

Appendix RF test data for WIFI2.4G

1. Duty Cycle

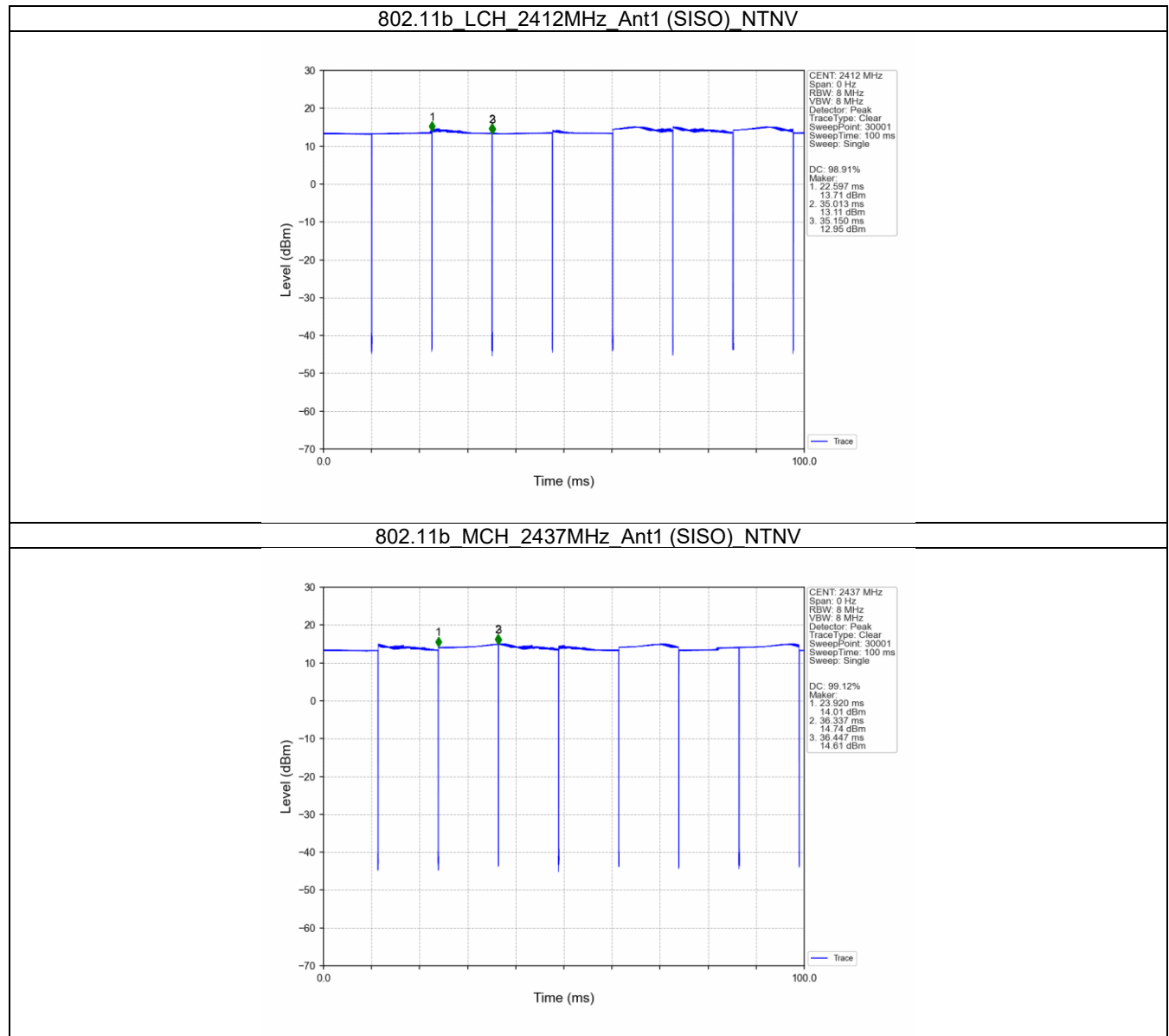
1.1 Test Result

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	12.553	98.91	0.05	0.42
		2437	12.417	12.527	99.12	0.04	0.32
		2462	12.420	12.546	99.00	0.04	0.40
802.11g	SISO	2412	2.066	2.189	94.38	0.25	2.30
		2437	2.065	2.198	93.95	0.27	2.31
		2462	2.066	2.187	94.47	0.25	1.91
802.11n (HT20)	SISO	2412	1.922	2.059	93.35	0.30	2.90
		2437	1.922	2.014	95.43	0.20	0.86
		2462	1.922	2.058	93.39	0.30	2.88
802.11n (HT40)	SISO	2422	100.000	100.000	100.00	0.00	0.00
		2437	100.000	100.000	100.00	0.00	0.00
		2452	100.000	100.000	100.00	0.00	0.00

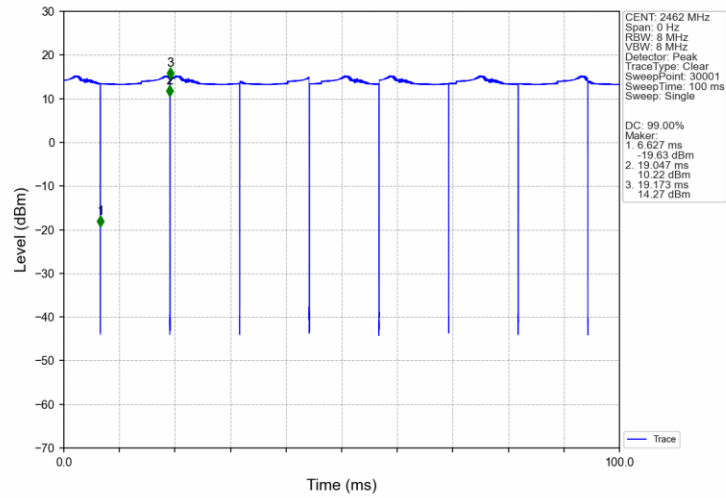
1.2 Test Graph

1.2.1 Ant1

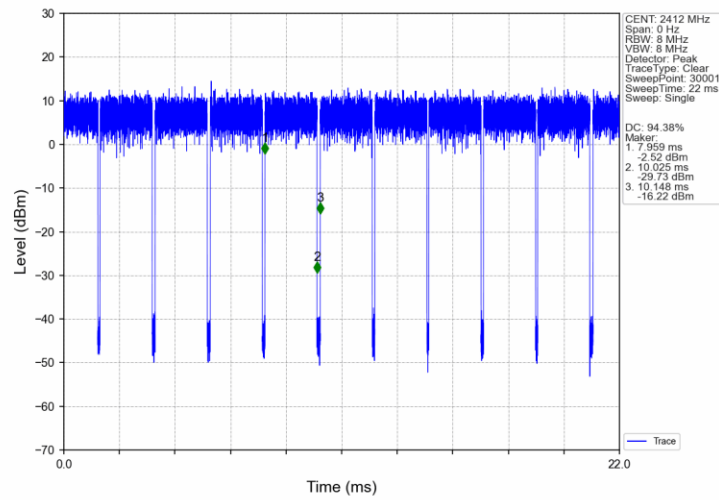




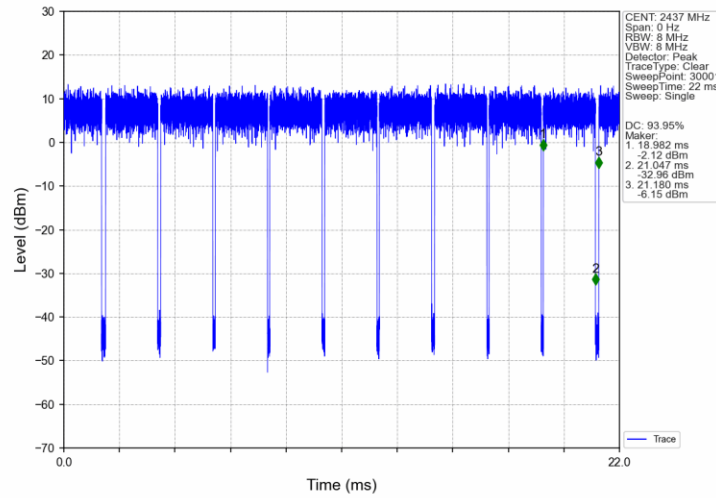
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



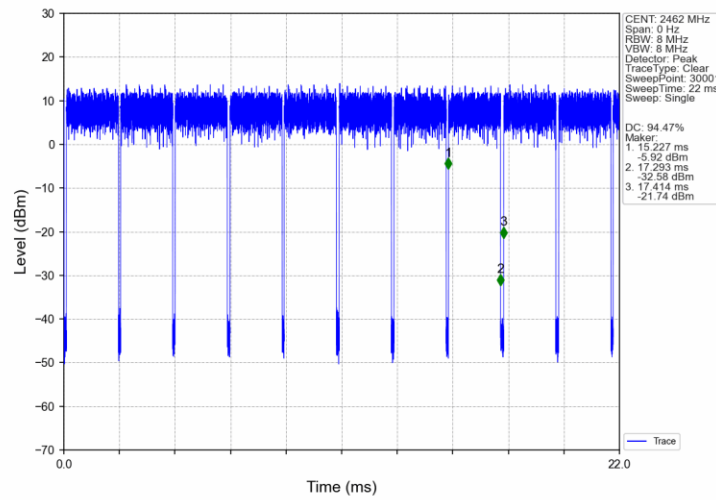
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



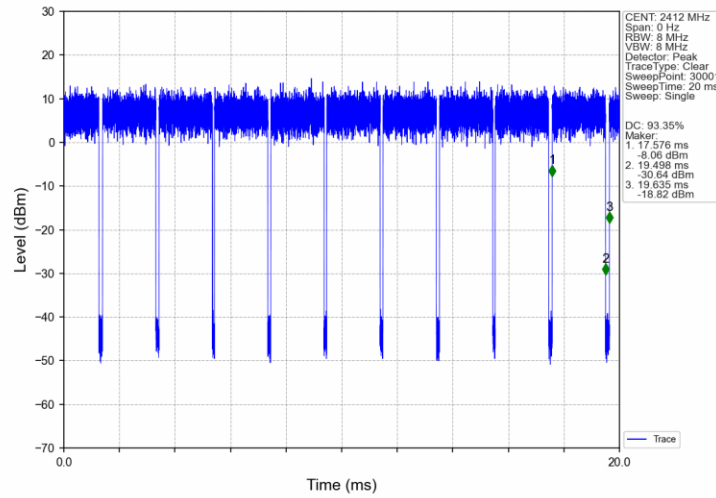
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



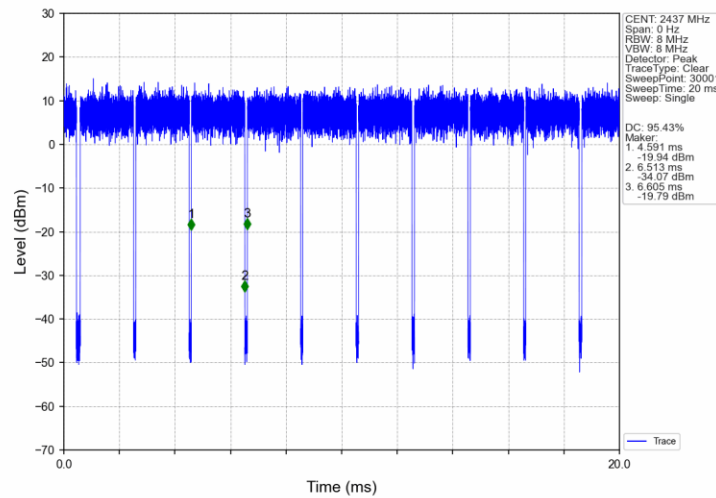
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



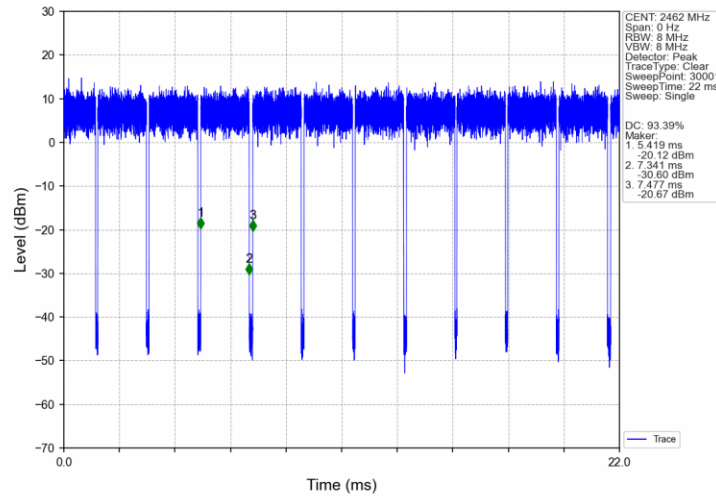
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



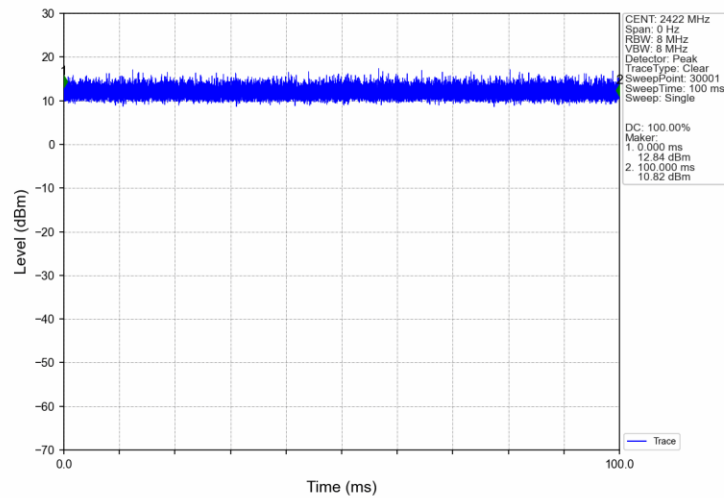
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

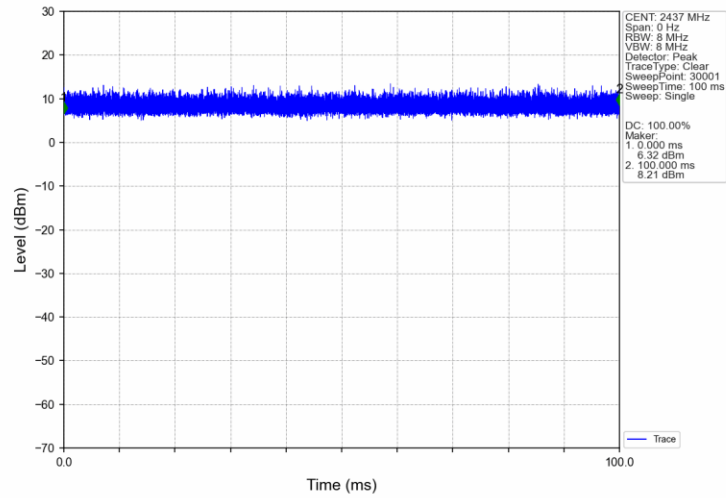


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

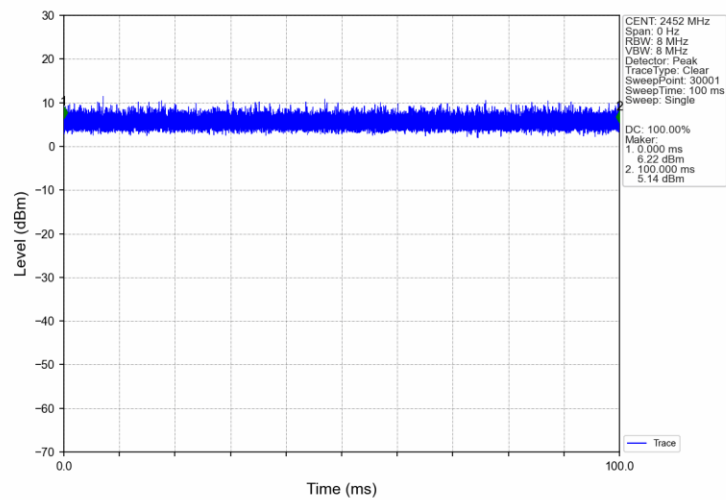




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

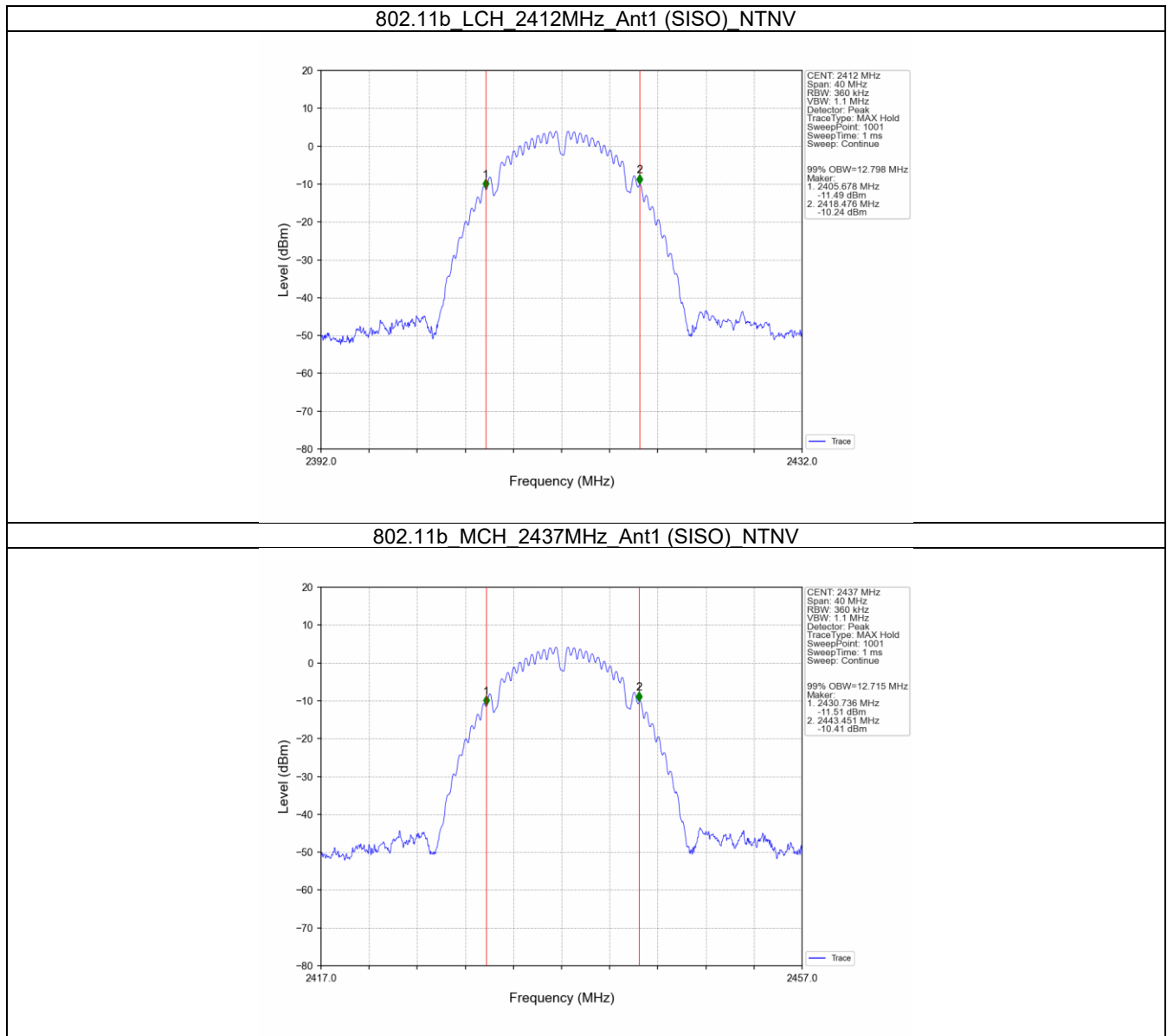
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	12.798	/	Pass
		2437	1	12.715	/	Pass
		2462	1	12.725	/	Pass
802.11g	SISO	2412	1	17.366	/	Pass
		2437	1	17.351	/	Pass
		2462	1	17.320	/	Pass
802.11n (HT20)	SISO	2412	1	18.212	/	Pass
		2437	1	18.099	/	Pass
		2462	1	18.136	/	Pass
802.11n (HT40)	SISO	2422	1	36.421	/	Pass
		2437	1	36.338	/	Pass
		2452	1	36.548	/	Pass

2.1.2 6dB BW

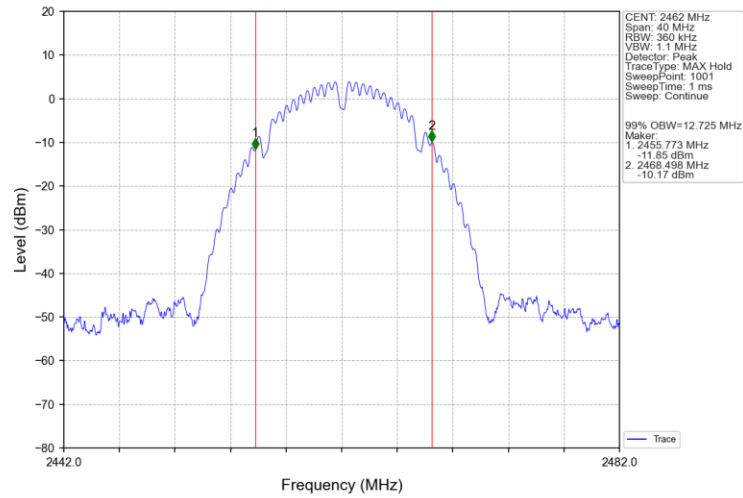
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.240	≥ 0.5	Pass
		2437	1	8.233	≥ 0.5	Pass
		2462	1	8.230	≥ 0.5	Pass
802.11g	SISO	2412	1	16.423	≥ 0.5	Pass
		2437	1	16.054	≥ 0.5	Pass
		2462	1	15.959	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.384	≥ 0.5	Pass
		2437	1	17.464	≥ 0.5	Pass
		2462	1	16.970	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.648	≥ 0.5	Pass
		2437	1	35.335	≥ 0.5	Pass
		2452	1	36.076	≥ 0.5	Pass

2.2 Test Graph

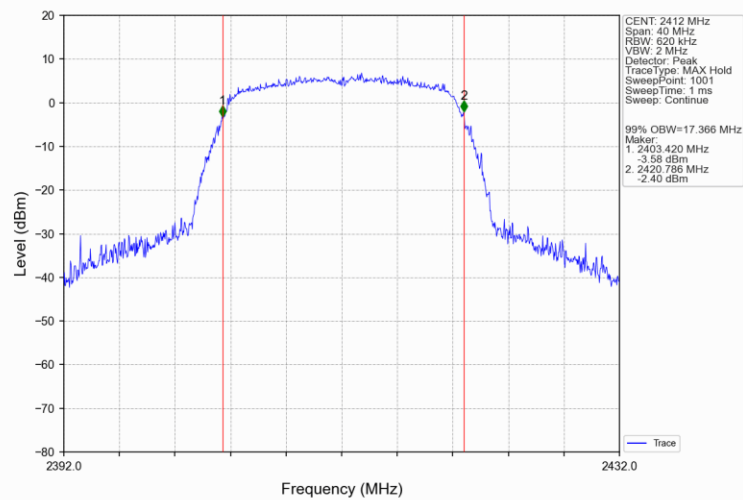
2.2.1 OBW



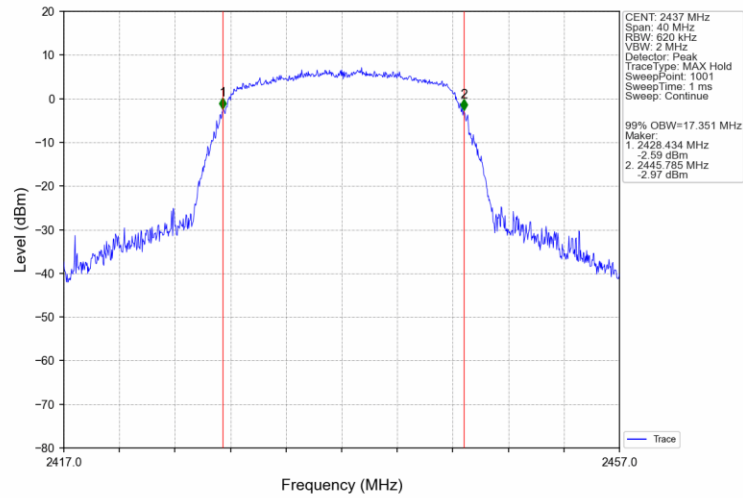
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



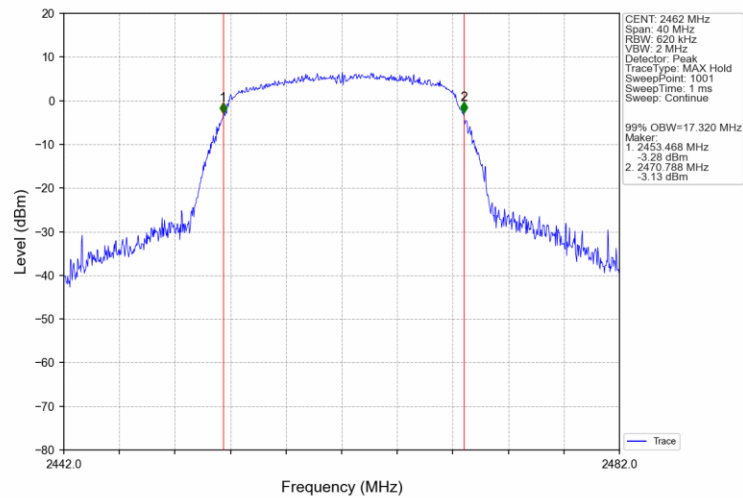
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



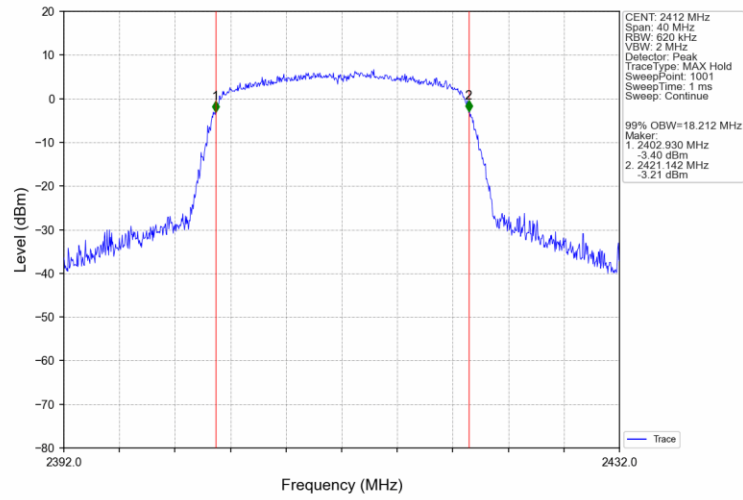
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



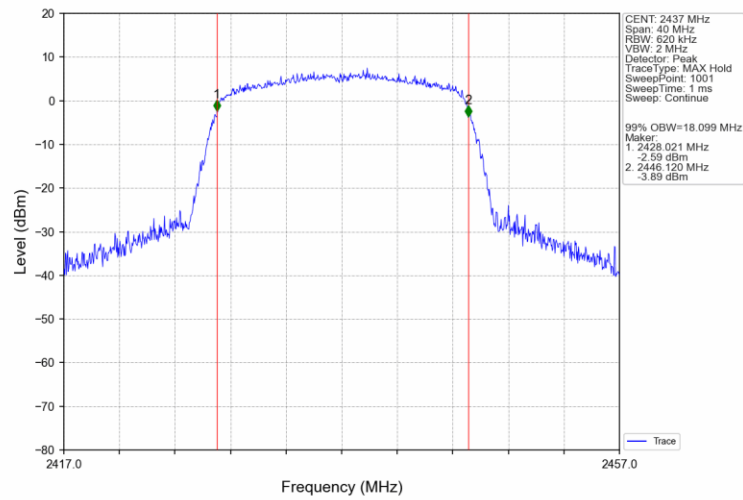
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



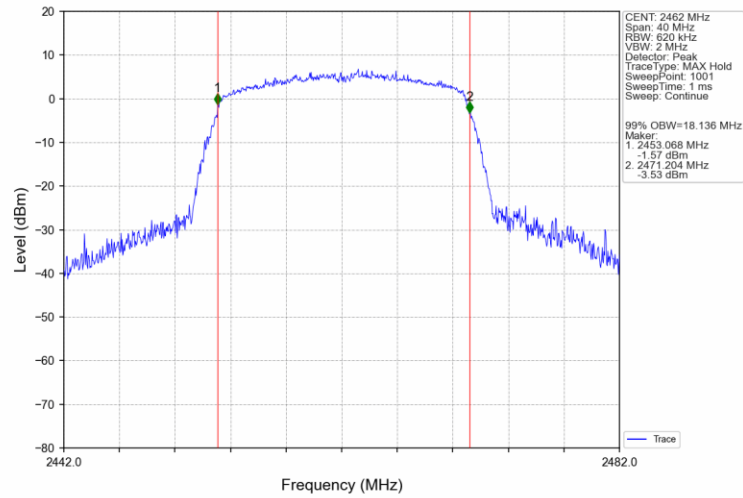
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



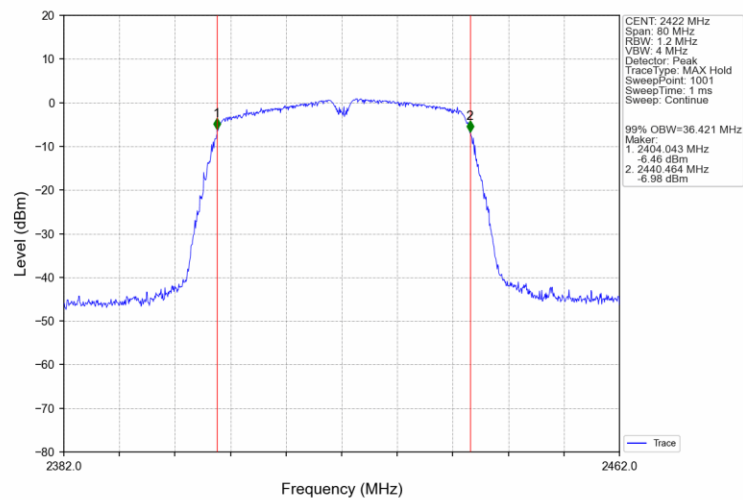
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



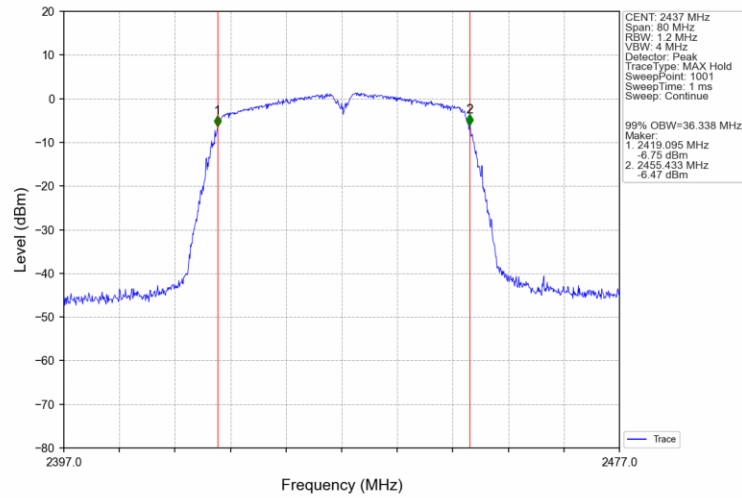
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



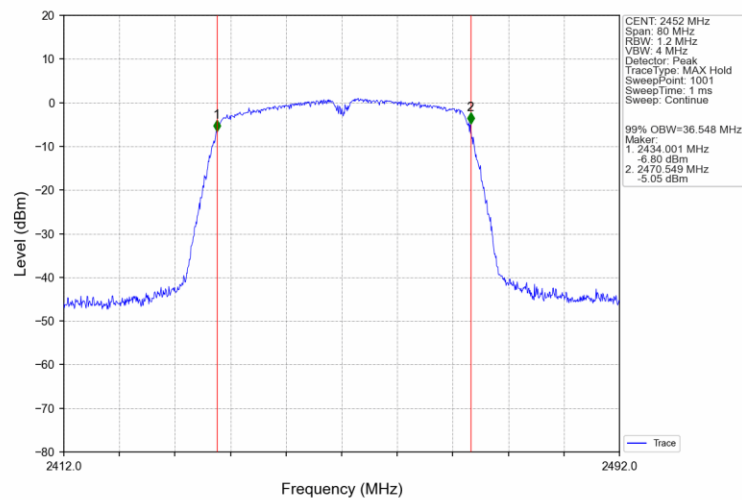
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

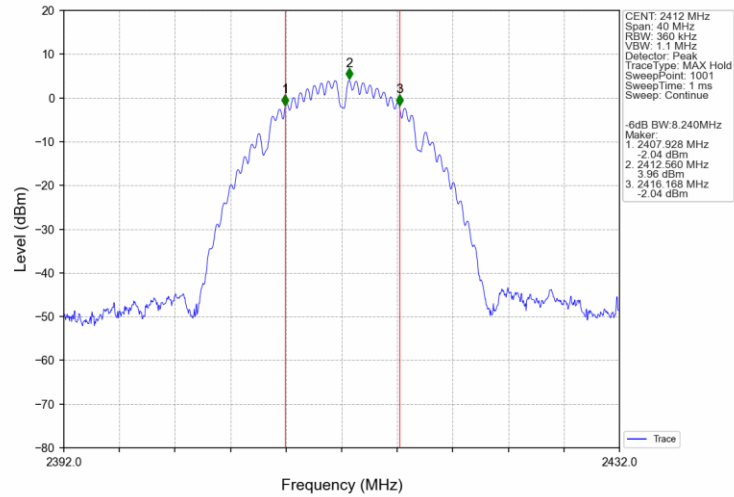


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

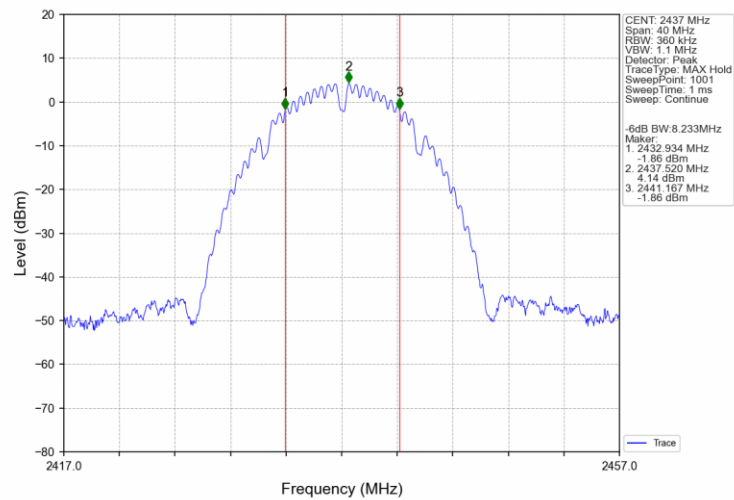


2.2.2 6dB BW

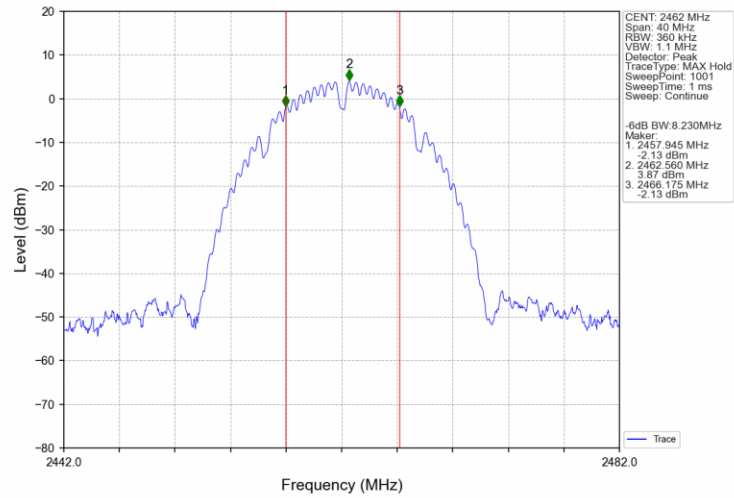
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



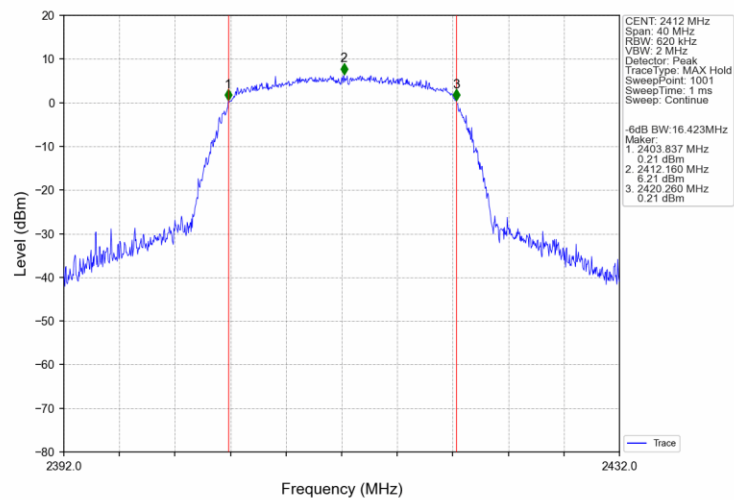
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



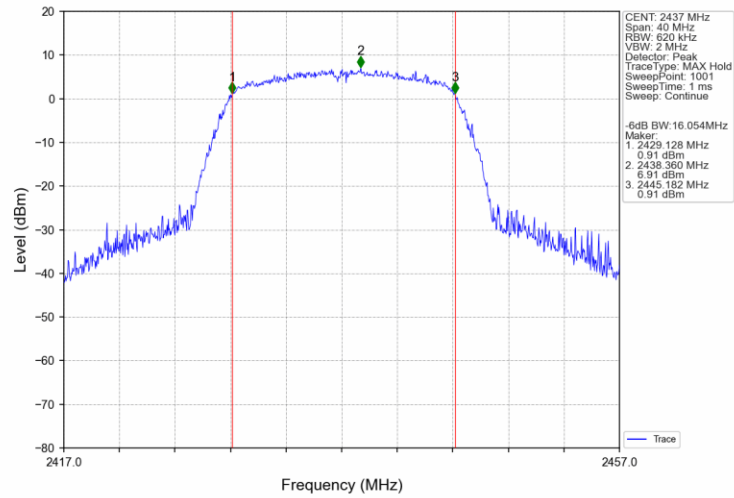
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



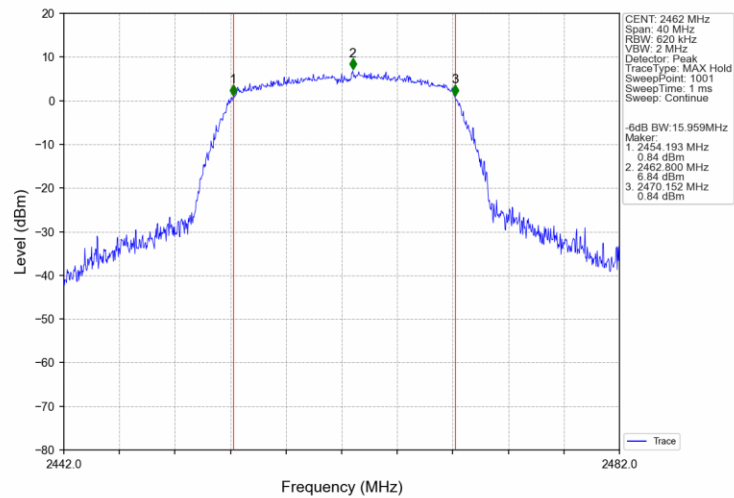
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



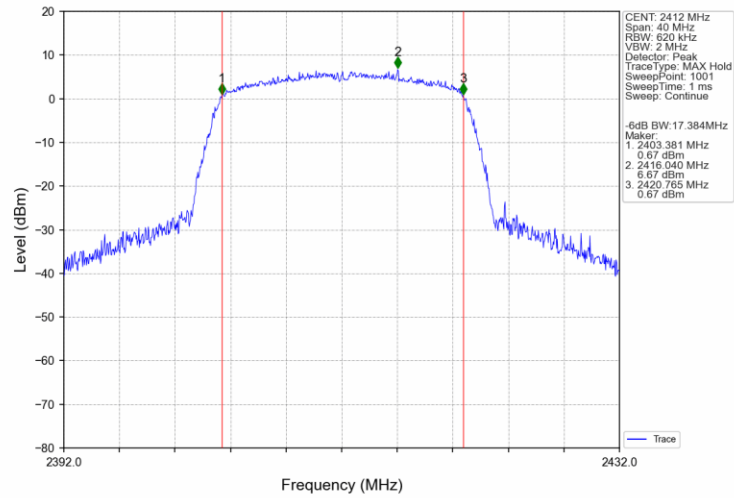
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



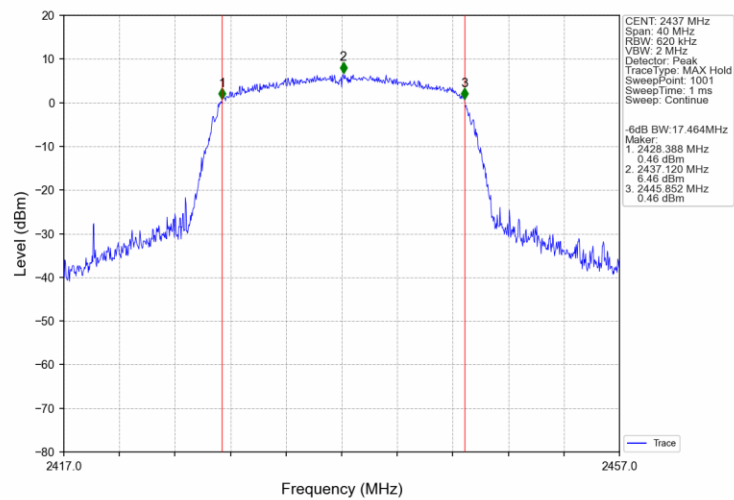
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



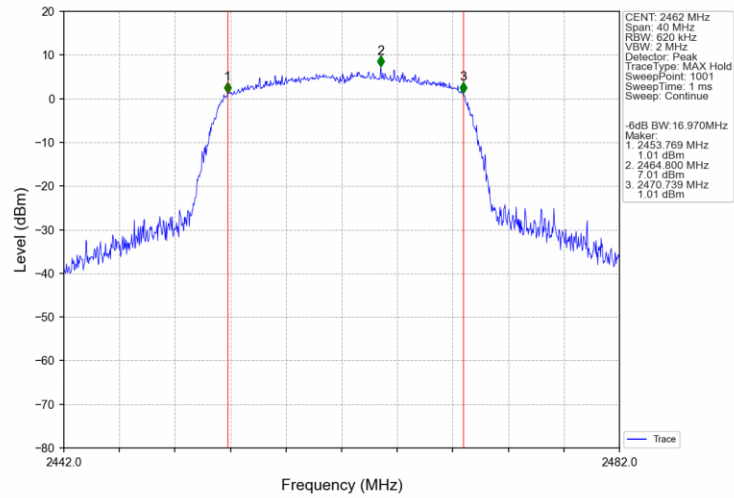
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



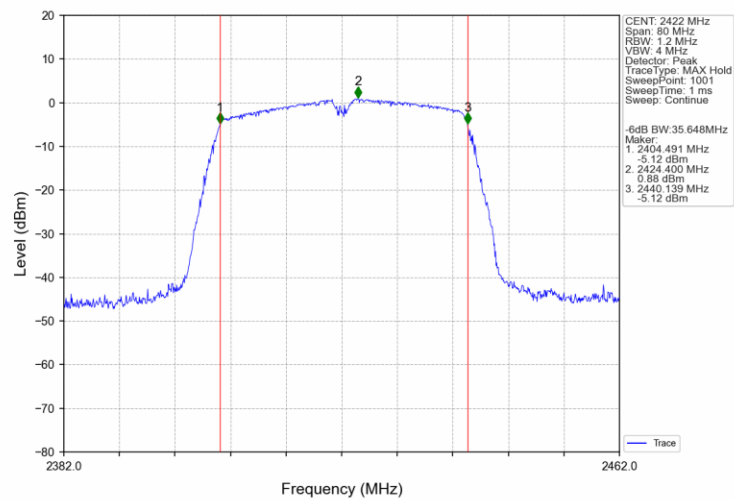
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



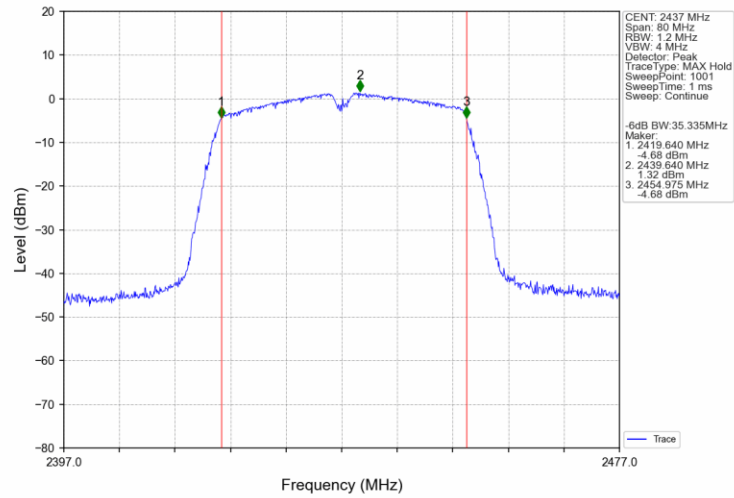
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



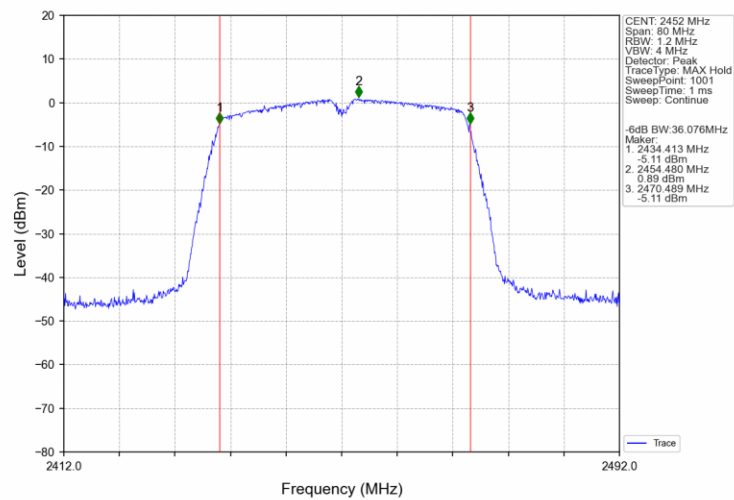
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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	12.88	<=30	Pass
		2437	12.82	<=30	Pass
		2462	12.67	<=30	Pass
802.11g	SISO	2412	13.57	<=30	Pass
		2437	14.15	<=30	Pass
		2462	14.56	<=30	Pass
802.11n (HT20)	SISO	2412	13.62	<=30	Pass
		2437	14.17	<=30	Pass
		2462	13.96	<=30	Pass
802.11n (HT40)	SISO	2422	13.05	<=30	Pass
		2437	13.29	<=30	Pass
		2452	13.24	<=30	Pass
Note1: Antenna Gain: Ant1: 2.34dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

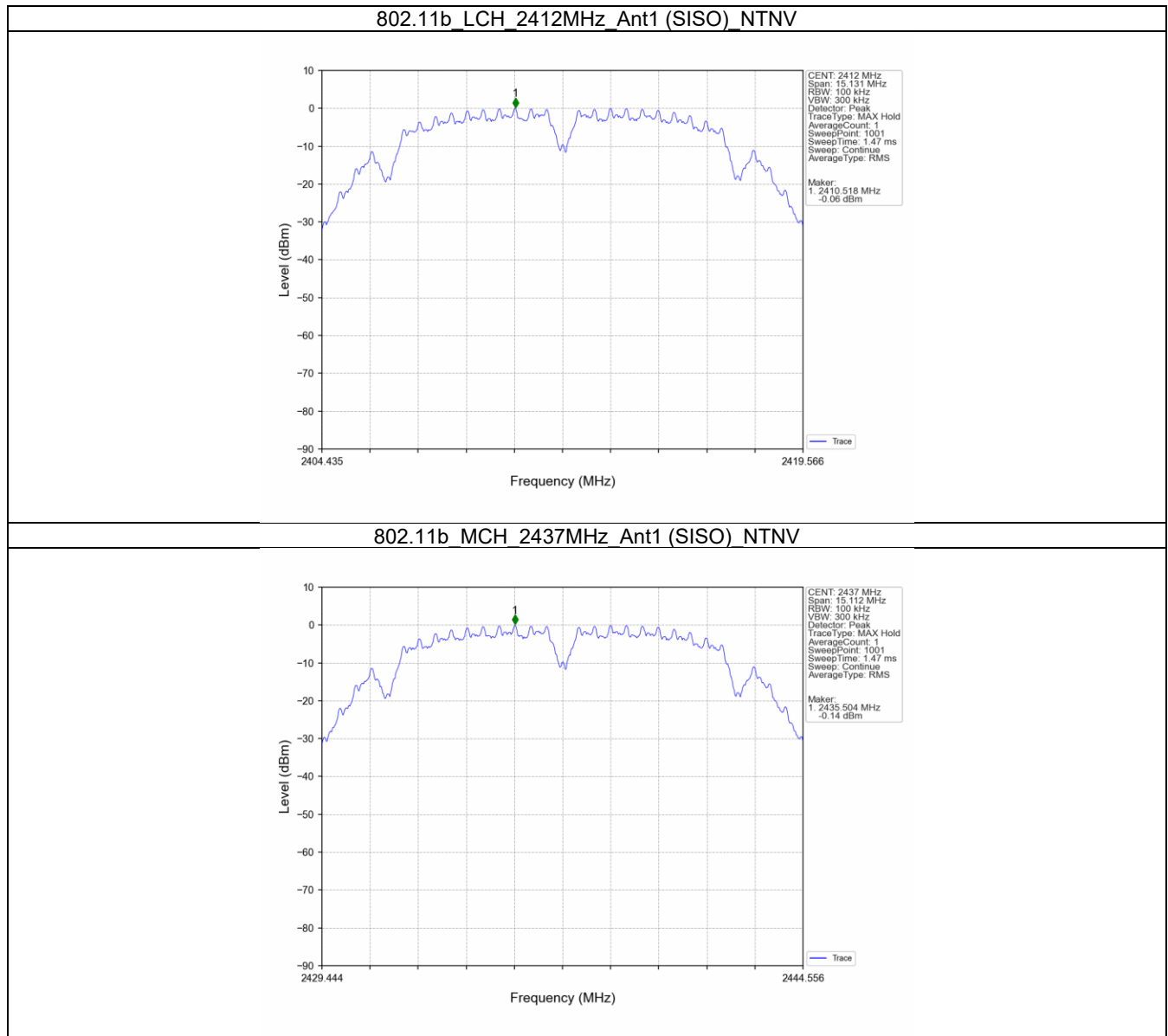
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-0.06	<=8	Pass
		2437	-0.14	<=8	Pass
		2462	-0.23	<=8	Pass
802.11g	SISO	2412	-4.95	<=8	Pass
		2437	-4.54	<=8	Pass
		2462	-4.41	<=8	Pass
802.11n (HT20)	SISO	2412	-4.87	<=8	Pass
		2437	-4.17	<=8	Pass
		2462	-4.65	<=8	Pass
802.11n (HT40)	SISO	2422	-10.53	<=8	Pass
		2437	-10.75	<=8	Pass
		2452	-10.79	<=8	Pass

Note1: Antenna Gain: Ant1: 2.34dBi;

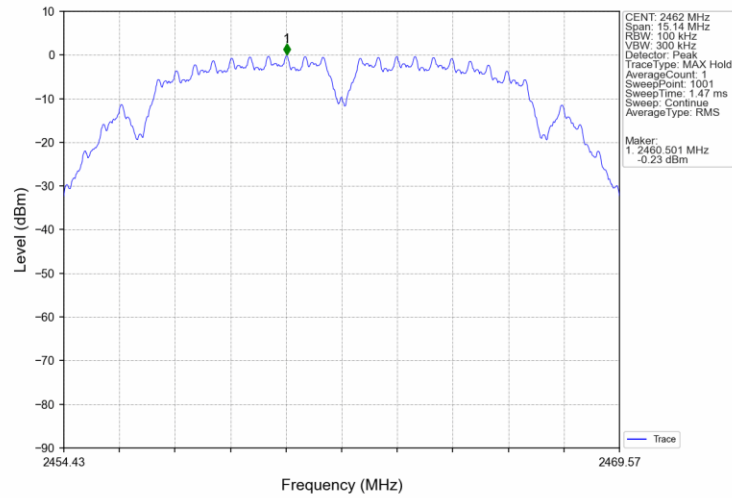
4.2 Test Graph

4.2.1 PSD

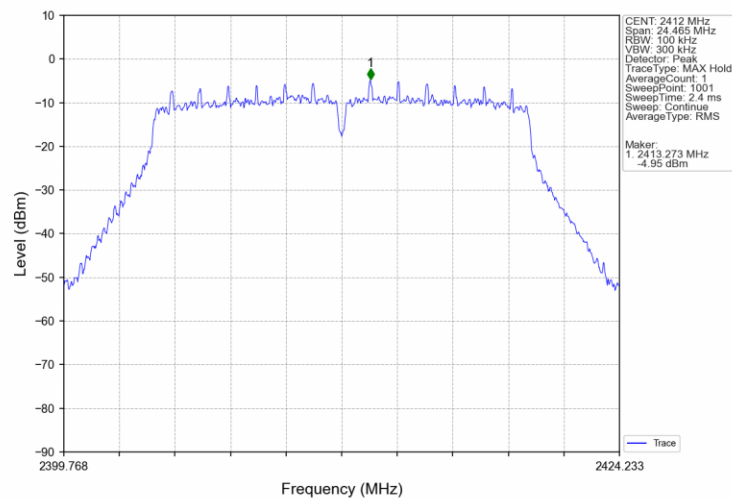




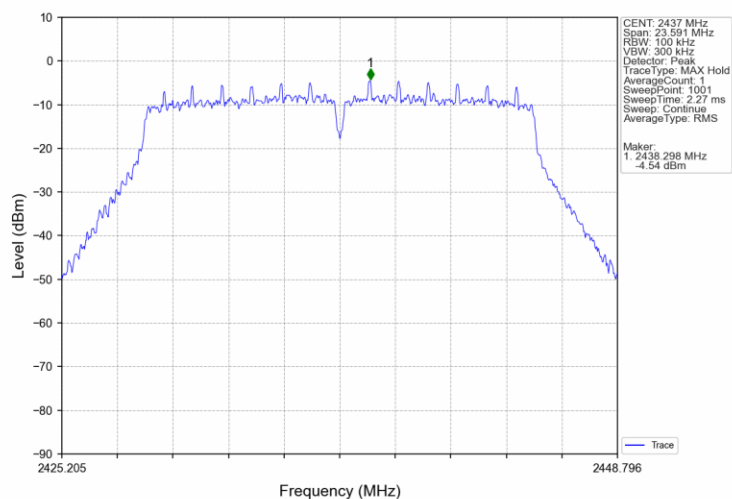
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



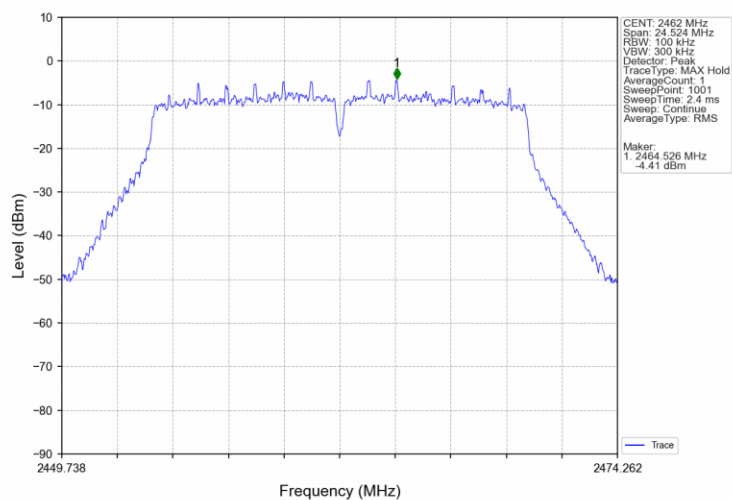
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



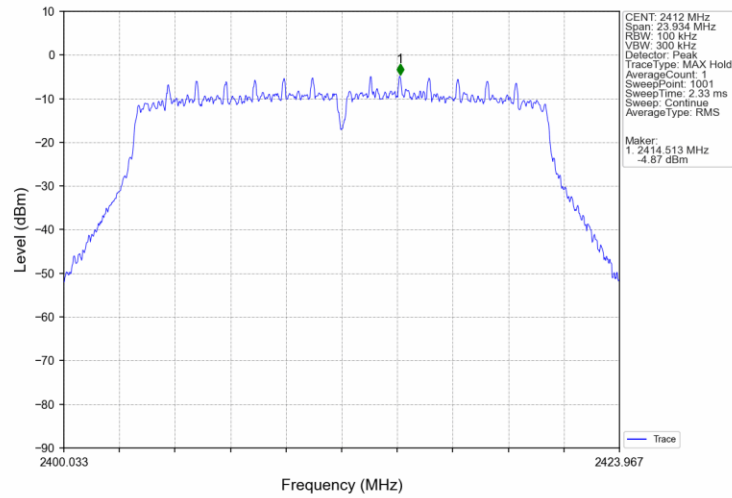
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



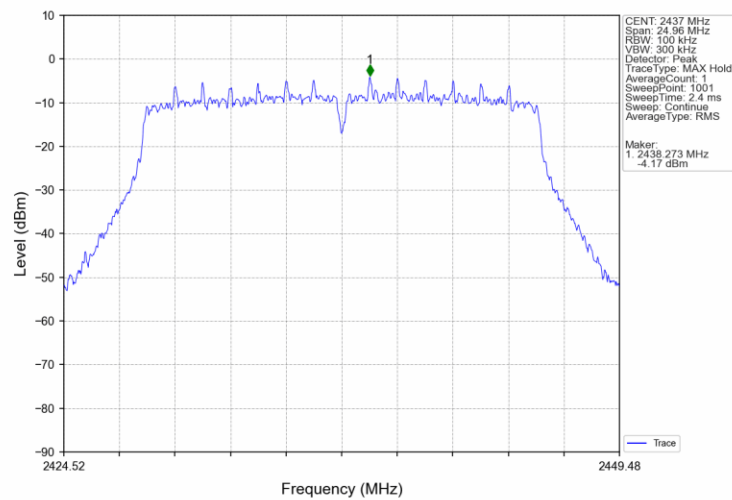
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



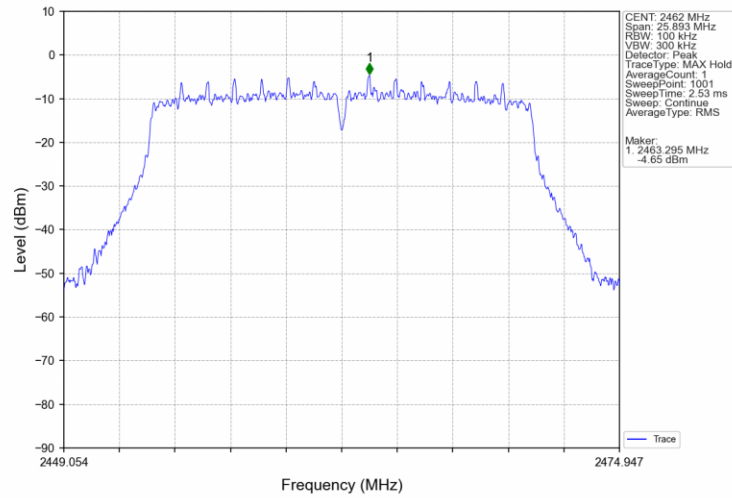
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



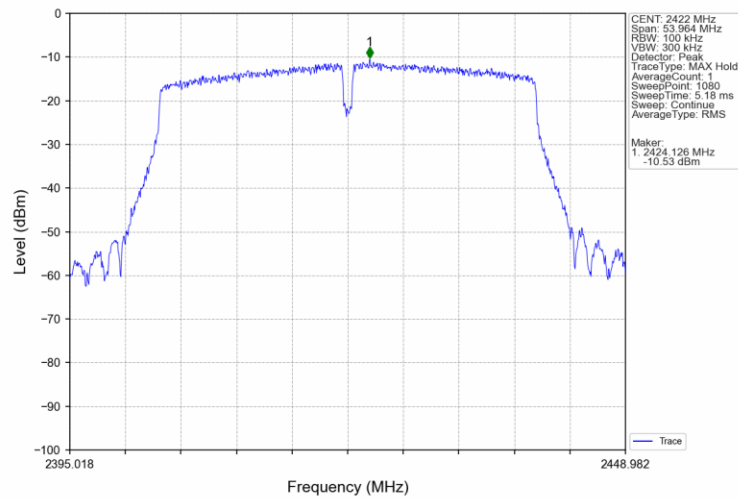
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



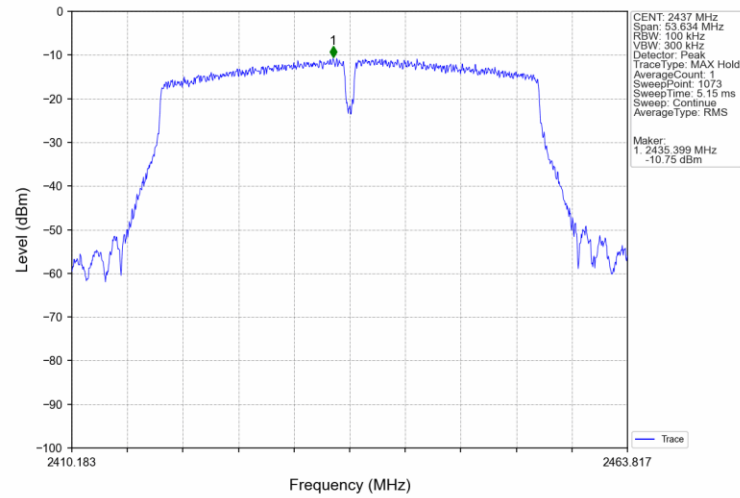
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



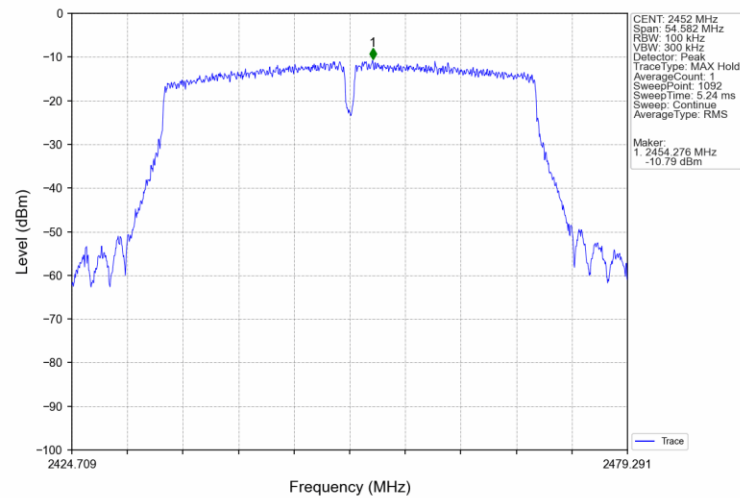
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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	-0.04
		2437	1	-0.13
		2462	1	-0.24
802.11g	SISO	2412	1	-4.91
		2437	1	-4.46
		2462	1	-4.08
802.11n (HT20)	SISO	2412	1	-4.77
		2437	1	-4.10
		2462	1	-4.51
802.11n (HT40)	SISO	2422	1	-4.53
		2437	1	-7.99
		2452	1	-10.46

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

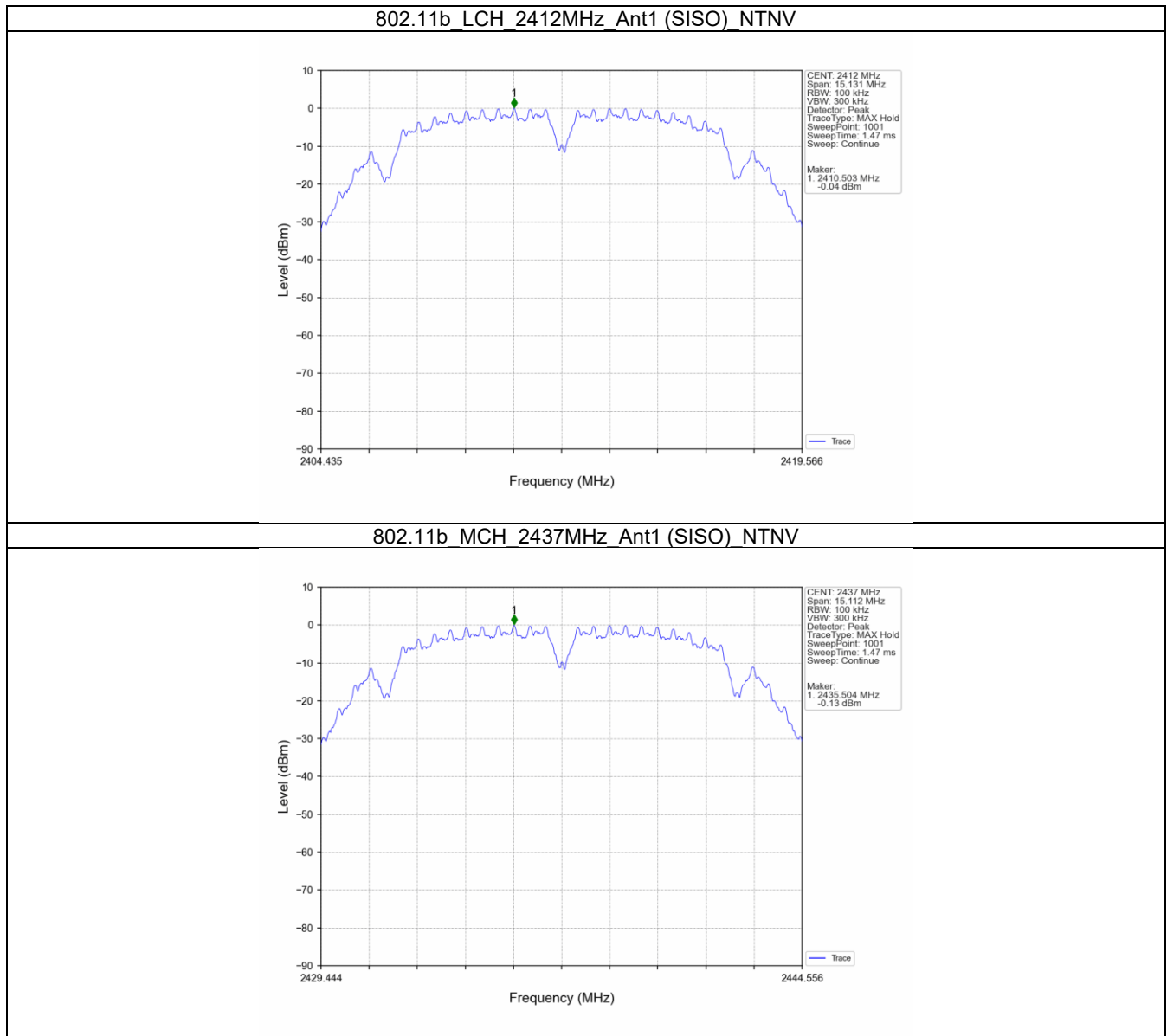
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-0.04	-20.04	Pass
		2437	1	-0.13	-20.13	Pass
		2462	1	-0.24	-20.24	Pass
802.11g	SISO	2412	1	-4.91	-24.91	Pass
		2437	1	-4.46	-24.46	Pass
		2462	1	-4.08	-24.08	Pass
802.11n (HT20)	SISO	2412	1	-4.77	-24.77	Pass
		2437	1	-4.10	-24.10	Pass
		2462	1	-4.51	-24.51	Pass
802.11n (HT40)	SISO	2422	1	-4.53	-24.53	Pass
		2437	1	-7.99	-27.99	Pass
		2452	1	-10.46	-30.46	Pass

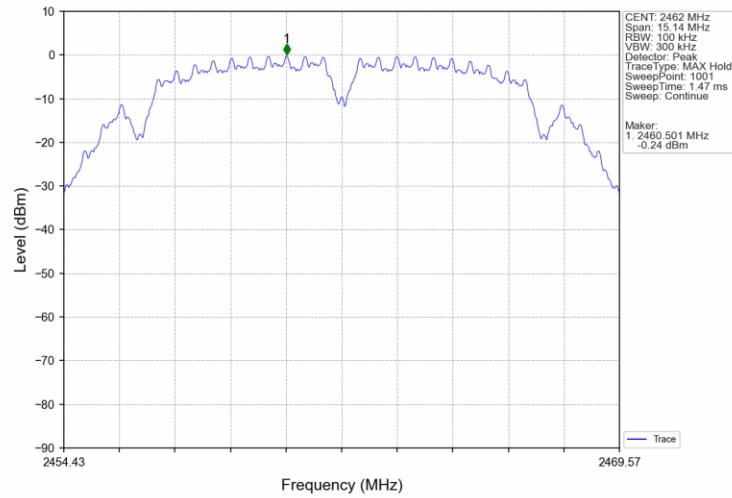
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

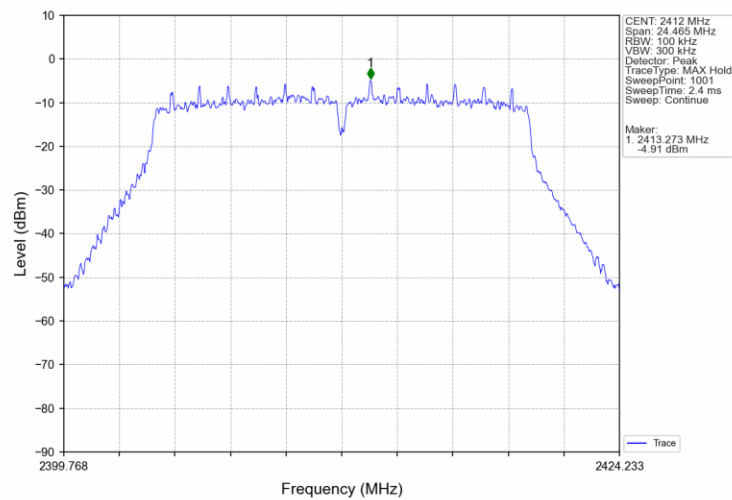
5.2.1 Ref



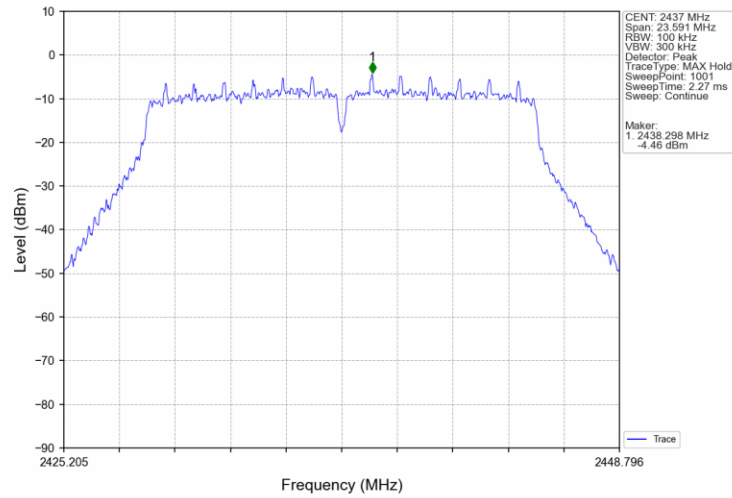
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



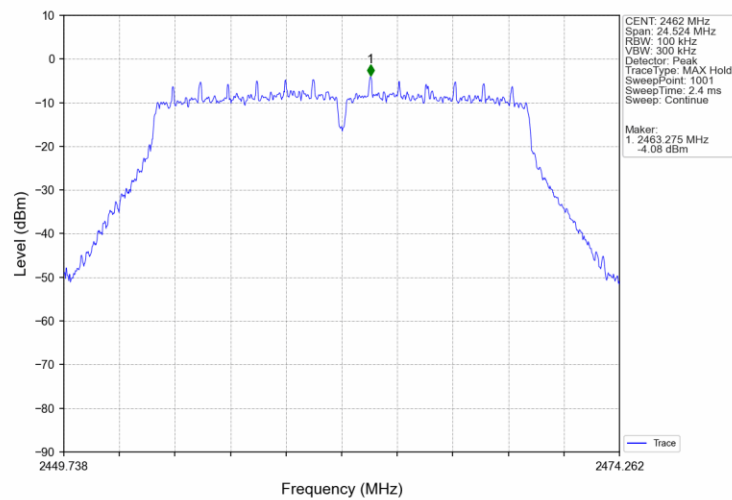
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



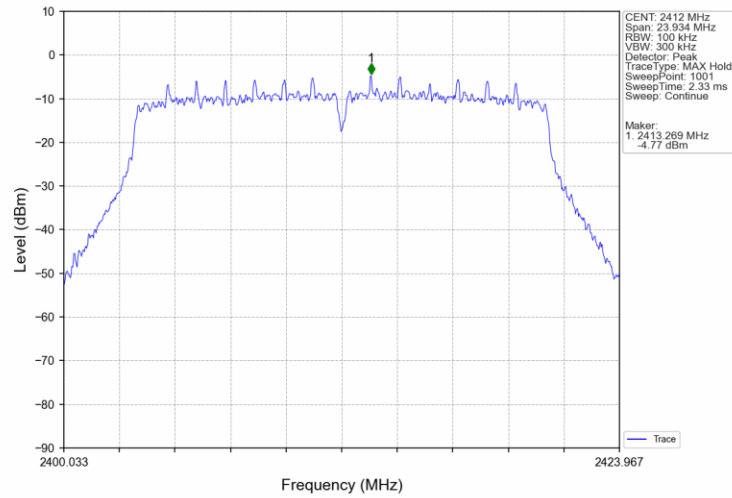
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



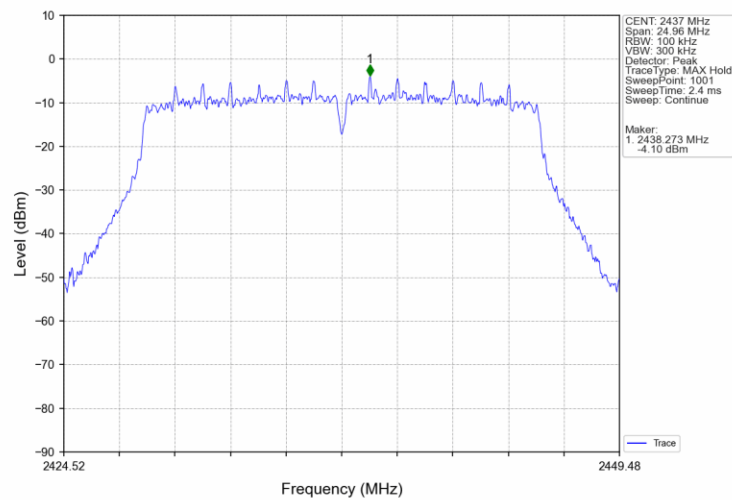
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



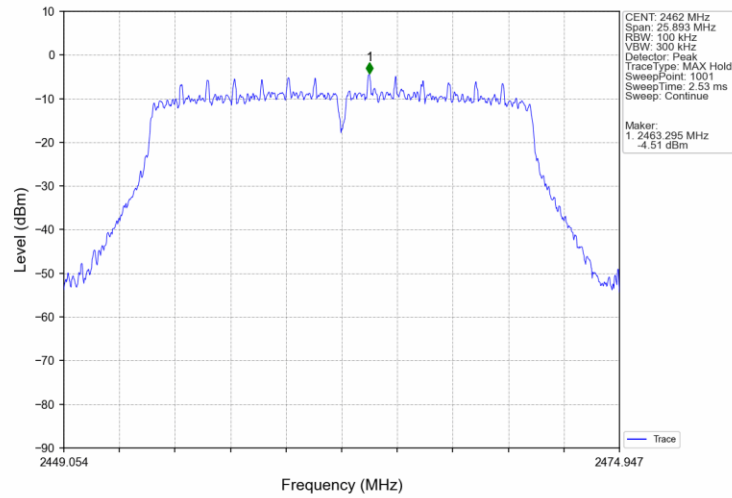
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



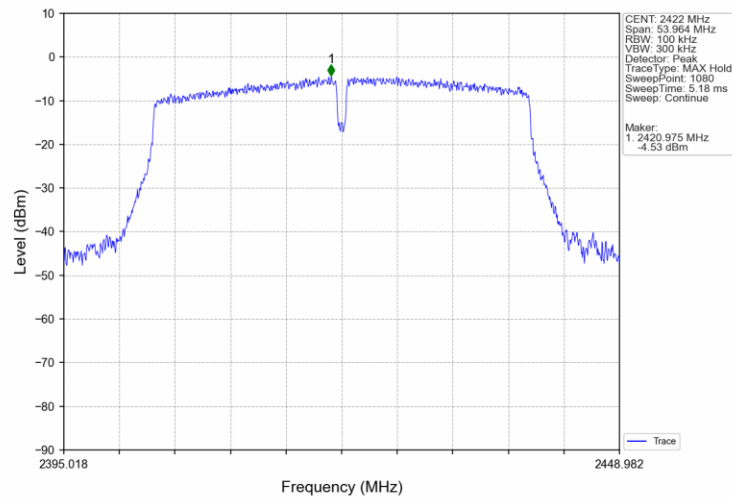
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



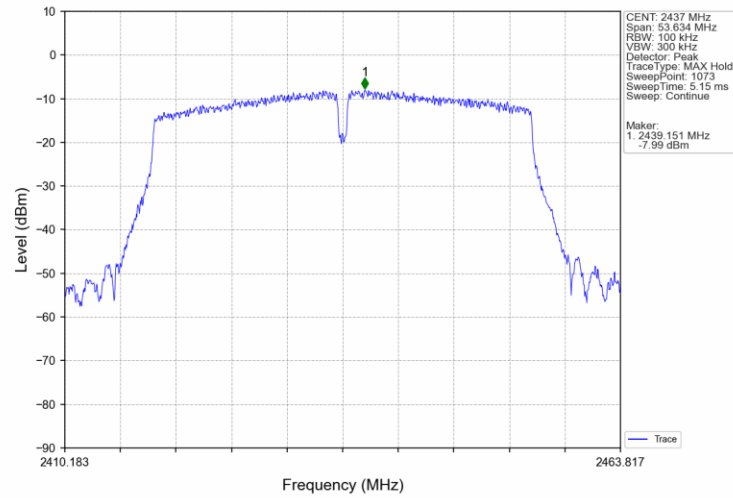
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



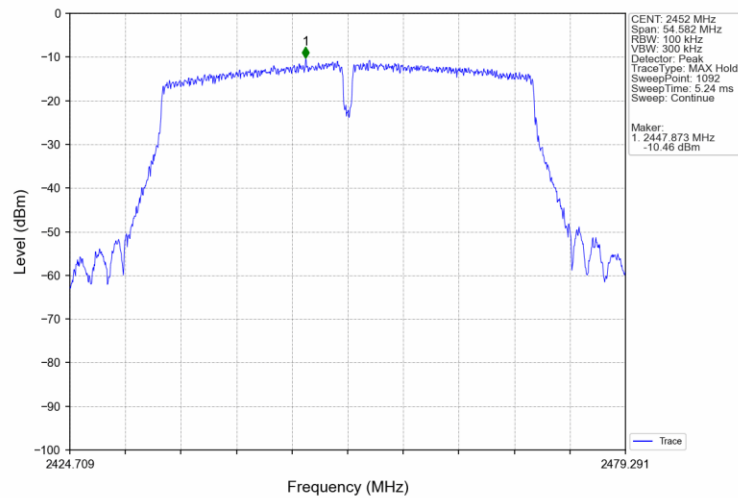
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

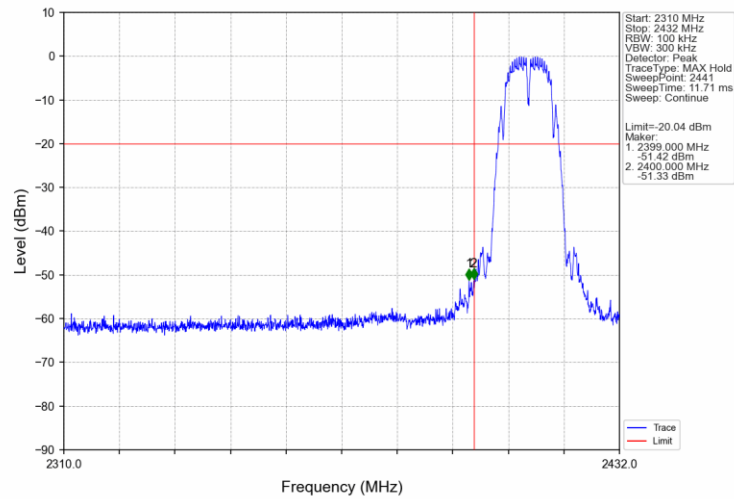


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

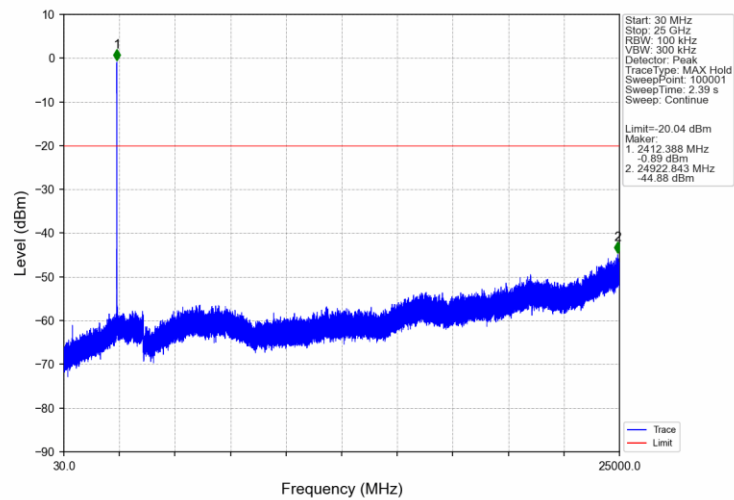


5.2.2 CSE

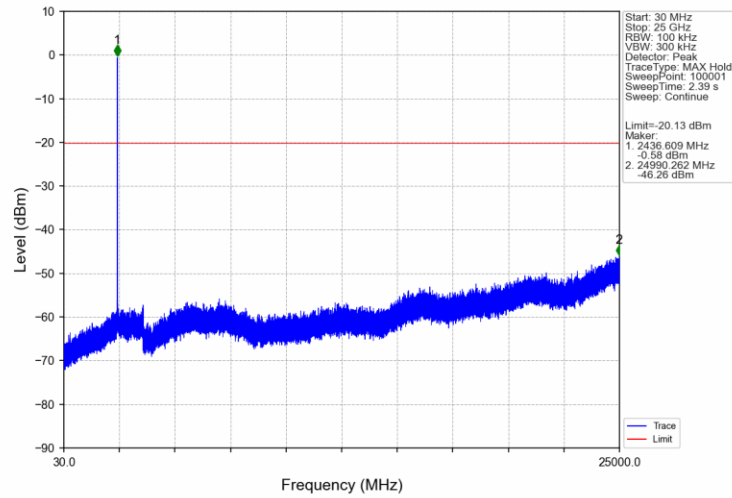
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

