



Shenzhen CTL Testing Technology Co., Ltd.

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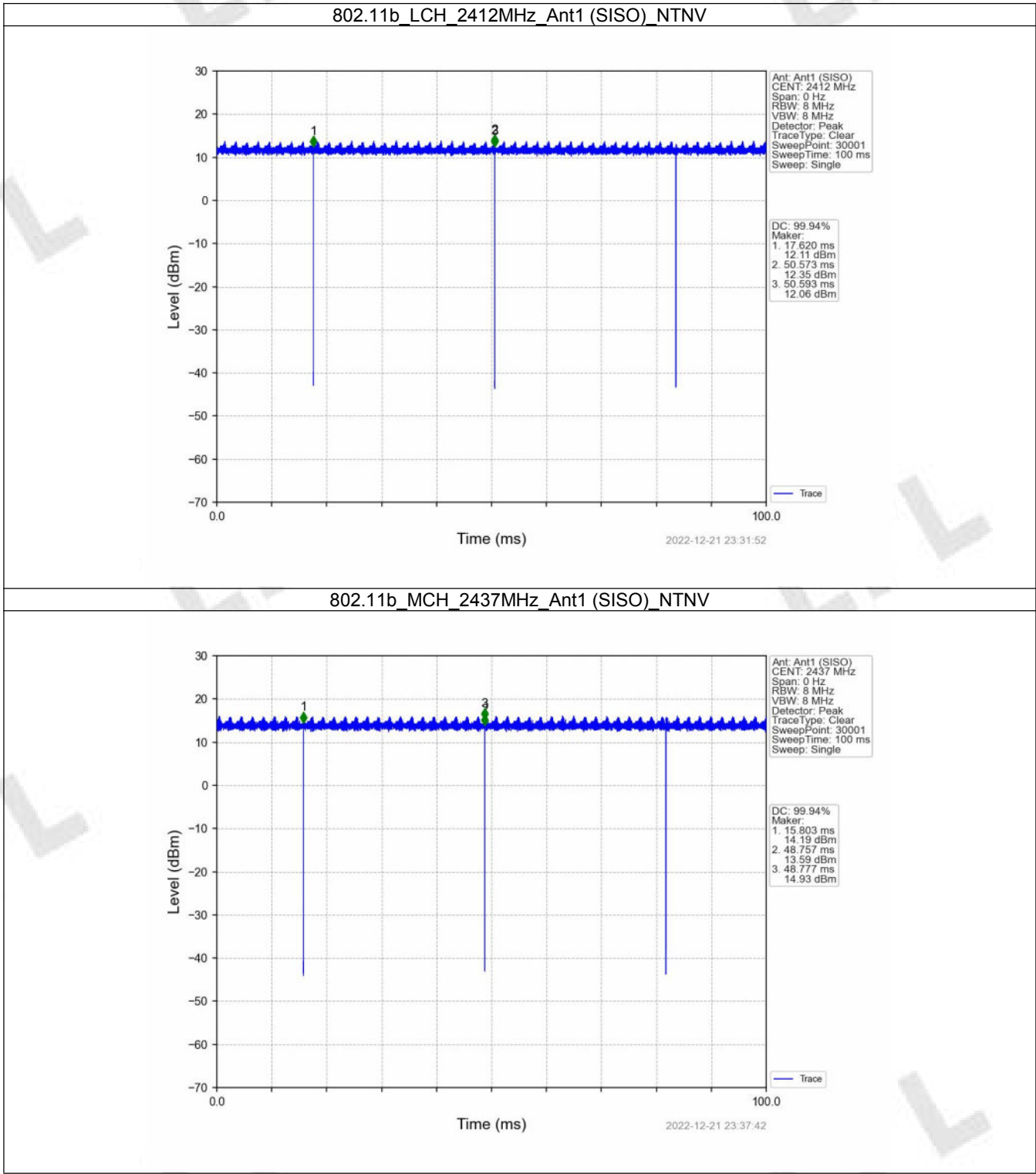
1. Duty Cycle

1.1 Ant1

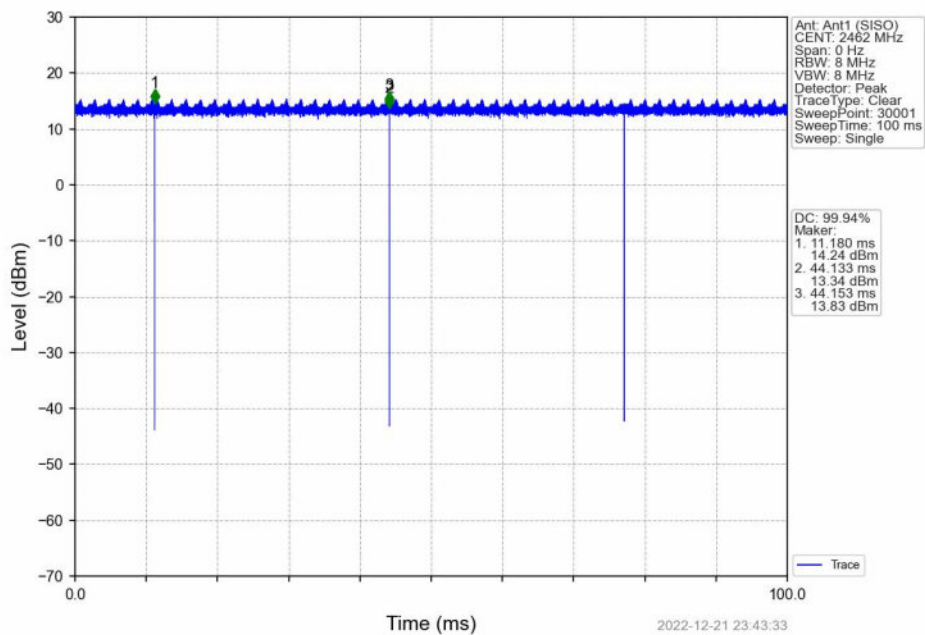
1.1.1 Test Result

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	32.953	32.973	99.94	0.00	0.00
		2437	32.954	32.974	99.94	0.00	0.01
		2462	32.953	32.973	99.94	0.00	0.00
802.11g	SISO	2412	5.484	5.510	99.53	0.02	0.04
		2437	5.484	5.510	99.53	0.02	0.04
		2462	5.484	5.510	99.53	0.02	0.04
802.11n (HT20)	SISO	2412	5.079	5.105	99.49	0.02	0.04
		2437	5.079	5.104	99.51	0.02	0.00
		2462	5.079	5.104	99.51	0.02	0.00
802.11n (HT40)	SISO	2422	2.469	2.494	99.00	0.04	0.03
		2437	2.468	2.493	99.00	0.04	0.03
		2452	2.469	2.495	98.96	0.05	0.03

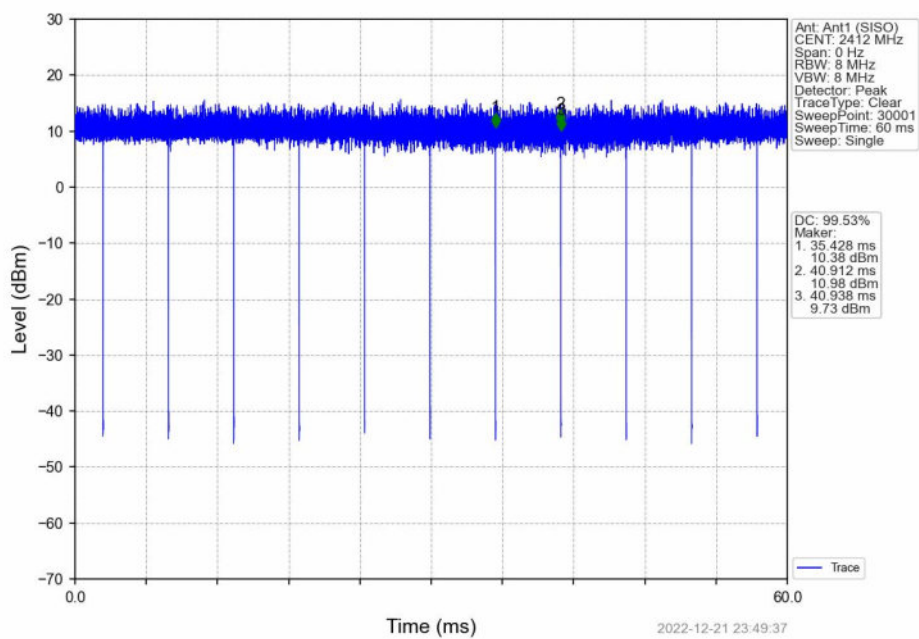
1.1.2 Test Graph



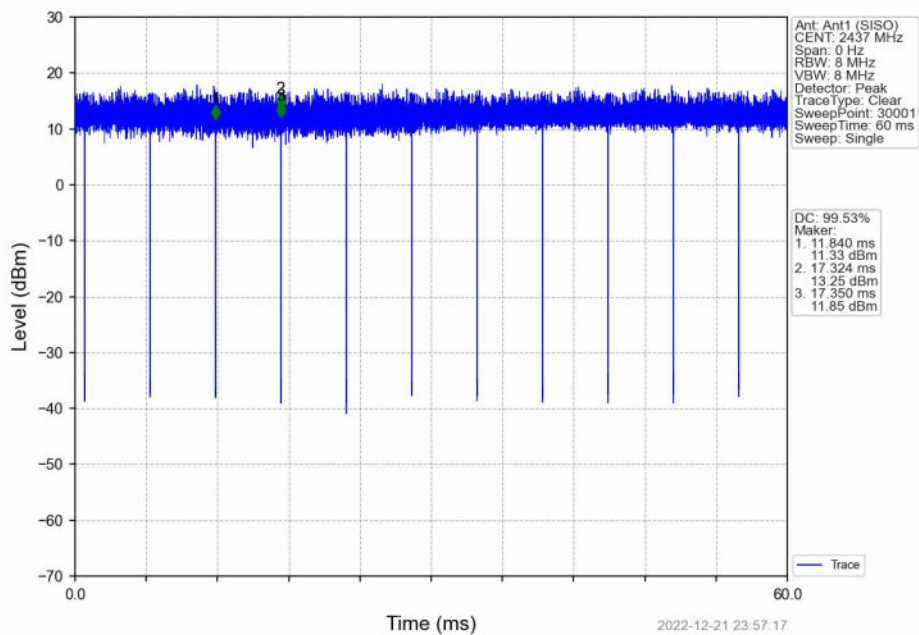
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



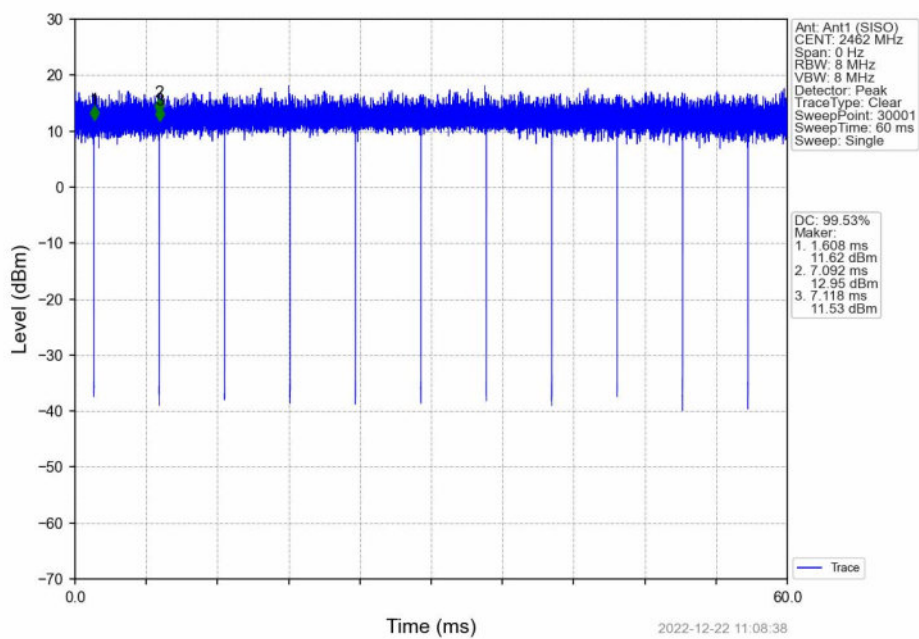
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



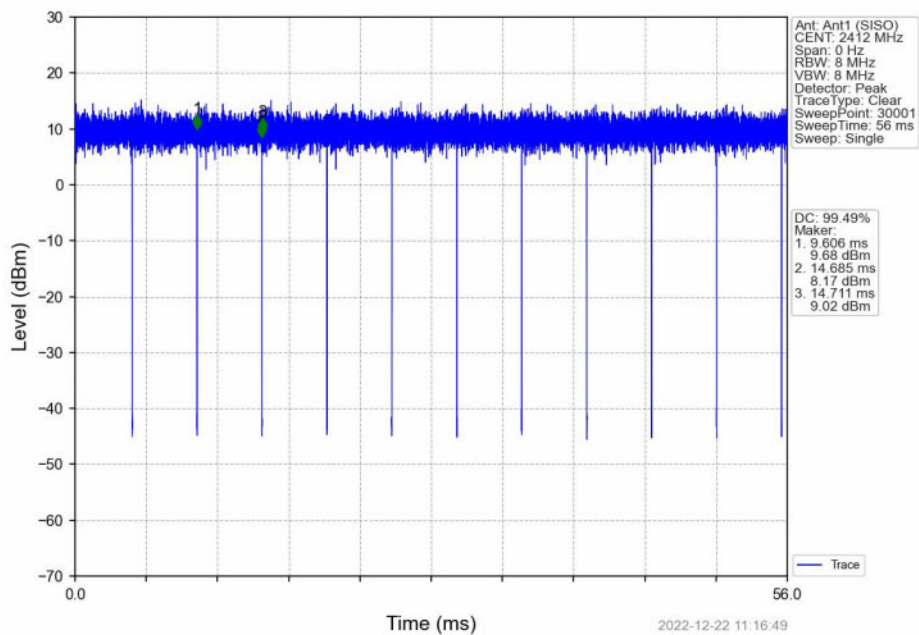
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



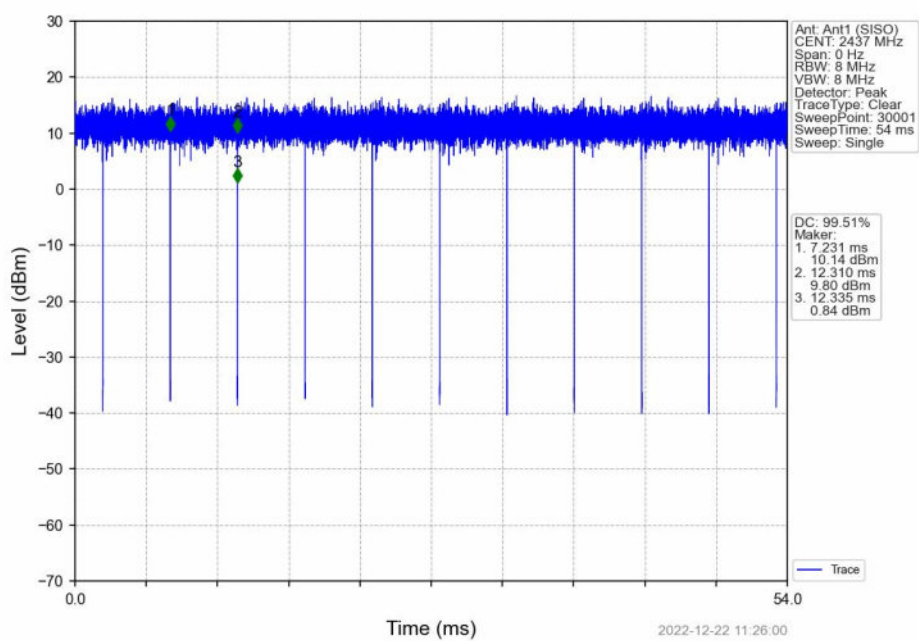
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



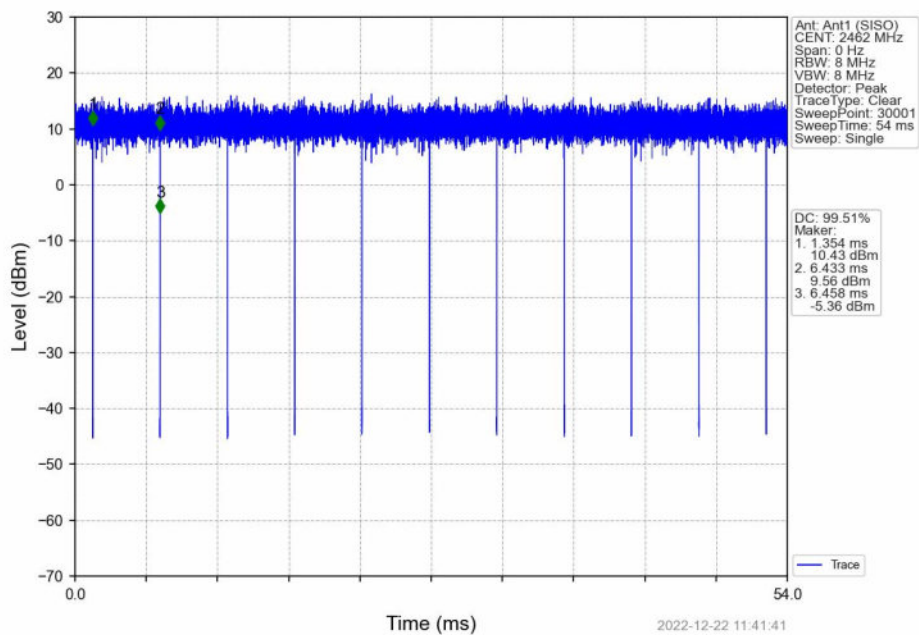
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



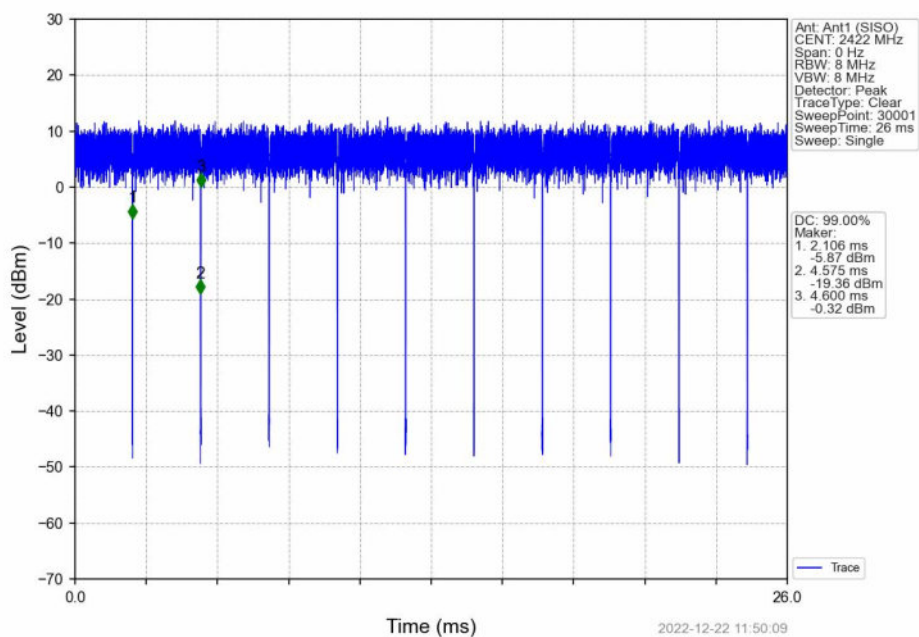
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



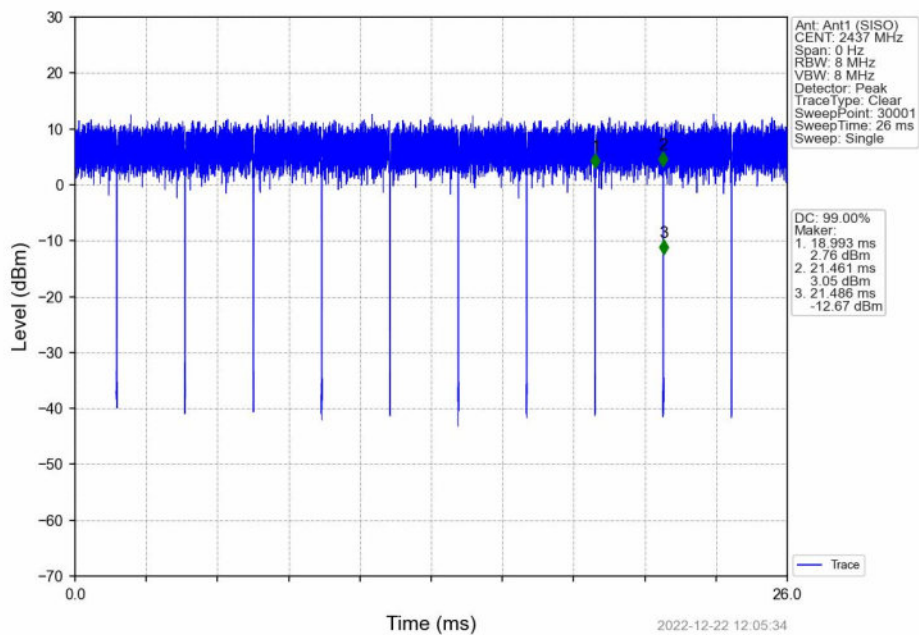
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



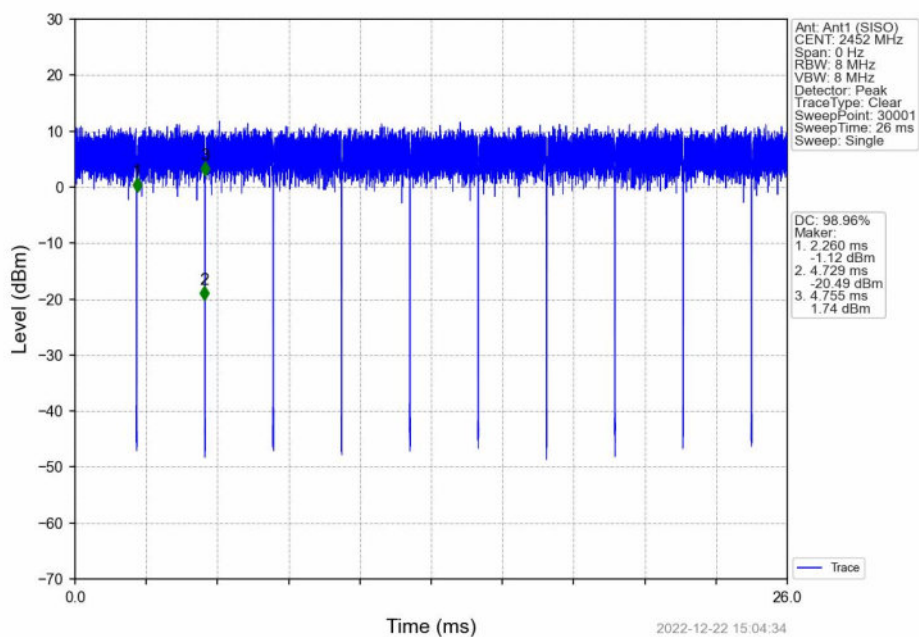
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



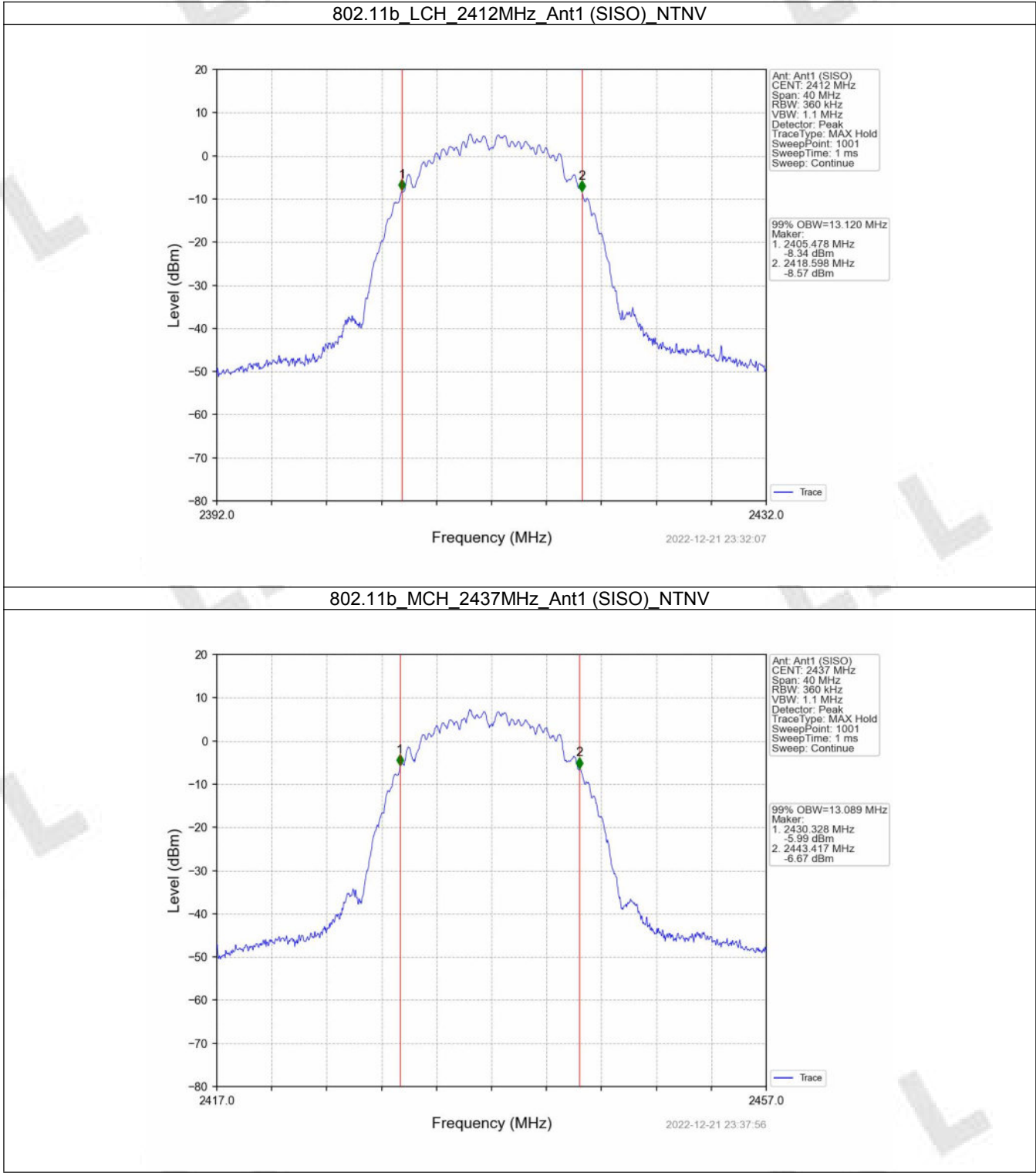
2. Bandwidth

2.1 OBW

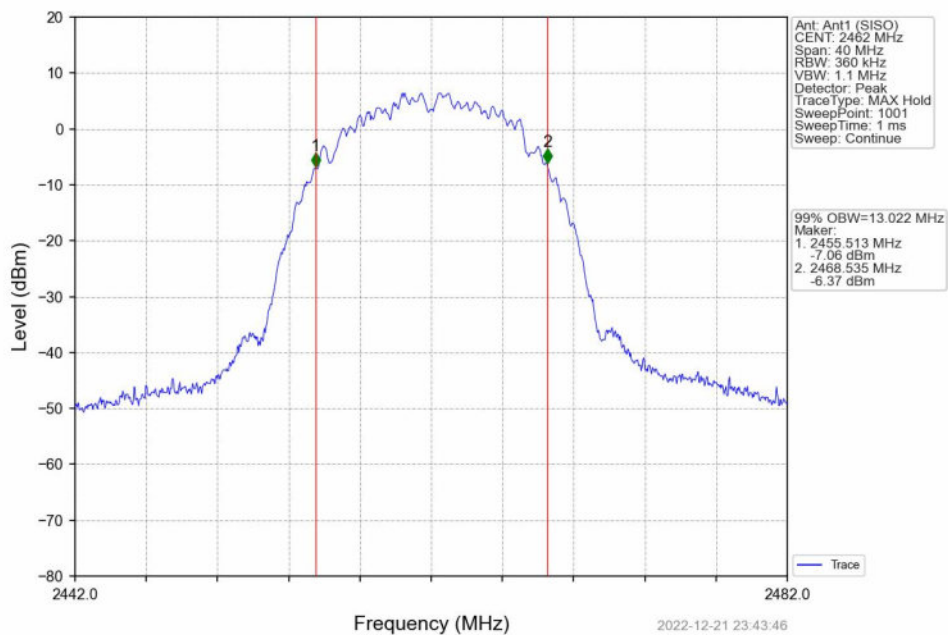
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	13.120	Pass
		2437	1	13.089	Pass
		2462	1	13.022	Pass
802.11g	SISO	2412	1	18.279	Pass
		2437	1	18.261	Pass
		2462	1	18.106	Pass
802.11n (HT20)	SISO	2412	1	18.938	Pass
		2437	1	18.963	Pass
		2462	1	18.843	Pass
802.11n (HT40)	SISO	2422	1	34.496	Pass
		2437	1	34.765	Pass
		2452	1	34.847	Pass

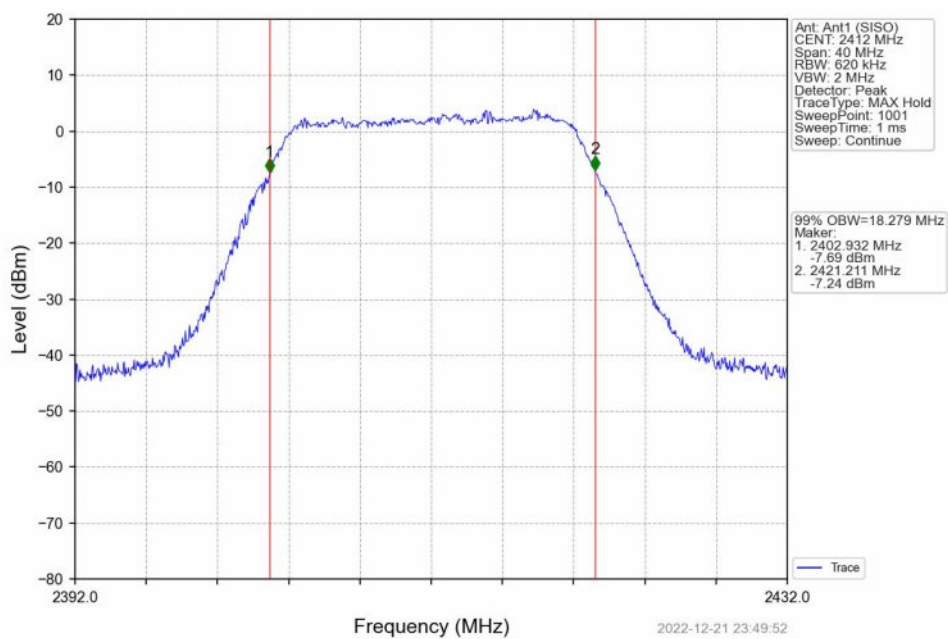
2.1.2 Test Graph



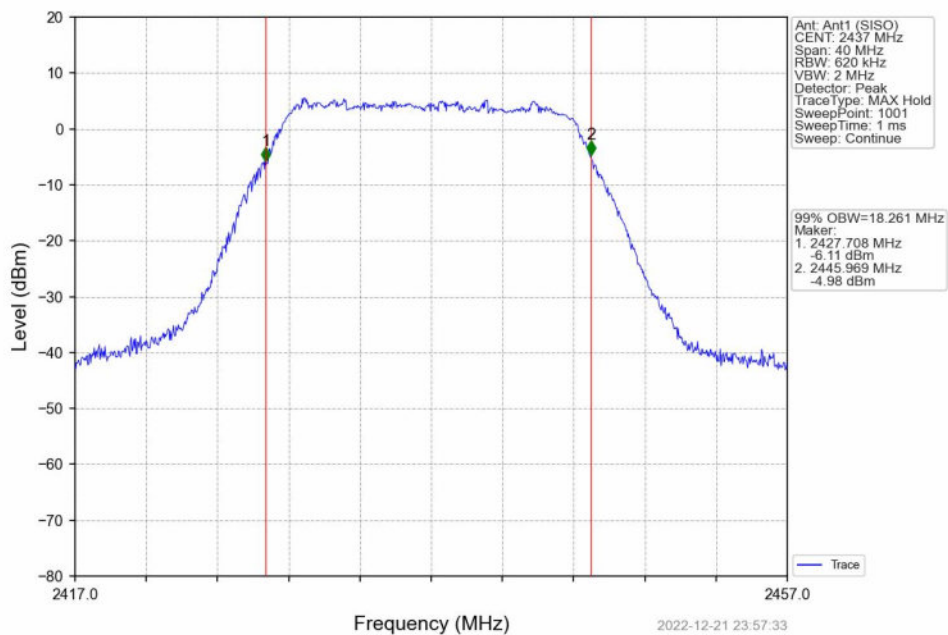
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



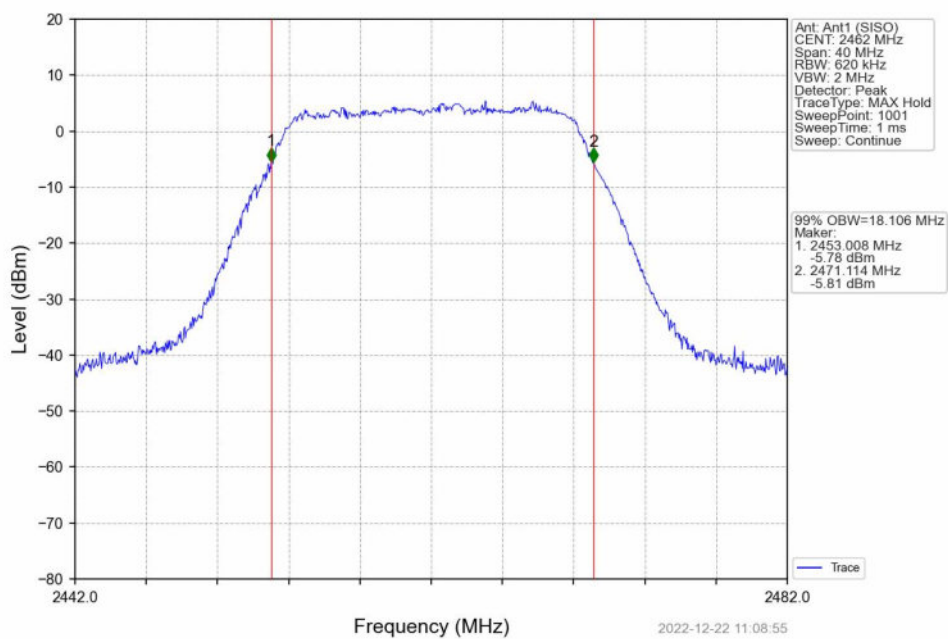
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



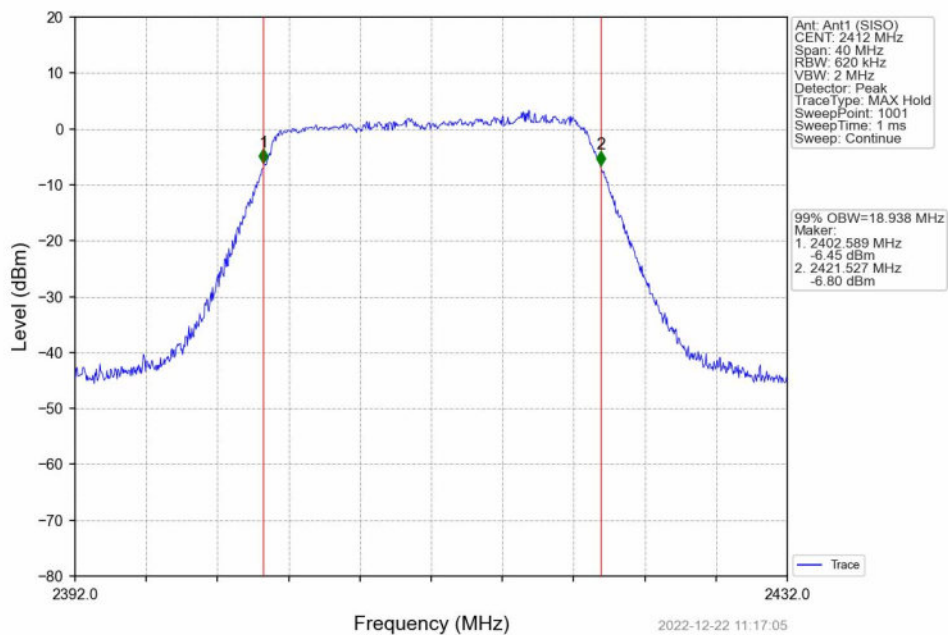
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



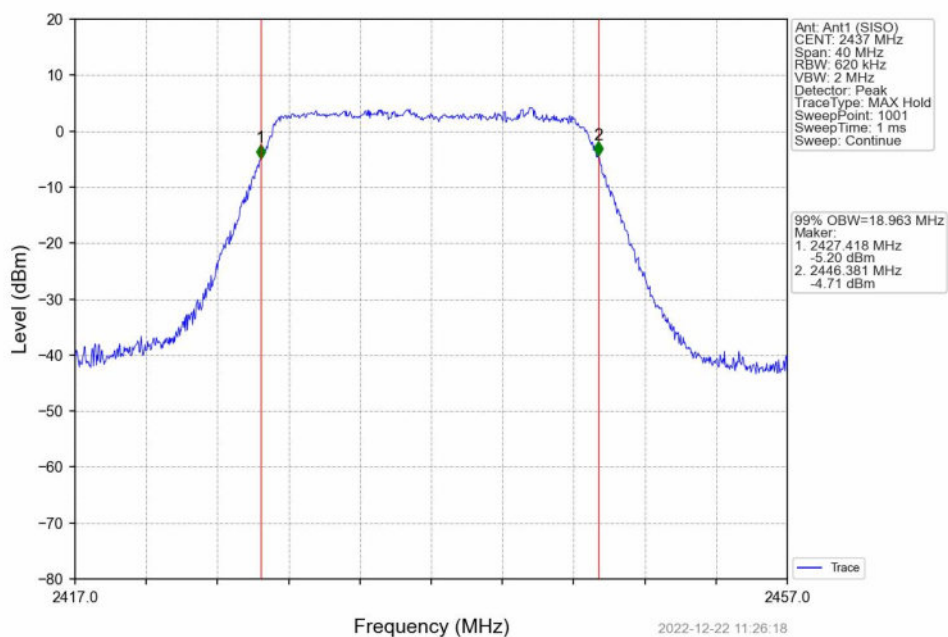
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



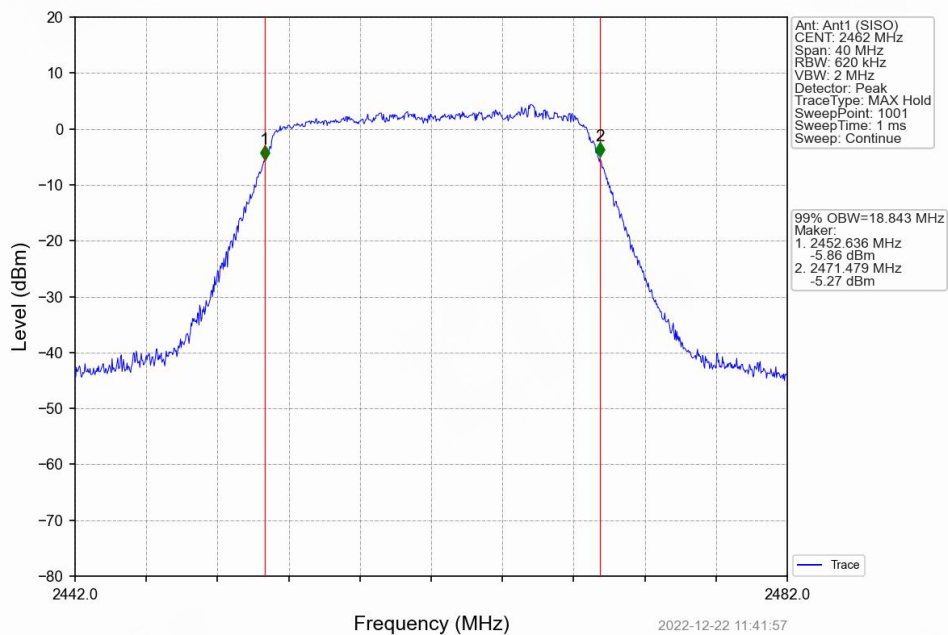
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



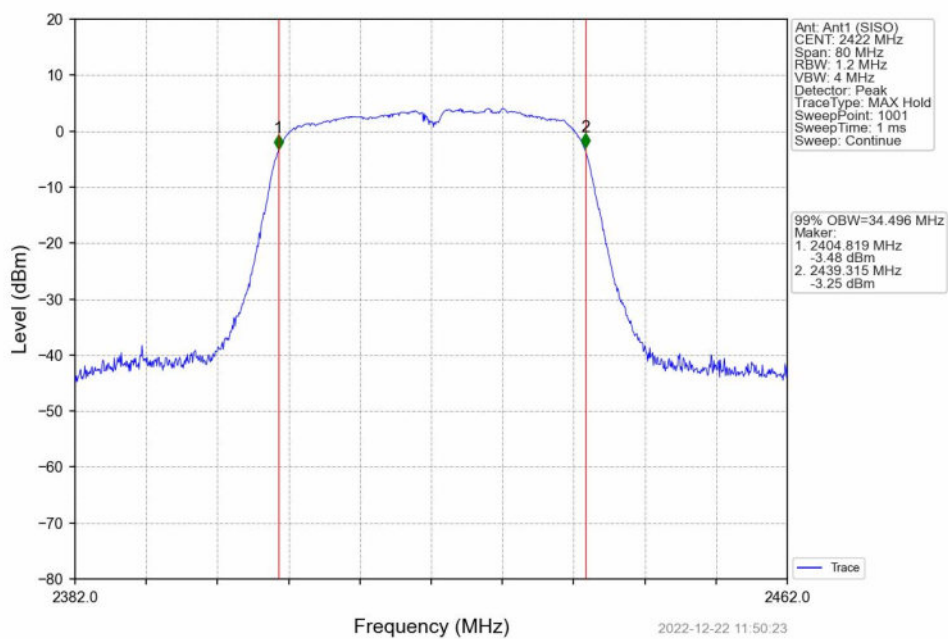
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



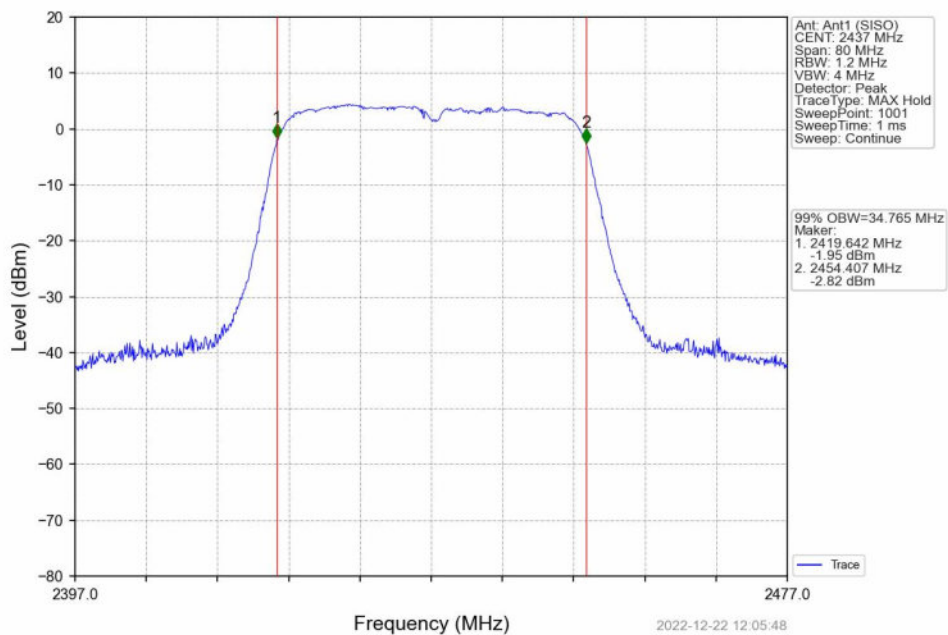
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



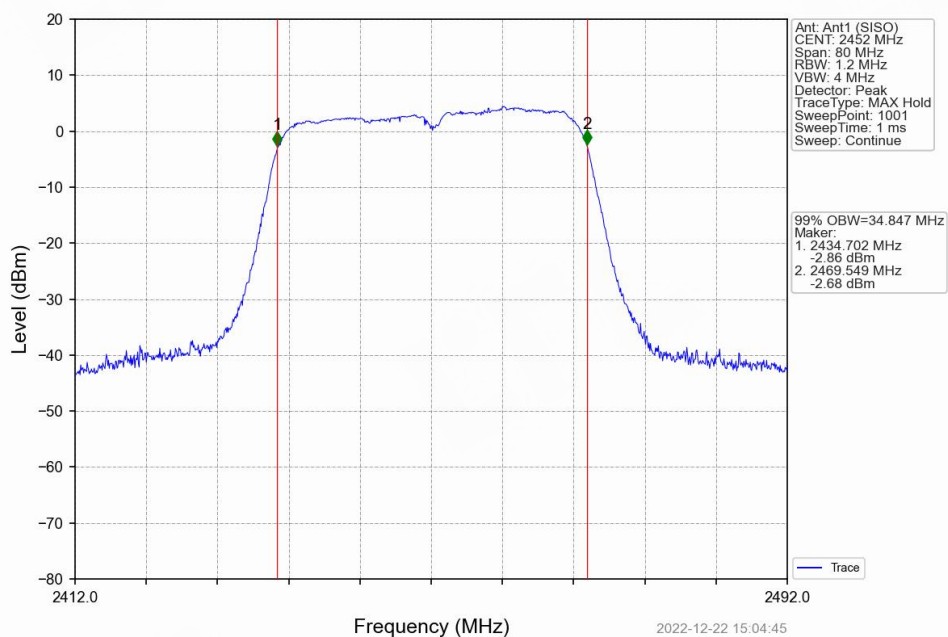
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

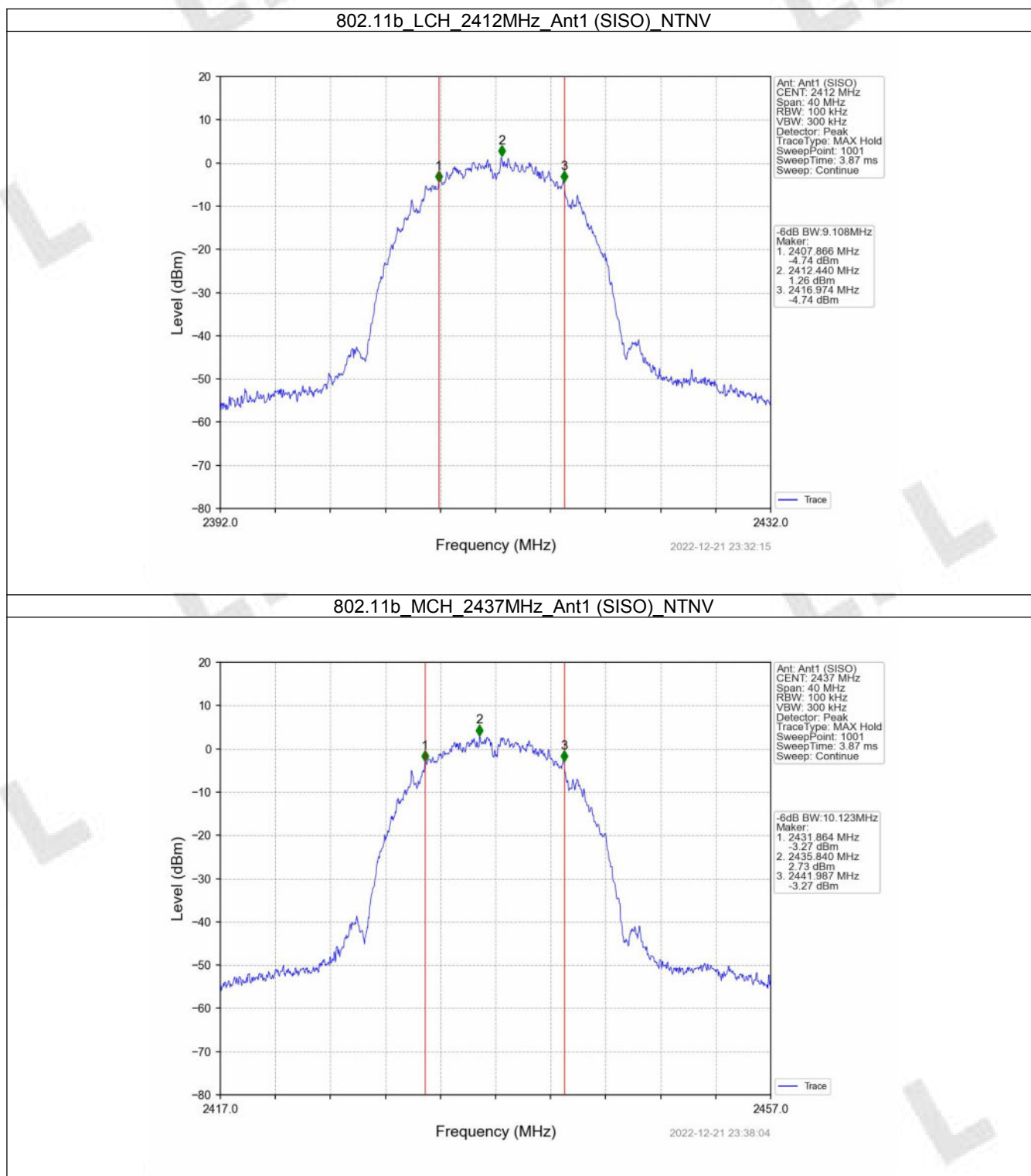


2.2 6dB BW

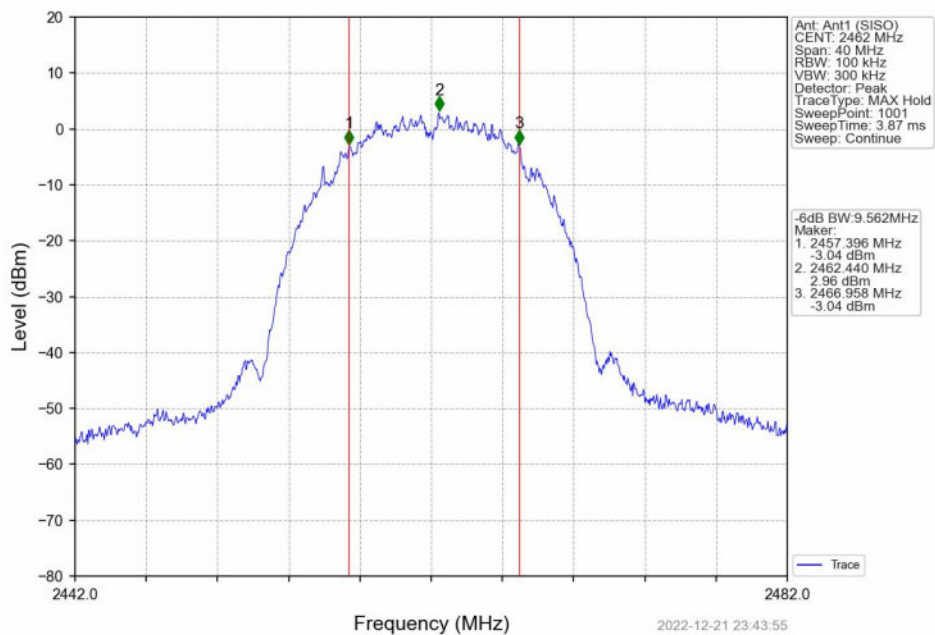
2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.108	≥ 0.5	Pass
		2437	1	10.123	≥ 0.5	Pass
		2462	1	9.562	≥ 0.5	Pass
802.11g	SISO	2412	1	16.405	≥ 0.5	Pass
		2437	1	16.431	≥ 0.5	Pass
		2462	1	16.412	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.641	≥ 0.5	Pass
		2437	1	17.646	≥ 0.5	Pass
		2462	1	17.594	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	32.666	≥ 0.5	Pass
		2437	1	32.650	≥ 0.5	Pass
		2452	1	32.702	≥ 0.5	Pass

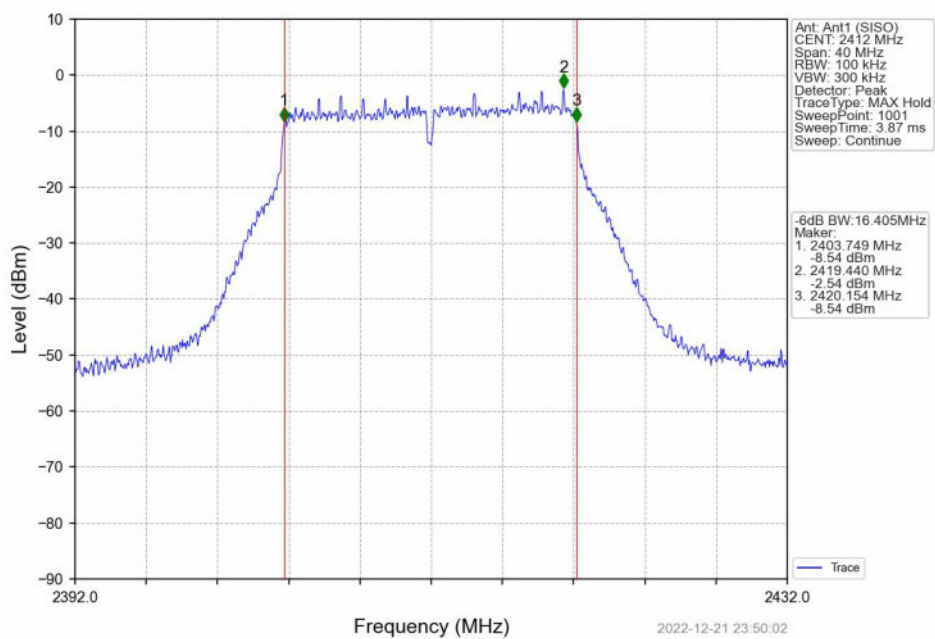
2.2.2 Test Graph



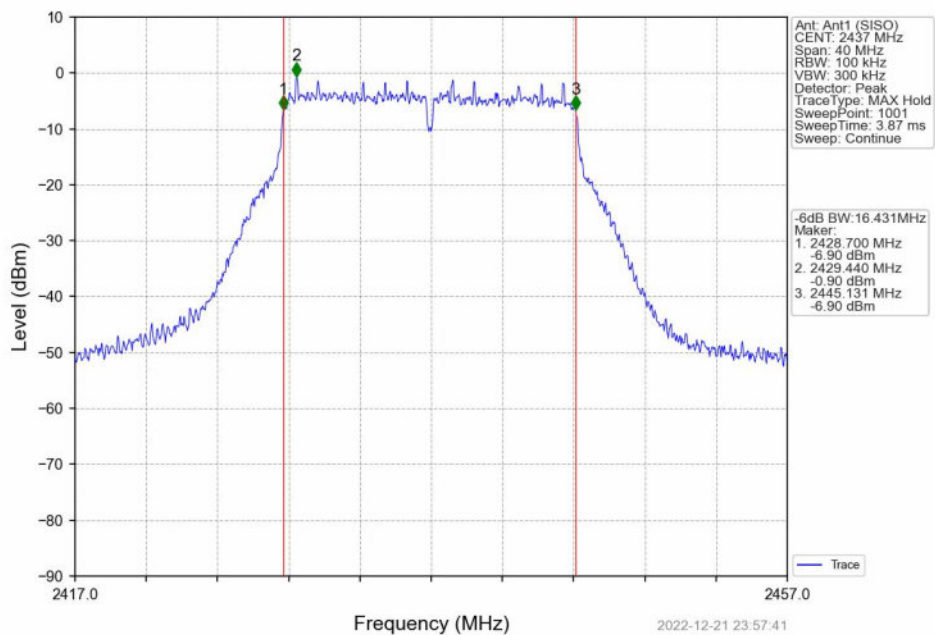
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



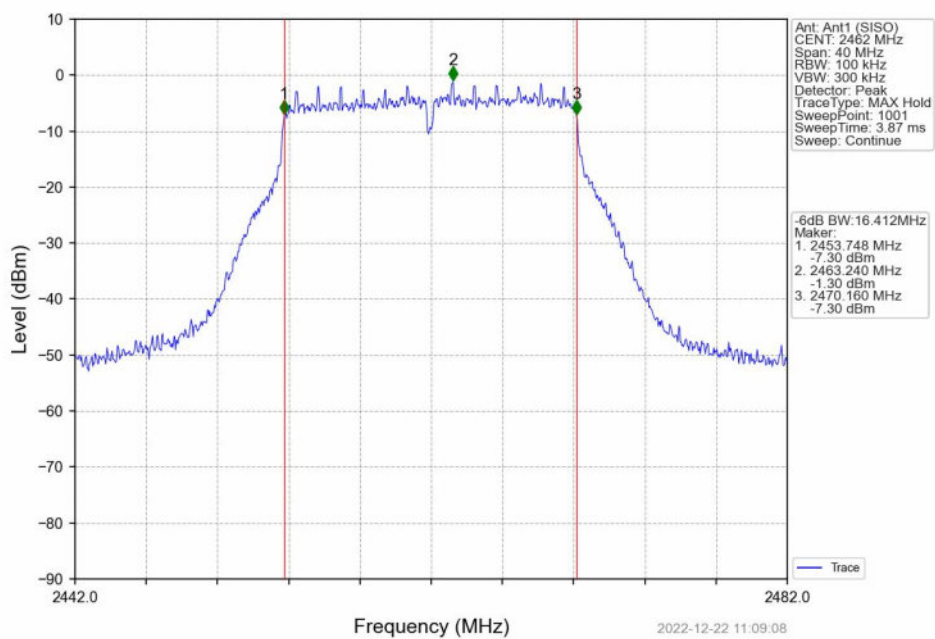
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



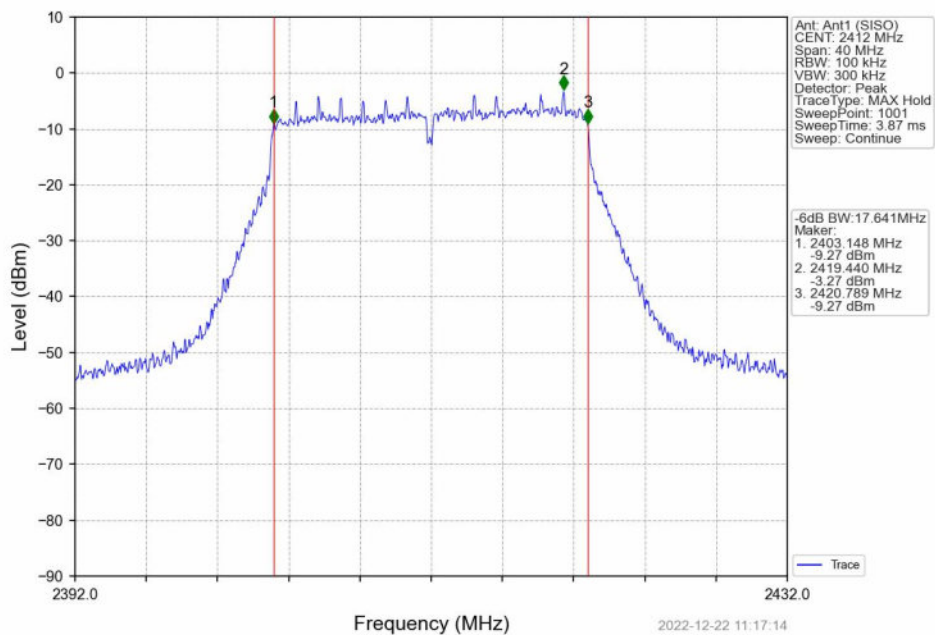
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



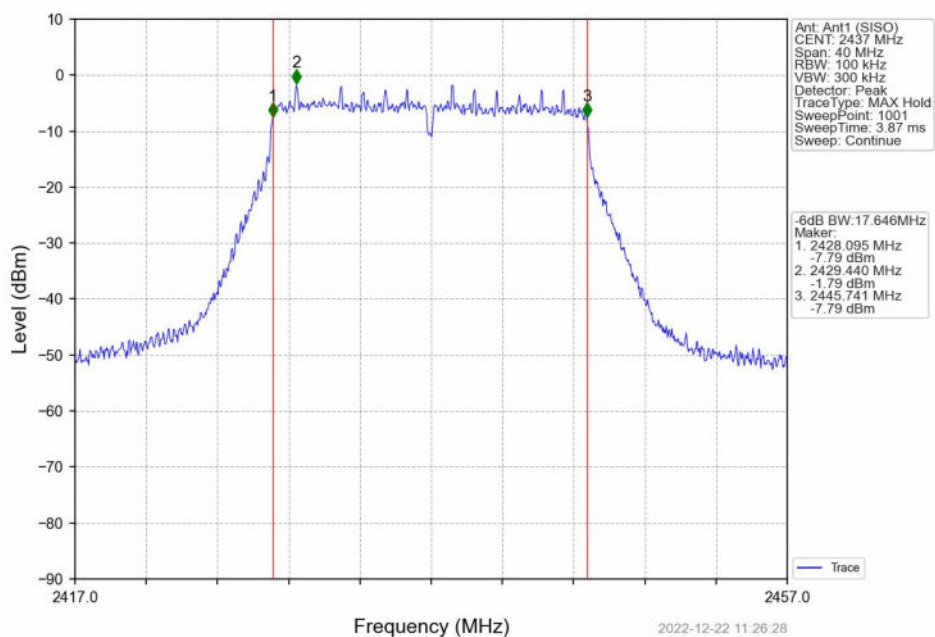
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



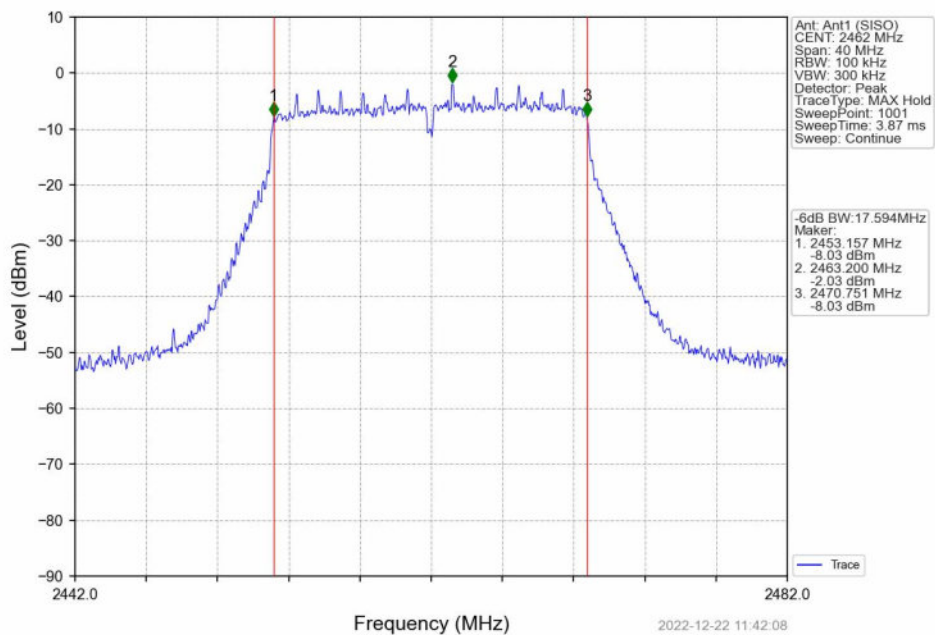
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



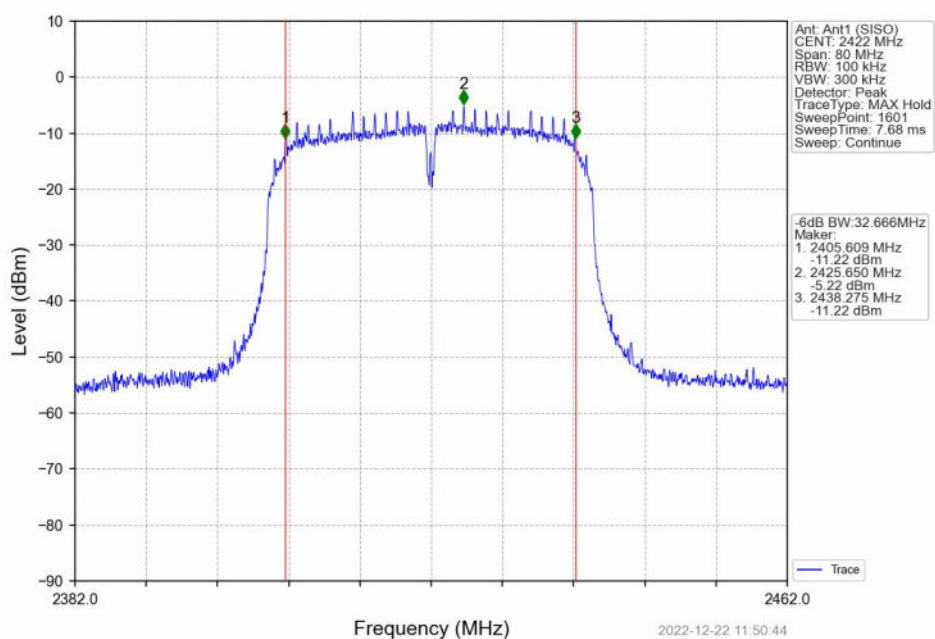
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



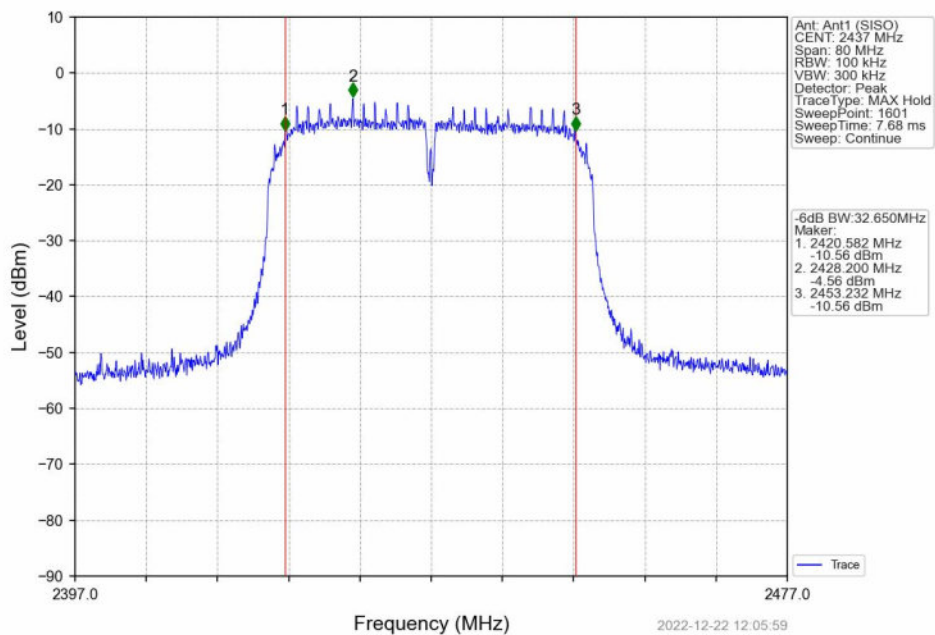
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



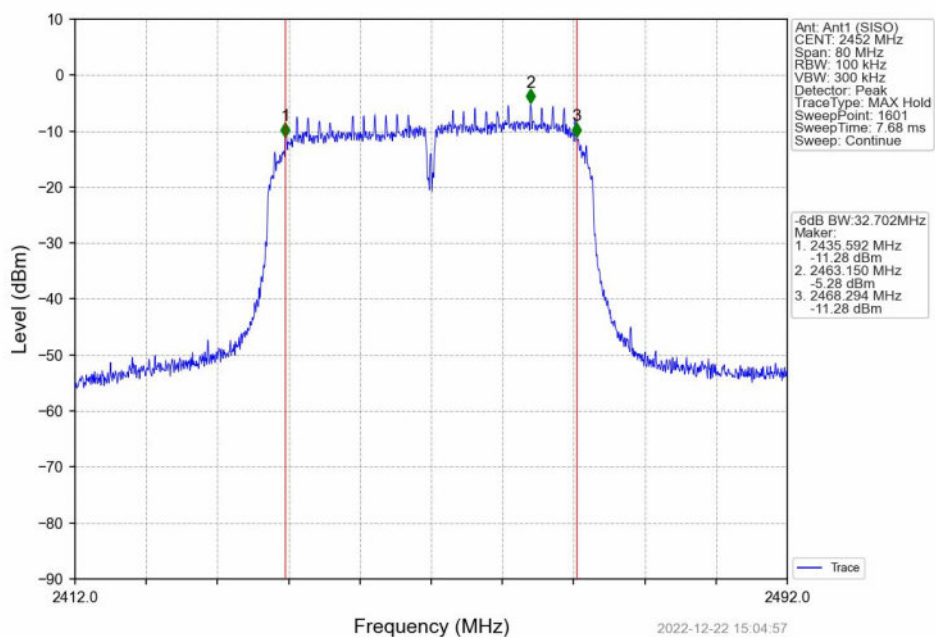
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



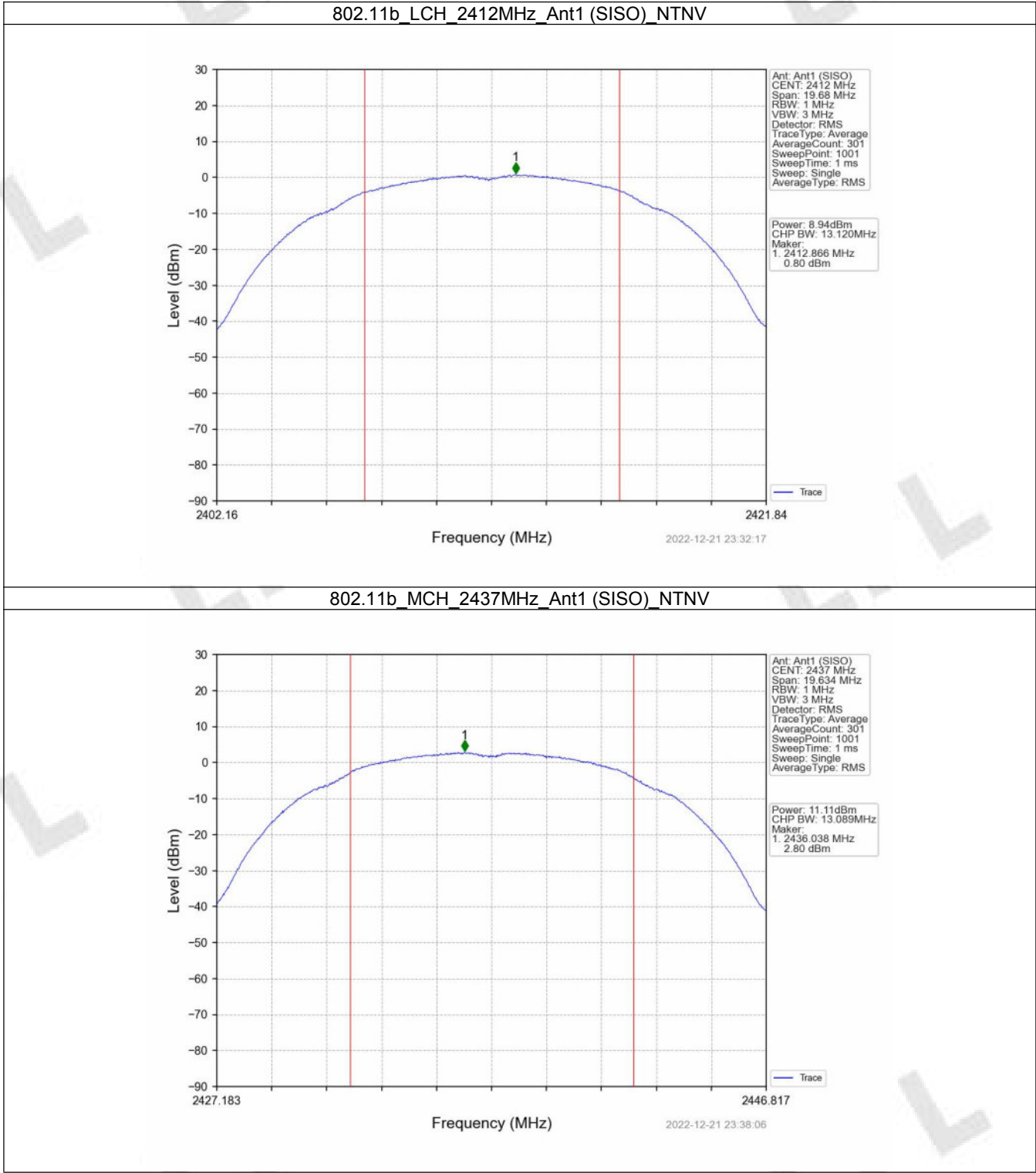
3. Maximum Conducted Output Power

3.1 Power

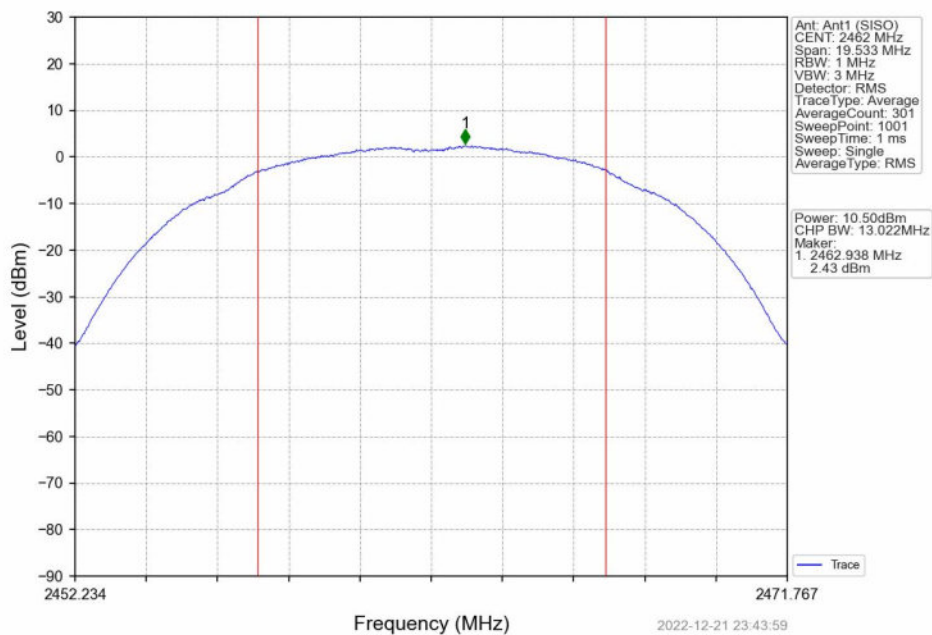
3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	8.94	<=30	Pass
		2437	11.11	<=30	Pass
		2462	10.50	<=30	Pass
802.11g	SISO	2412	8.46	<=30	Pass
		2437	10.52	<=30	Pass
		2462	10.35	<=30	Pass
802.11n (HT20)	SISO	2412	7.85	<=30	Pass
		2437	9.63	<=30	Pass
		2462	8.99	<=30	Pass
802.11n (HT40)	SISO	2422	7.94	<=30	Pass
		2437	8.72	<=30	Pass
		2452	8.14	<=30	Pass
Note1: Antenna Gain: Ant1: 1.76dBi;					

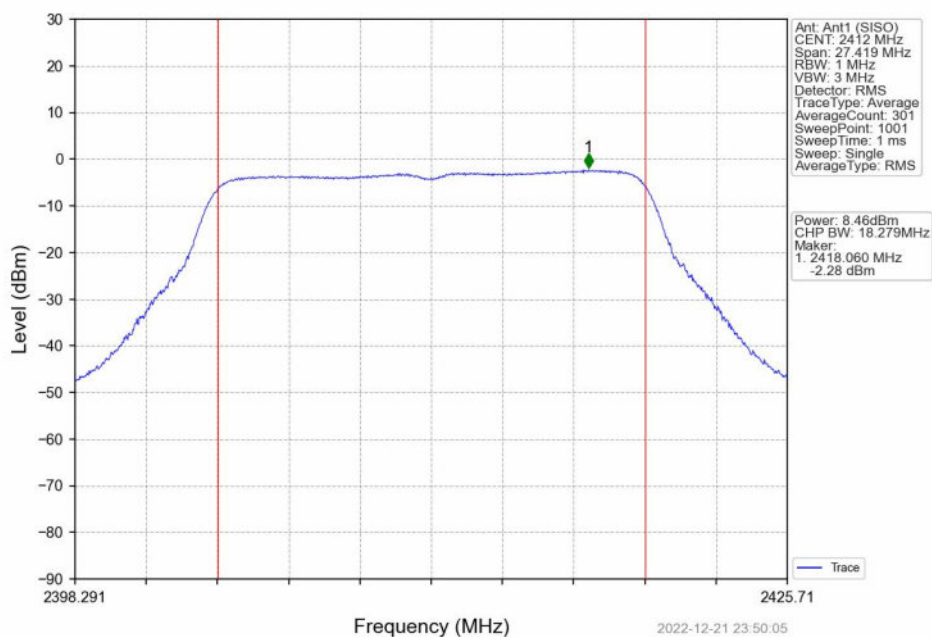
3.1.2 Test Graph



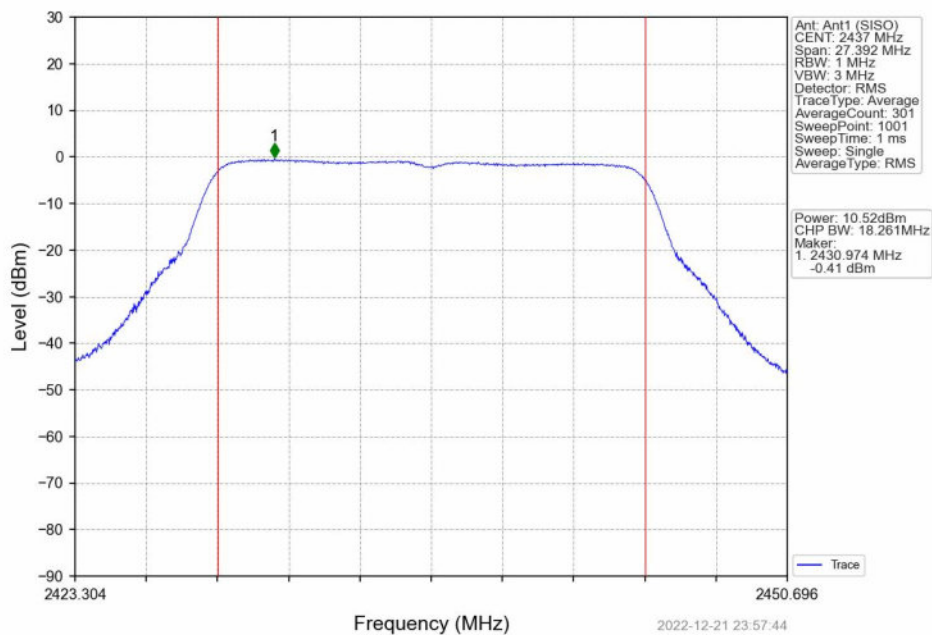
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



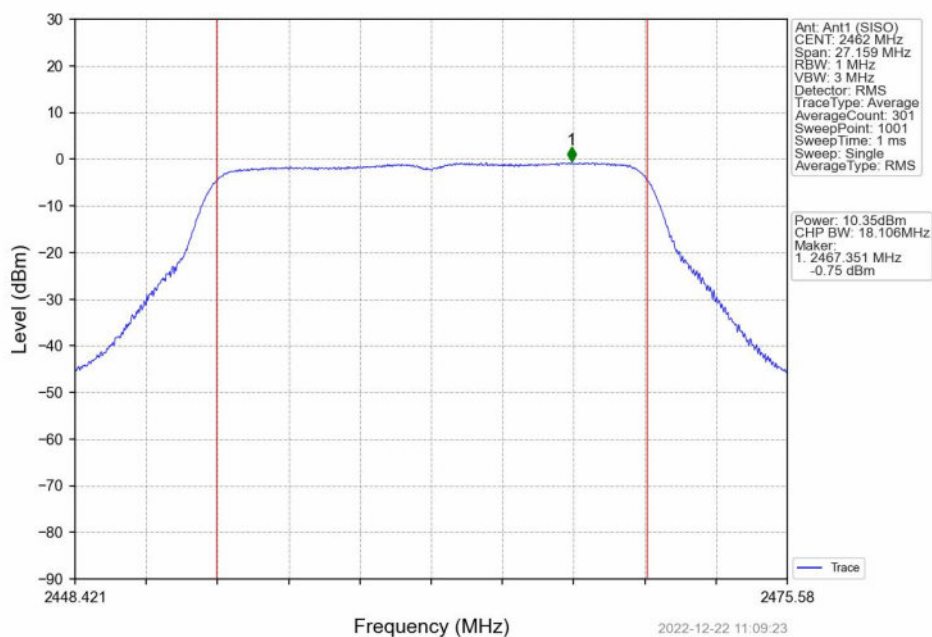
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



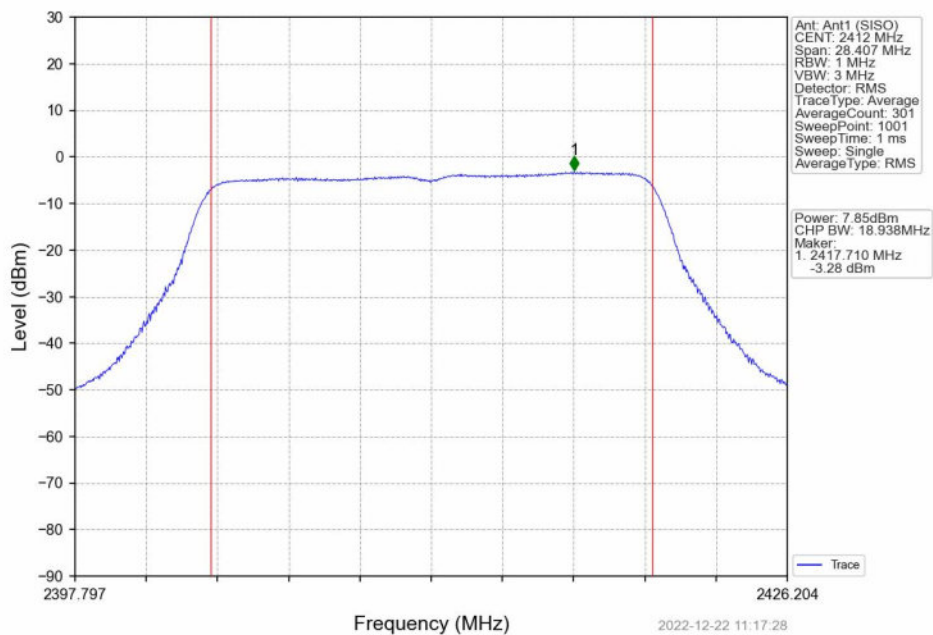
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



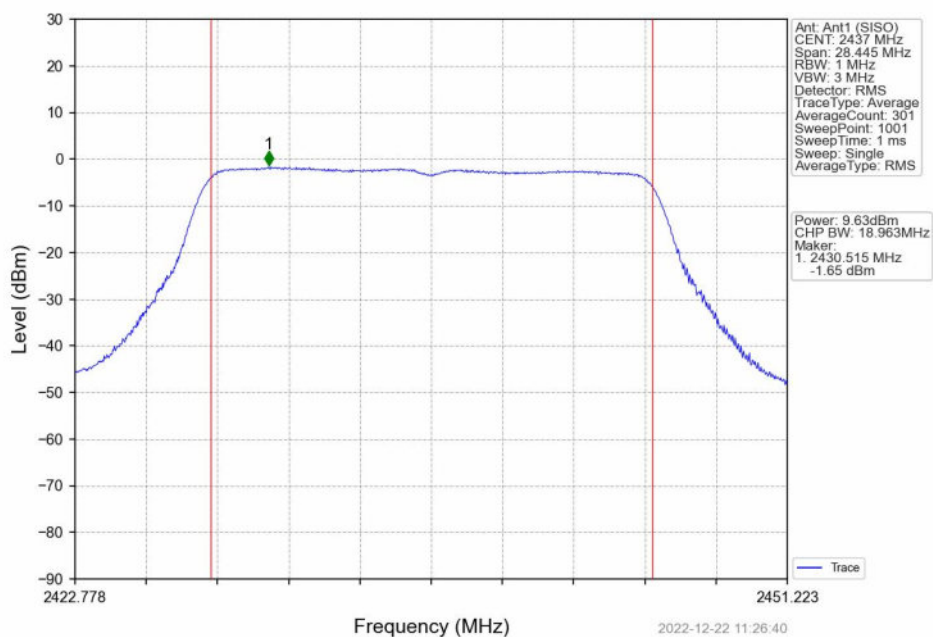
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



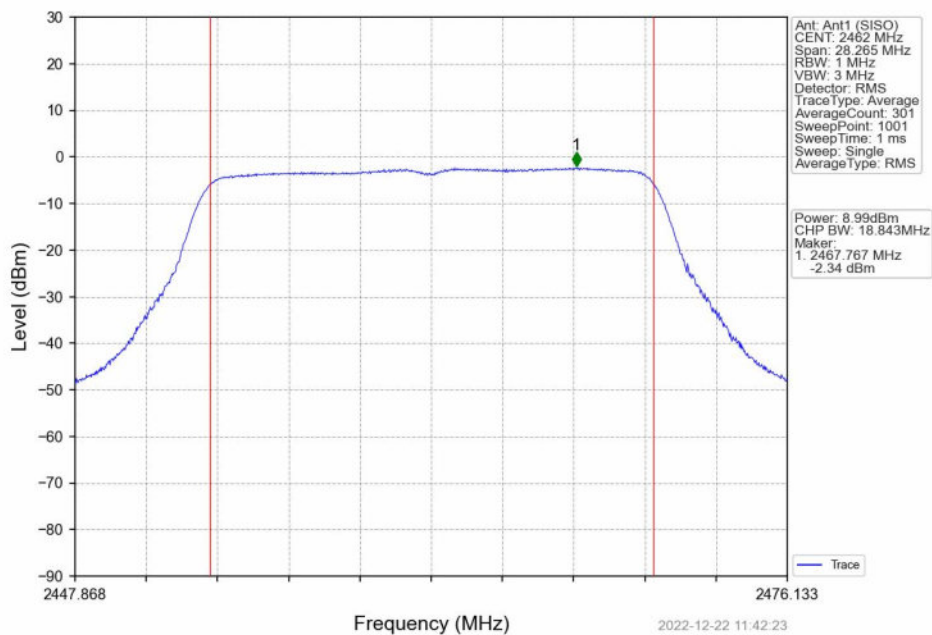
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



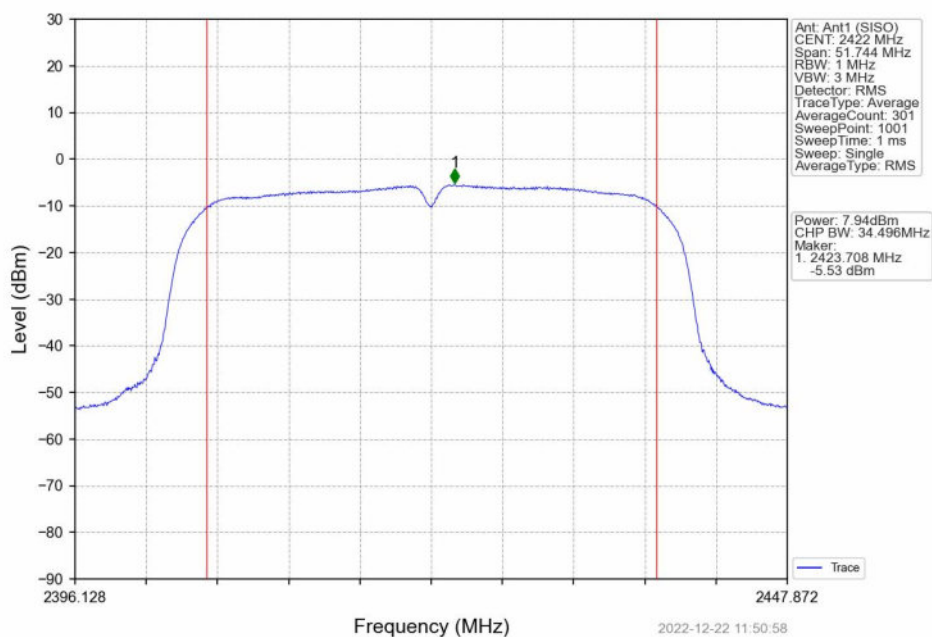
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



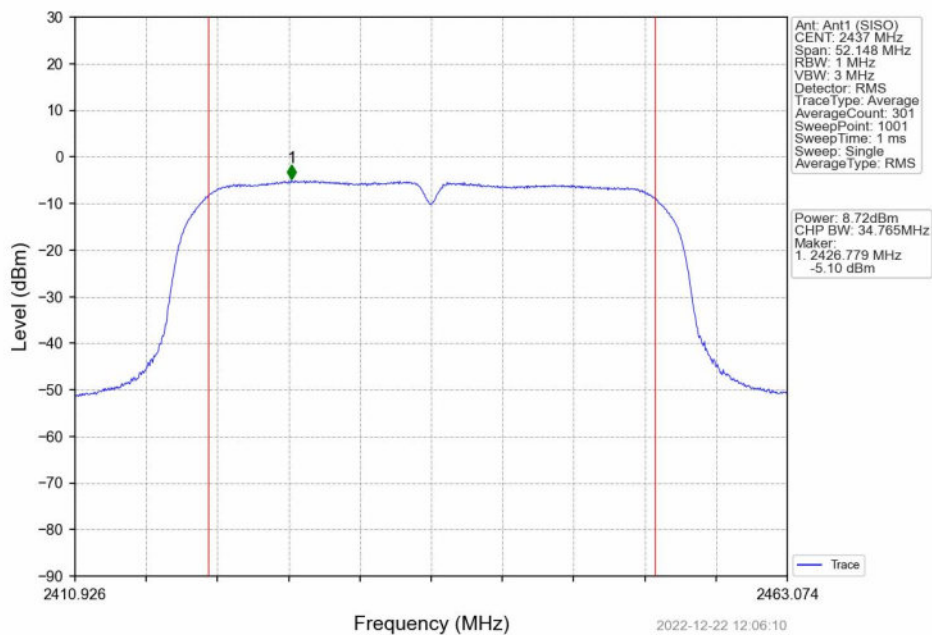
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



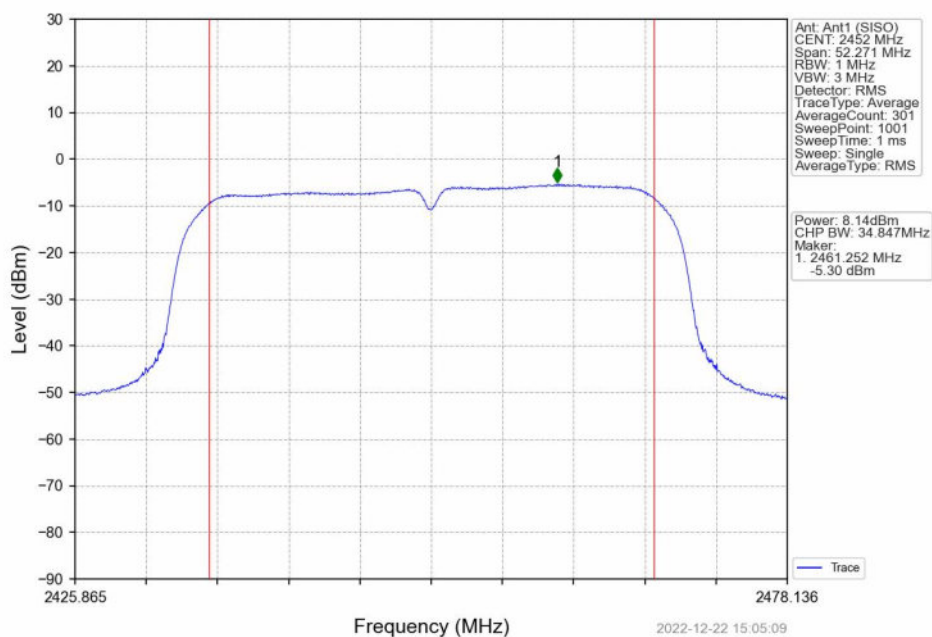
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



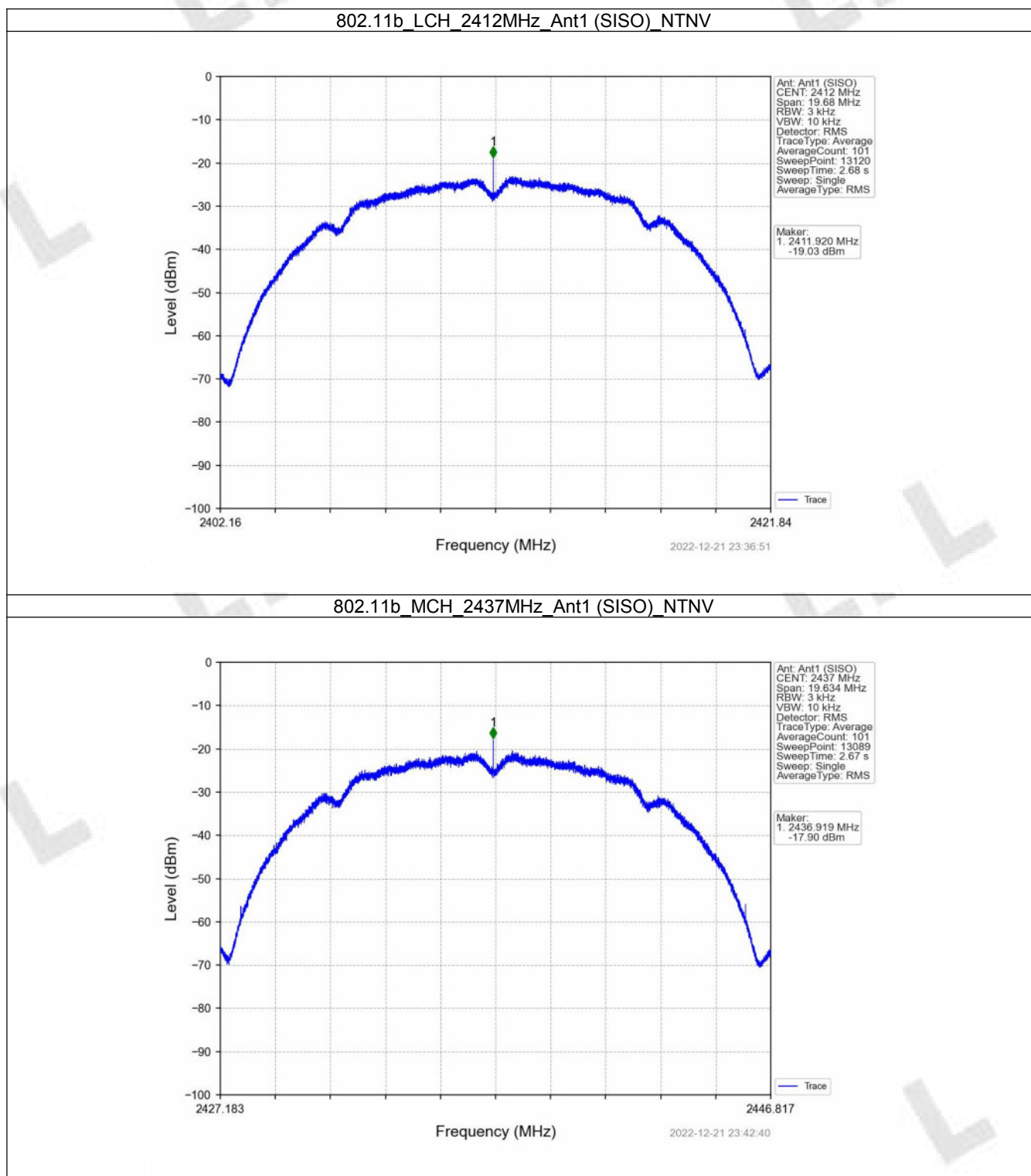
4. Maximum Power Spectral Density

4.1 PSD

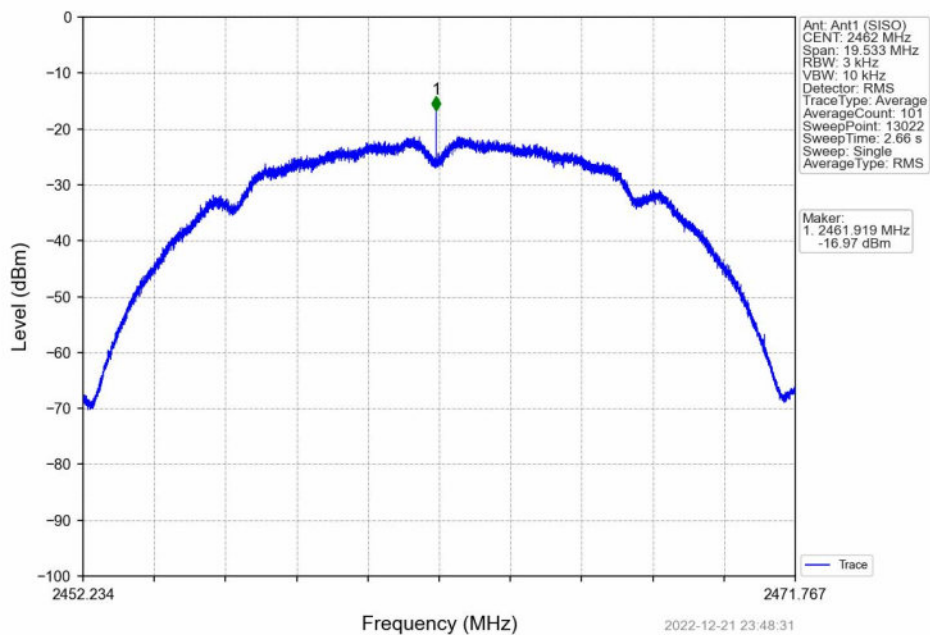
4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-19.03	<=8	Pass
		2437	-17.90	<=8	Pass
		2462	-16.97	<=8	Pass
802.11g	SISO	2412	-21.33	<=8	Pass
		2437	-20.04	<=8	Pass
		2462	-18.70	<=8	Pass
802.11n (HT20)	SISO	2412	-21.07	<=8	Pass
		2437	-19.86	<=8	Pass
		2462	-18.94	<=8	Pass
802.11n (HT40)	SISO	2422	-20.48	<=8	Pass
		2437	-20.85	<=8	Pass
		2452	-20.69	<=8	Pass
Note1: Antenna Gain: Ant1: 1.76dBi;					

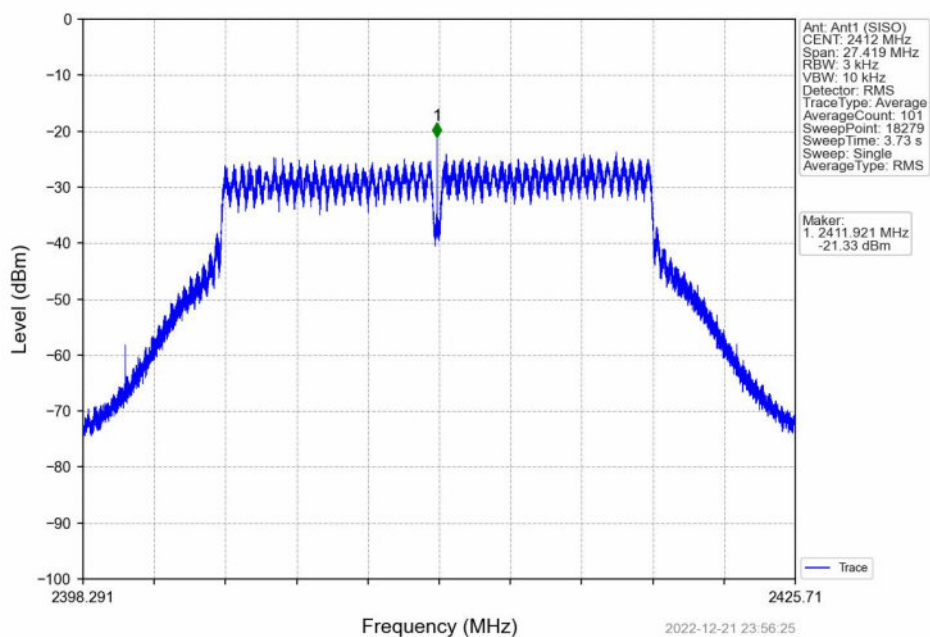
4.1.2 Test Graph



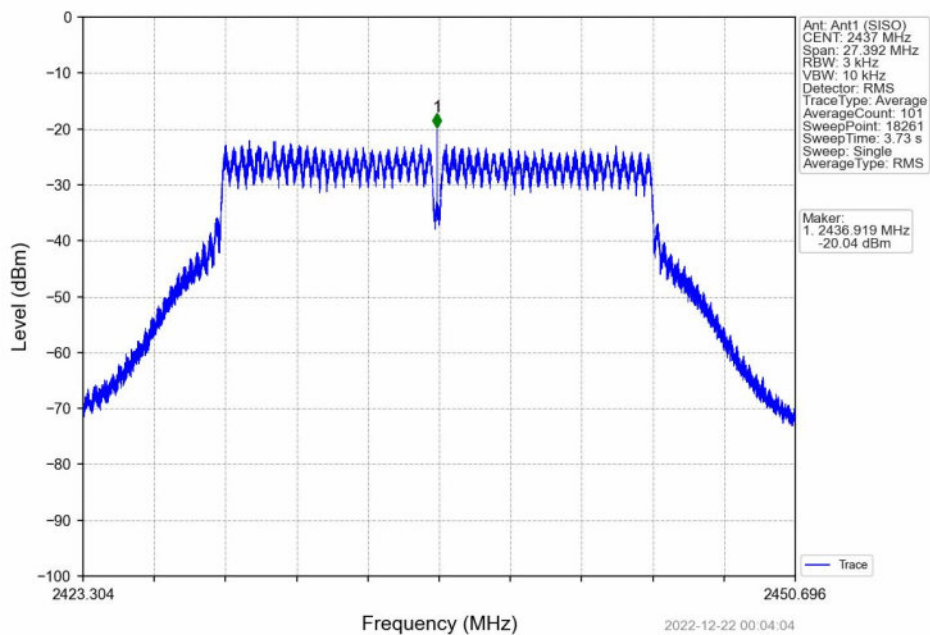
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



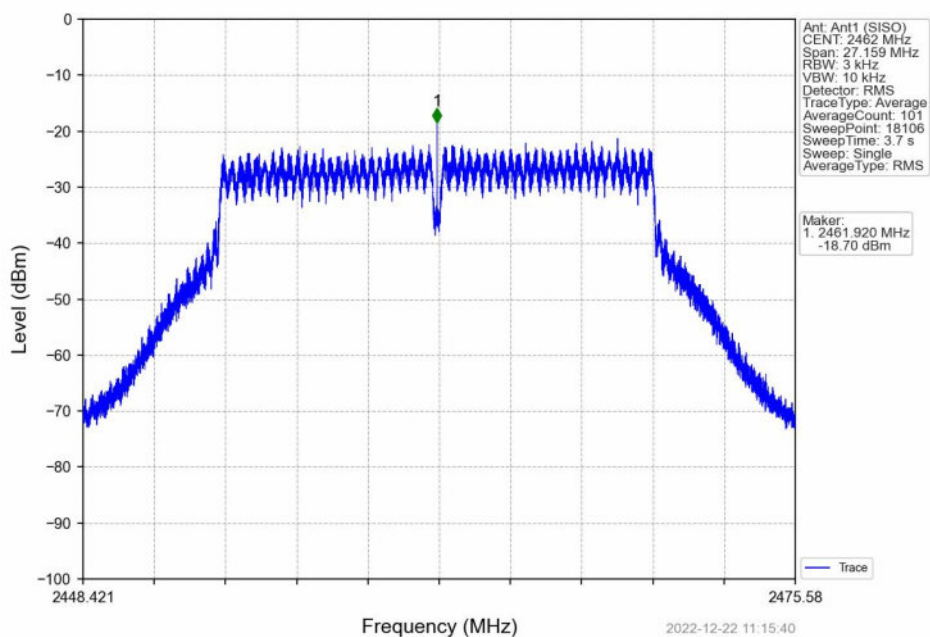
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



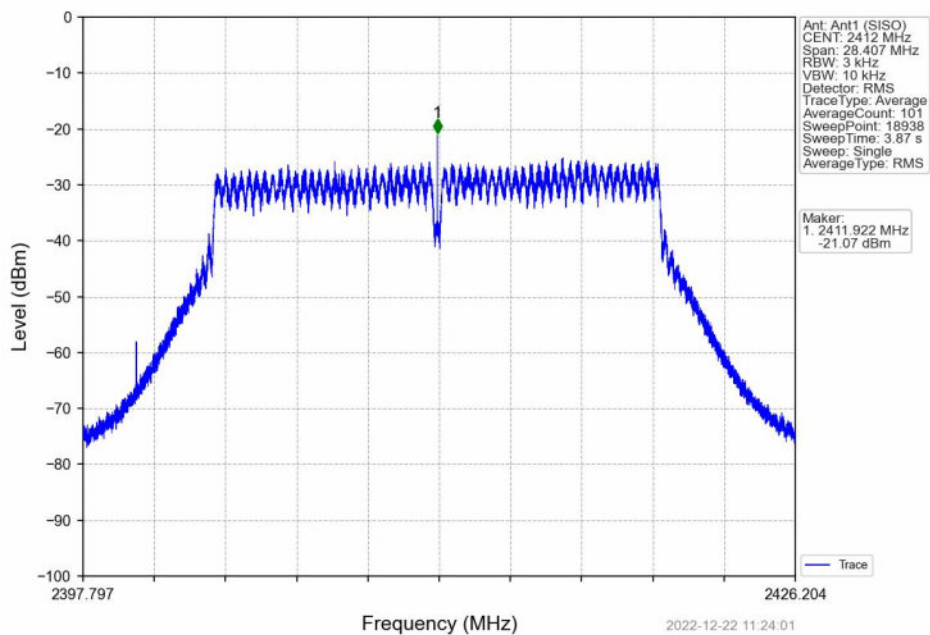
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



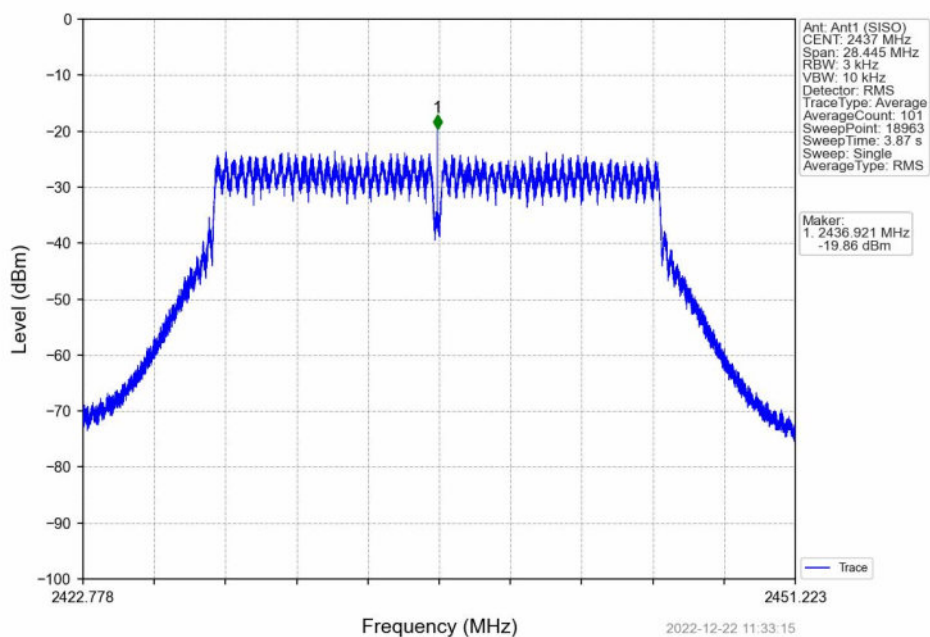
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



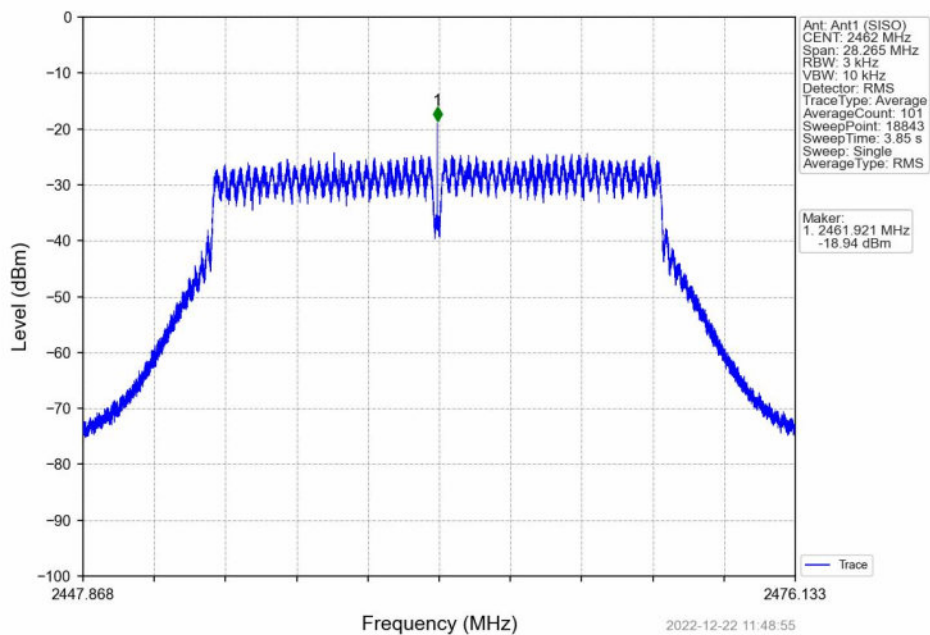
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



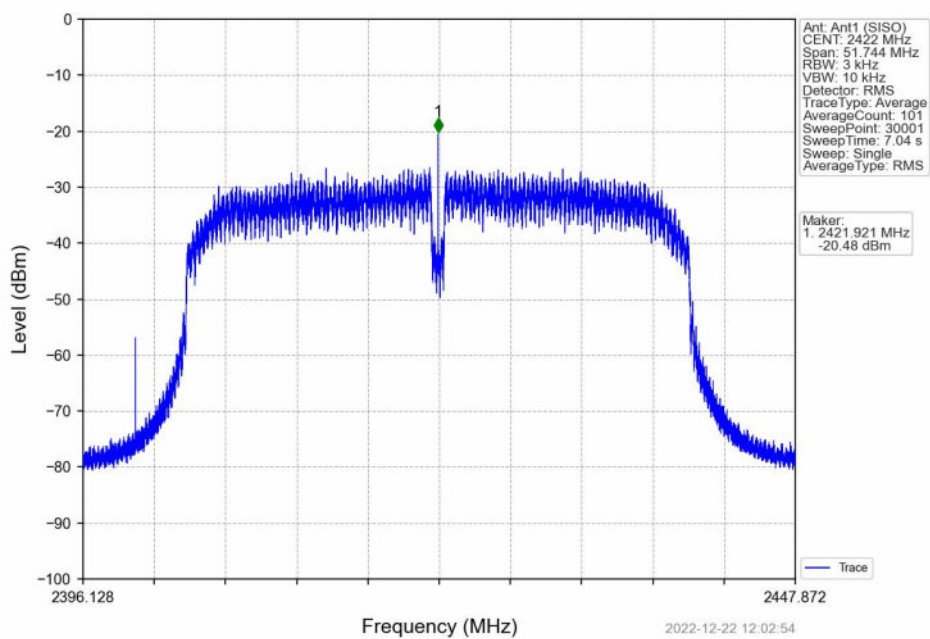
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



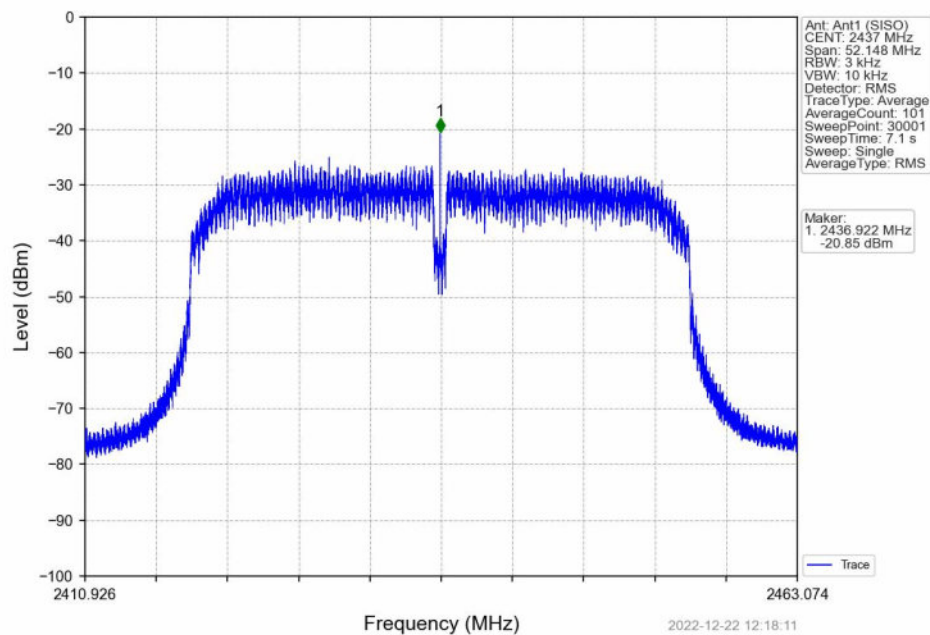
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



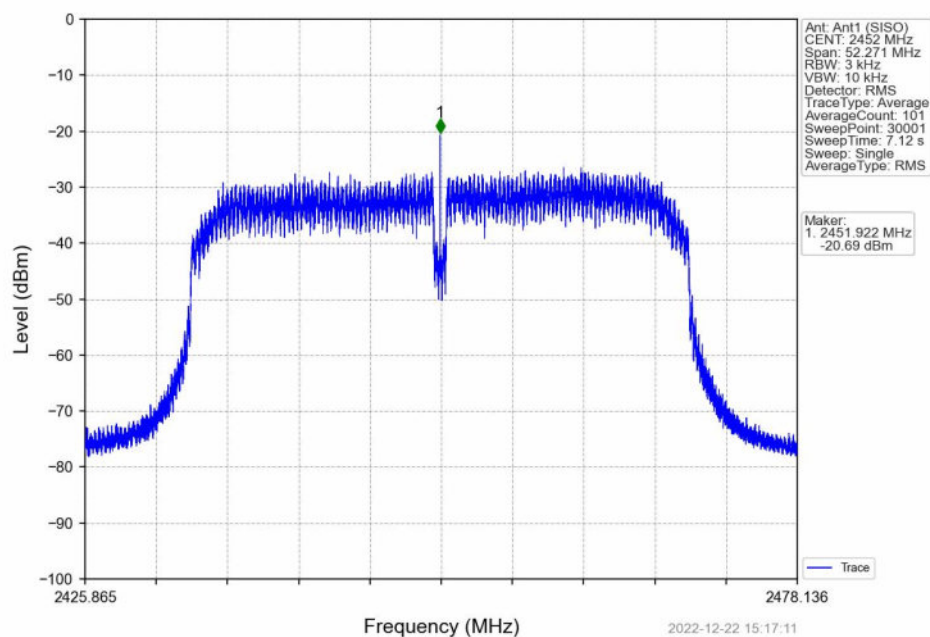
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

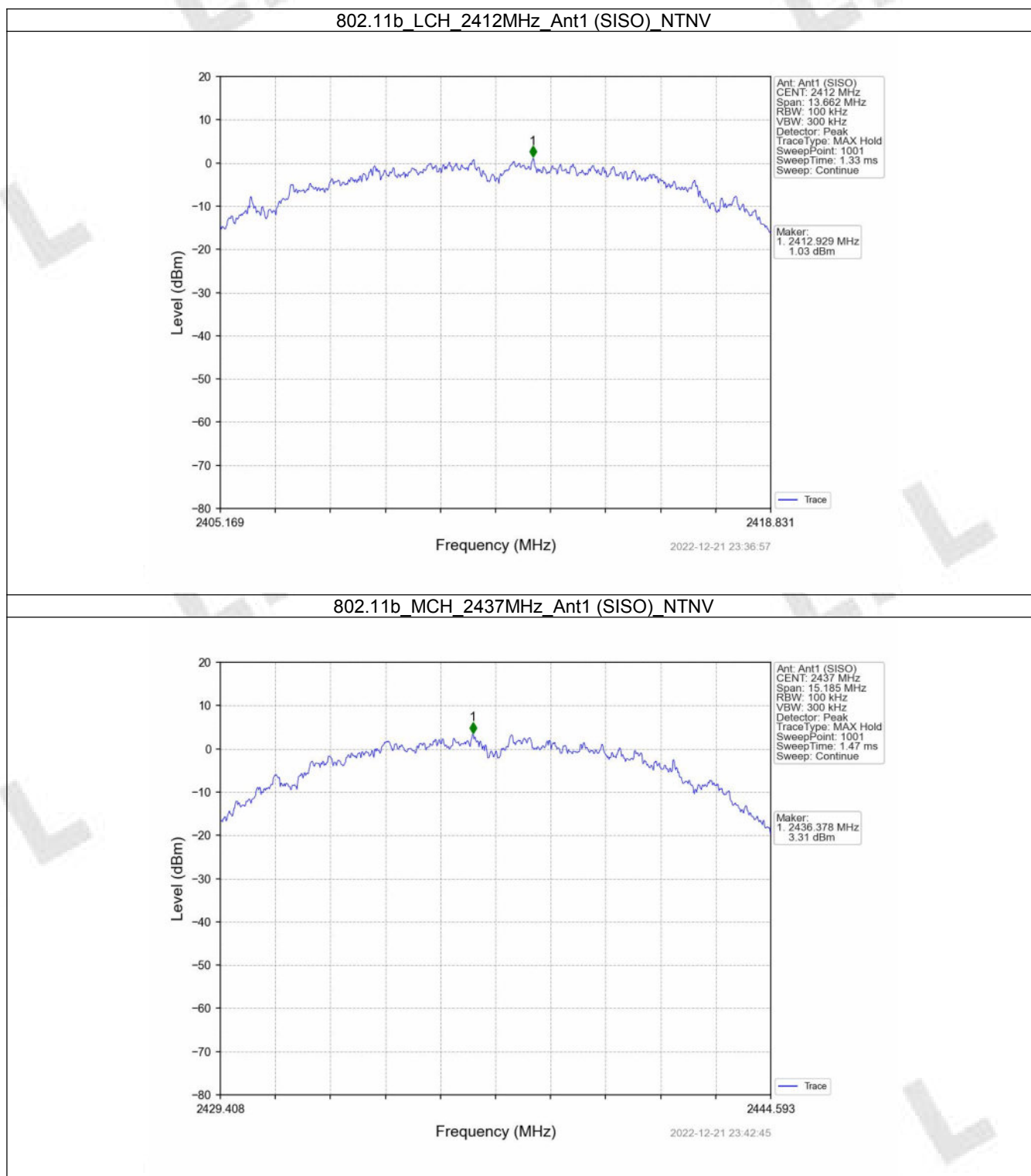
5.1 Ref

5.1.1 Test Result

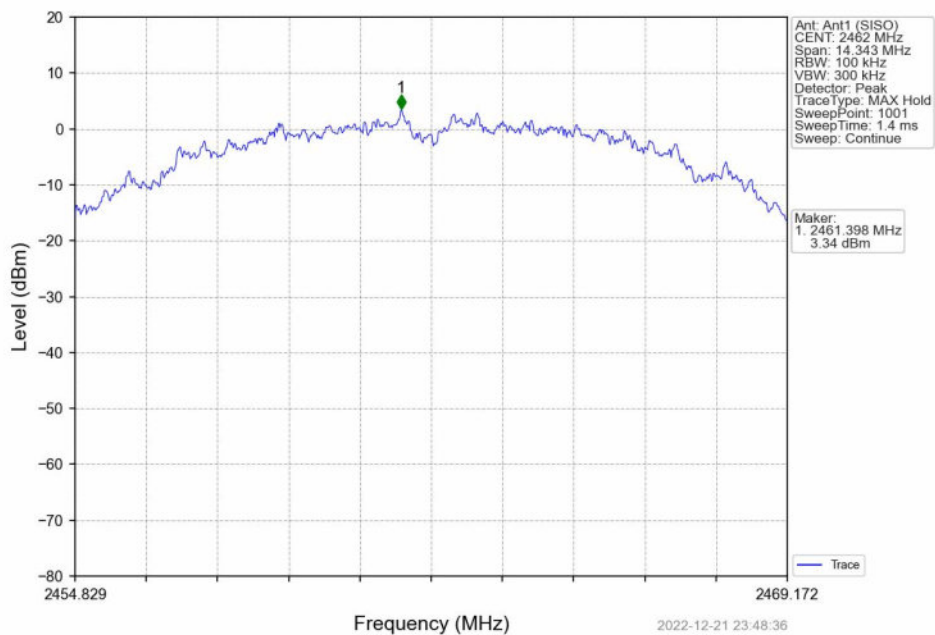
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	1.03
		2437	1	3.31
		2462	1	3.34
802.11g	SISO	2412	1	-2.69
		2437	1	-0.77
		2462	1	-1.39
802.11n (HT20)	SISO	2412	1	-3.24
		2437	1	-2.43
		2462	1	-2.11
802.11n (HT40)	SISO	2422	1	-5.46
		2437	1	-4.96
		2452	1	-5.64

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.

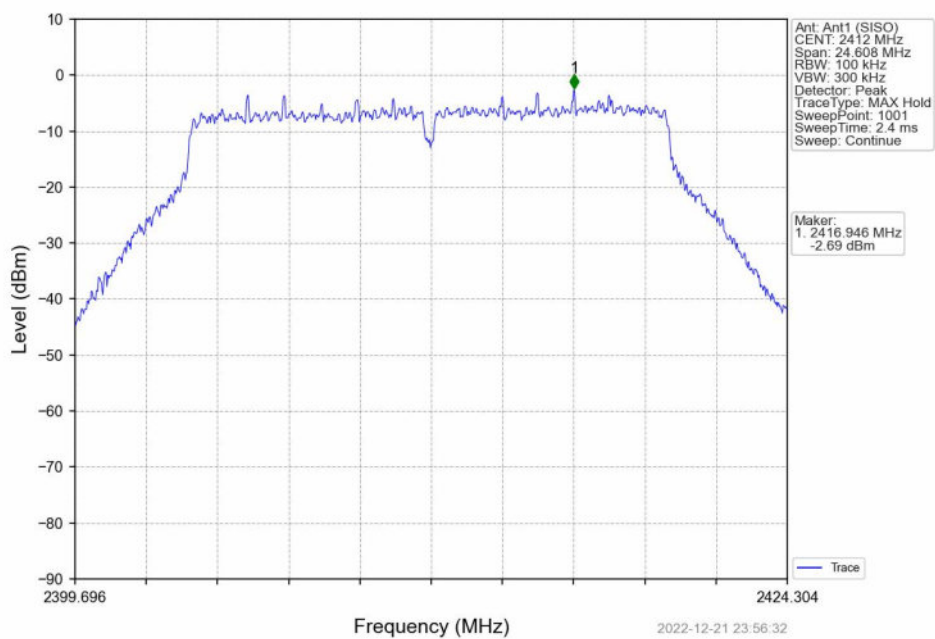
5.1.2 Test Graph



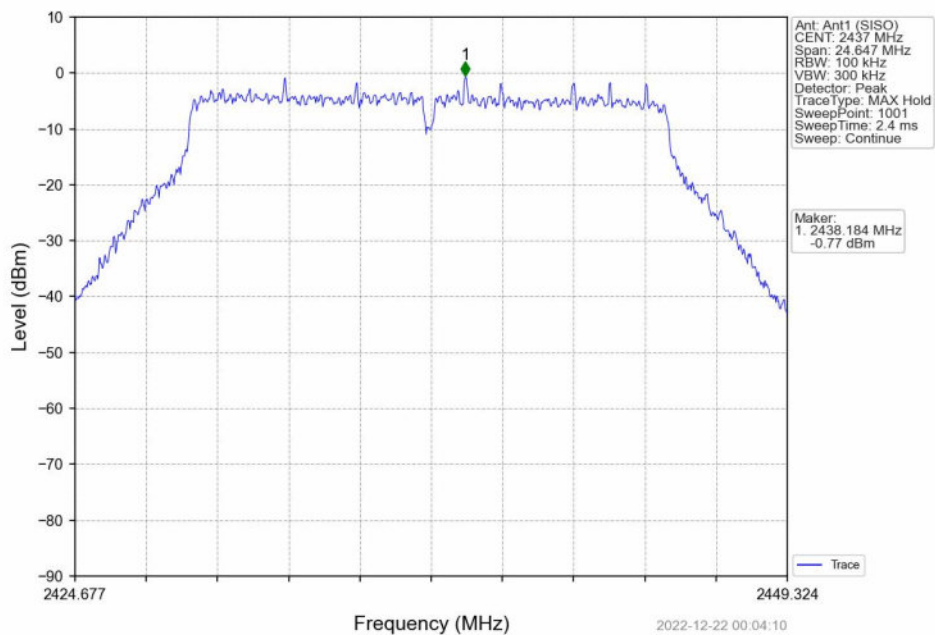
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



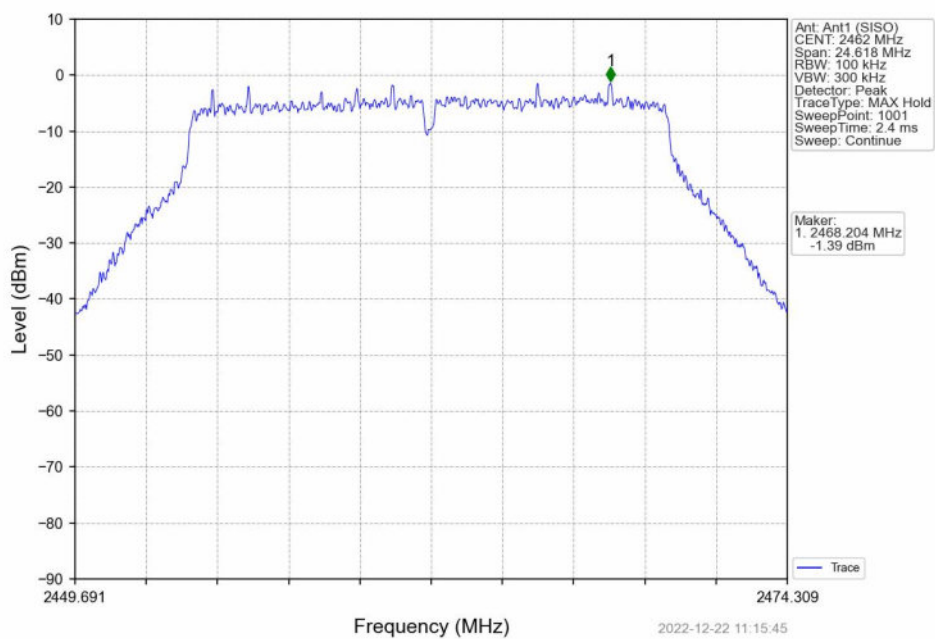
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



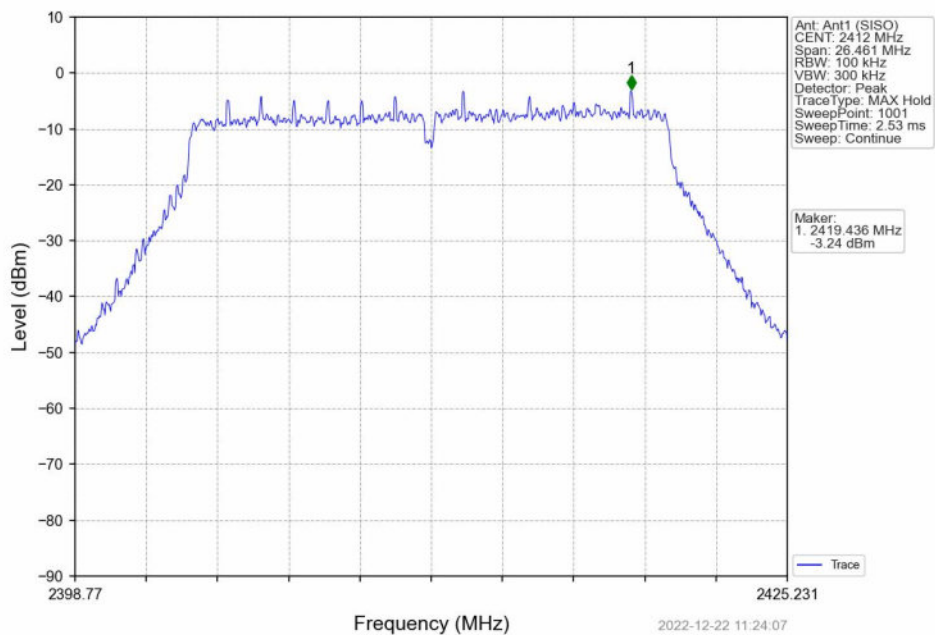
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



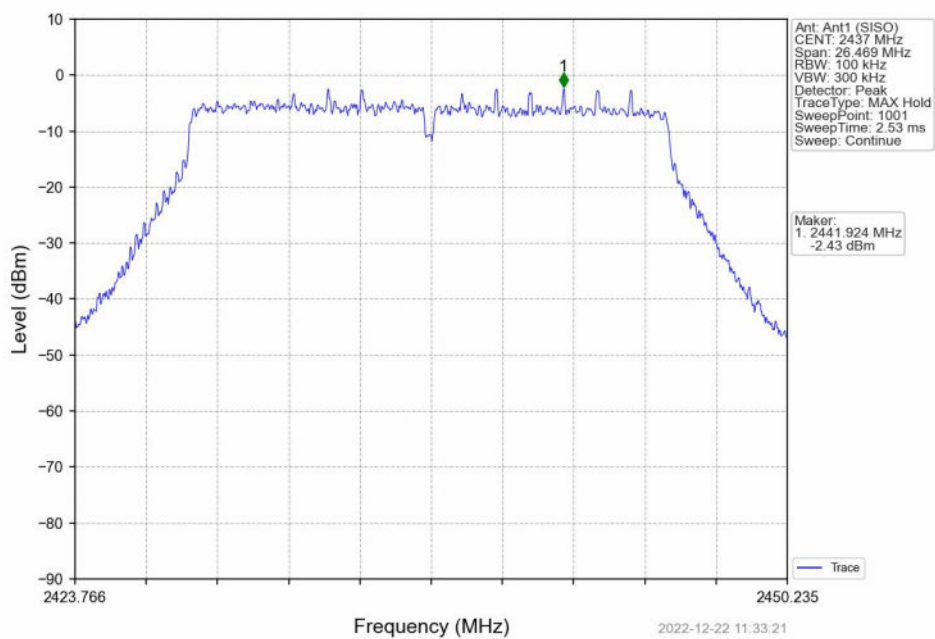
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



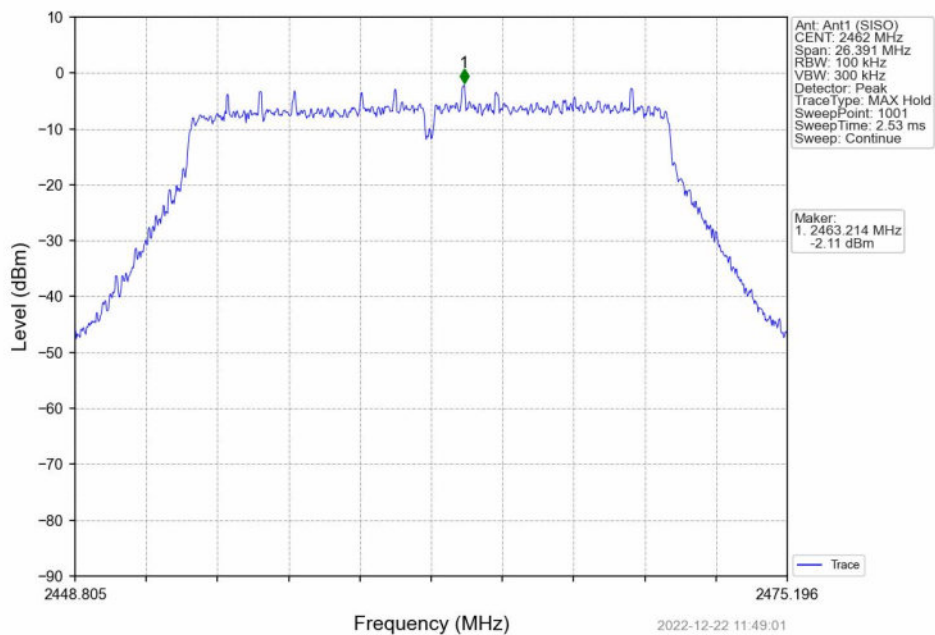
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



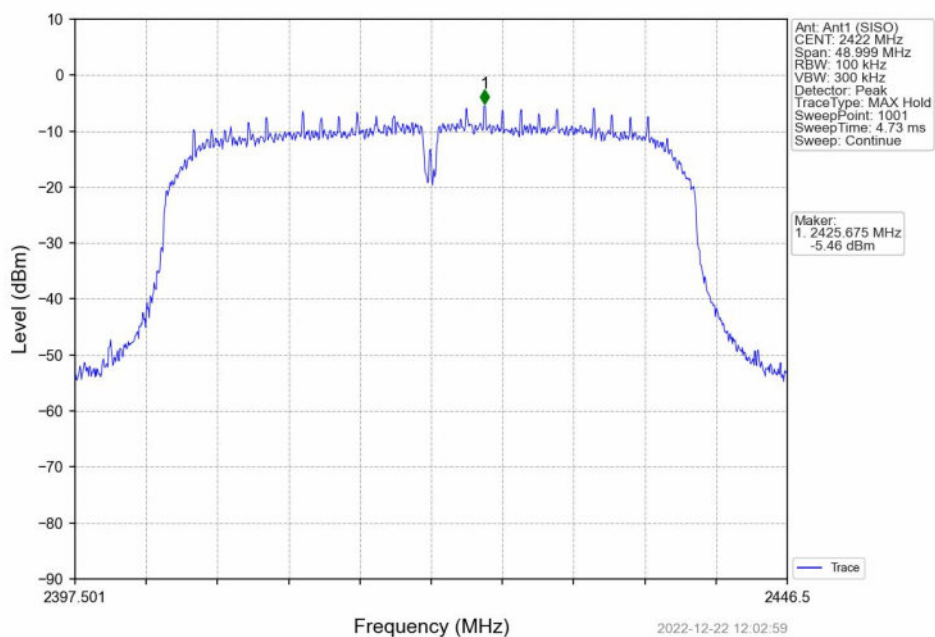
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



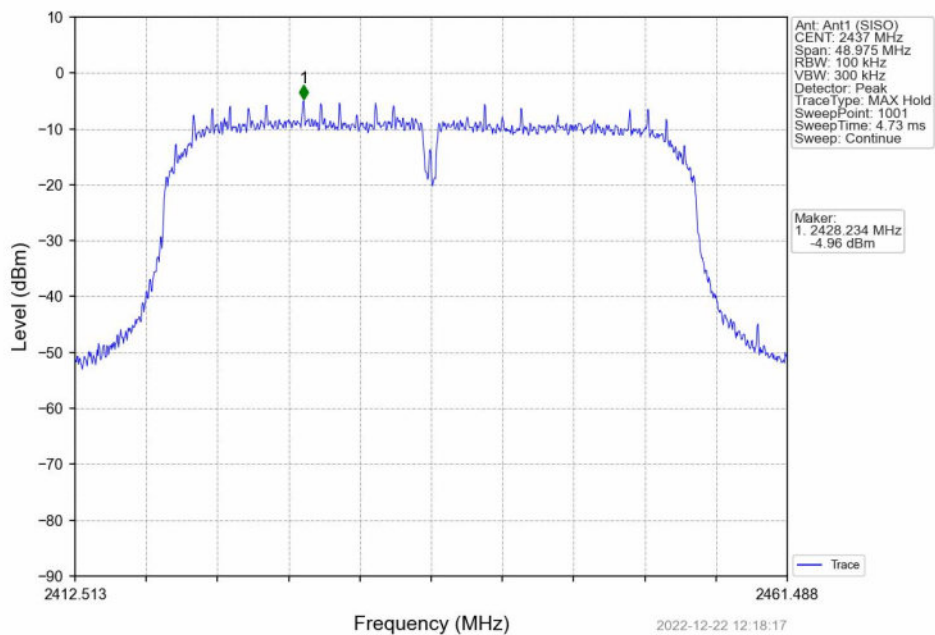
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



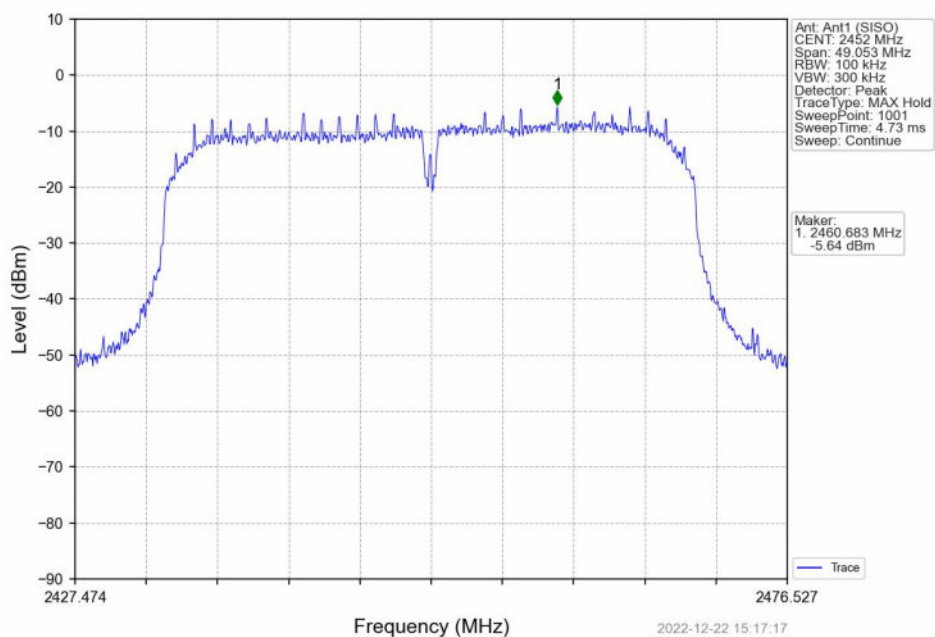
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



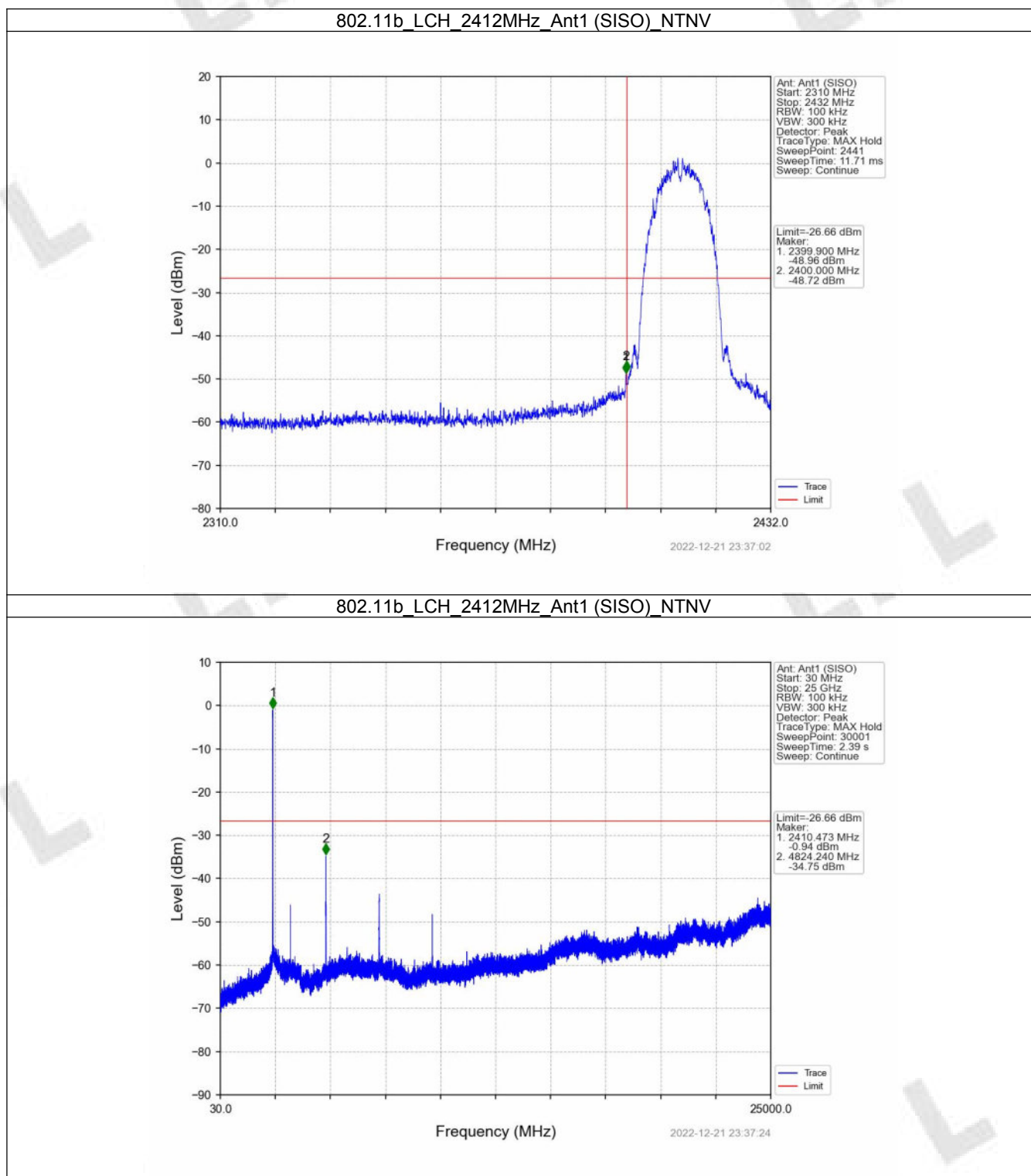
5.2 CSE

5.2.1 Test Result

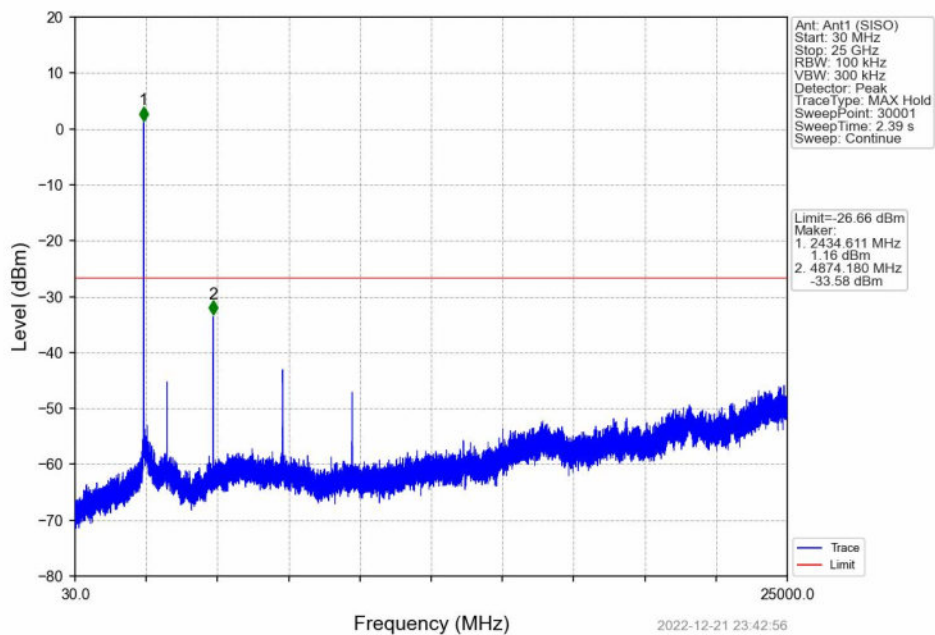
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	3.34	-26.66	Pass
		2437	1	3.34	-26.66	Pass
		2462	1	3.34	-26.66	Pass
802.11g	SISO	2412	1	-0.77	-30.77	Pass
		2437	1	-0.77	-30.77	Pass
		2462	1	-0.77	-30.77	Pass
802.11n (HT20)	SISO	2412	1	-2.11	-32.11	Pass
		2437	1	-2.11	-32.11	Pass
		2462	1	-2.11	-32.11	Pass
802.11n (HT40)	SISO	2422	1	-4.96	-34.96	Pass
		2437	1	-4.96	-34.96	Pass
		2452	1	-4.96	-34.96	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.

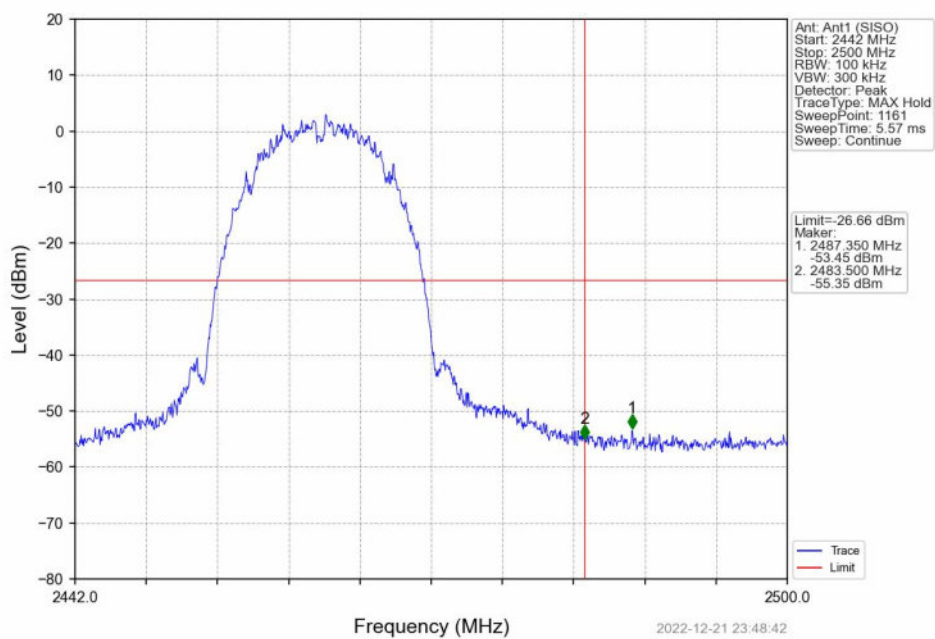
5.2.2 Test Graph



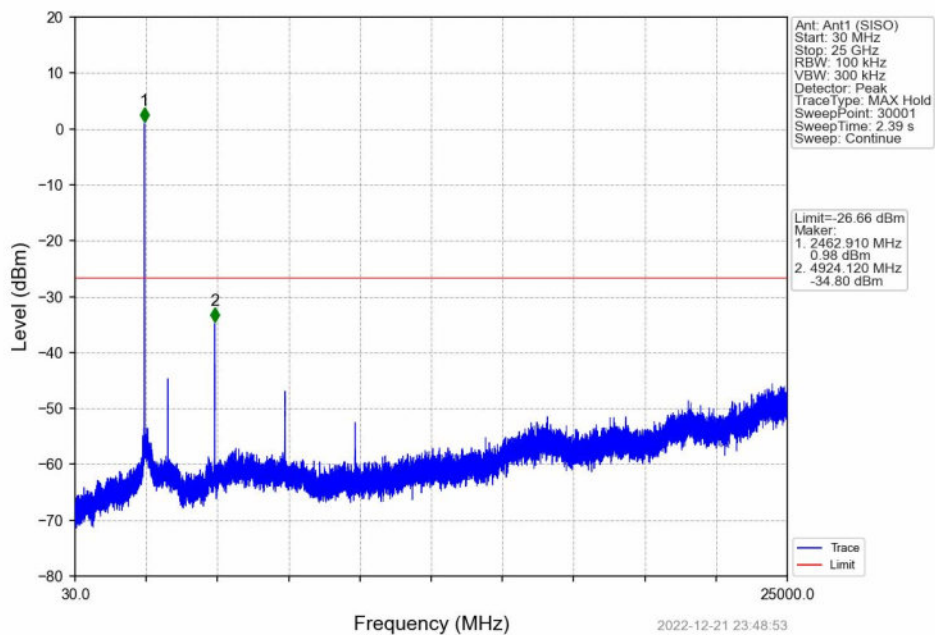
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



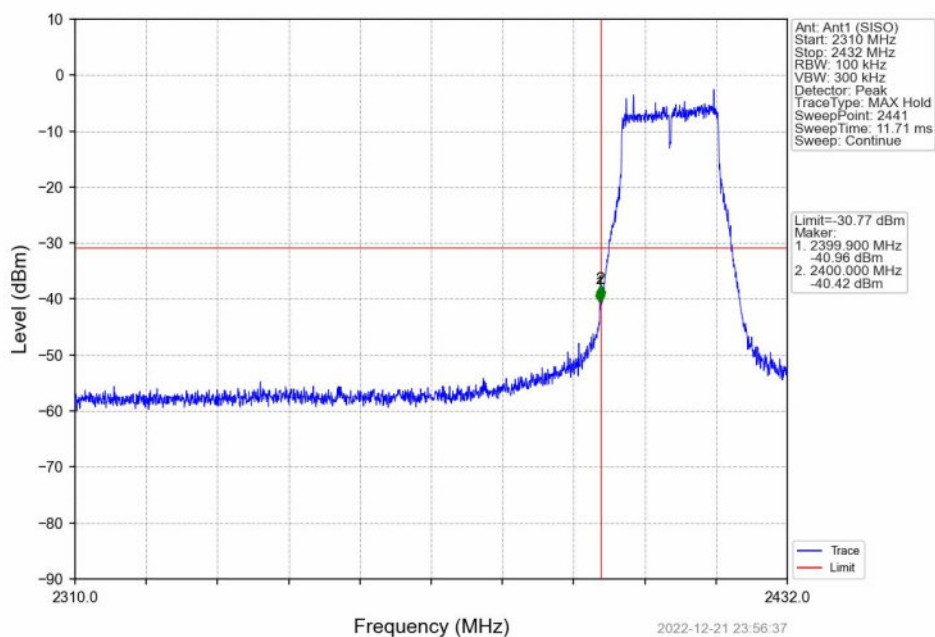
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



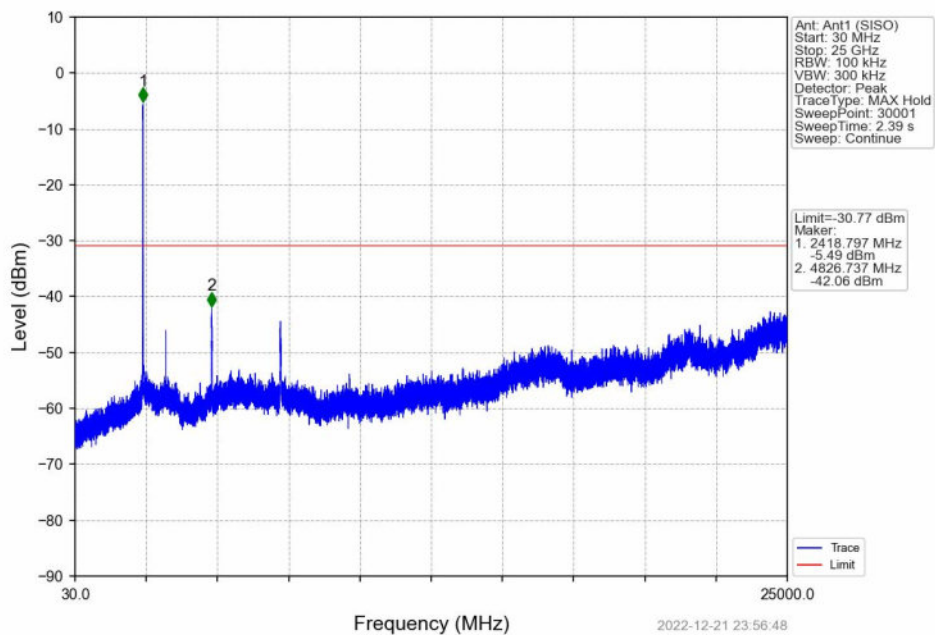
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



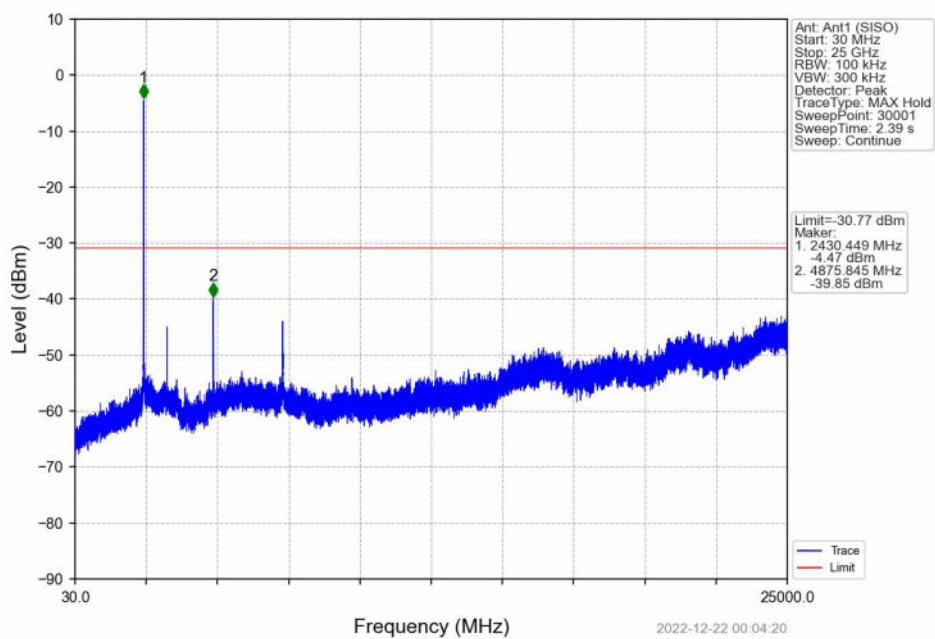
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



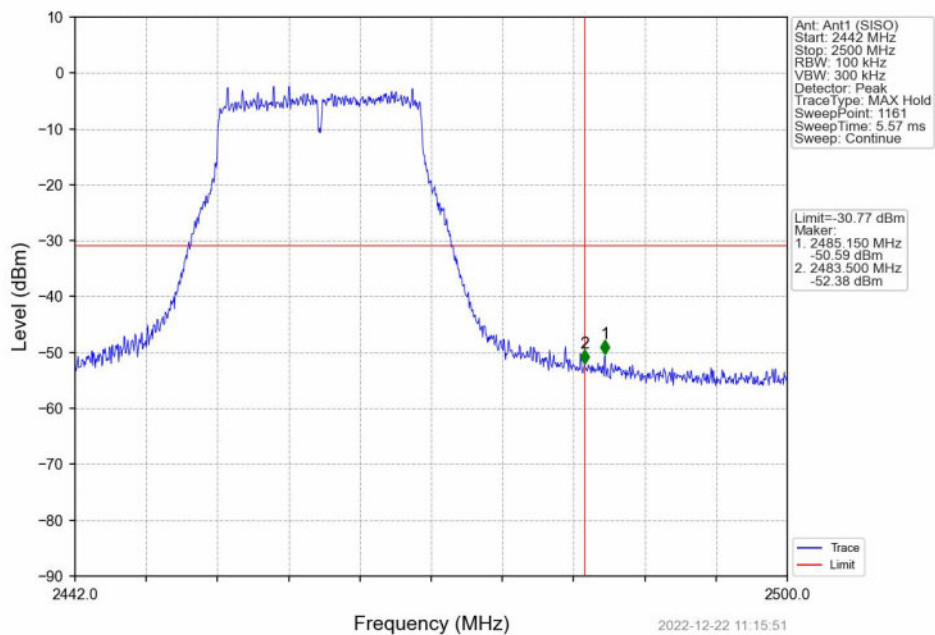
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



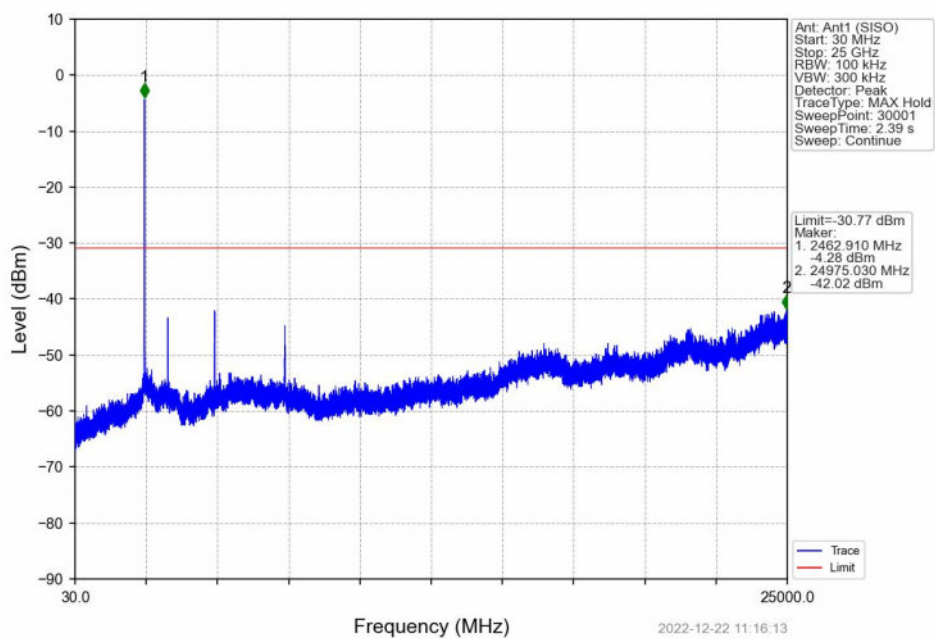
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



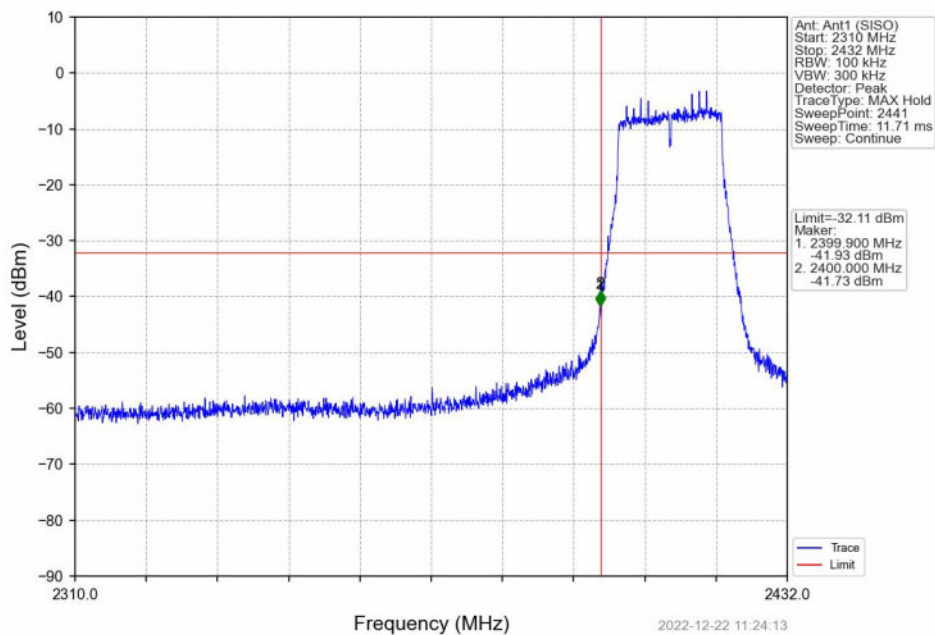
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



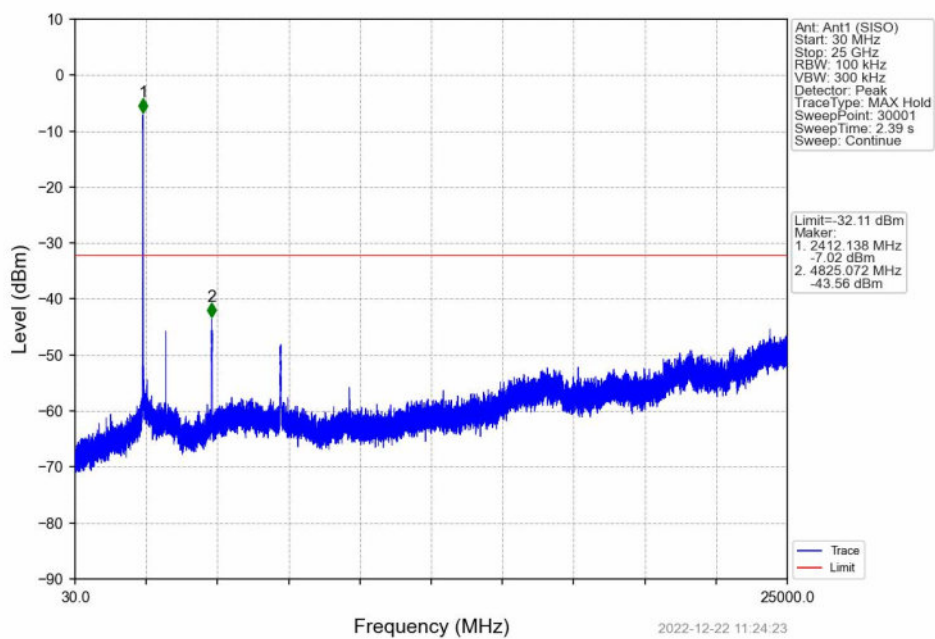
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



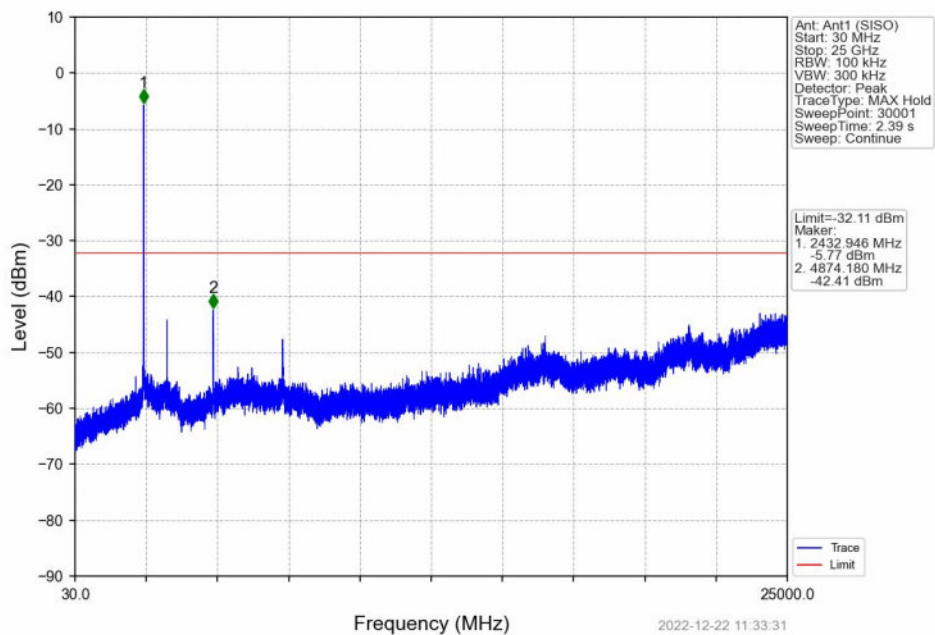
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



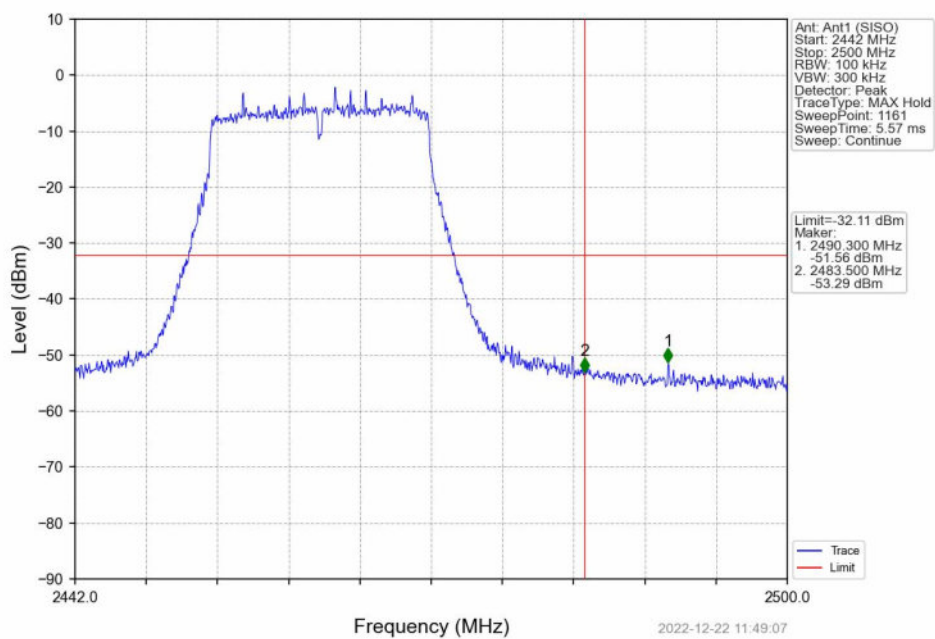
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



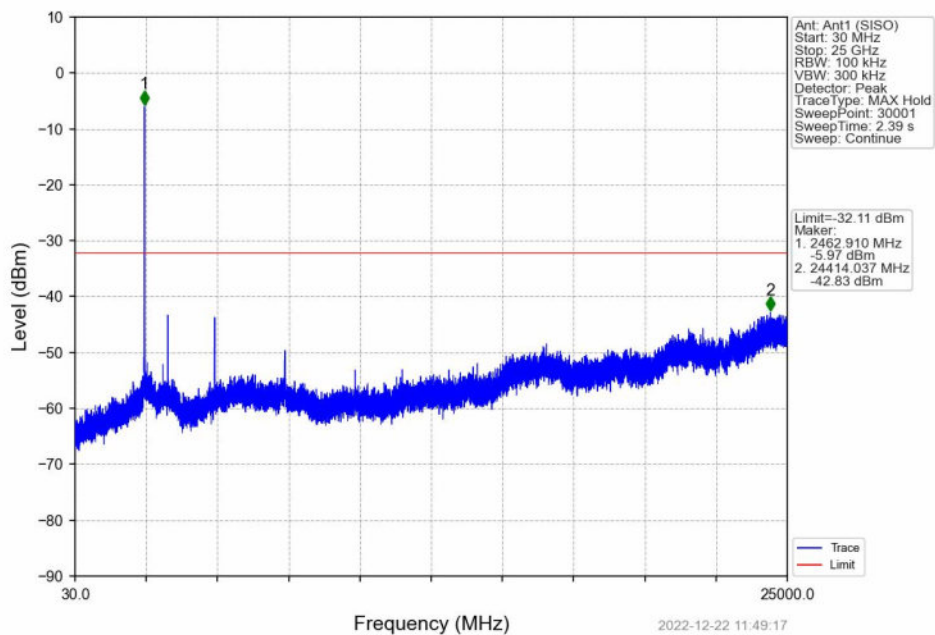
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



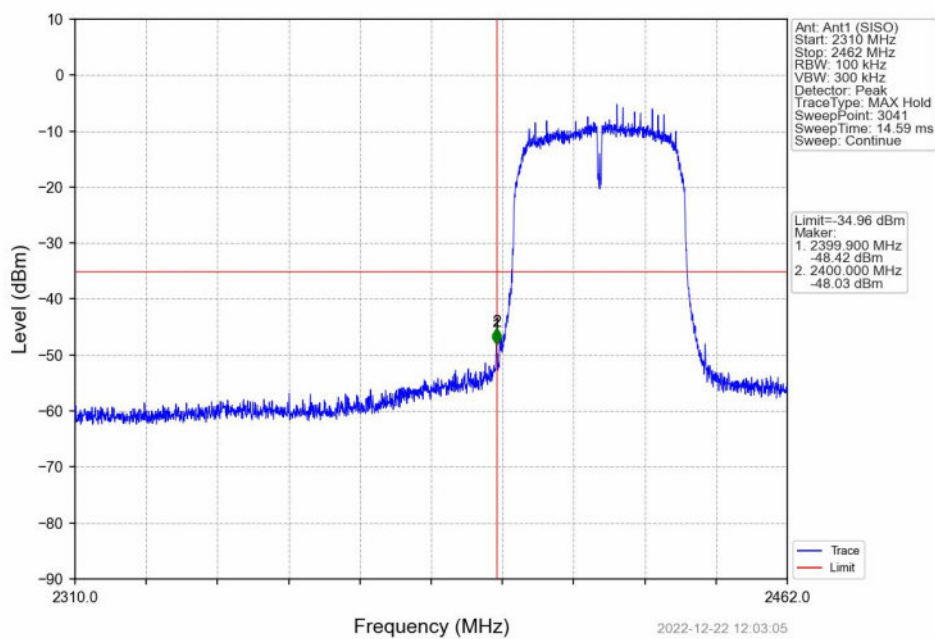
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



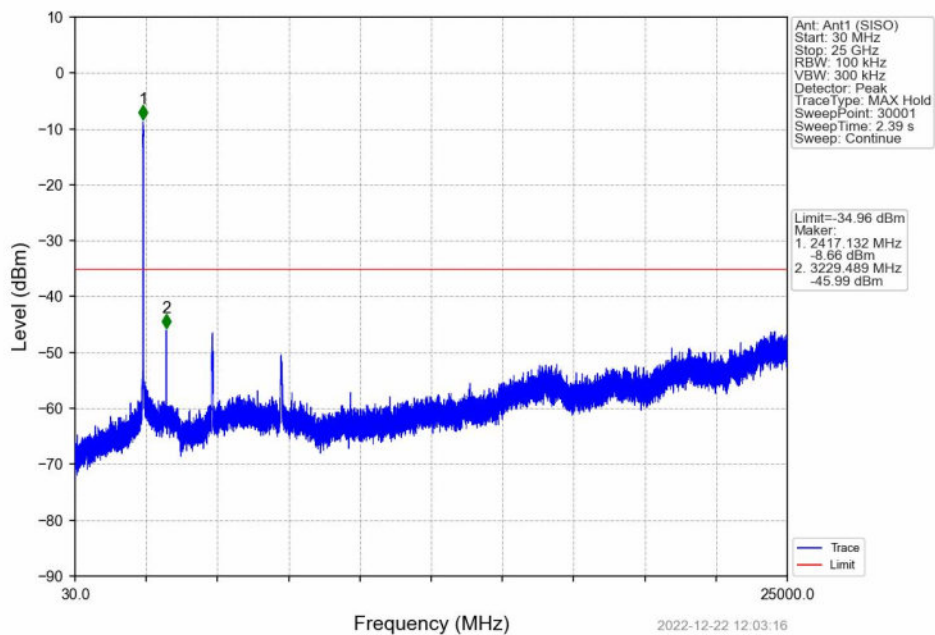
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



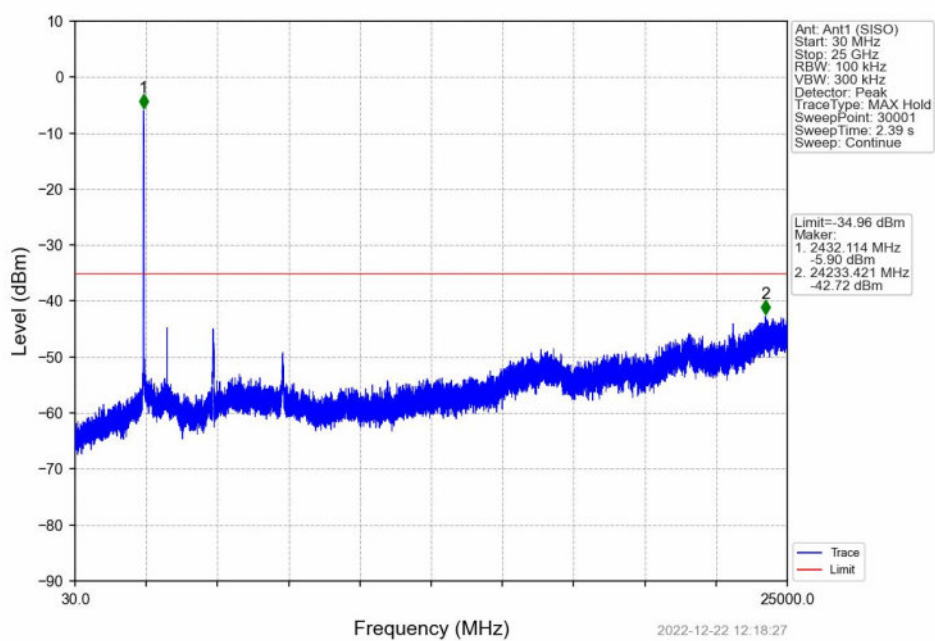
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



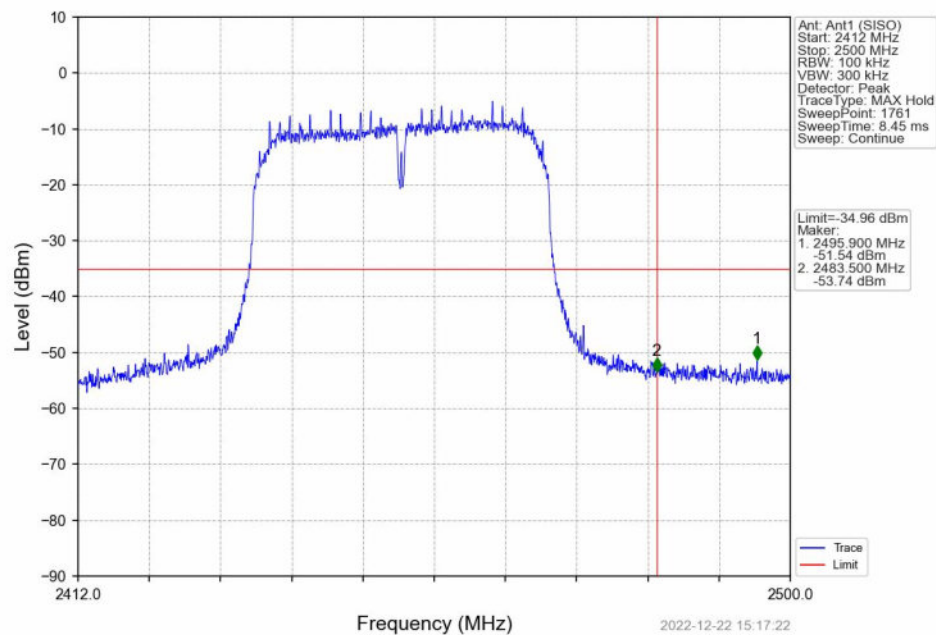
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

