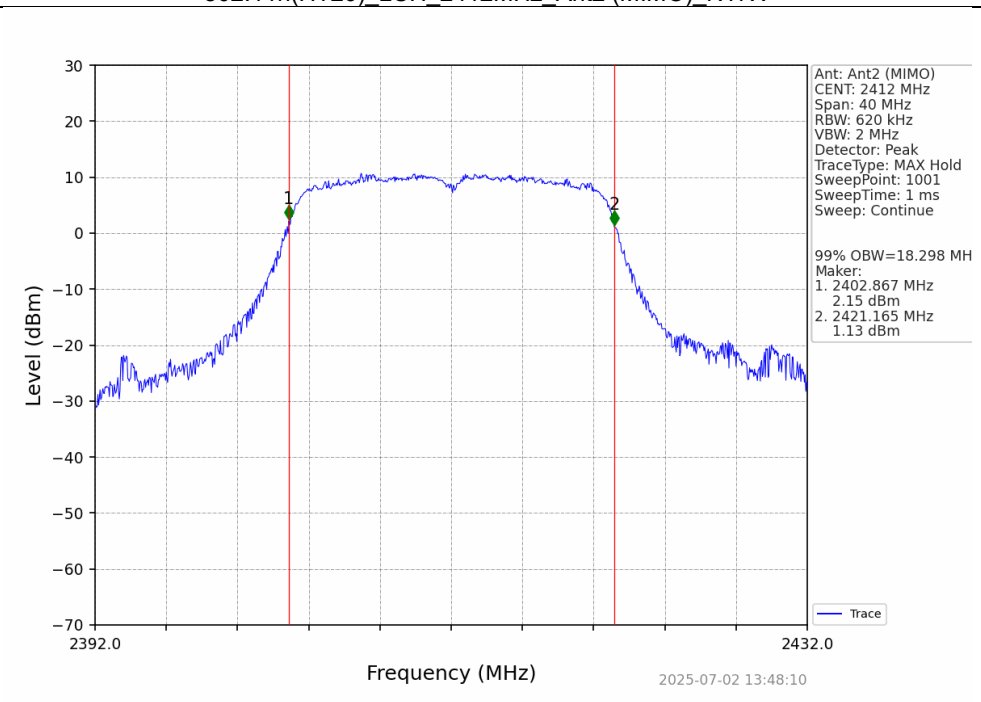
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



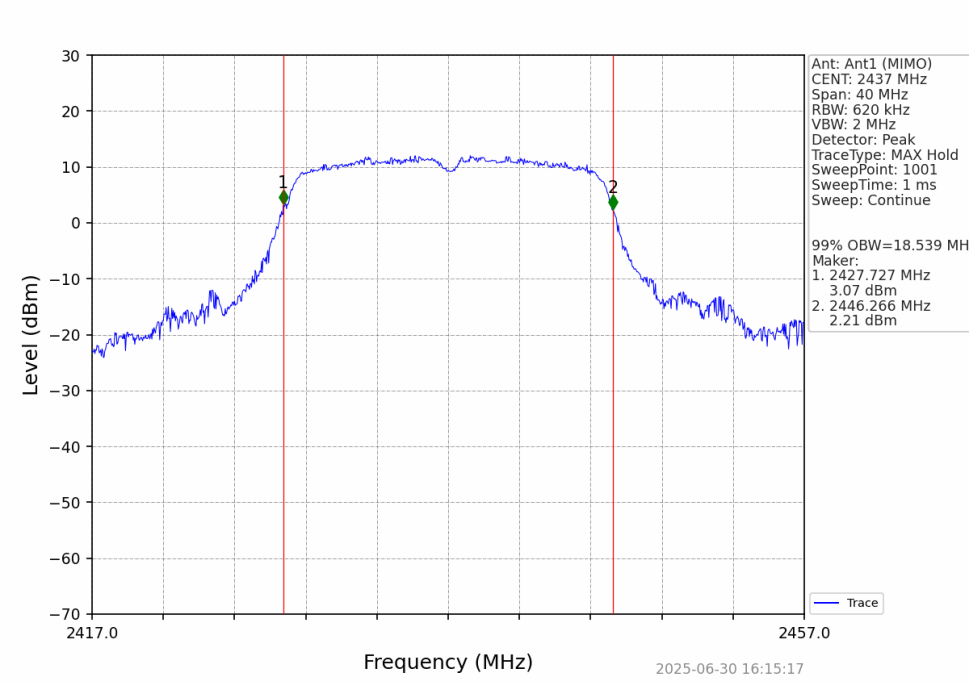
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



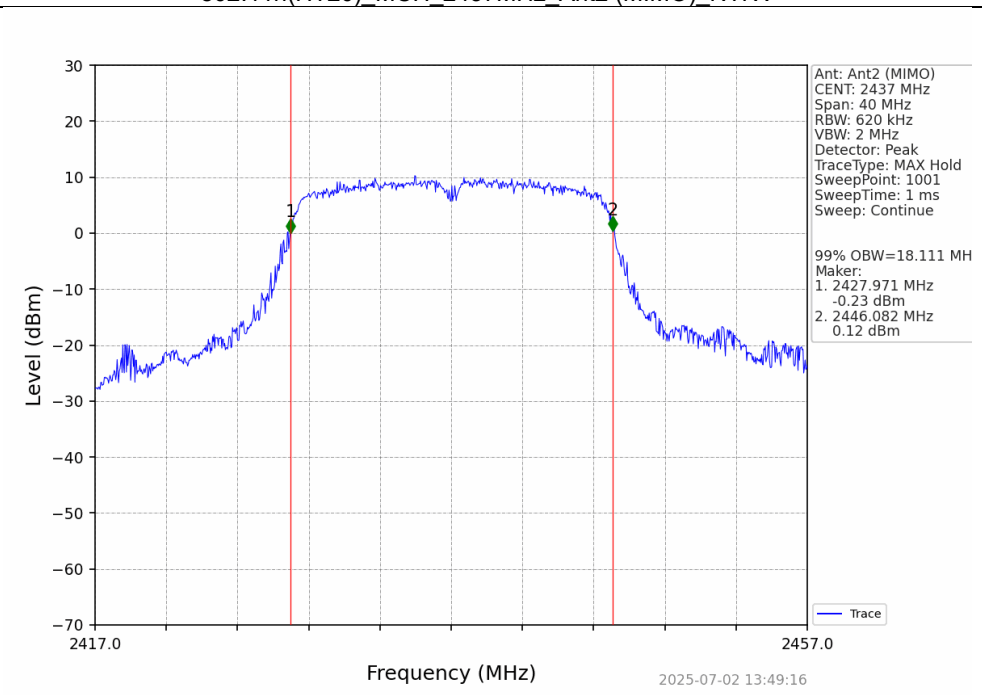
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



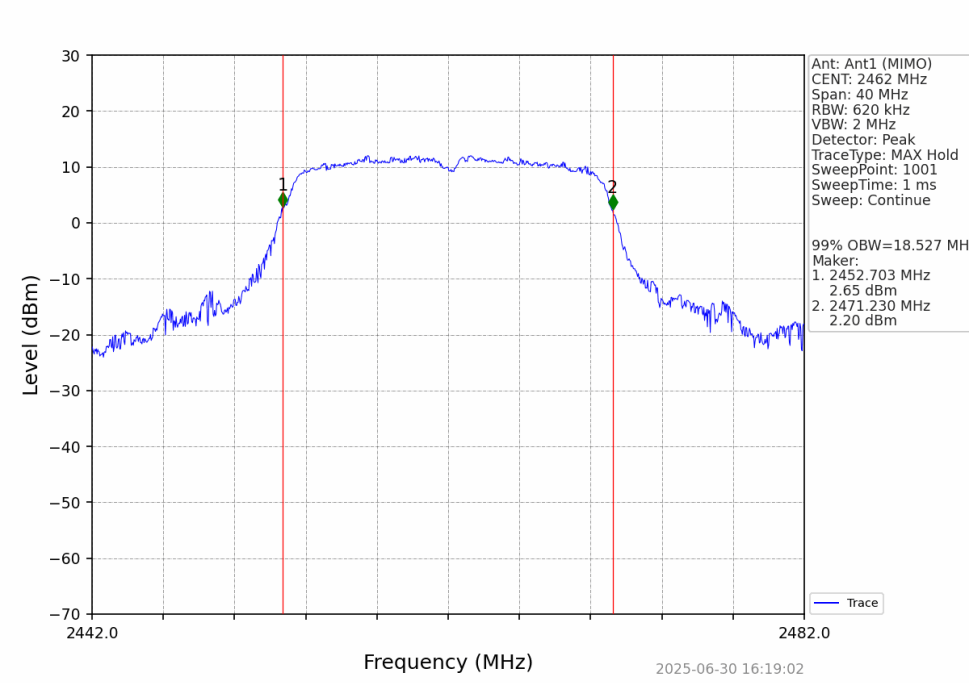
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



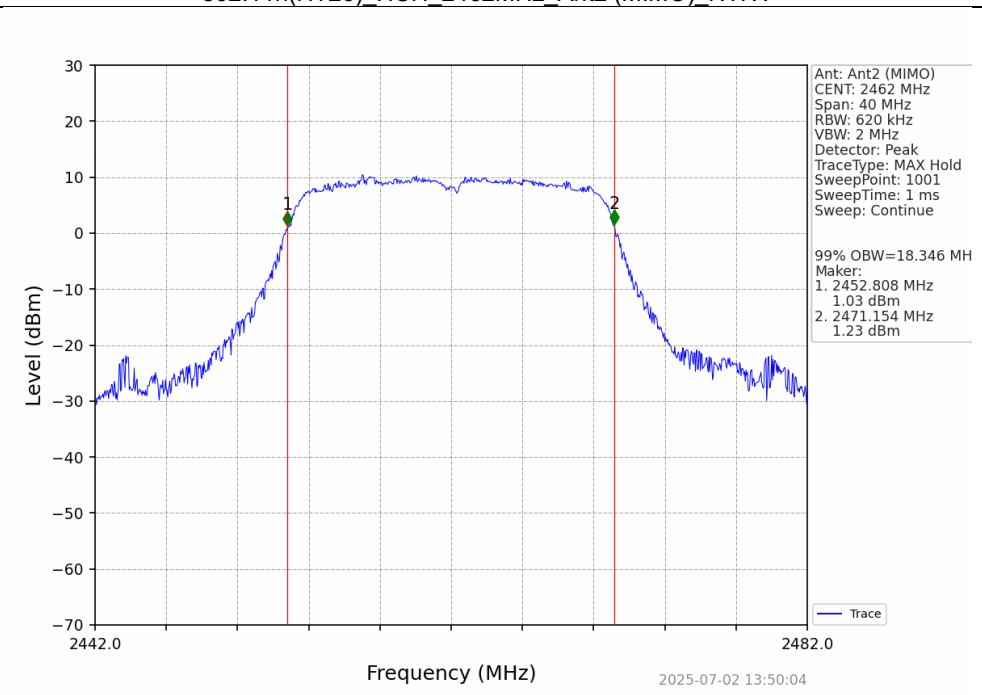
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



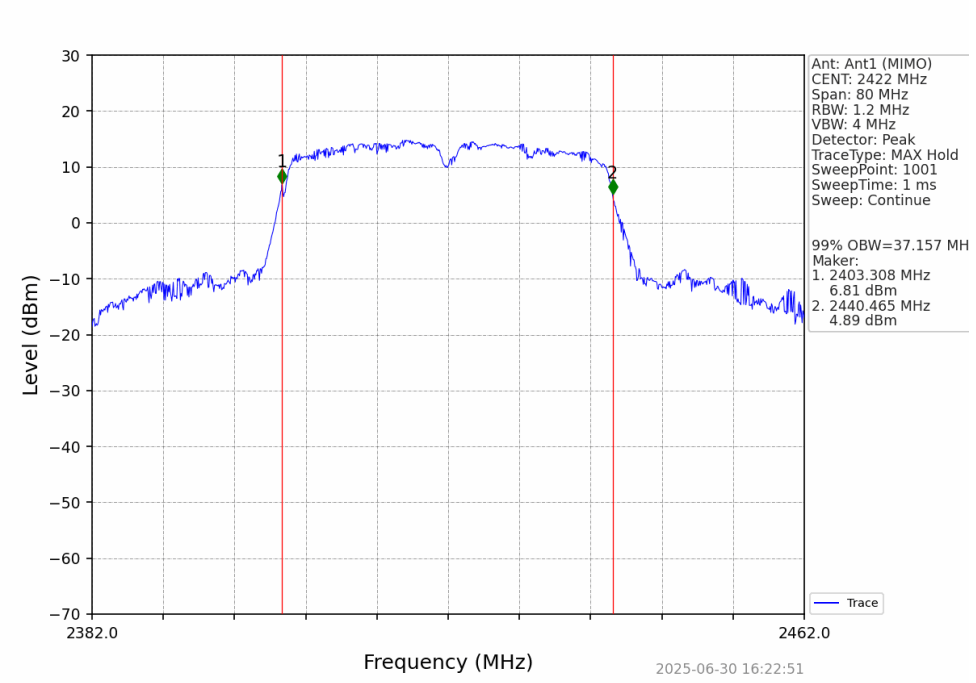
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



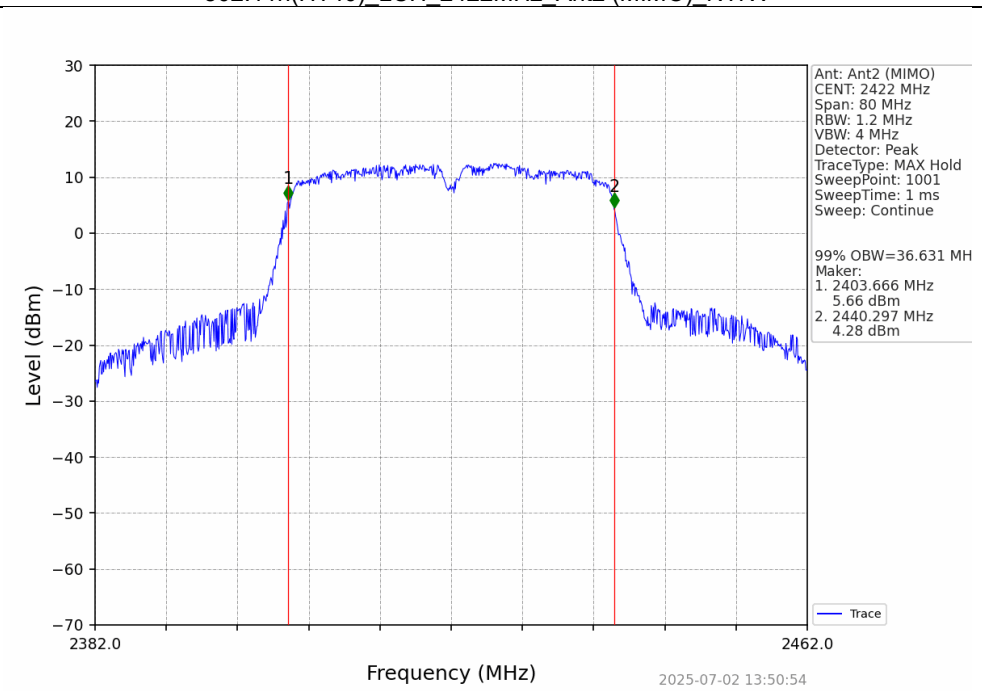
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



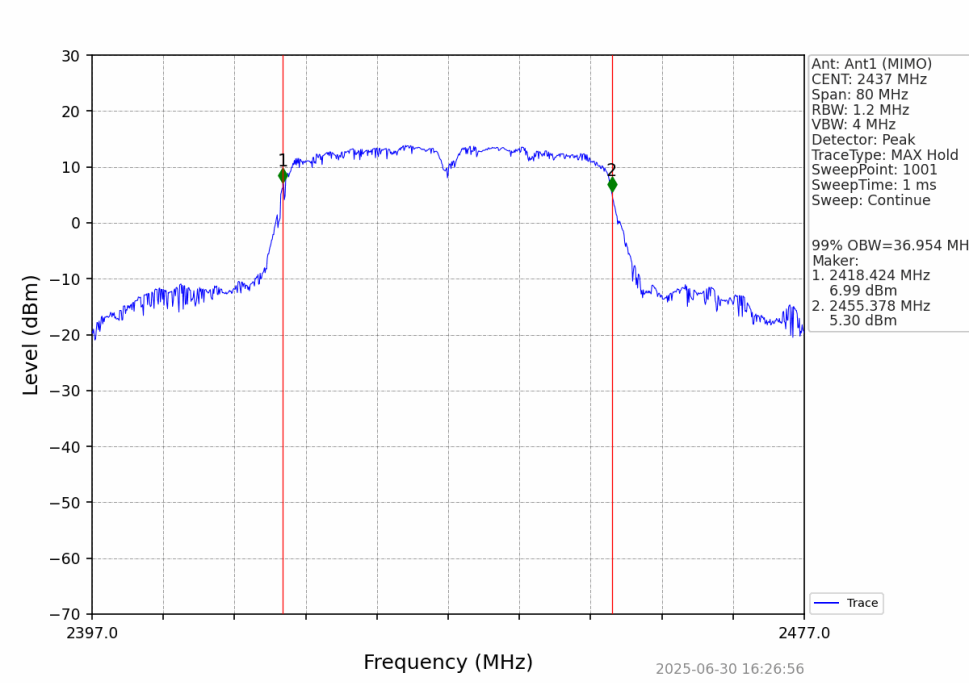
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



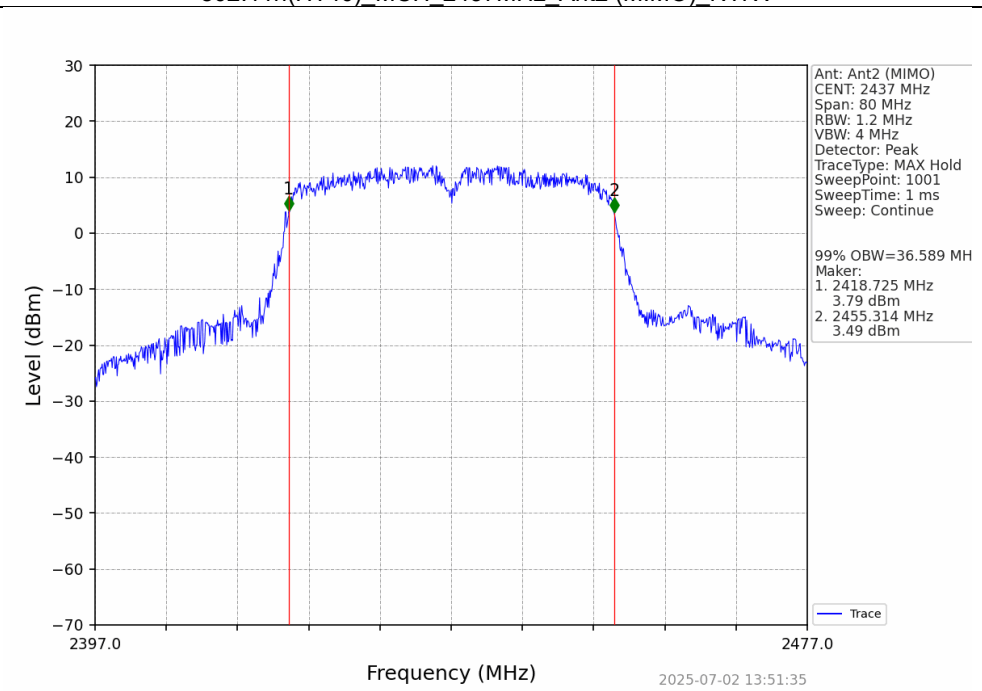
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



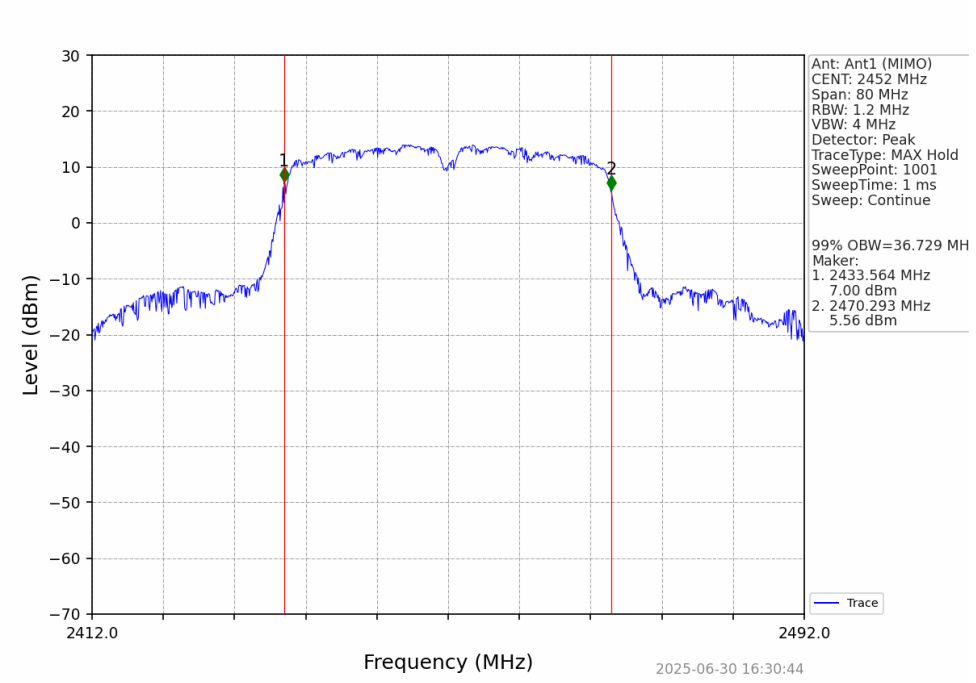
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



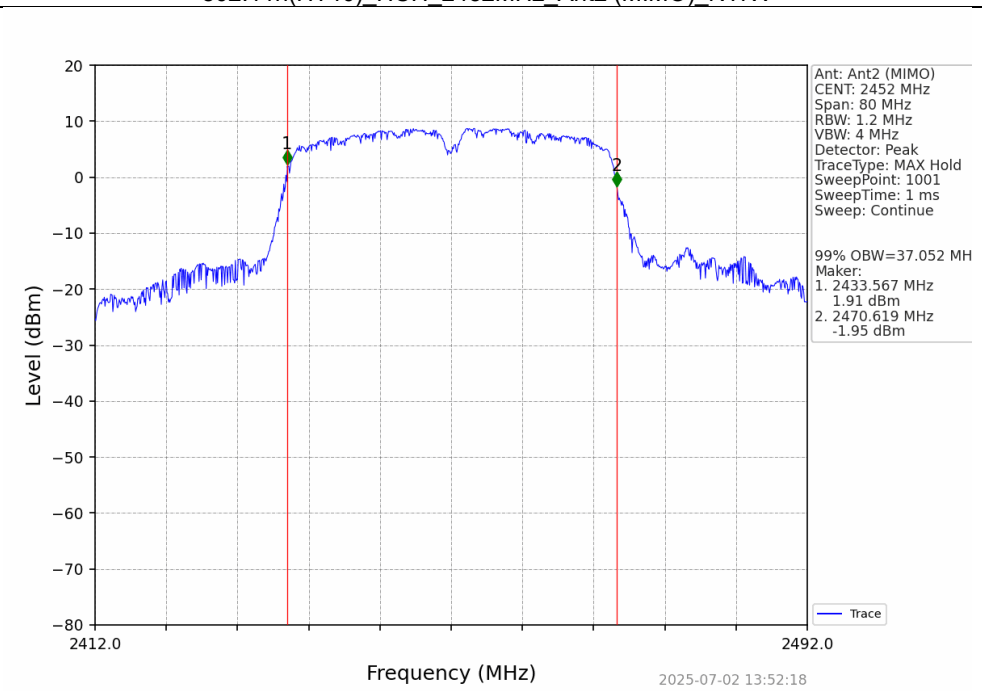
802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

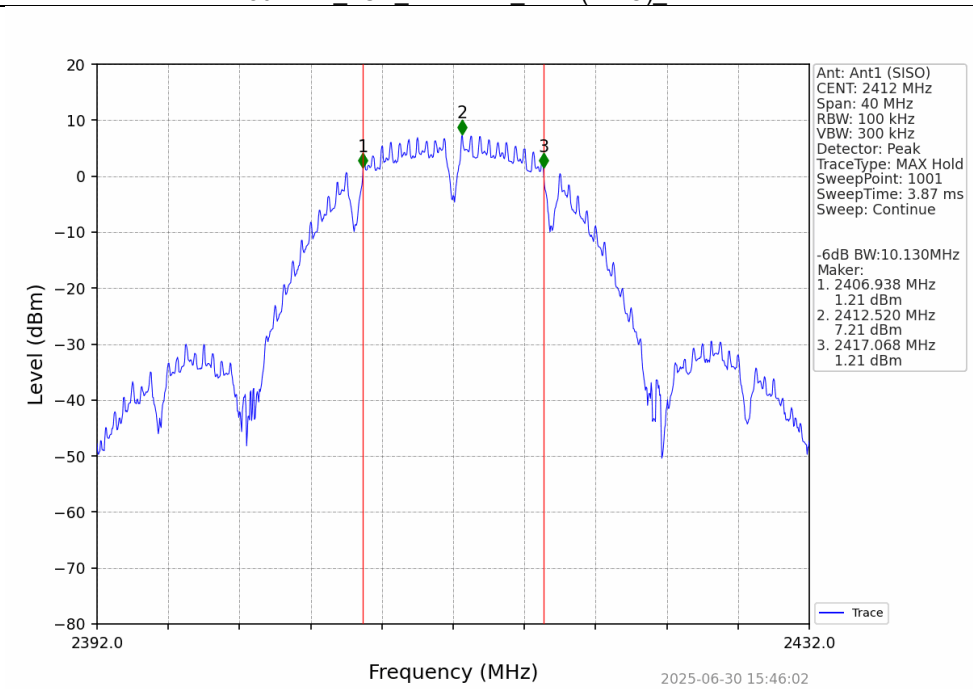


802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



2.2.2 6dB BW

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



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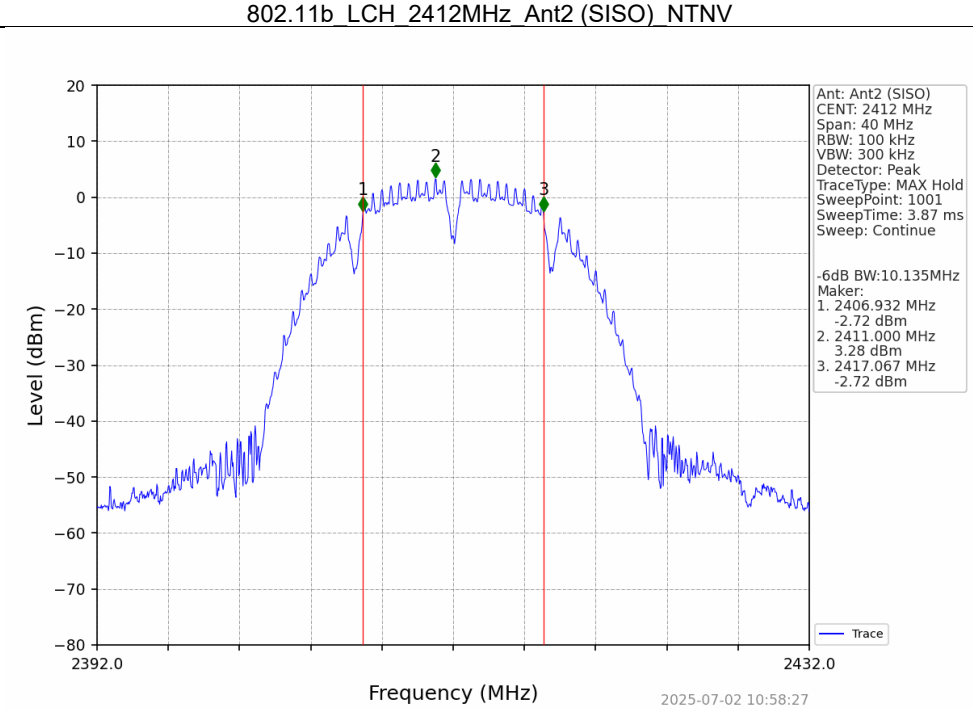
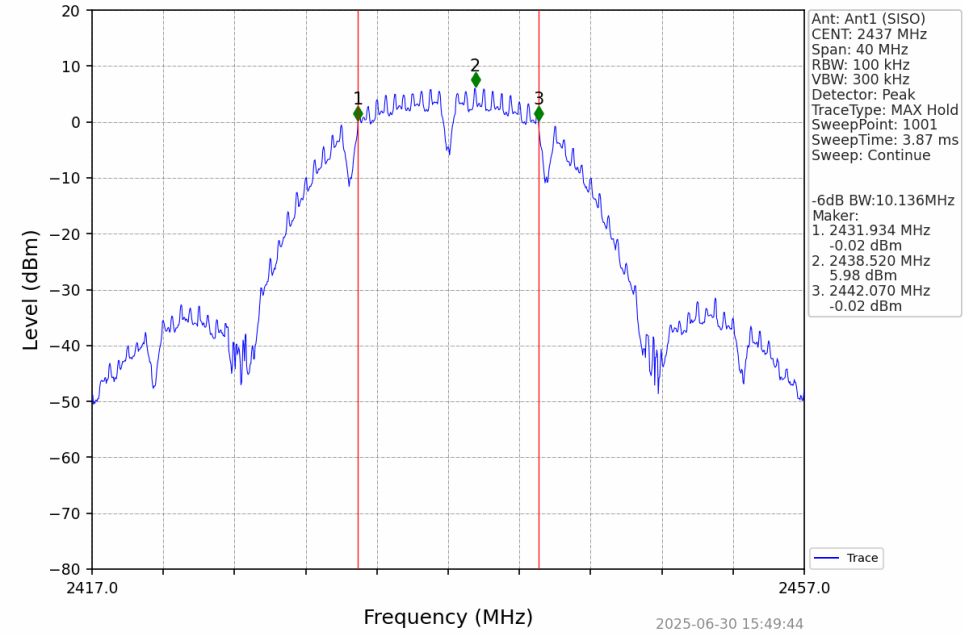
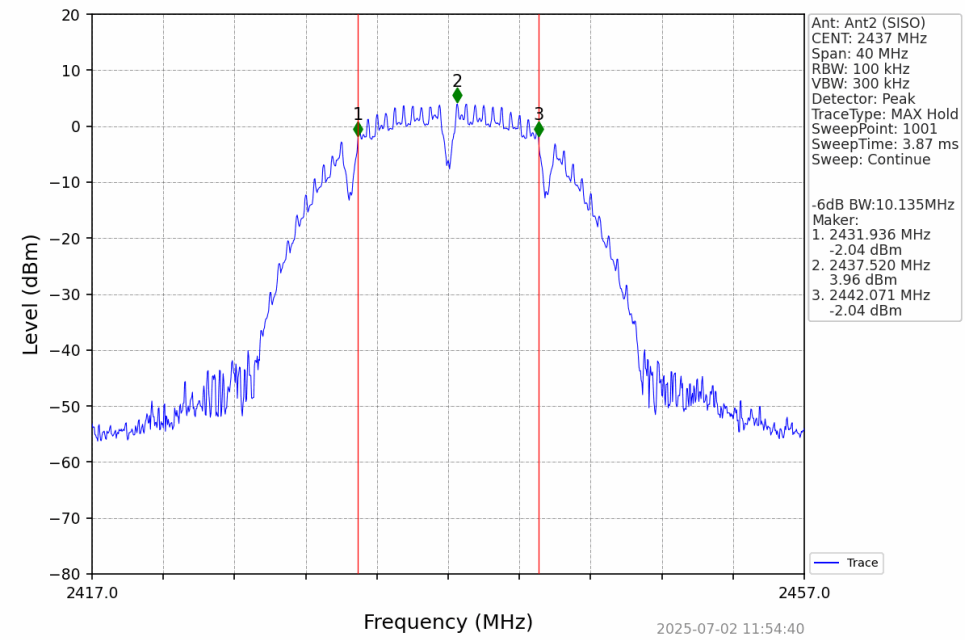


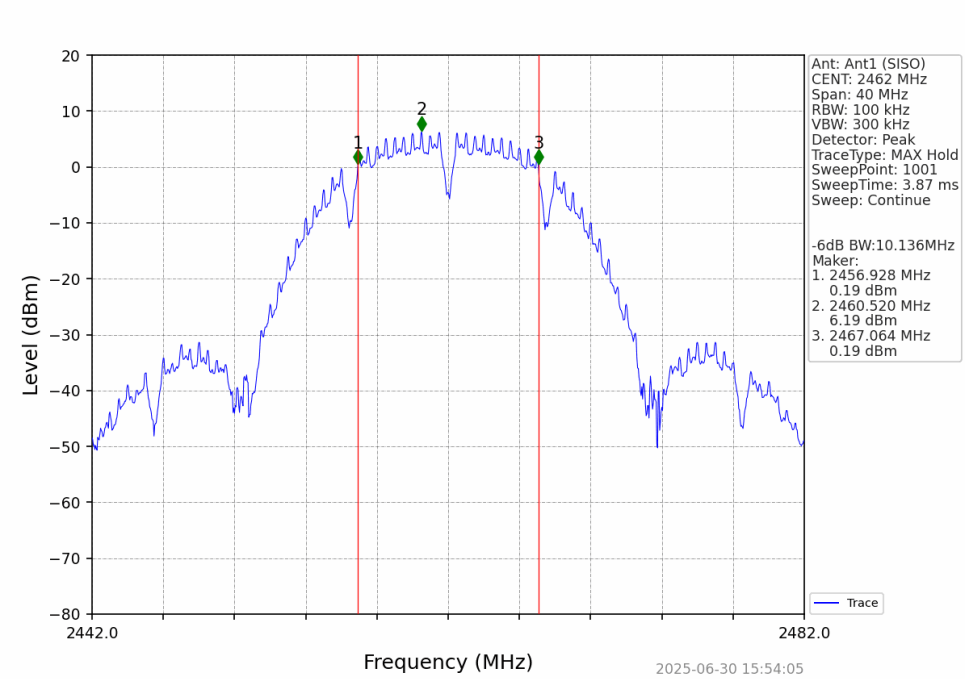
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



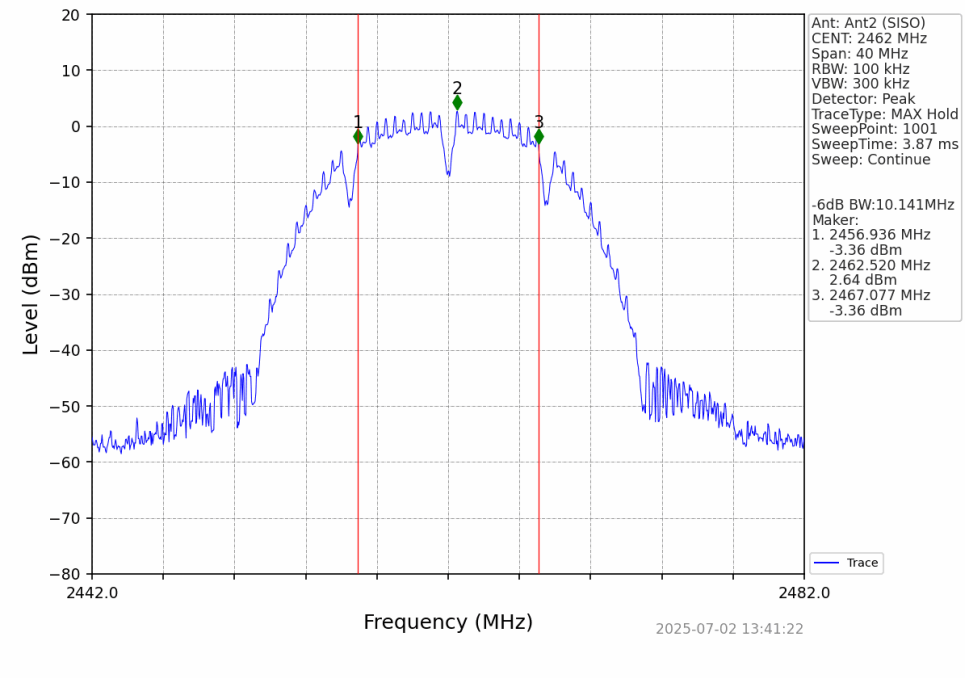
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



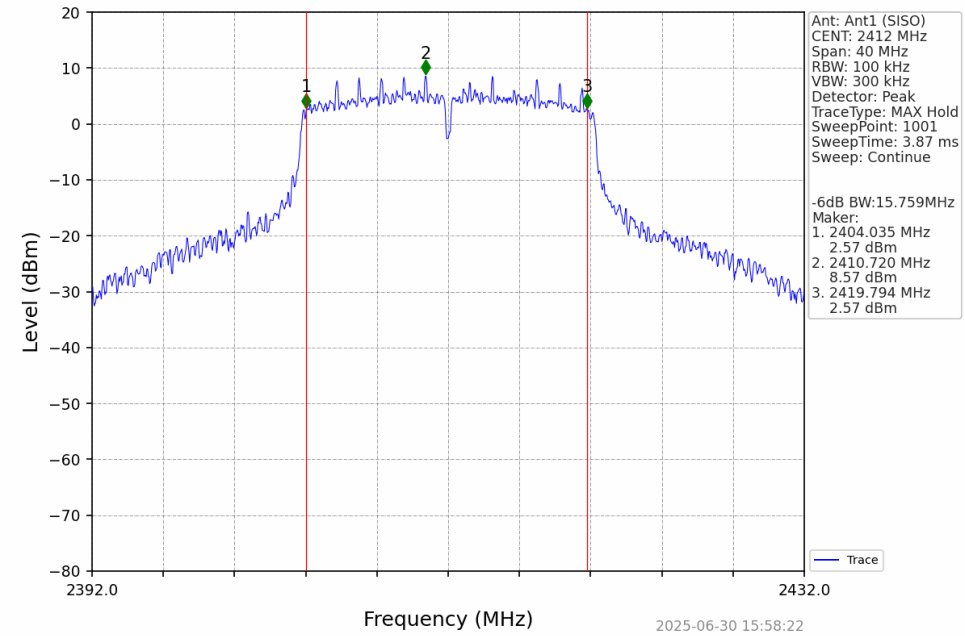
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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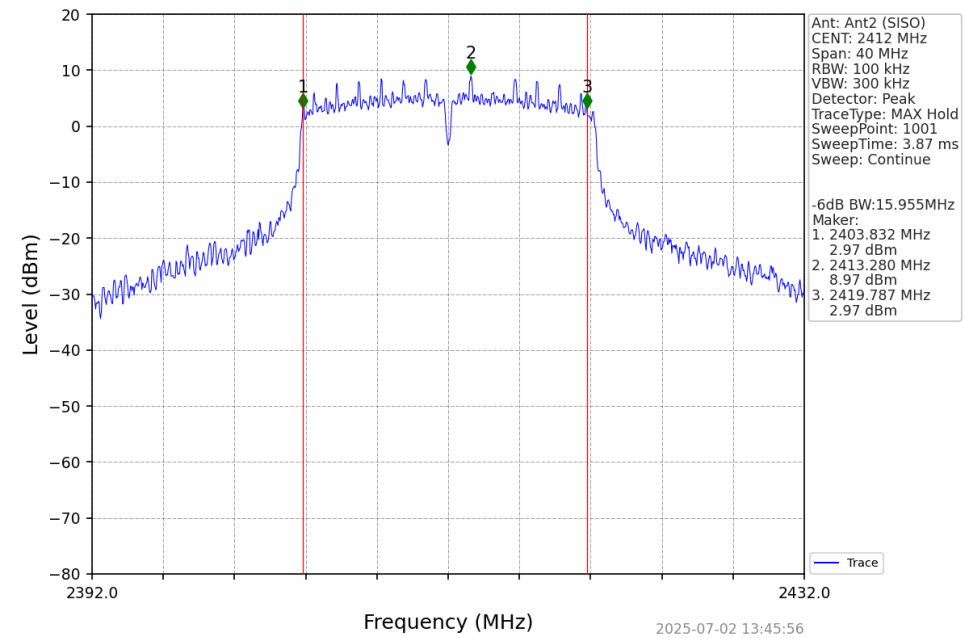
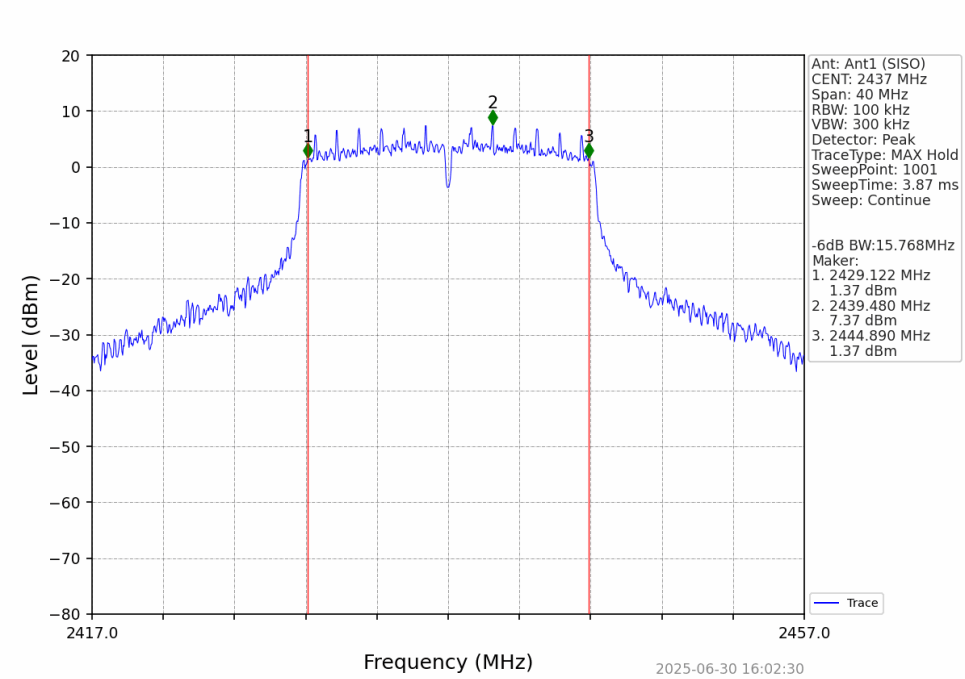


802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



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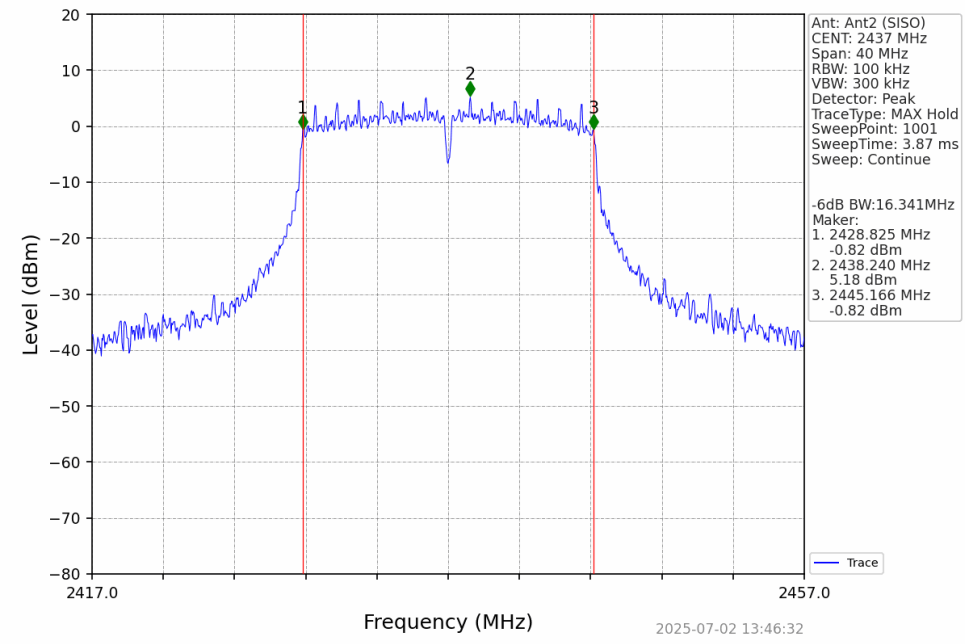
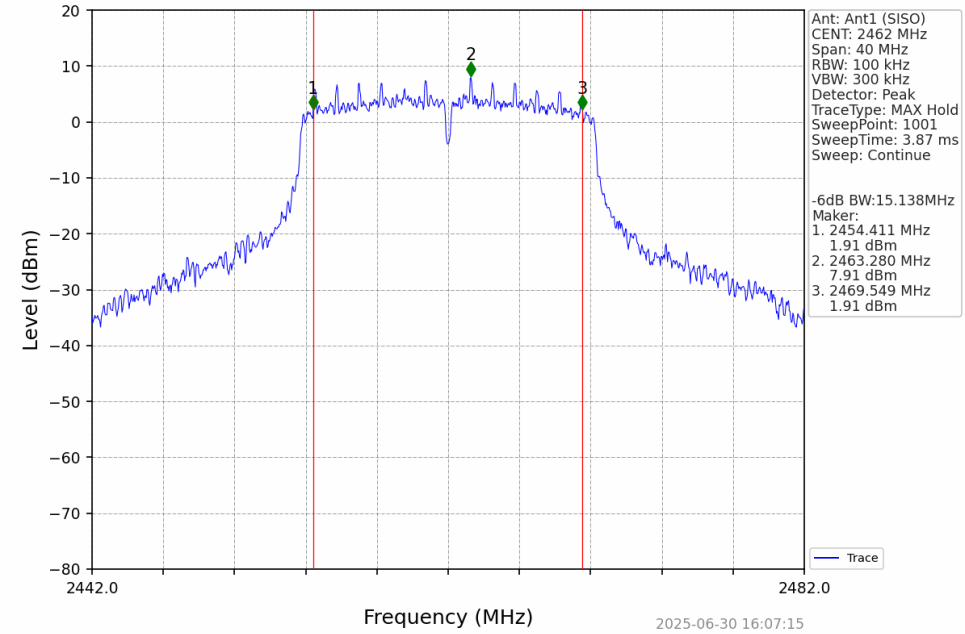
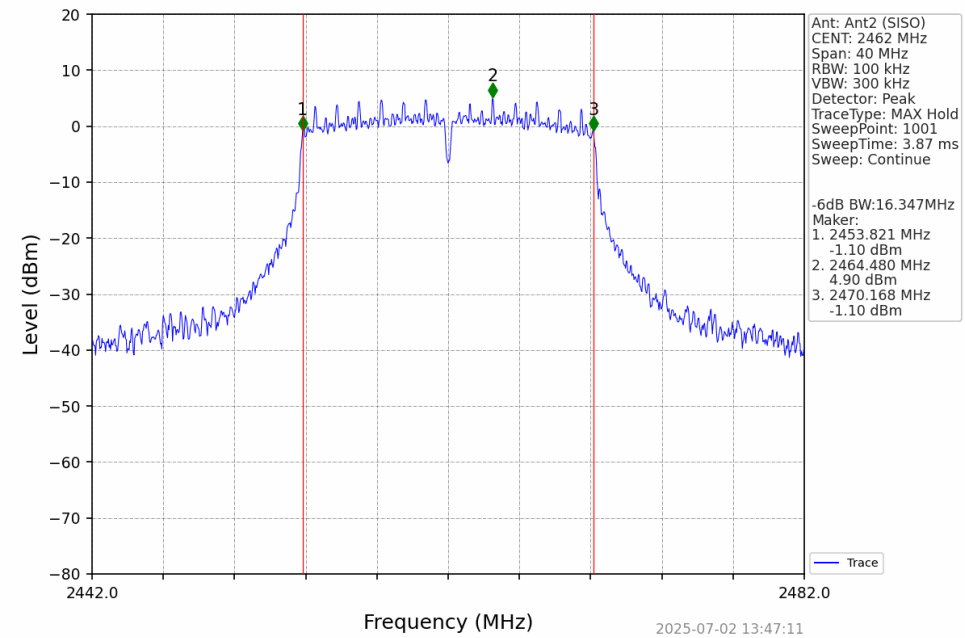


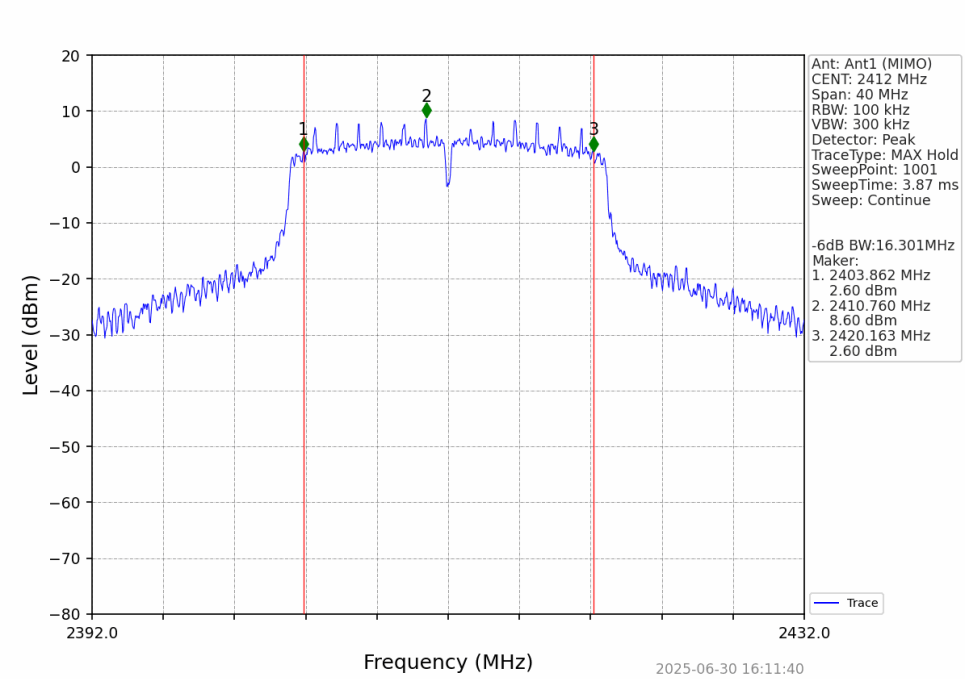
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



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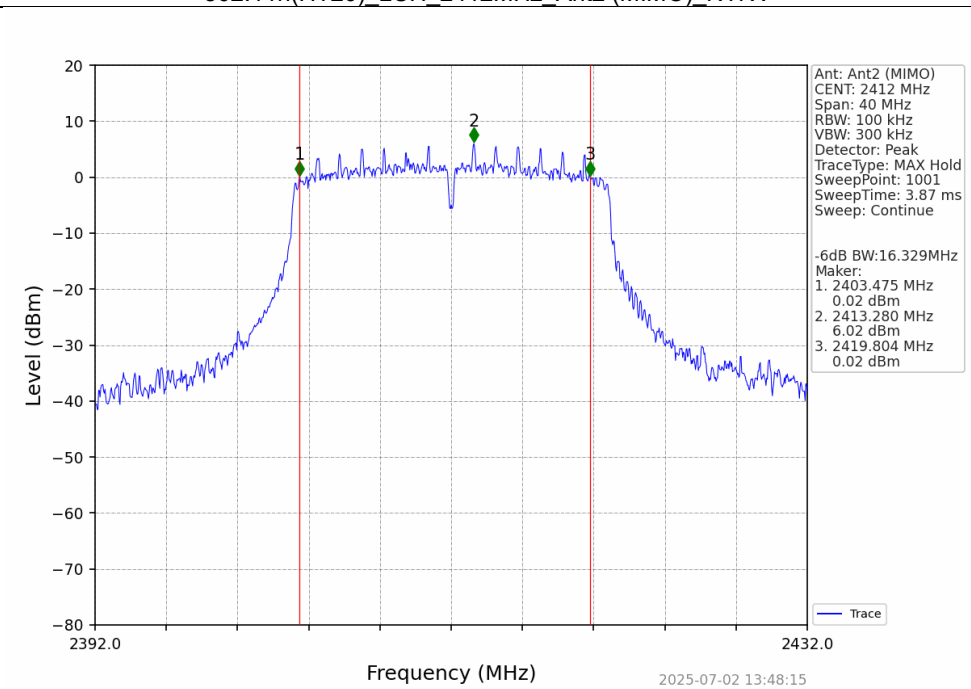
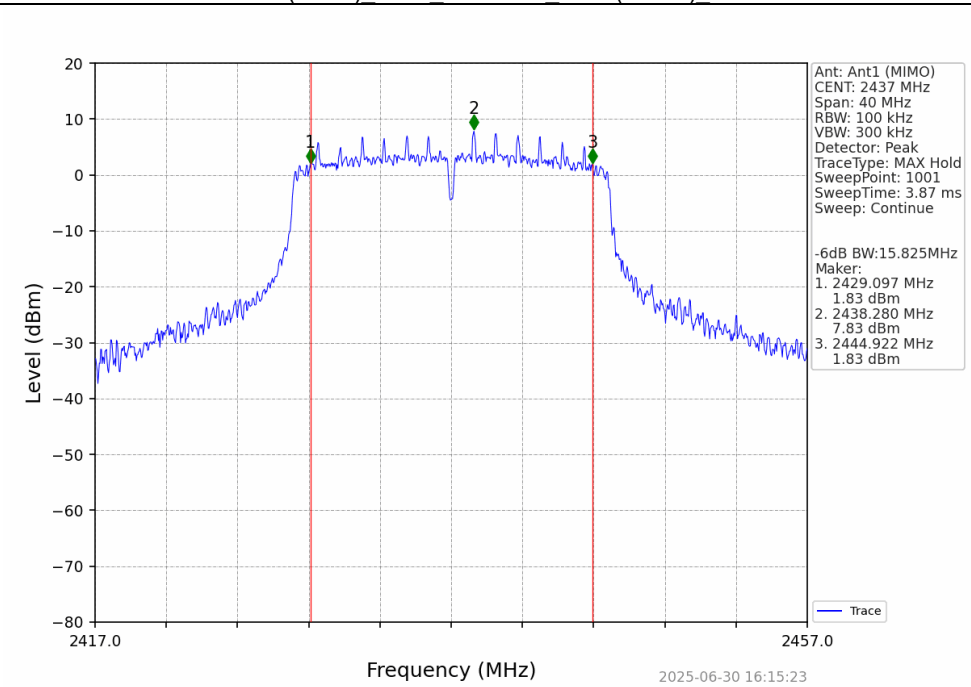


802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



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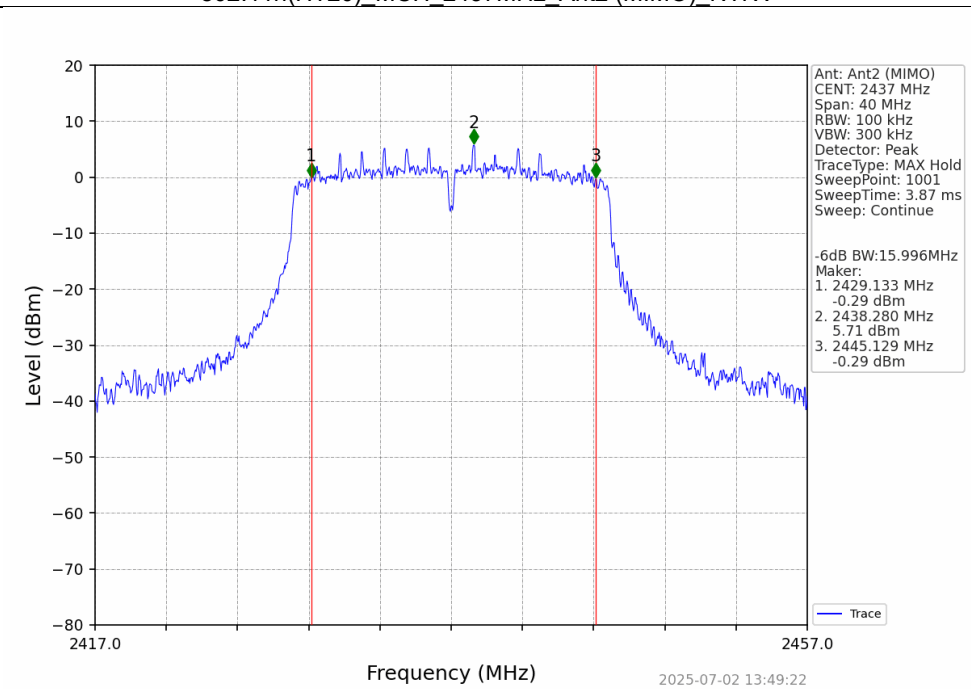
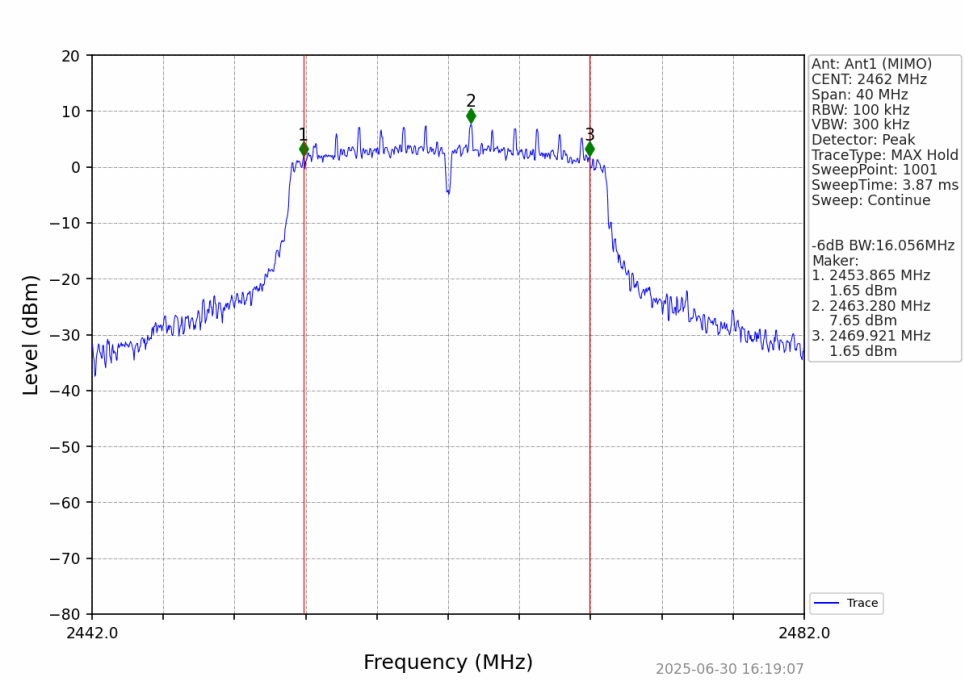
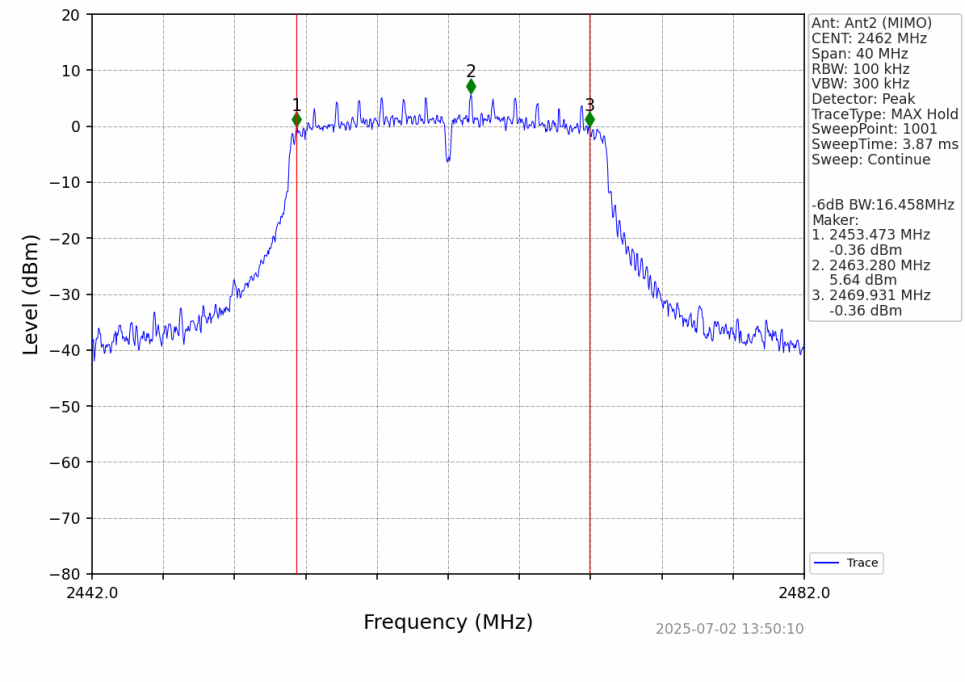


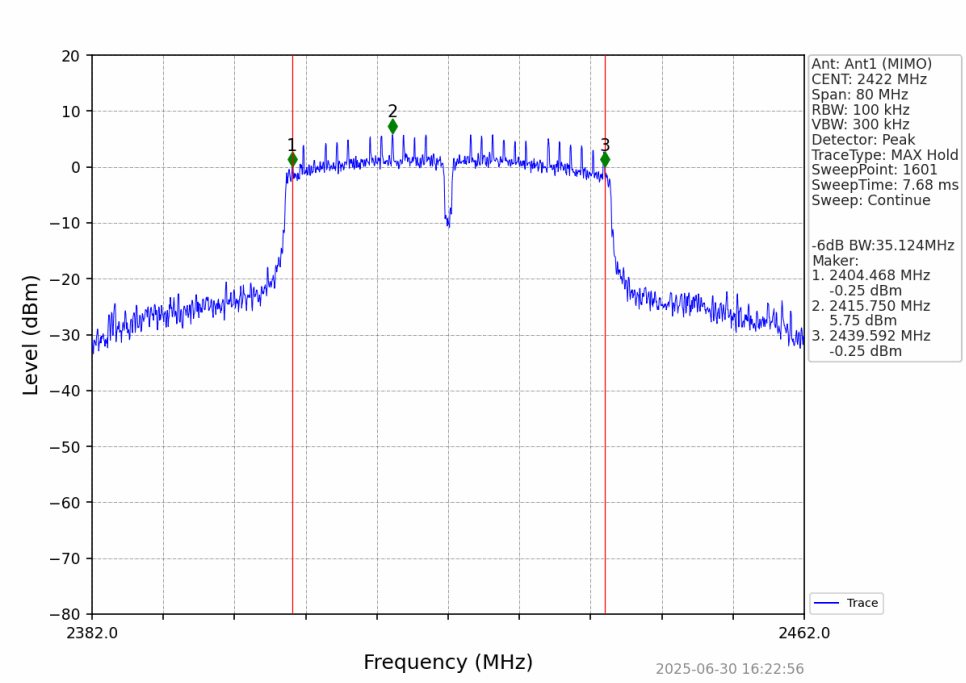
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



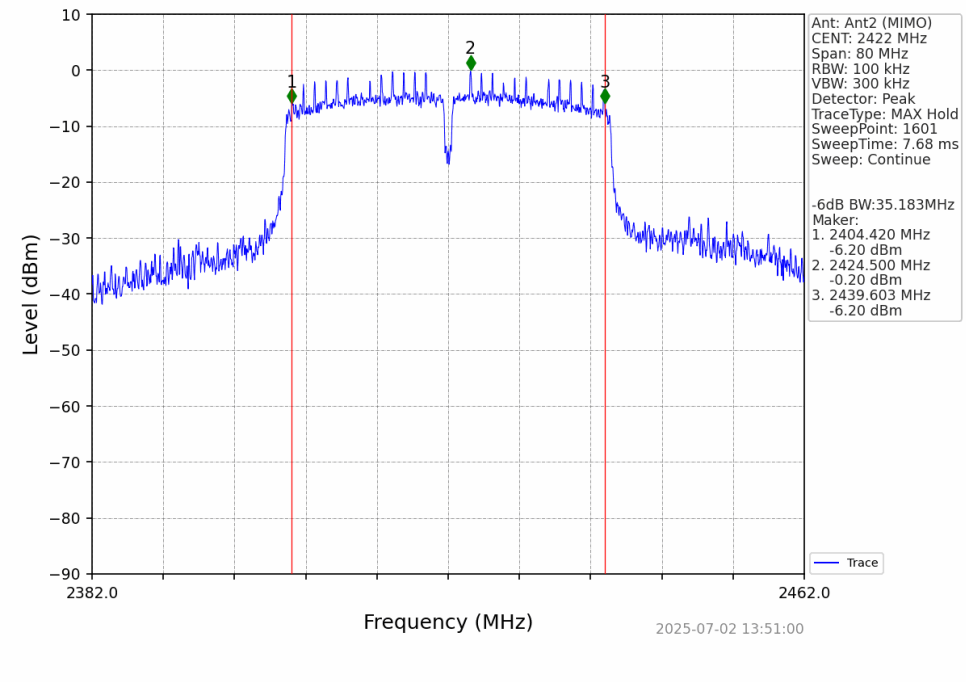
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



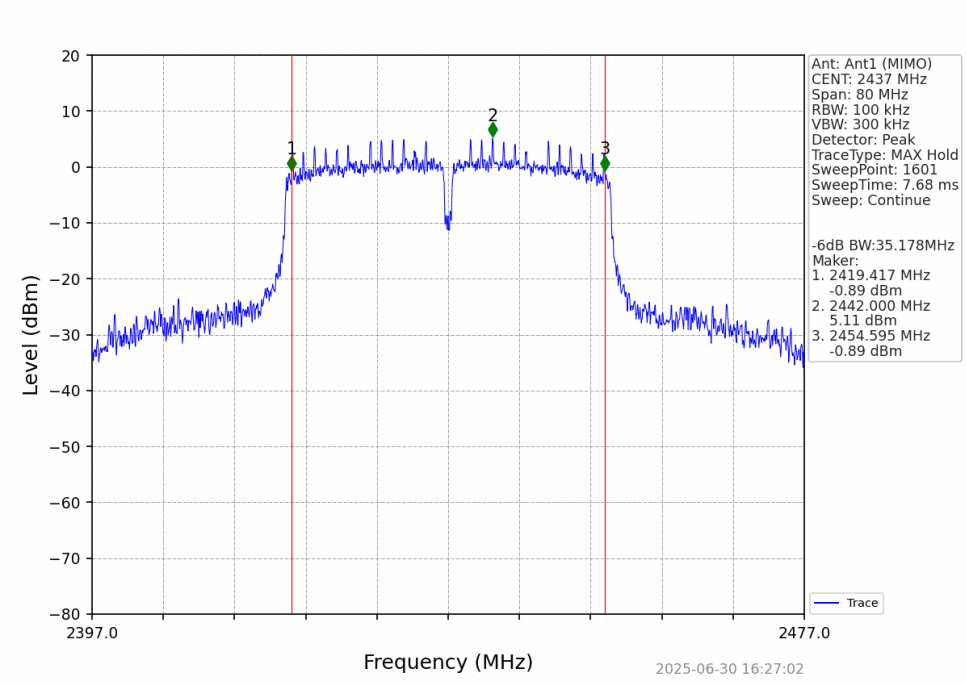
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



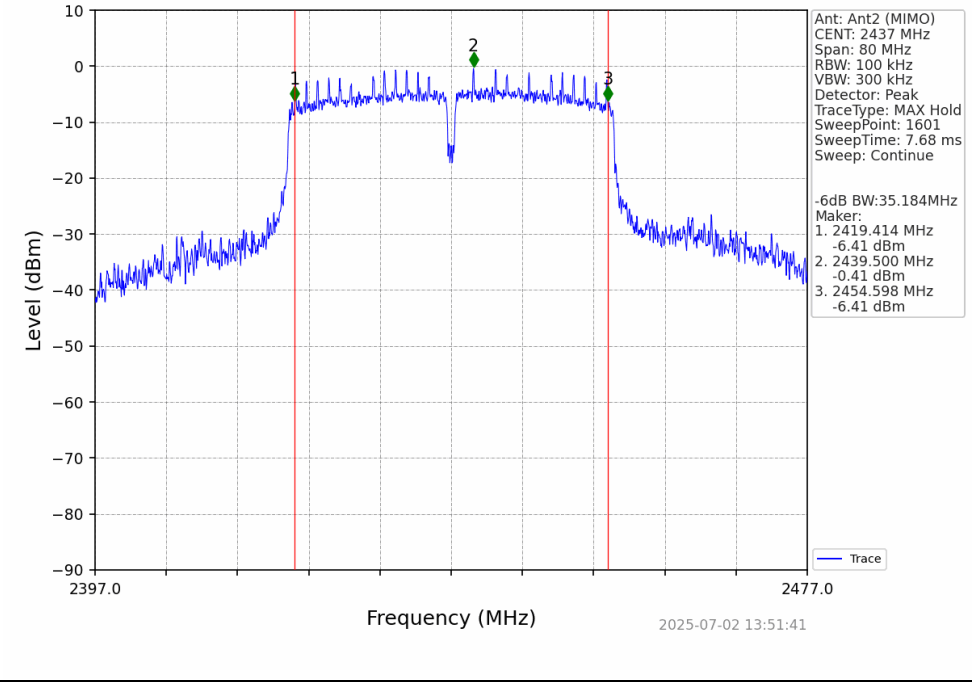
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



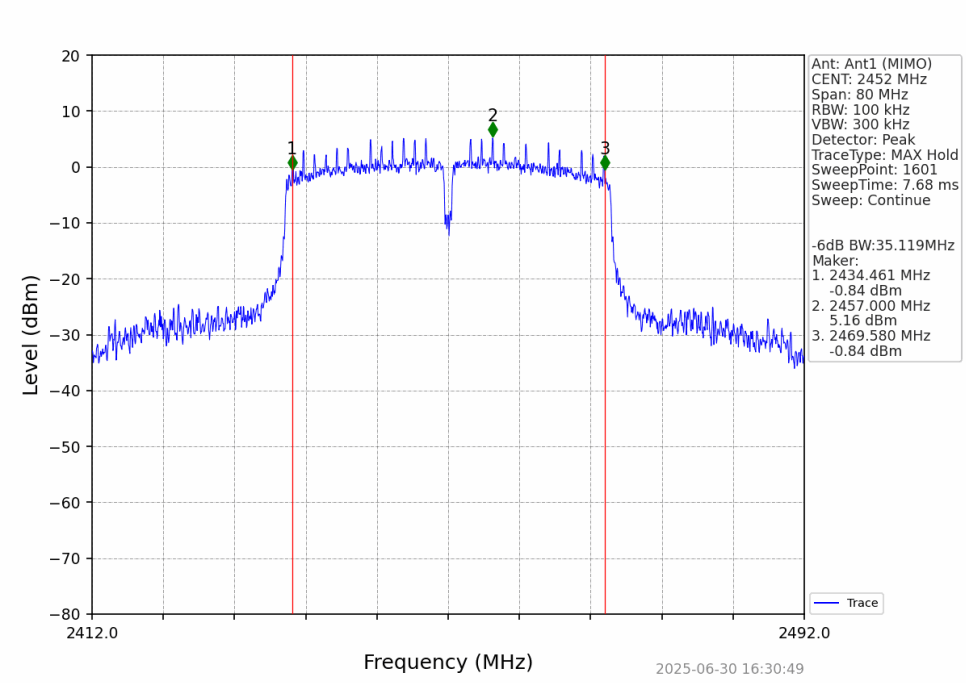
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



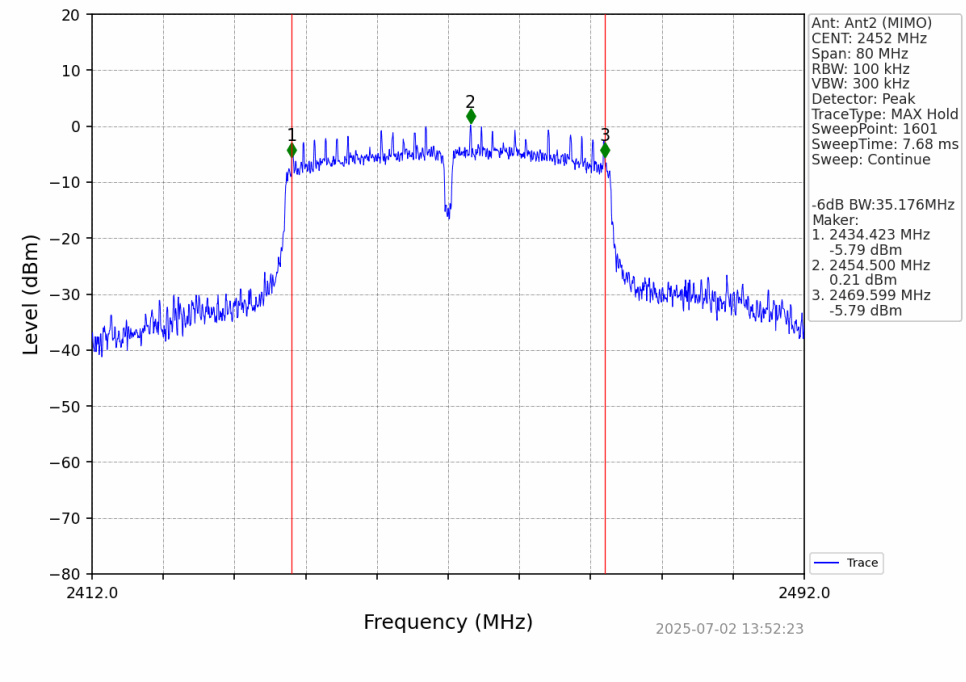
802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_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	ANT2	MIMO	Limit	
802.11b	SISO	2412	19.04	14.94	/	<=30	Pass
		2437	17.84	14.79	/	<=30	Pass
		2462	18.04	14.58	/	<=30	Pass
802.11g	SISO	2412	26.93	24.93	/	<=30	Pass
		2437	25.80	24.55	/	<=30	Pass
		2462	25.68	24.47	/	<=30	Pass
802.11n (HT20)	MIMO	2412	26.78	24.35	28.74	<=30	Pass
		2437	25.47	23.86	27.75	<=30	Pass
		2462	25.55	23.82	27.78	<=30	Pass
802.11n (HT40)	MIMO	2422	27.02	24.98	29.13	<=30	Pass
		2437	26.29	24.51	28.50	<=30	Pass
		2452	26.29	24.57	28.52	<=30	Pass
Note1: Antenna Gain: Ant1: 2.00dBi; Ant2: -2.49dBi; Note2: Directional Gain: 2dBi							

4. Maximum Power Spectral Density

4.1 Test Result

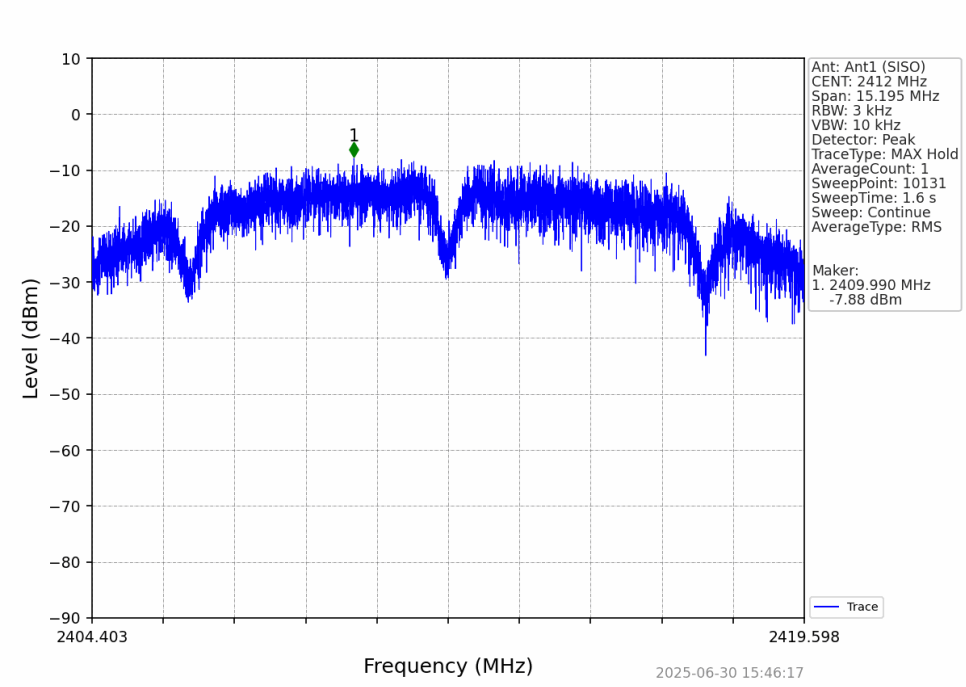
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	-7.88	-12.02	/	<=8	Pass
		2437	-8.33	-10.67	/	<=8	Pass
		2462	-7.07	-10.82	/	<=8	Pass
802.11g	SISO	2412	-7.06	-8.60	/	<=8	Pass
		2437	-7.54	-9.65	/	<=8	Pass
		2462	-7.54	-9.72	/	<=8	Pass
802.11n (HT20)	MIMO	2412	-5.84	-8.24	-3.86	<=8	Pass
		2437	-7.18	-8.96	-5.48	<=8	Pass
		2462	-6.90	-9.96	-6.00	<=8	Pass
802.11n (HT40)	MIMO	2422	-8.11	-10.15	-6.02	<=8	Pass
		2437	-8.74	-11.80	-7.00	<=8	Pass
		2452	-9.44	-11.64	-7.39	<=8	Pass
Note1: Antenna Gain: Ant1: 2.00dBi; Ant2: -2.49dBi; Note2: Directional Gain: 2dBi							

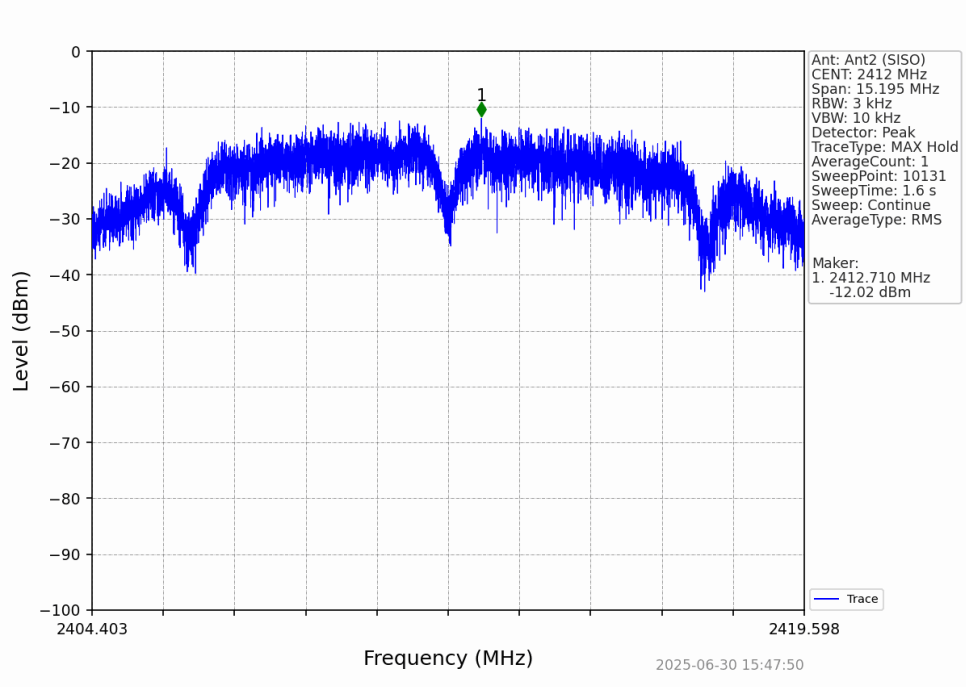
4.2 Test Graph

4.2.1 PSD

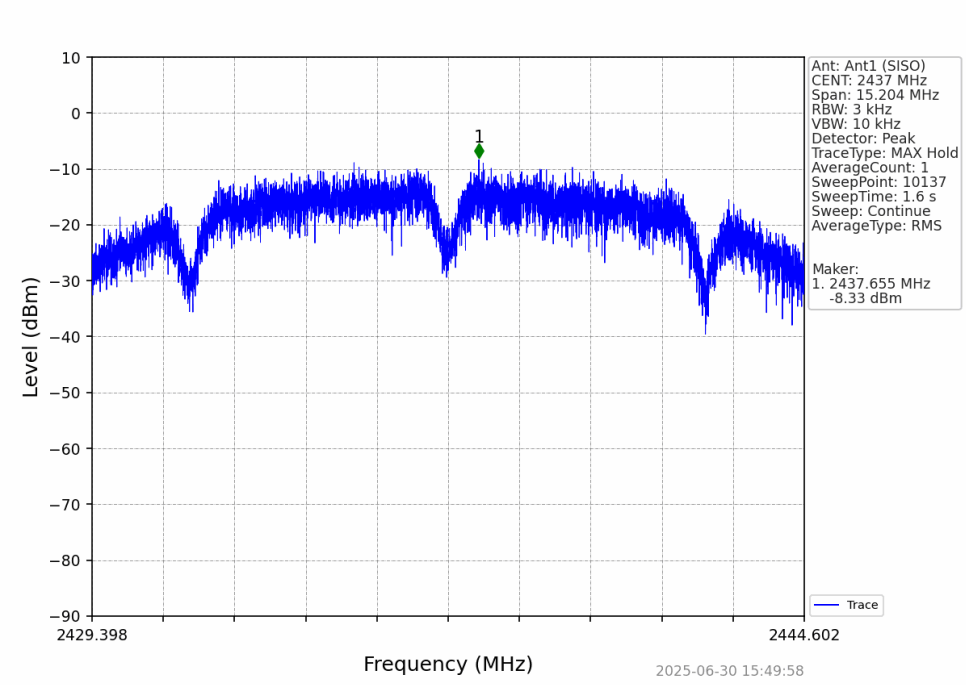
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



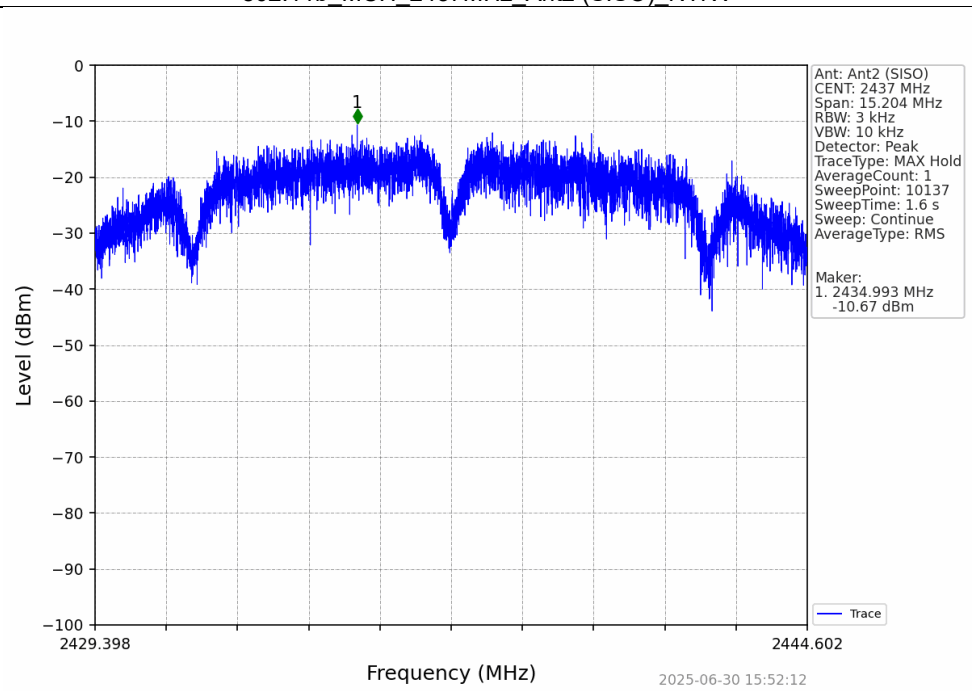
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



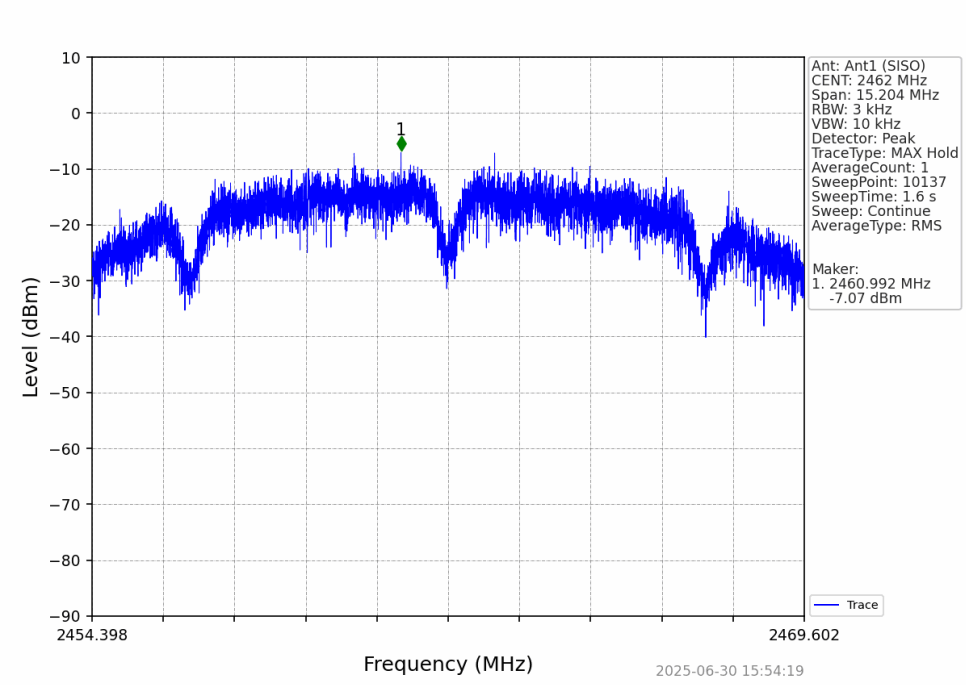
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



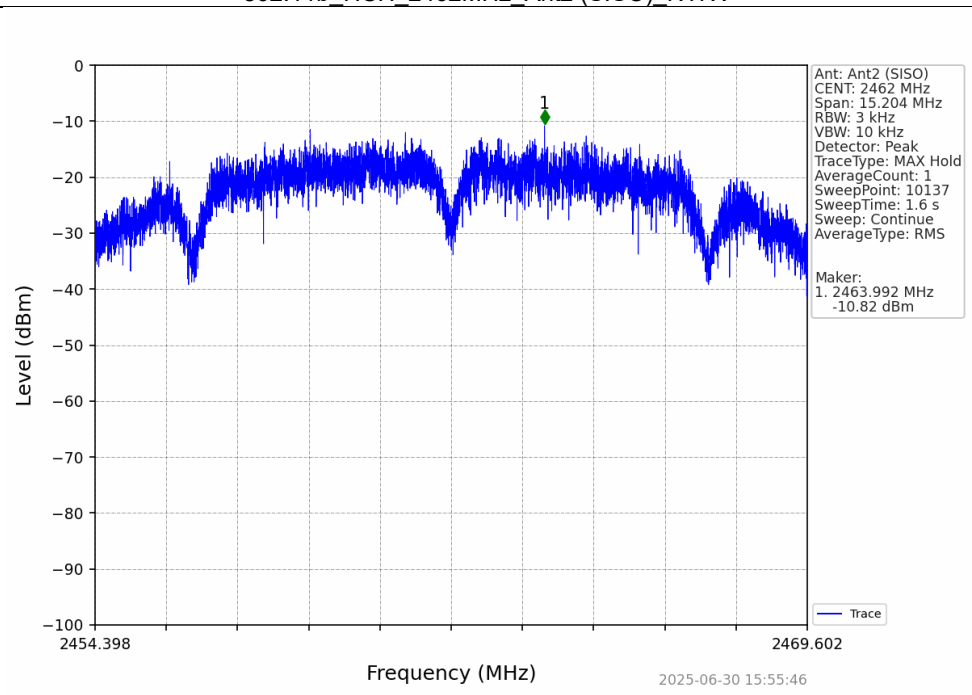
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



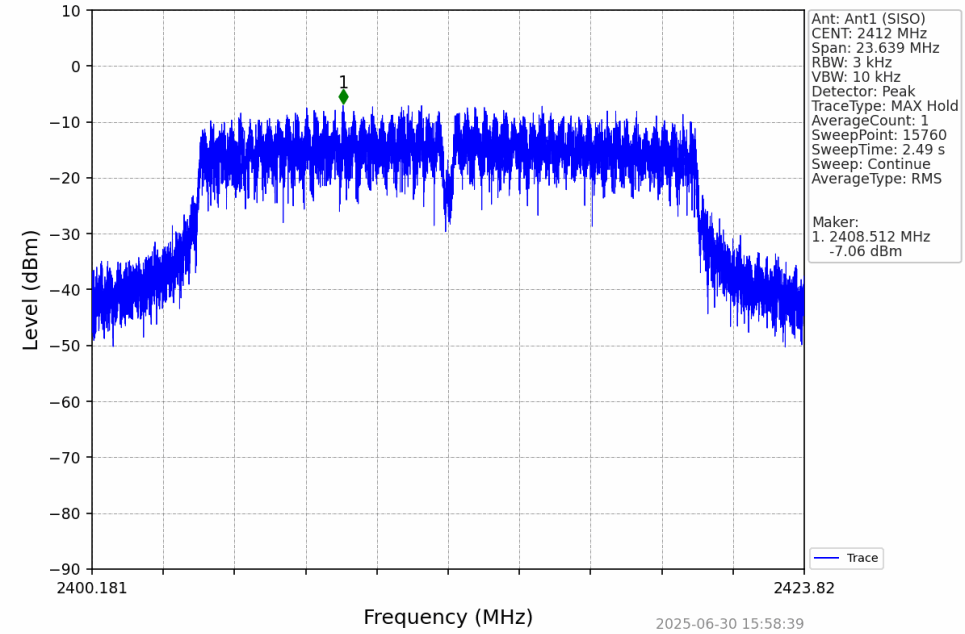
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



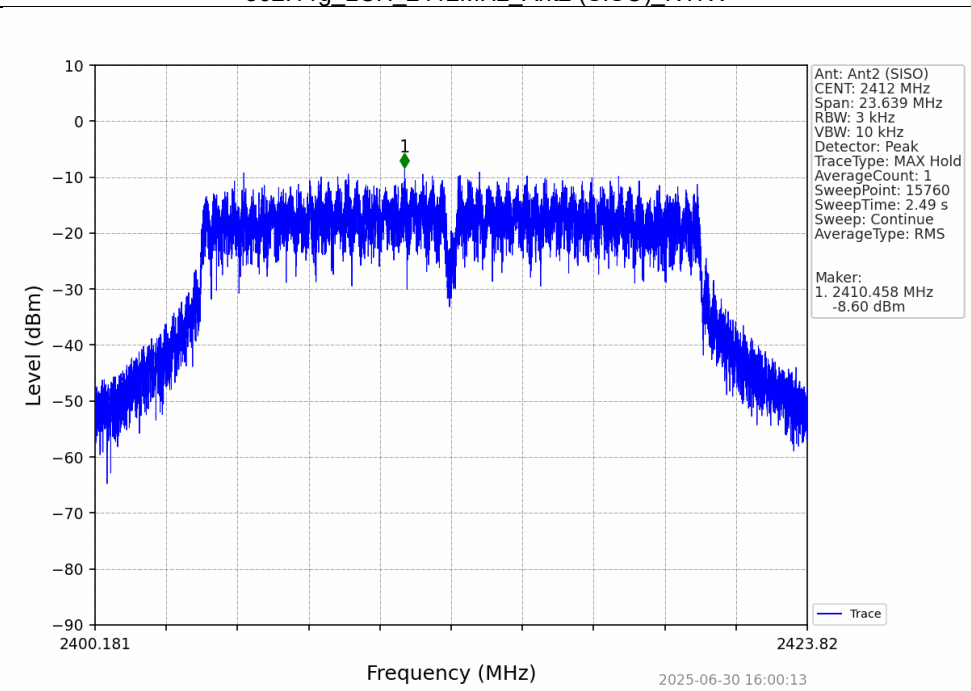
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



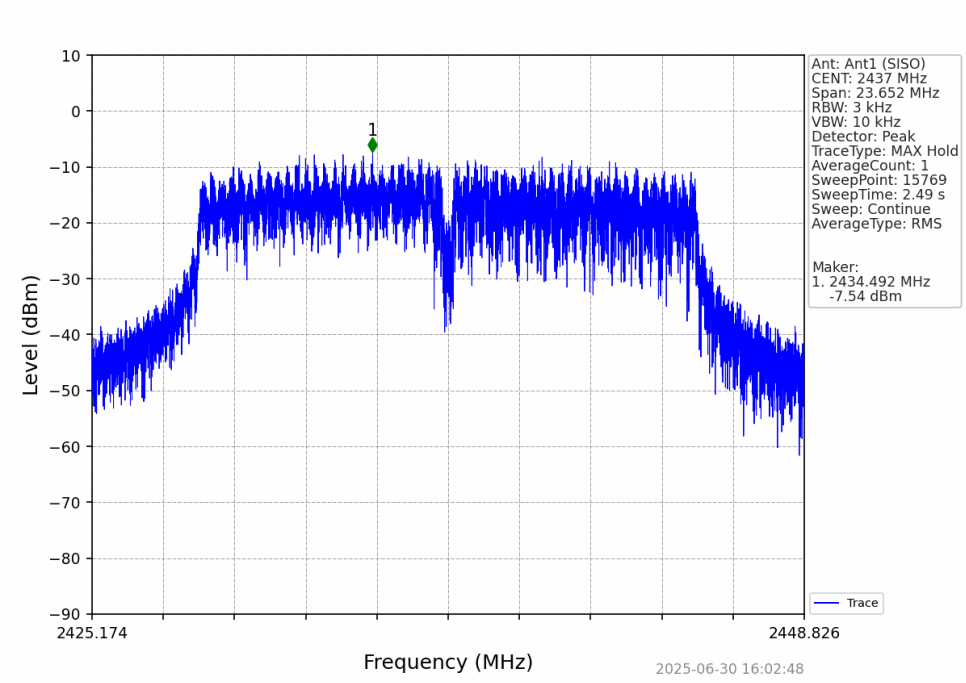
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



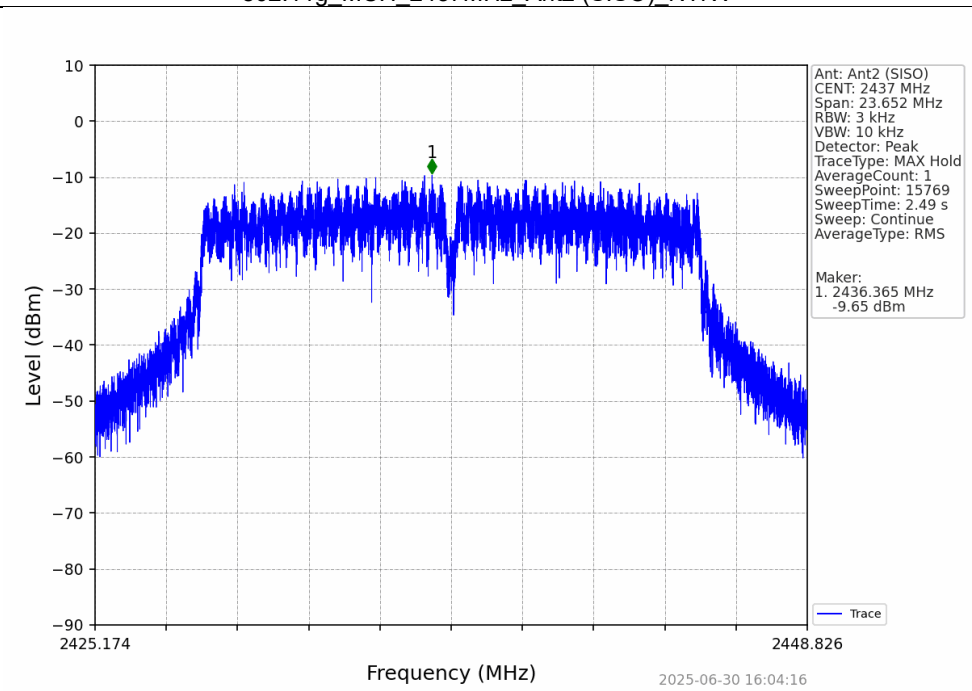
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



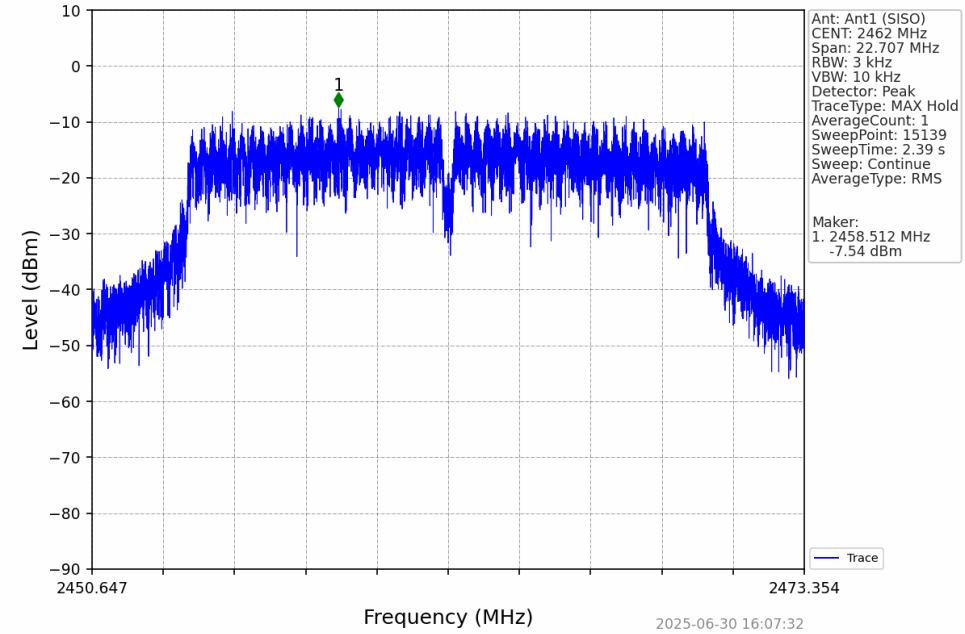
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



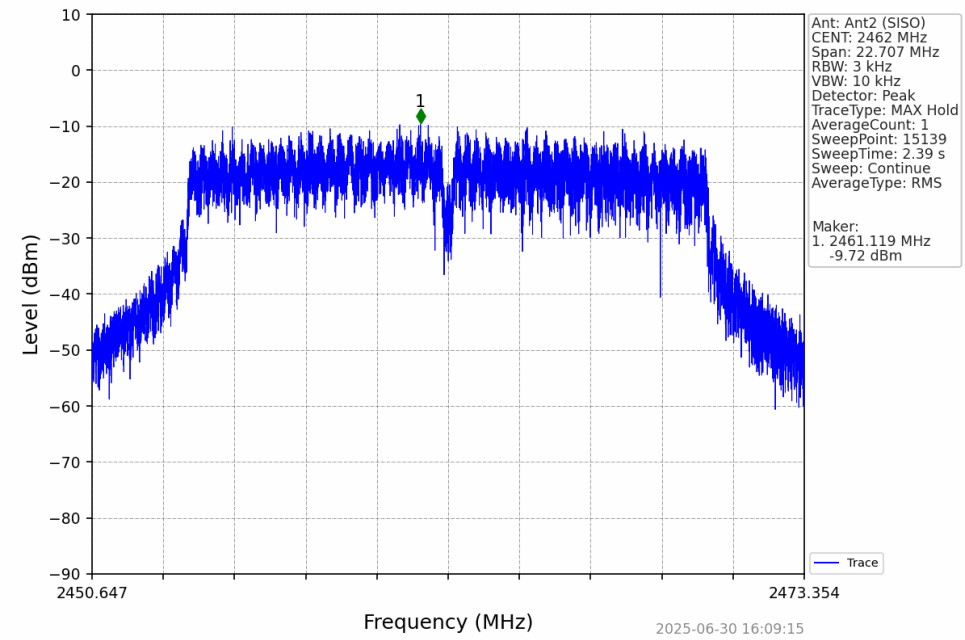
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



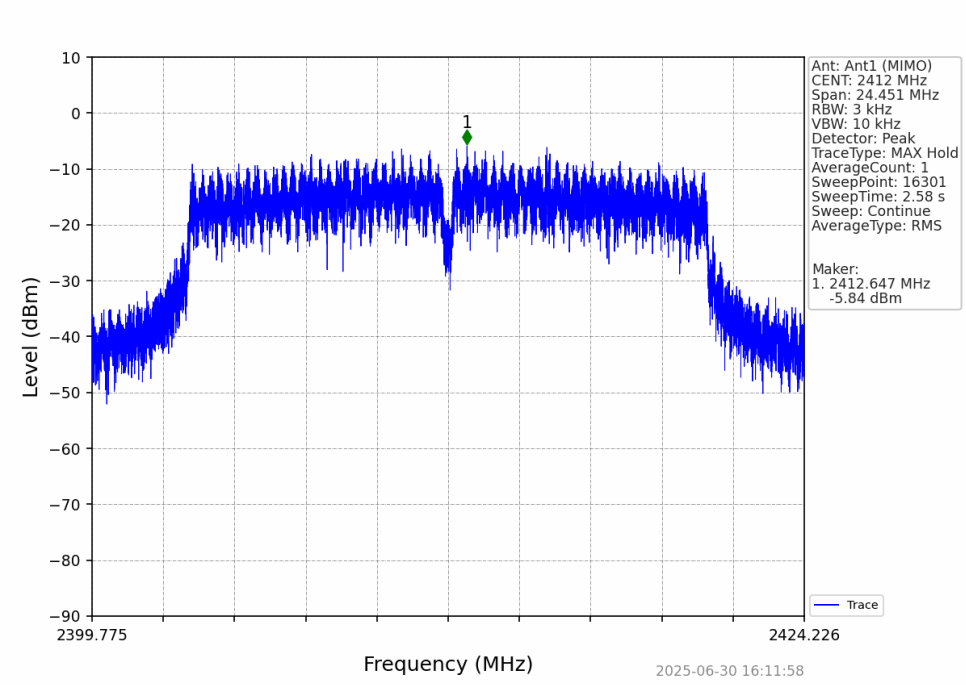
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



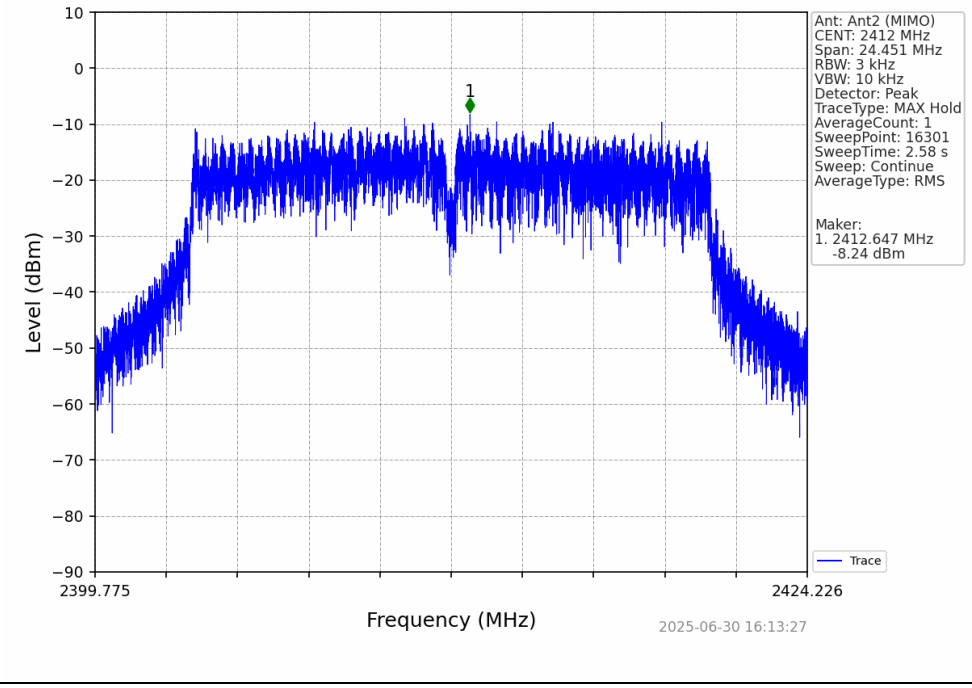
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



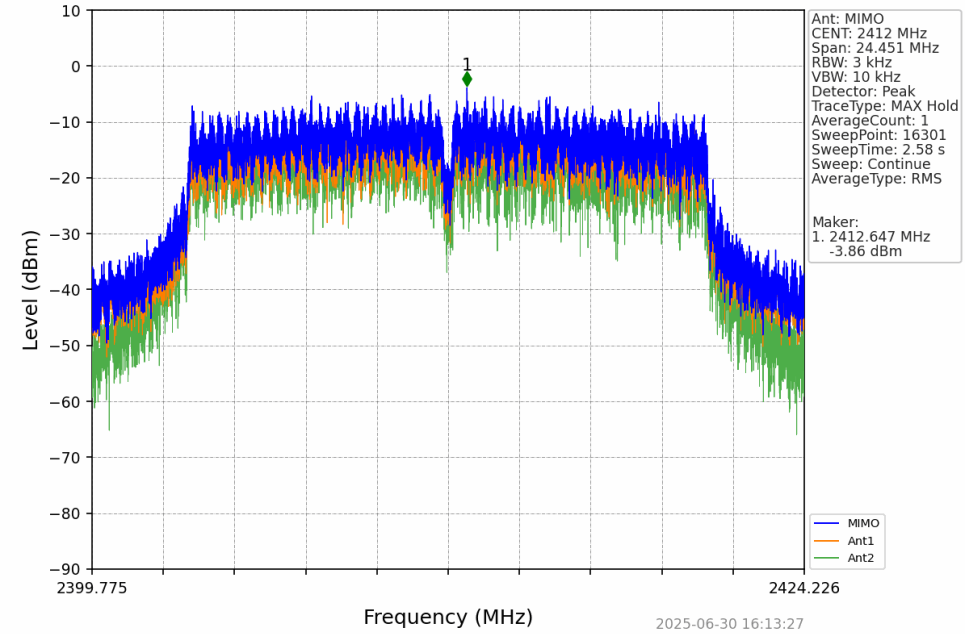
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



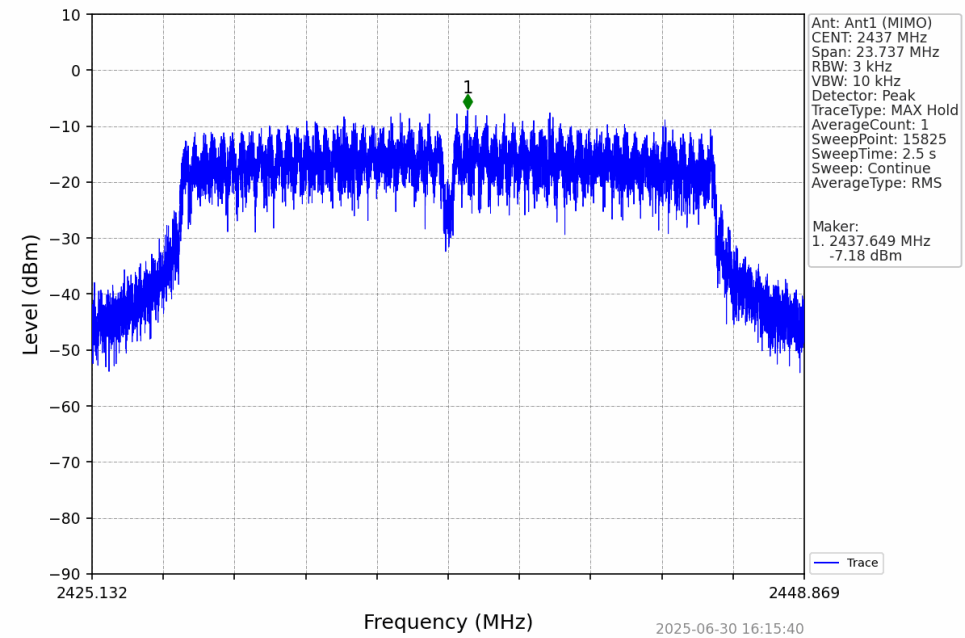
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



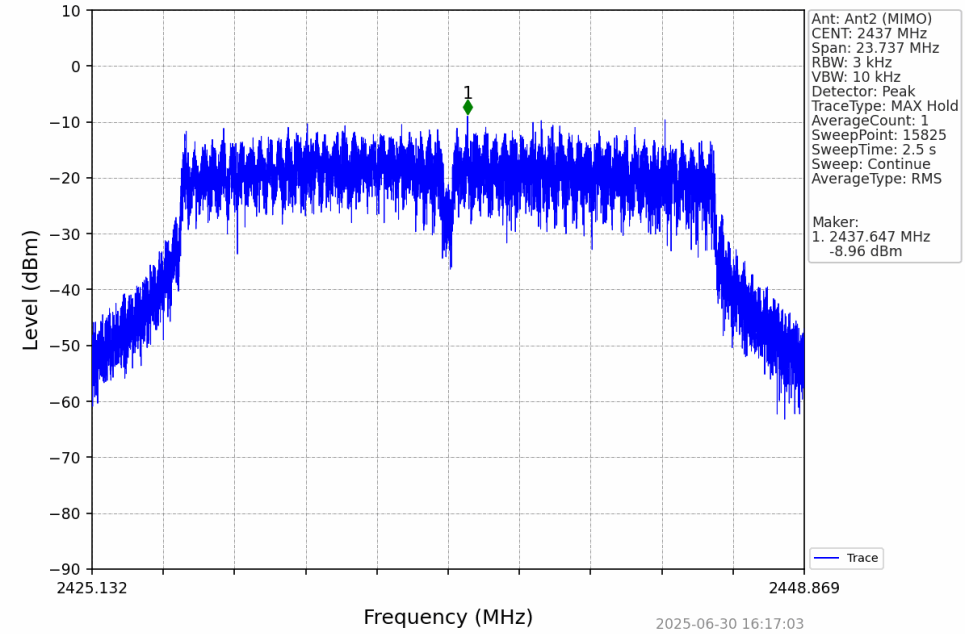
802.11n(HT20)_LCH_2412MHz_MIMO_NTNV



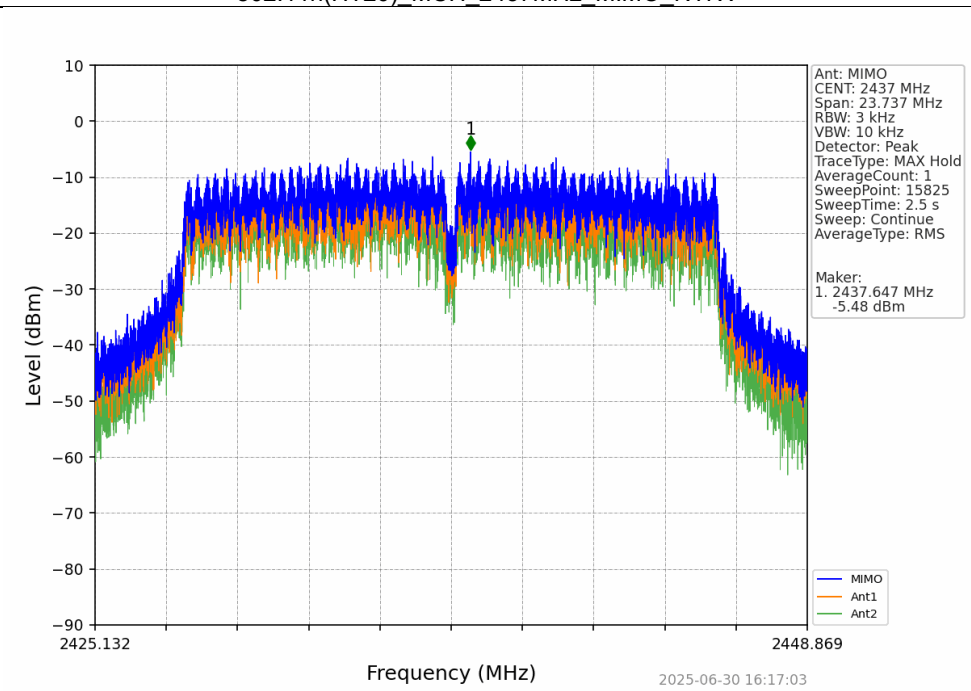
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



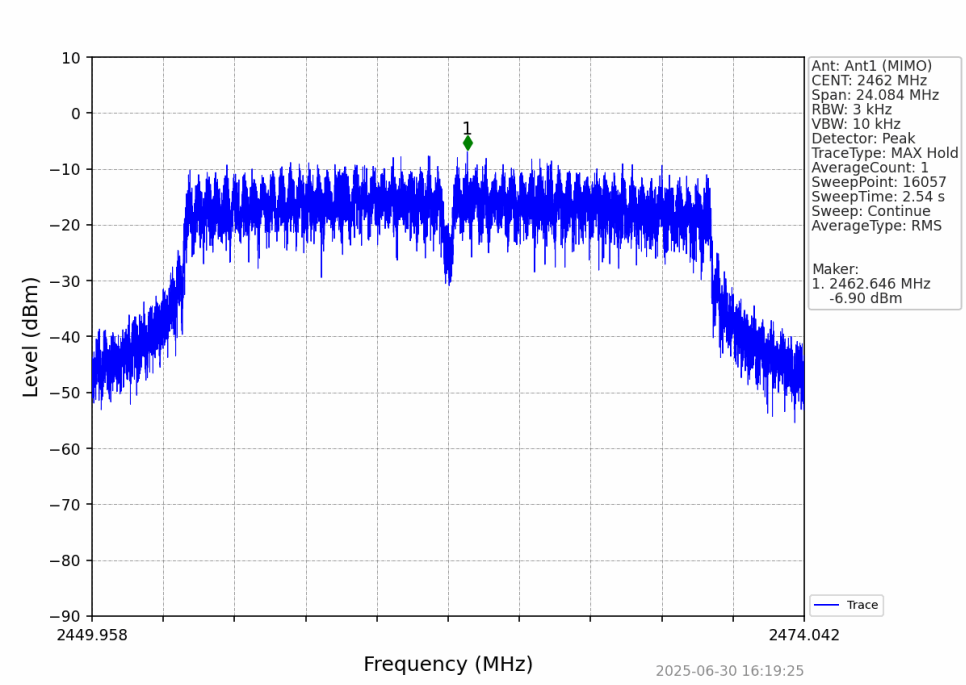
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



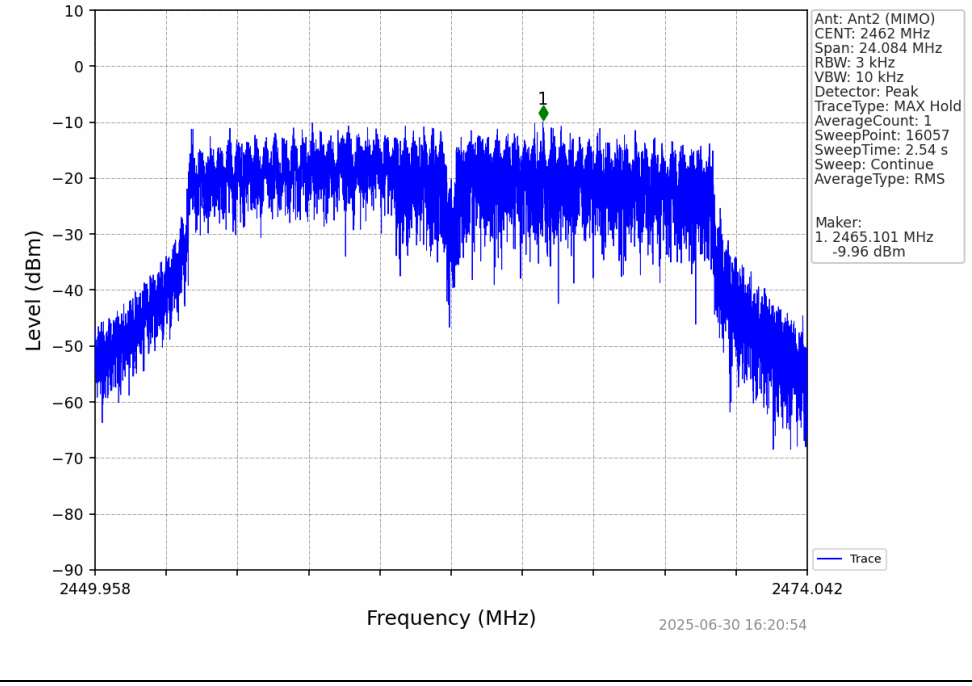
802.11n(HT20)_MCH_2437MHz_MIMO_NTNV



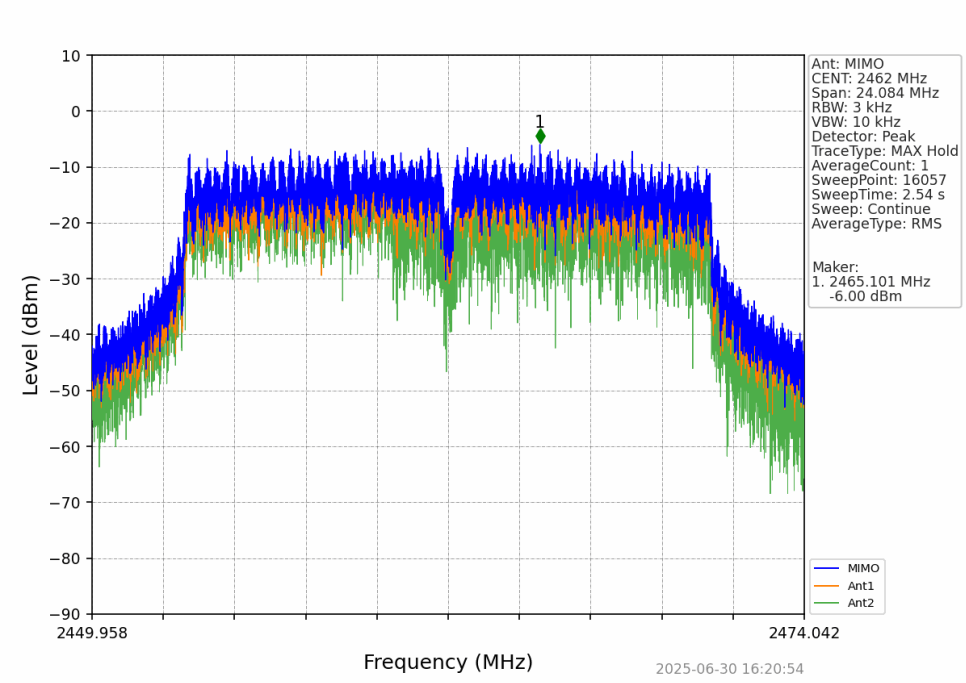
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



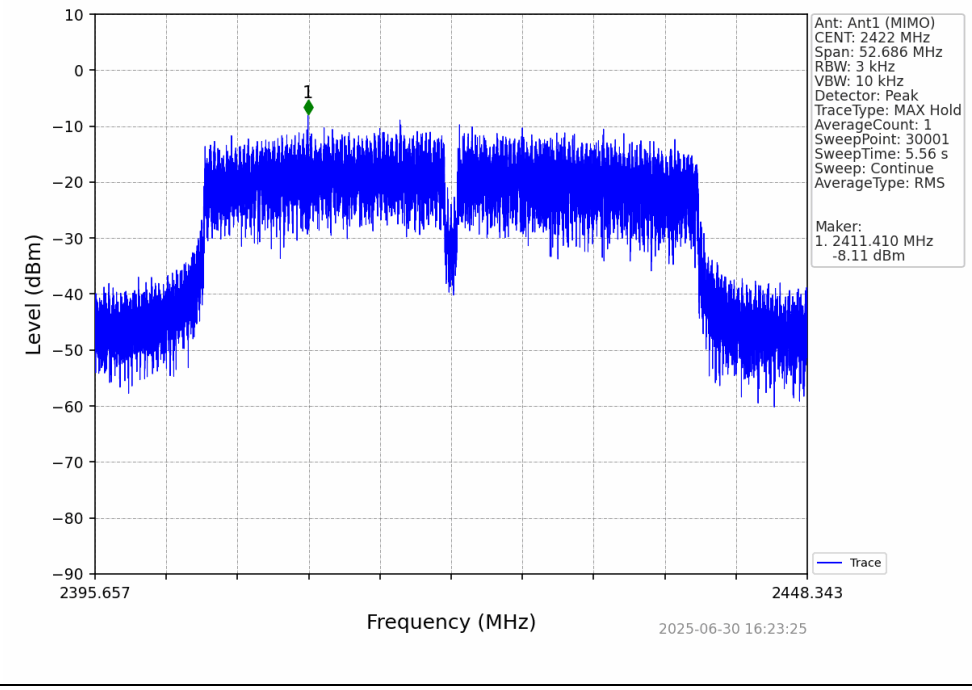
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



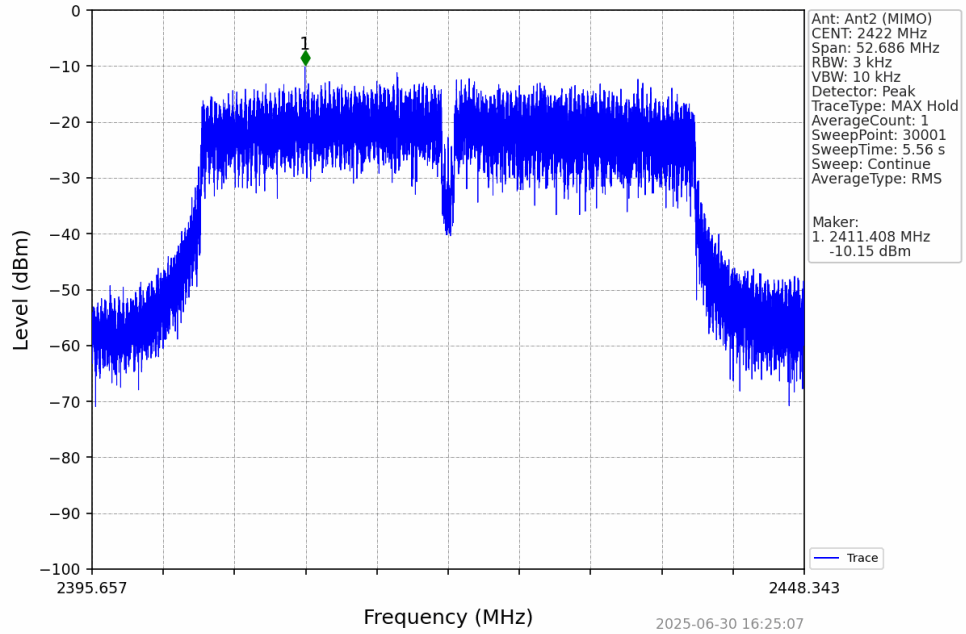
802.11n(HT20)_HCH_2462MHz_MIMO_NTNV



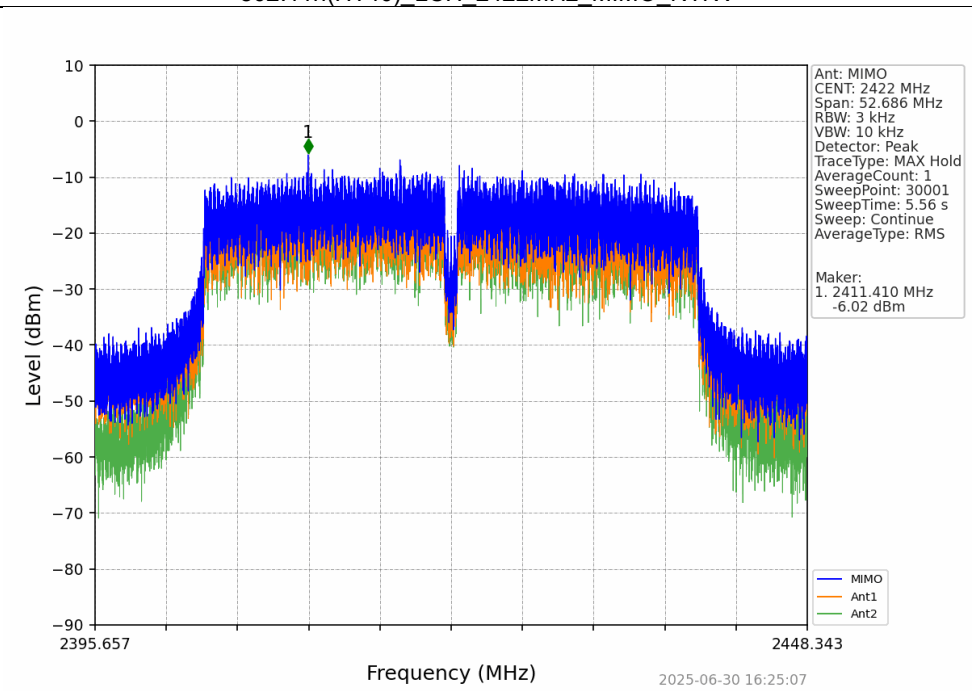
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



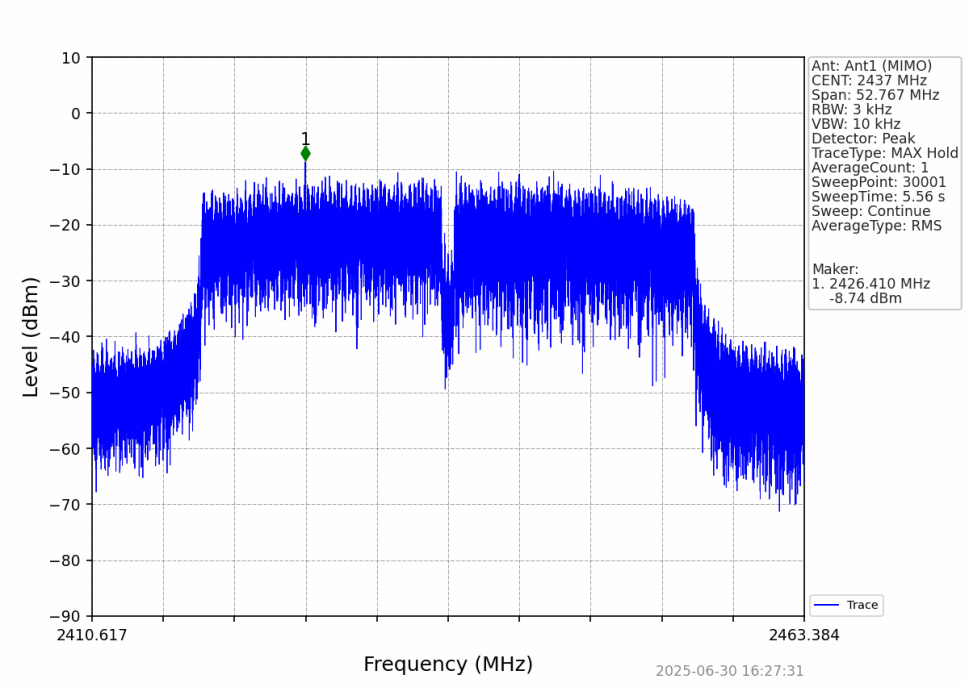
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



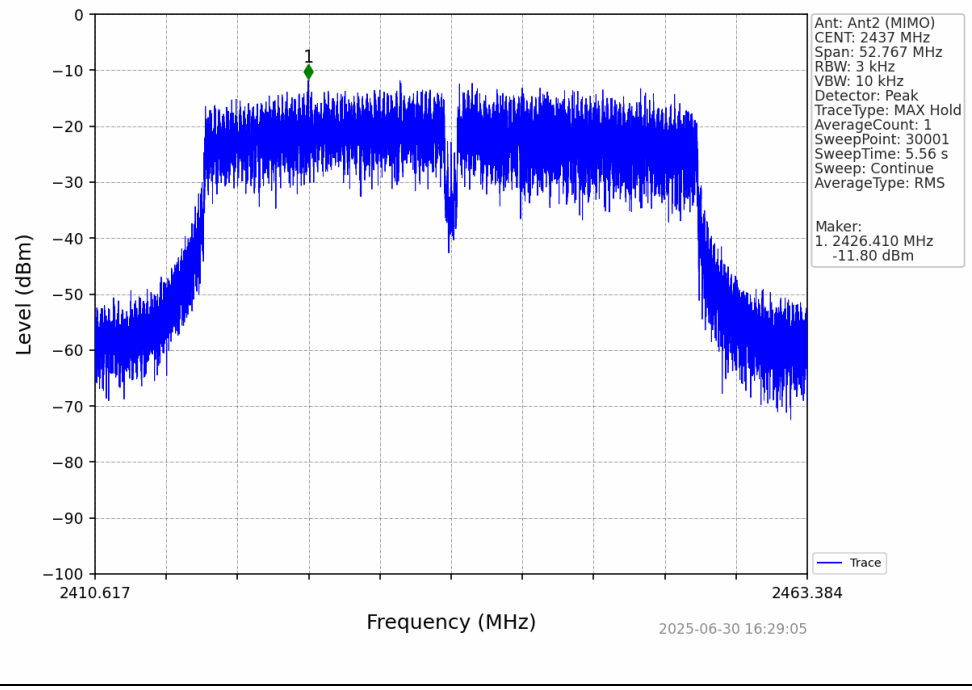
802.11n(HT40)_LCH_2422MHz_MIMO_NTNV



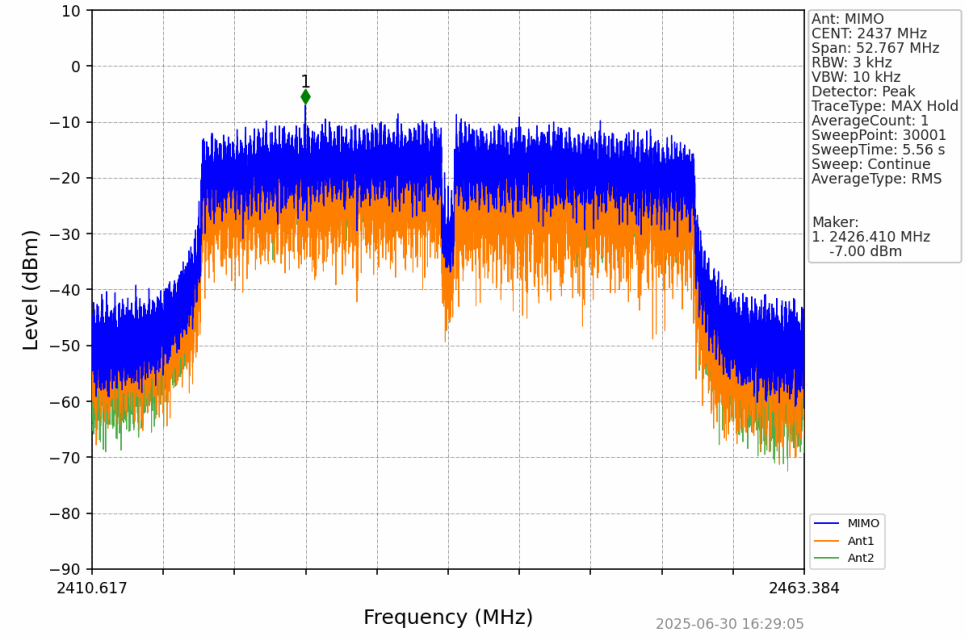
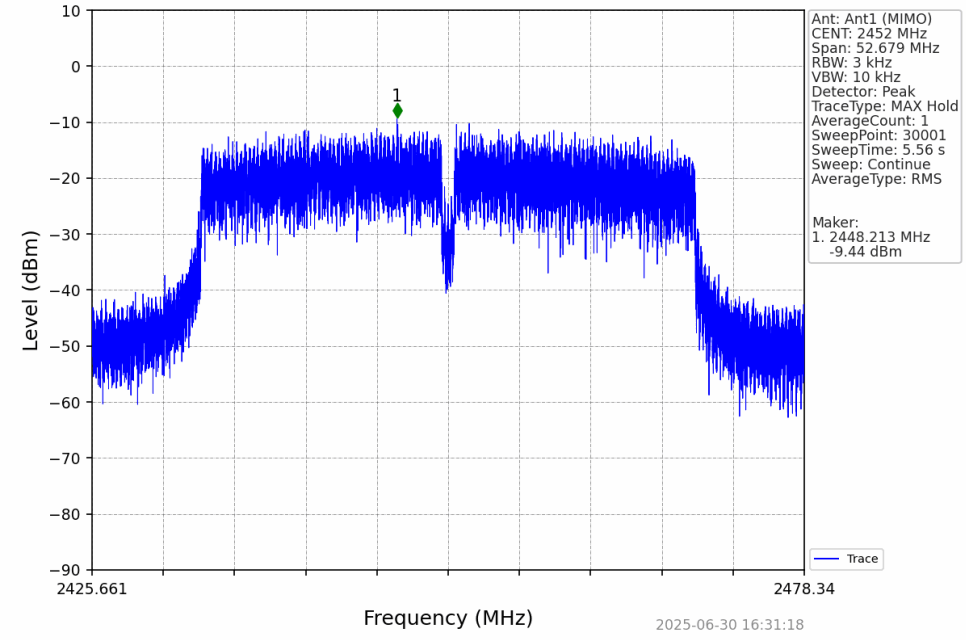
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_MIMO_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV