

Appendix - 2.4G WIFI

1. Duty Cycle

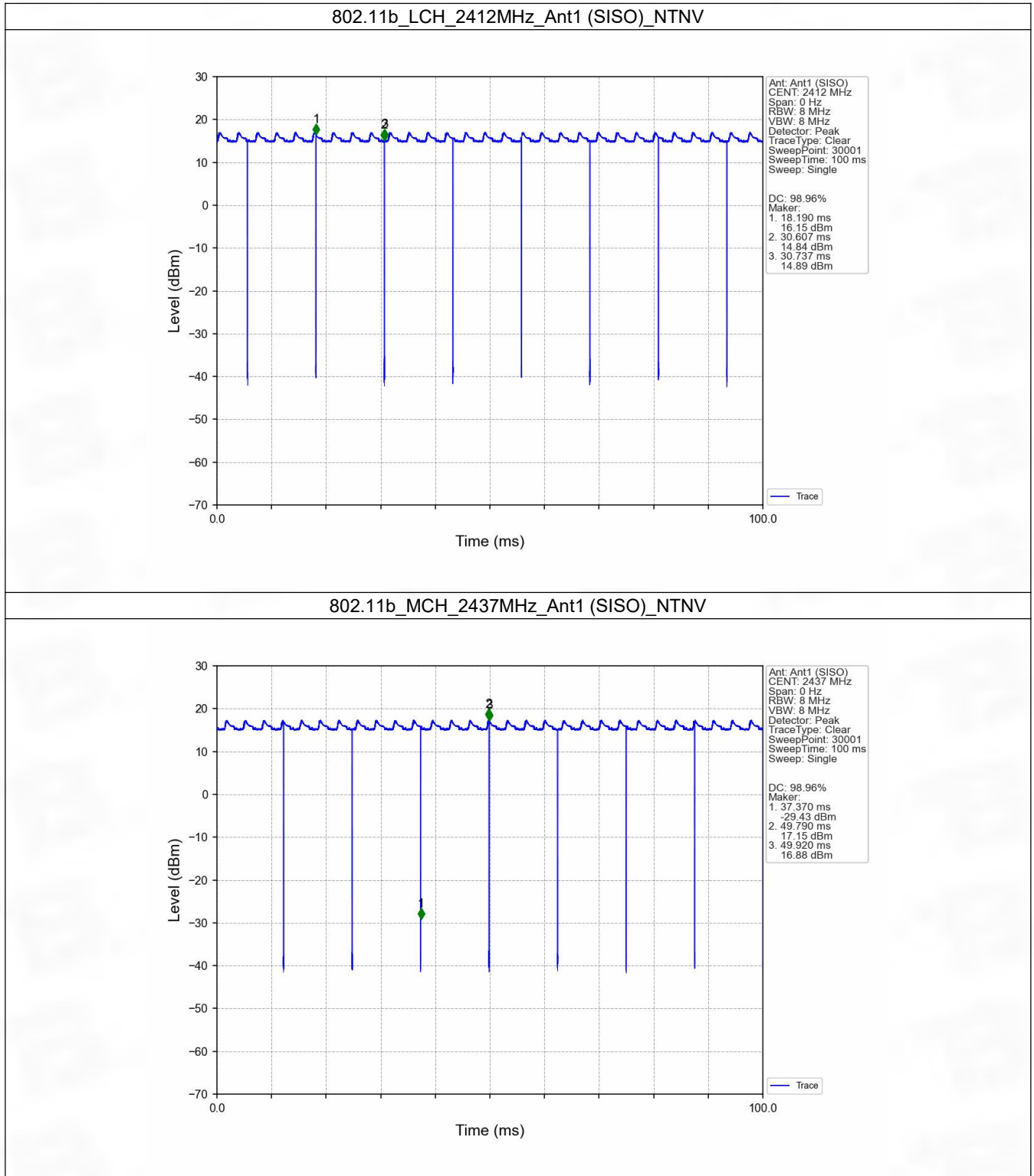
1.1 Test Result

1.1.1 Ant1

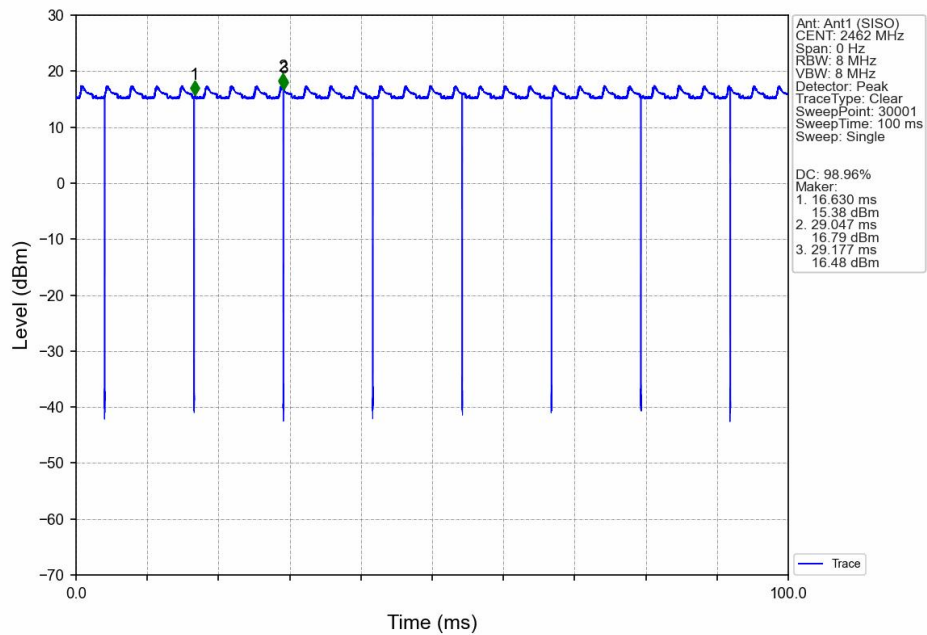
Ant1							
Mode	TX Type	Frequency (MHz)	T _{on} (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.417	12.547	98.96	0.05	0.03
		2437	12.420	12.550	98.96	0.05	0.03
		2462	12.417	12.547	98.96	0.05	0.03
802.11g	SISO	2412	2.064	2.193	94.12	0.26	0.03
		2437	2.064	2.193	94.12	0.26	0.03
		2462	2.065	2.194	94.12	0.26	0.03
802.11n (HT20)	SISO	2412	1.921	2.050	93.71	0.28	0.04
		2437	1.920	2.049	93.70	0.28	0.00
		2462	1.921	2.050	93.71	0.28	0.04

1.2 Test Graph

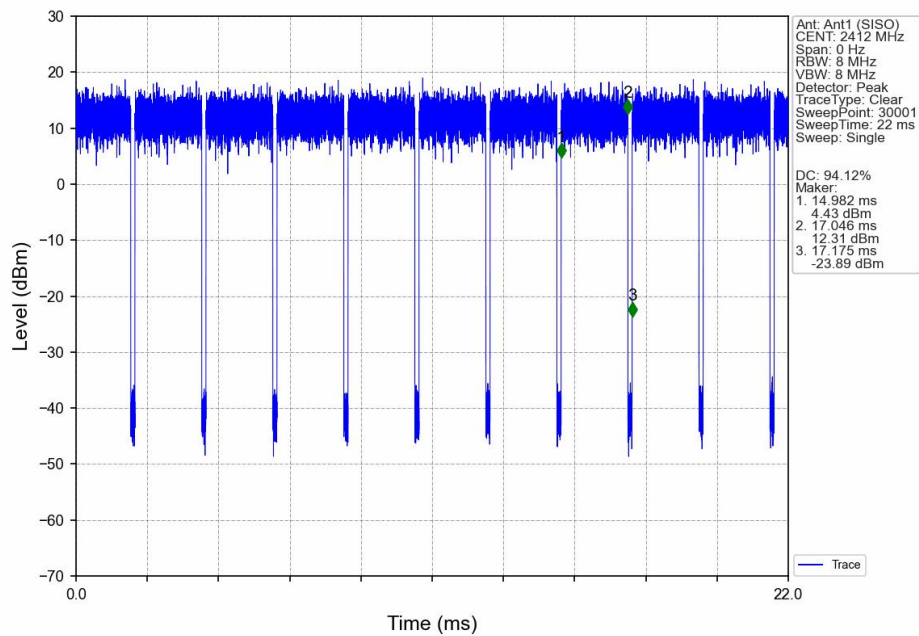
1.2.1 Ant1



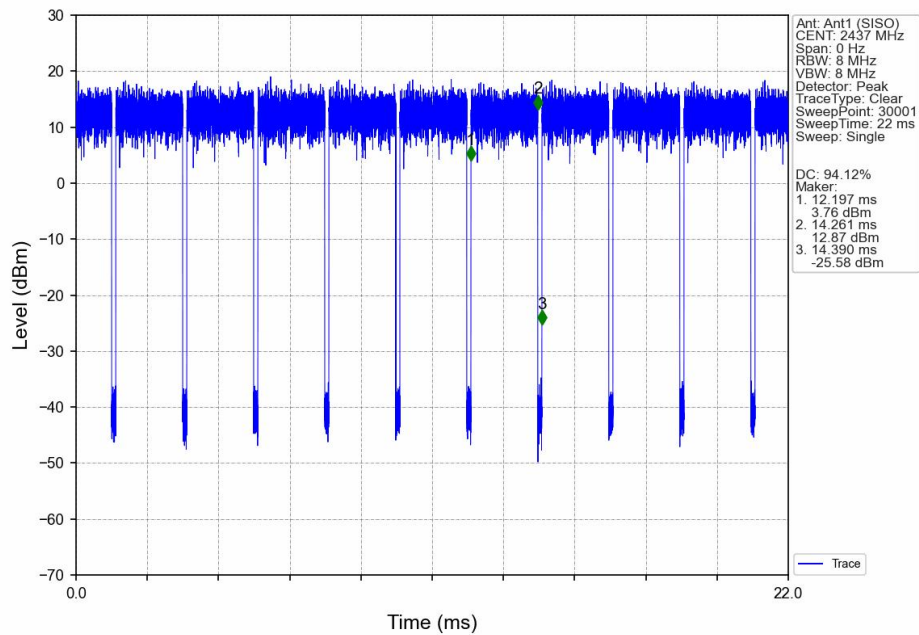
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



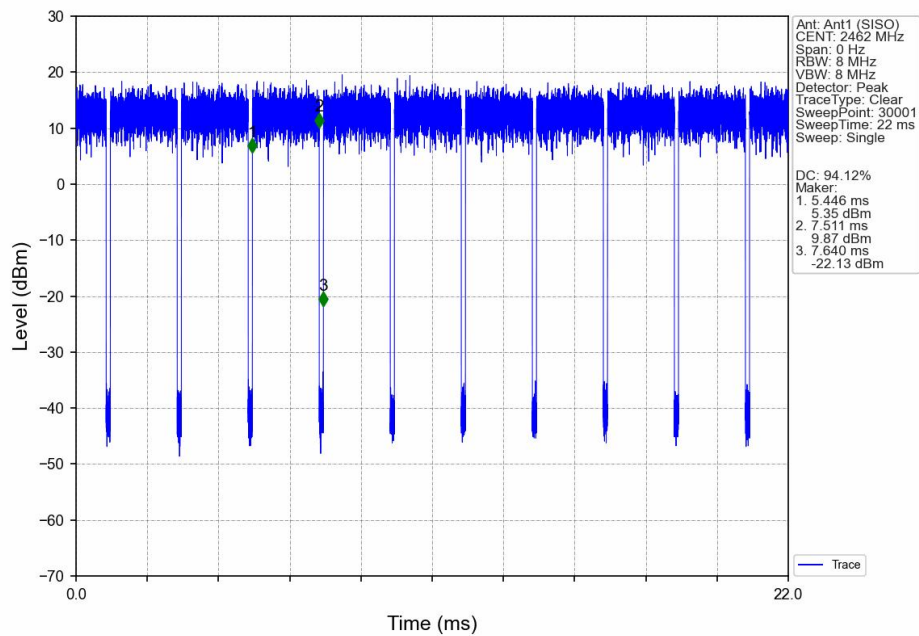
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



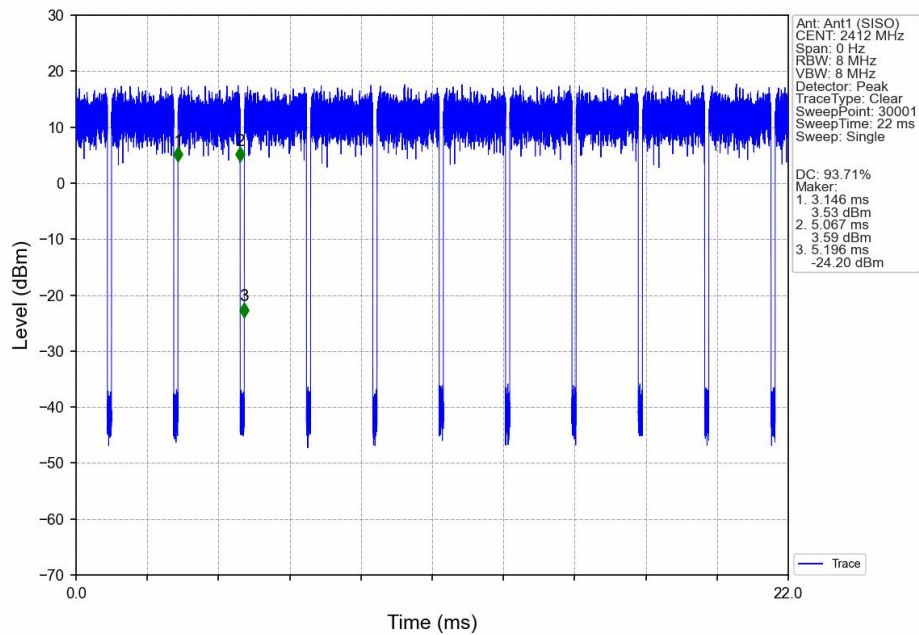
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



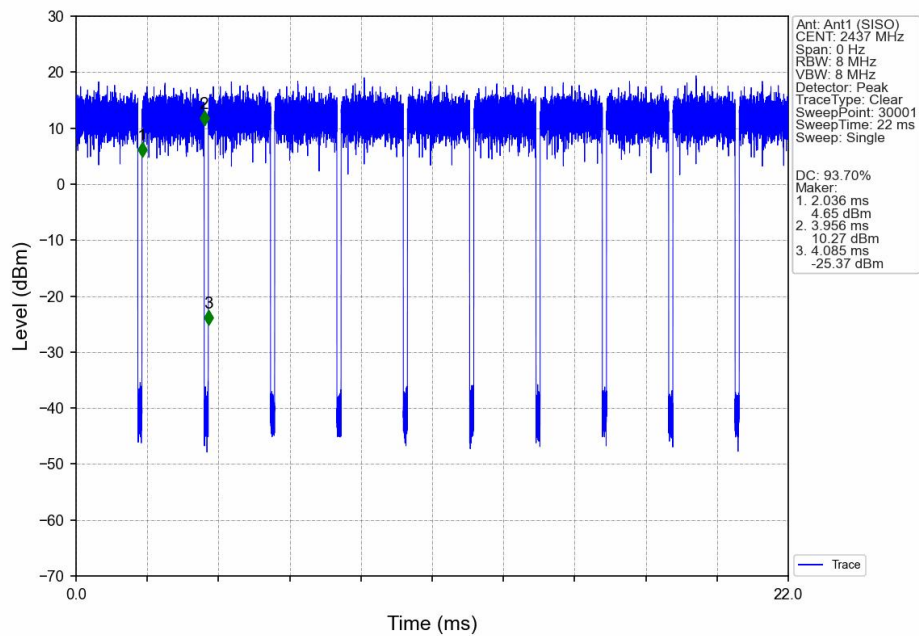
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



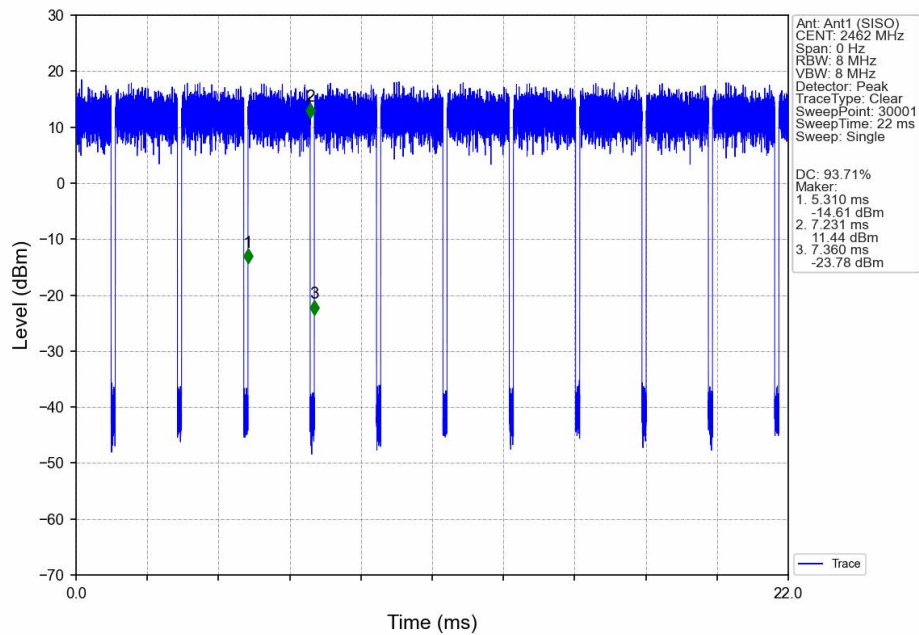
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

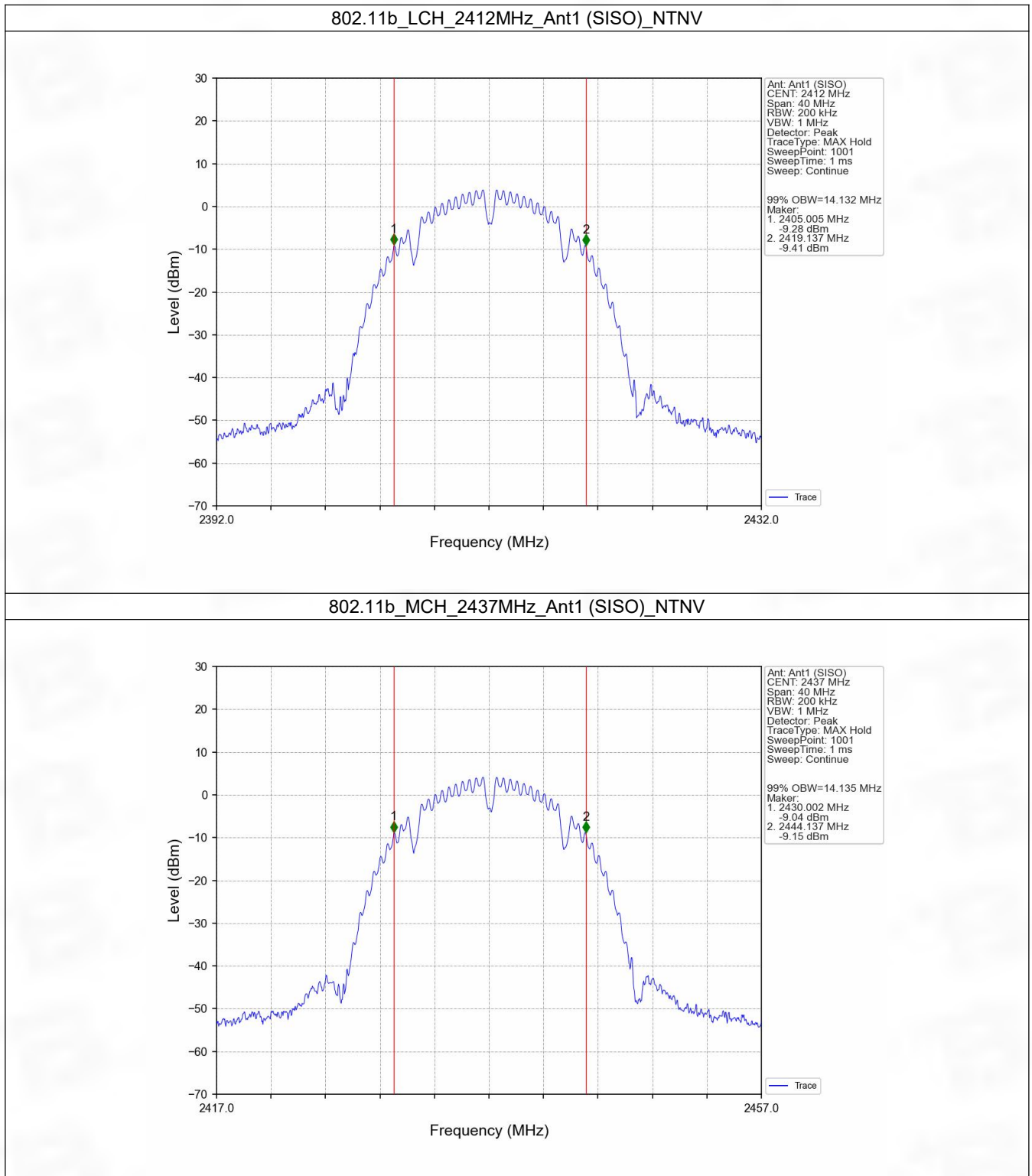
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.132	/	Pass
		2437	1	14.135	/	Pass
		2462	1	14.132	/	Pass
802.11g	SISO	2412	1	16.629	/	Pass
		2437	1	16.734	/	Pass
		2462	1	16.720	/	Pass
802.11n (HT20)	SISO	2412	1	17.798	/	Pass
		2437	1	17.868	/	Pass
		2462	1	17.925	/	Pass

2.1.2 6dB BW

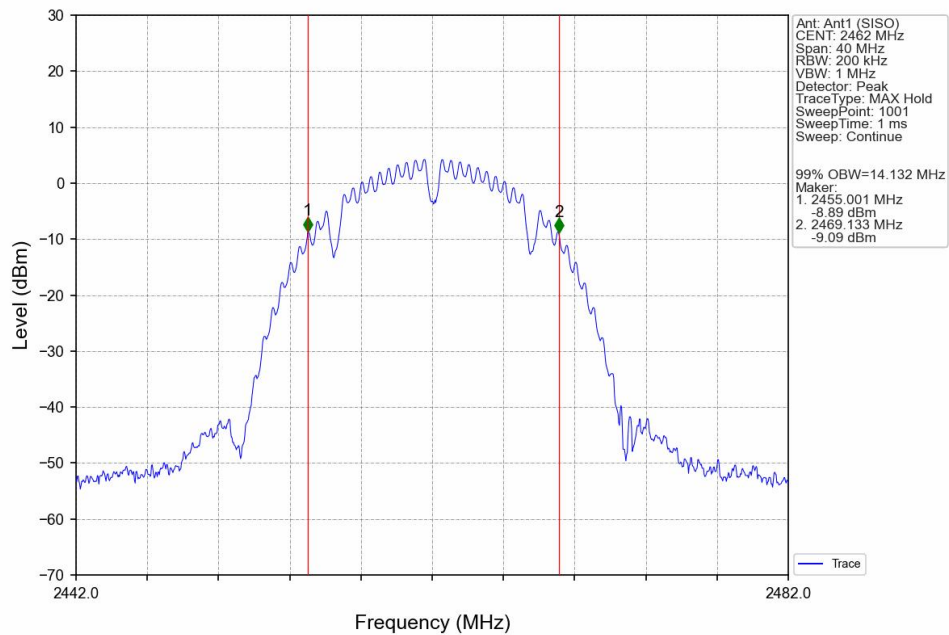
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.193	≥ 0.5	Pass
		2437	1	9.194	≥ 0.5	Pass
		2462	1	9.192	≥ 0.5	Pass
802.11g	SISO	2412	1	16.426	≥ 0.5	Pass
		2437	1	16.454	≥ 0.5	Pass
		2462	1	16.454	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.698	≥ 0.5	Pass
		2437	1	17.662	≥ 0.5	Pass
		2462	1	17.662	≥ 0.5	Pass

2.2 Test Graph

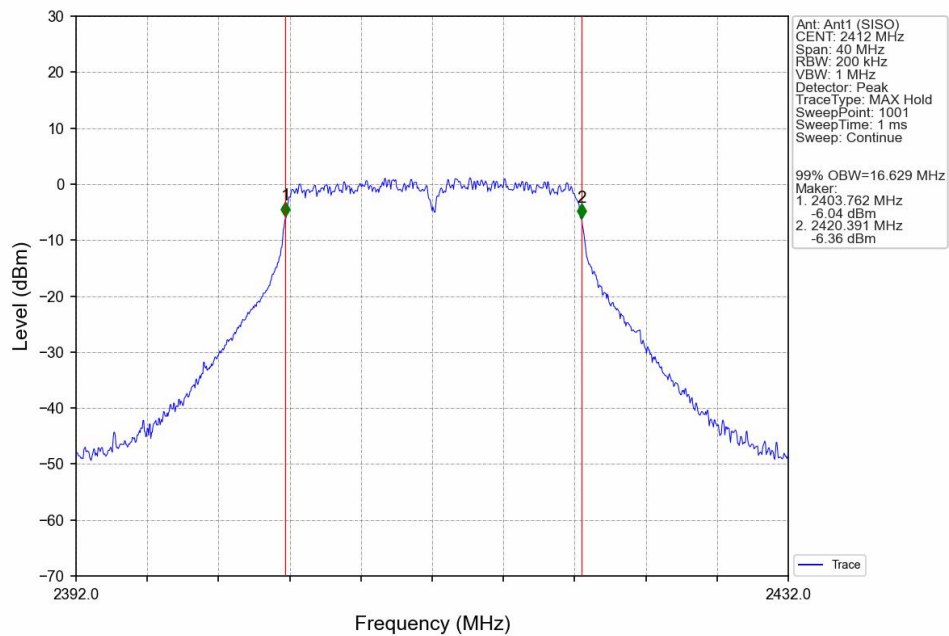
2.2.1 OBW



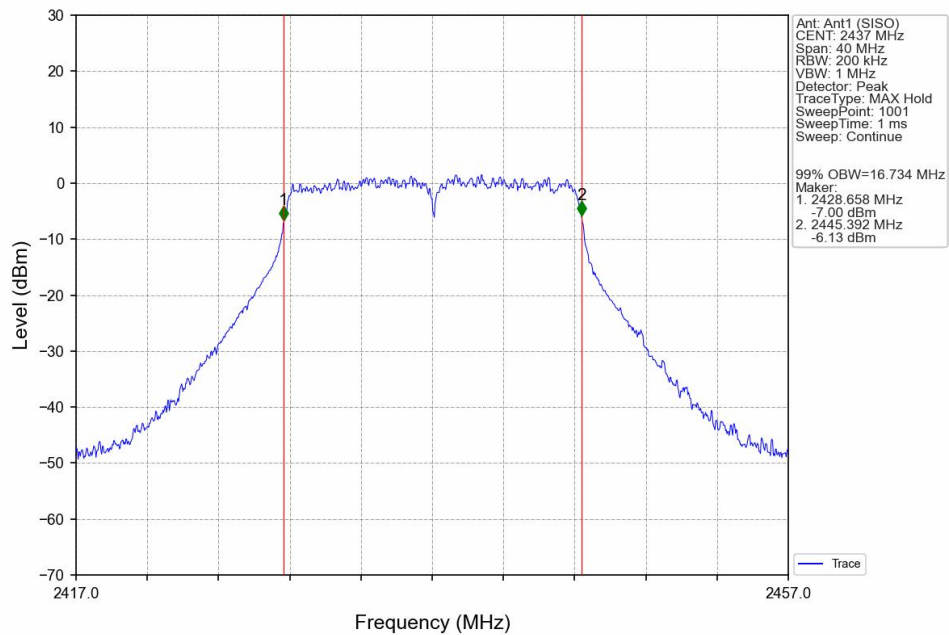
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



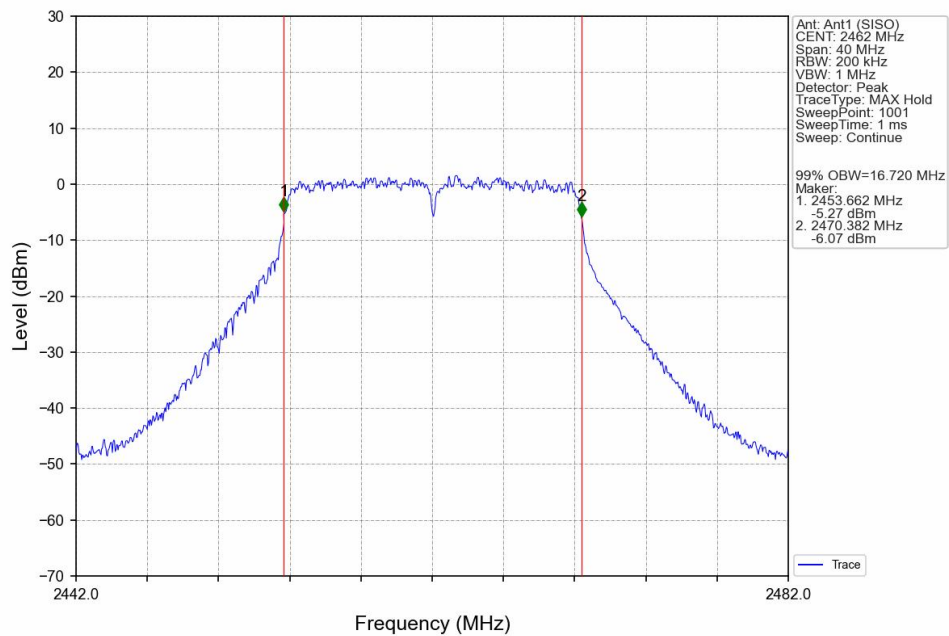
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



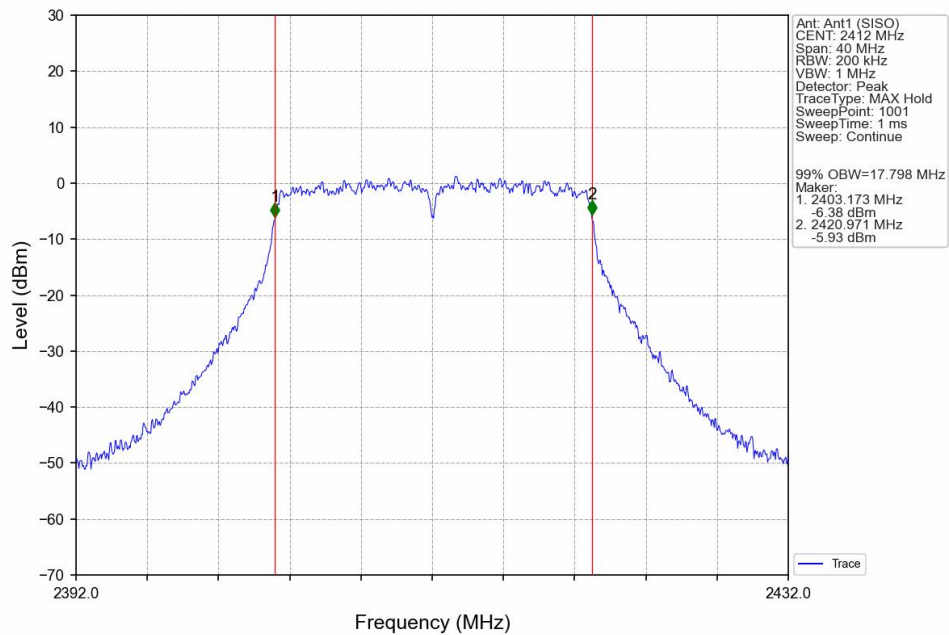
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



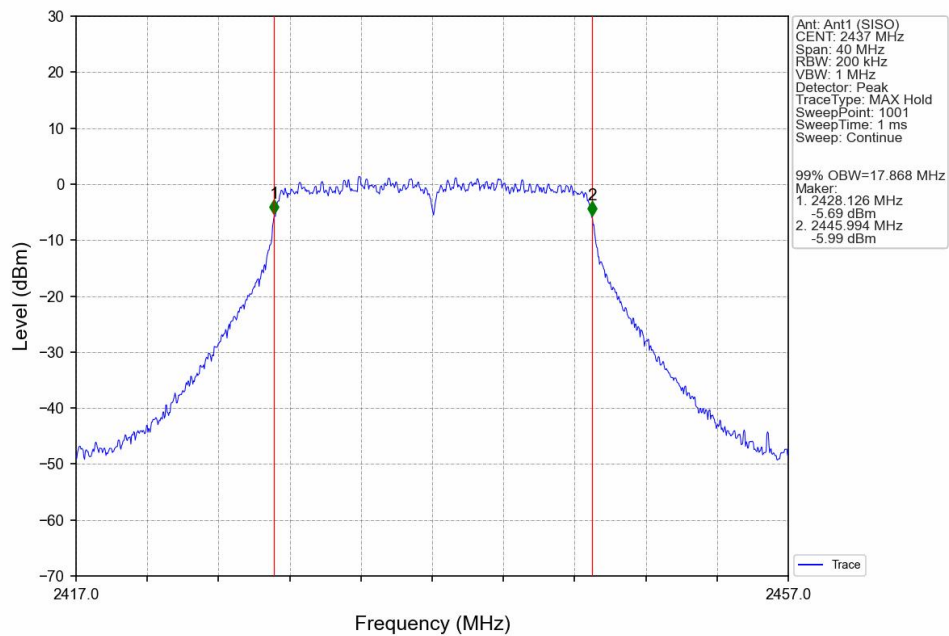
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



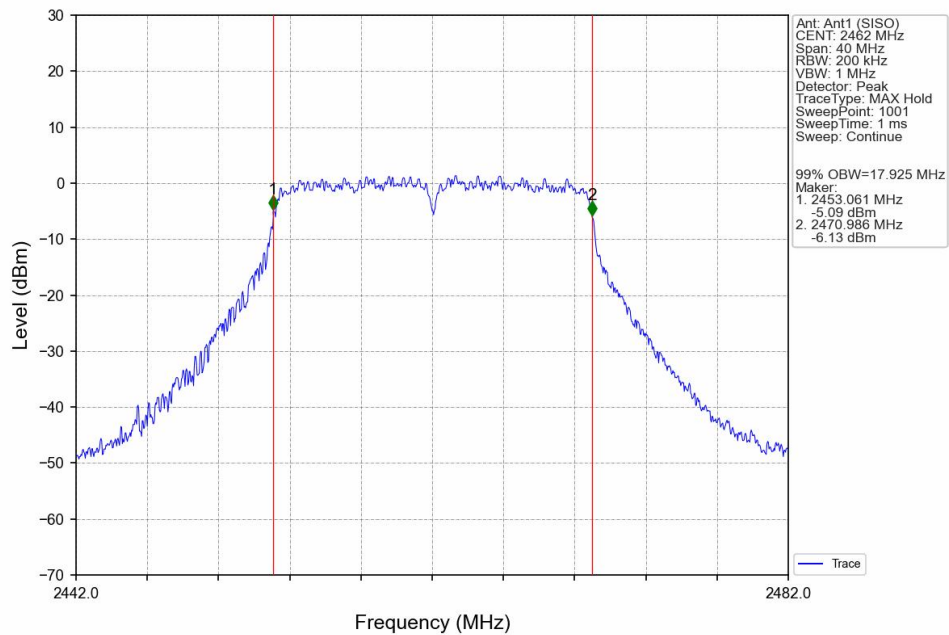
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



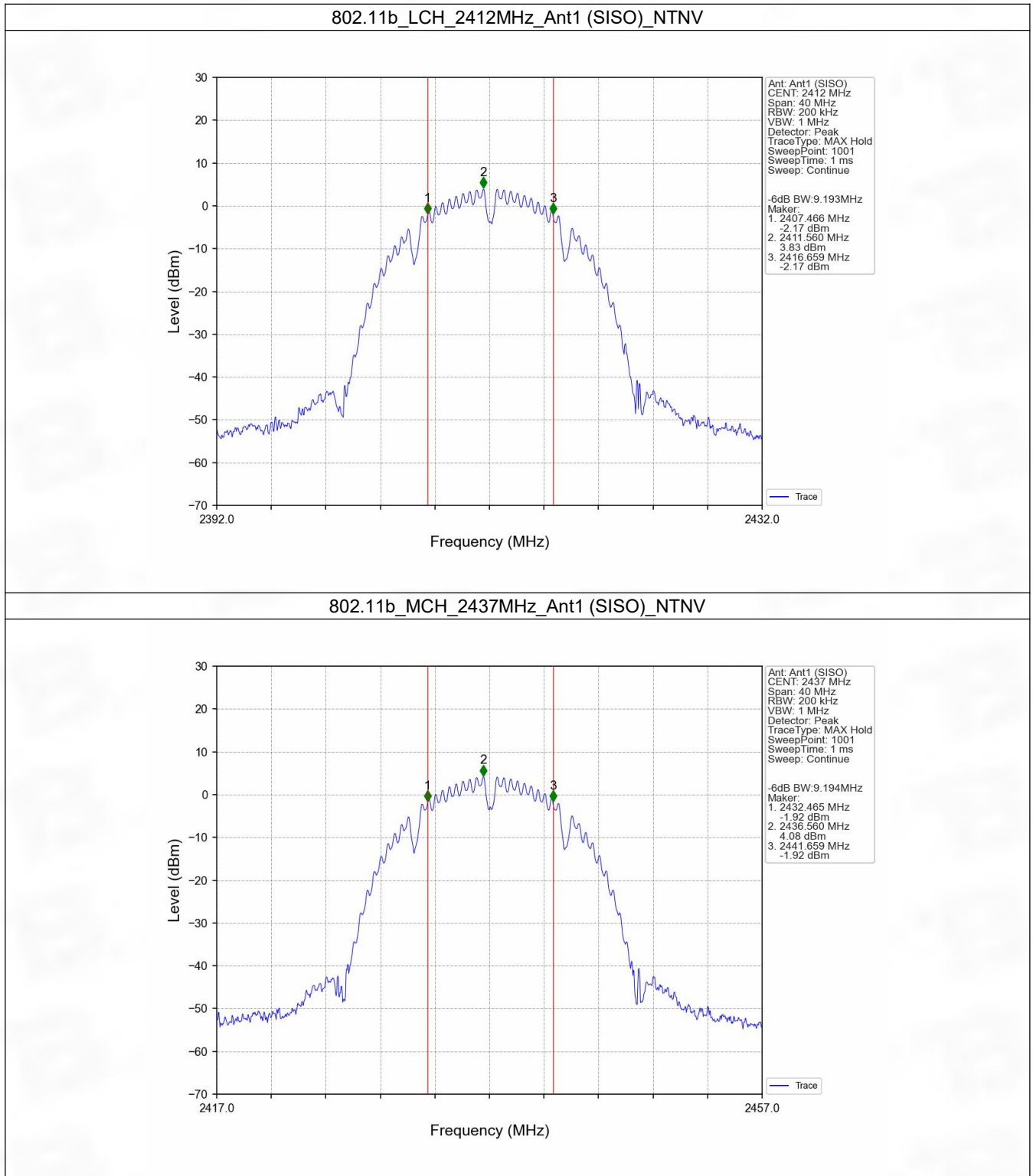
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



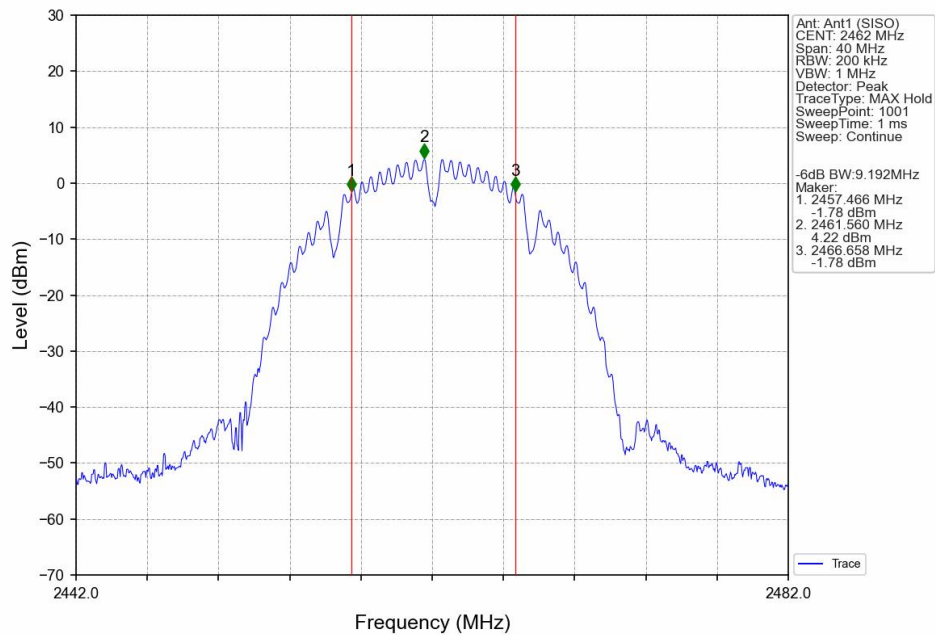
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



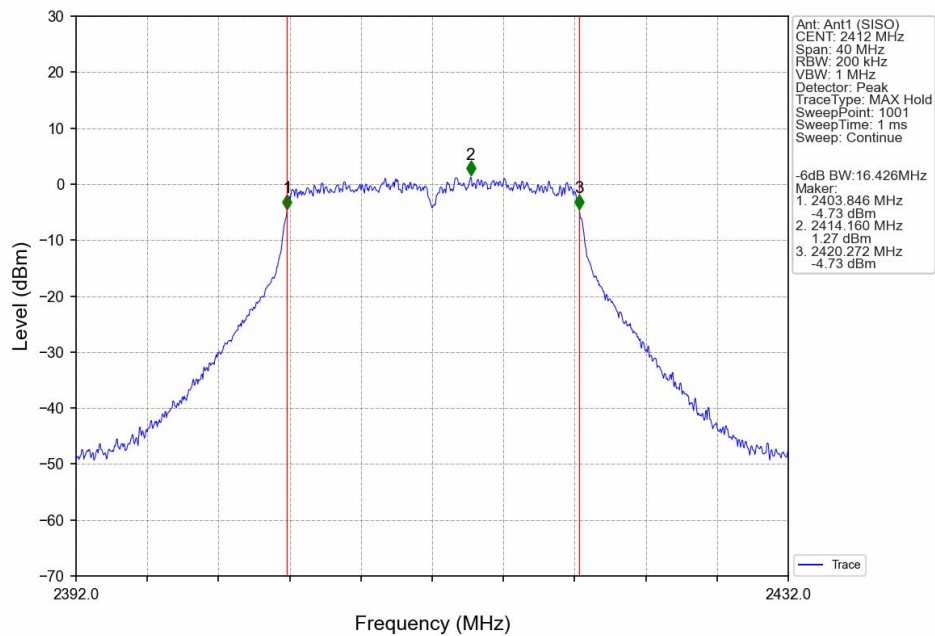
2.2.2 6dB BW



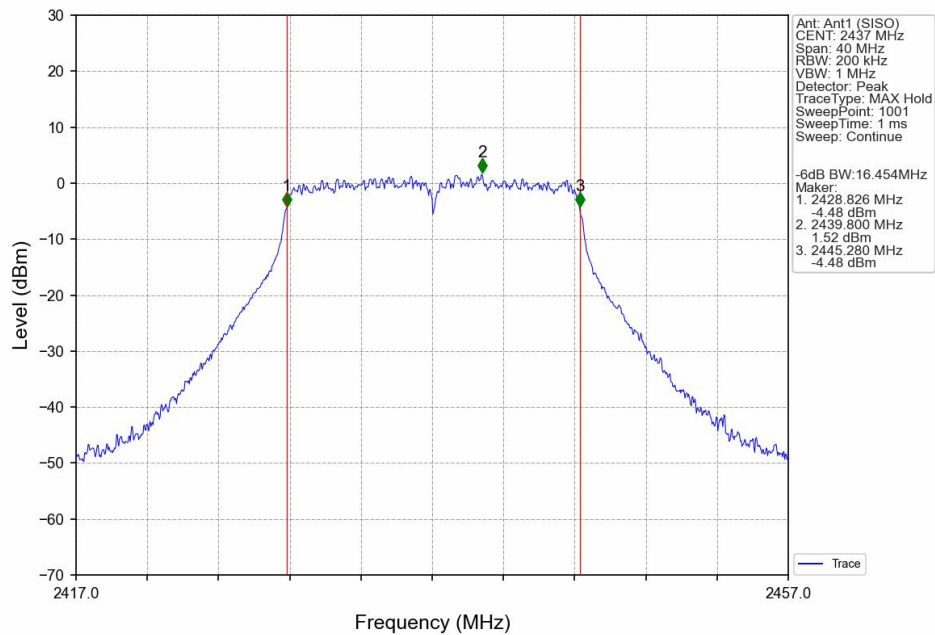
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



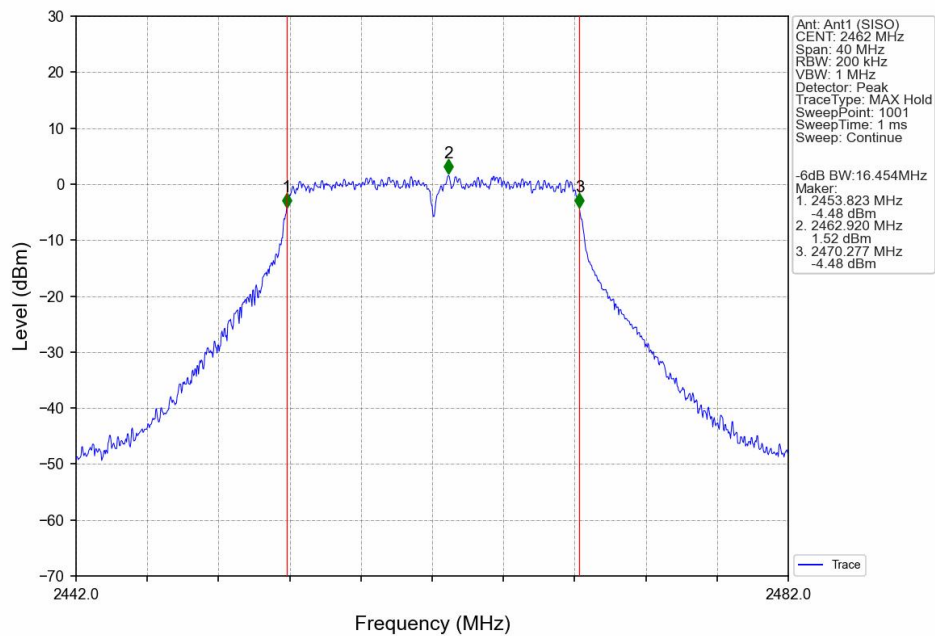
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



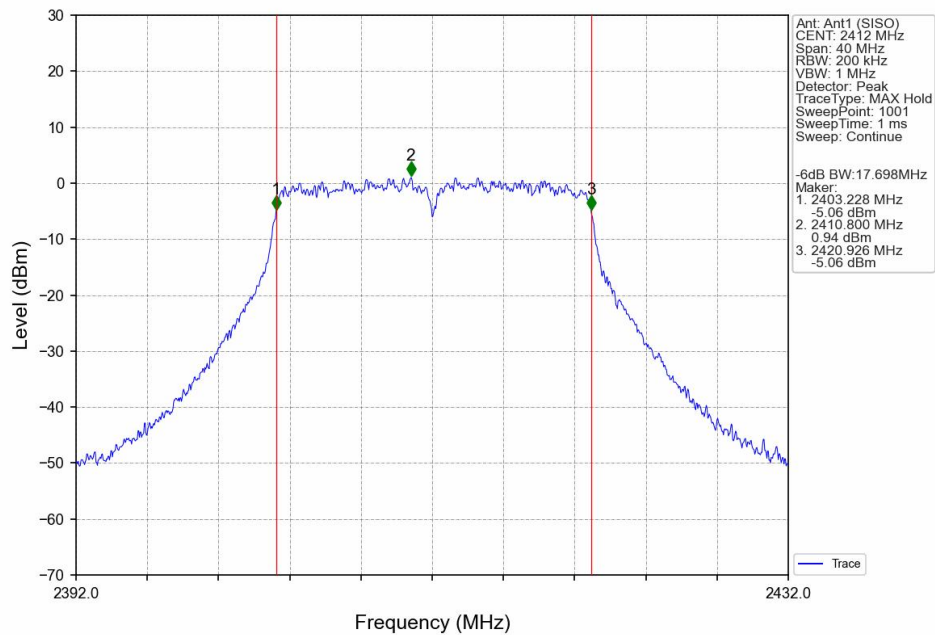
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



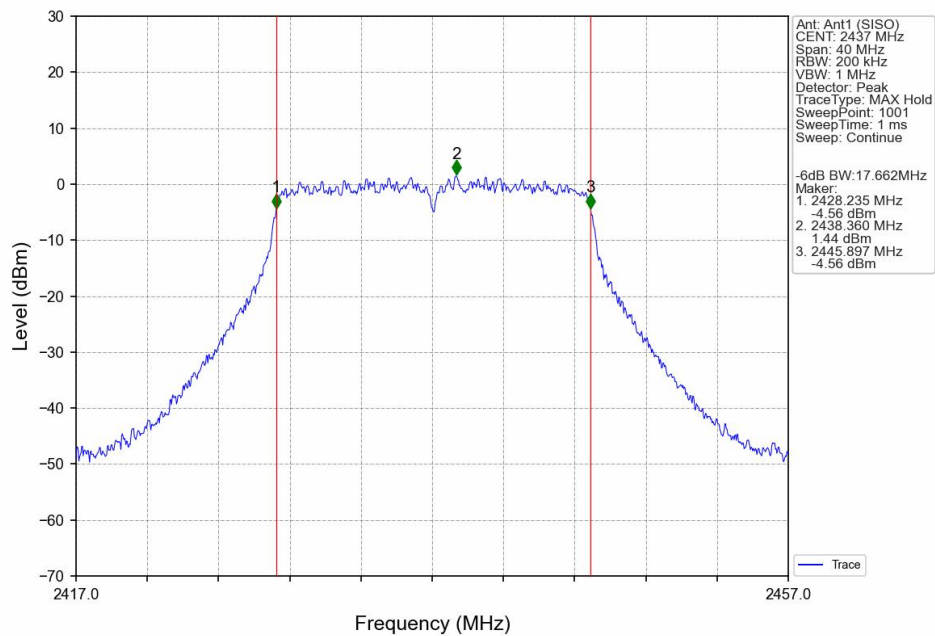
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



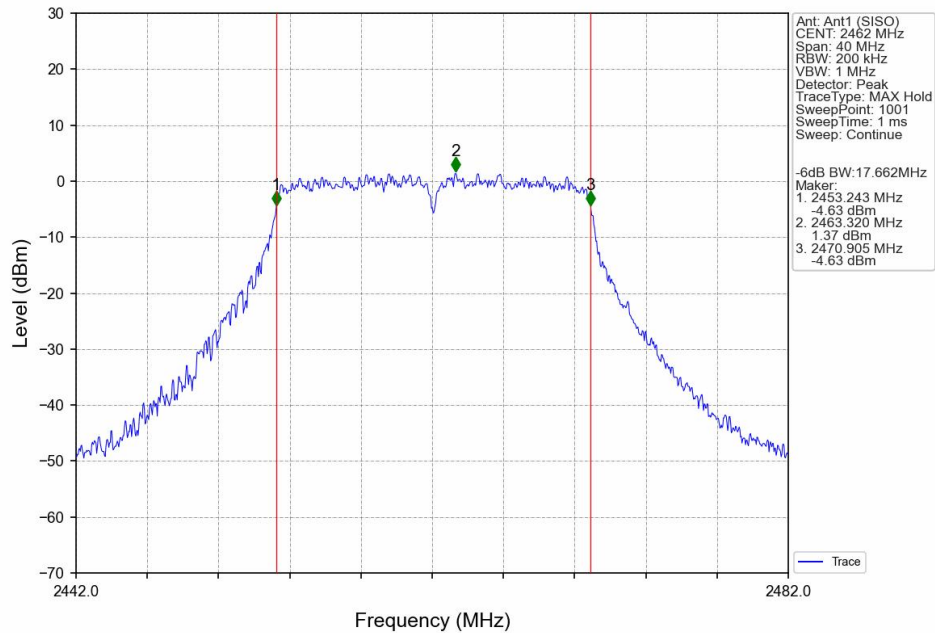
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

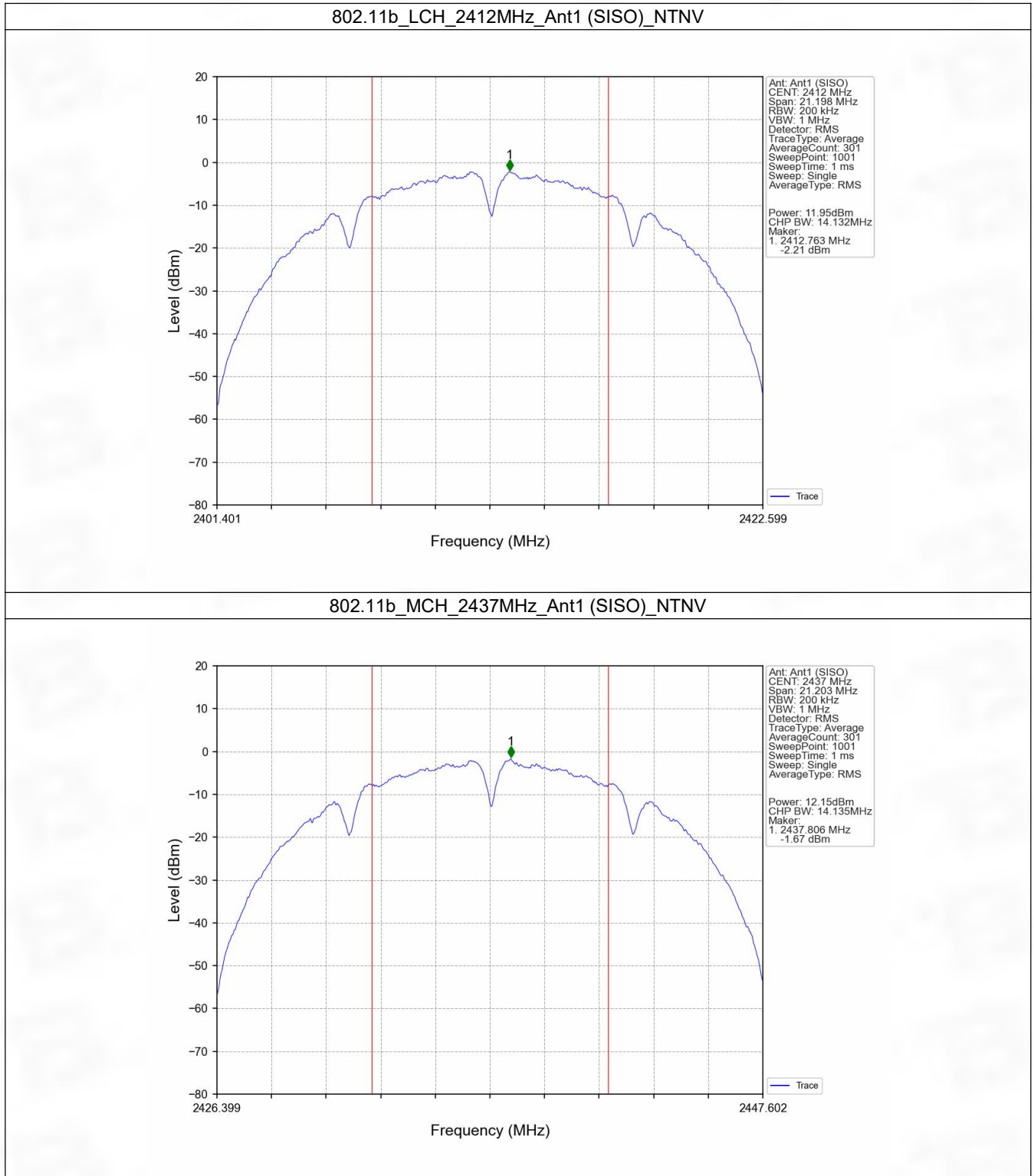
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	11.95	<=30	Pass
		2437	12.15	<=30	Pass
		2462	12.29	<=30	Pass
802.11g	SISO	2412	11.25	<=30	Pass
		2437	11.48	<=30	Pass
		2462	11.63	<=30	Pass
802.11n (HT20)	SISO	2412	11.17	<=30	Pass
		2437	11.47	<=30	Pass
		2462	11.62	<=30	Pass

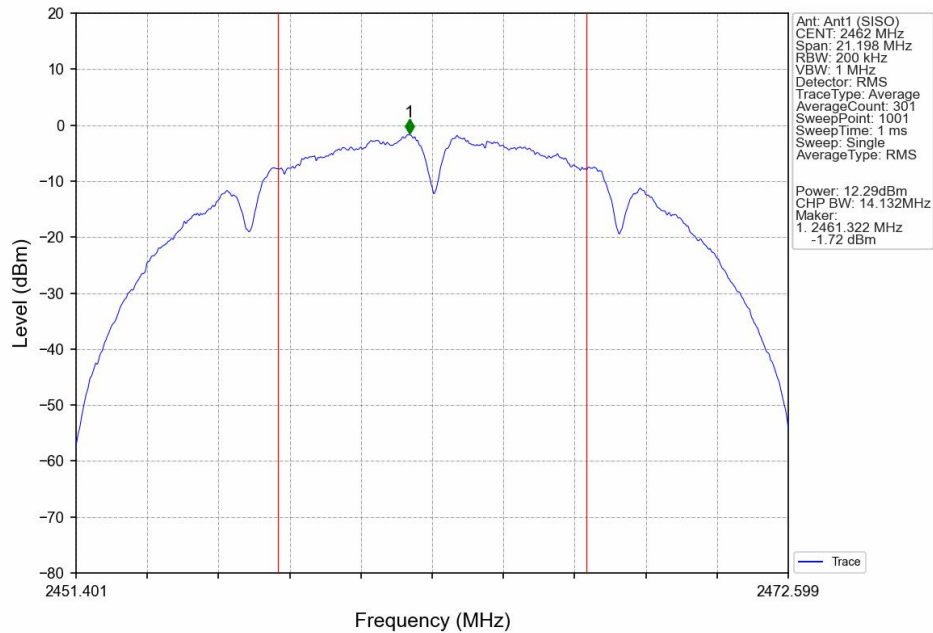
Note1: Antenna Gain: Ant1: 2.45dBi;

3.2 Test Graph

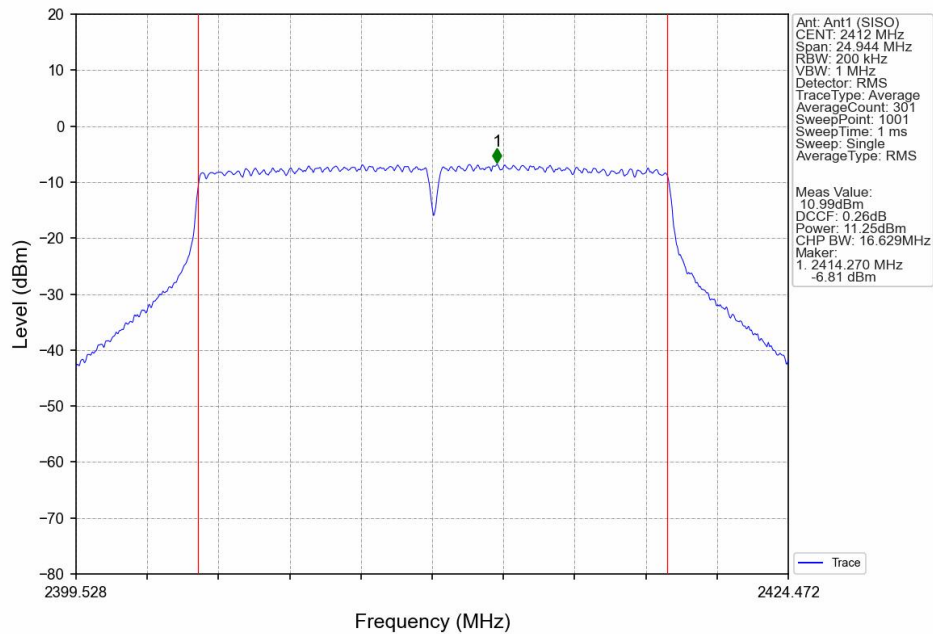
3.2.1 Power



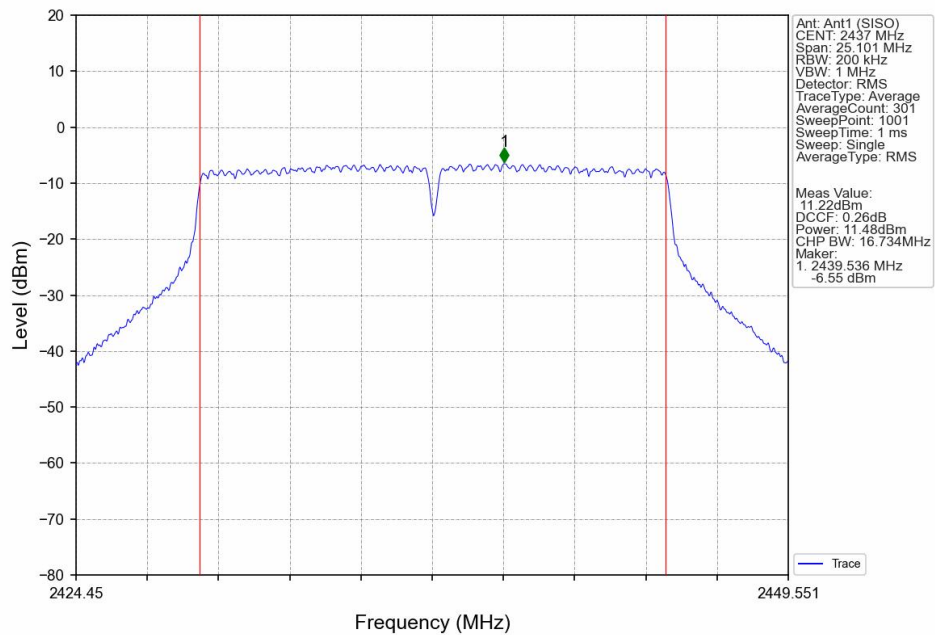
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



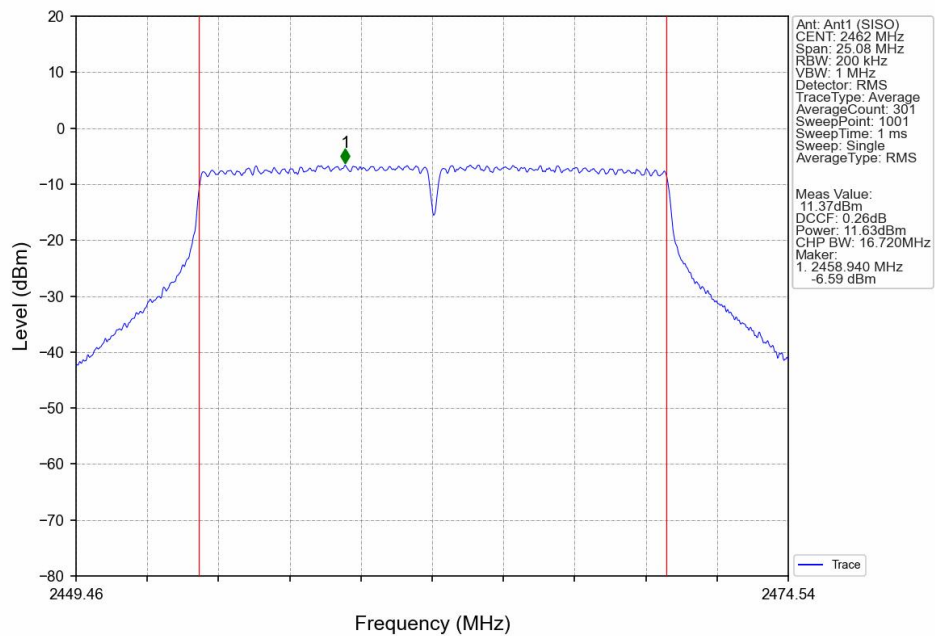
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



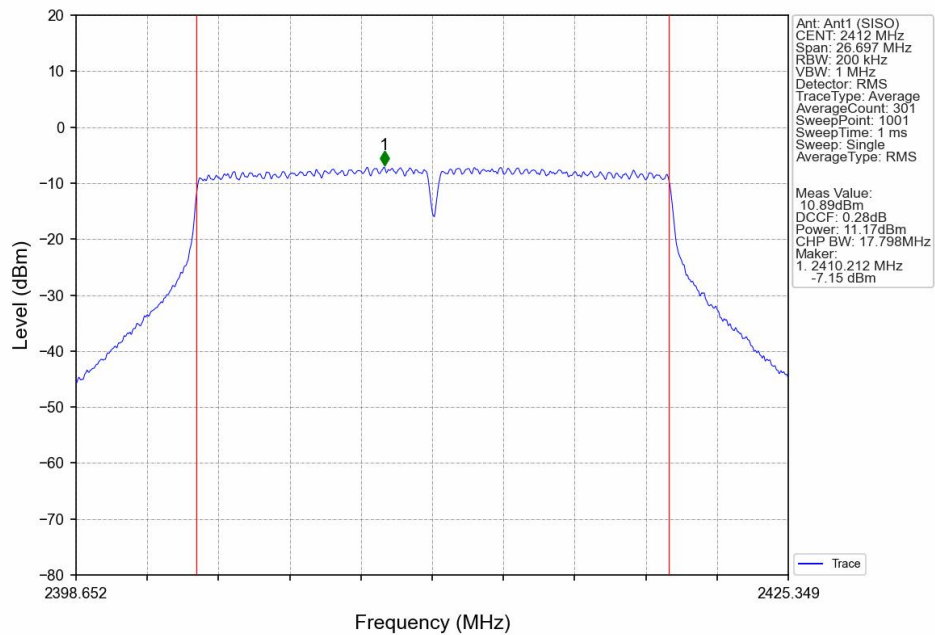
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



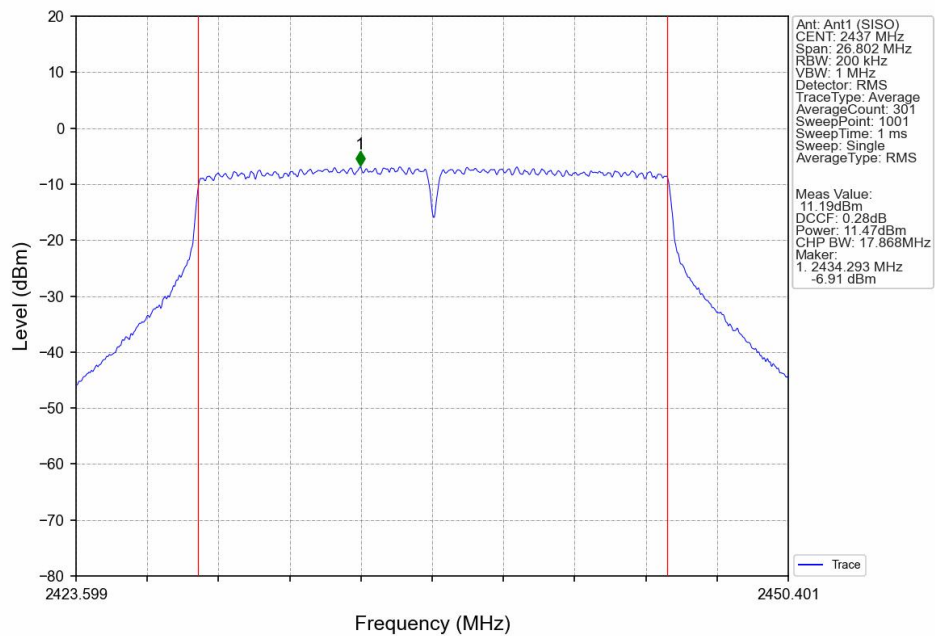
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



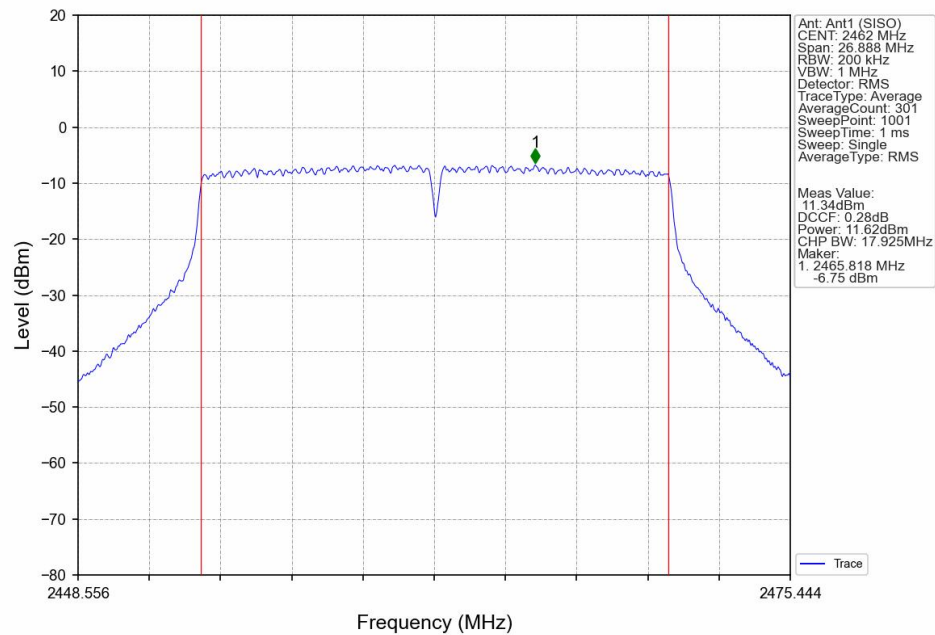
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

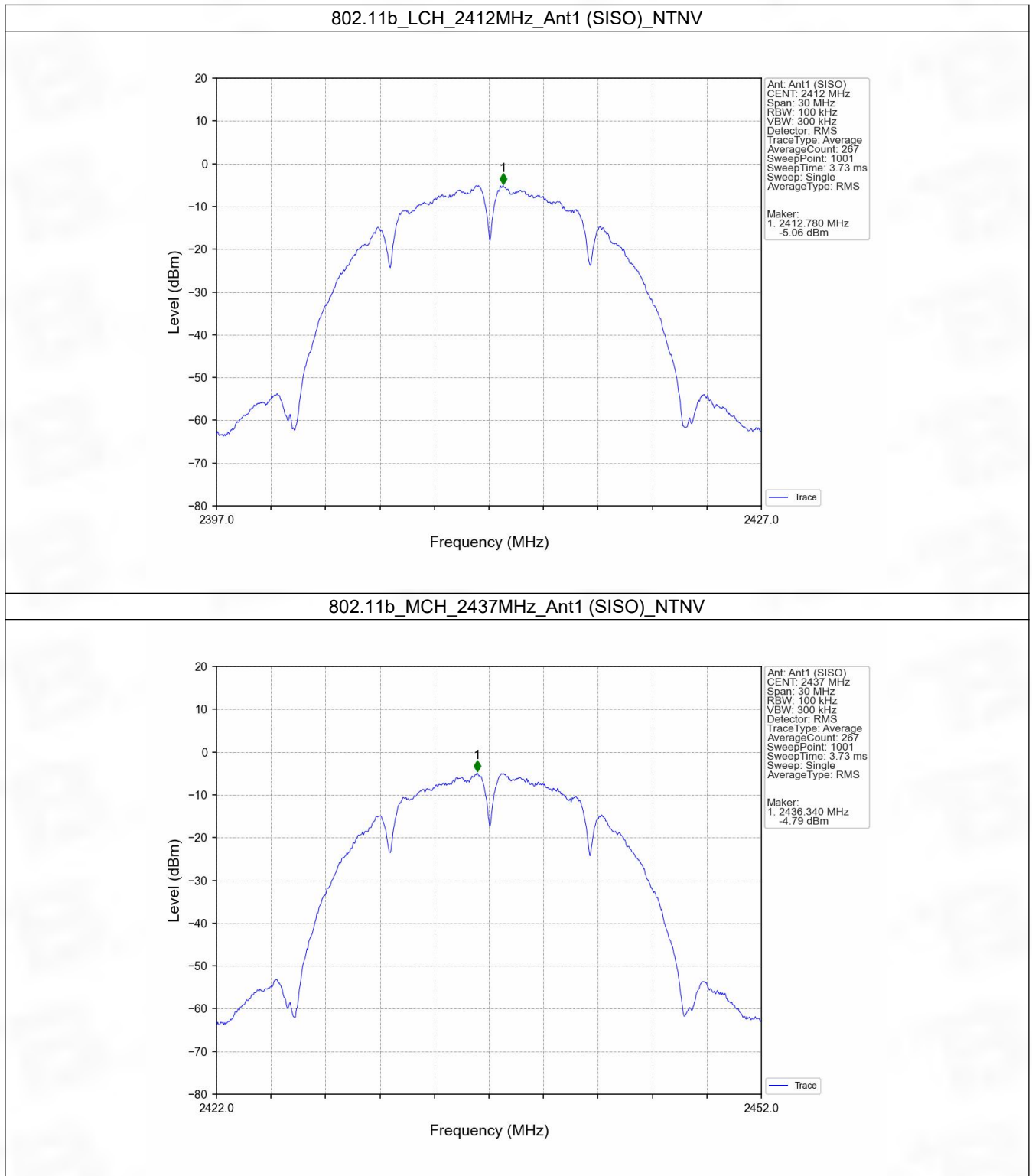
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	-5.06dBm/100kHz	<=8	Pass
		2437	-4.79dBm/100kHz	<=8	Pass
		2462	-4.77dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-8.98dBm/100kHz	<=8	Pass
		2437	-8.26dBm/100kHz	<=8	Pass
		2462	-8.43dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-9.16dBm/100kHz	<=8	Pass
		2437	-8.92dBm/100kHz	<=8	Pass
		2462	-8.56dBm/100kHz	<=8	Pass

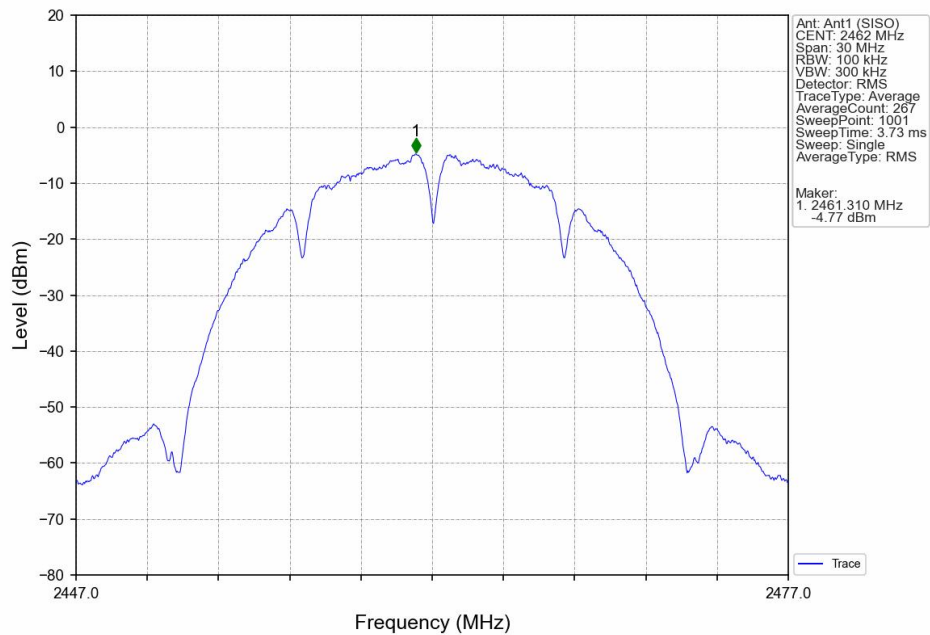
Note1: Antenna Gain: Ant1: 2.45dBi;

4.2 Test Graph

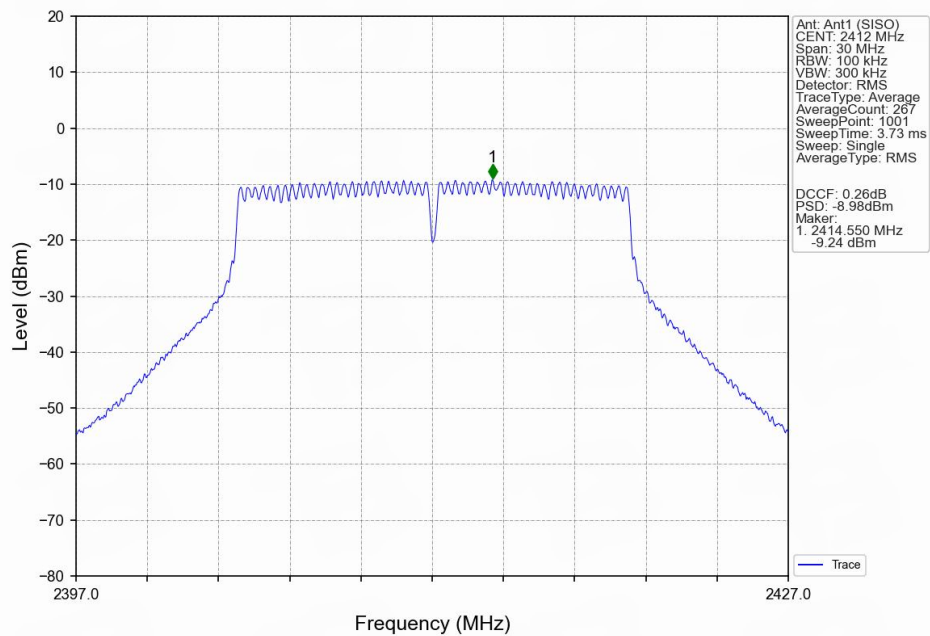
4.2.1 PSD



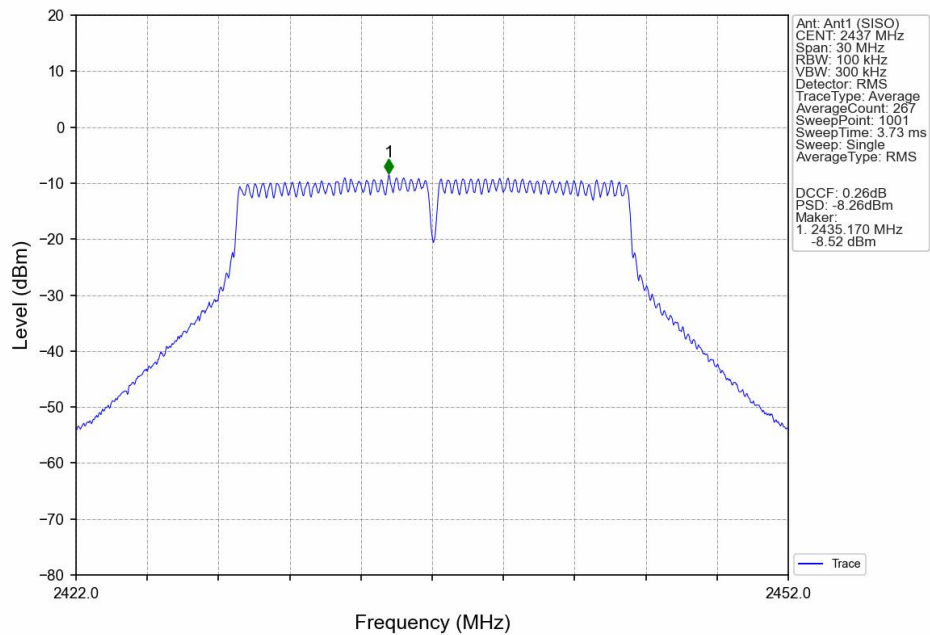
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



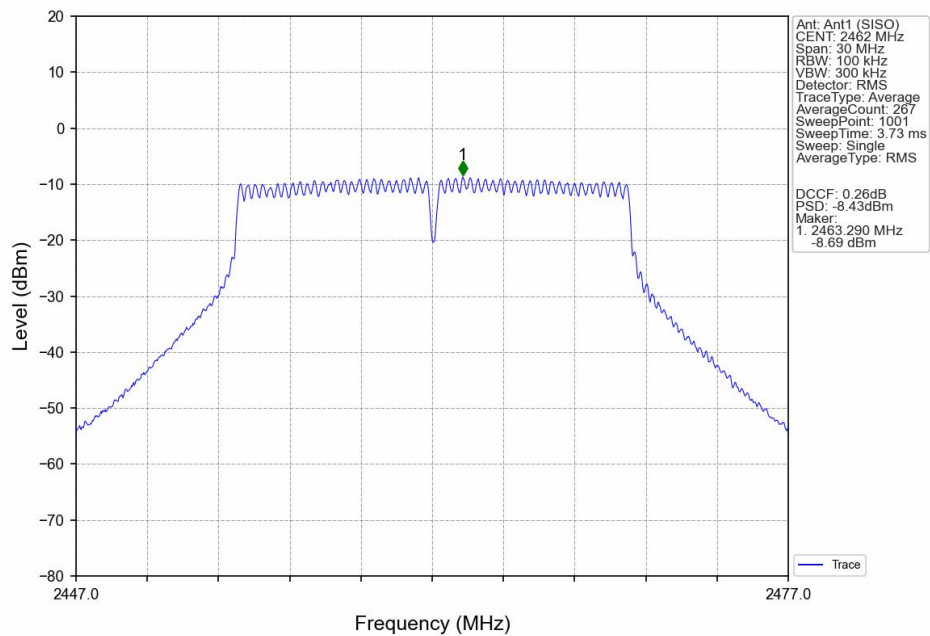
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



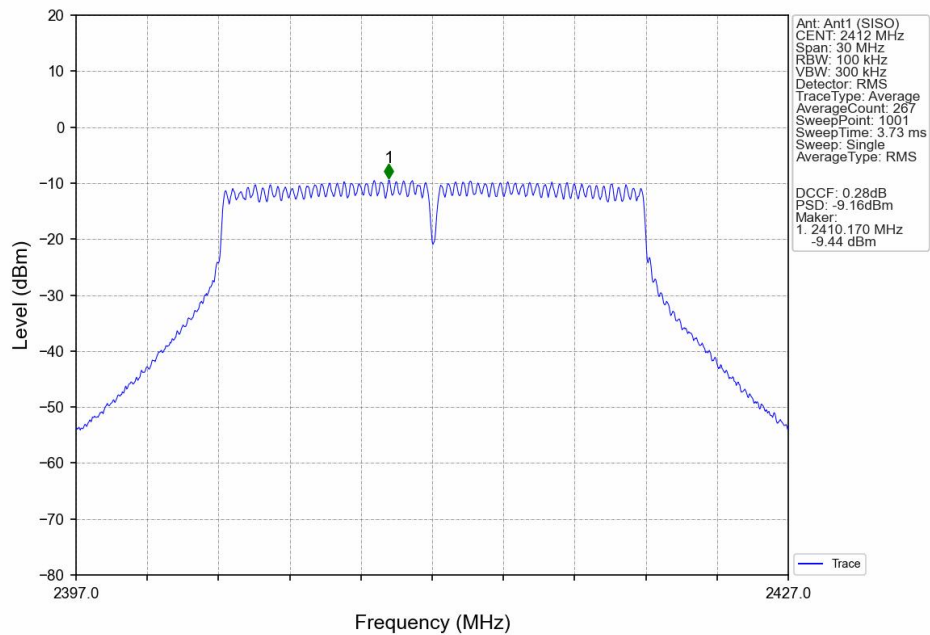
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



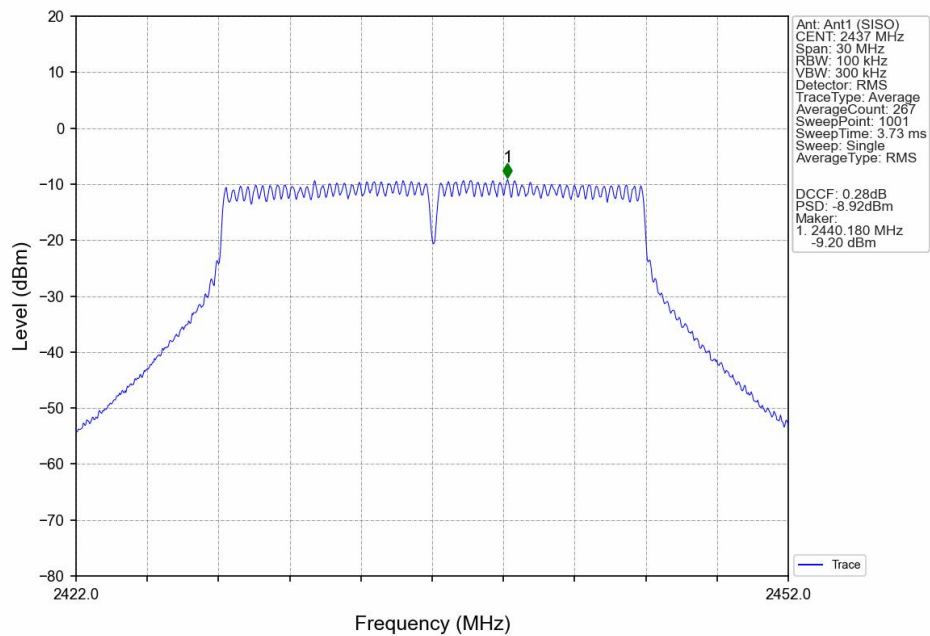
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



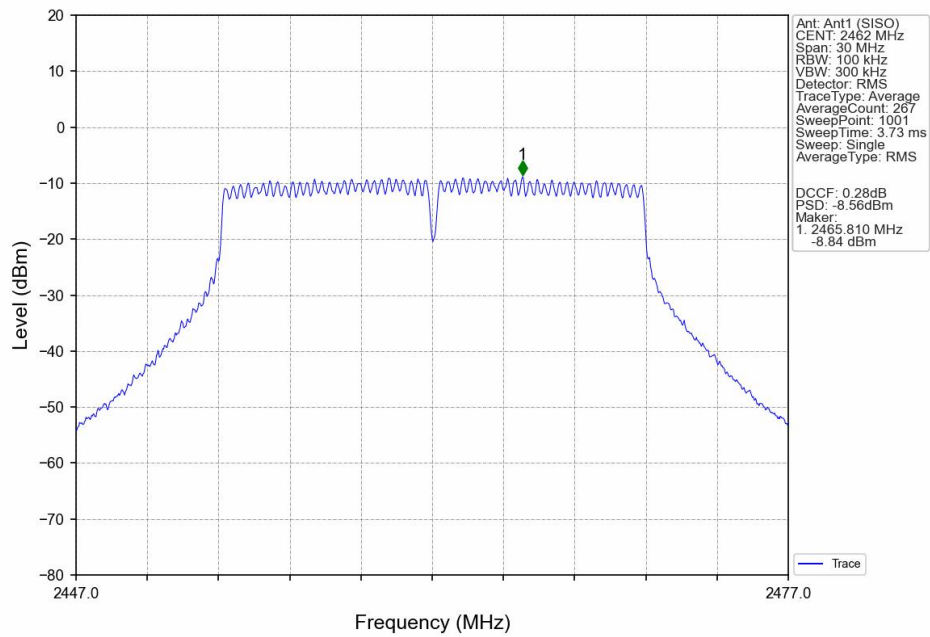
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



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	3.47
		2437	1	3.49
		2462	1	3.94
802.11g	SISO	2412	1	-0.05
		2437	1	0.01
		2462	1	0.42
802.11n (HT20)	SISO	2412	1	0.35
		2437	1	0.62
		2462	1	0.79

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	3.47	-26.53	Pass
		2437	1	3.49	-26.51	Pass
		2462	1	3.94	-26.06	Pass
802.11g	SISO	2412	1	-0.05	-30.05	Pass
		2437	1	0.01	-29.99	Pass
		2462	1	0.42	-29.58	Pass
802.11n (HT20)	SISO	2412	1	0.35	-29.65	Pass
		2437	1	0.62	-29.38	Pass
		2462	1	0.79	-29.21	Pass