

Appendix for 2.4G Wi-Fi

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1. Duty Cycle

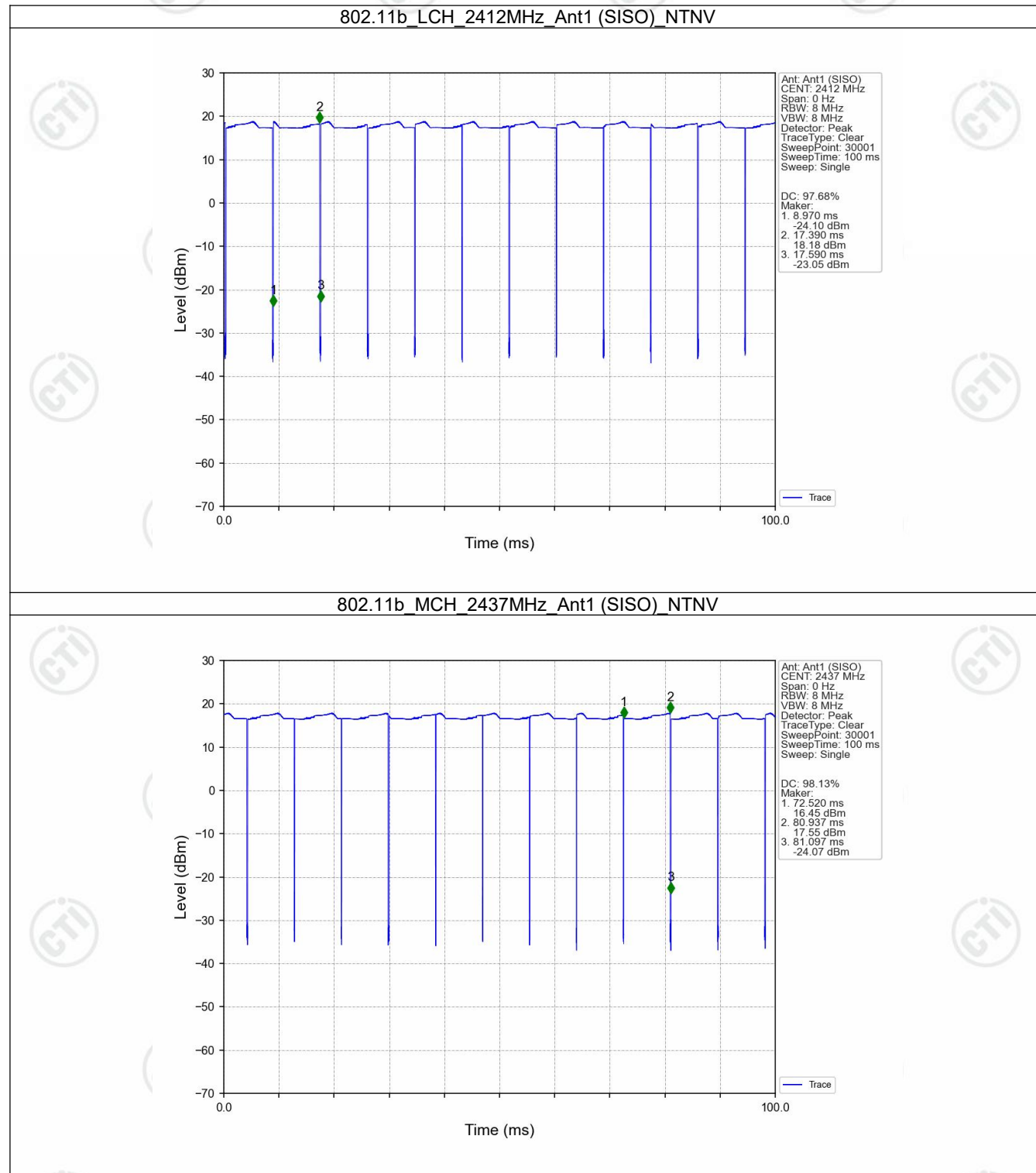
1.1 Test Result

1.1.1 Ant1

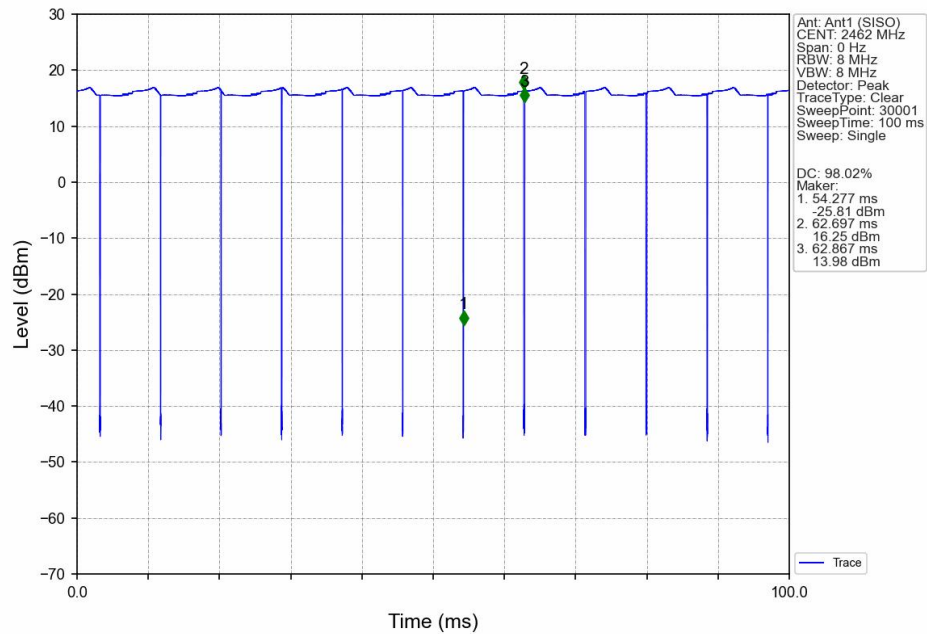
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.420	8.620	97.68	0.10	0.91
		2437	8.417	8.577	98.13	0.08	1.00
		2462	8.420	8.590	98.02	0.09	1.16
802.11g	SISO	2412	1.396	1.633	85.49	0.68	6.11
		2437	1.396	1.632	85.54	0.68	6.08
		2462	1.396	1.557	89.66	0.47	1.63
802.11n (HT20)	SISO	2412	5.091	5.324	95.62	0.19	1.99
		2437	5.090	5.297	96.09	0.17	1.51
		2462	5.089	5.266	96.64	0.15	0.87
802.11n (HT40)	SISO	2422	2.469	2.694	91.65	0.38	3.49
		2437	2.470	2.695	91.65	0.38	2.85
		2452	2.470	2.695	91.65	0.38	3.49

1.2 Test Graph

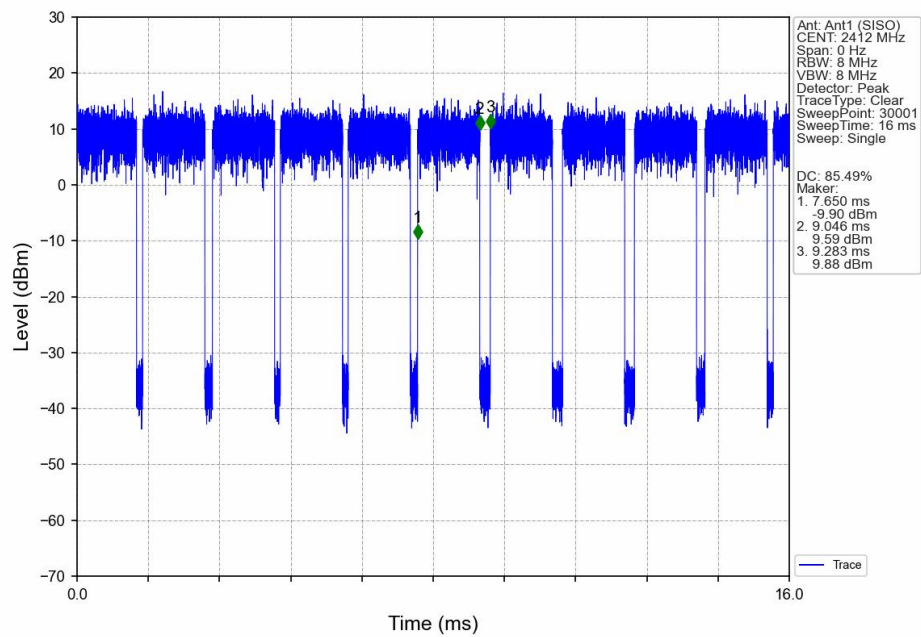
1.2.1 Ant1



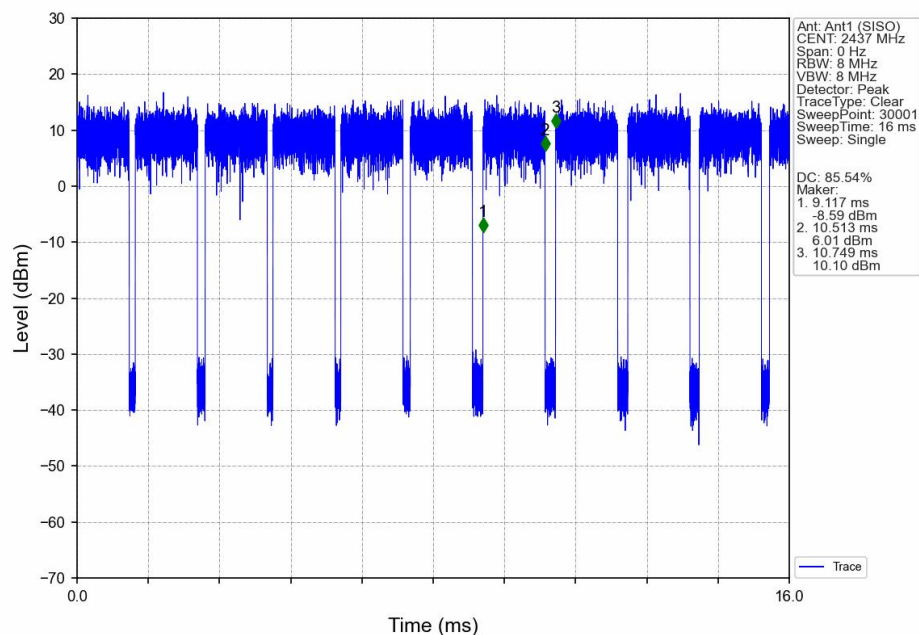
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



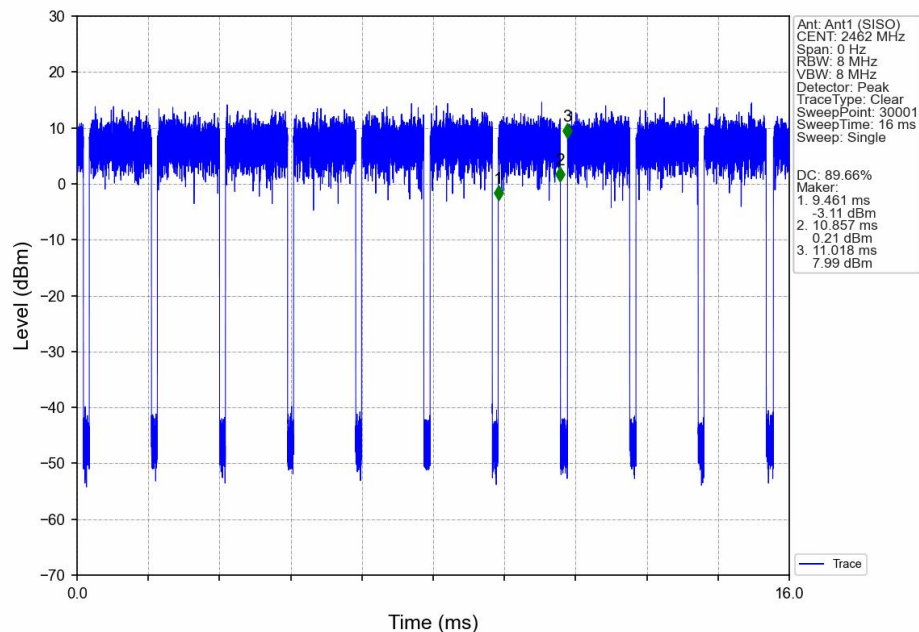
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



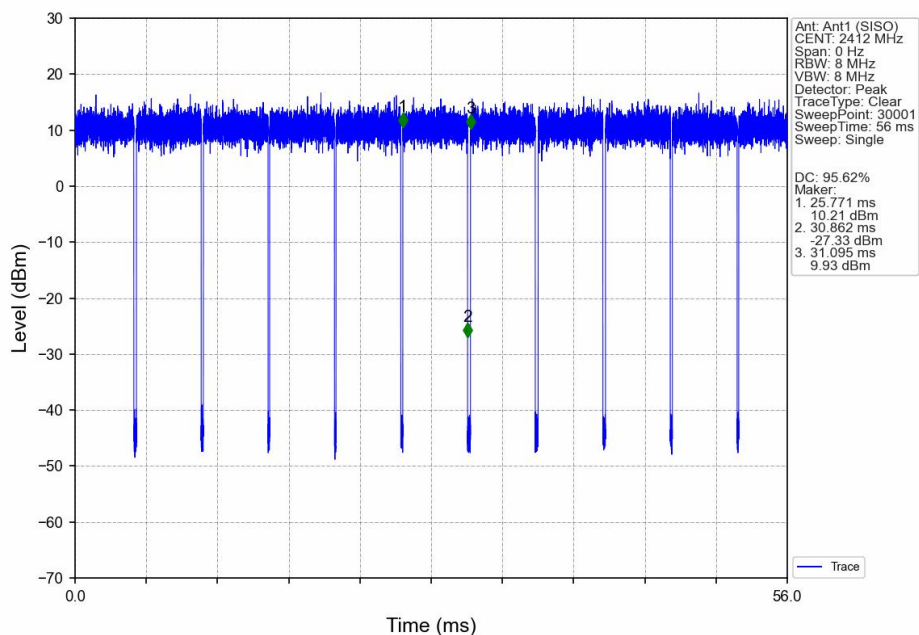
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



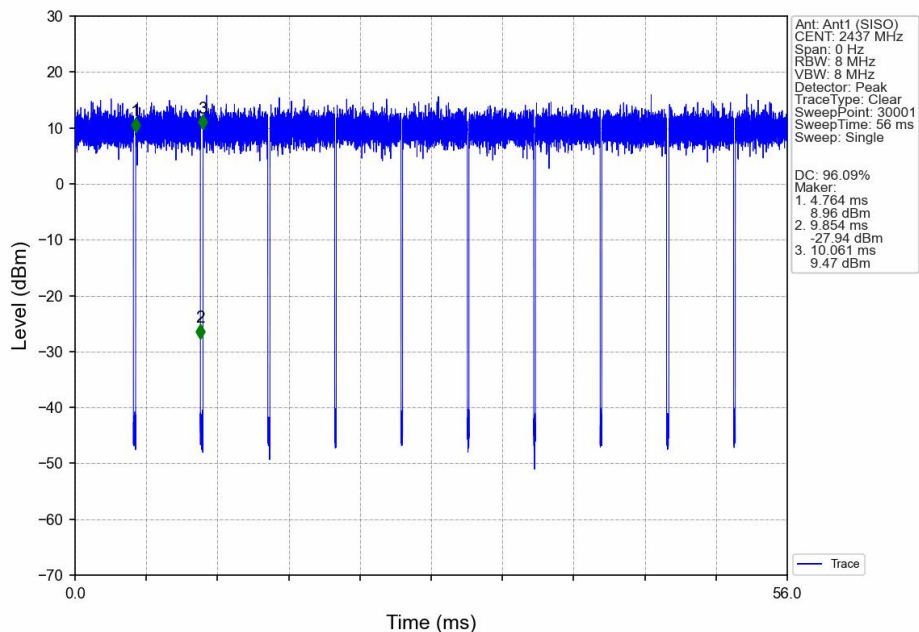
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



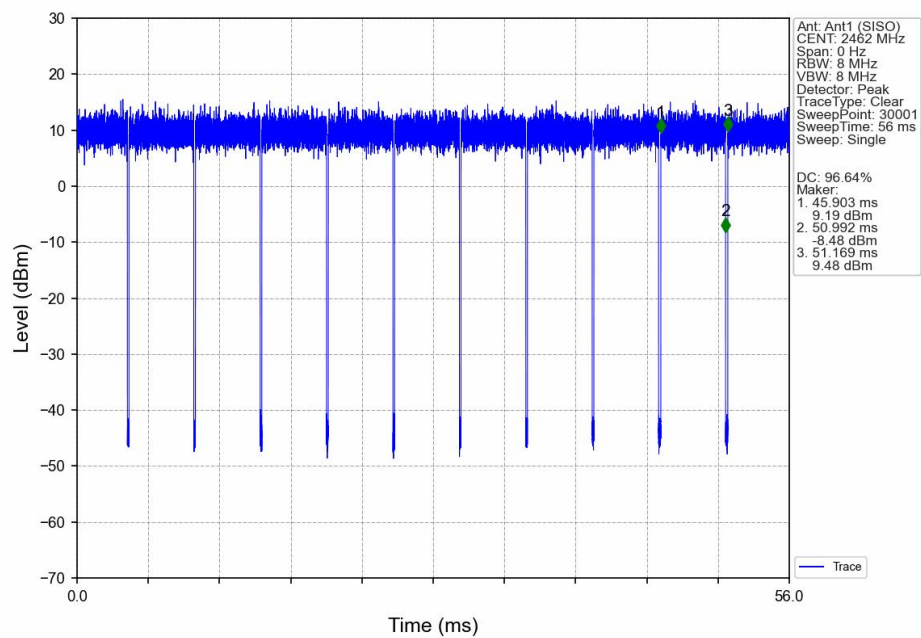
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



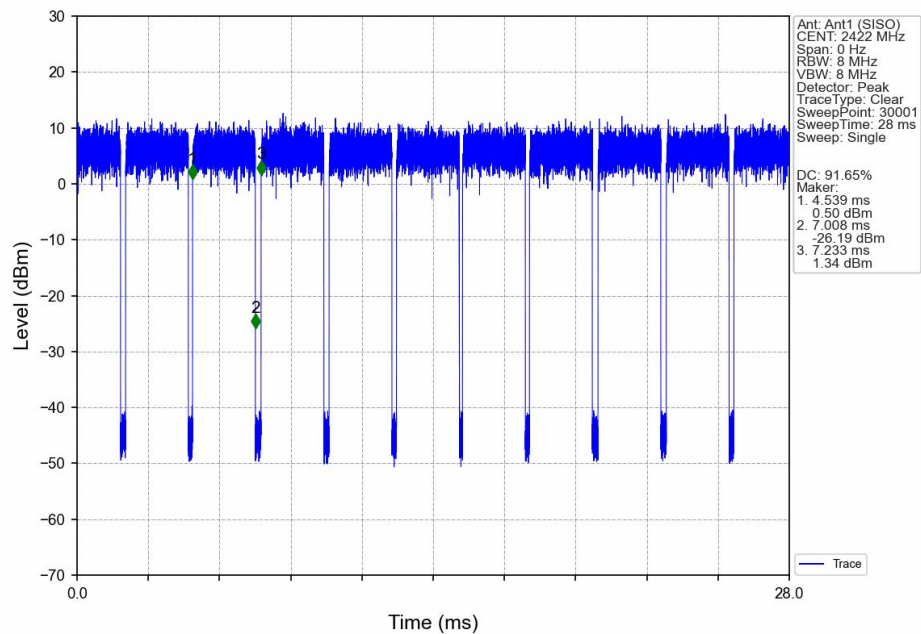
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



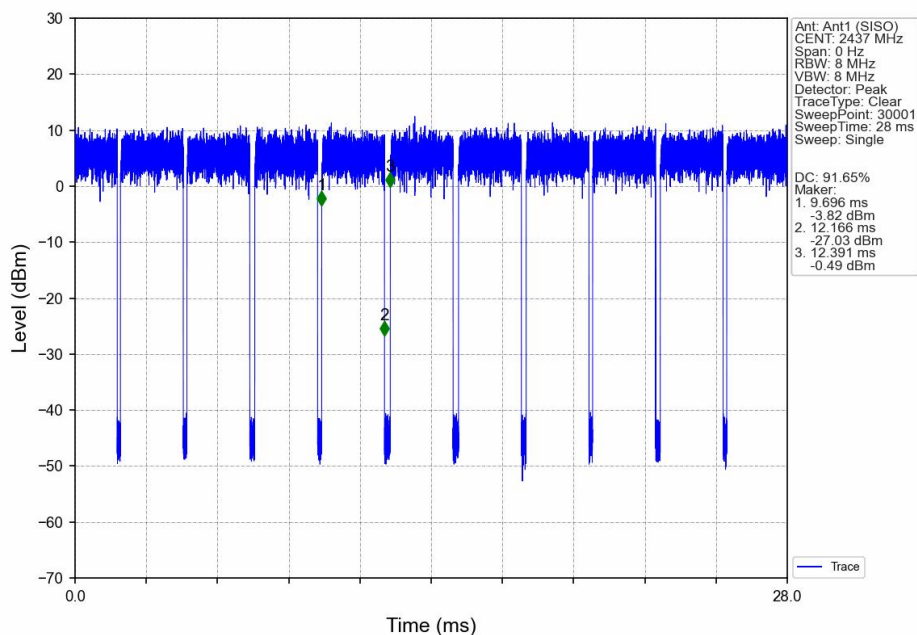
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



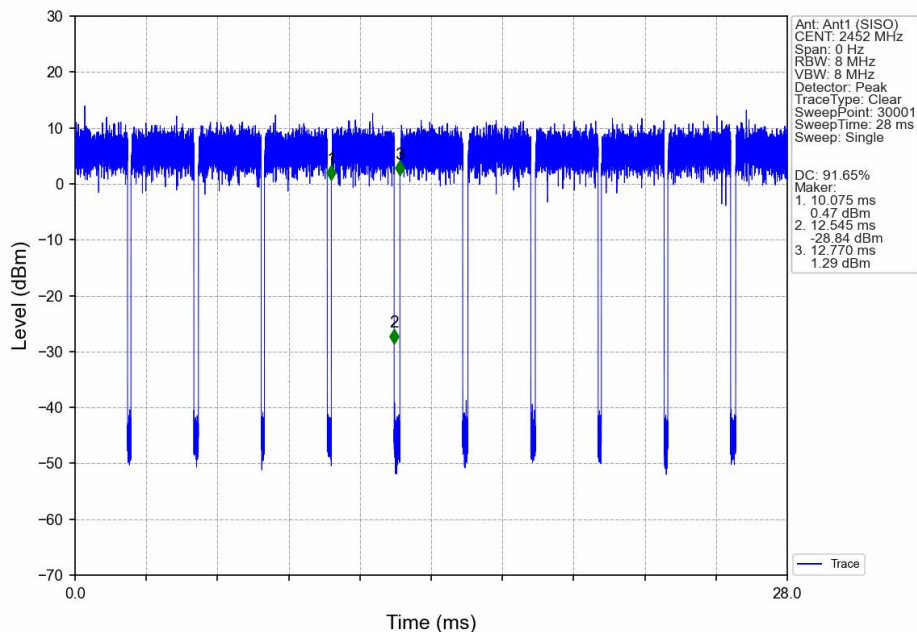
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

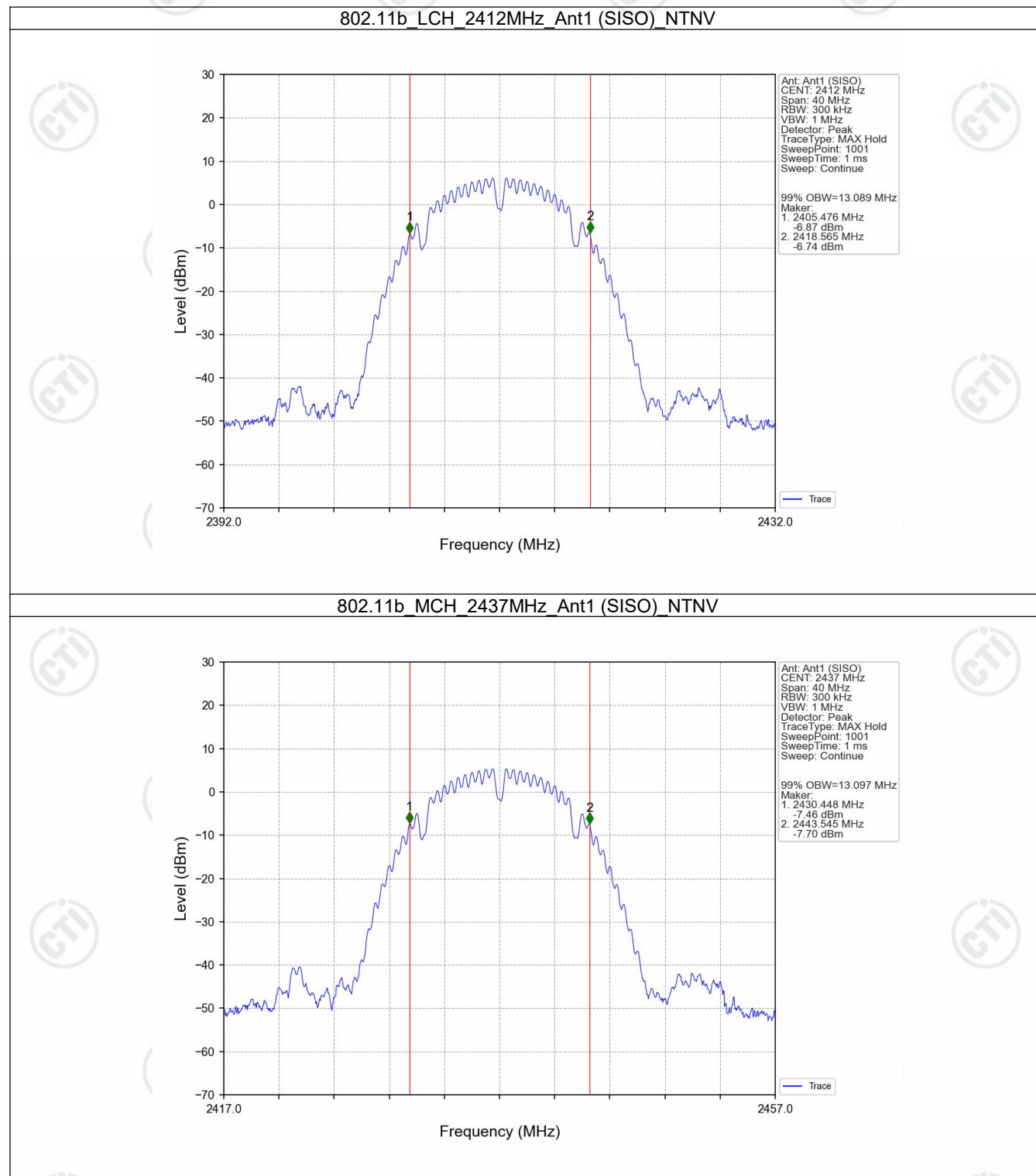
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	13.089	/	Pass
		2437	1	13.097	/	Pass
		2462	1	13.079	/	Pass
802.11g	SISO	2412	1	17.119	/	Pass
		2437	1	17.065	/	Pass
		2462	1	17.086	/	Pass
802.11n (HT20)	SISO	2412	1	18.221	/	Pass
		2437	1	18.231	/	Pass
		2462	1	18.262	/	Pass
802.11n (HT40)	SISO	2422	1	37.272	/	Pass
		2437	1	37.237	/	Pass
		2452	1	37.364	/	Pass

2.1.2 6dB BW

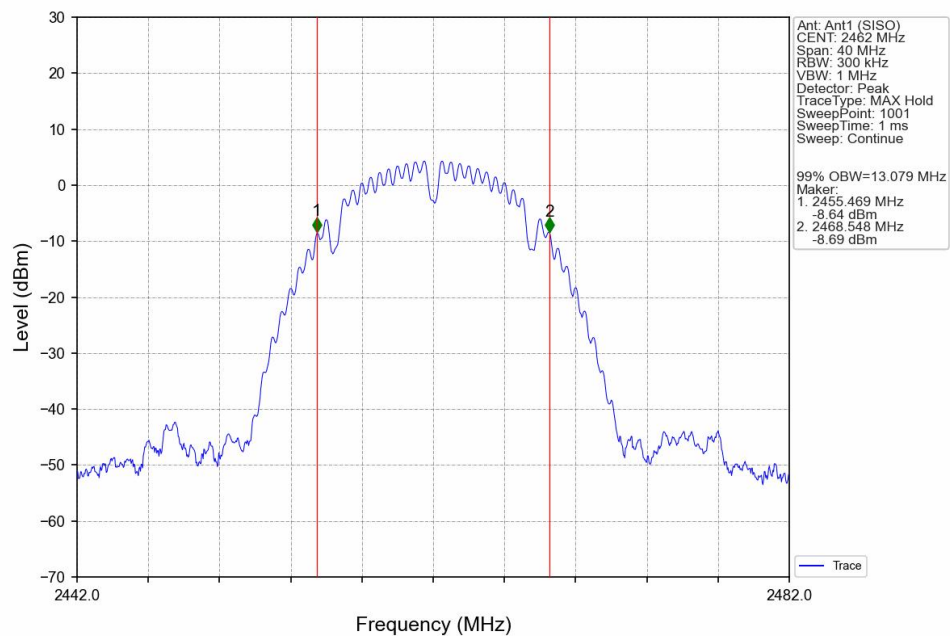
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.216	≥ 0.5	Pass
		2437	1	9.214	≥ 0.5	Pass
		2462	1	9.214	≥ 0.5	Pass
802.11g	SISO	2412	1	16.406	≥ 0.5	Pass
		2437	1	16.422	≥ 0.5	Pass
		2462	1	16.398	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.602	≥ 0.5	Pass
		2437	1	17.573	≥ 0.5	Pass
		2462	1	17.655	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.993	≥ 0.5	Pass
		2437	1	36.287	≥ 0.5	Pass
		2452	1	36.349	≥ 0.5	Pass

2.2 Test Graph

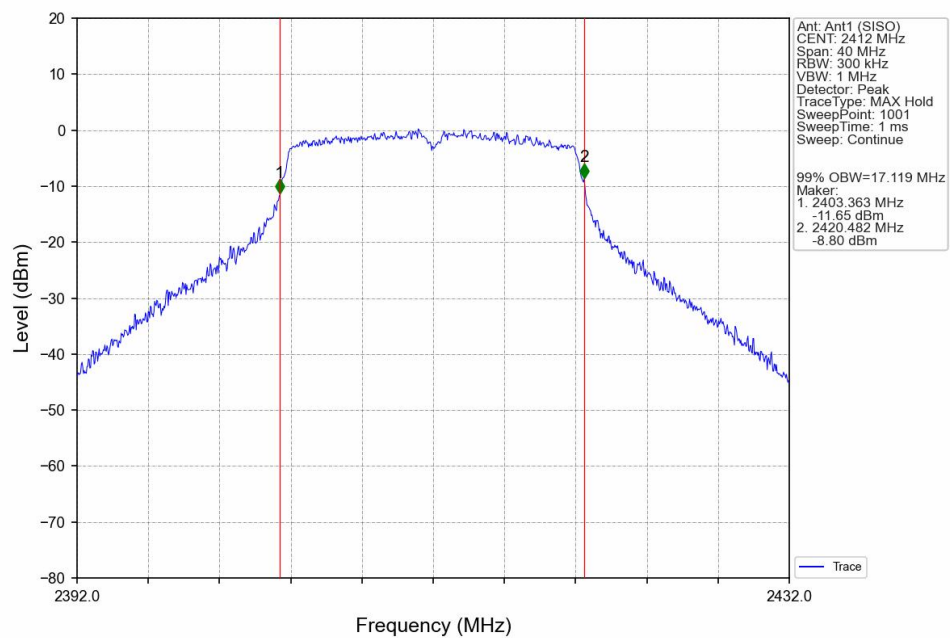
2.2.1 OBW



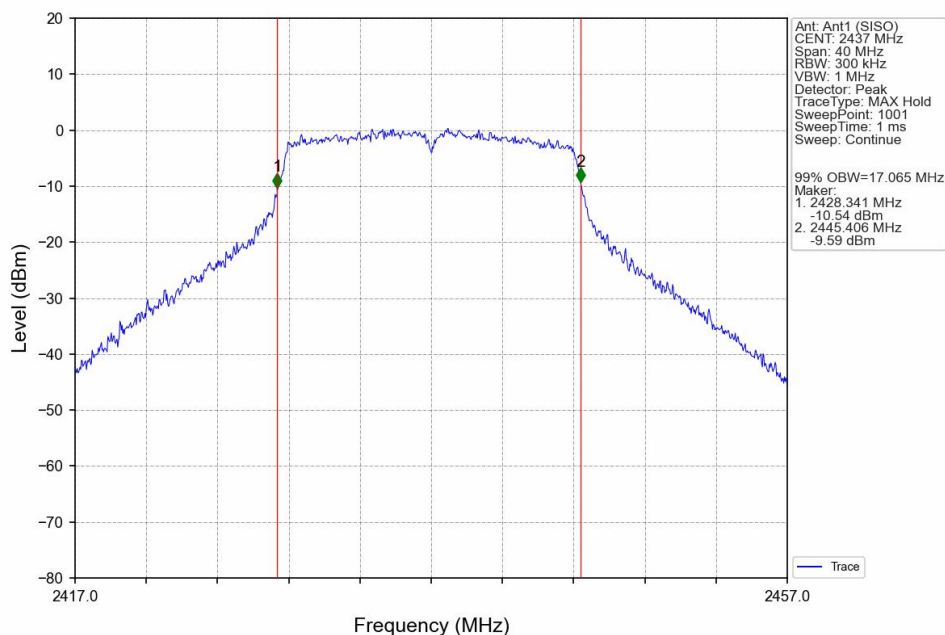
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



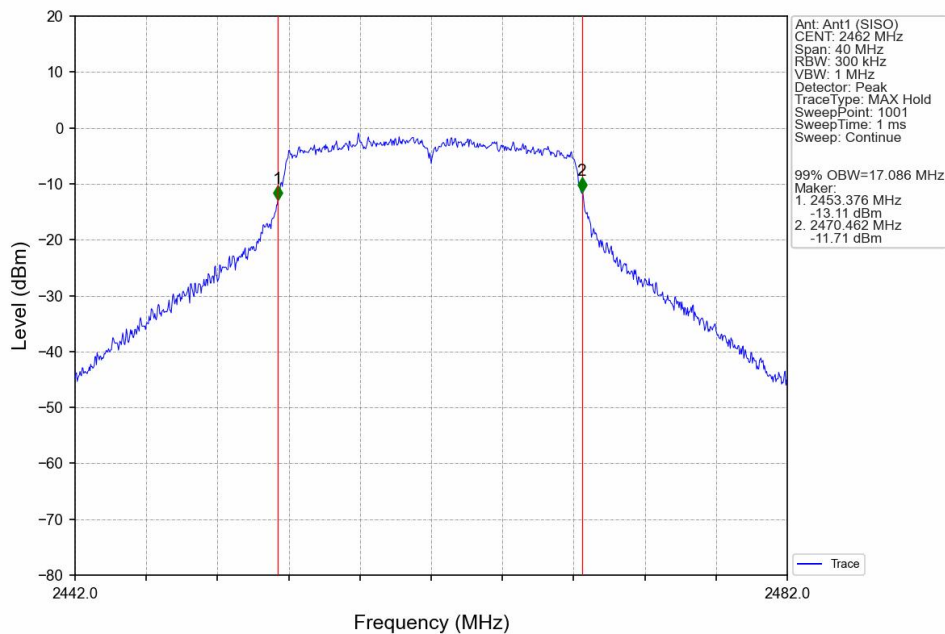
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



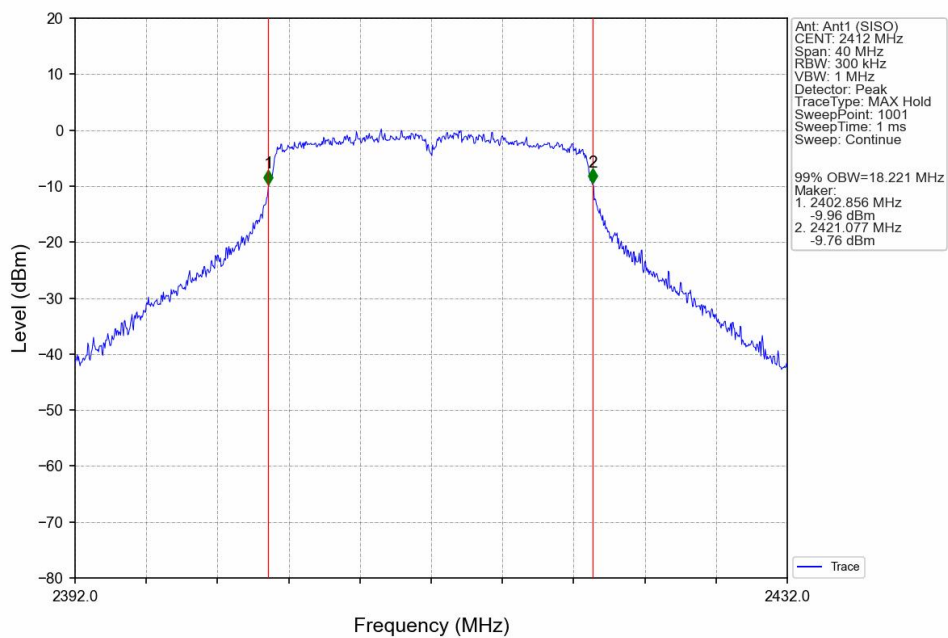
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



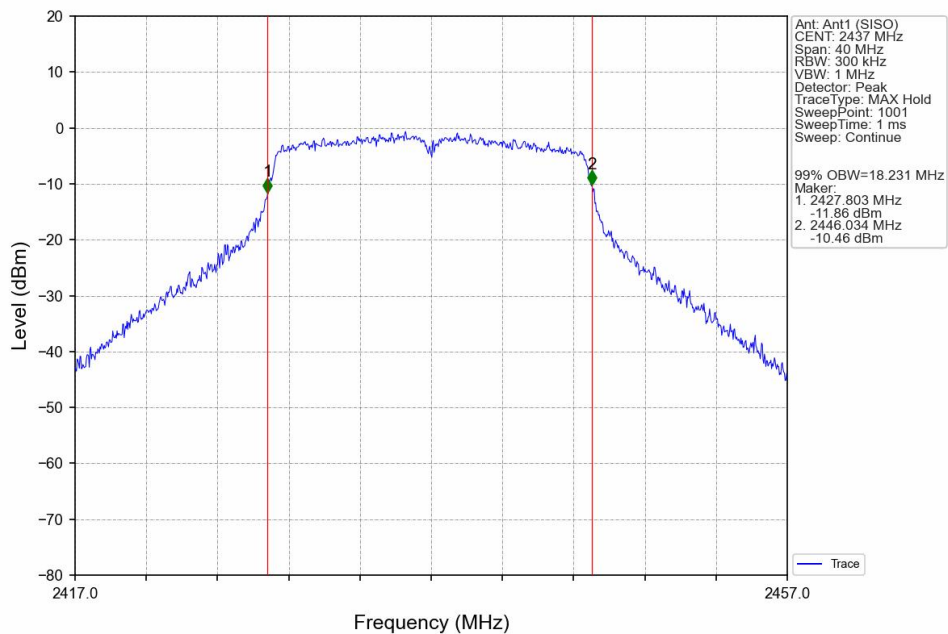
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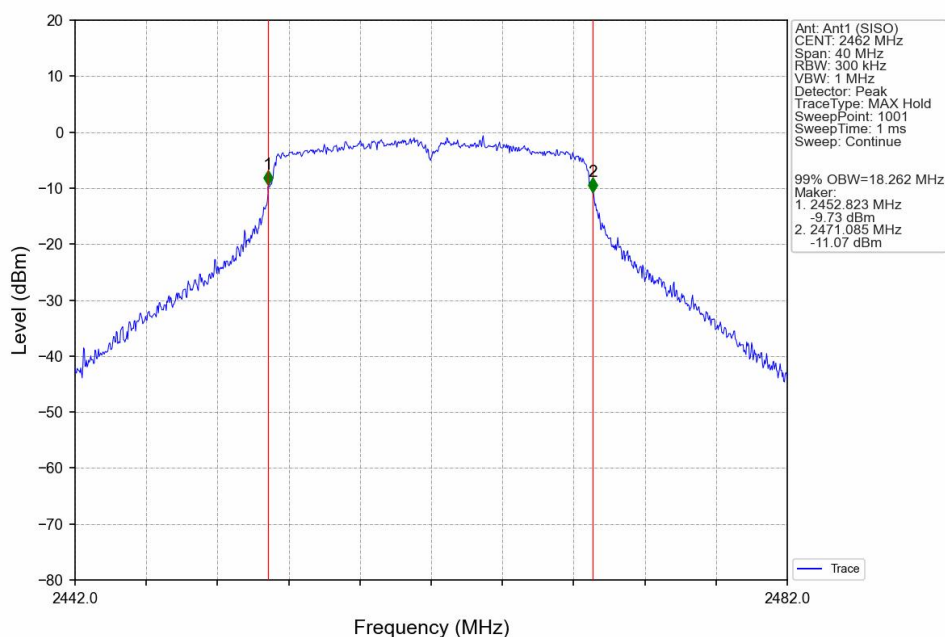
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



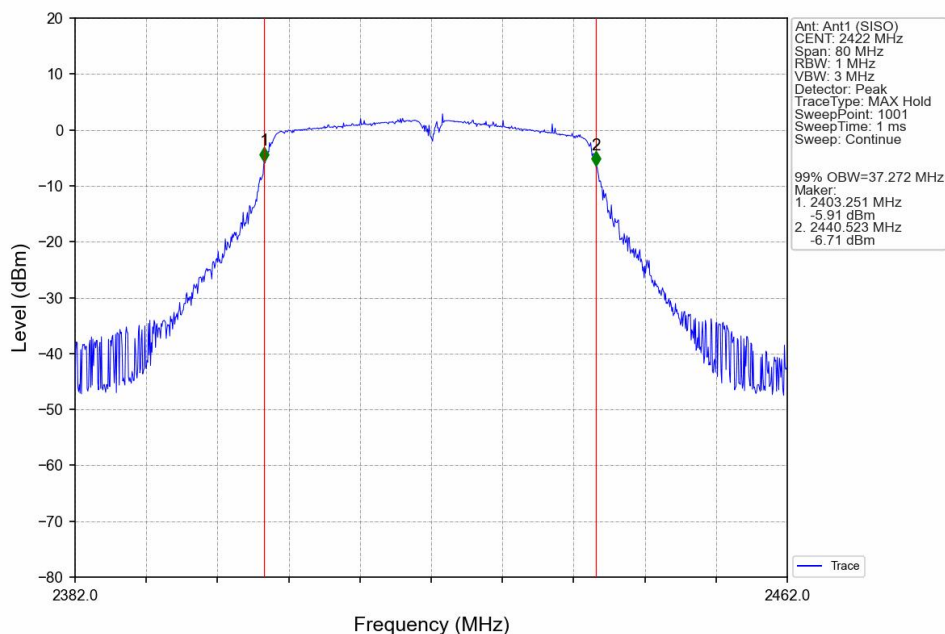
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



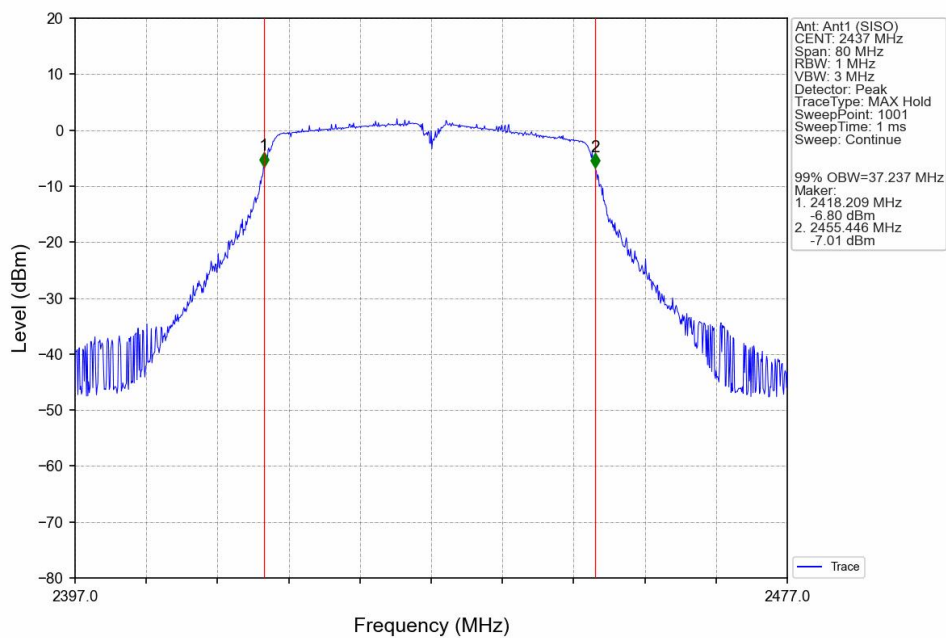
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



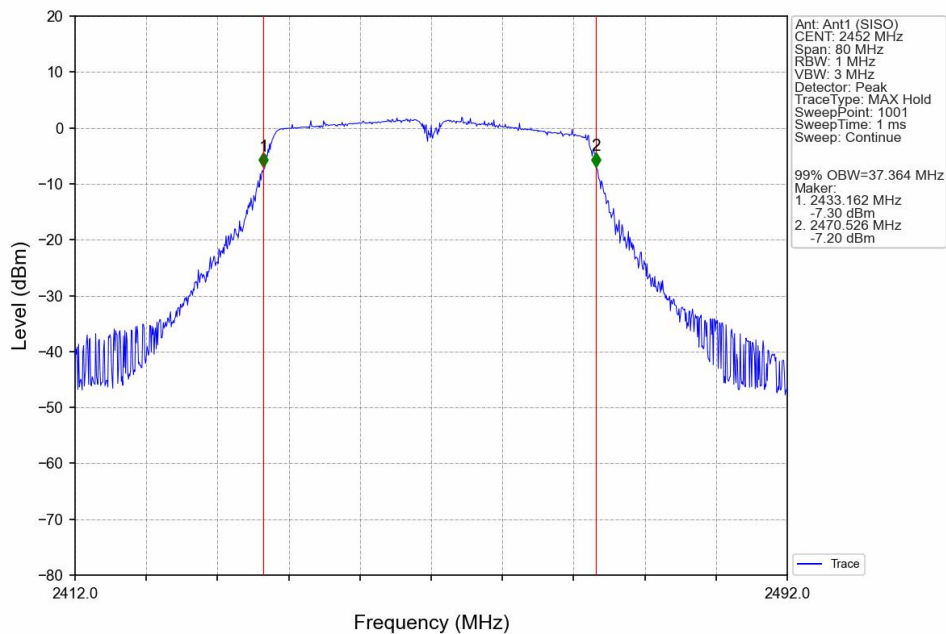
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



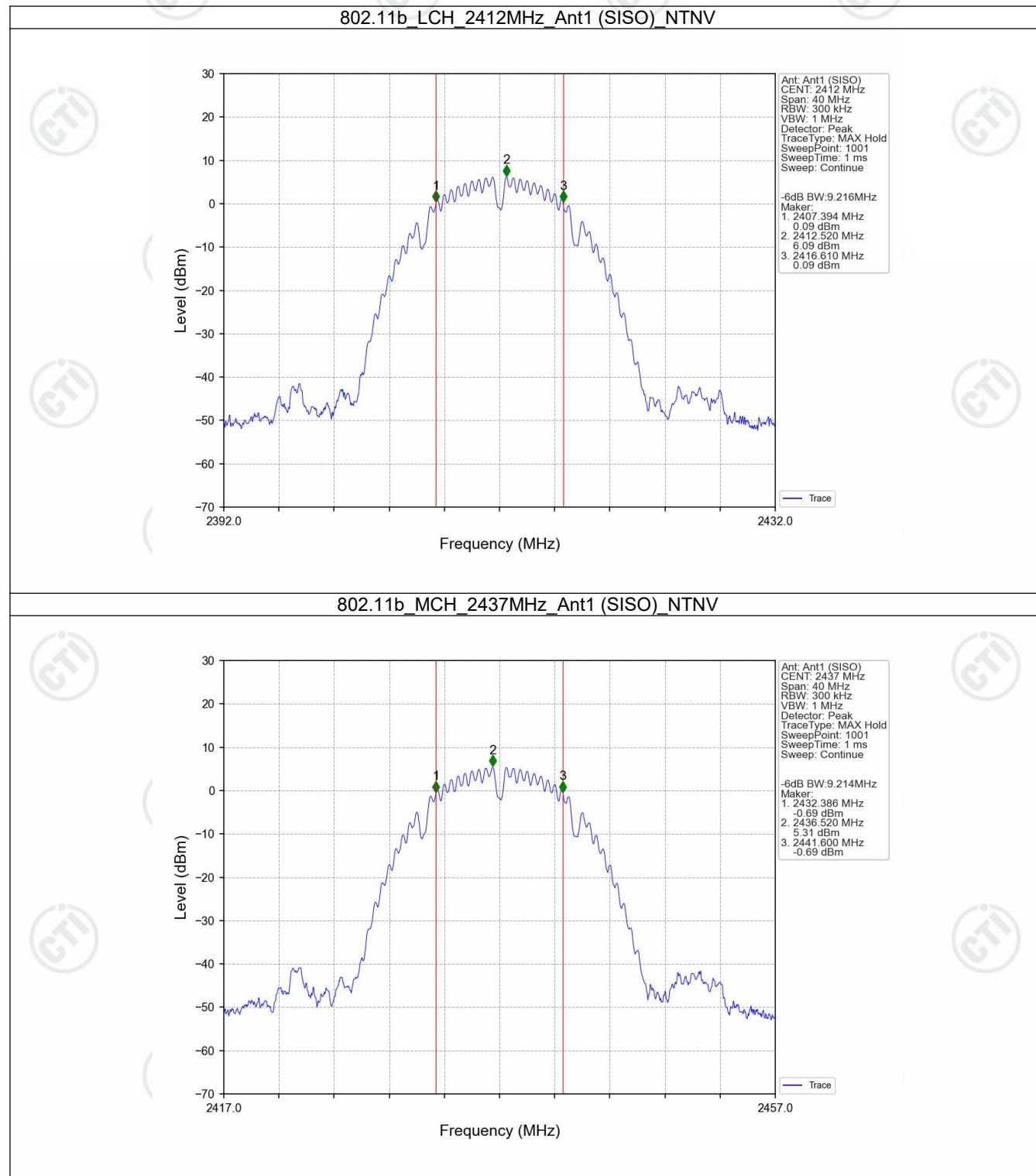
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



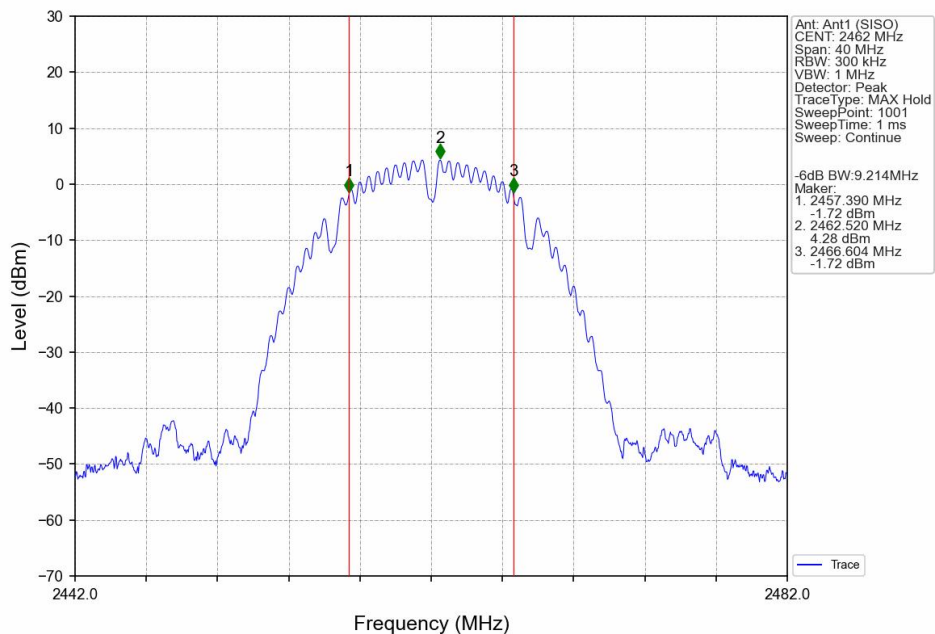
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



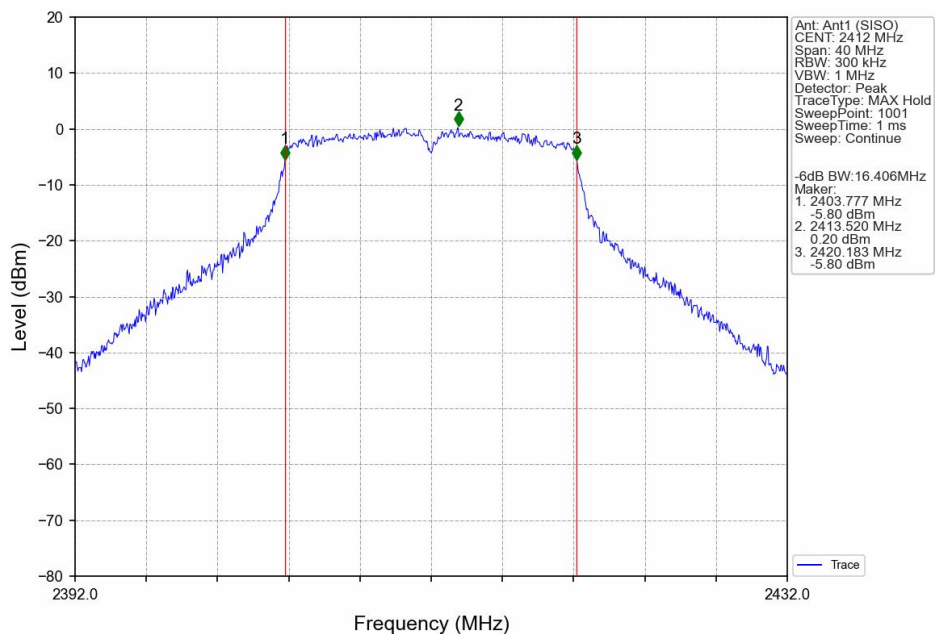
2.2.2 6dB BW



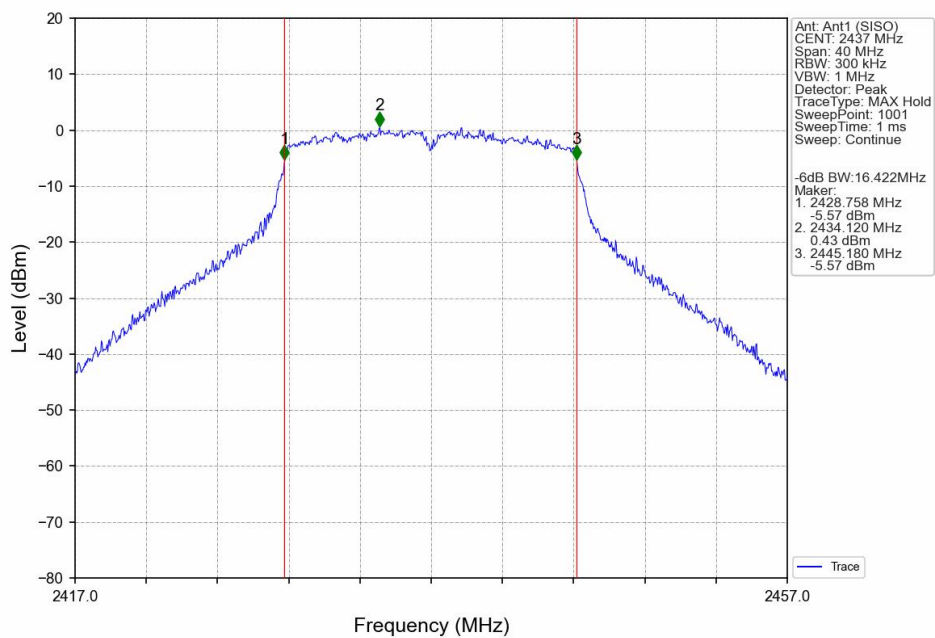
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



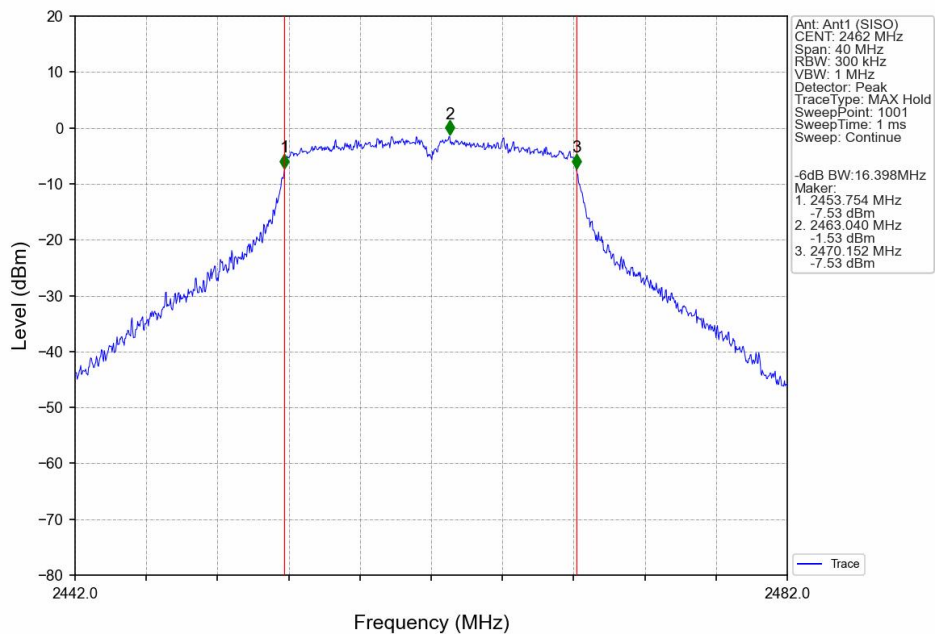
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



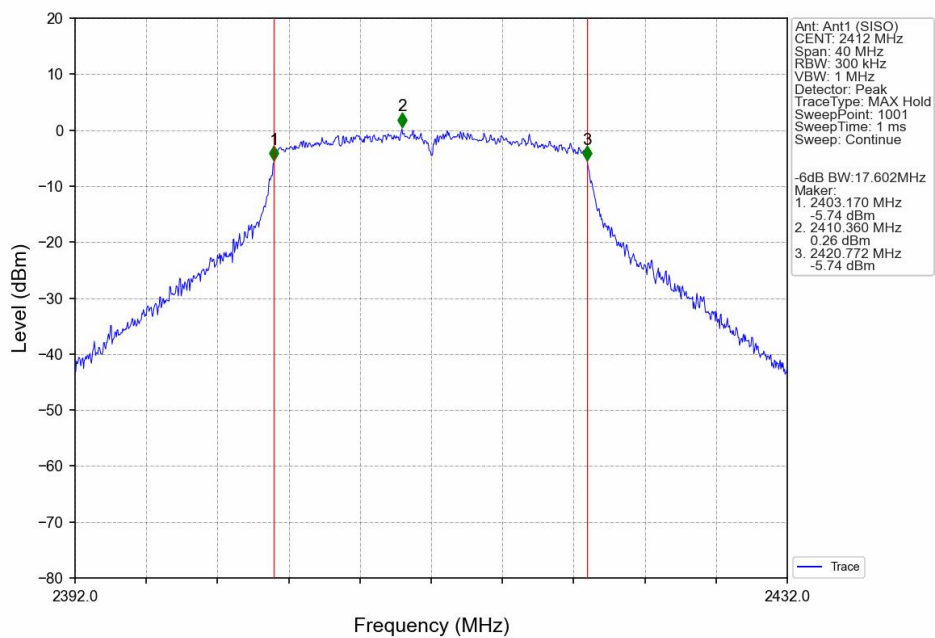
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



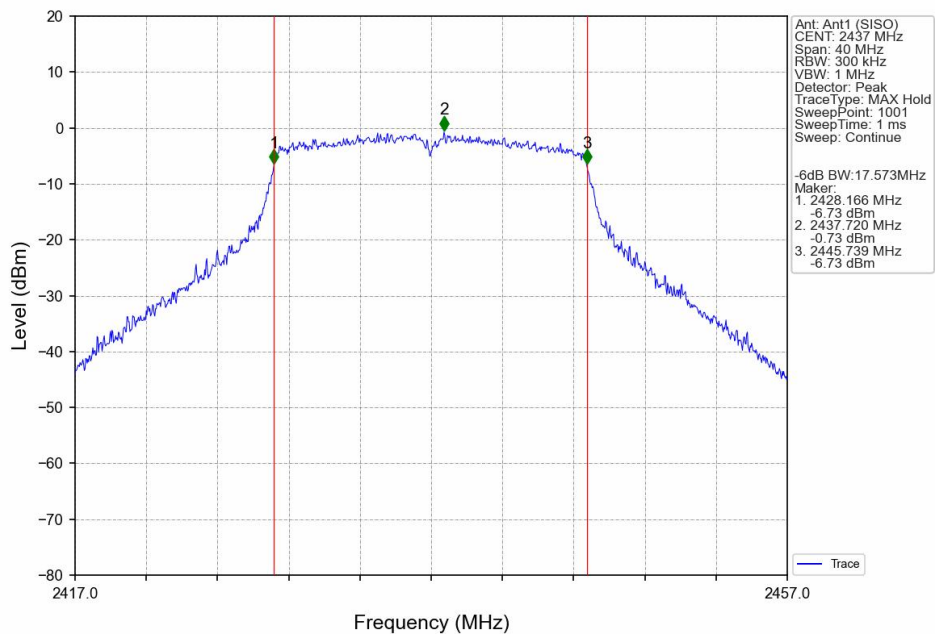
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



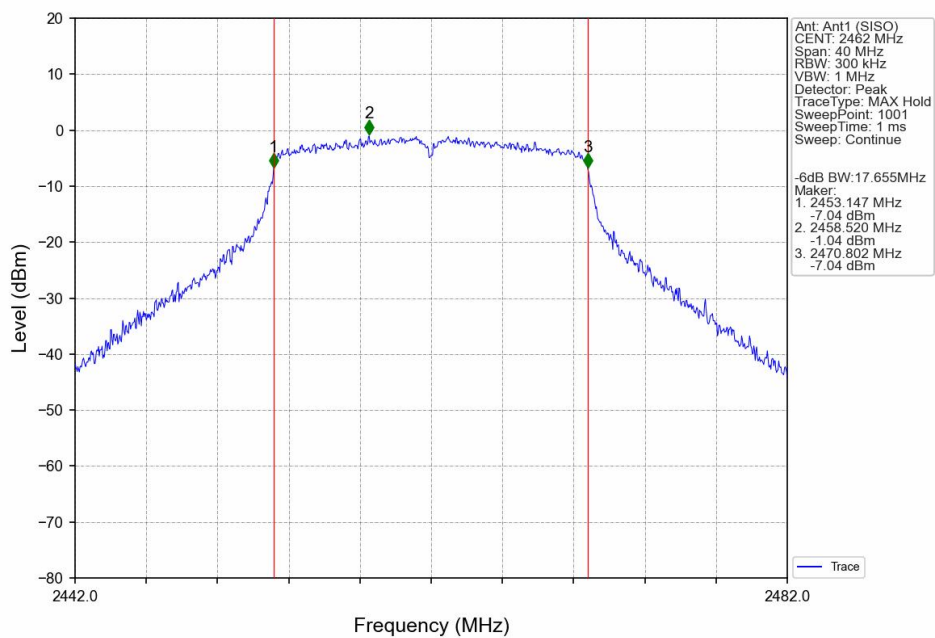
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



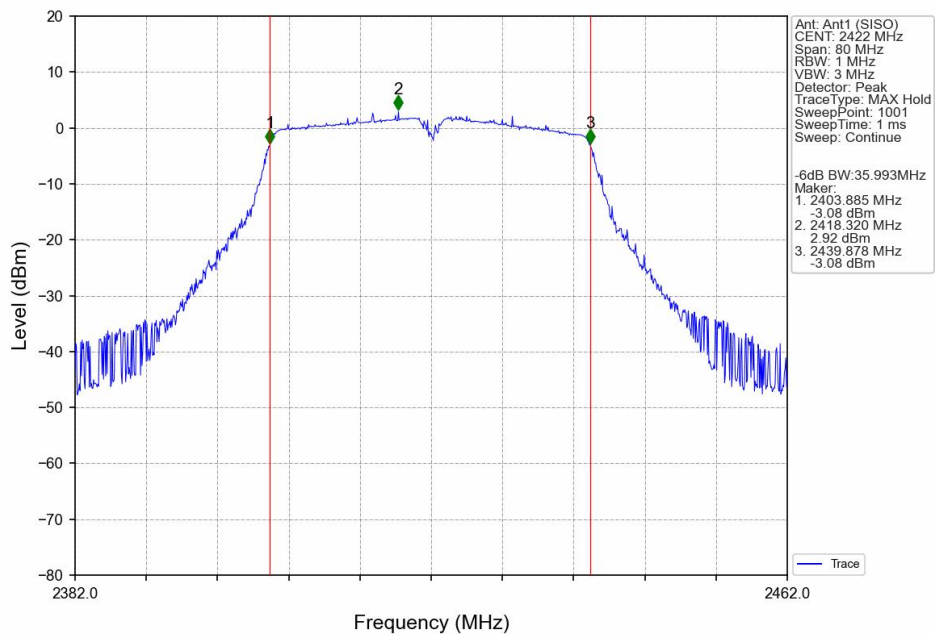
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



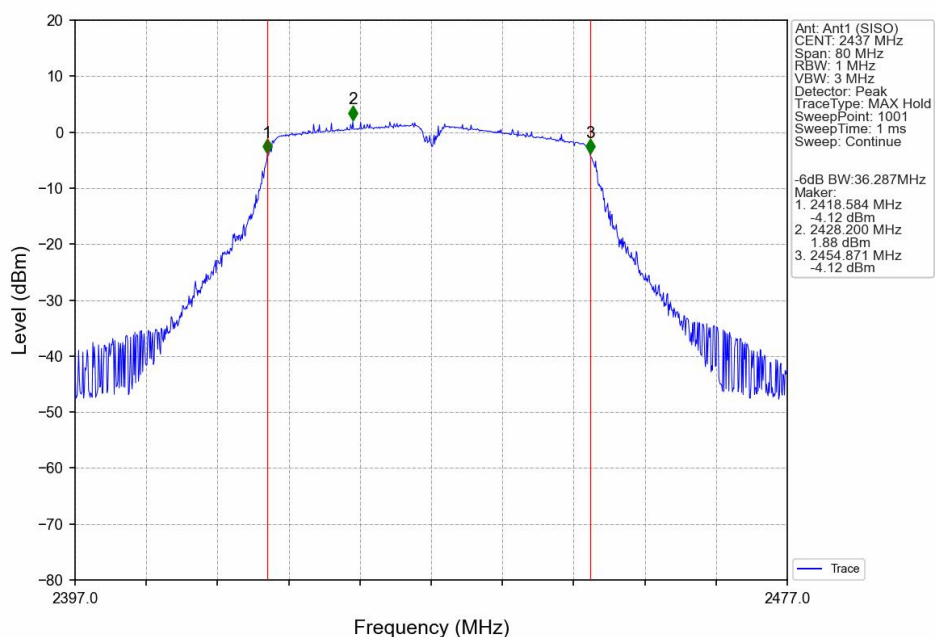
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



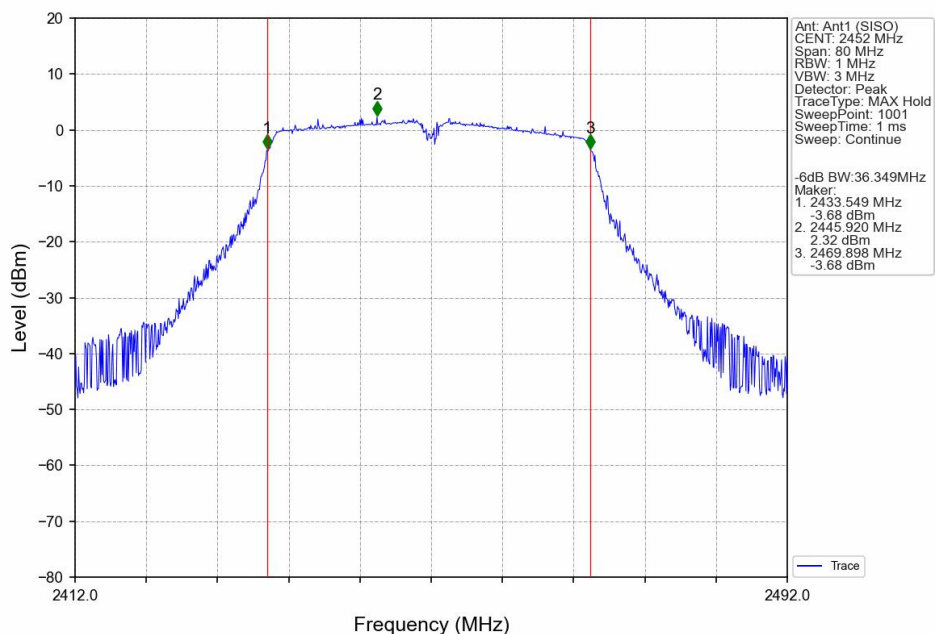
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	16.74	<=30	Pass
		2437	15.94	<=30	Pass
		2462	16.40	<=30	Pass
802.11g	SISO	2412	15.98	<=30	Pass
		2437	15.23	<=30	Pass
		2462	15.22	<=30	Pass
802.11n (HT20)	SISO	2412	15.94	<=30	Pass
		2437	15.19	<=30	Pass
		2462	15.13	<=30	Pass
802.11n (HT40)	SISO	2422	15.65	<=30	Pass
		2437	15.24	<=30	Pass
		2452	15.60	<=30	Pass

Note1: Antenna Gain: Ant1: 1.78dBi;

4. Maximum Power Spectral Density

4.1 Test Result

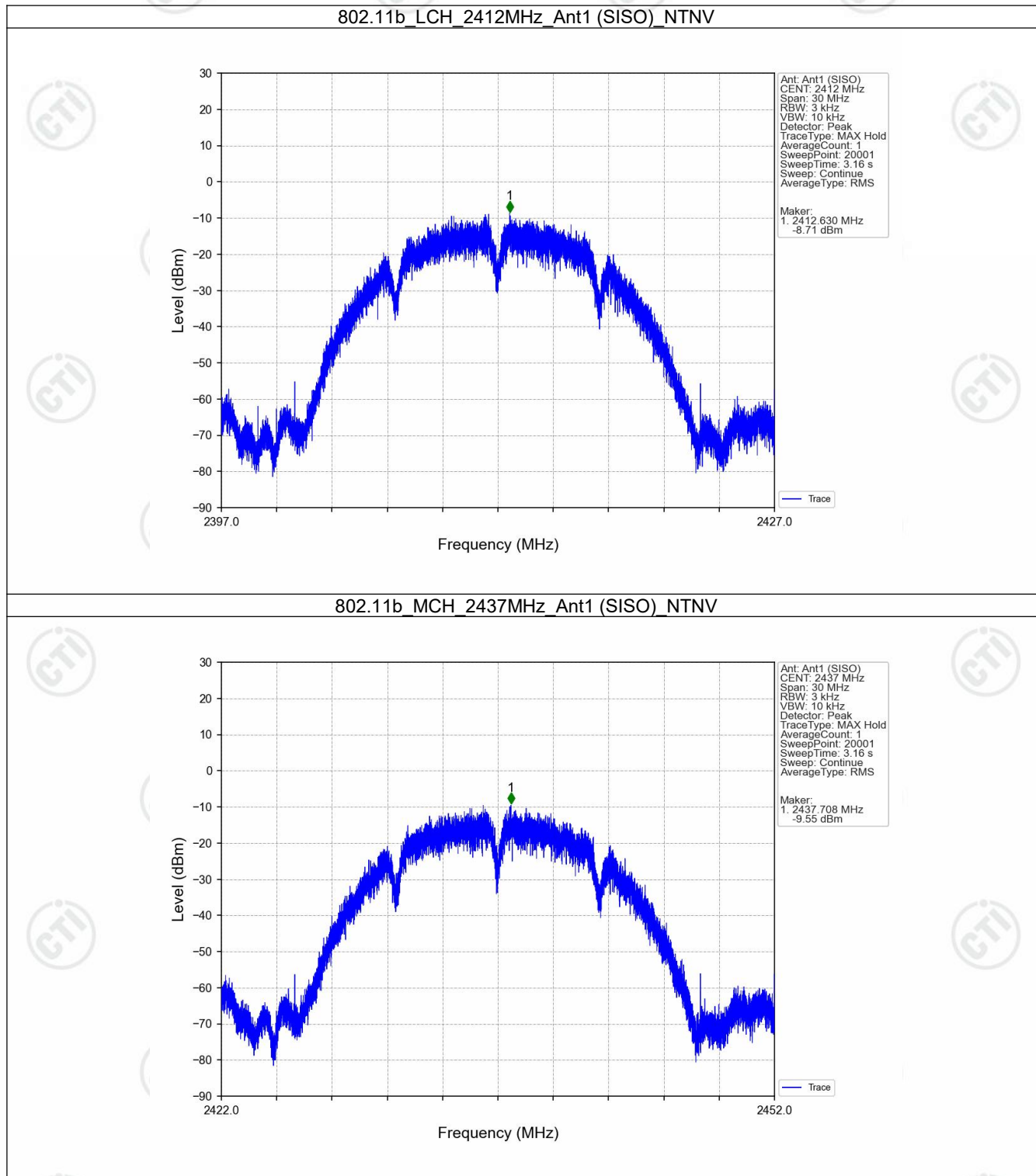
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	-8.71dBm/3kHz	<=8	Pass
		2437	-9.55dBm/3kHz	<=8	Pass
		2462	-9.81dBm/3kHz	<=8	Pass
802.11g	SISO	2412	-16.55dBm/3kHz	<=8	Pass
		2437	-17.68dBm/3kHz	<=8	Pass
		2462	-18.29dBm/3kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-16.80dBm/3kHz	<=8	Pass
		2437	-18.24dBm/3kHz	<=8	Pass
		2462	-17.84dBm/3kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-19.97dBm/3kHz	<=8	Pass
		2437	-20.57dBm/3kHz	<=8	Pass
		2452	-20.23dBm/3kHz	<=8	Pass

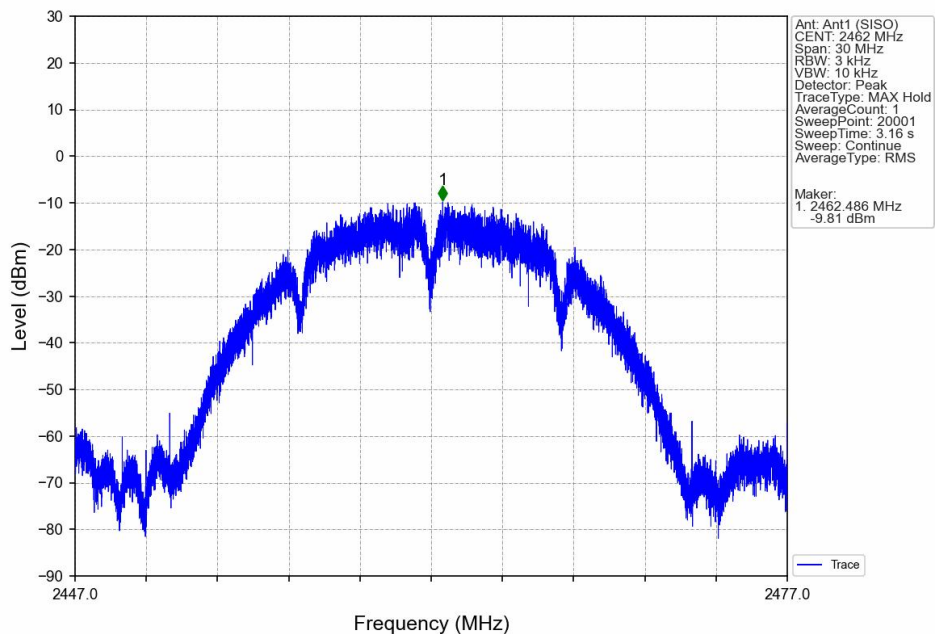
Note1: Antenna Gain: Ant1: 1.78dBi;

4.2 Test Graph

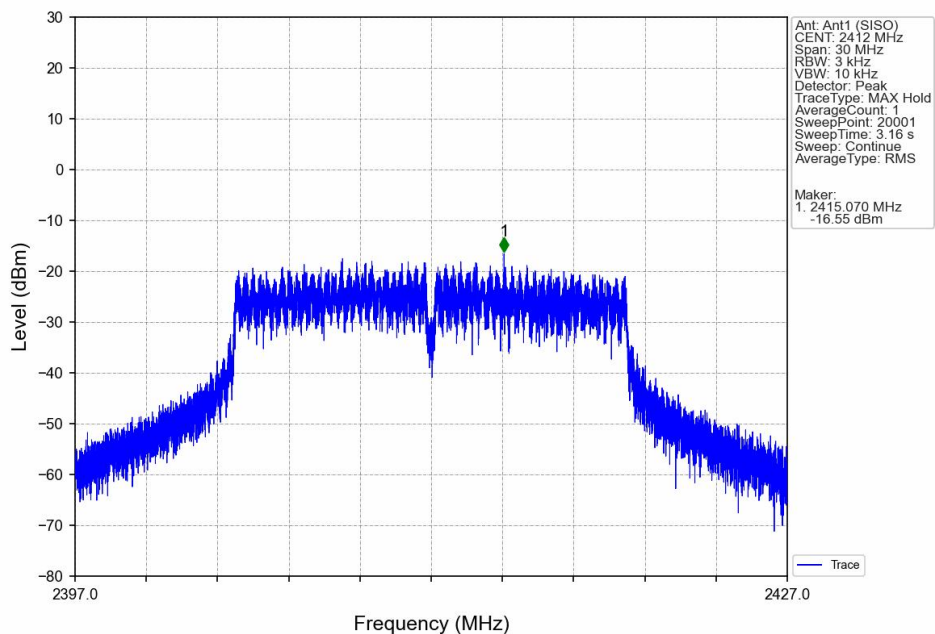
4.2.1 PSD



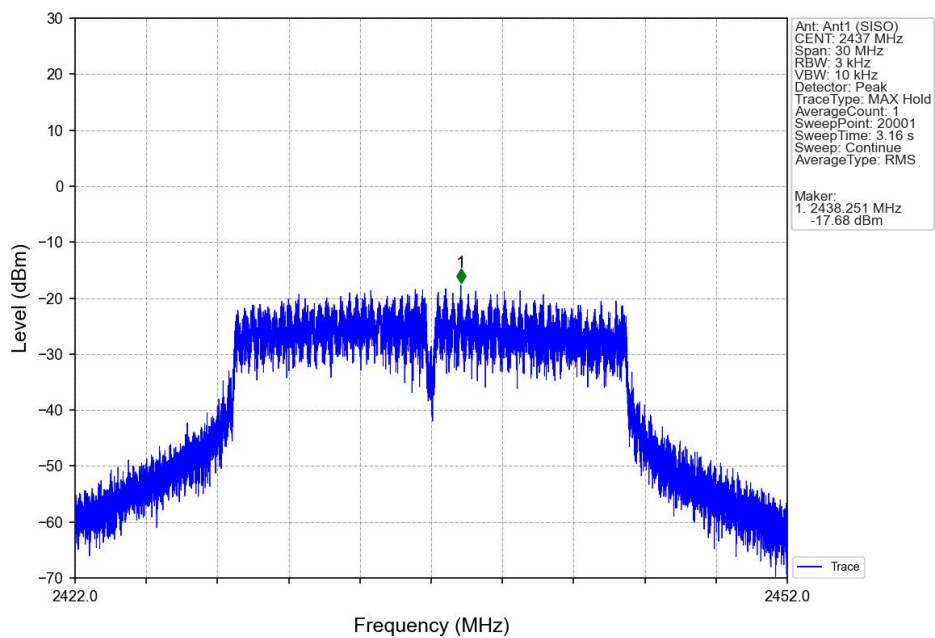
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



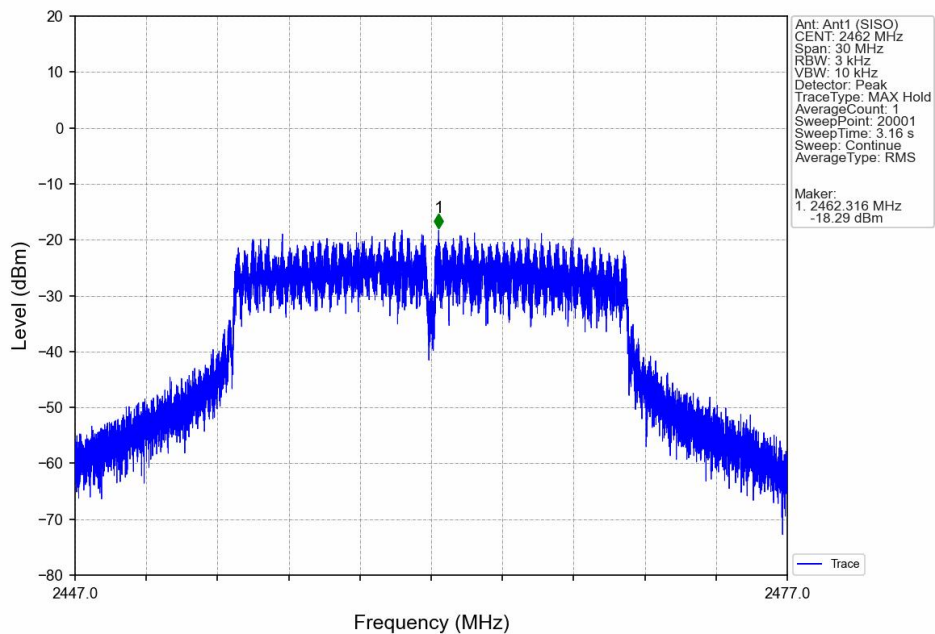
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



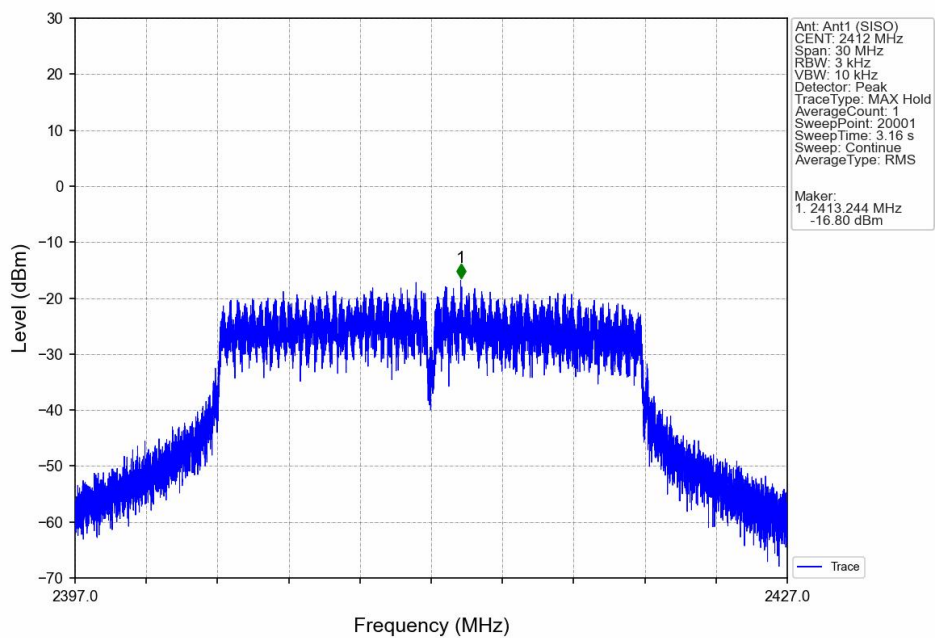
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



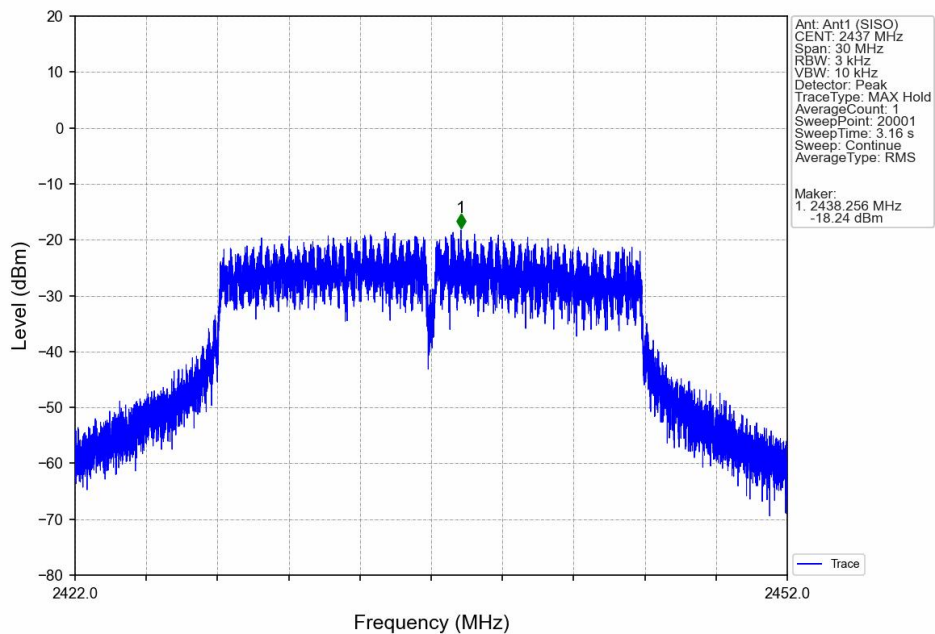
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



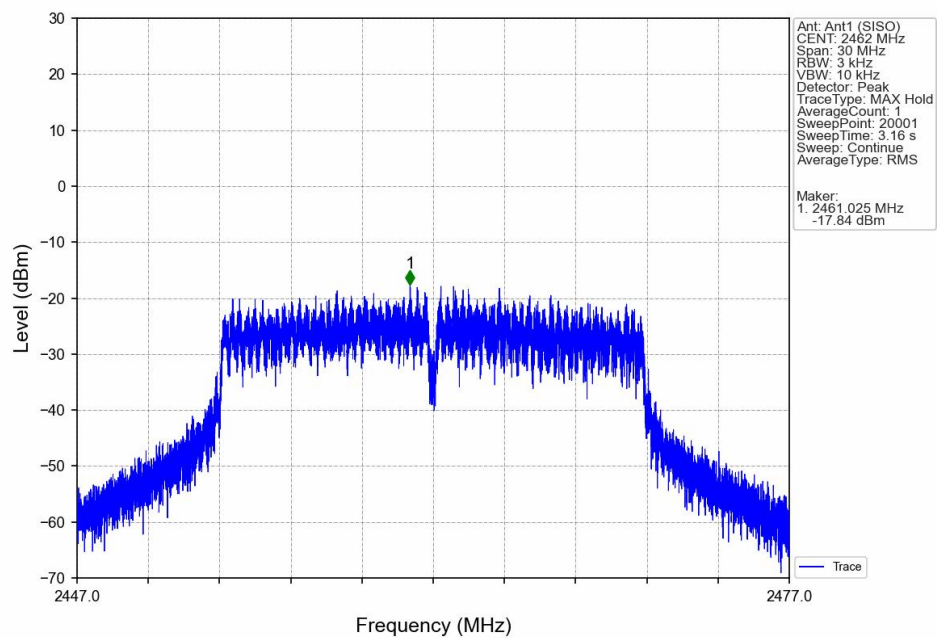
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



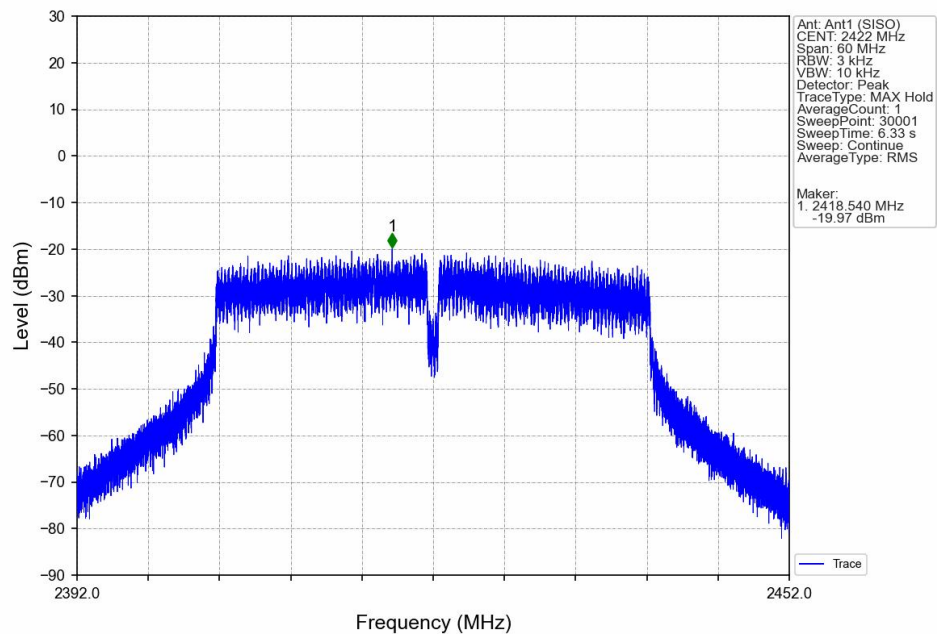
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



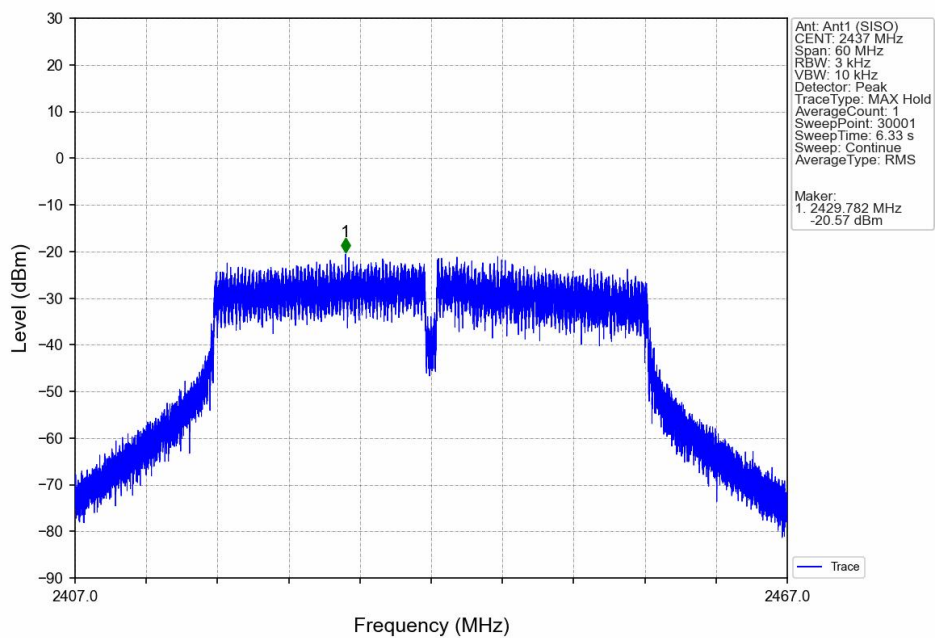
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



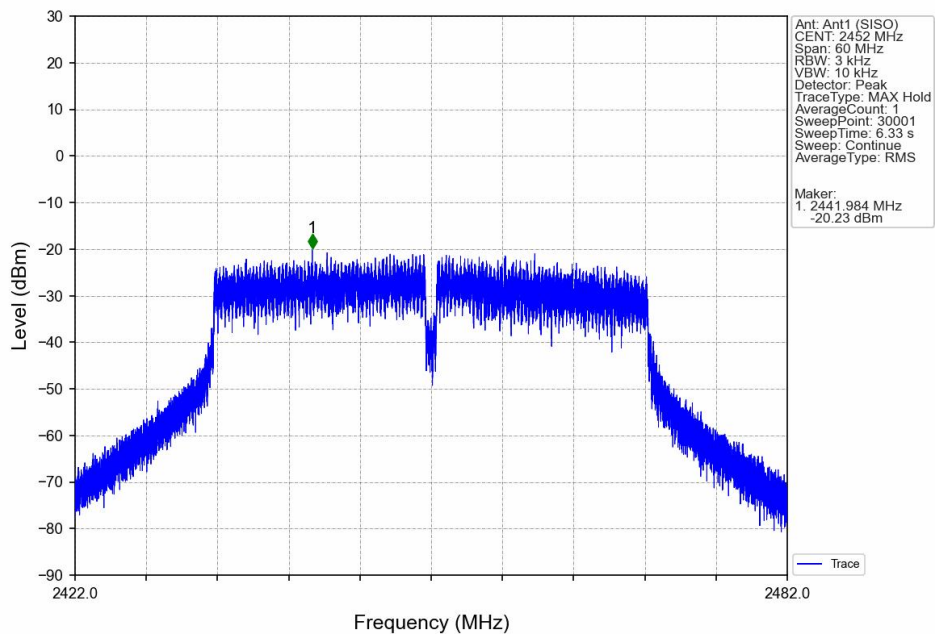
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	6.07
		2437	1	5.26
		2462	1	5.87
802.11g	SISO	2412	1	-2.56
		2437	1	-3.06
		2462	1	-3.05
802.11n (HT20)	SISO	2412	1	-2.28
		2437	1	-4.14
		2462	1	-3.34
802.11n (HT40)	SISO	2422	1	-5.95
		2437	1	-6.35
		2452	1	-5.77

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	6.07	-13.93	Pass
		2437	1	6.07	-13.93	Pass
		2462	1	6.07	-13.93	Pass
802.11g	SISO	2412	1	-2.56	-22.56	Pass
		2437	1	-2.56	-22.56	Pass
		2462	1	-2.56	-22.56	Pass
802.11n (HT20)	SISO	2412	1	-2.28	-22.28	Pass
		2437	1	-2.28	-22.28	Pass
		2462	1	-2.28	-22.28	Pass
802.11n (HT40)	SISO	2422	1	-5.77	-25.77	Pass
		2437	1	-5.77	-25.77	Pass
		2452	1	-5.77	-25.77	Pass

5.2 Test Graph

5.2.1 Ref

