

Appendix - WIFI

1. Duty Cycle

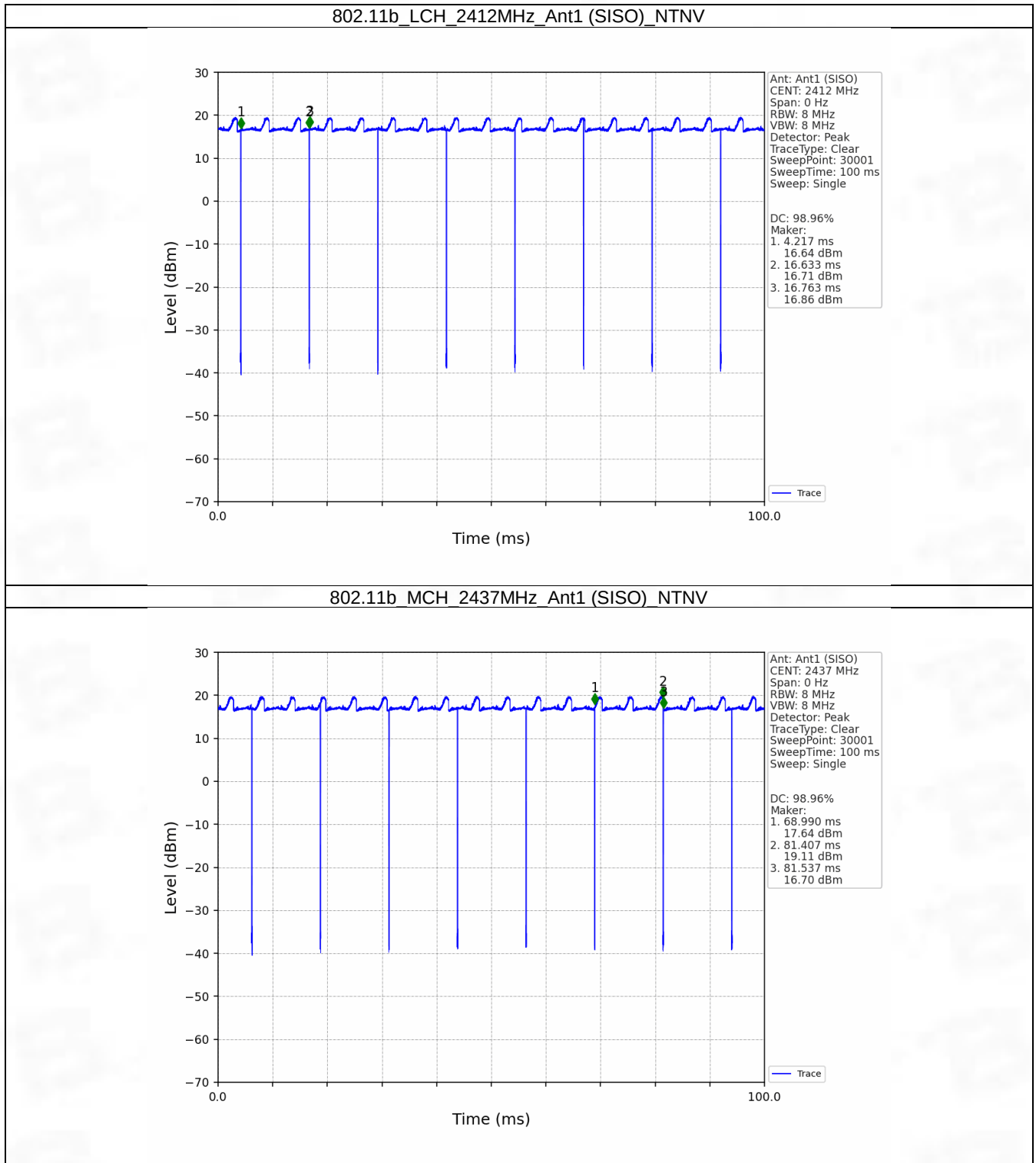
1.1 Test Result

1.1.1 Ant1

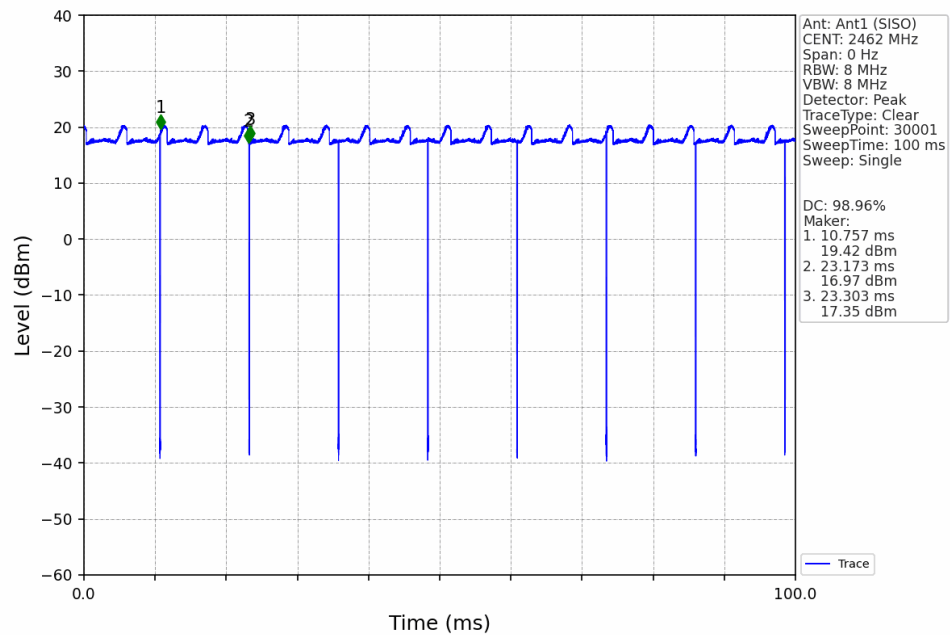
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.416	12.546	98.96	0.05	0.03
		2437	12.417	12.547	98.96	0.05	0.03
		2462	12.416	12.546	98.96	0.05	0.03
802.11g	SISO	2412	2.065	2.194	94.12	0.26	0.00
		2437	2.065	2.194	94.12	0.26	0.03
		2462	2.065	2.194	94.12	0.26	0.03
802.11n (HT20)	SISO	2412	1.920	2.049	93.70	0.28	0.04
		2437	1.920	2.049	93.70	0.28	0.04
		2462	1.921	2.050	93.71	0.28	0.04

1.2 Test Graph

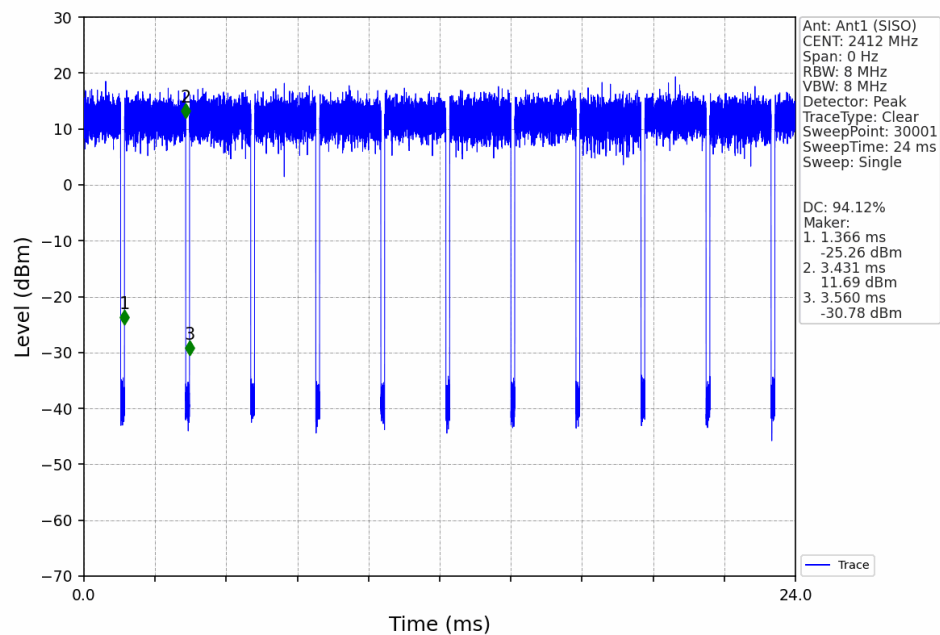
1.2.1 Ant1



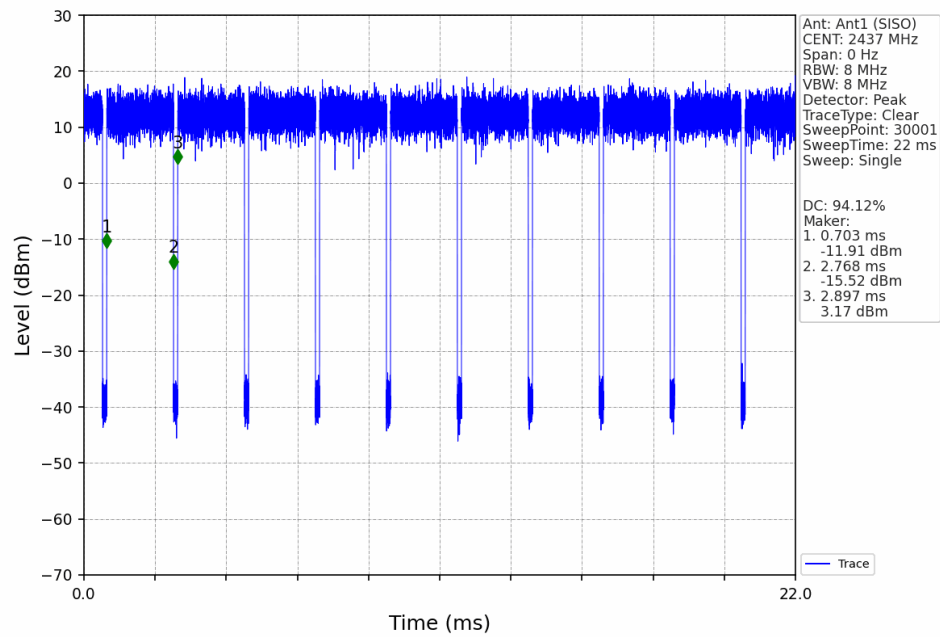
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



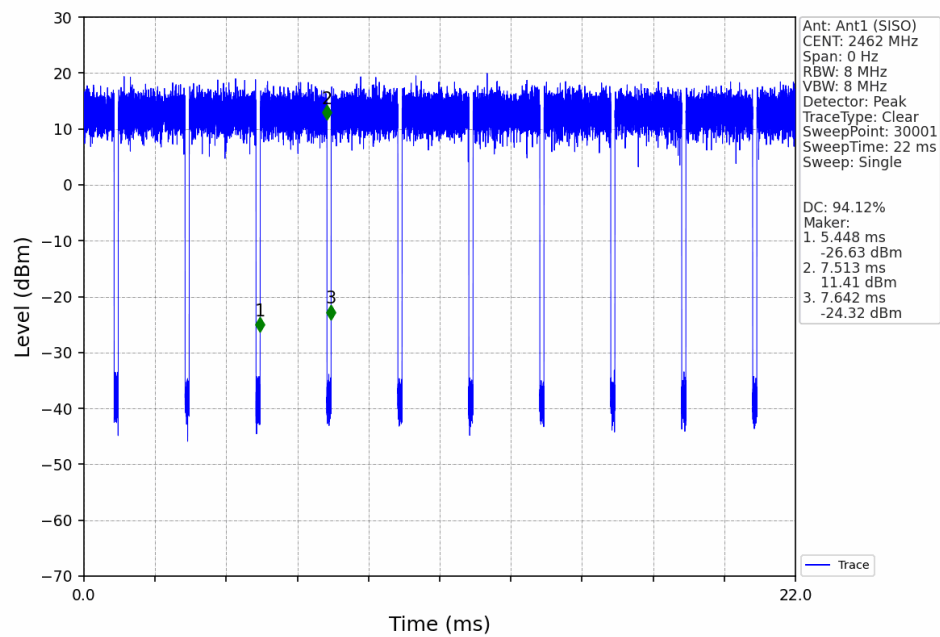
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



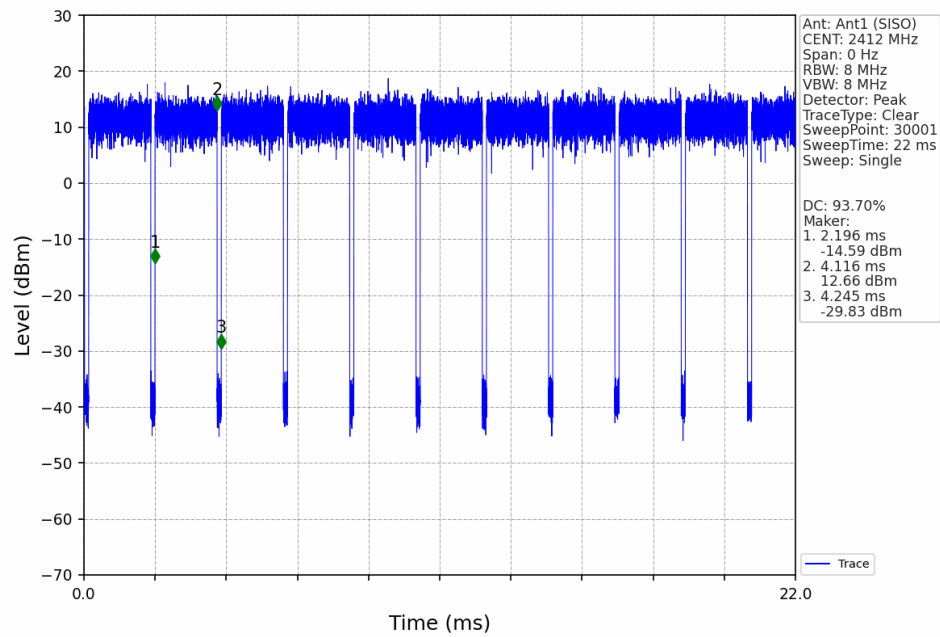
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



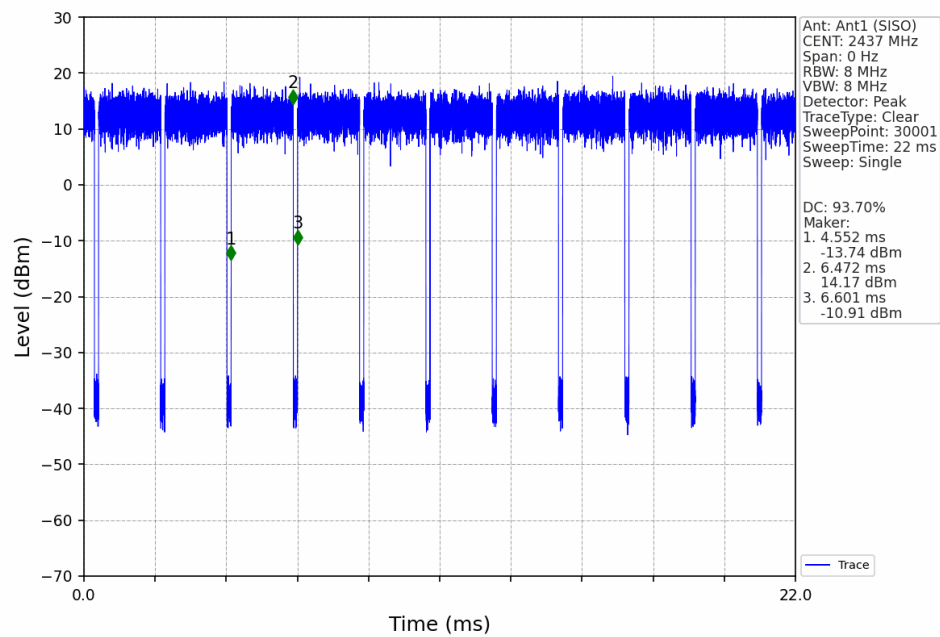
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

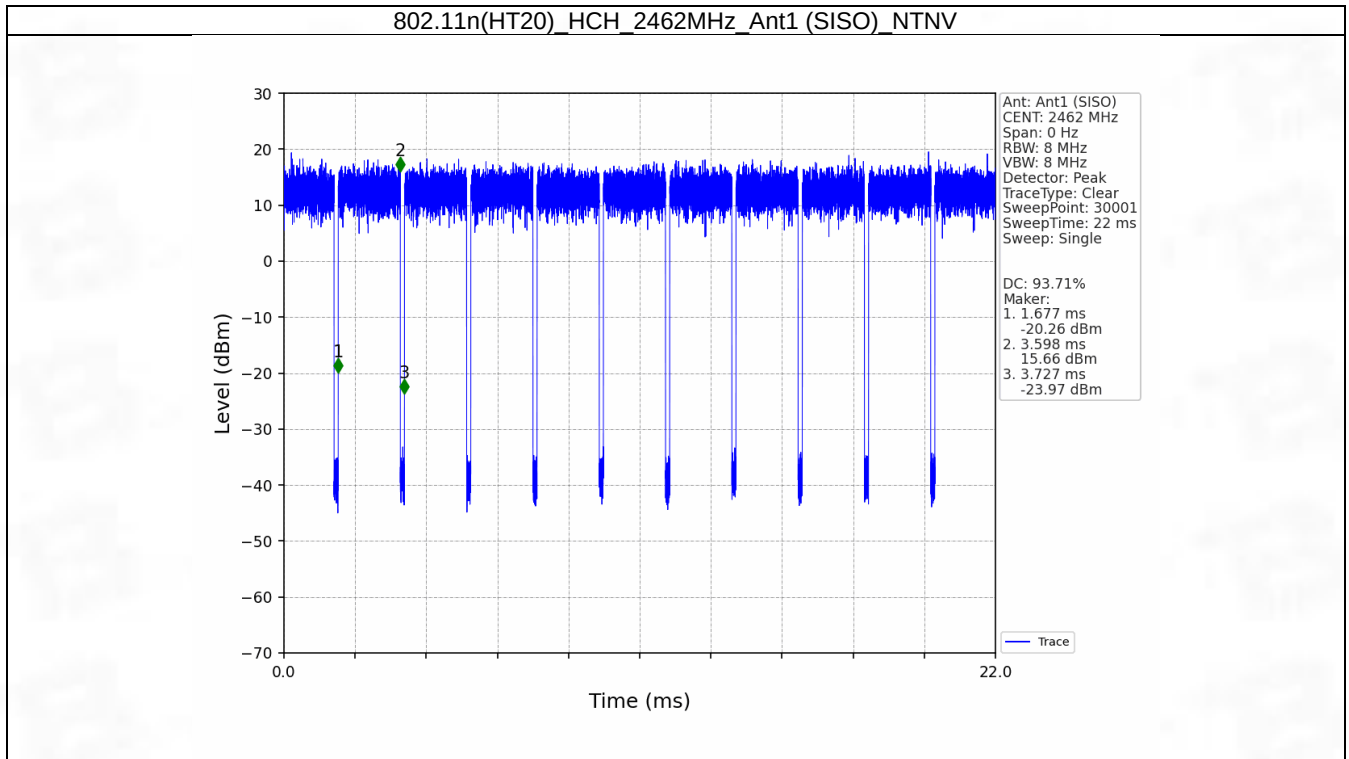


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





2. Bandwidth

2.1 Test Result

2.1.1 OBW

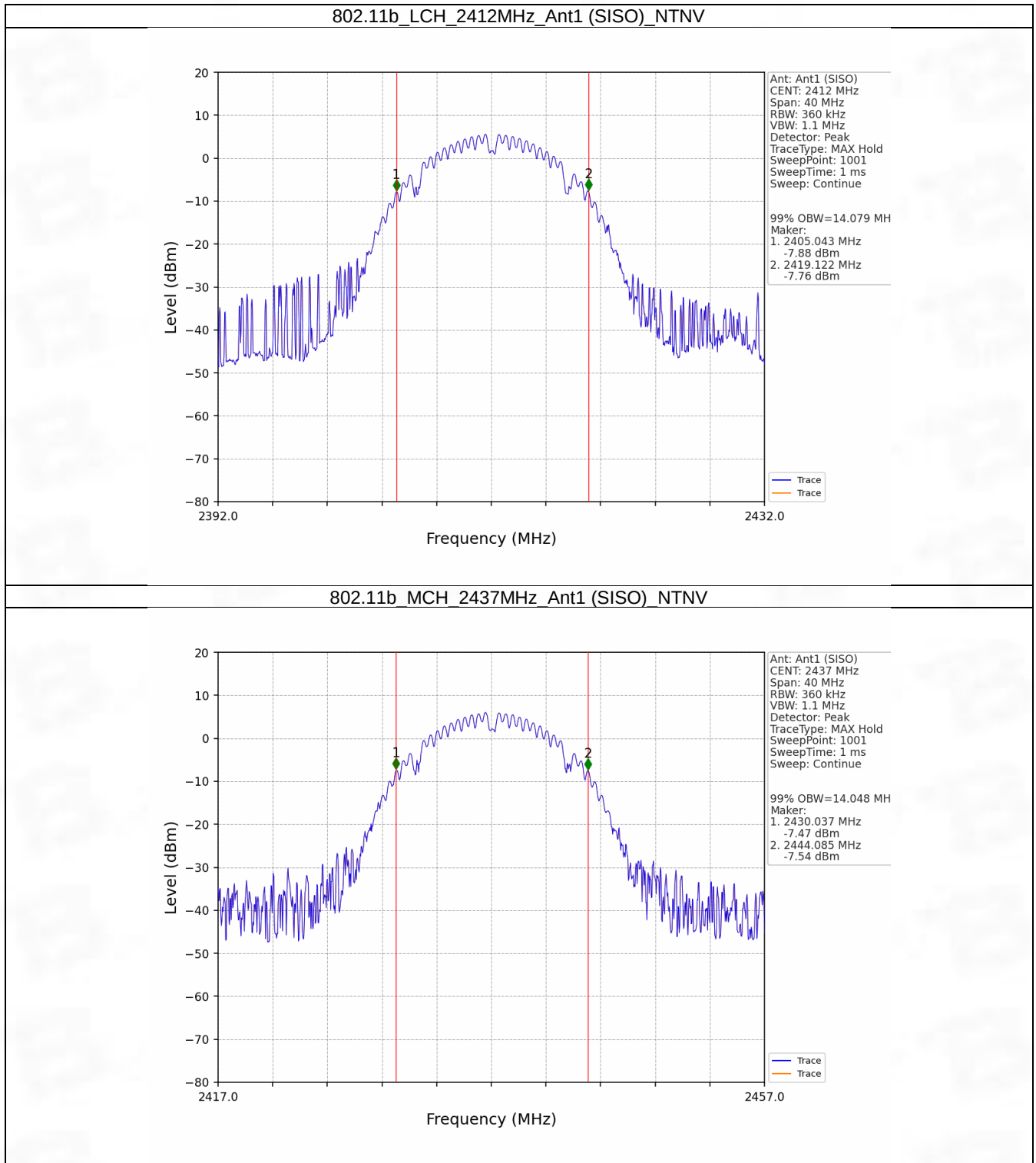
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.079	/	Pass
		2437	1	14.048	/	Pass
		2462	1	14.019	/	Pass
802.11g	SISO	2412	1	18.031	/	Pass
		2437	1	18.039	/	Pass
		2462	1	18.027	/	Pass
802.11n (HT20)	SISO	2412	1	18.855	/	Pass
		2437	1	18.875	/	Pass
		2462	1	18.952	/	Pass

2.1.2 6dB BW

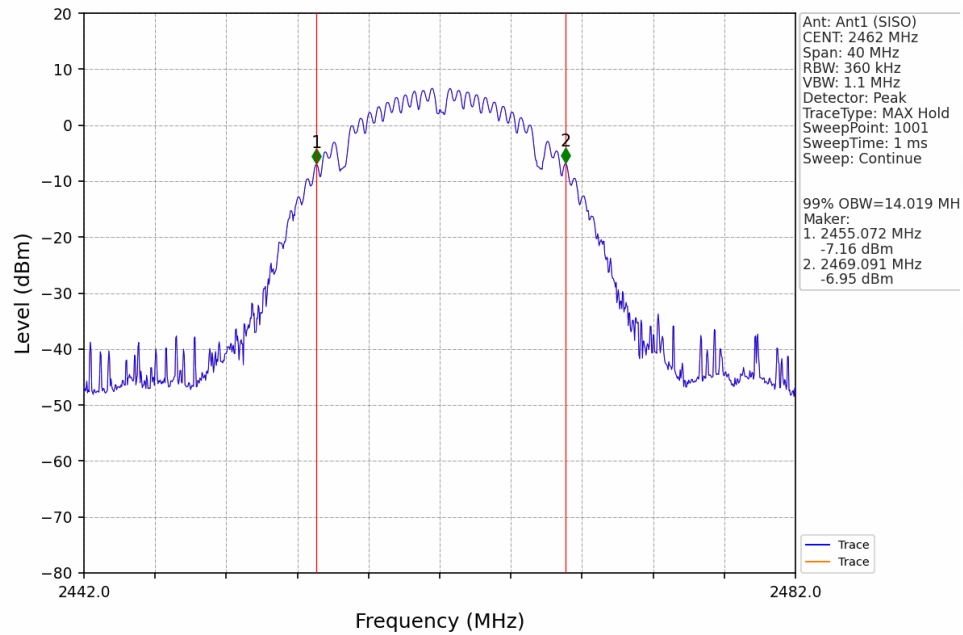
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.239	≥ 0.5	Pass
		2437	1	9.213	≥ 0.5	Pass
		2462	1	9.227	≥ 0.5	Pass
802.11g	SISO	2412	1	16.504	≥ 0.5	Pass
		2437	1	16.617	≥ 0.5	Pass
		2462	1	16.706	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.991	≥ 0.5	Pass
		2437	1	17.823	≥ 0.5	Pass
		2462	1	17.648	≥ 0.5	Pass

2.2 Test Graph

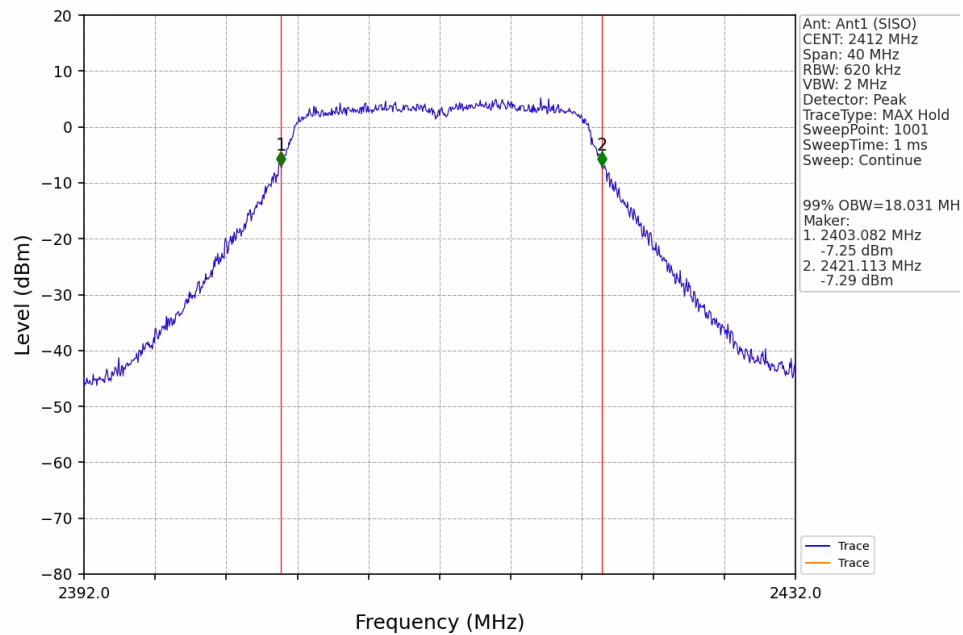
2.2.1 OBW



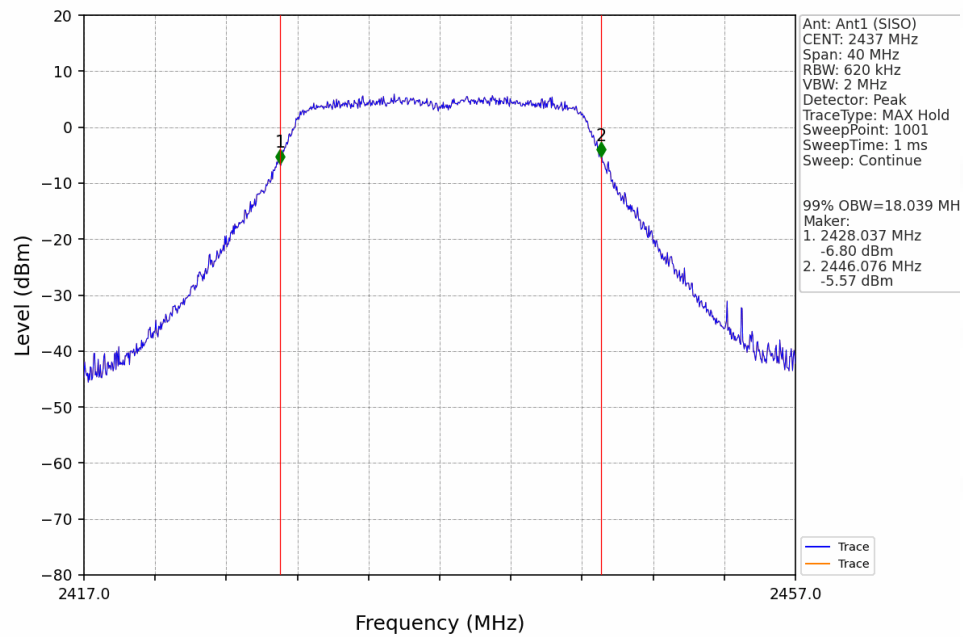
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



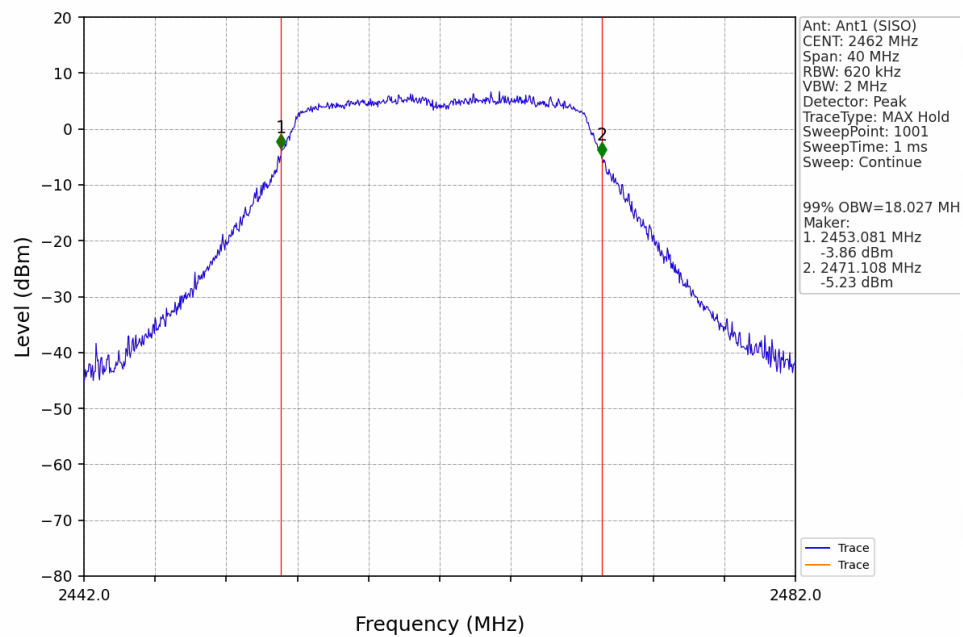
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



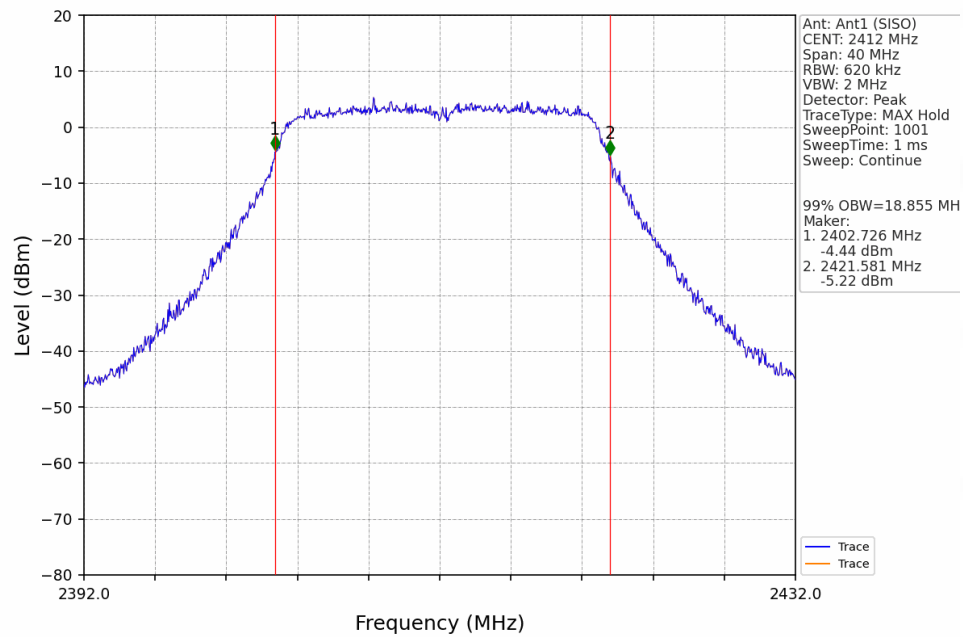
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



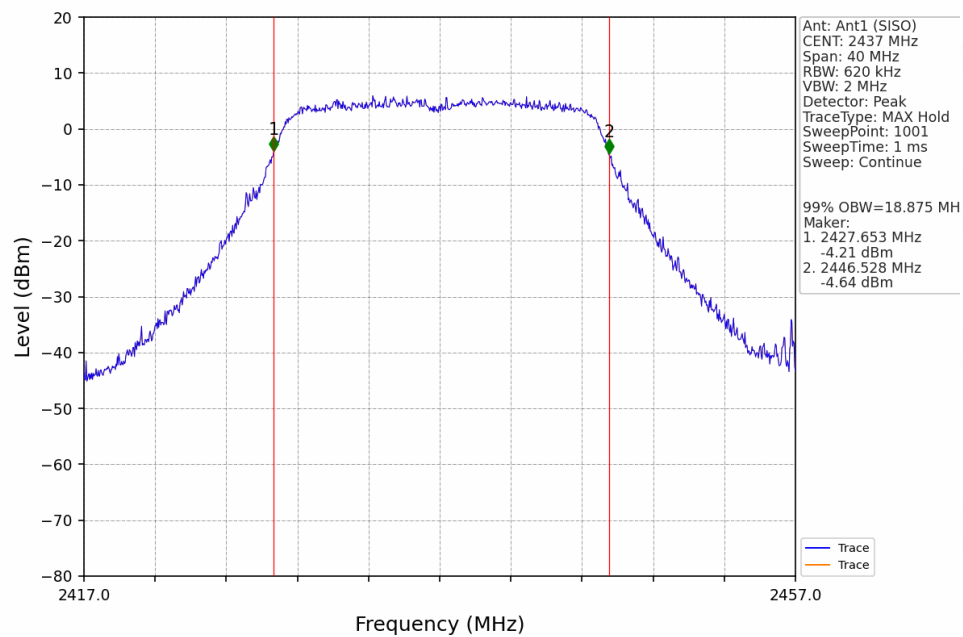
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

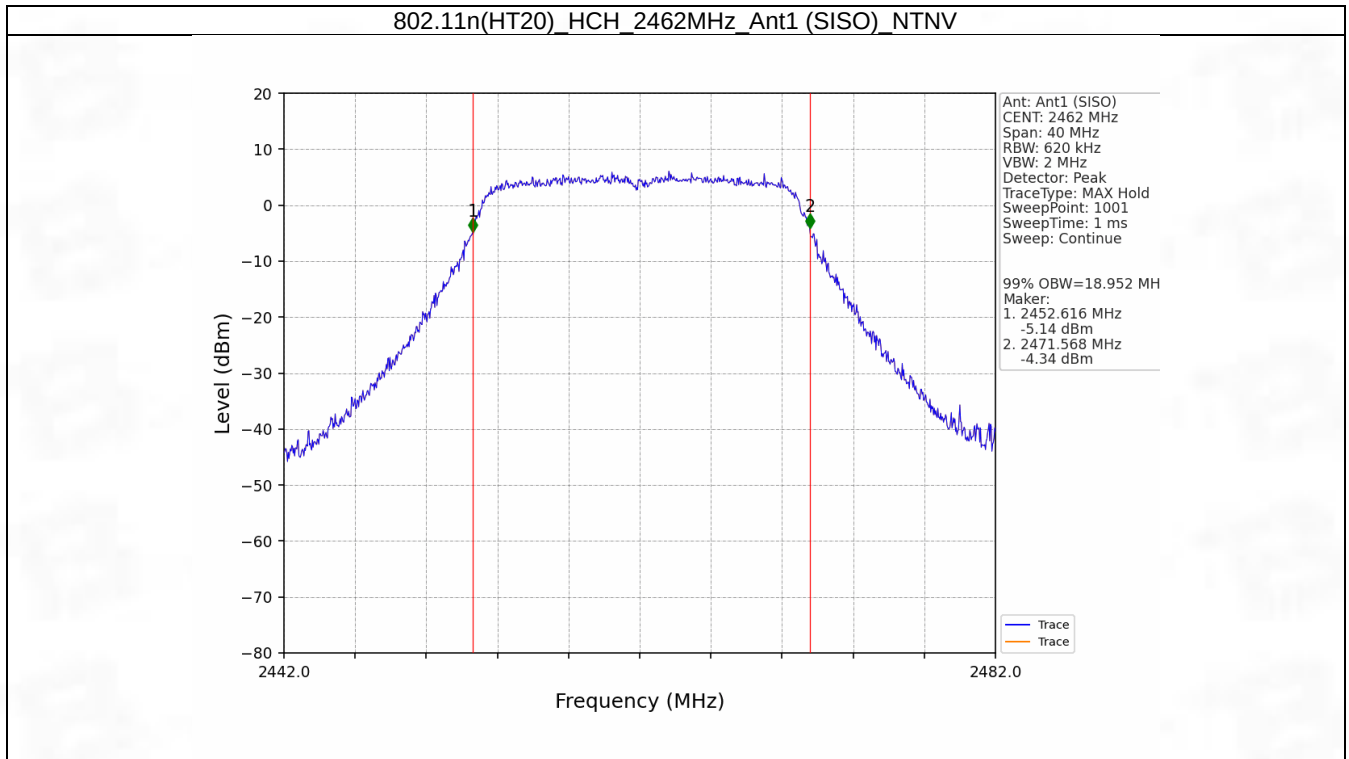


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

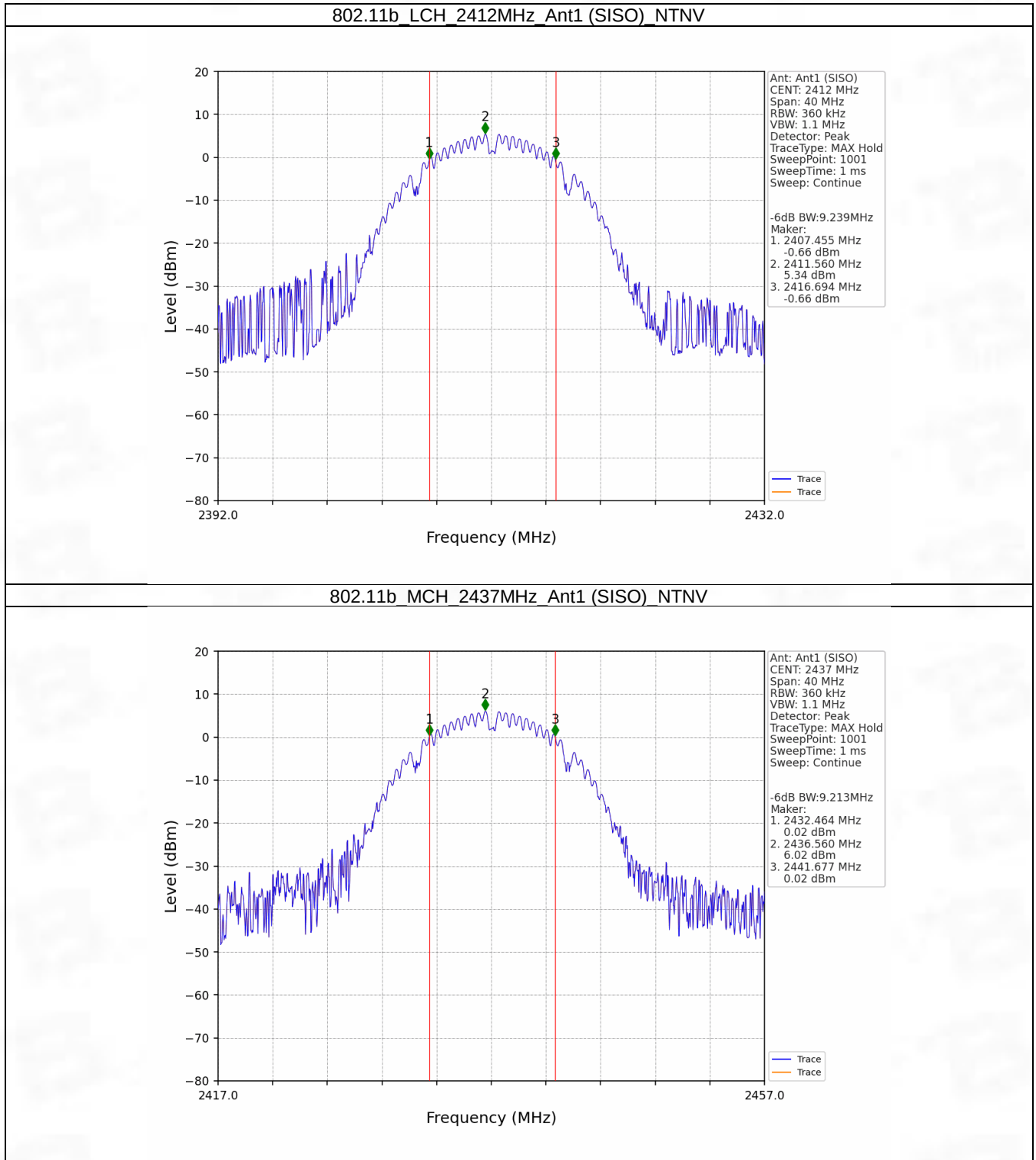


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

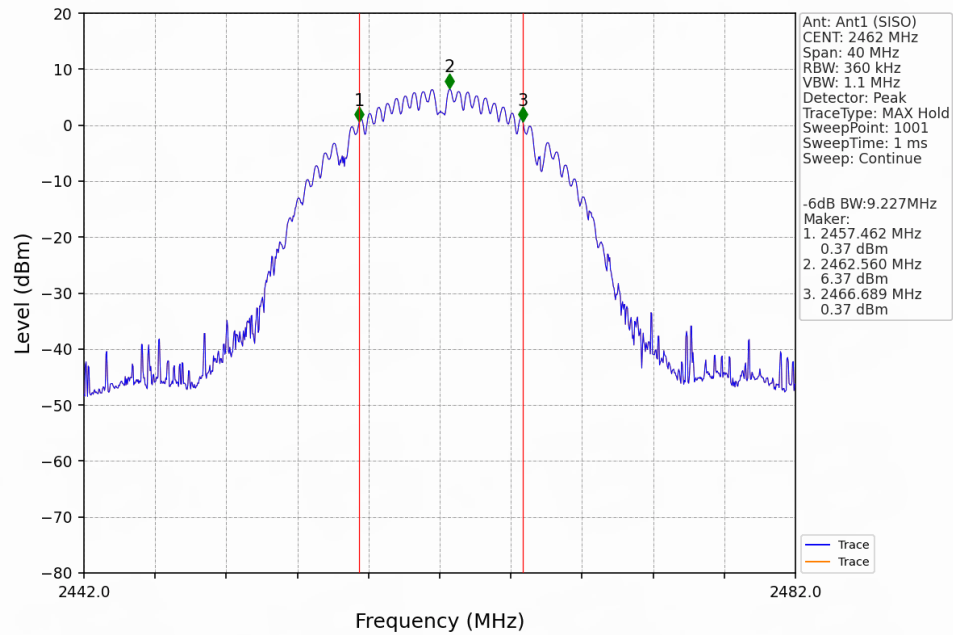




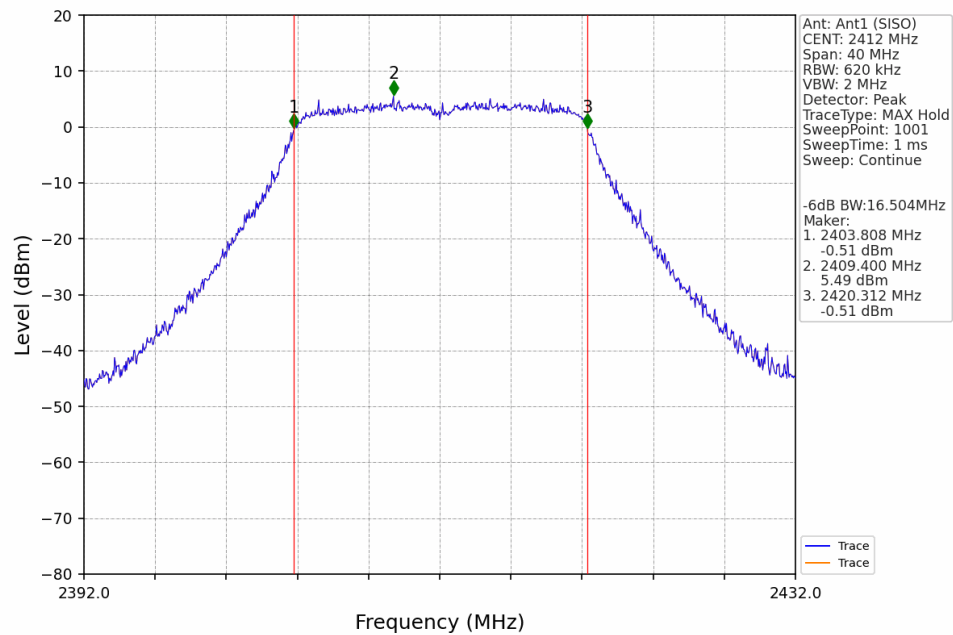
2.2.2 6dB BW



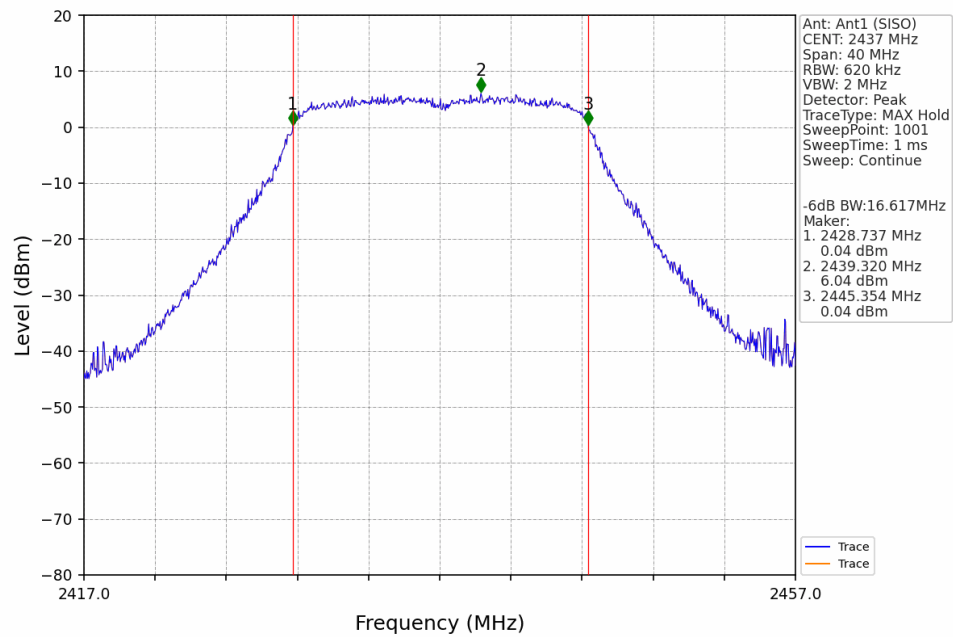
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



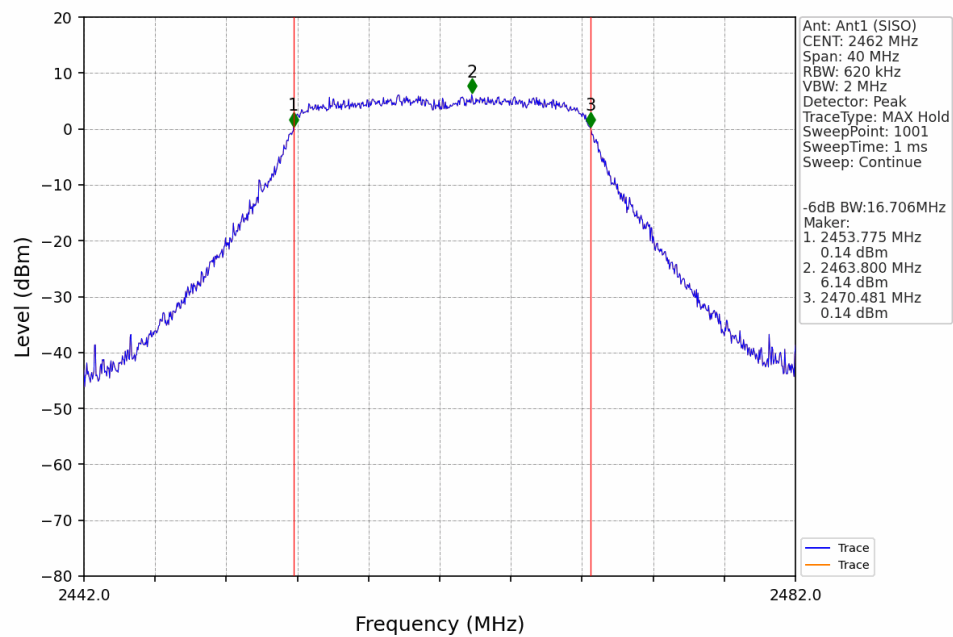
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



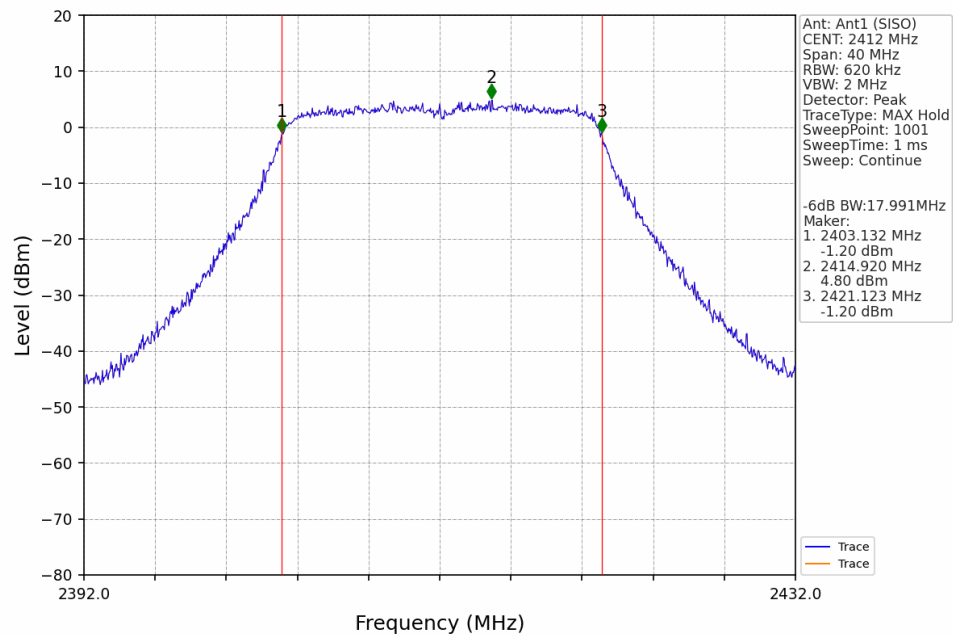
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



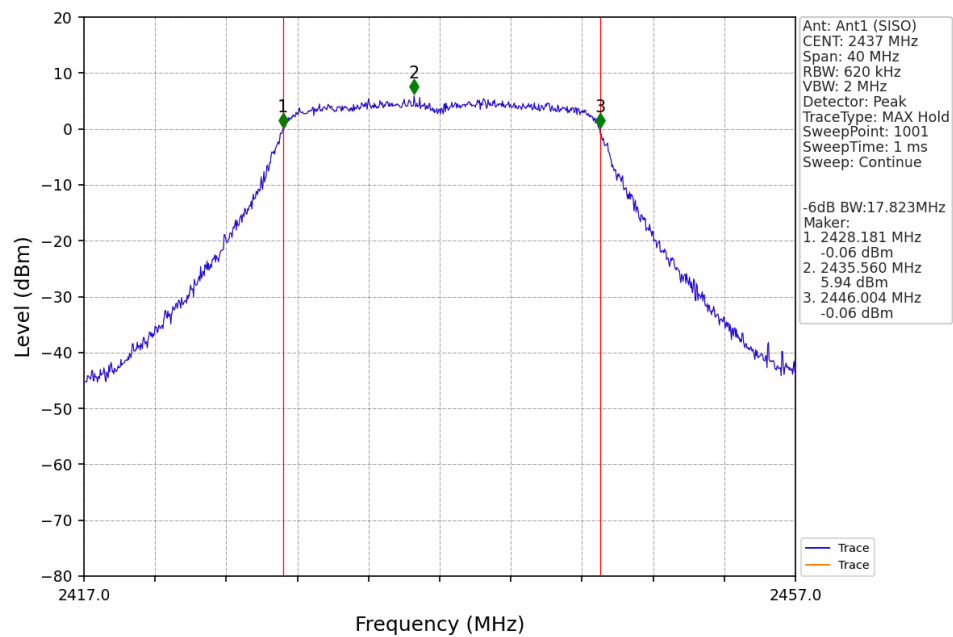
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

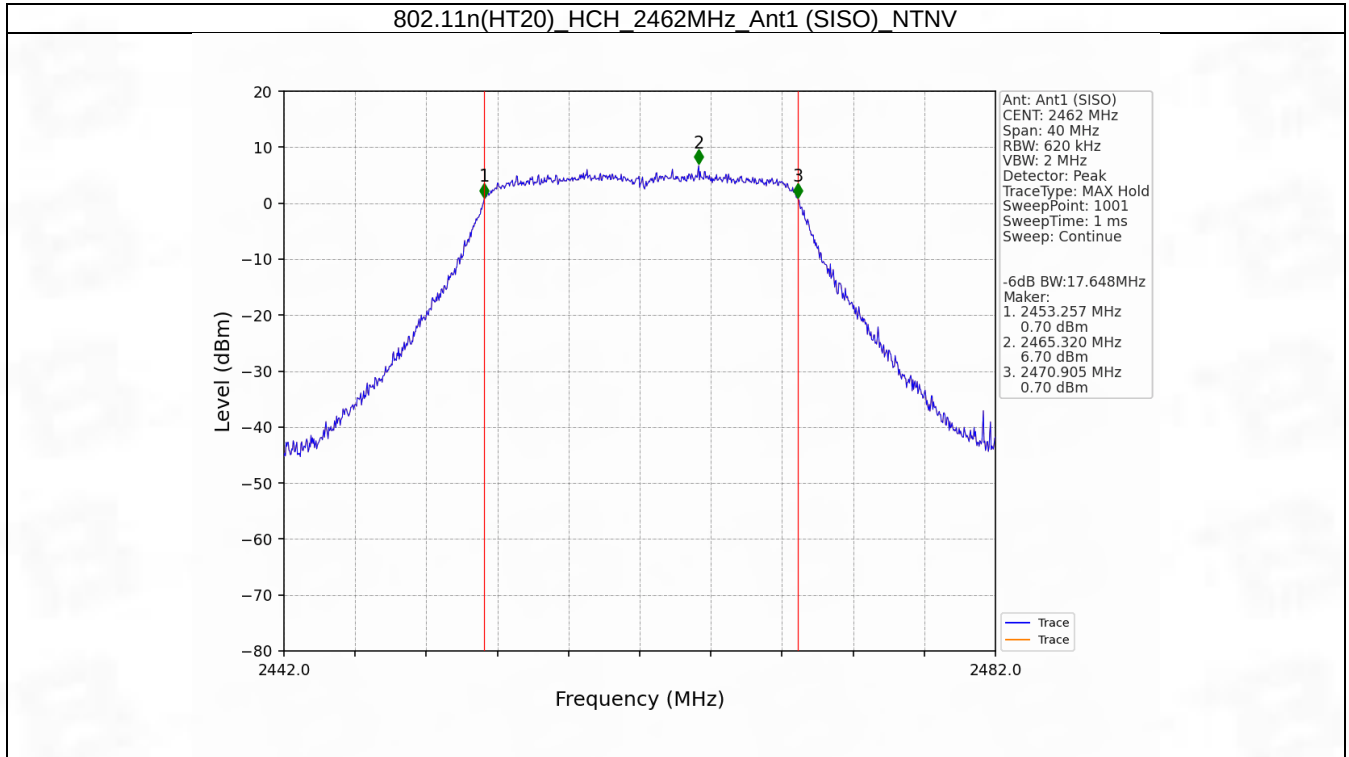


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



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 Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	15.91	<=30	Pass
		2437	16.59	<=30	Pass
		2462	16.95	<=30	Pass
802.11g	SISO	2412	17.79	<=30	Pass
		2437	18.47	<=30	Pass
		2462	18.87	<=30	Pass
802.11n (HT20)	SISO	2412	17.73	<=30	Pass
		2437	18.62	<=30	Pass
		2462	18.88	<=30	Pass

Note1: Antenna Gain: Ant1: 2.54dBi;

4. Maximum Power Spectral Density

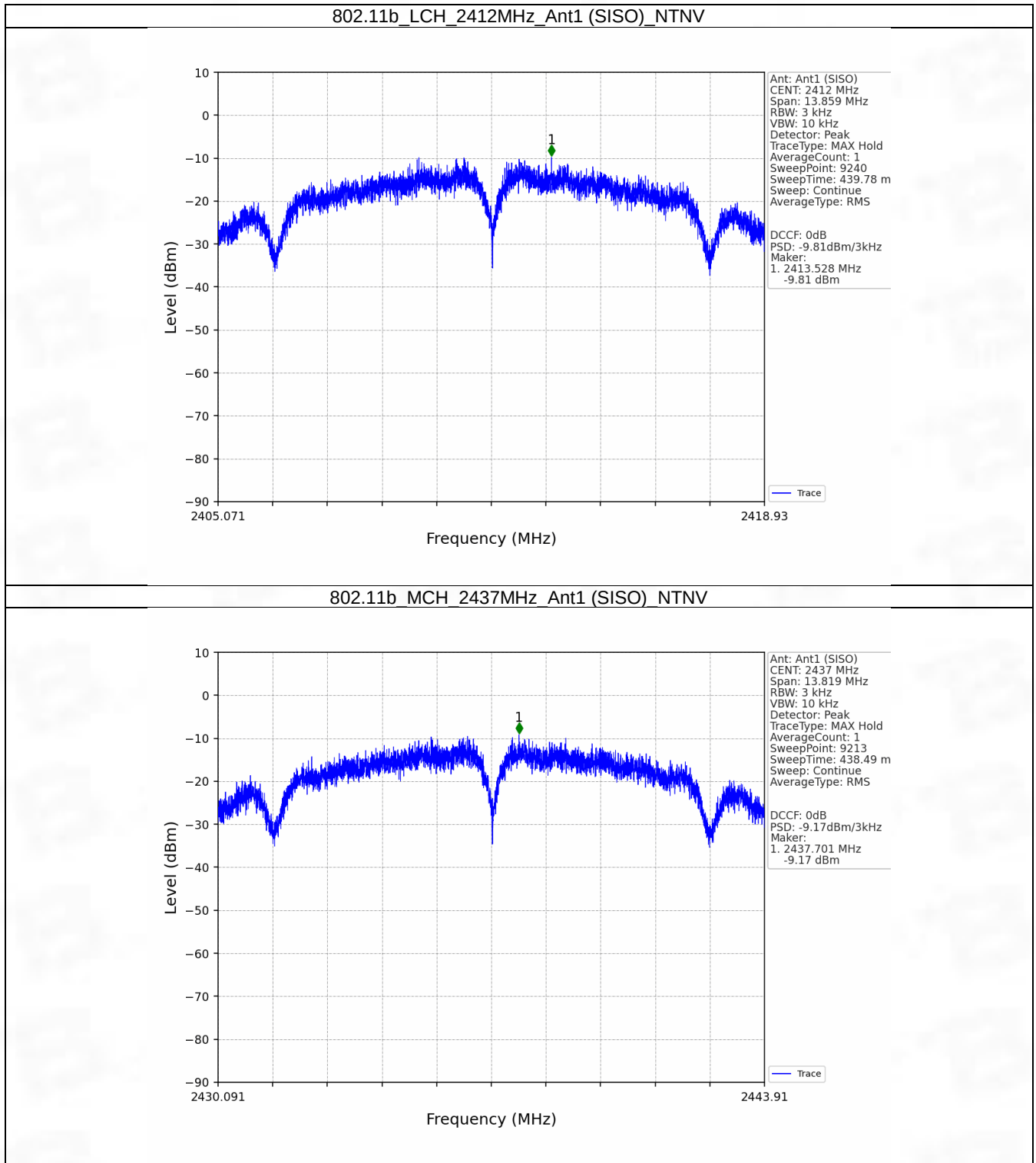
4.1 Test Result

4.1.1 PSD

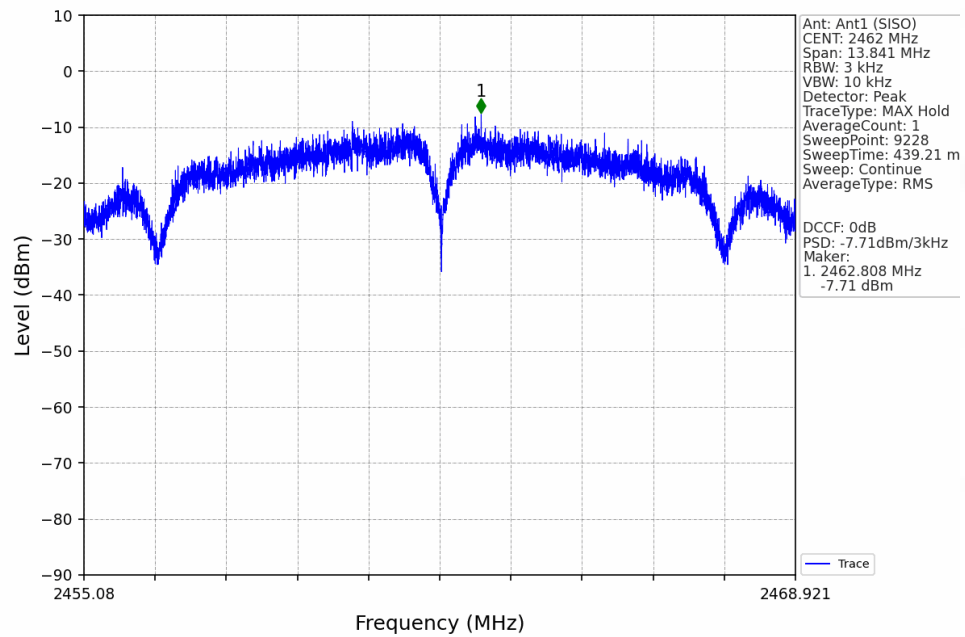
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-9.81	<=8	Pass
		2437	-9.17	<=8	Pass
		2462	-7.71	<=8	Pass
802.11g	SISO	2412	-15.05	<=8	Pass
		2437	-15.08	<=8	Pass
		2462	-14.91	<=8	Pass
802.11n (HT20)	SISO	2412	-16.00	<=8	Pass
		2437	-15.16	<=8	Pass
		2462	-13.88	<=8	Pass
Note1: Antenna Gain: Ant1: 2.54dBi;					

4.2 Test Graph

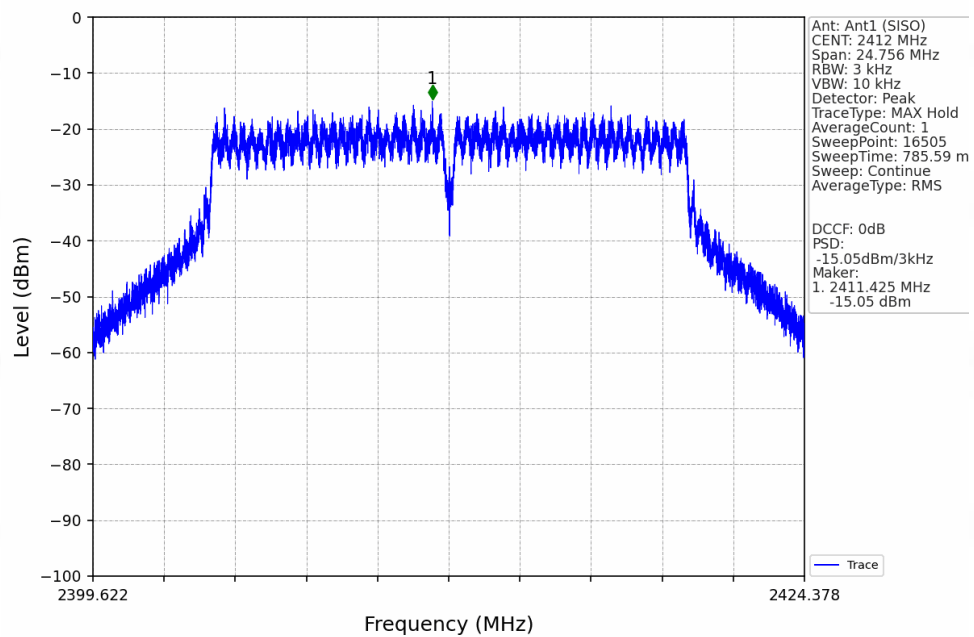
4.2.1 PSD



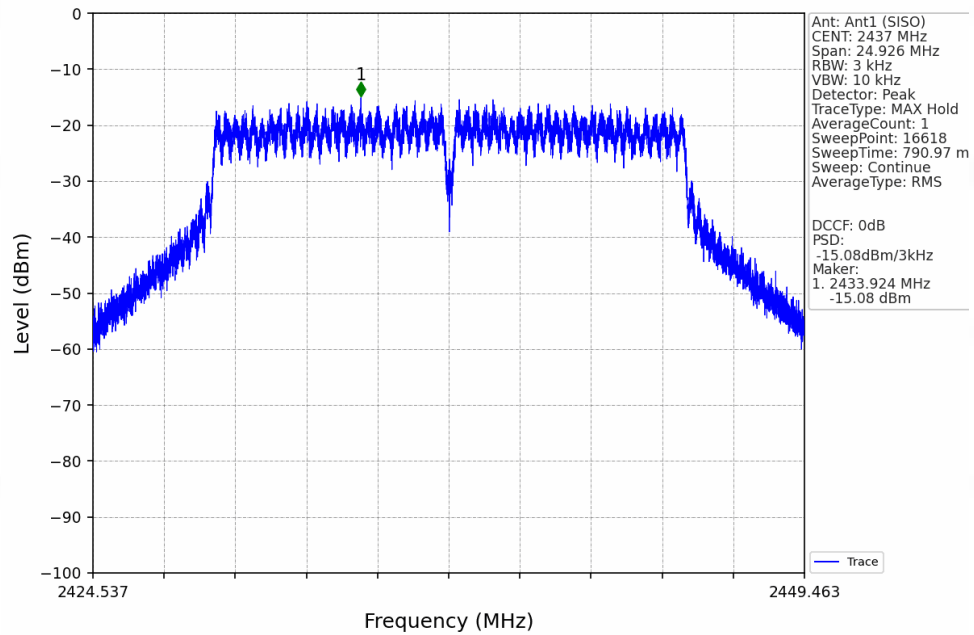
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



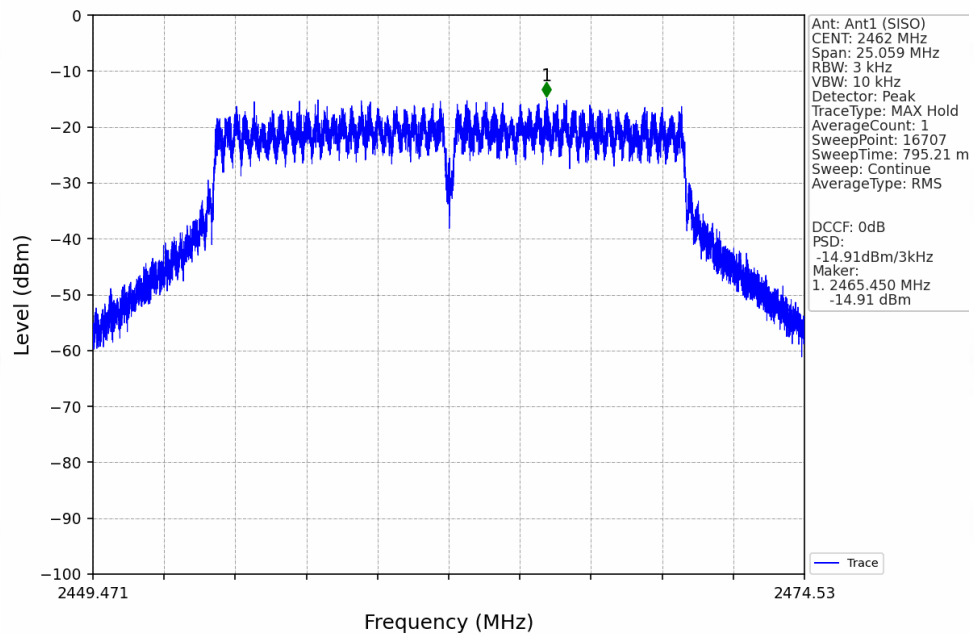
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



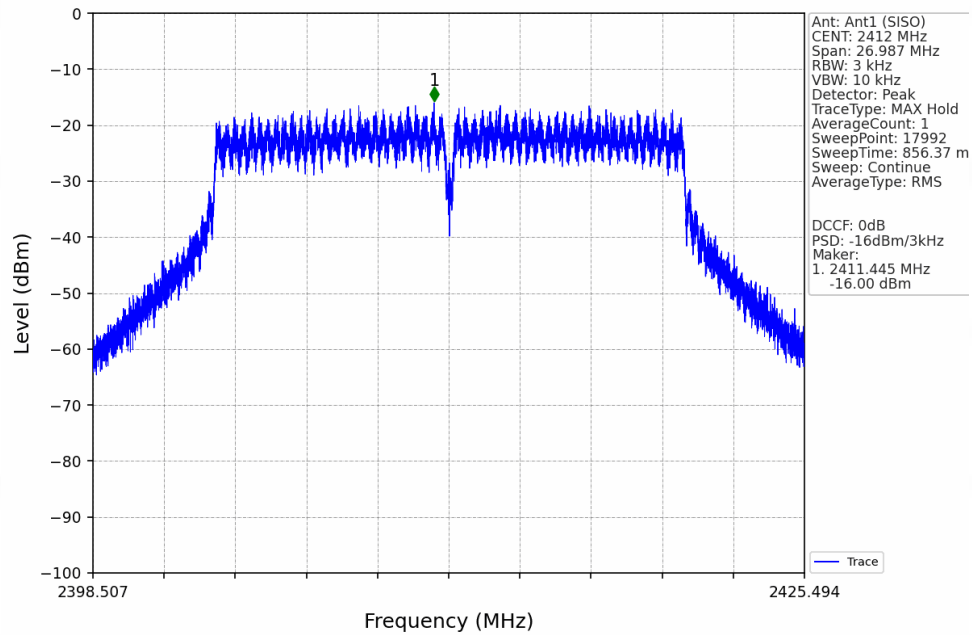
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



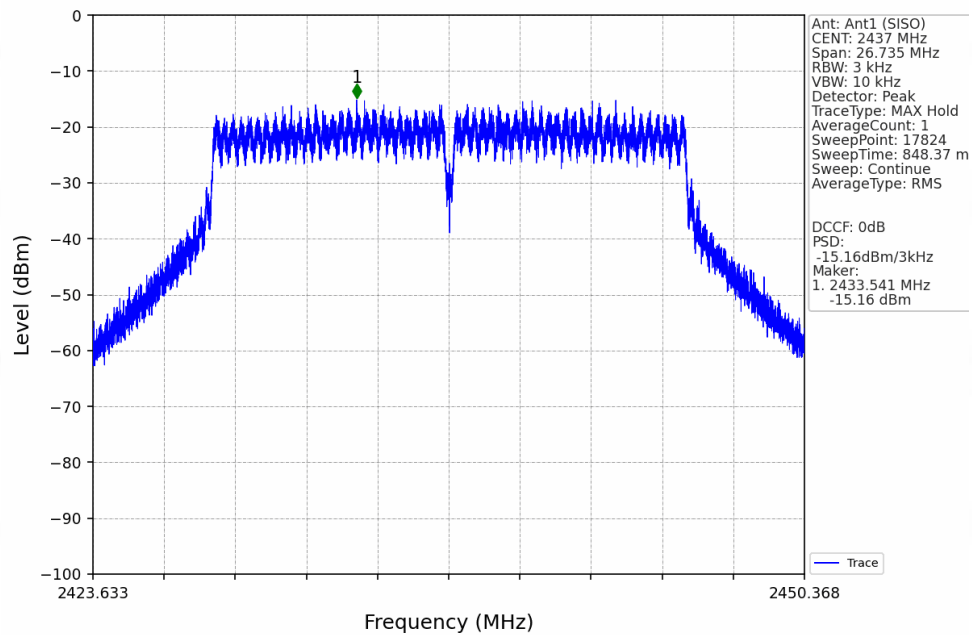
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

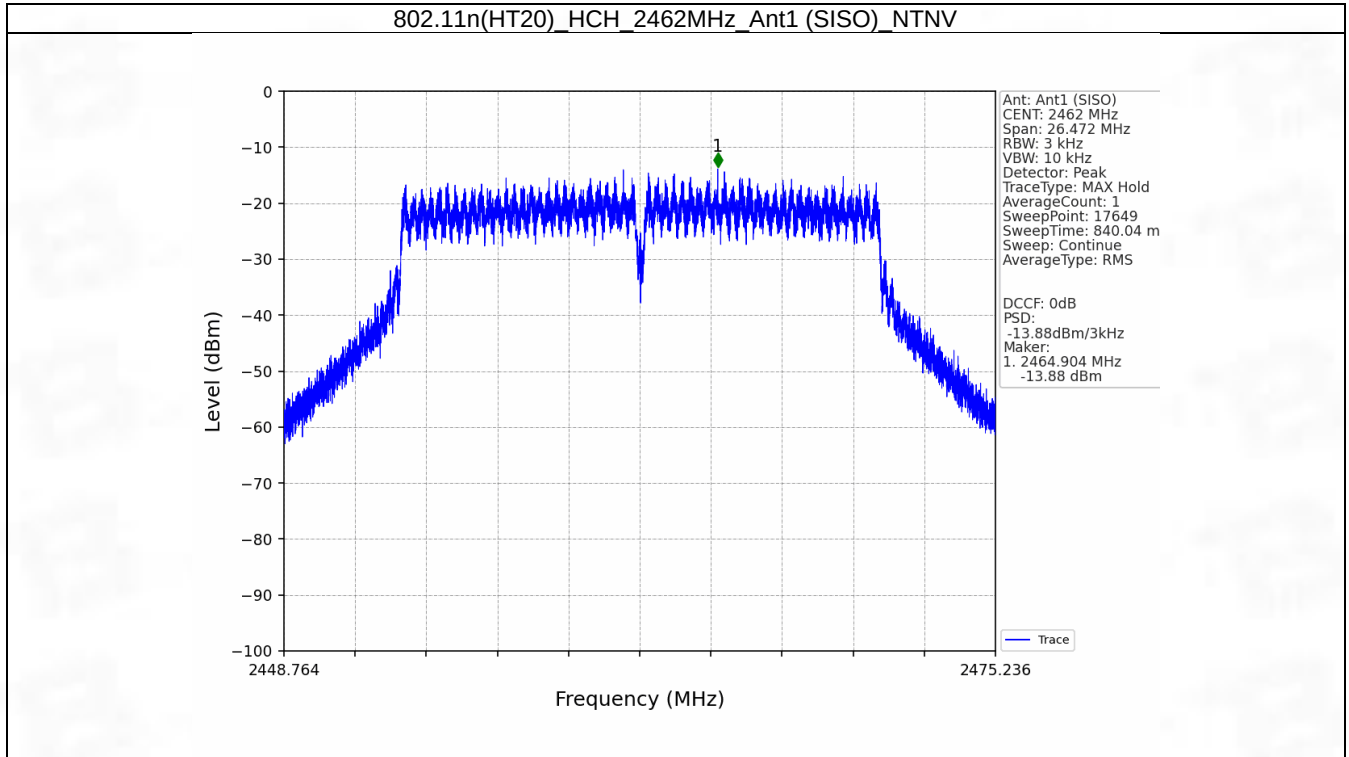


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

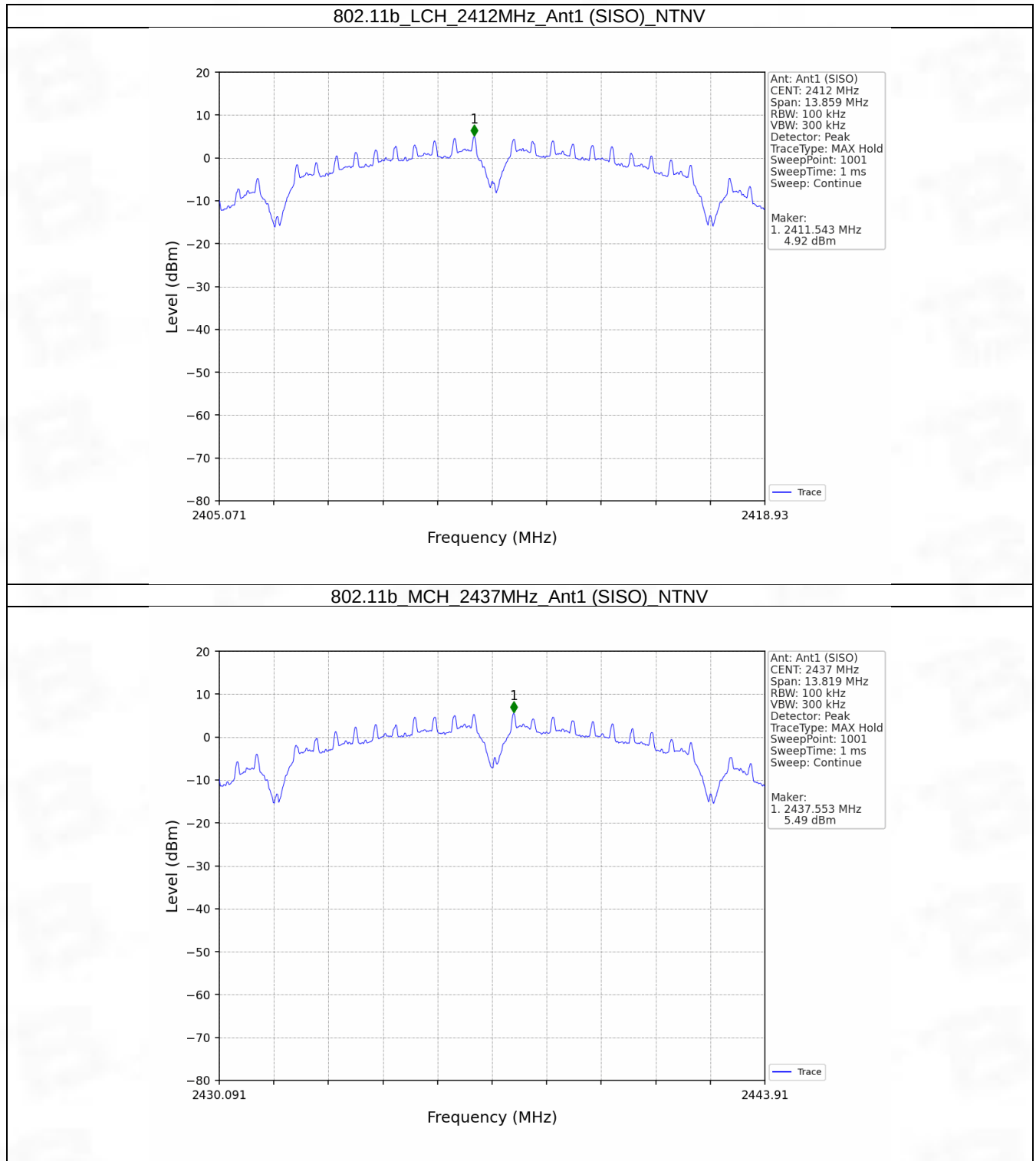
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	4.92
		2437	1	5.49
		2462	1	5.92
802.11g	SISO	2412	1	-1.26
		2437	1	-0.54
		2462	1	-0.17
802.11n (HT20)	SISO	2412	1	-1.25
		2437	1	-0.47
		2462	1	-0.30

5.1.2 CSE

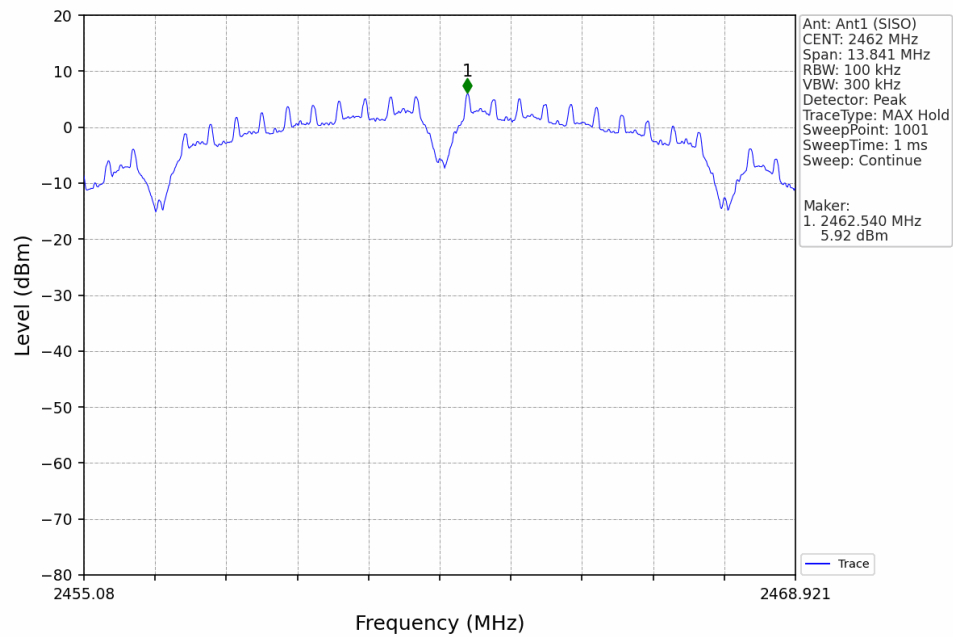
Mode	TX Type	Frequency (MHz)	ANT	Frequency (MHz)	Level (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	2390.200	-45.83	-15.08	Pass
				2400.000	-45.31		
				23758.991	-44.88		
		2437	1	24781.929	-44.83	-14.51	Pass
		2462	1	2483.500	-55.62	-14.08	Pass
				2485.700	-54.40		
				24984.186	-44.46		
802.11g	SISO	2412	1	2399.850	-37.16	-21.26	Pass
				2400.00	-38.00		
				23736.518	-44.02		
		2437	1	23689.907	-44.09	-20.54	Pass
		2462	1	2483.500	-53.81	-20.17	Pass
				2486.500	-51.66		
				23700.728	-43.77		
802.11n (HT20)	SISO	2412	1	2399.950	-36.28	-21.25	Pass
				2400.000	-35.42		
				23716.542	-44.09		
		2437	1	23684.913	-44.40	-20.47	Pass
		2462	1	2483.500	-53.77	-20.30	Pass
				2483.900	-53.06		
				21703.960	-44.02		

5.2 Test Graph

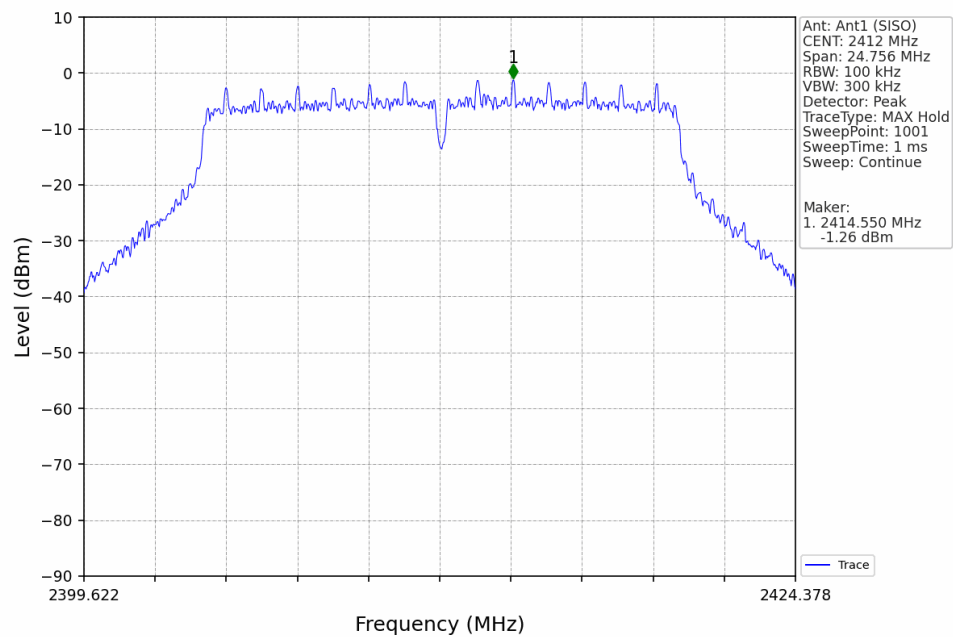
5.2.1 Ref



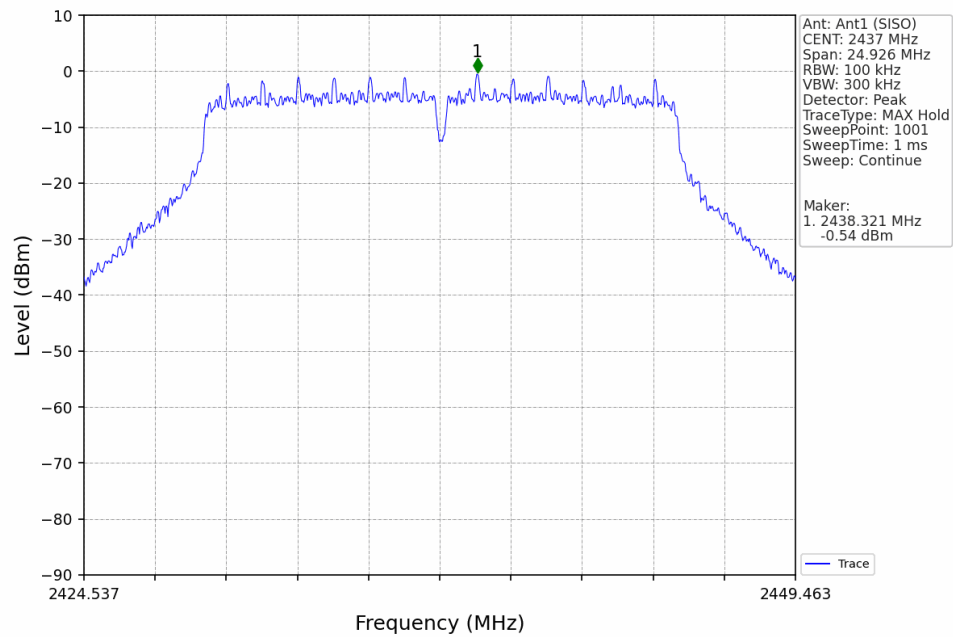
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



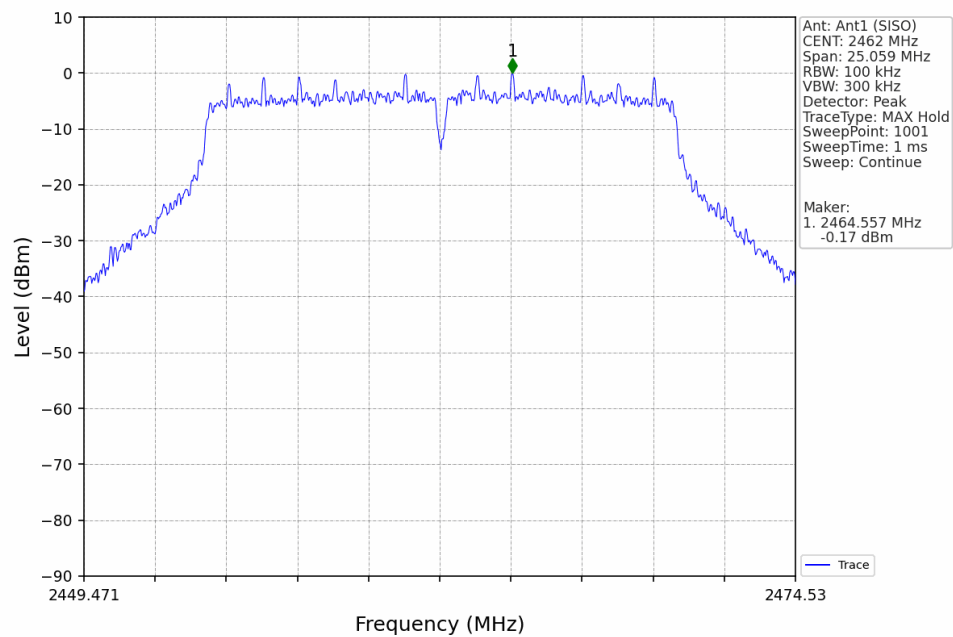
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



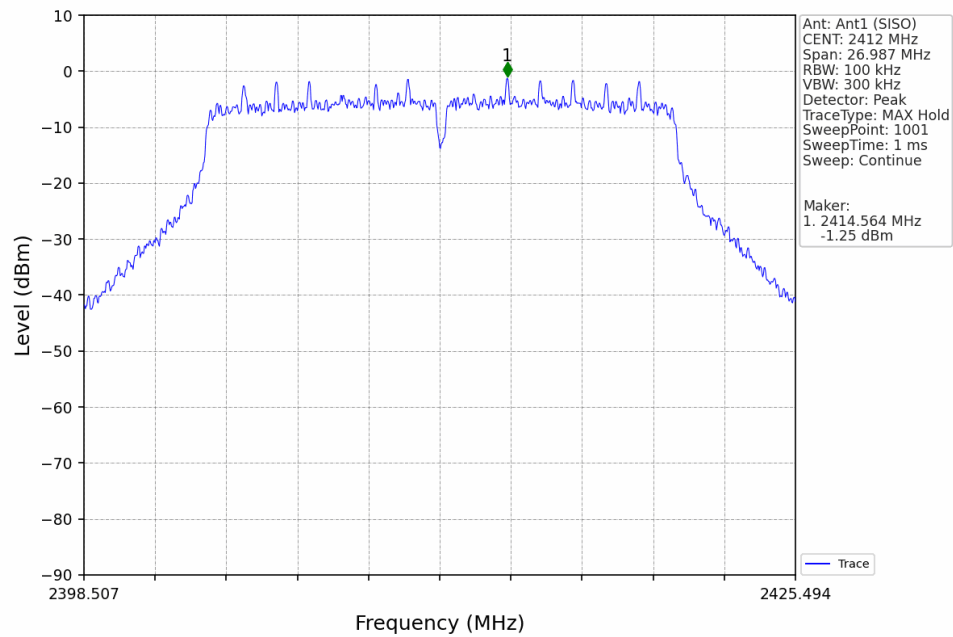
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



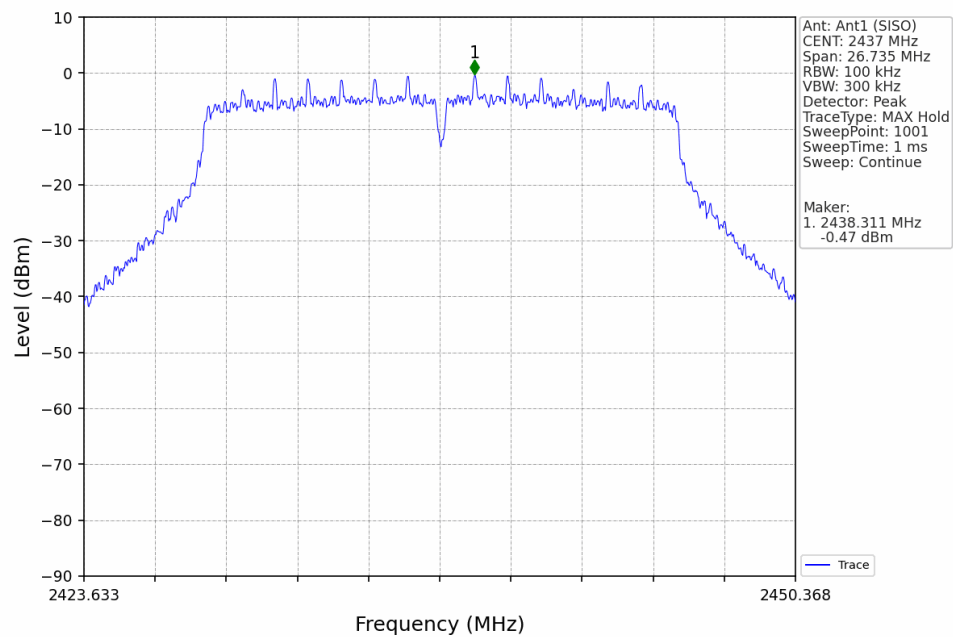
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

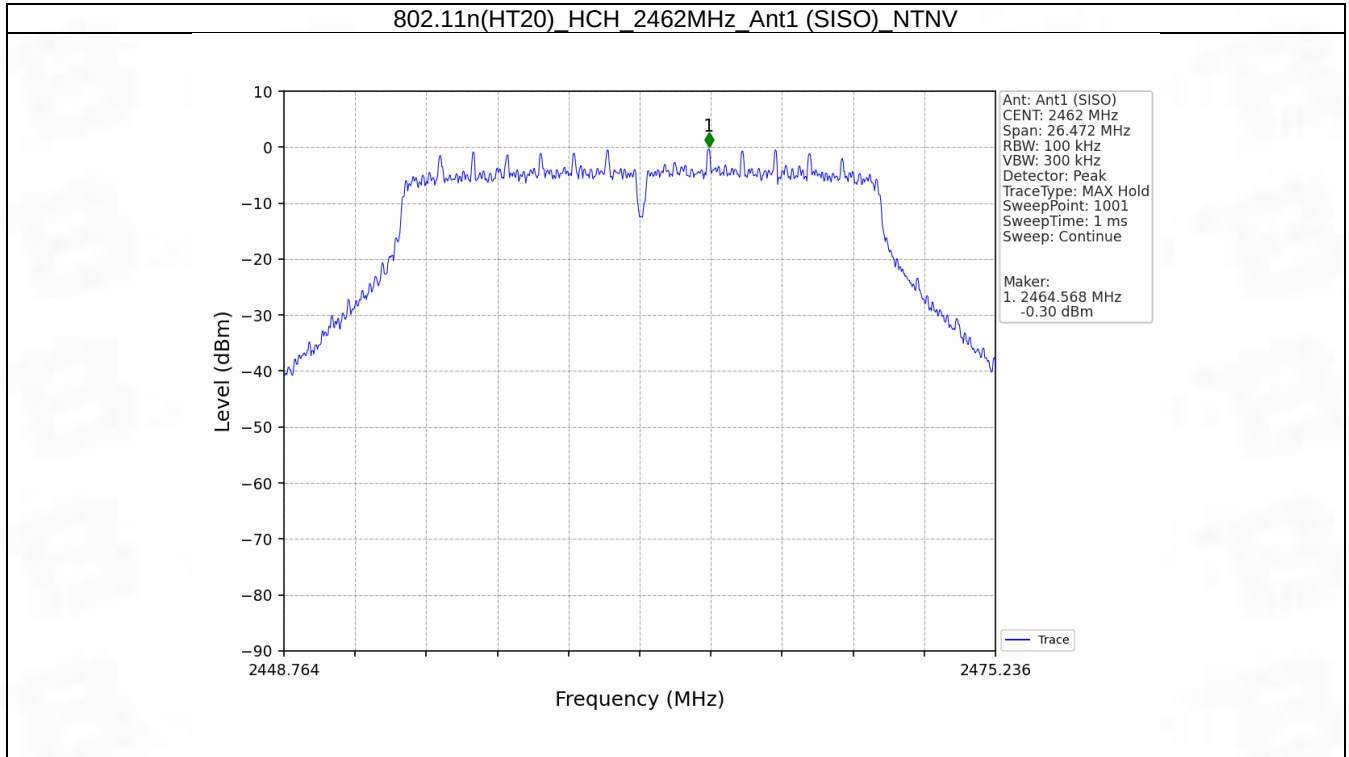


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

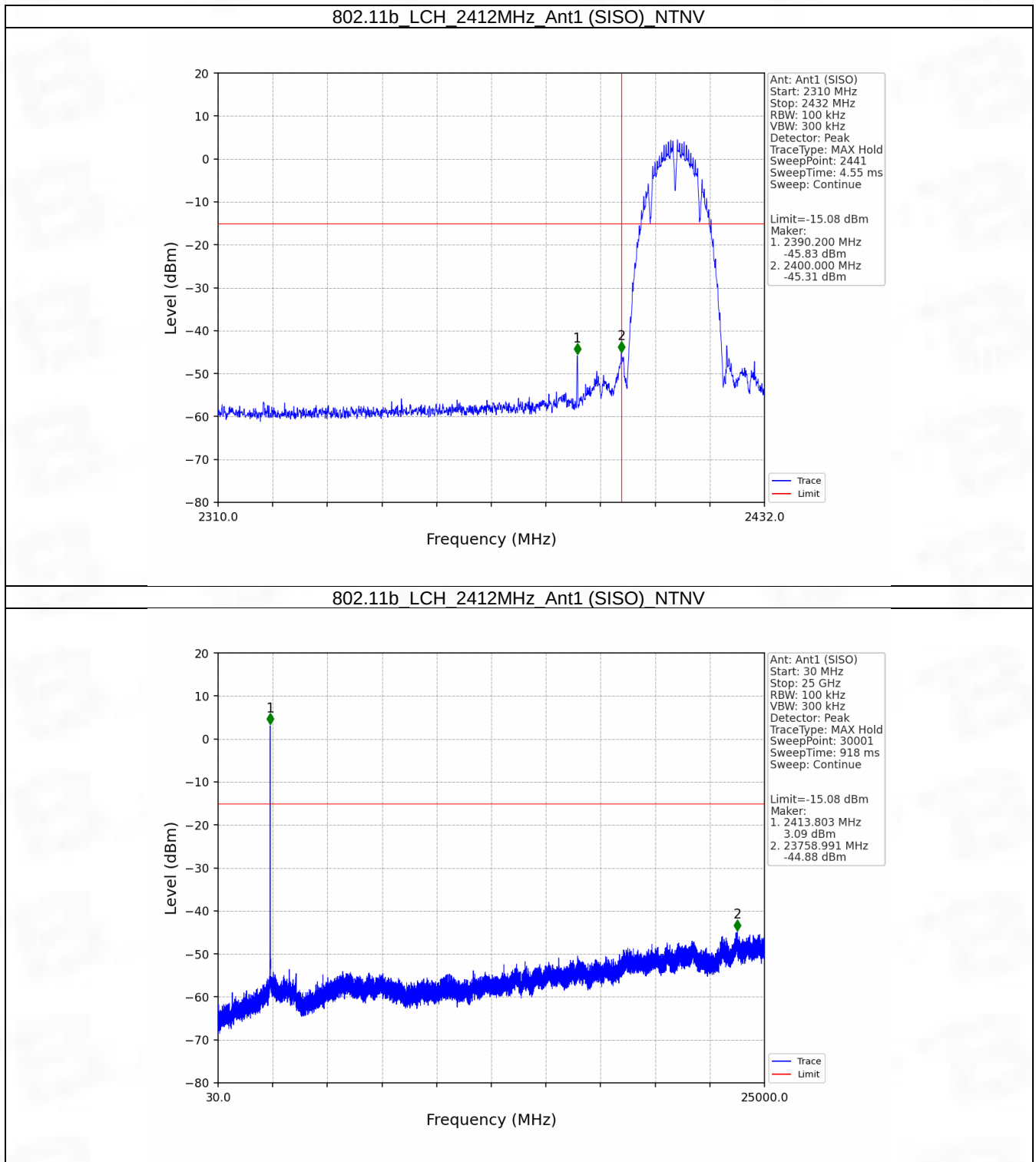


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

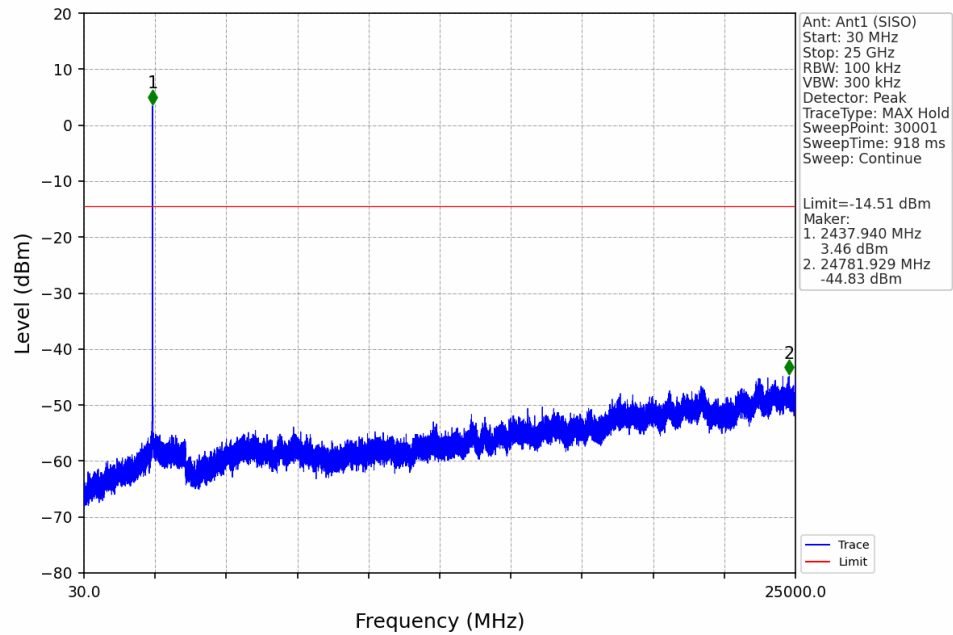




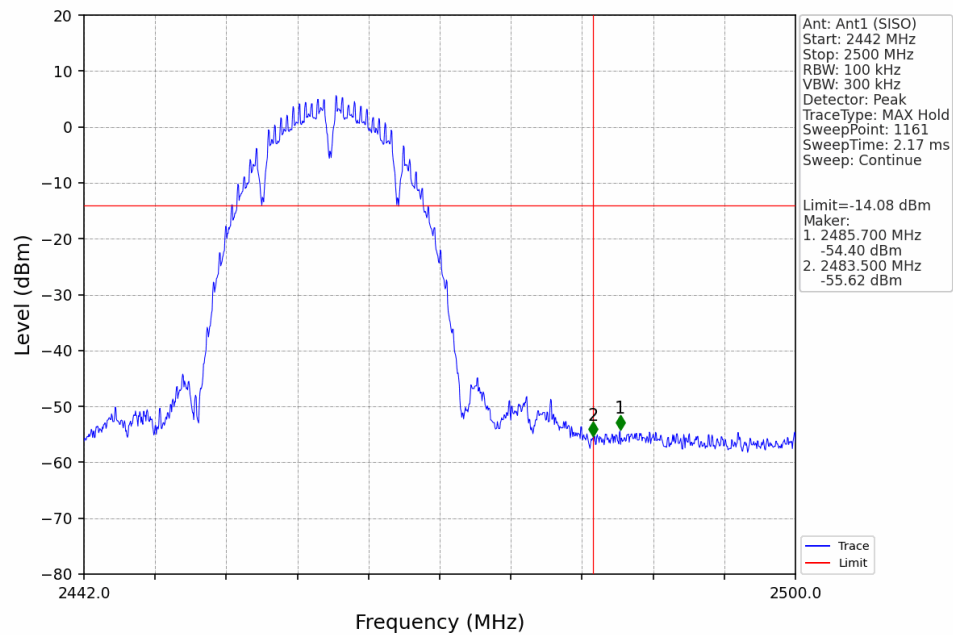
5.2.2 CSE



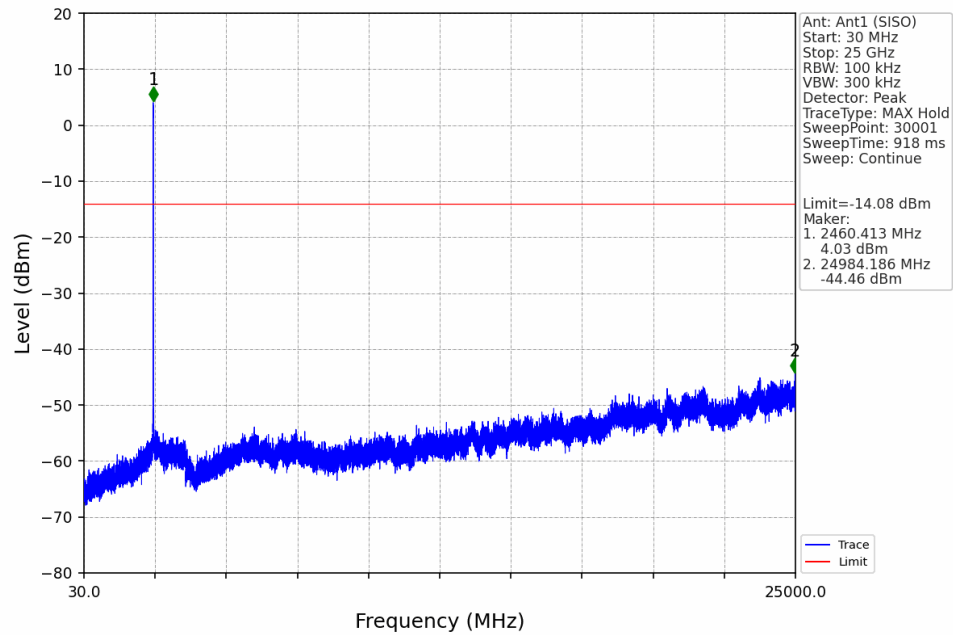
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



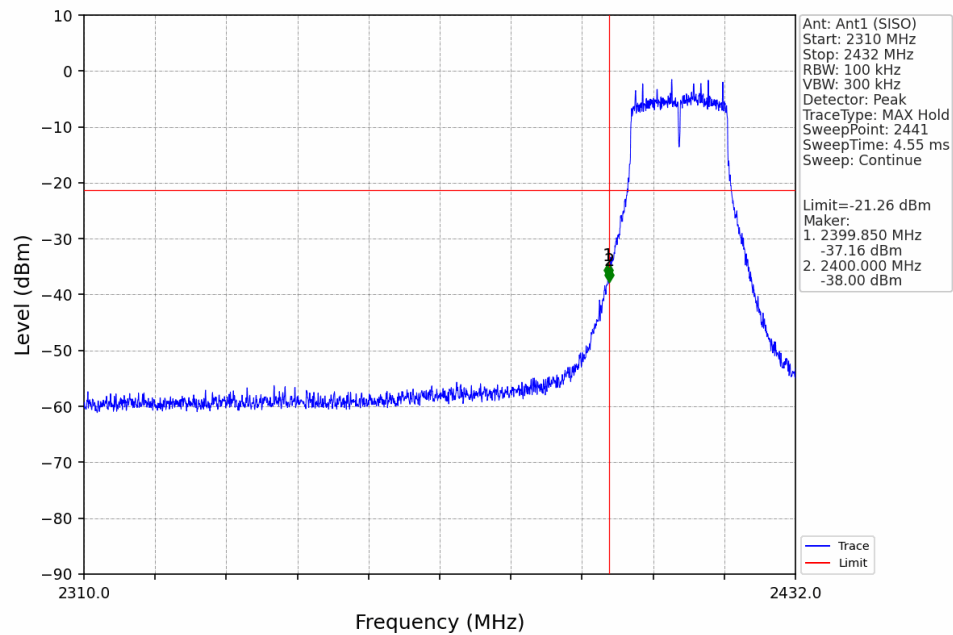
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



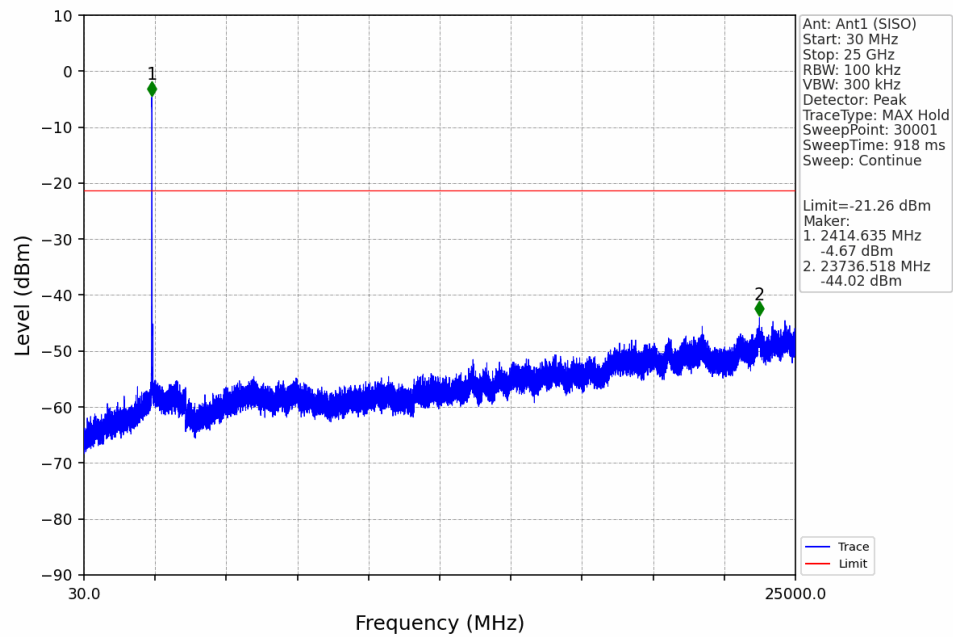
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



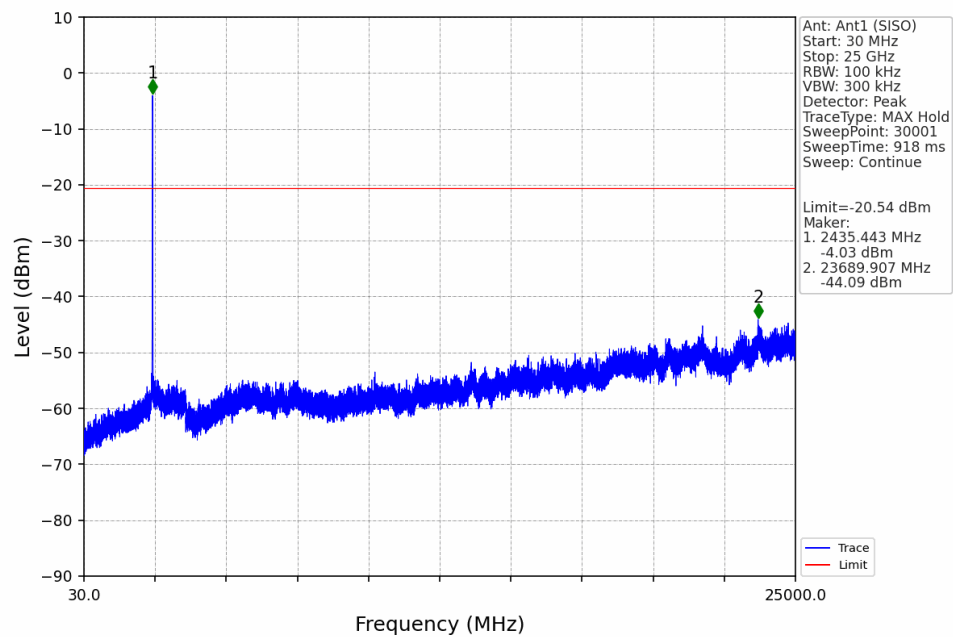
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



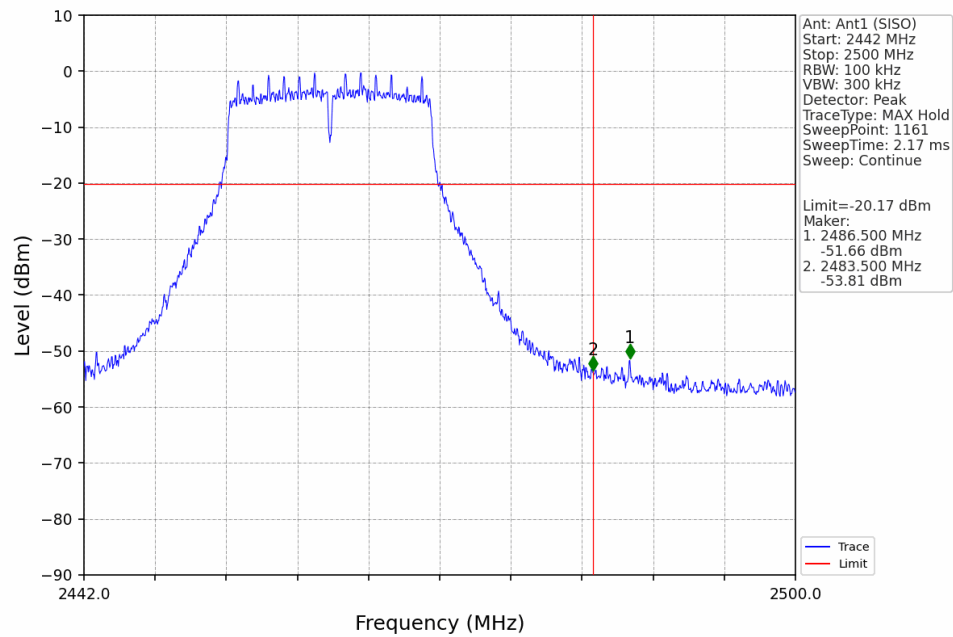
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



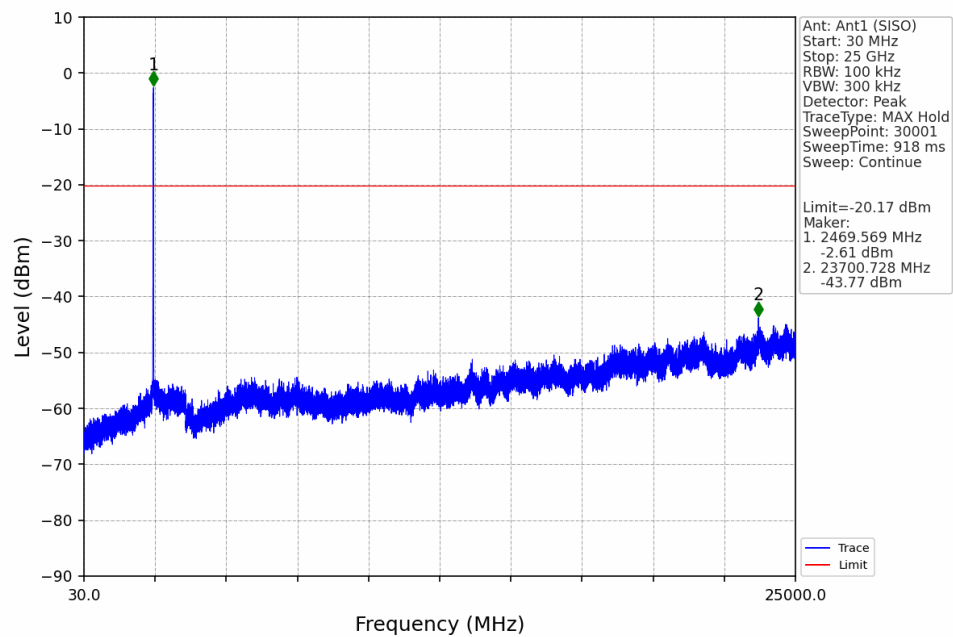
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



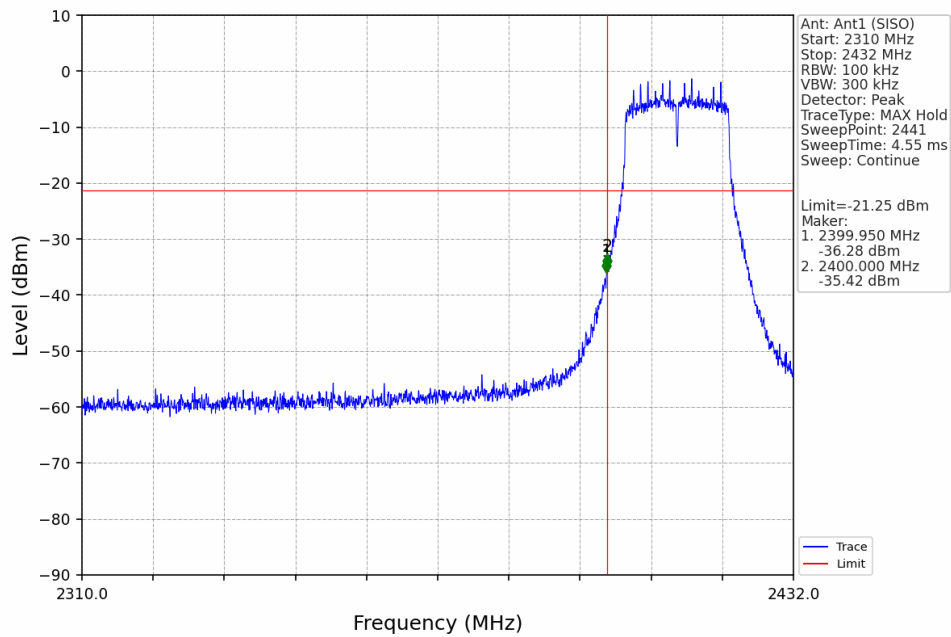
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



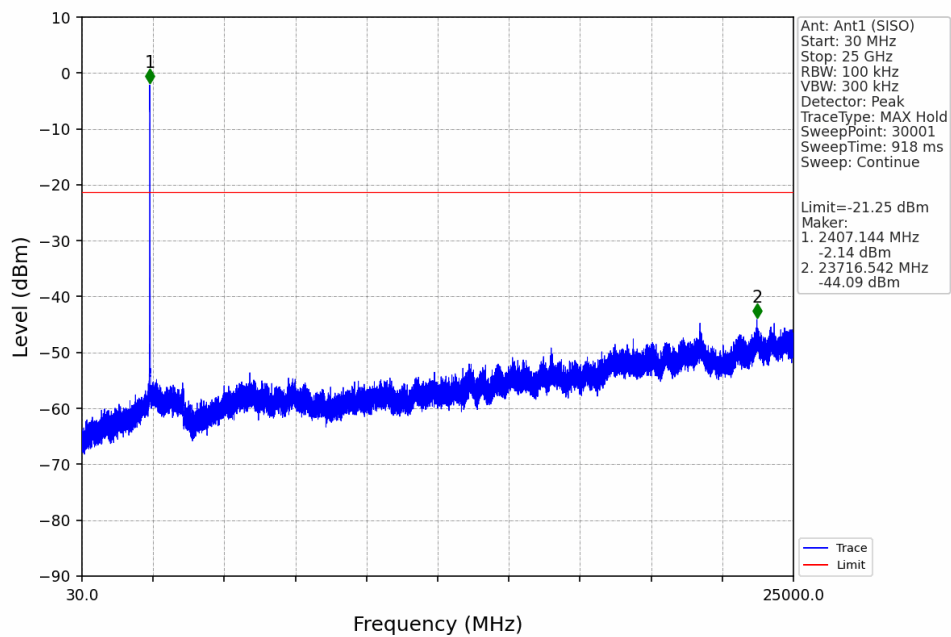
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



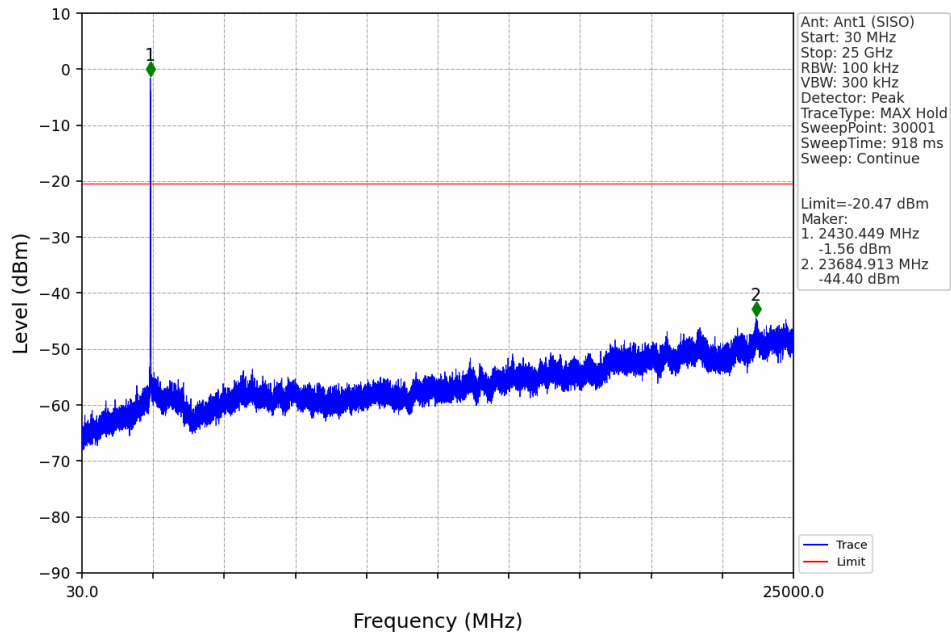
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

