

Test Data for 2.4G-WIFI

Product Name: MaaXBoard RT

Test Model: AES-MC-SBC-IMXRT1176-G

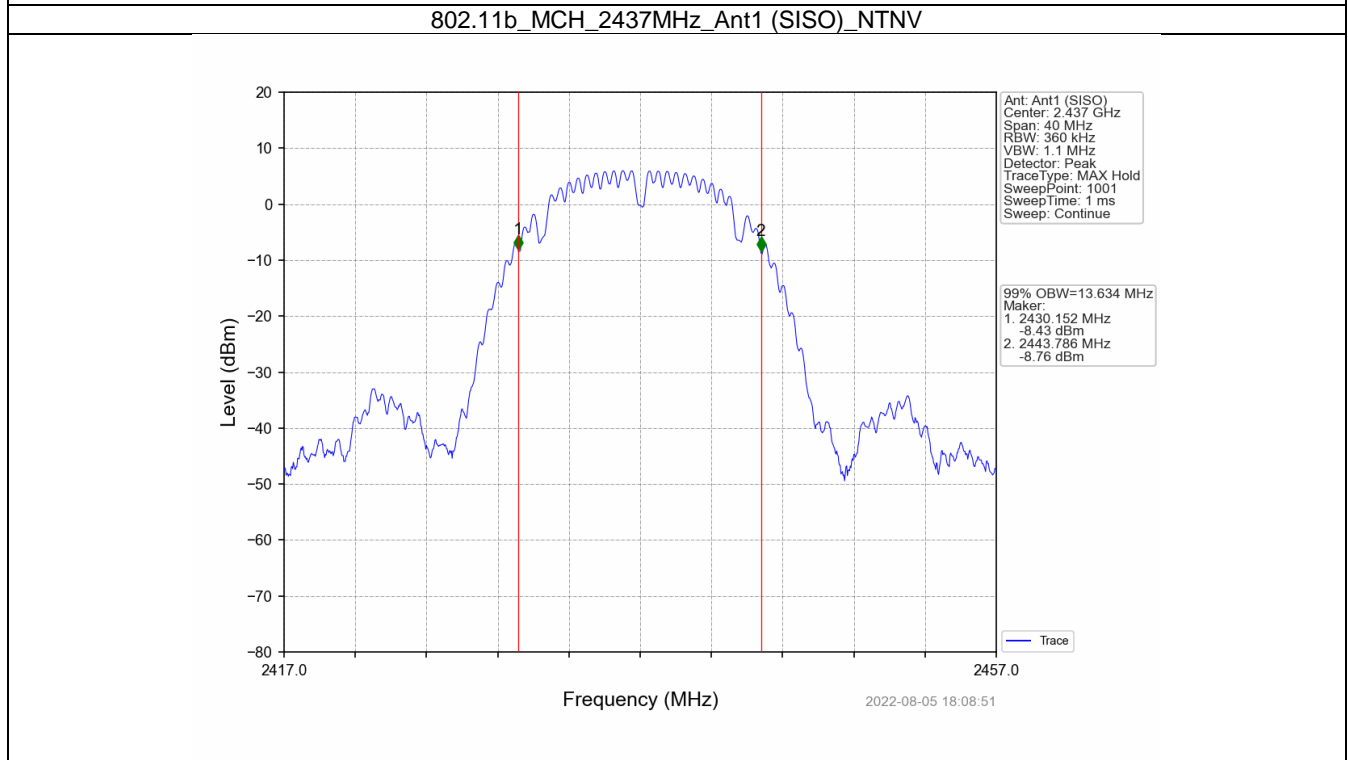
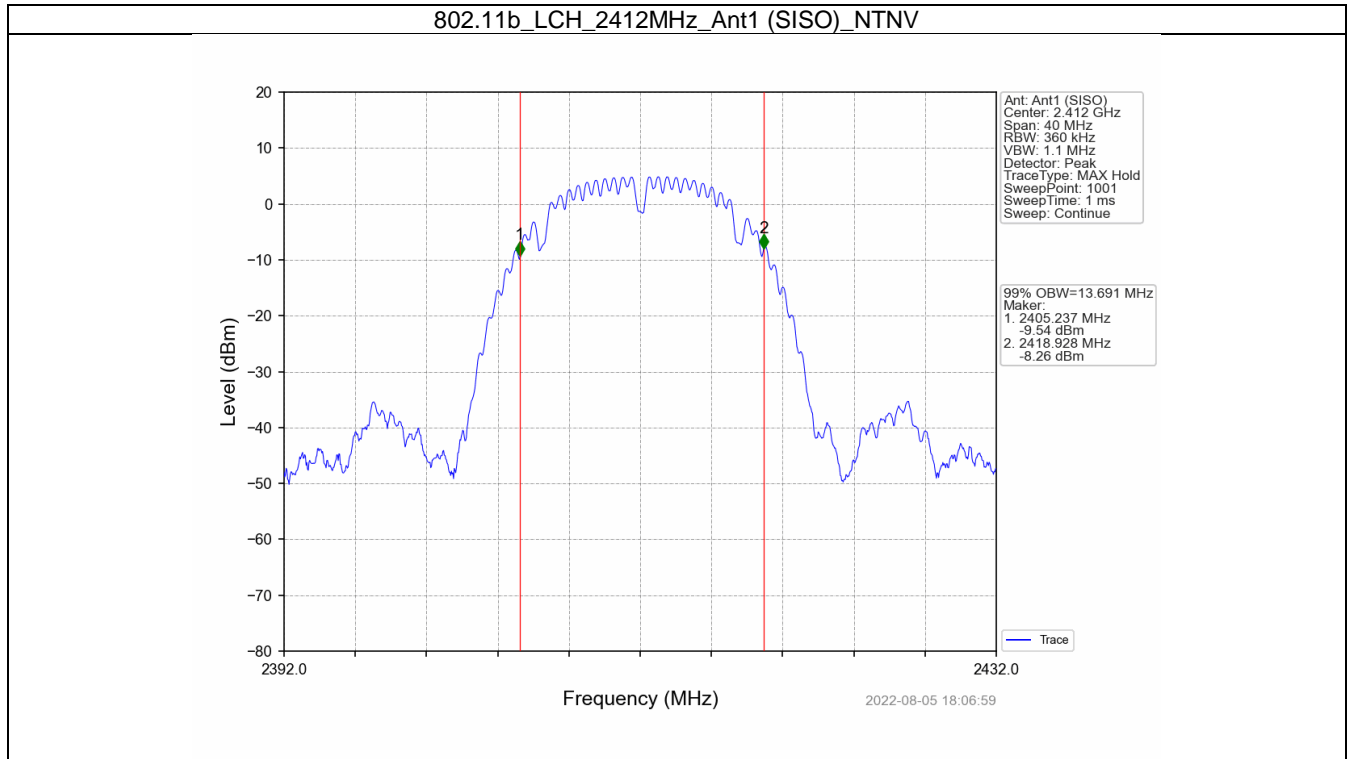
1. Bandwidth

1.1 OBW

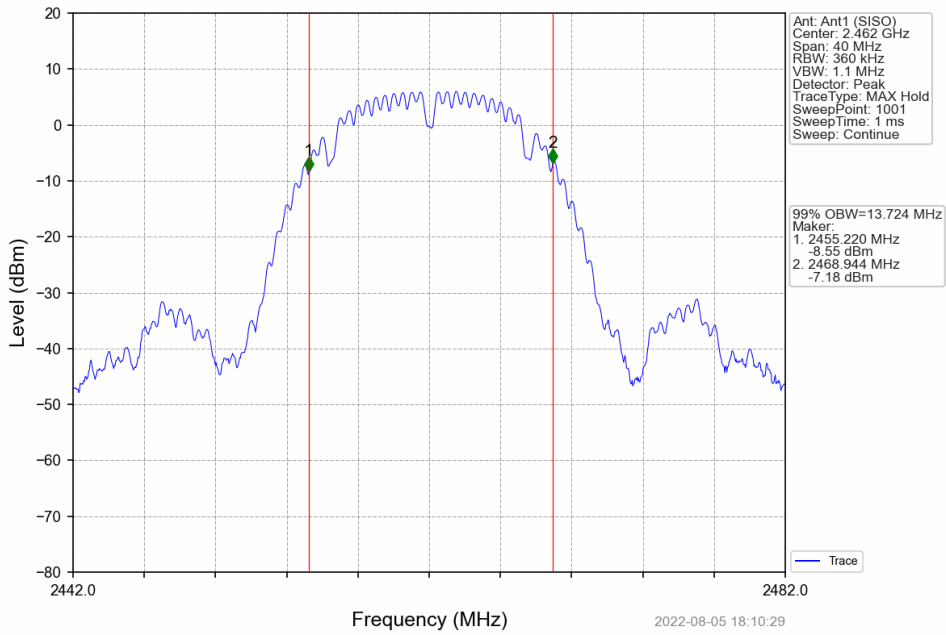
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	13.691	Pass
		2437	1	13.634	Pass
		2462	1	13.724	Pass
802.11g	SISO	2412	1	17.750	Pass
		2437	1	17.634	Pass
		2462	1	17.623	Pass
802.11n (HT20)	SISO	2412	1	18.355	Pass
		2437	1	18.263	Pass
		2462	1	18.382	Pass

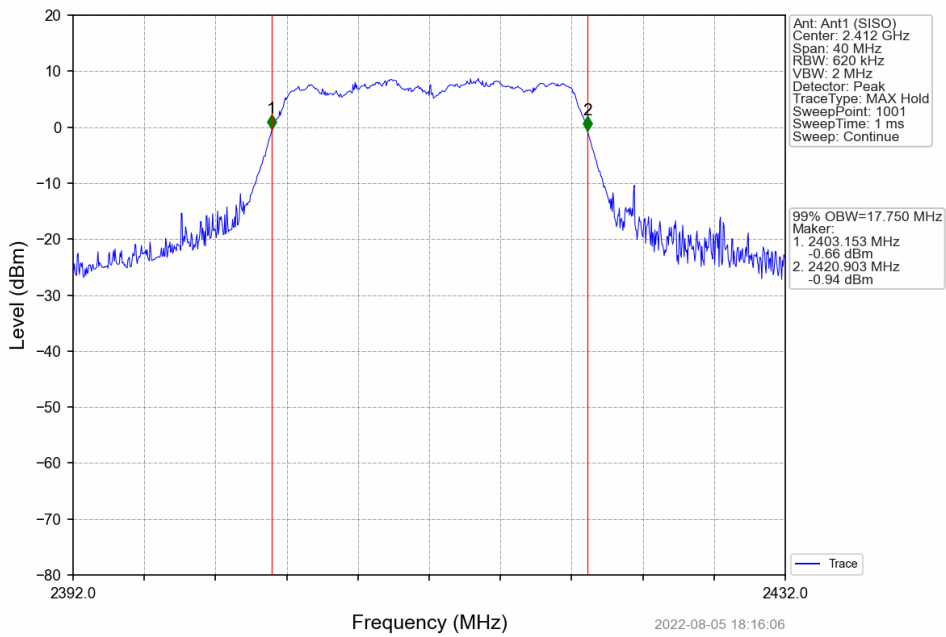
1.1.2 Test Graph



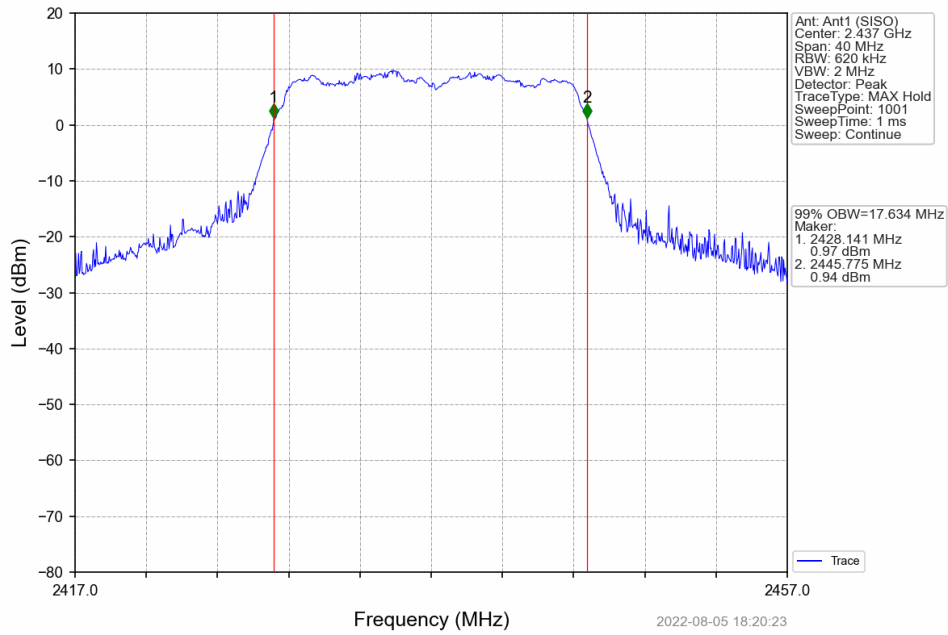
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



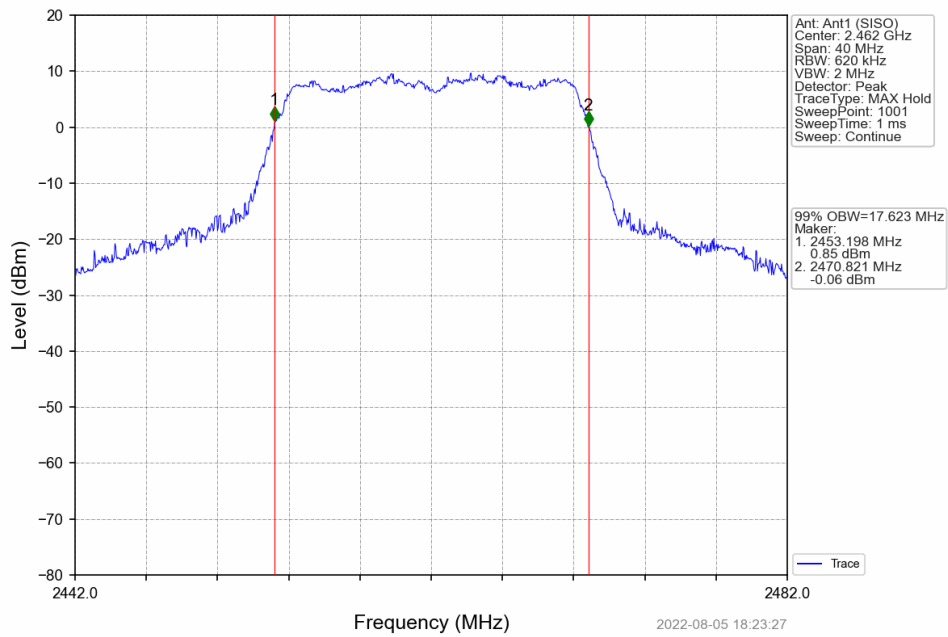
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



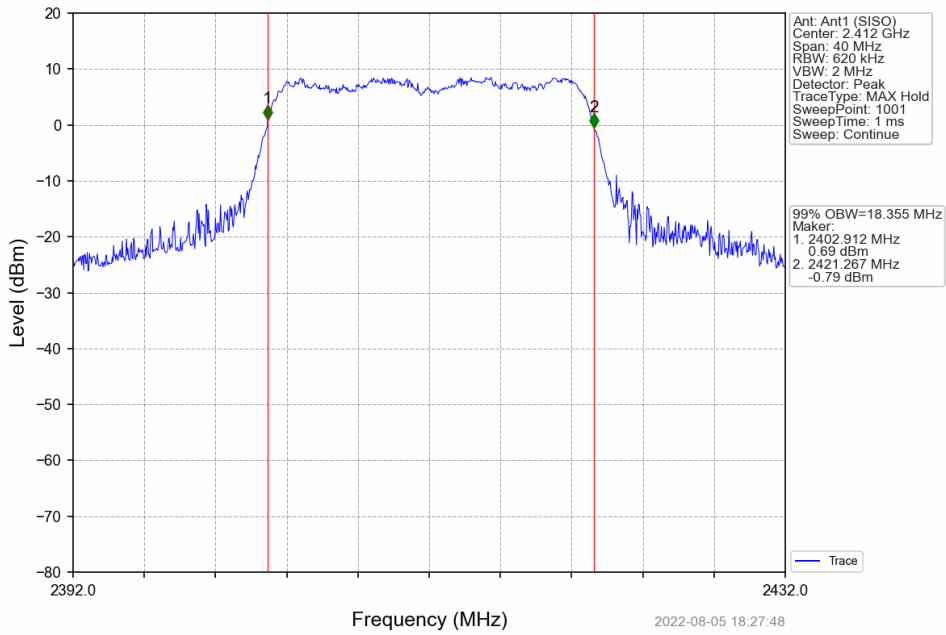
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



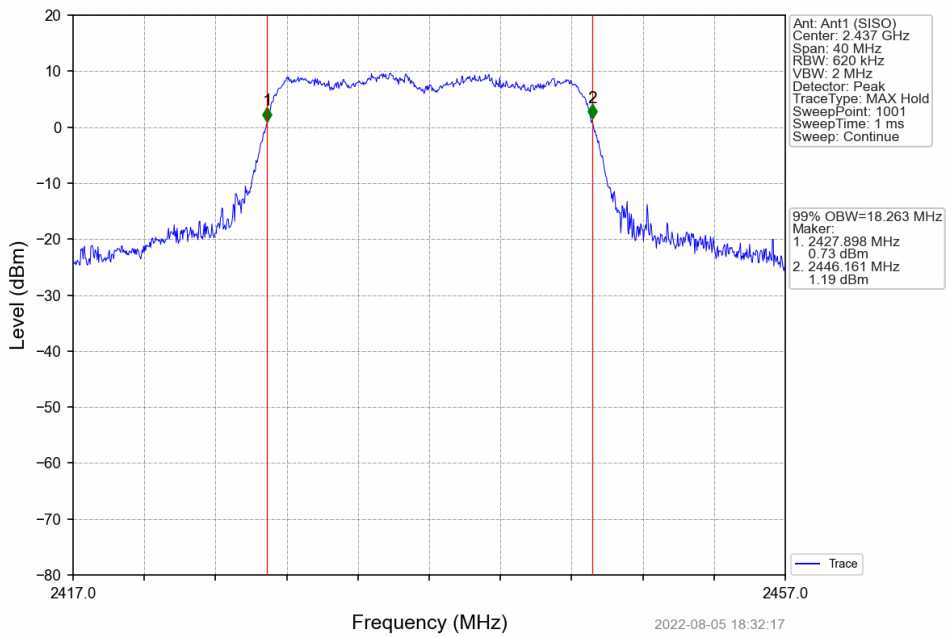
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

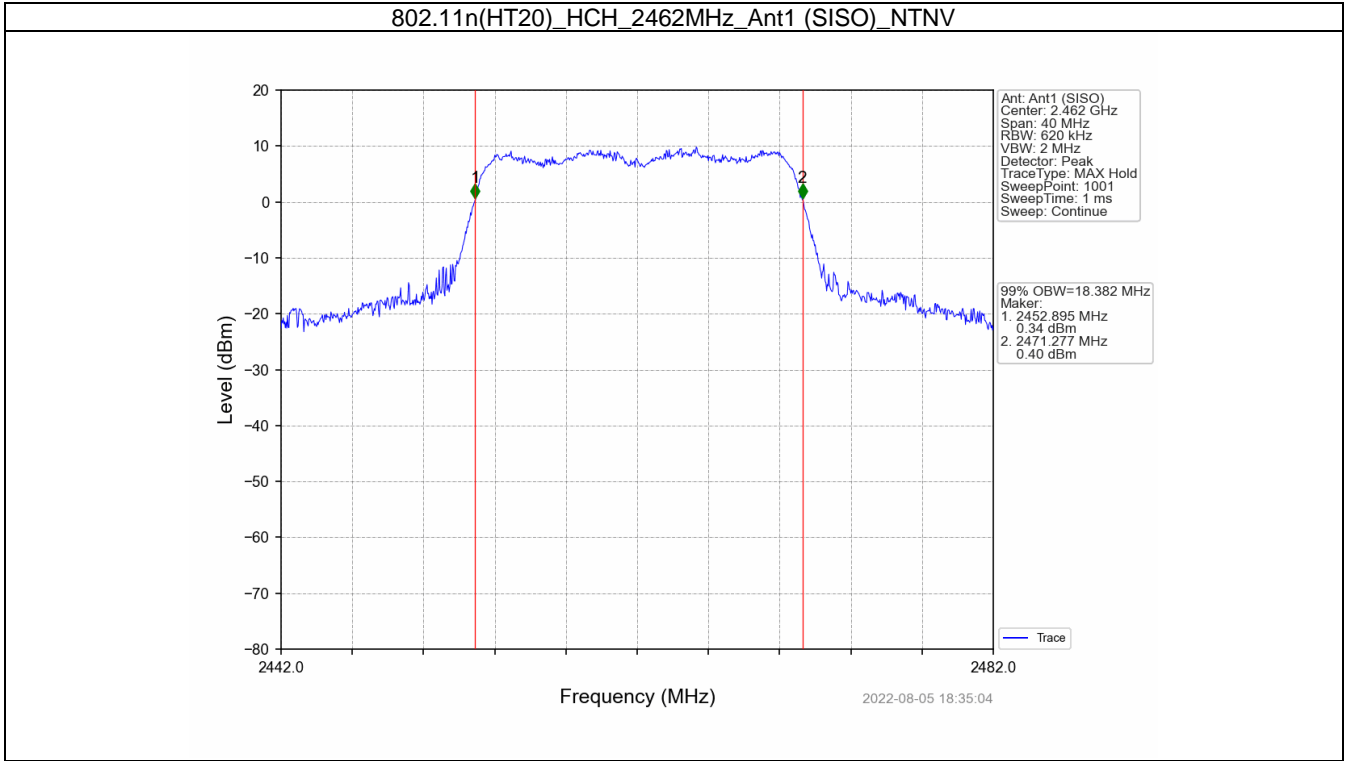


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



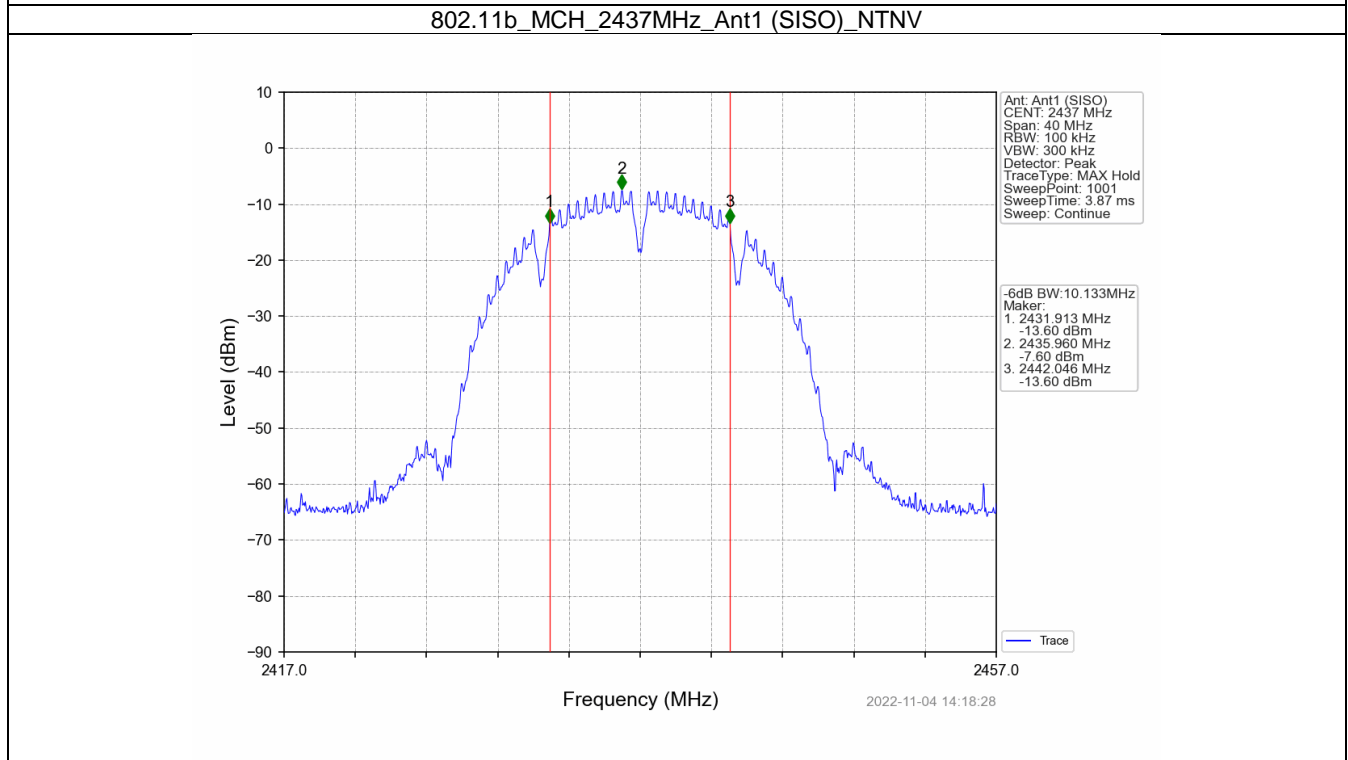
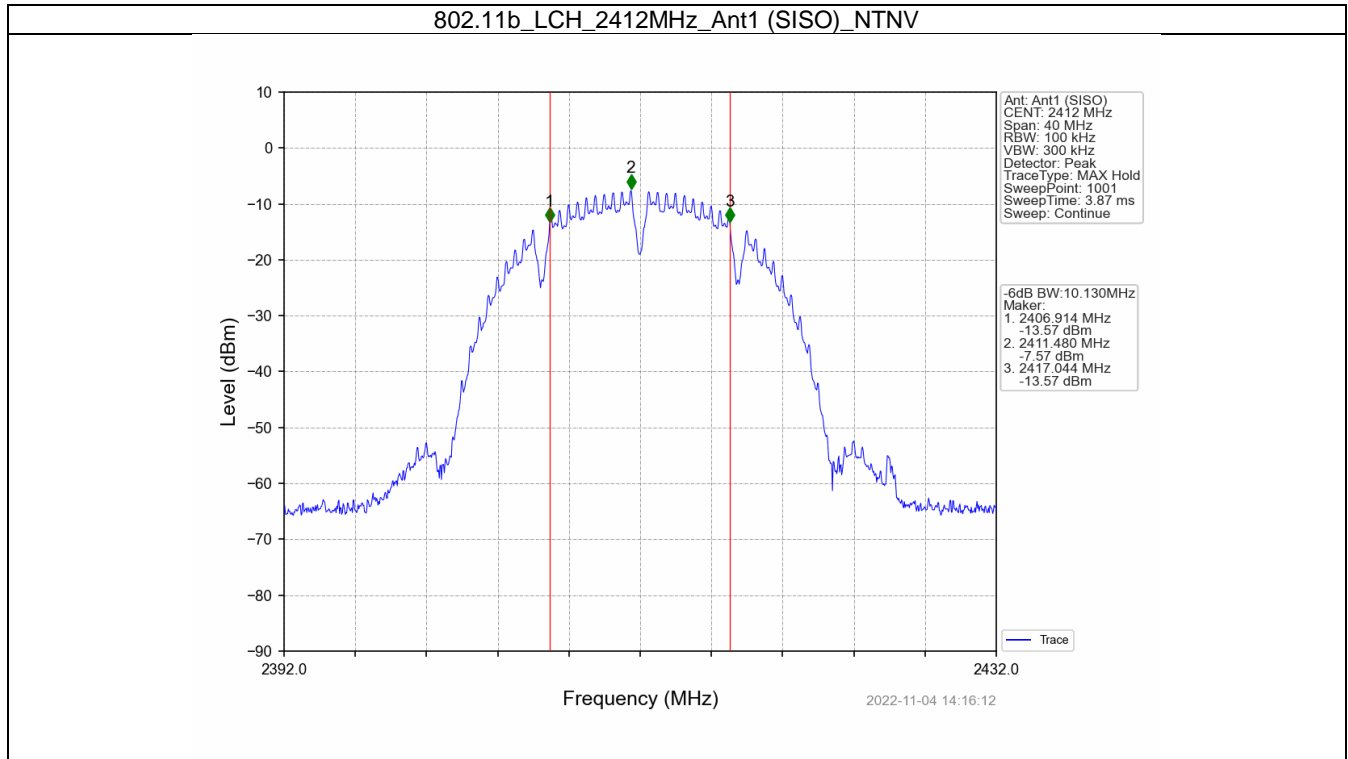


1.2 6dB BW

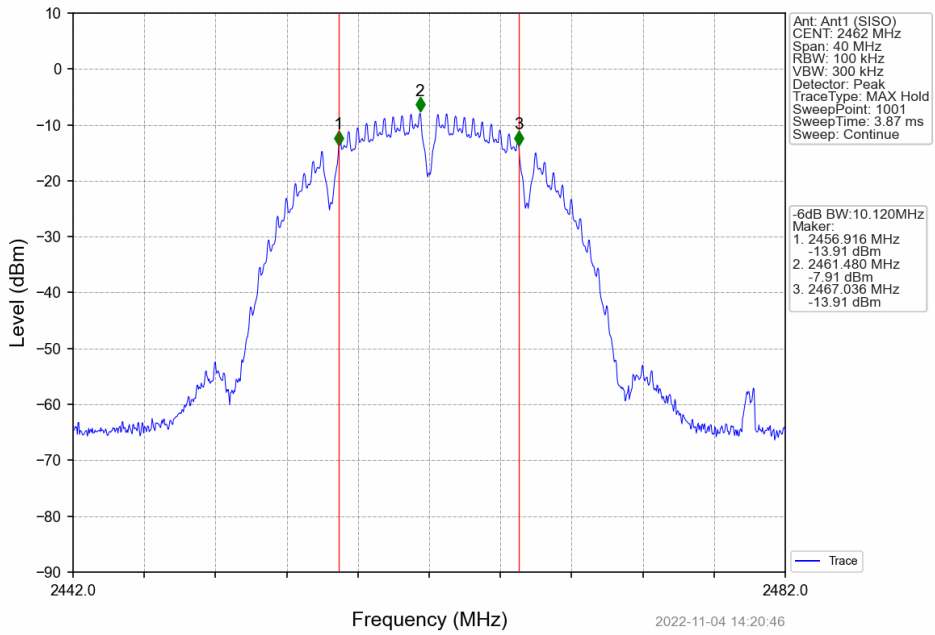
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.130	≥ 0.5	Pass
		2437	1	10.133	≥ 0.5	Pass
		2462	1	10.120	≥ 0.5	Pass
802.11g	SISO	2412	1	16.353	≥ 0.5	Pass
		2437	1	16.338	≥ 0.5	Pass
		2462	1	16.347	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.064	≥ 0.5	Pass
		2437	1	16.917	≥ 0.5	Pass
		2462	1	17.046	≥ 0.5	Pass

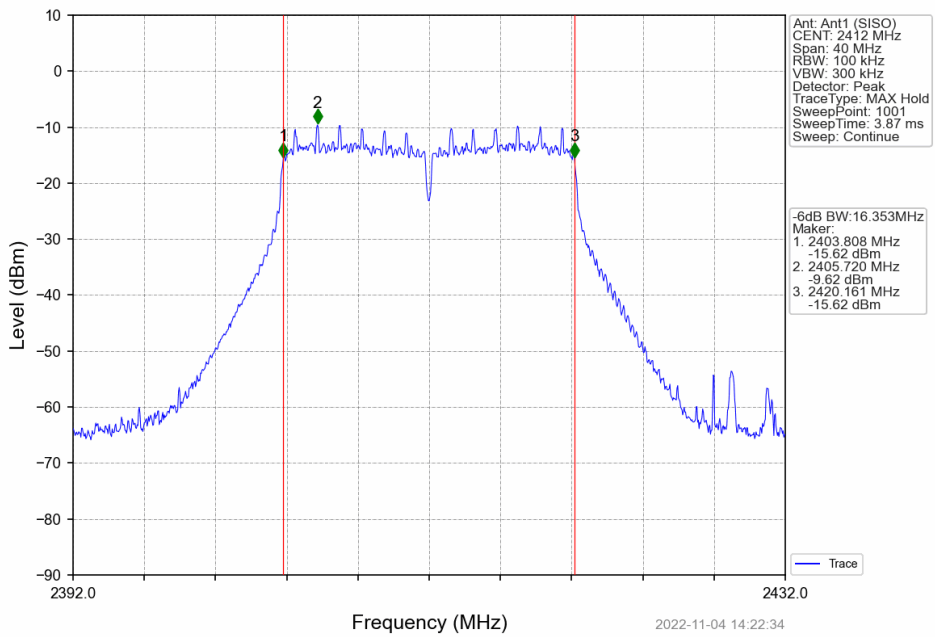
1.2.2 Test Graph



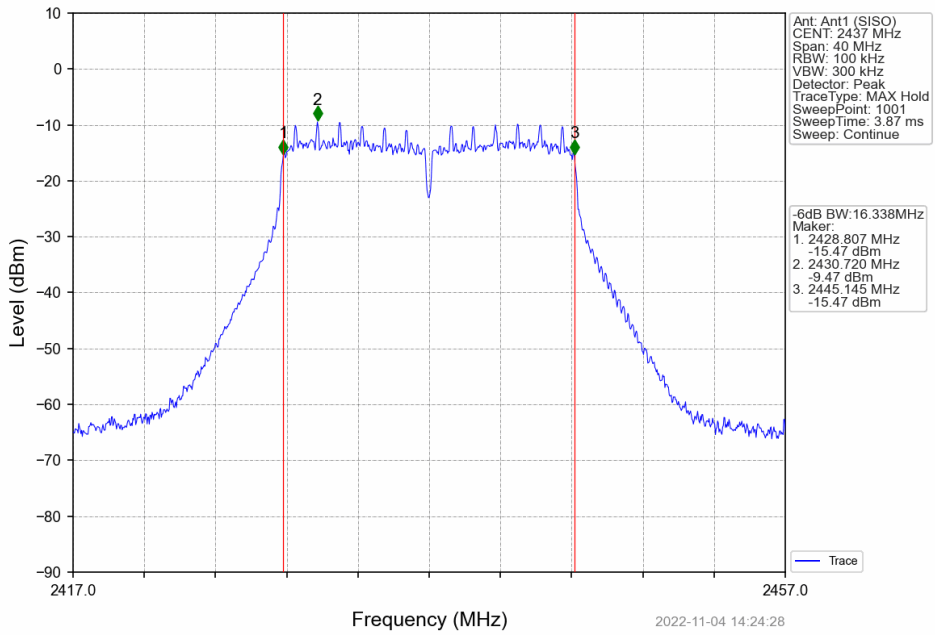
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



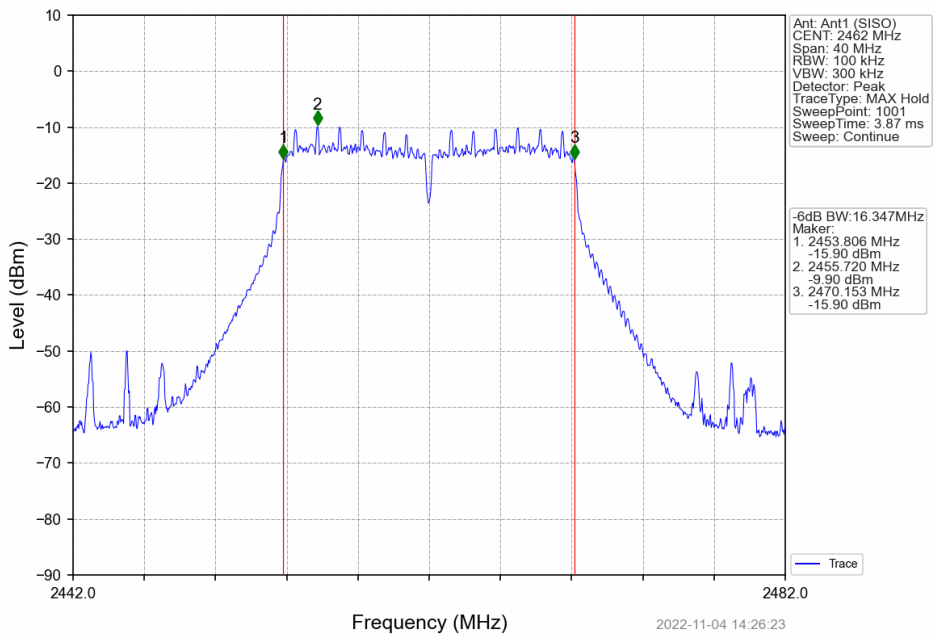
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



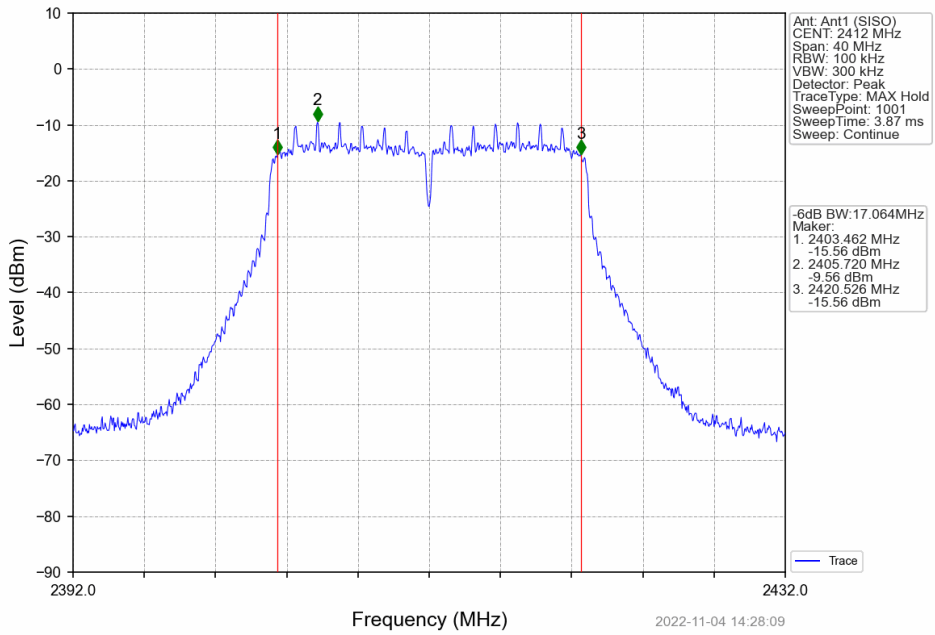
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



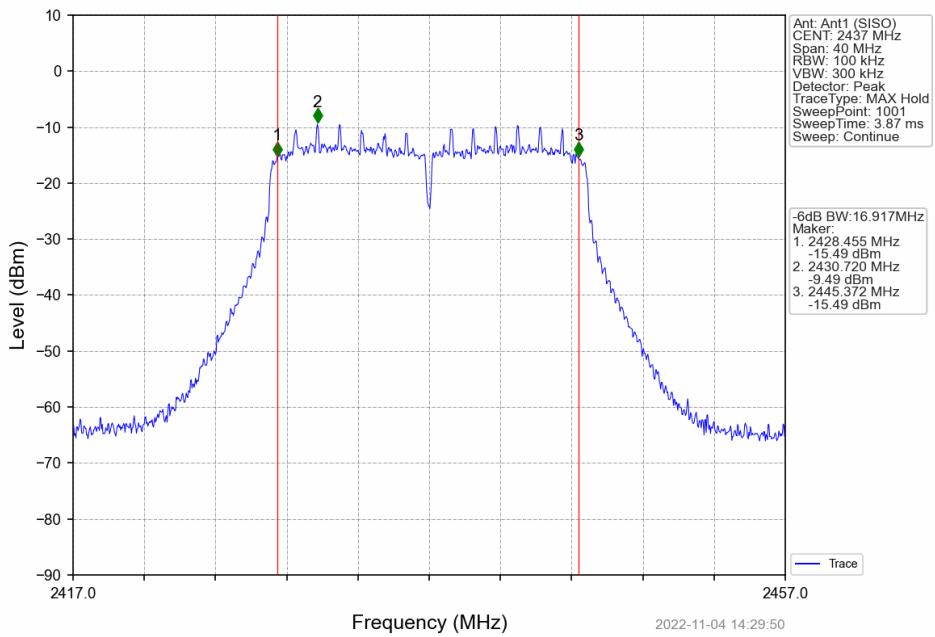
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

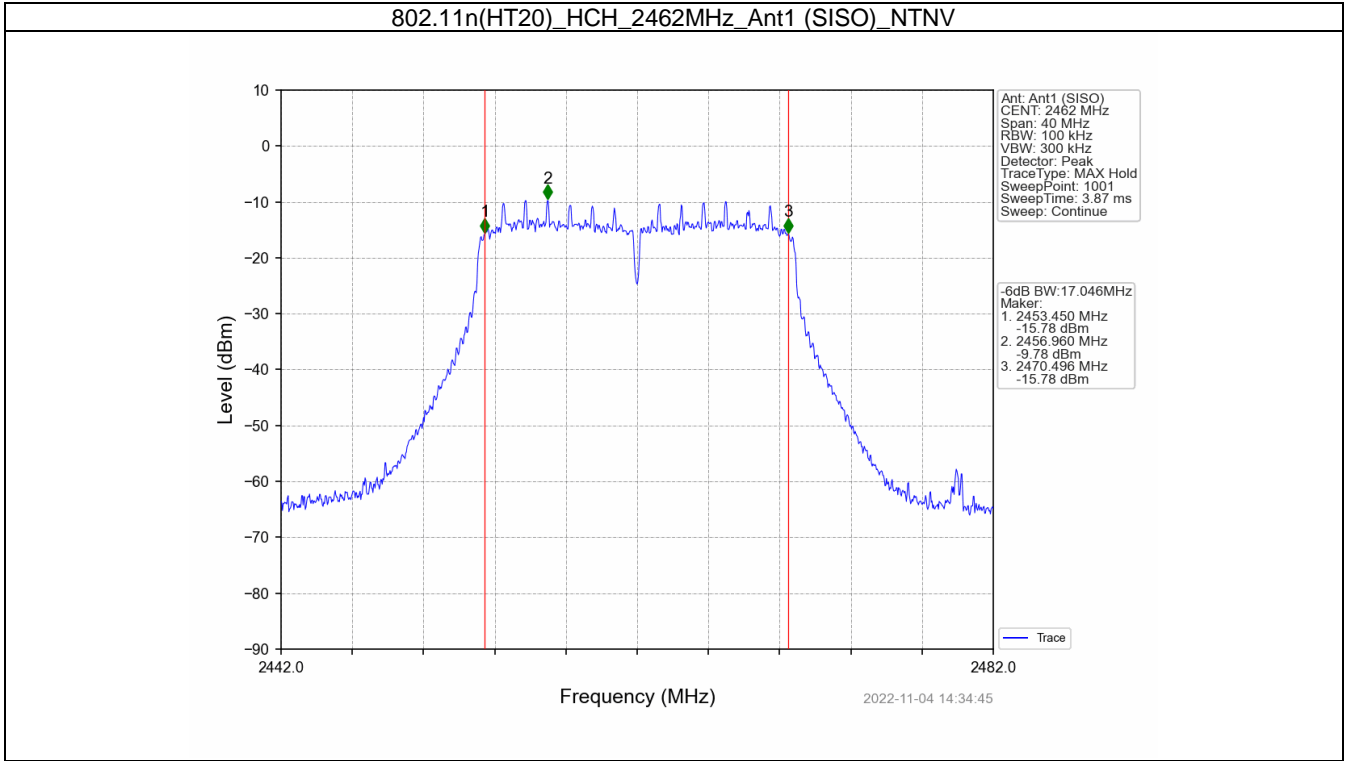


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





2. Maximum Conducted Output Power

2.1 Power

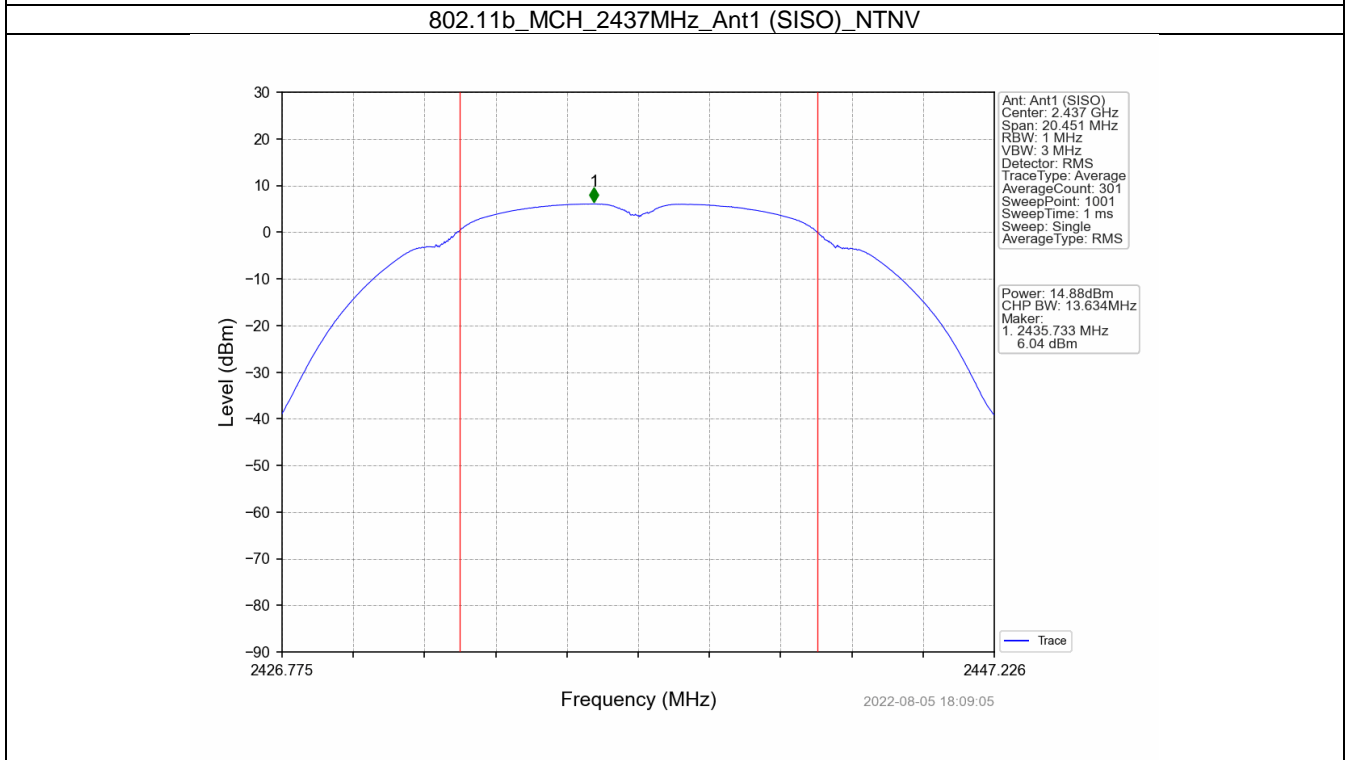
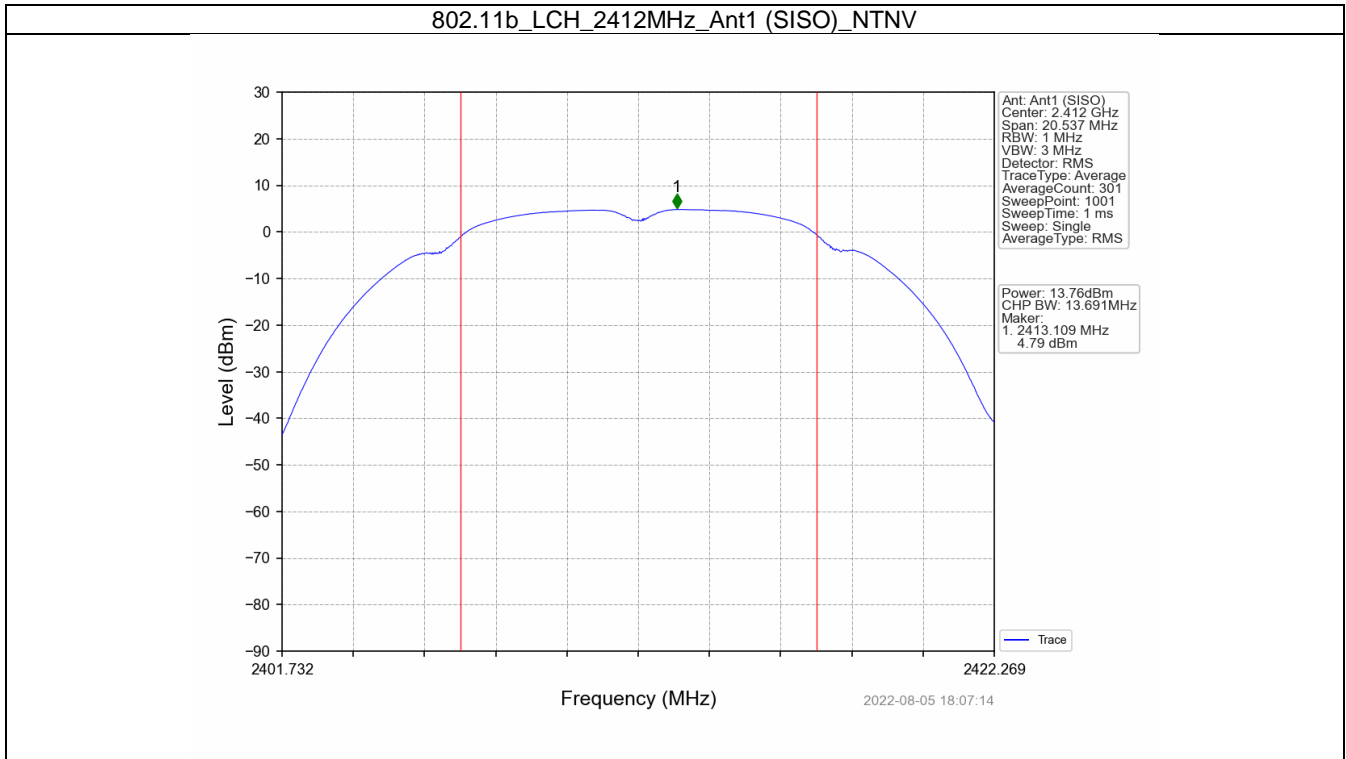
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)				Verdict
			ANT1	Limit	EIRP	Limit	
802.11b	SISO	2412	13.76	<=30	16.96	<=36	Pass
		2437	14.88	<=30	18.08	<=36	Pass
		2462	14.85	<=30	18.05	<=36	Pass
802.11g	SISO	2412	13.58	<=30	16.78	<=36	Pass
		2437	14.53	<=30	17.73	<=36	Pass
		2462	14.48	<=30	17.68	<=36	Pass
802.11n (HT20)	SISO	2412	13.64	<=30	16.84	<=36	Pass
		2437	14.56	<=30	17.76	<=36	Pass
		2462	14.61	<=30	17.81	<=36	Pass

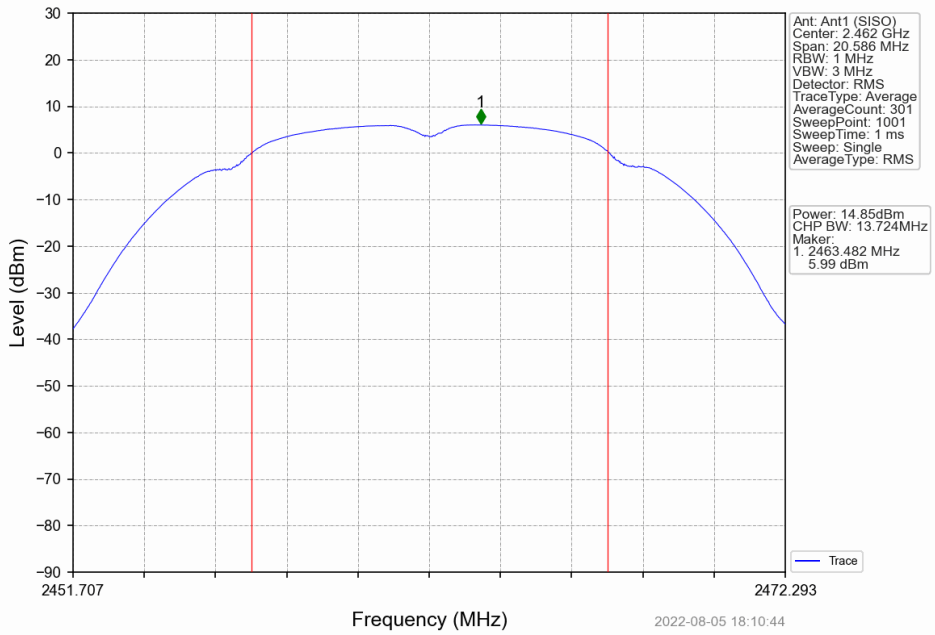
Note1: Antenna Gain: Ant1: 3.20dBi;

Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph;

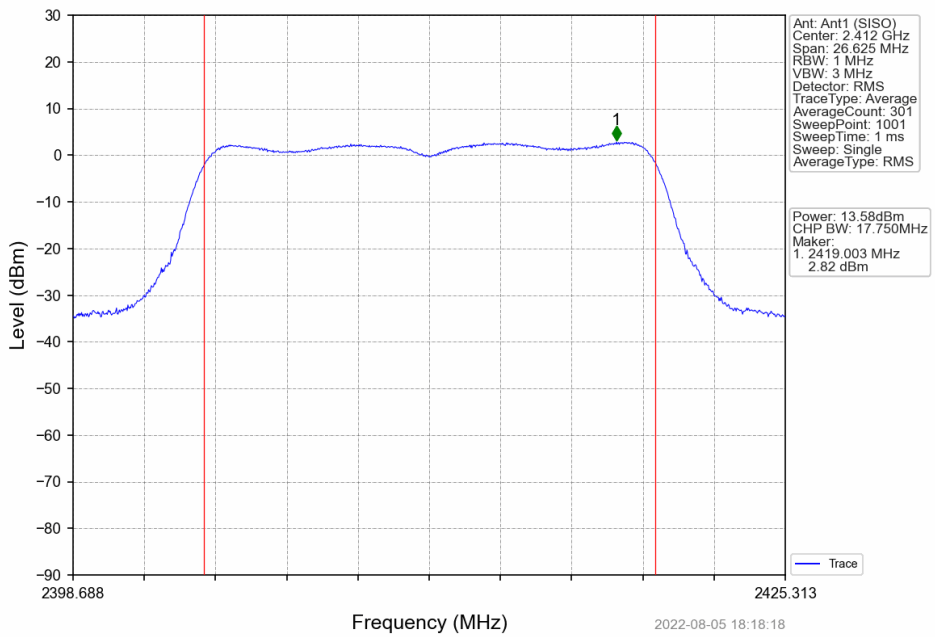
2.1.2 Test Graph



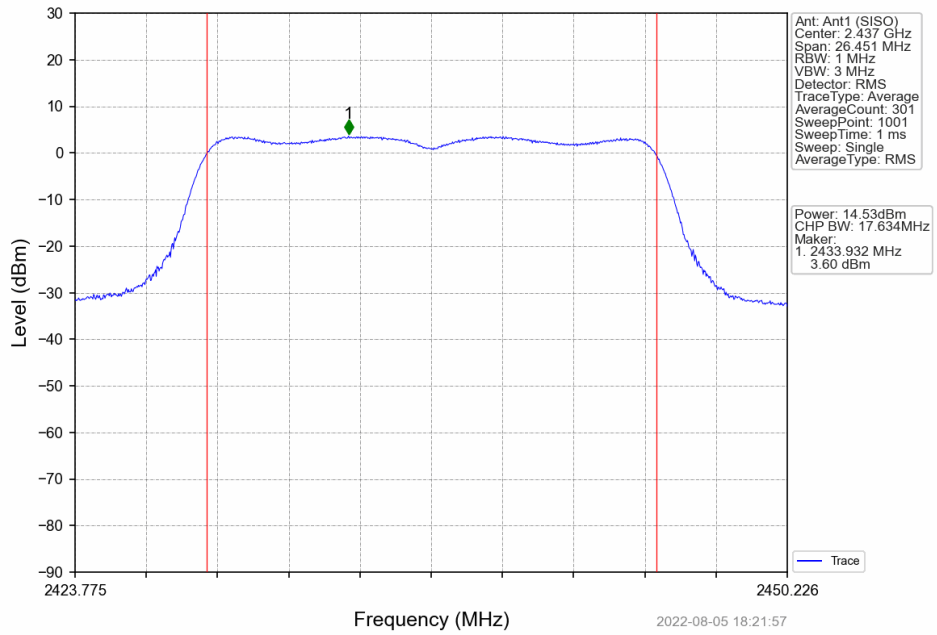
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



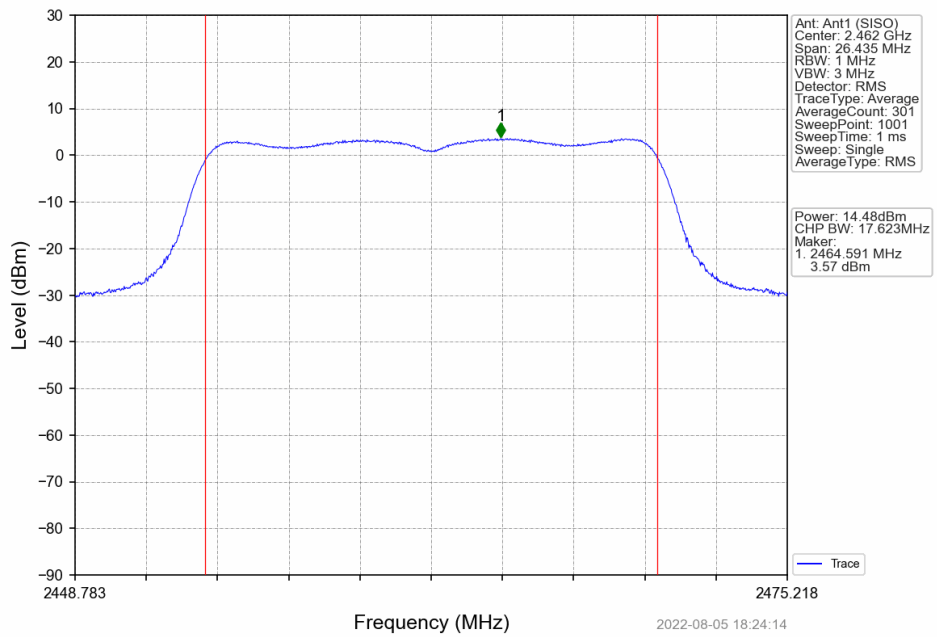
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



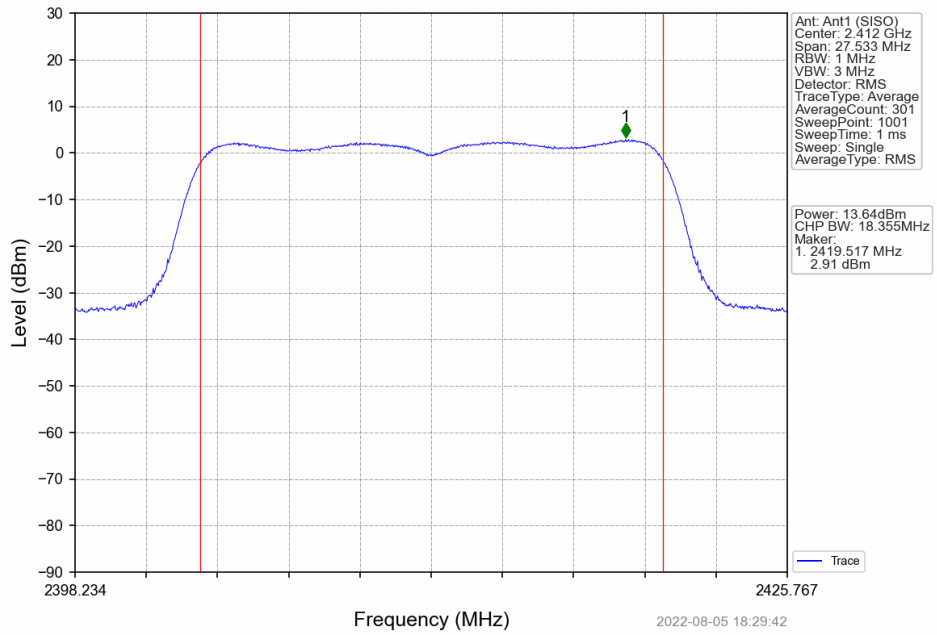
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



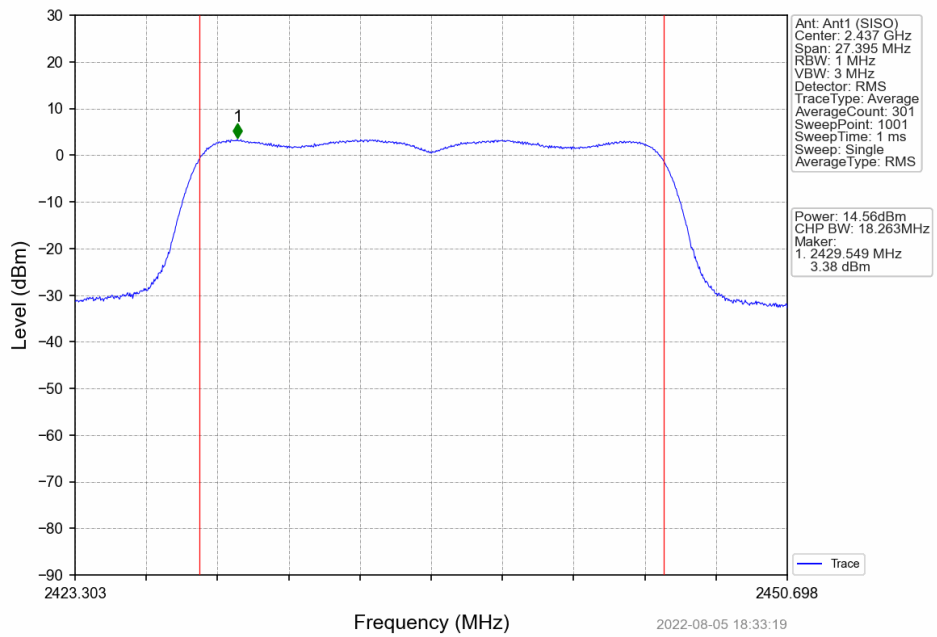
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

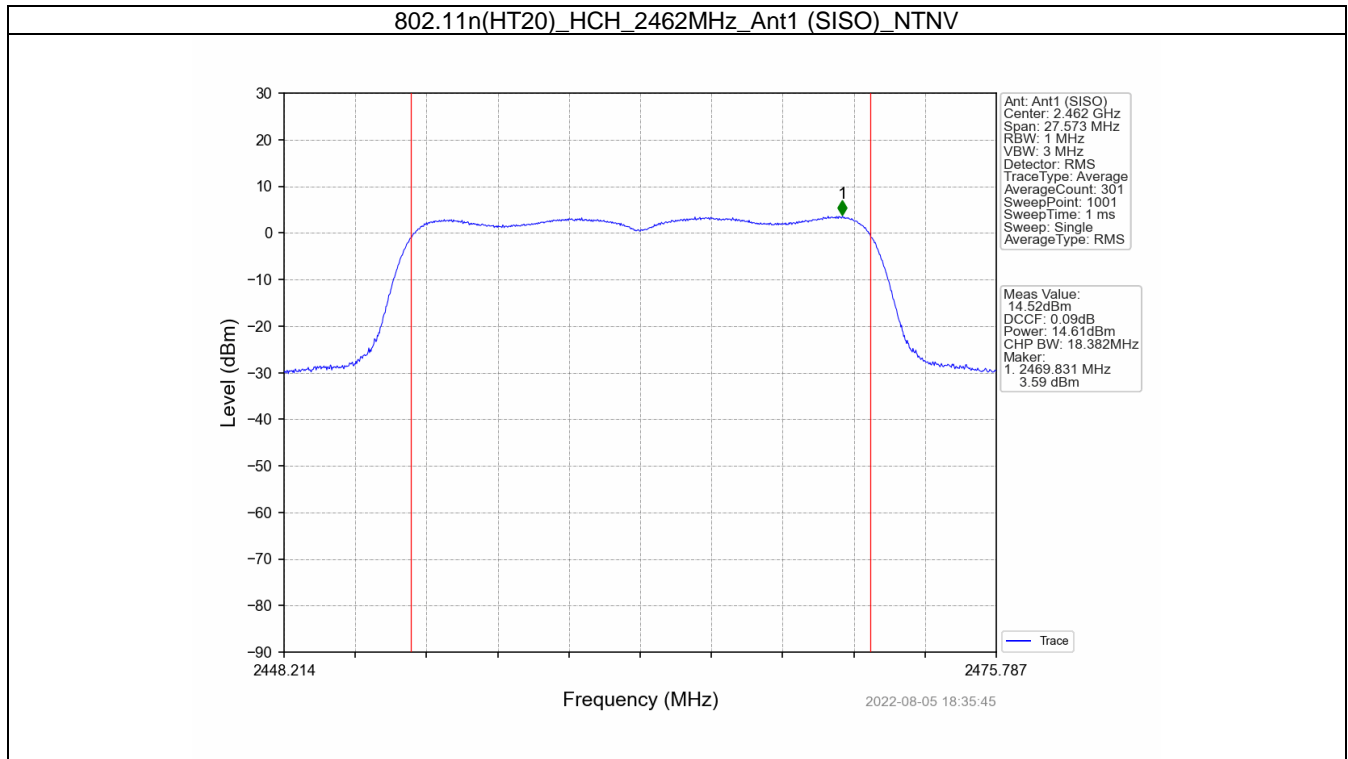


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





3. Maximum Power Spectral Density

3.1 PSD

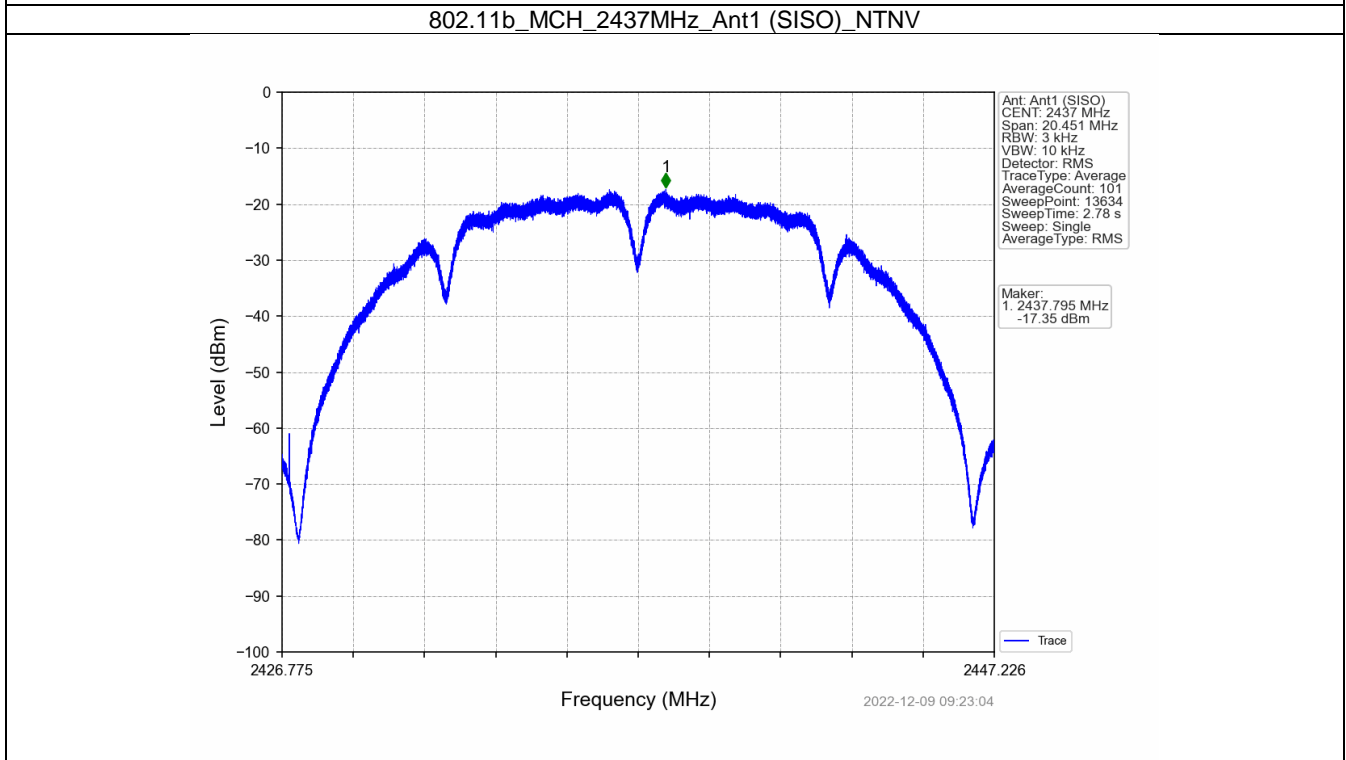
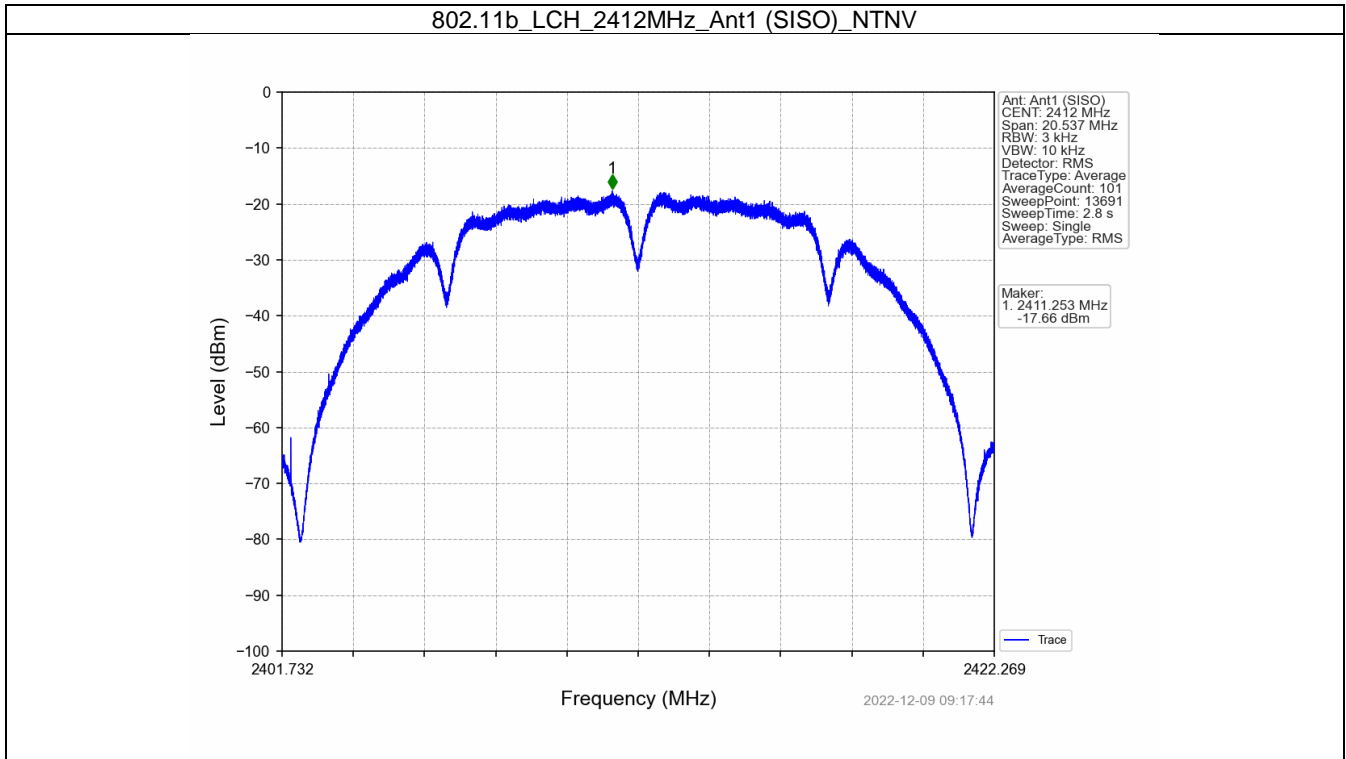
3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-17.66	<=8	Pass
		2437	-17.35	<=8	Pass
		2462	-16.67	<=8	Pass
802.11g	SISO	2412	-19.40	<=8	Pass
		2437	-19.14	<=8	Pass
		2462	-18.06	<=8	Pass
802.11n (HT20)	SISO	2412	-18.40	<=8	Pass
		2437	-18.82	<=8	Pass
		2462	-18.58	<=8	Pass

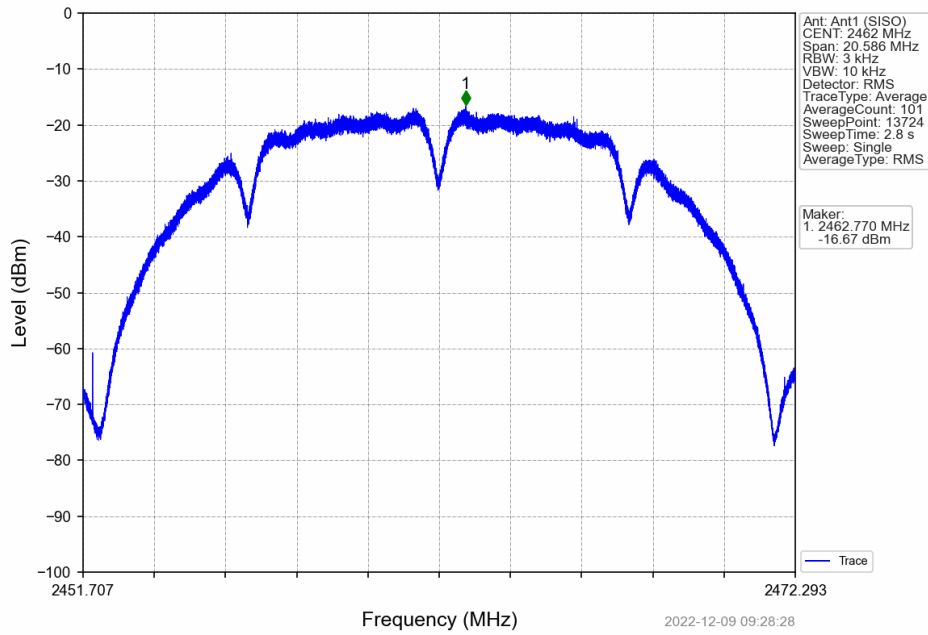
Note1: Antenna Gain: Ant1: 3.20dBi;

Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph;

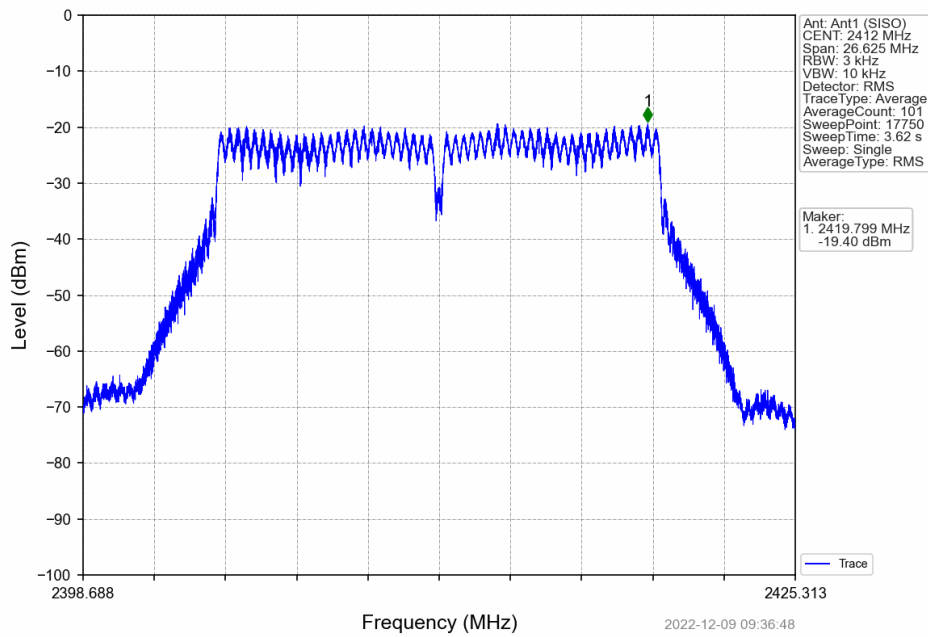
3.1.2 Test Graph



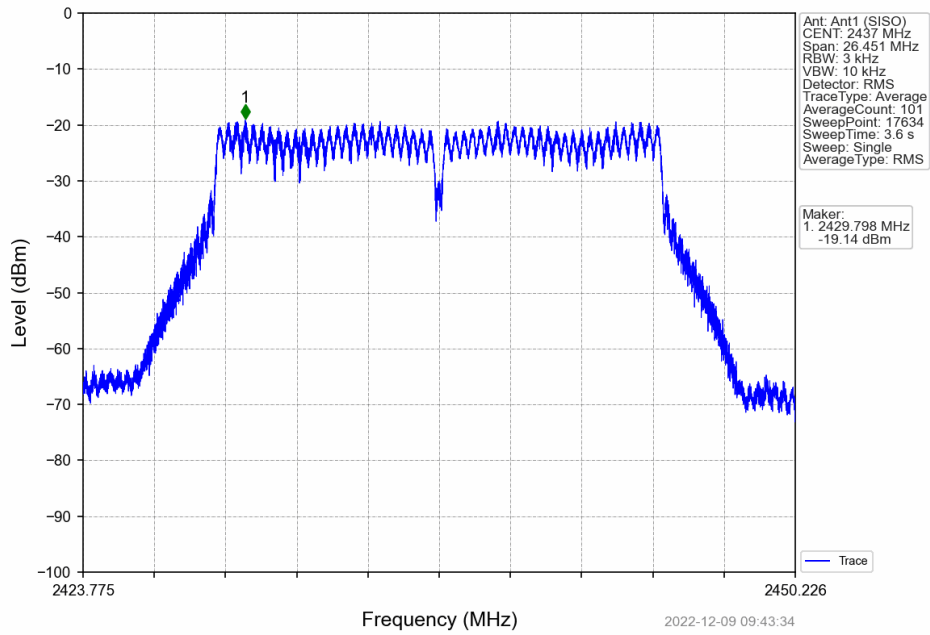
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



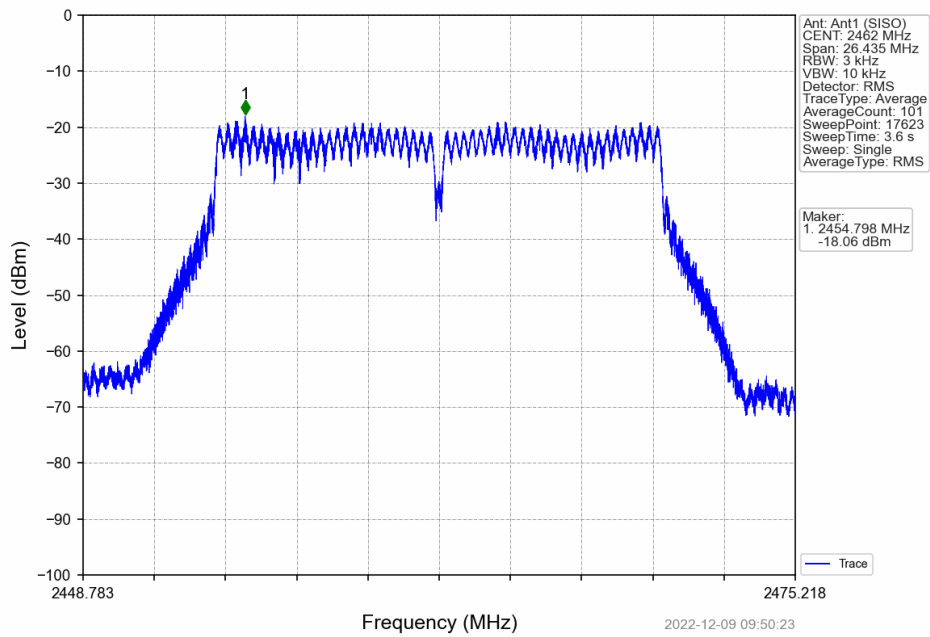
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



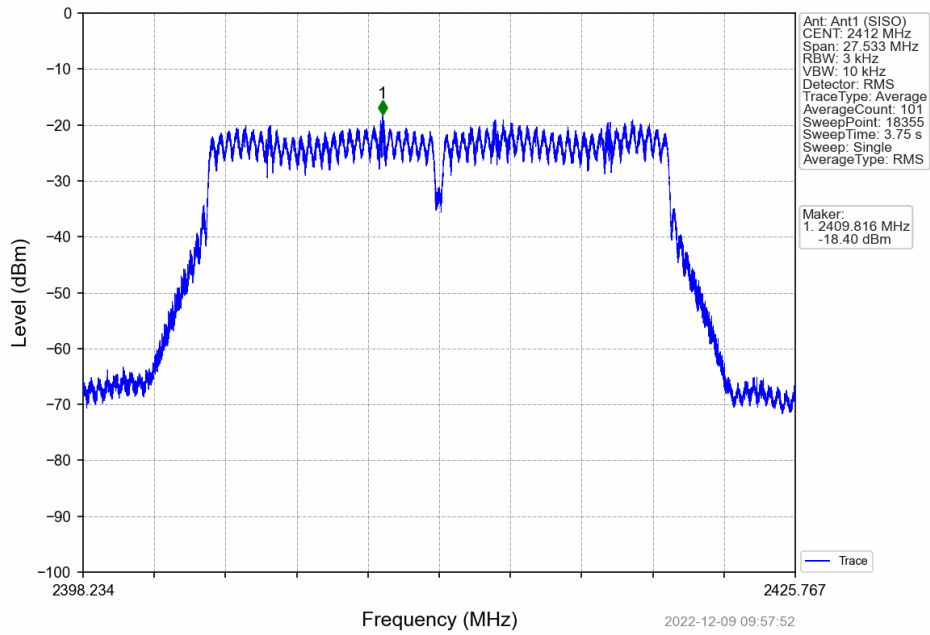
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



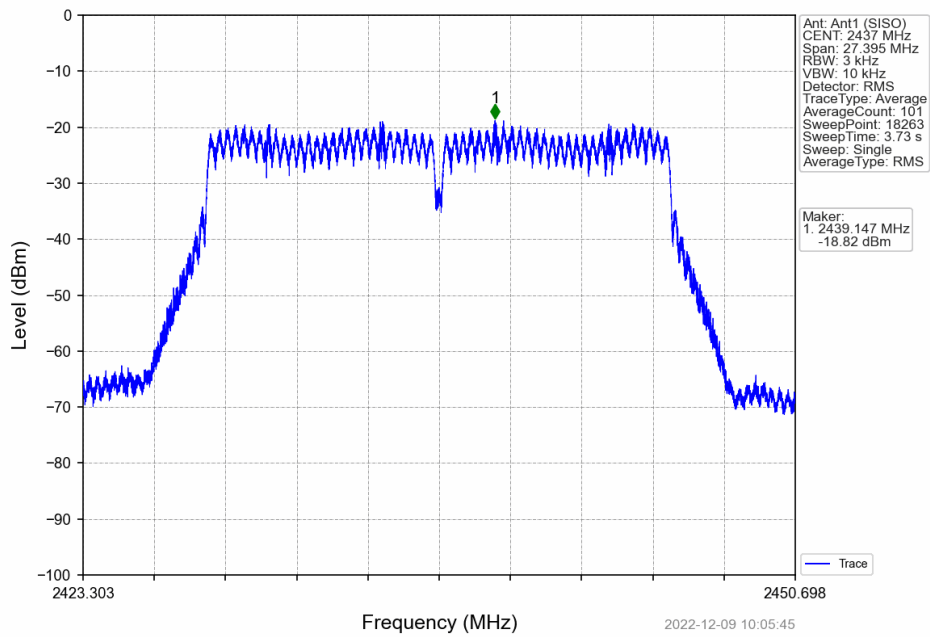
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

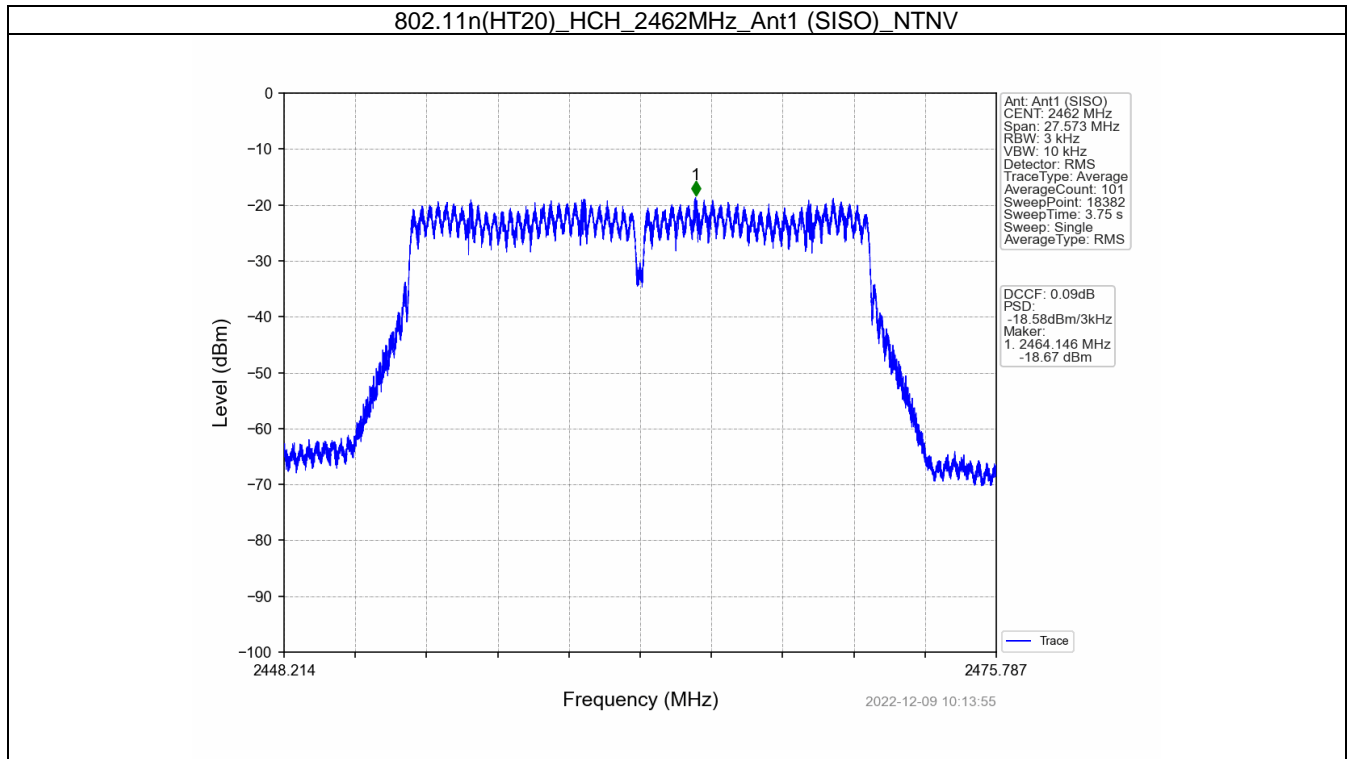


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





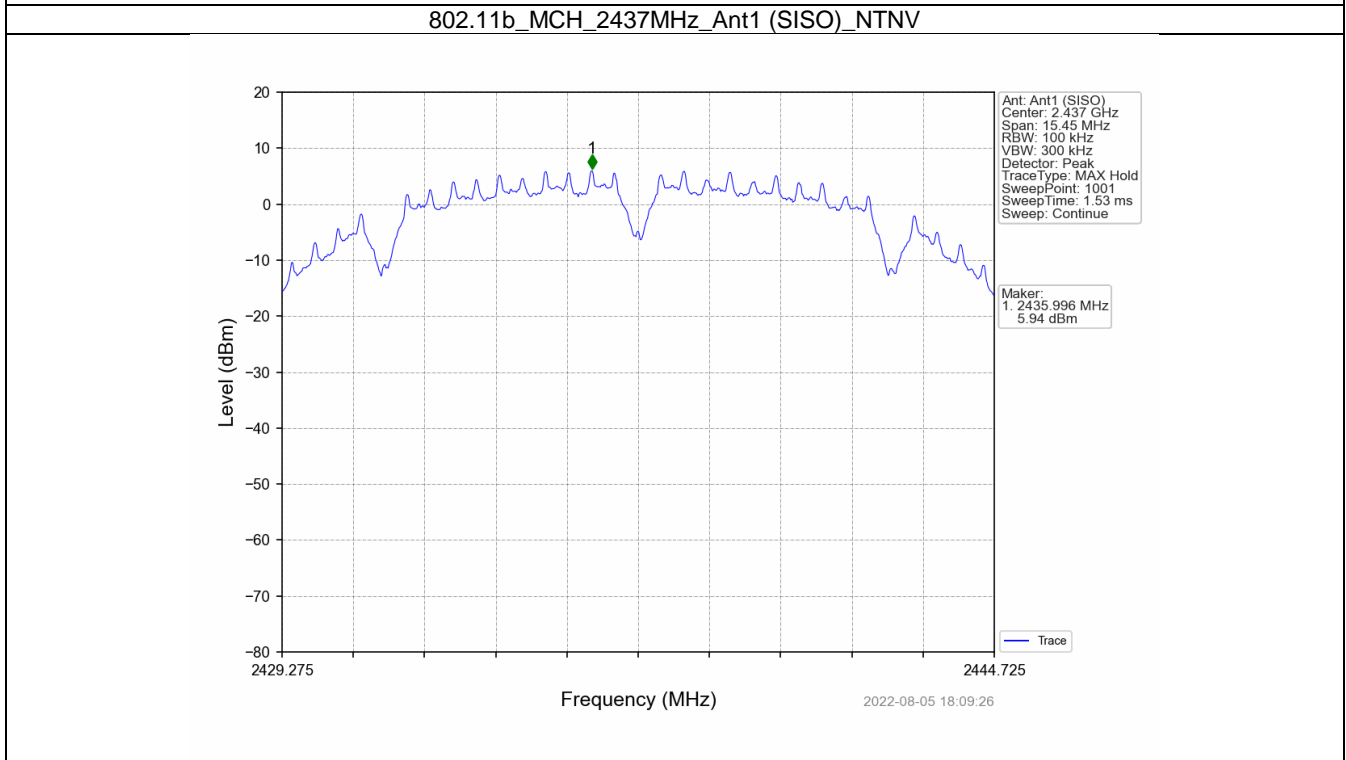
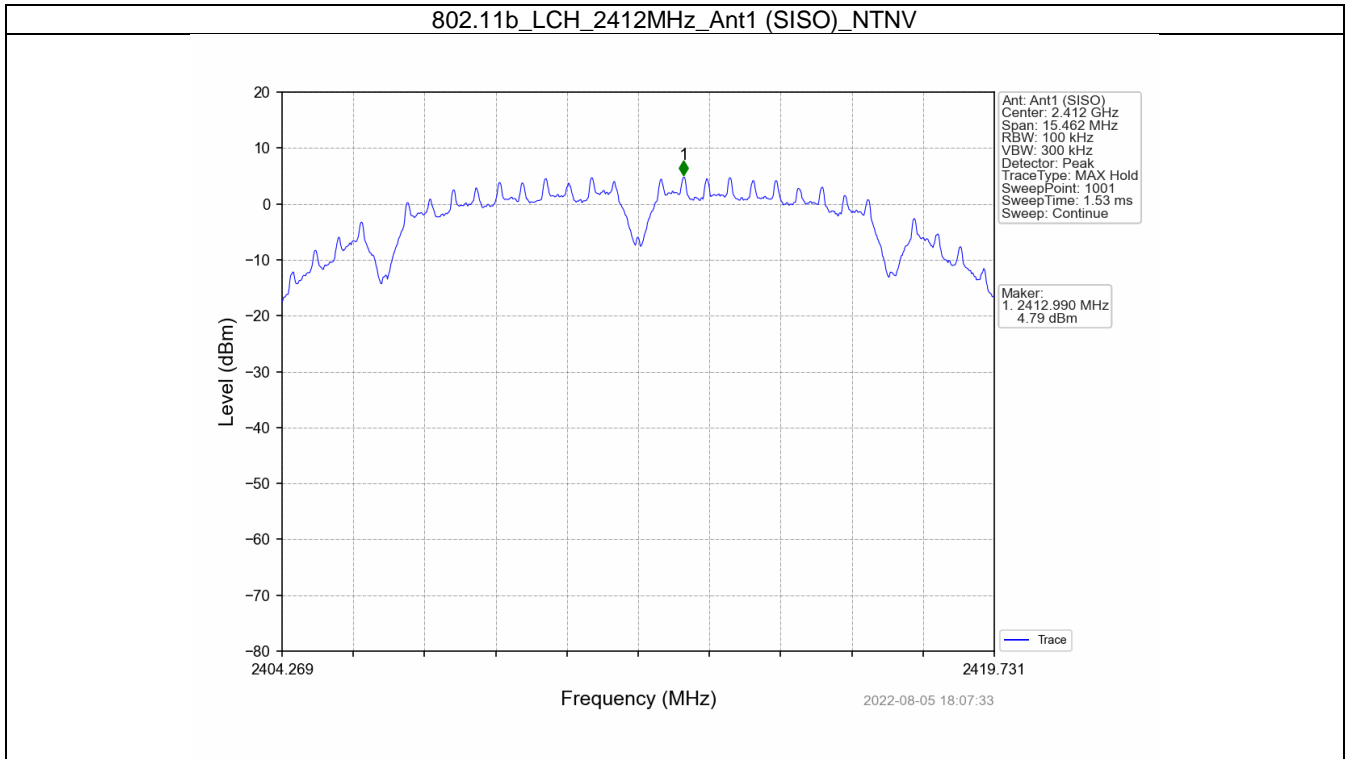
4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Ref

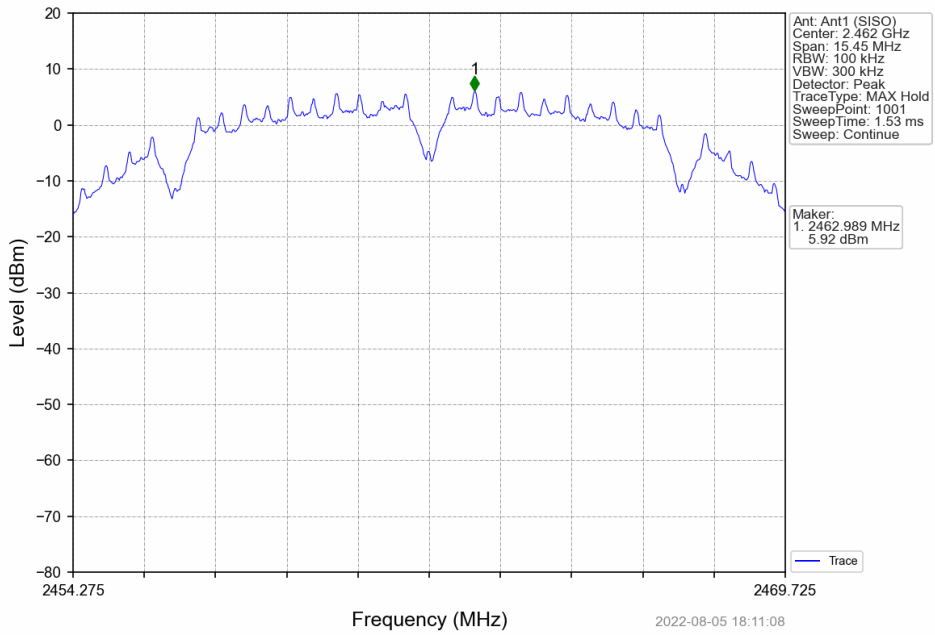
4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	4.79
		2437	1	5.94
		2462	1	5.92
802.11g	SISO	2412	1	3.35
		2437	1	4.03
		2462	1	4.15
802.11n (HT20)	SISO	2412	1	2.97
		2437	1	3.87
		2462	1	3.95
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.				

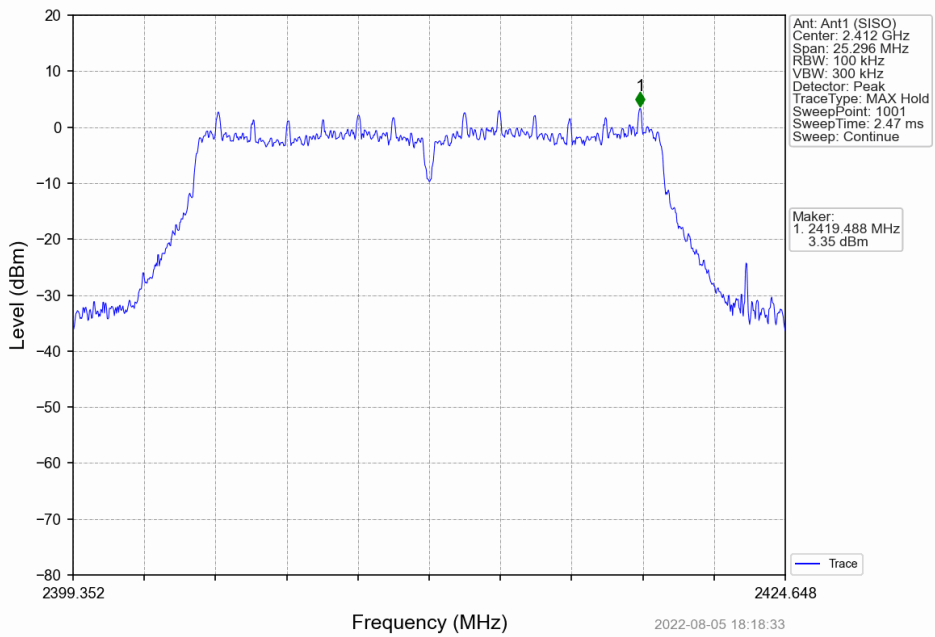
4.1.2 Test Graph



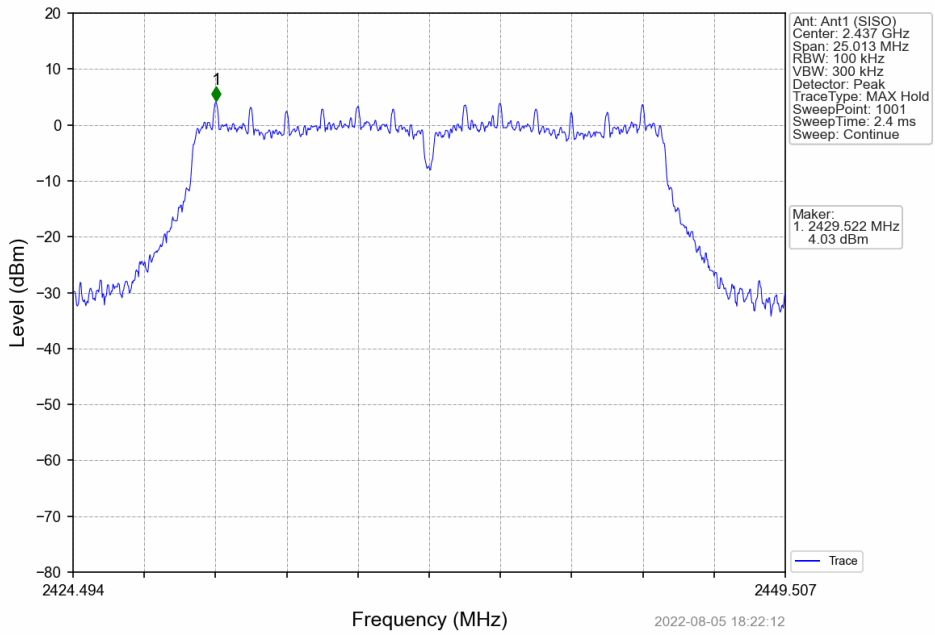
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



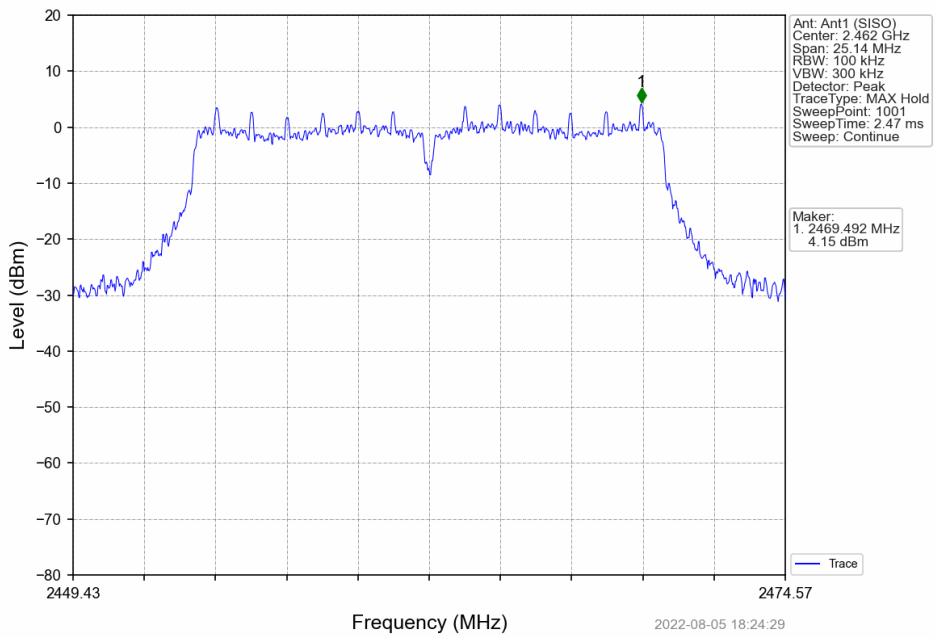
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



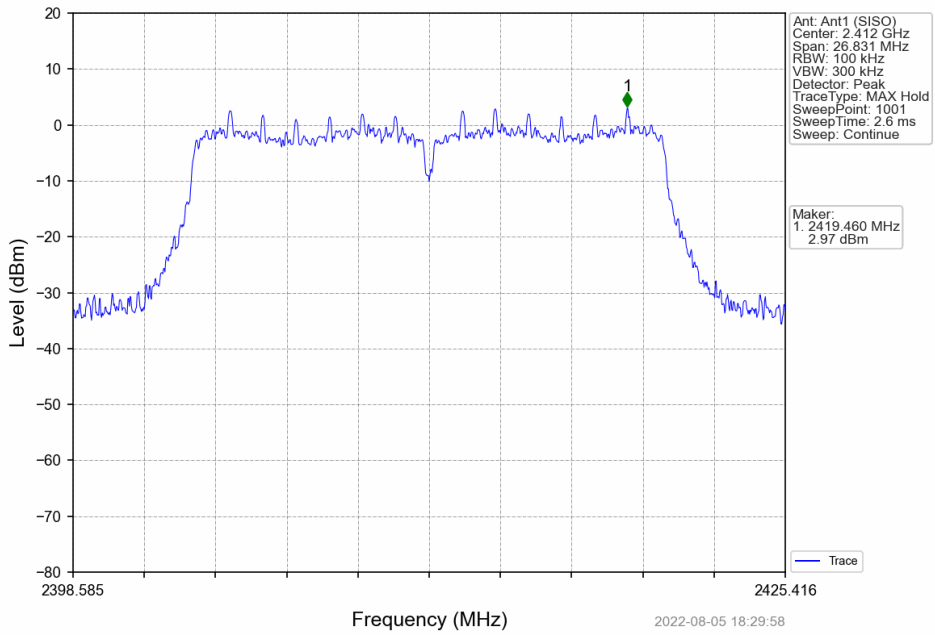
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



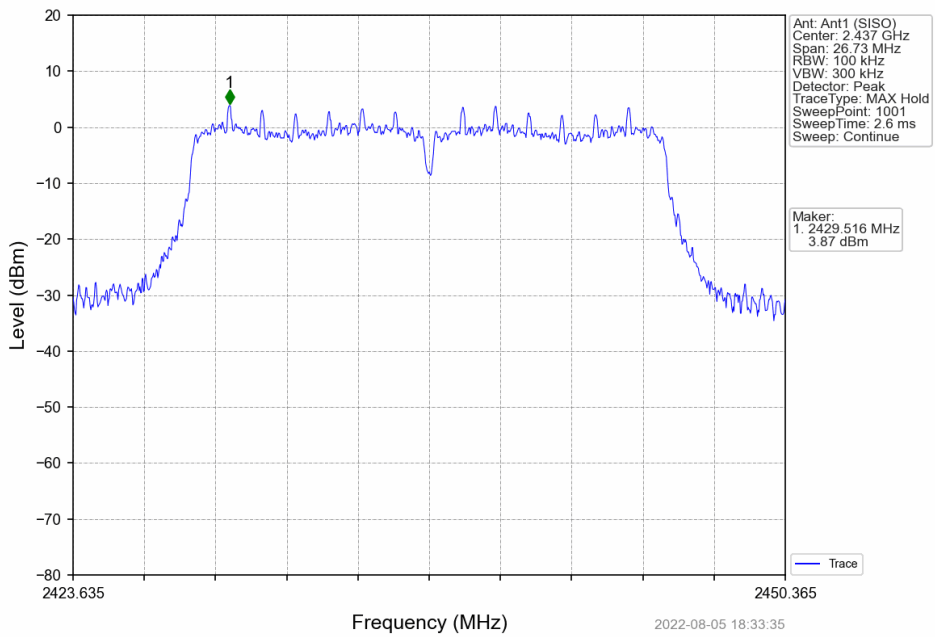
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

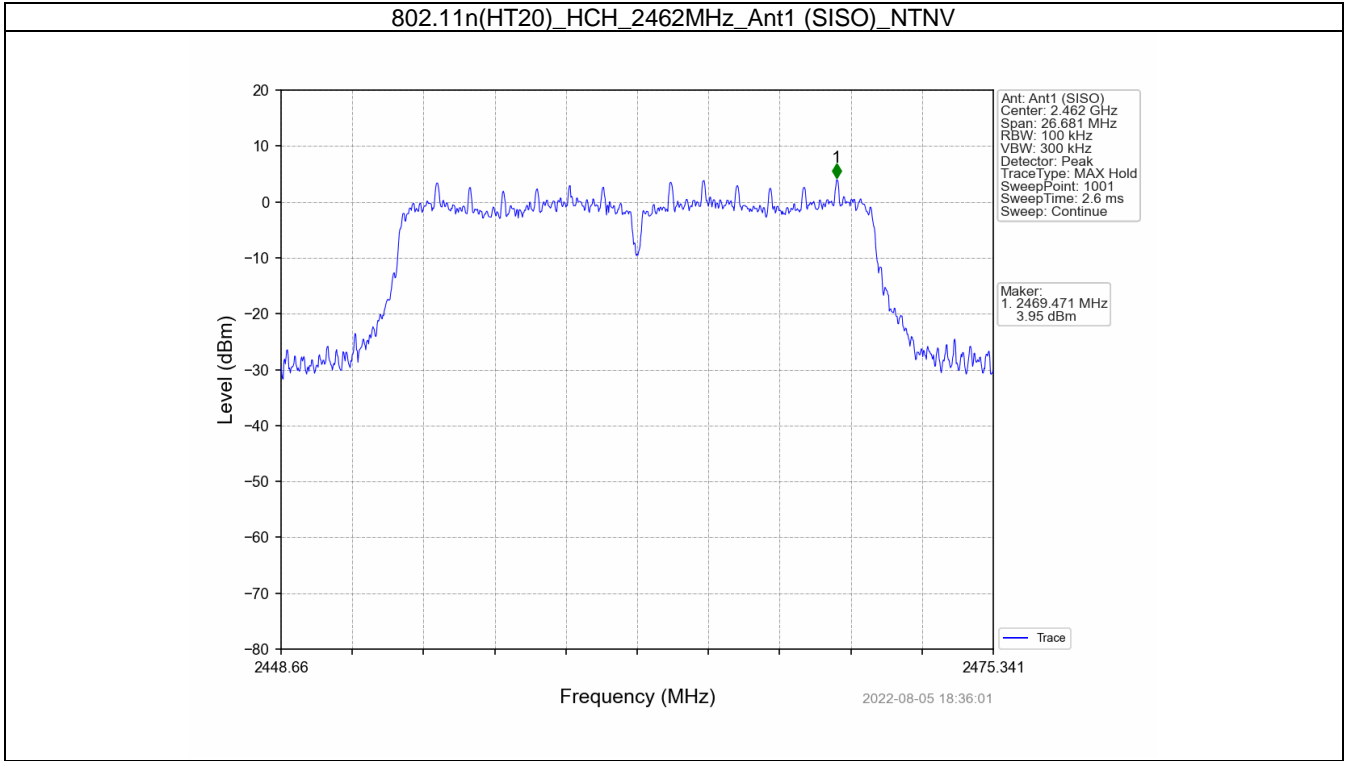


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



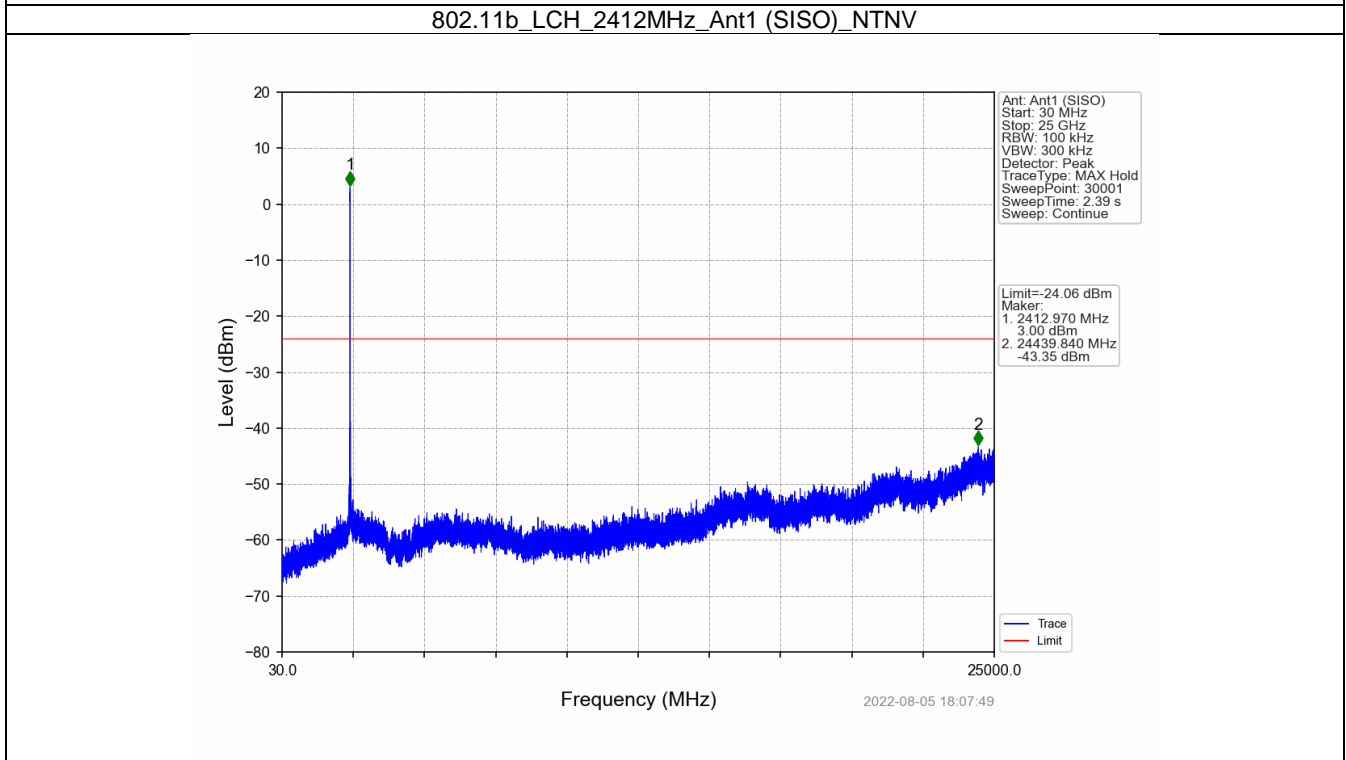
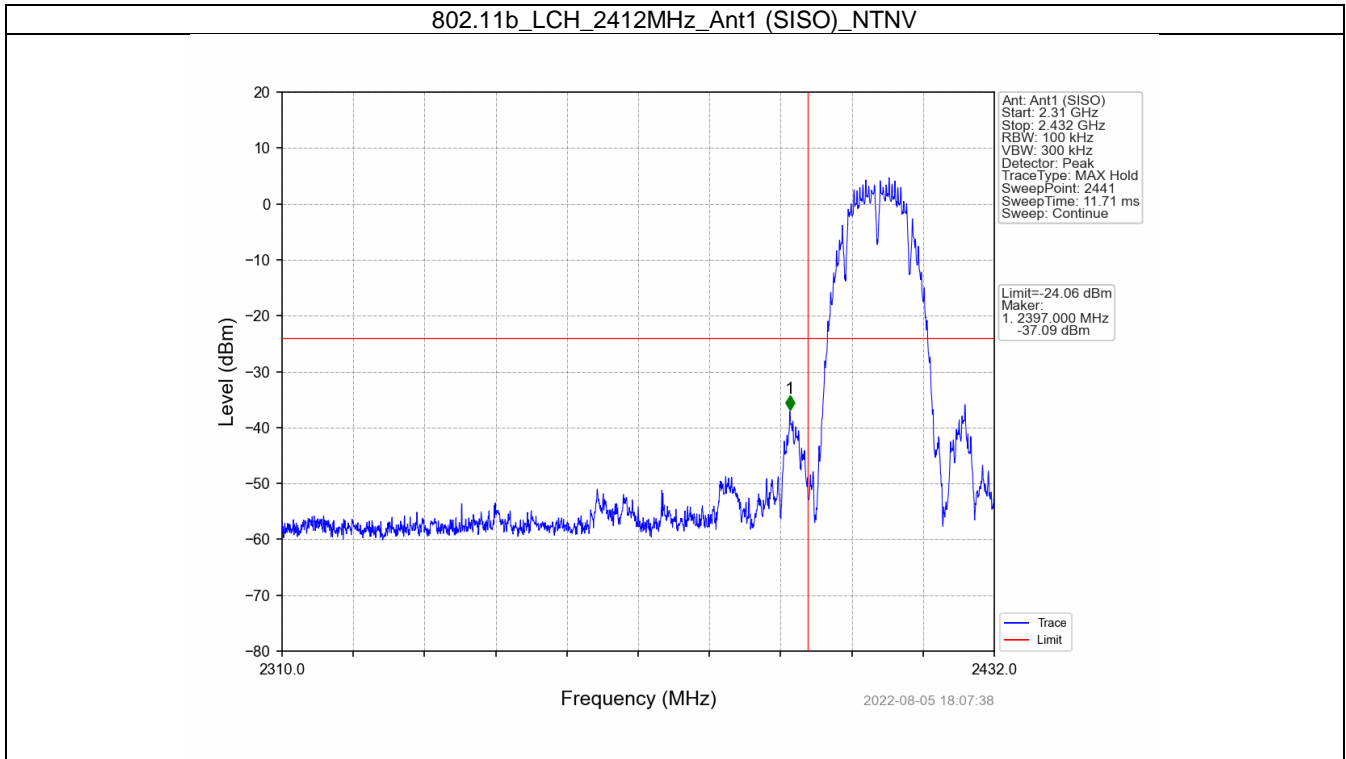


4.2 CSE

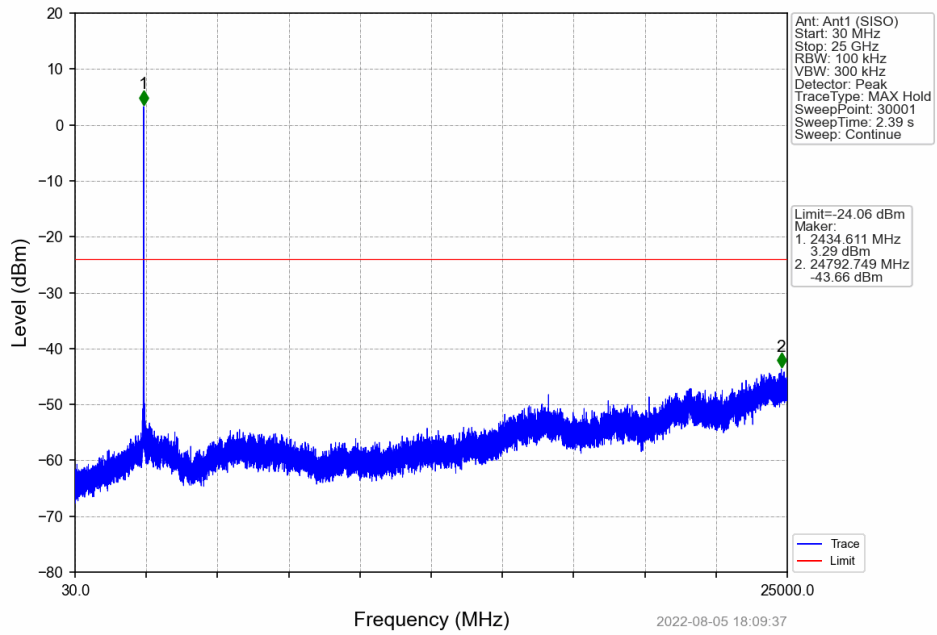
4.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	5.94	-24.06	Pass
		2437	1	5.94	-24.06	Pass
		2462	1	5.94	-24.06	Pass
802.11g	SISO	2412	1	4.15	-25.85	Pass
		2437	1	4.15	-25.85	Pass
		2462	1	4.15	-25.85	Pass
802.11n (HT20)	SISO	2412	1	3.95	-26.05	Pass
		2437	1	3.95	-26.05	Pass
		2462	1	3.95	-26.05	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.						

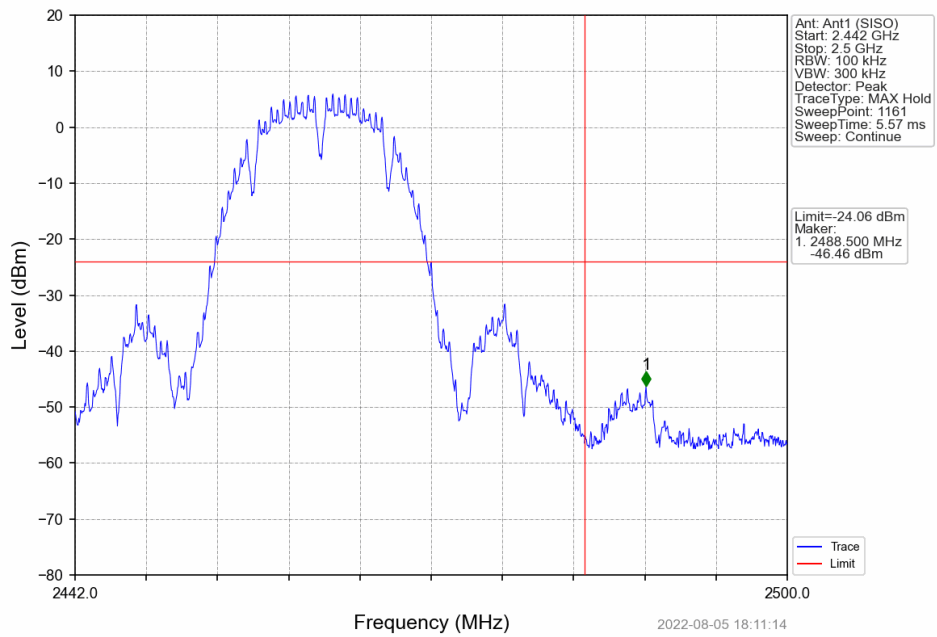
4.2.2 Test Graph



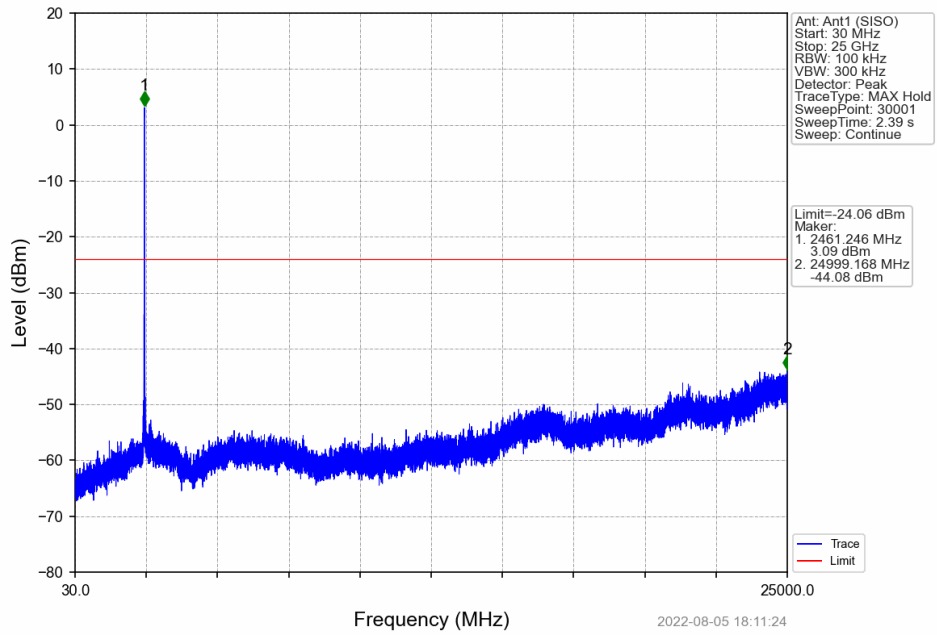
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



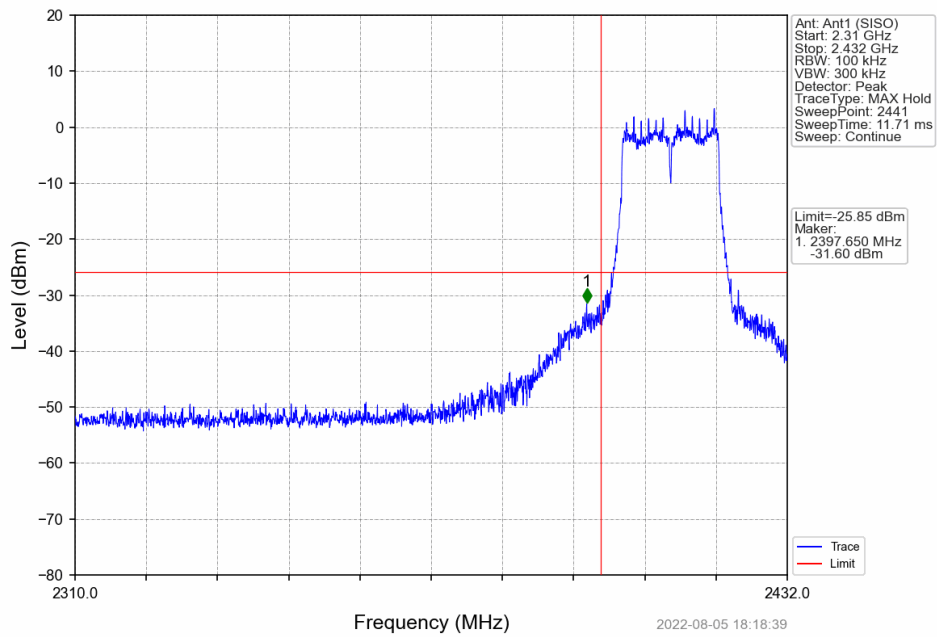
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



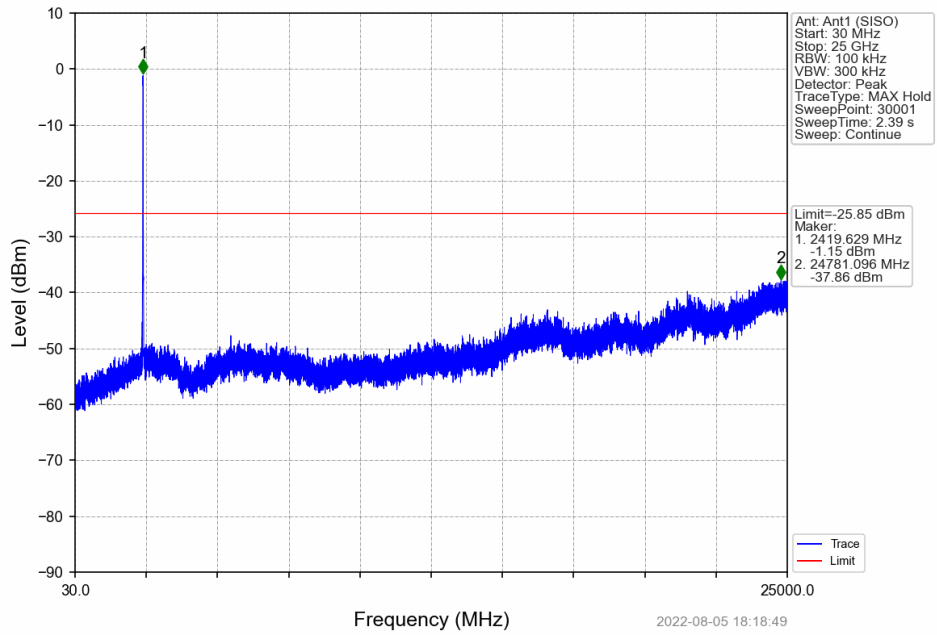
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



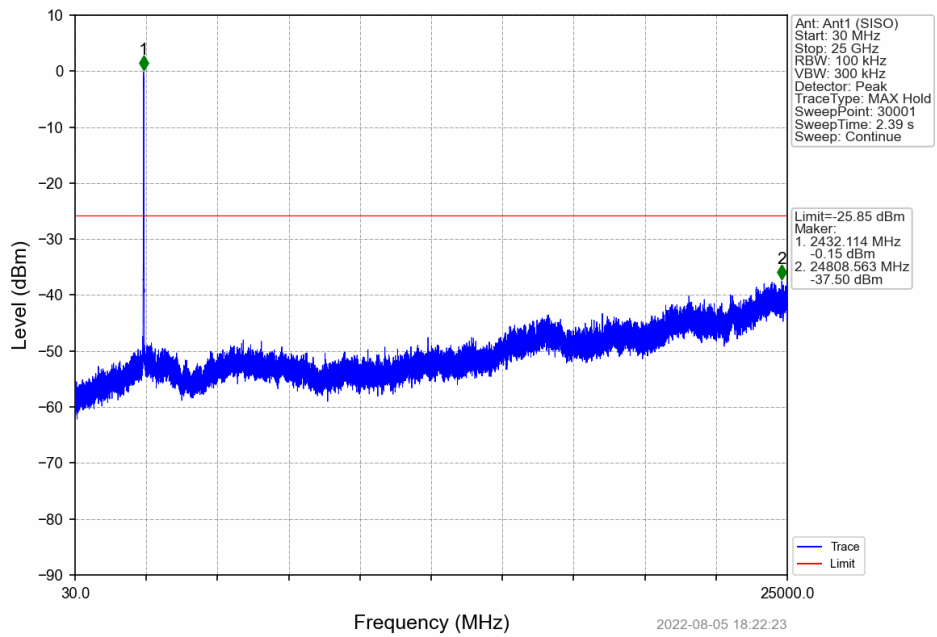
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



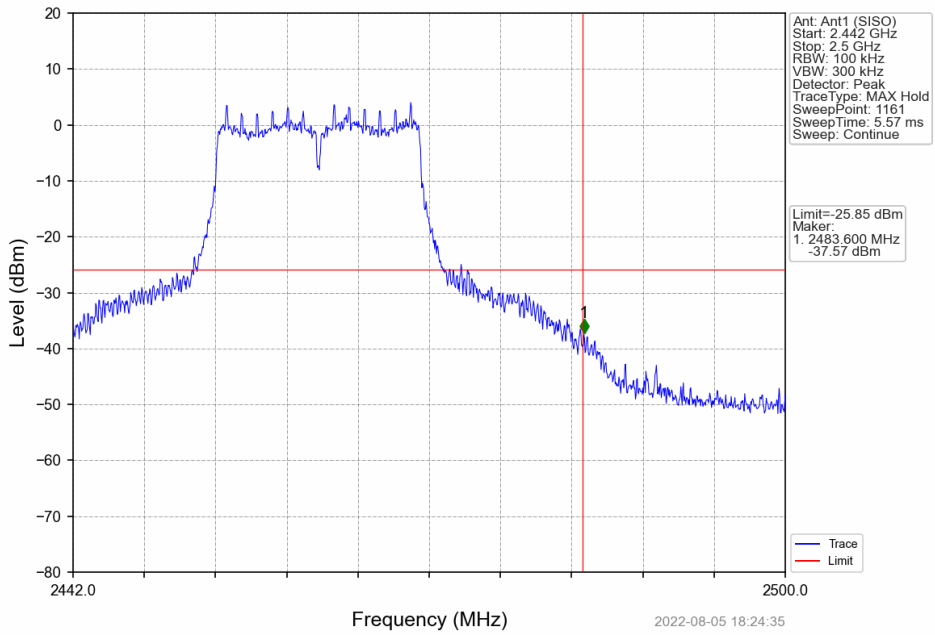
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



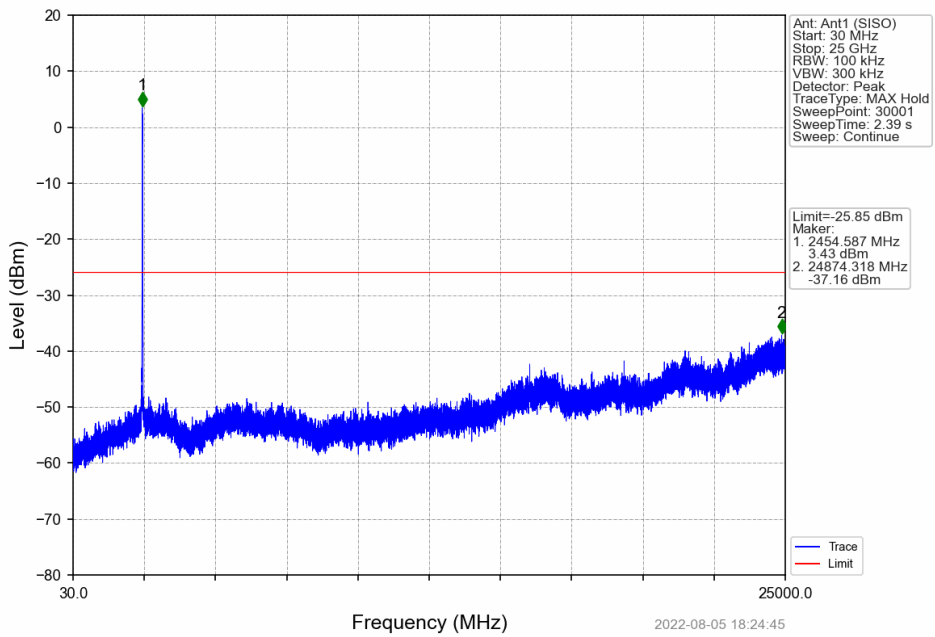
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



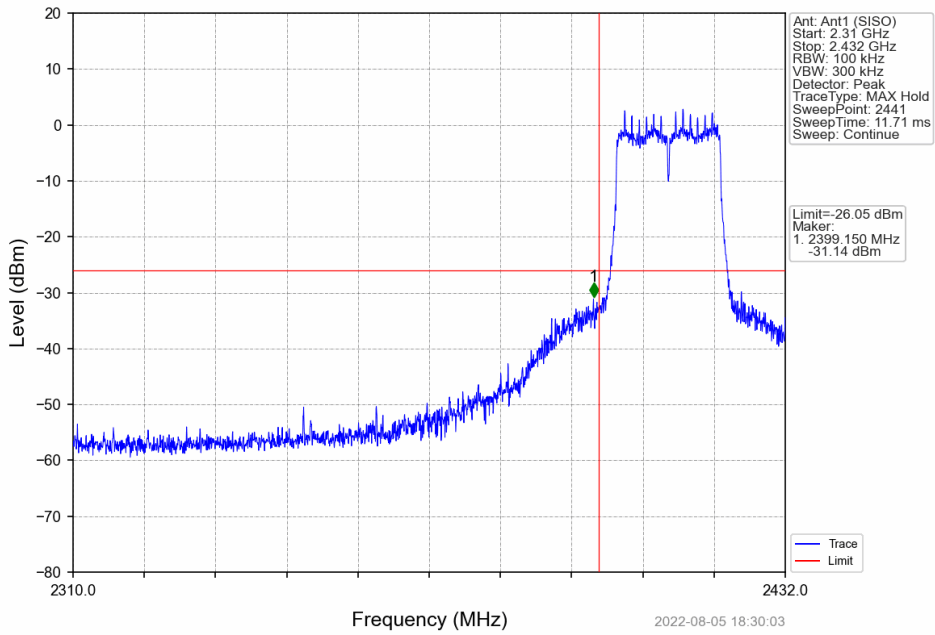
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



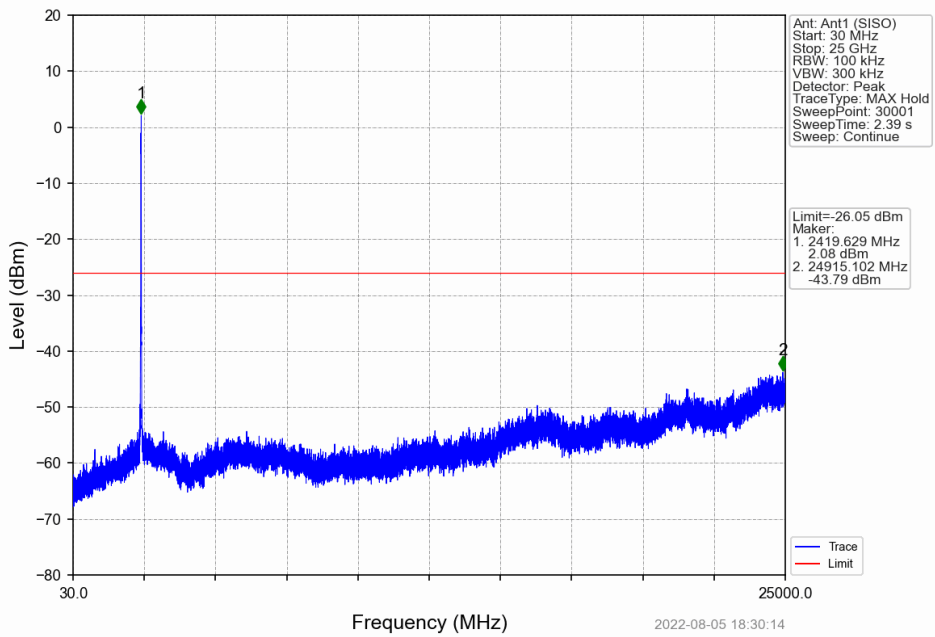
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



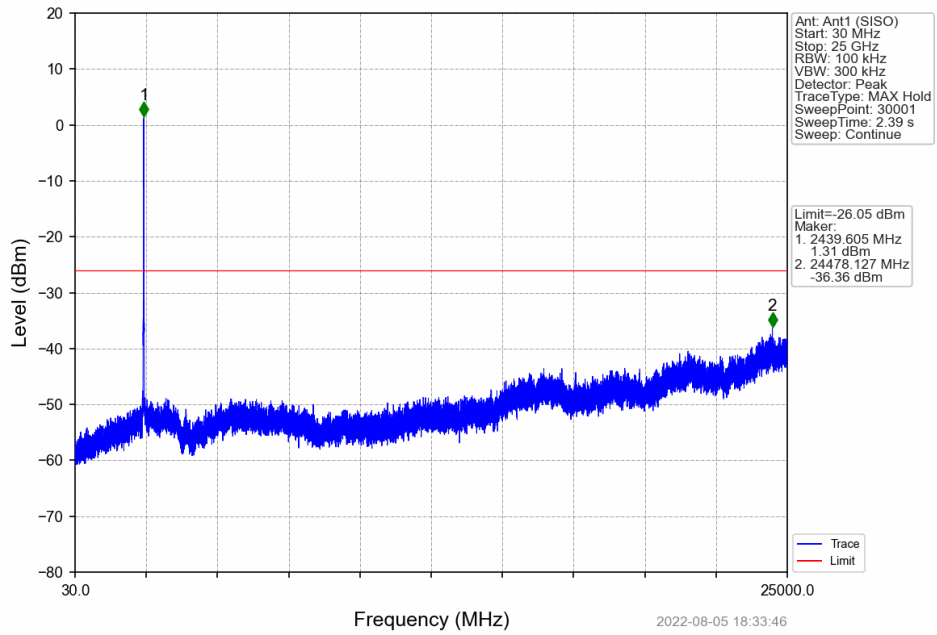
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

