

Appendix RF test data for WIFI2.4G

1. Duty Cycle

1.1 Test Result

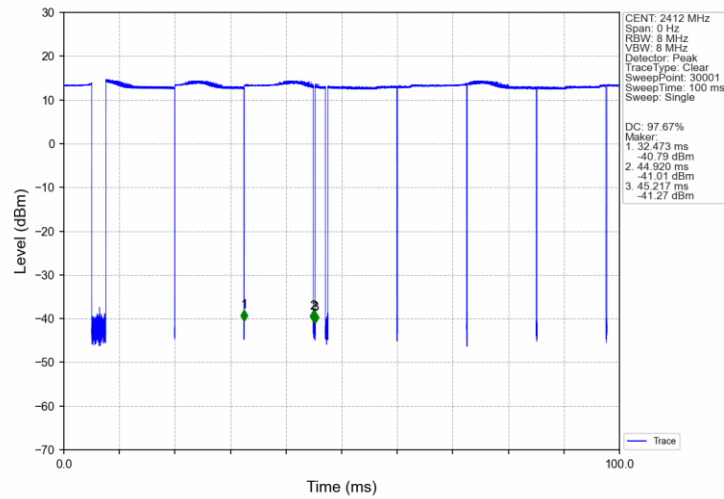
1.1.1 Ant1

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	12.447	12.744	97.67	0.10	2.14
		2437	1.860	2.216	83.94	0.76	15.46
		2462	1.860	2.180	85.32	0.69	14.34
802.11g	SISO	2412	2.064	13.874	14.88	8.27	54.32
		2437	2.065	11.425	18.07	7.43	3.51
		2462	2.067	11.900	17.37	7.60	28.68
802.11n (HT20)	SISO	2412	1.933	14.676	13.17	8.80	75.37
		2437	1.921	12.267	15.66	8.05	8.69
		2462	1.920	13.276	14.46	8.40	69.89
802.11n (HT40)	SISO	2422	0.130	12.940	1.00	19.98	27.52
		2437	0.130	11.540	1.13	19.48	83.25
		2452	0.129	13.317	0.97	20.14	16.92

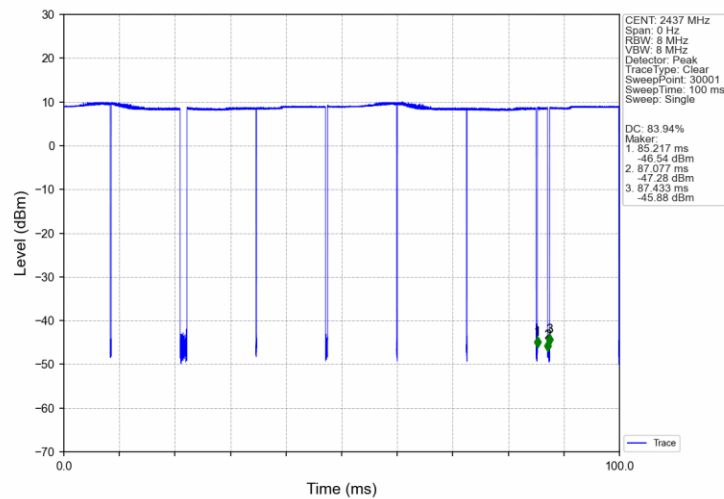
1.2 Test Graph

1.2.1 Ant1

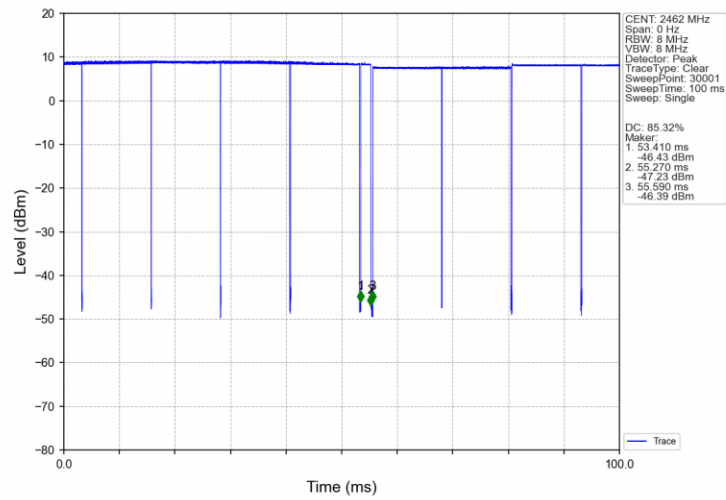
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



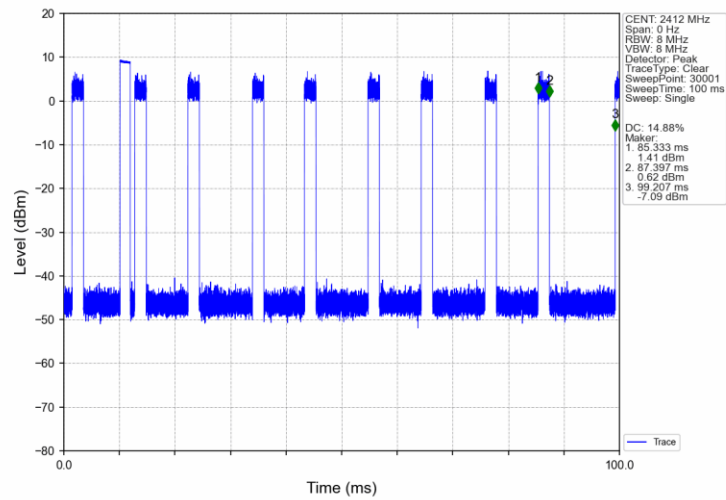
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



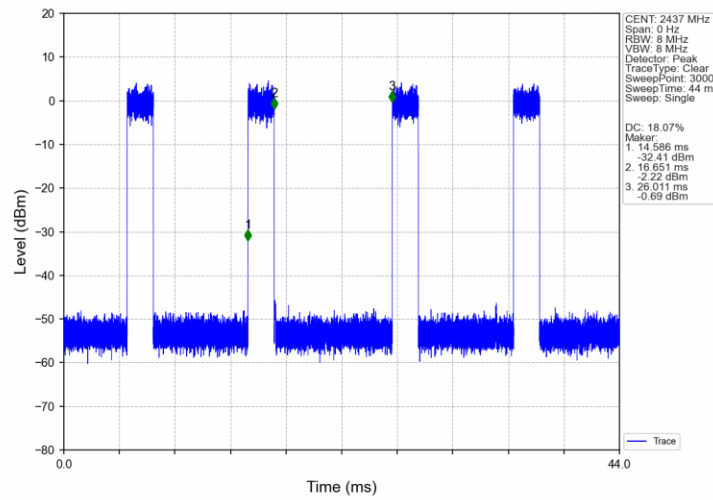
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



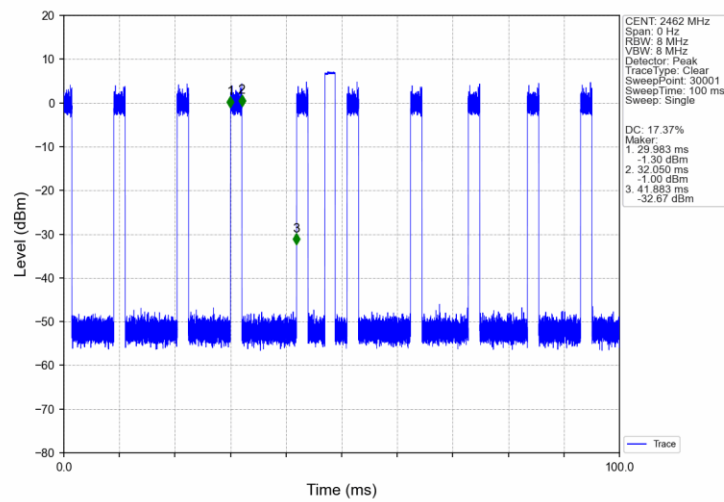
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



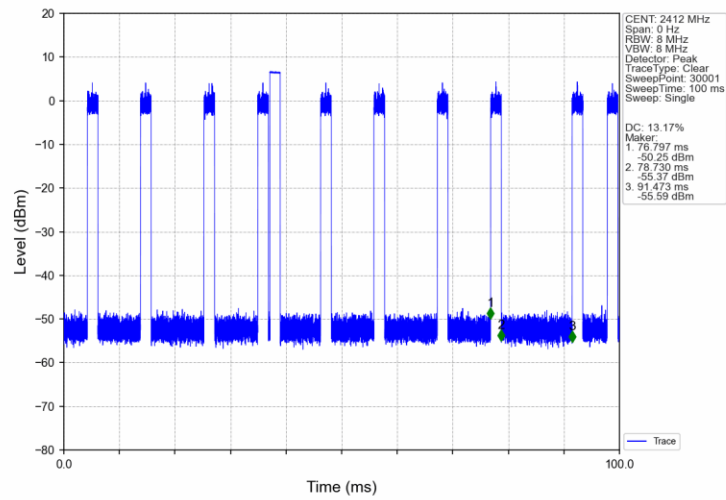
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



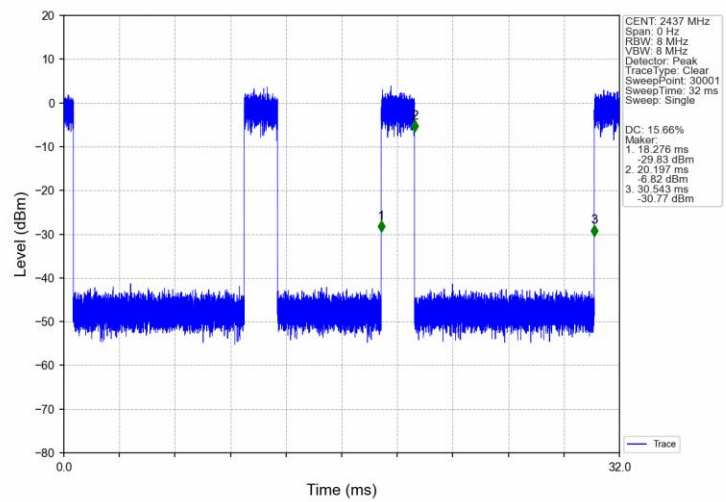
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



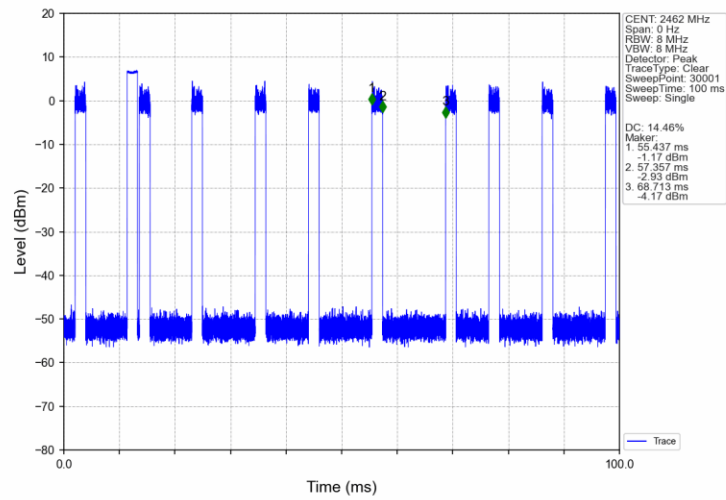
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



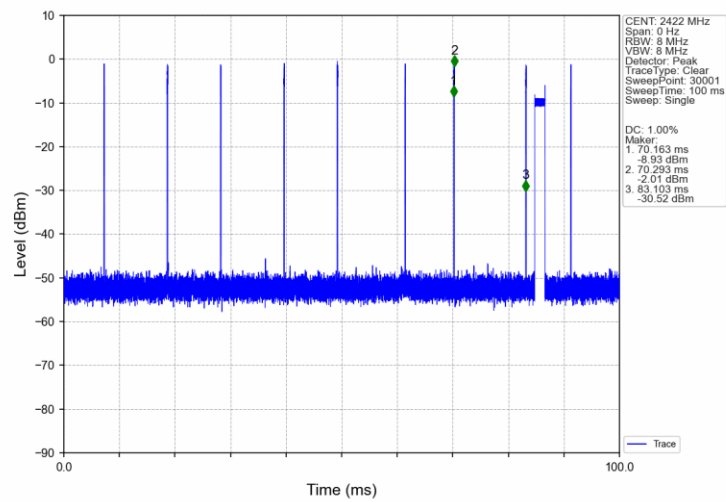
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



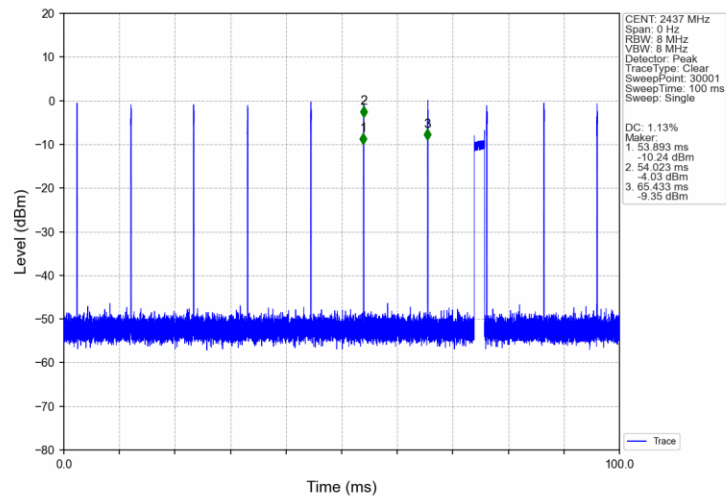
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



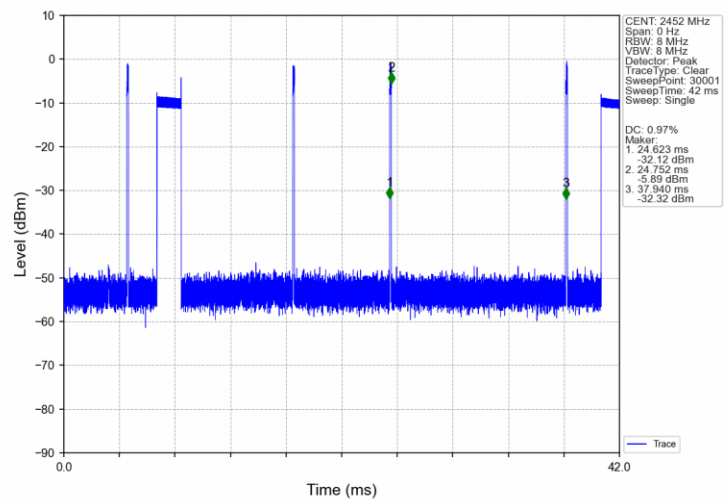
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	13.388	/	Pass
		2437	1	13.343	/	Pass
		2462	1	13.378	/	Pass
802.11g	SISO	2412	1	16.824	/	Pass
		2437	1	16.910	/	Pass
		2462	1	16.856	/	Pass
802.11n (HT20)	SISO	2412	1	17.812	/	Pass
		2437	1	17.739	/	Pass
		2462	1	17.740	/	Pass
802.11n (HT40)	SISO	2422	1	35.515	/	Pass
		2437	1	35.390	/	Pass
		2452	1	35.566	/	Pass

2.1.2 6dB BW

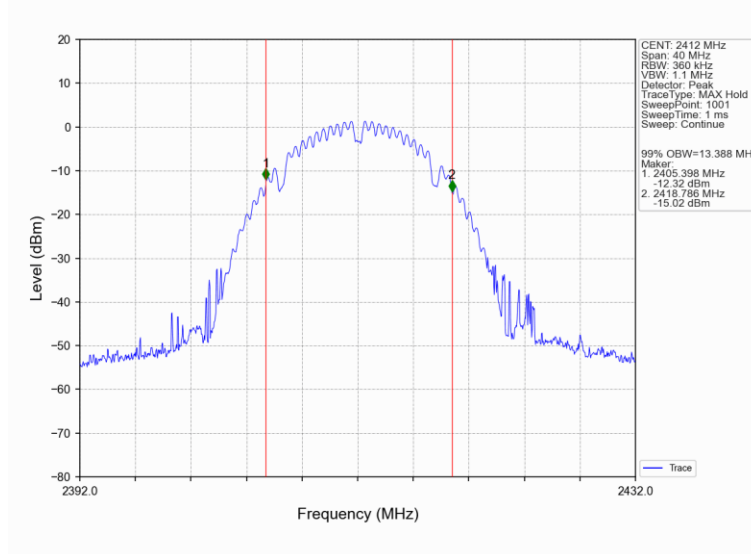
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.149	≥ 0.5	Pass
		2437	1	9.185	≥ 0.5	Pass
		2462	1	9.188	≥ 0.5	Pass

802.11g	SISO	2412	1	15.136	≥ 0.5	Pass
		2437	1	15.137	≥ 0.5	Pass
		2462	1	14.234	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.200	≥ 0.5	Pass
		2437	1	15.210	≥ 0.5	Pass
		2462	1	15.226	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	30.837	≥ 0.5	Pass
		2437	1	29.489	≥ 0.5	Pass
		2452	1	30.821	≥ 0.5	Pass

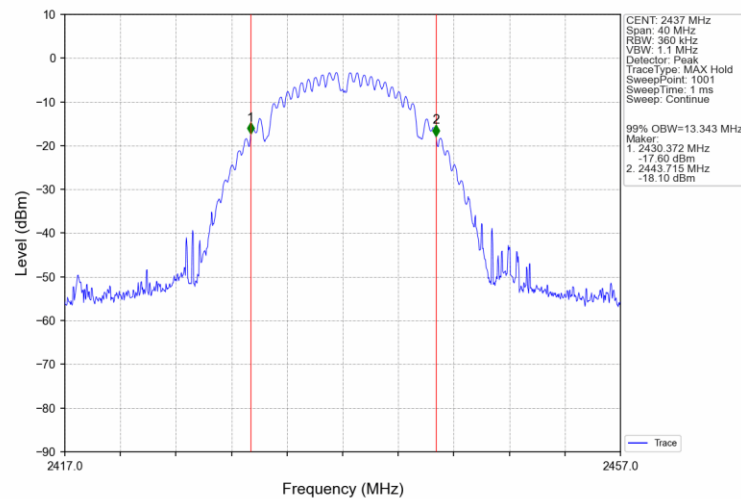
2.2 Test Graph

2.2.1 OBW

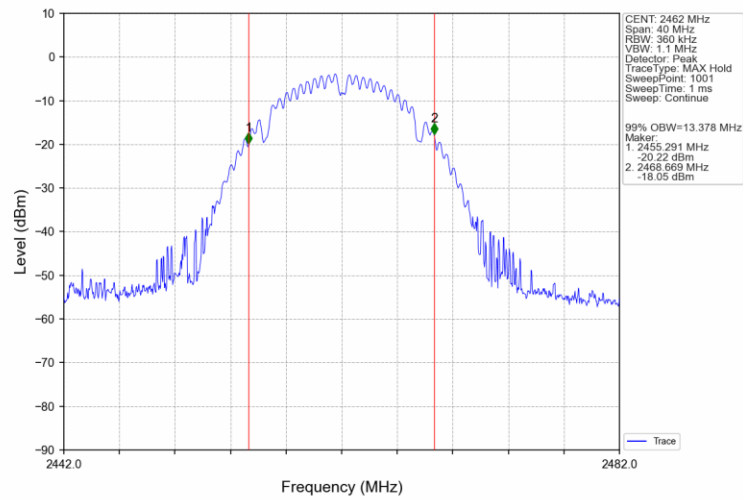
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



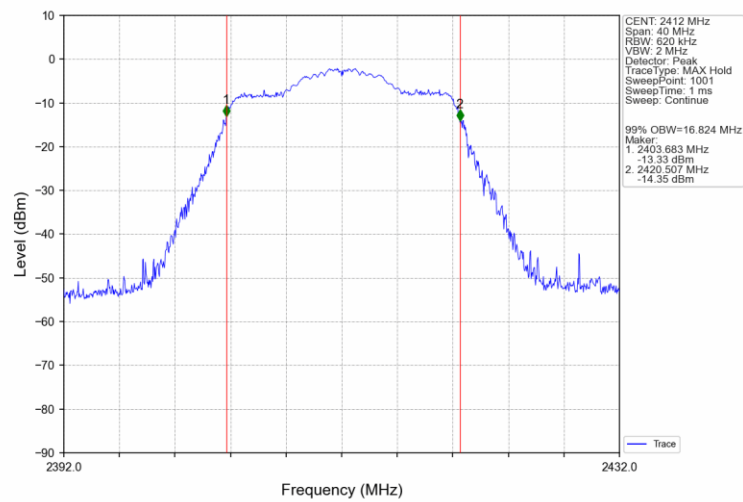
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



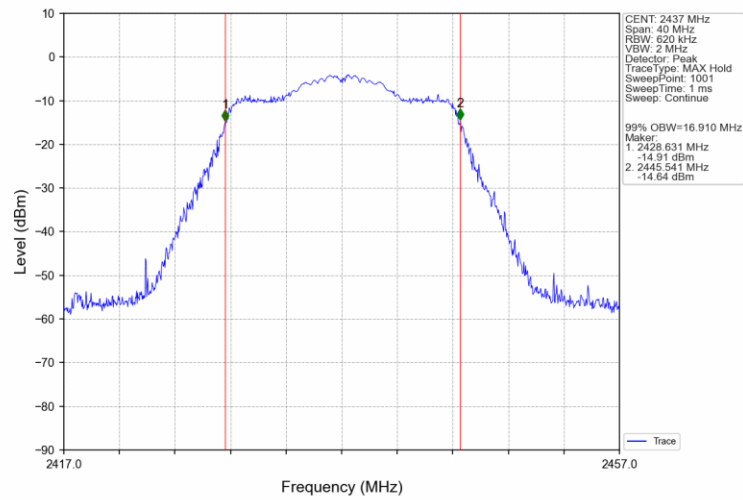
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



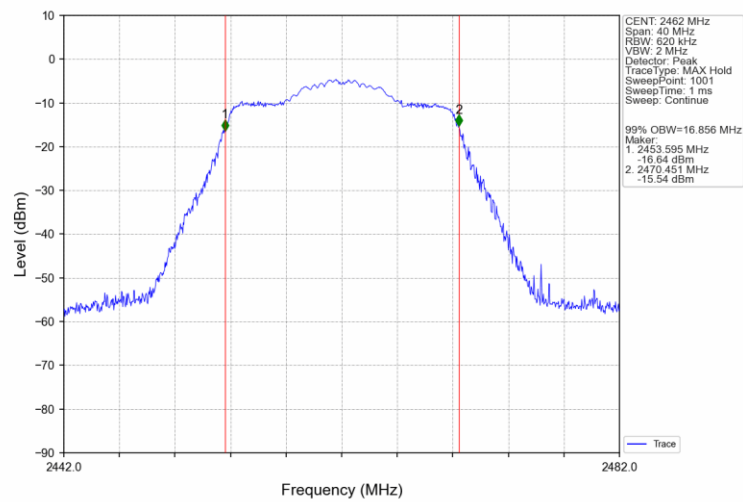
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



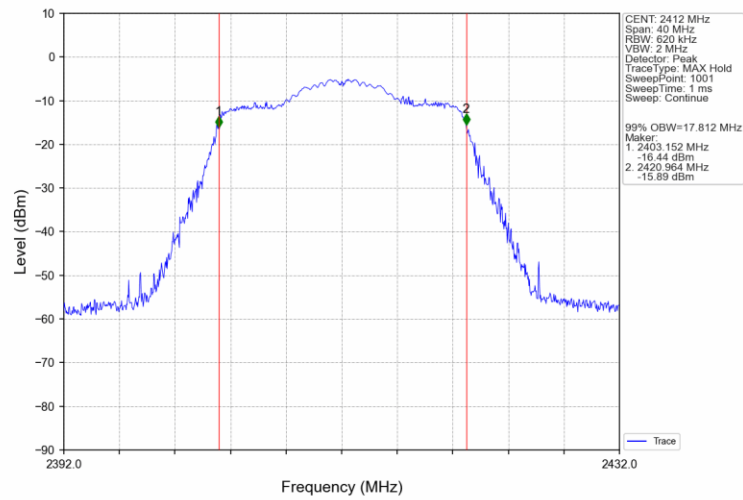
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



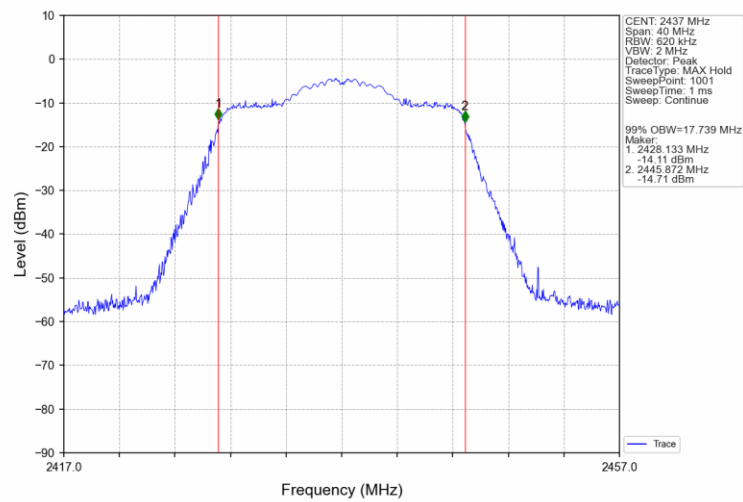
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



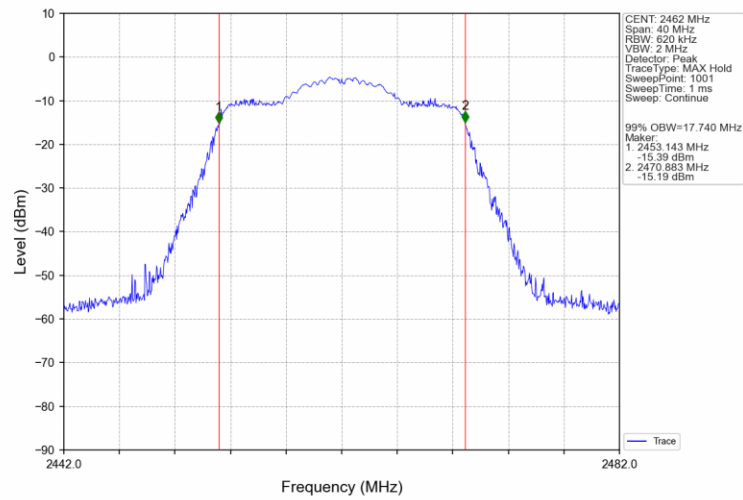
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



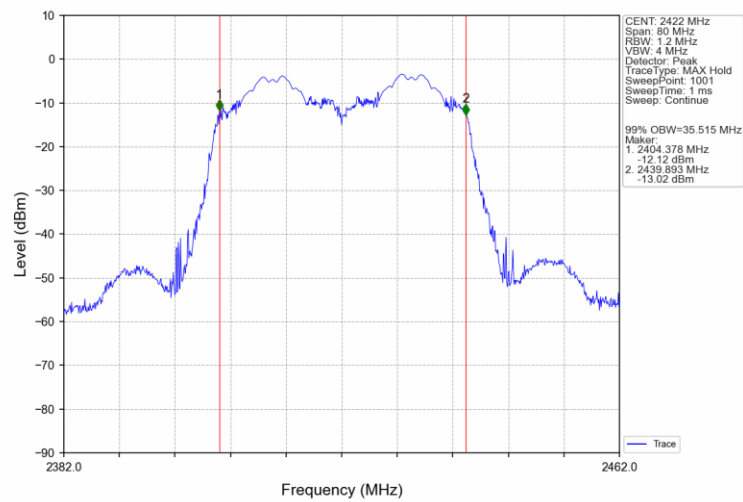
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



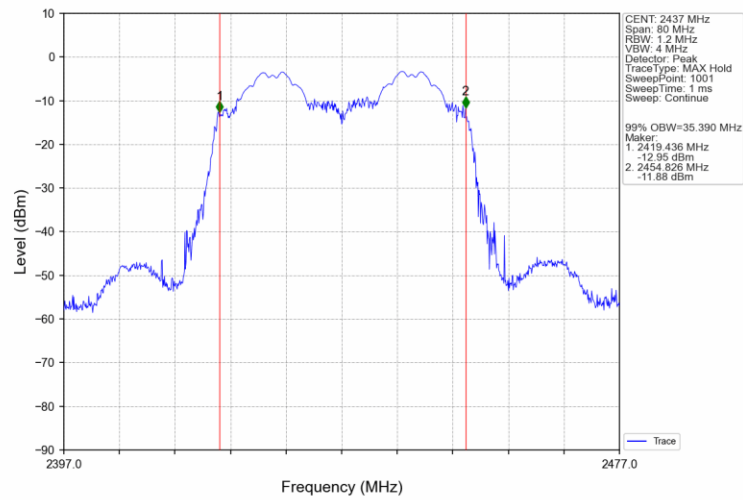
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



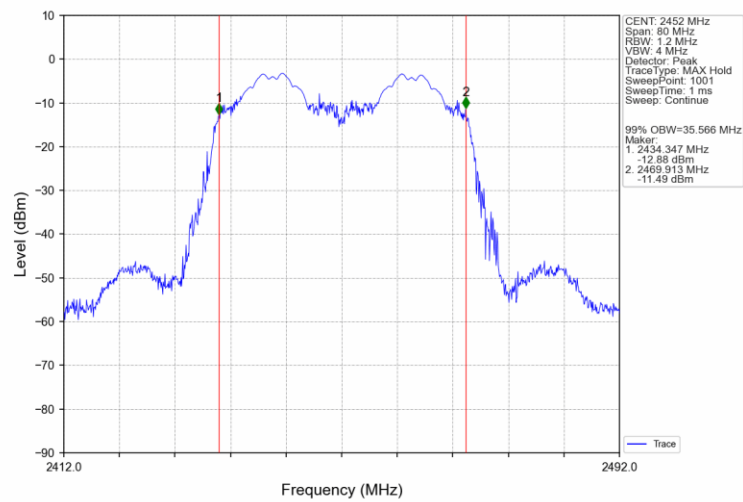
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

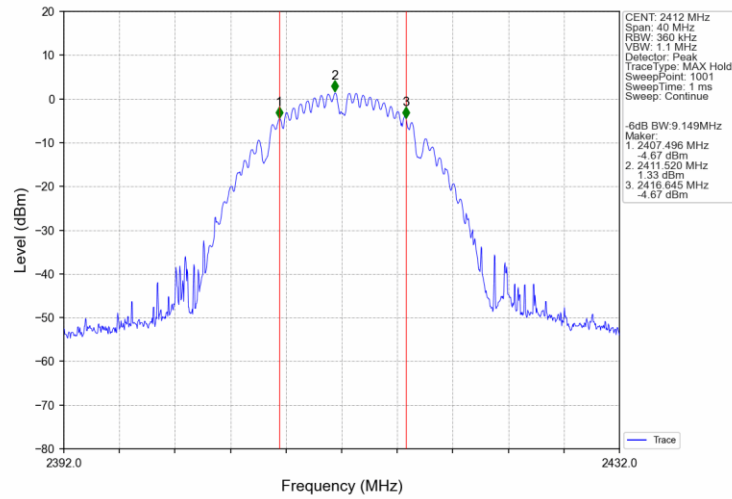


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

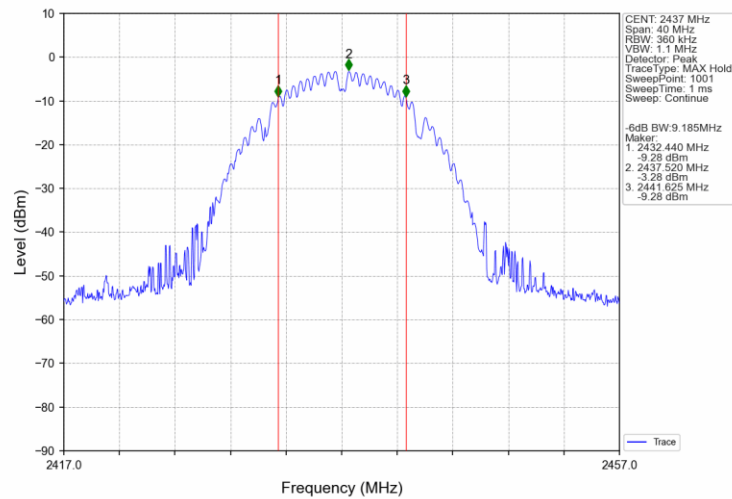


2.2.2 6dB BW

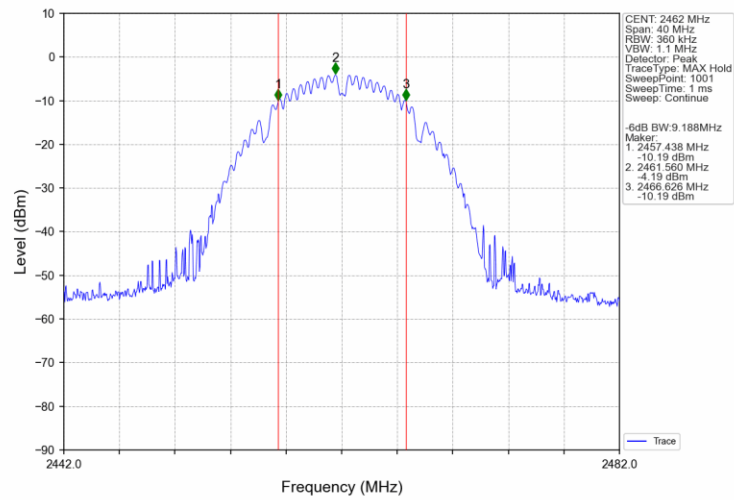
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



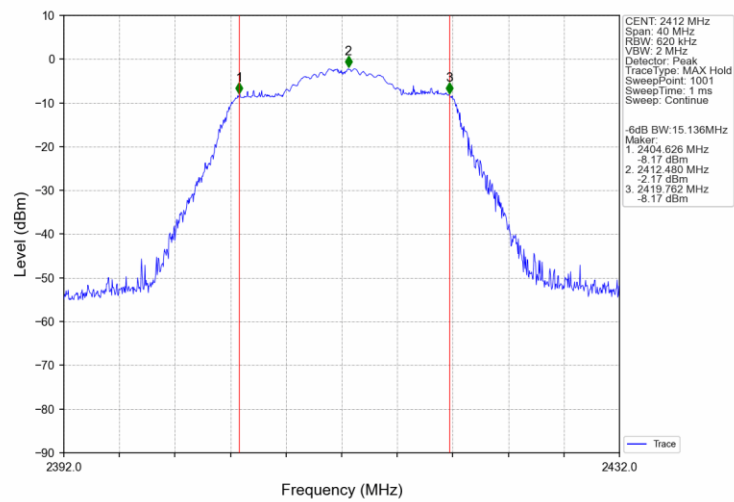
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



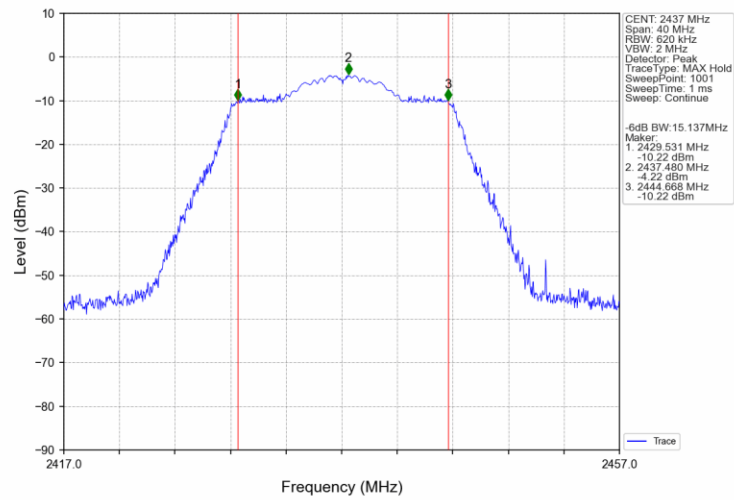
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



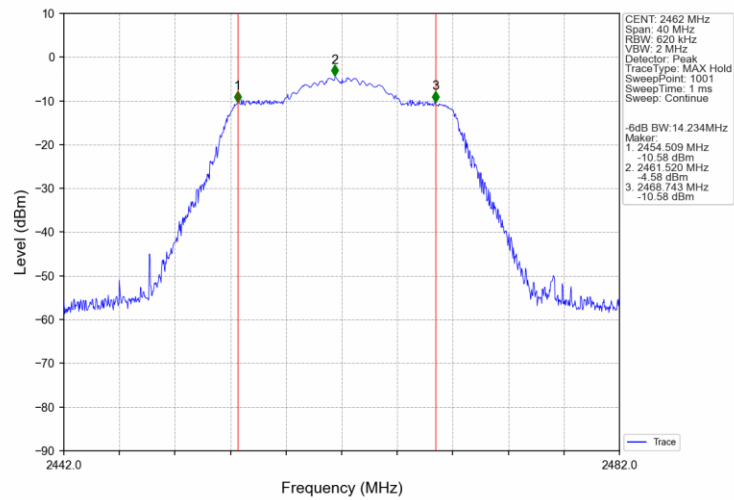
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



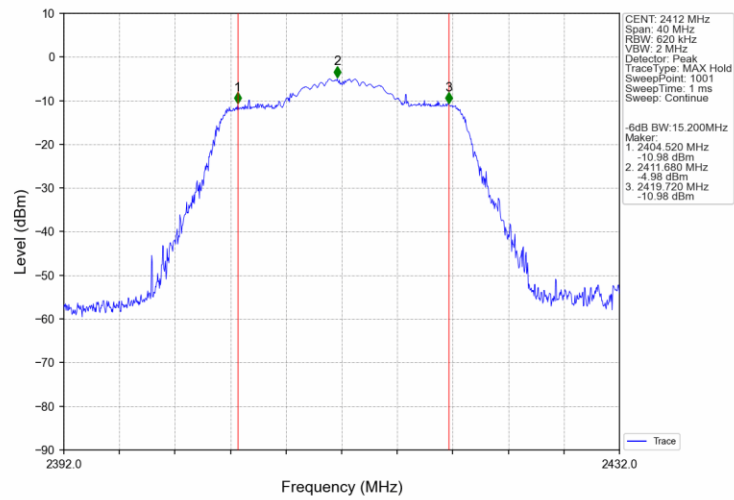
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



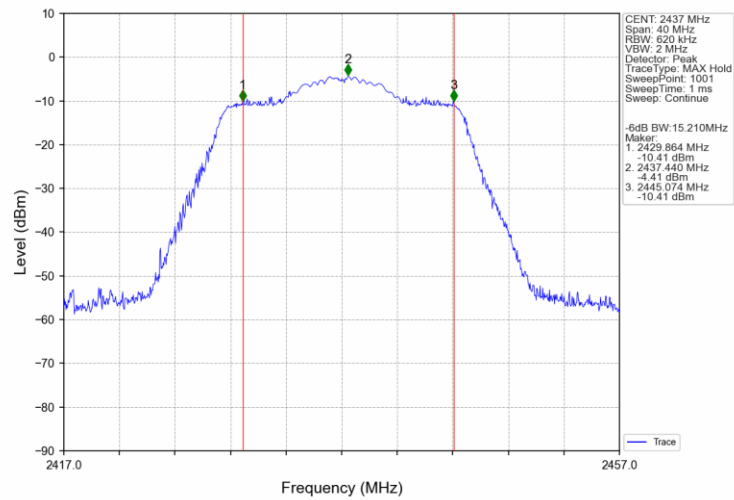
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



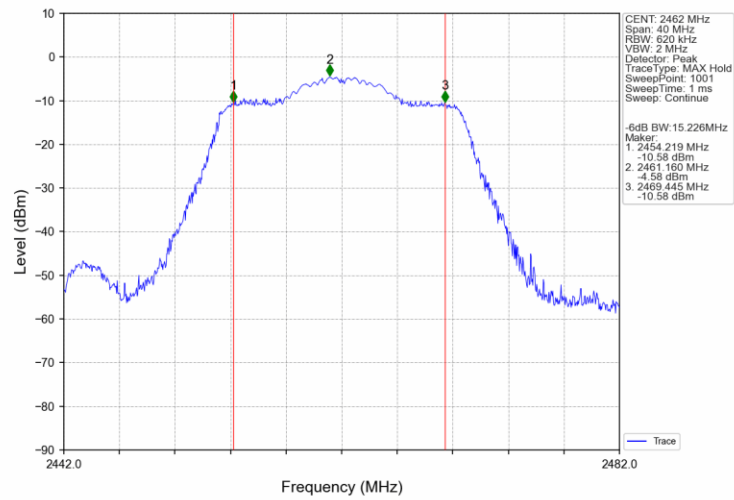
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



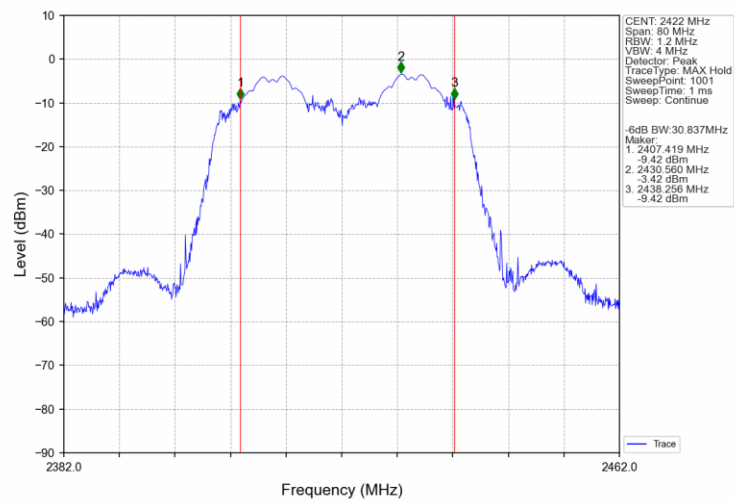
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



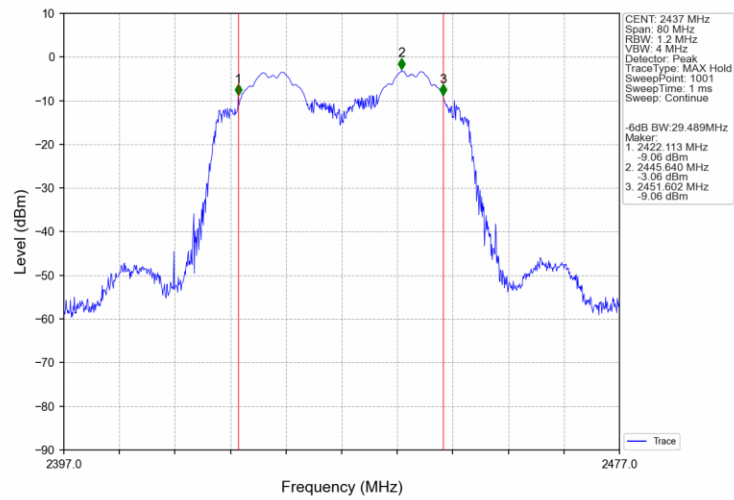
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



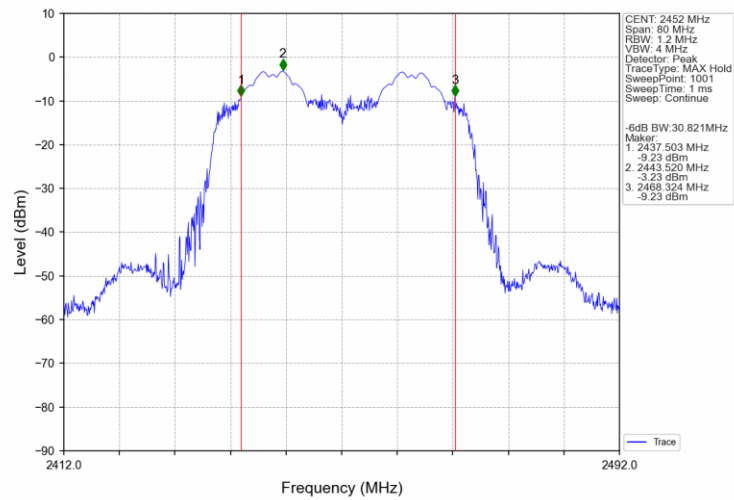
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Peak 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	7.10	<=30	Pass
		2437	7.52	<=30	Pass
		2462	6.77	<=30	Pass
802.11g	SISO	2412	6.53	<=30	Pass
		2437	7.21	<=30	Pass
		2462	6.47	<=30	Pass
802.11n (HT20)	SISO	2412	6.22	<=30	Pass
		2437	6.79	<=30	Pass
		2462	6.67	<=30	Pass
802.11n (HT40)	SISO	2422	6.49	<=30	Pass
		2437	6.64	<=30	Pass
		2452	6.78	<=30	Pass
Note1: Antenna Gain: Ant1: 0.98dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

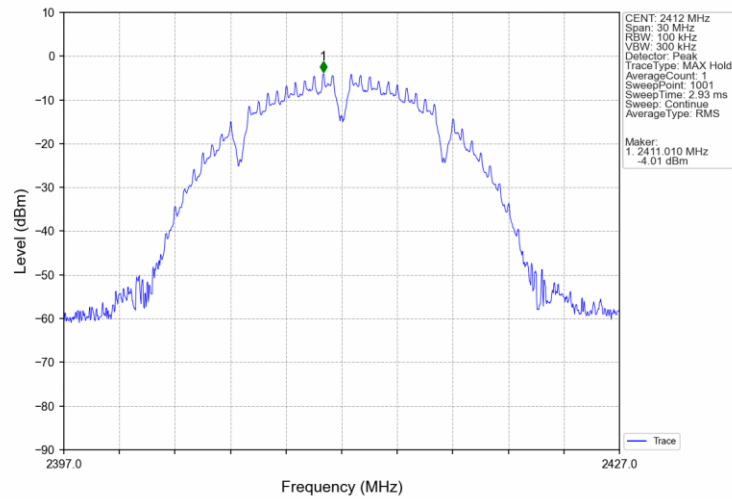
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-4.01	<=8	Pass
		2437	-4.15	<=8	Pass
		2462	-4.25	<=8	Pass
802.11g	SISO	2412	-5.63	<=8	Pass
		2437	-6.42	<=8	Pass
		2462	-7.24	<=8	Pass
802.11n (HT20)	SISO	2412	-6.97	<=8	Pass
		2437	-7.41	<=8	Pass
		2462	-6.79	<=8	Pass
802.11n (HT40)	SISO	2422	-8.27	<=8	Pass
		2437	-7.88	<=8	Pass
		2452	-8.69	<=8	Pass
Note1: Antenna Gain: Ant1: 0.98dBi;					

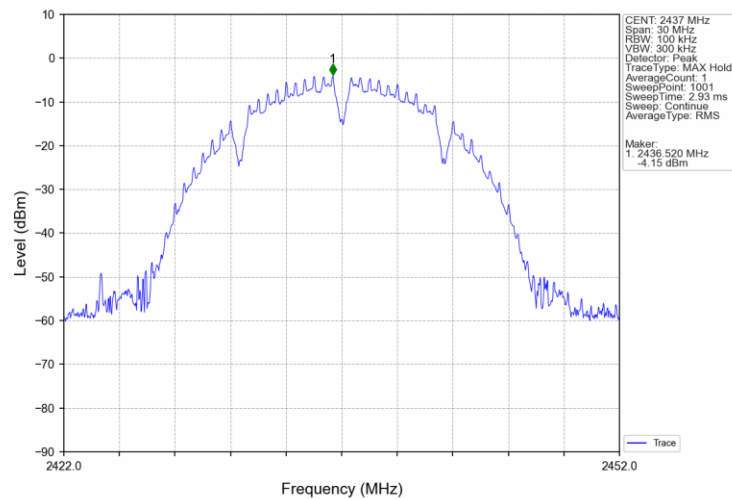
4.2 Test Graph

4.2.1 PSD

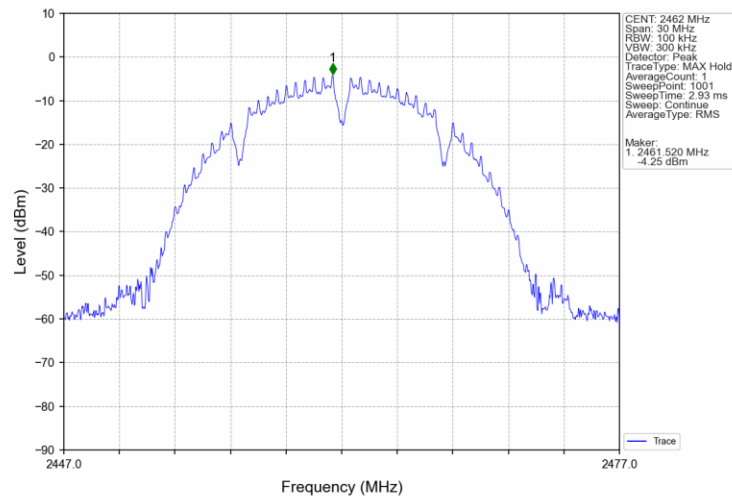
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



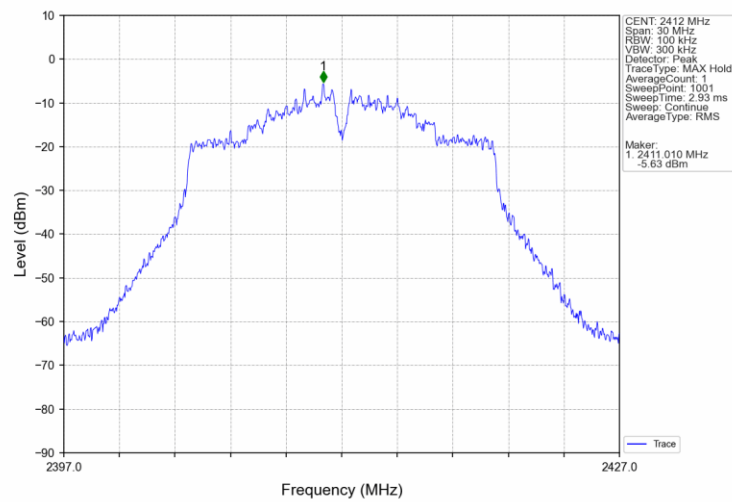
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



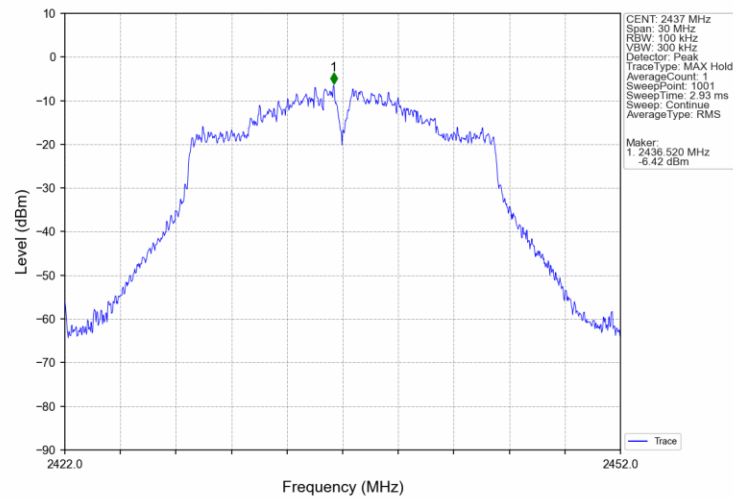
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



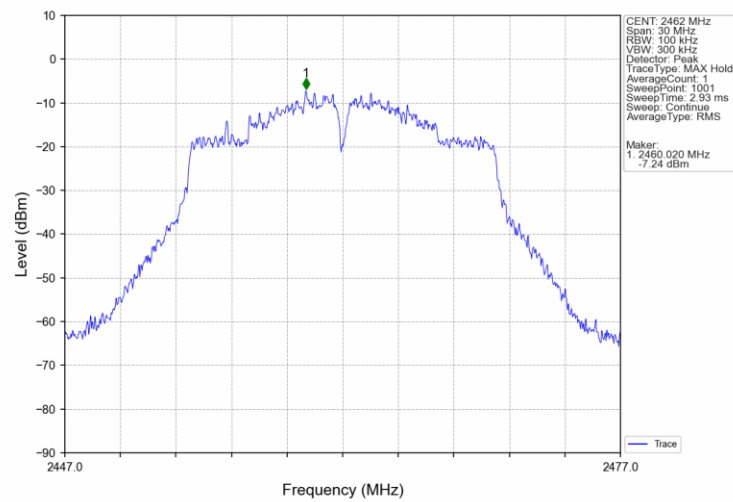
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



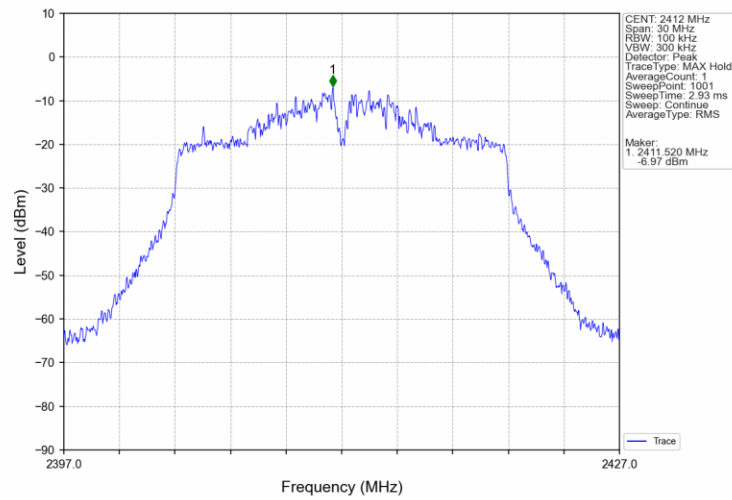
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



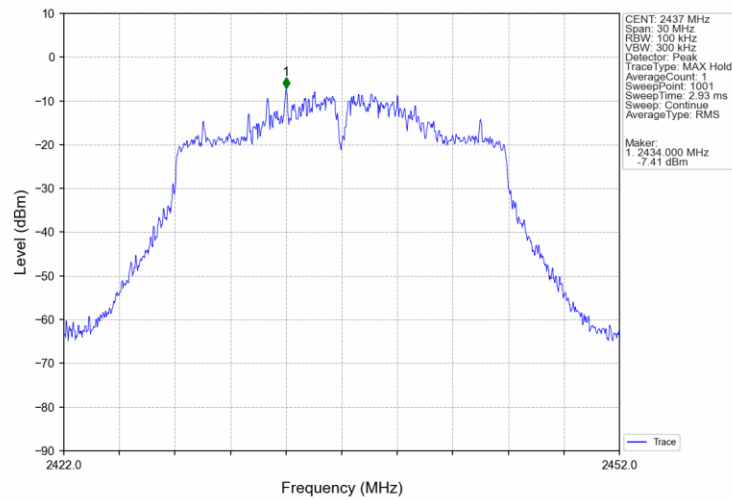
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



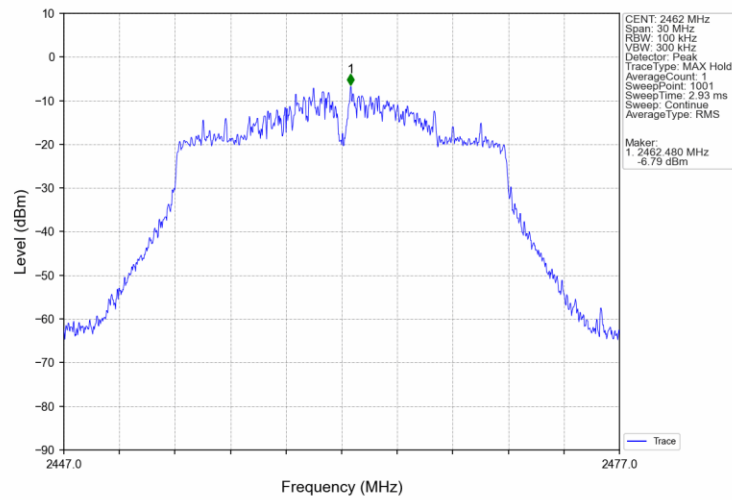
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



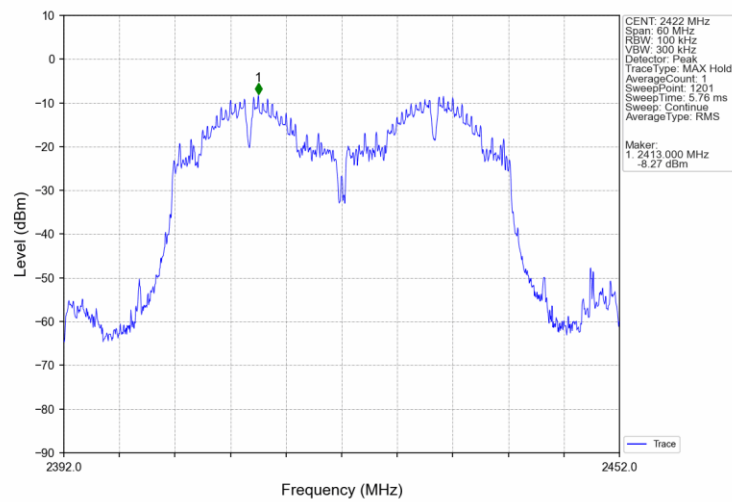
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



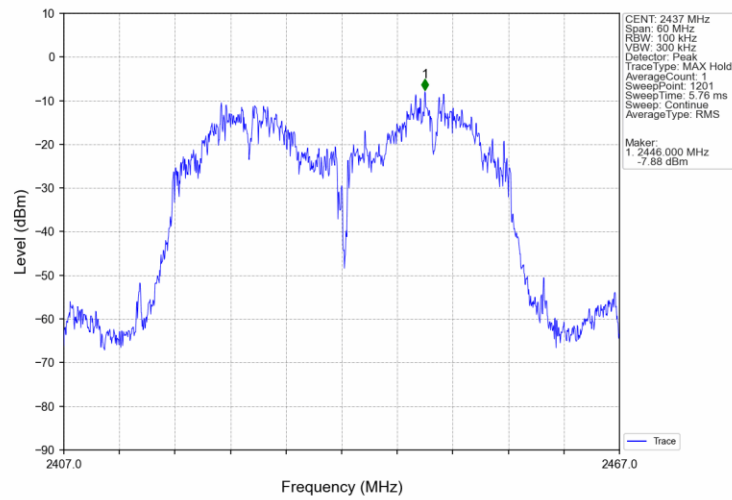
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



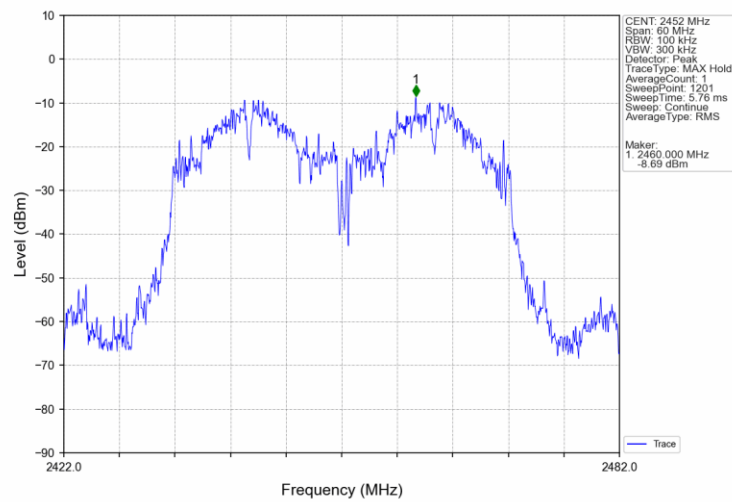
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	0.87
		2437	1	-3.50
		2462	1	-4.54
802.11g	SISO	2412	1	-3.03
		2437	1	-6.81
		2462	1	-5.47
802.11n (HT20)	SISO	2412	1	-7.59
		2437	1	-6.66
		2462	1	-6.27
802.11n (HT40)	SISO	2422	1	-9.42
		2437	1	-9.10
		2452	1	-9.24

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.

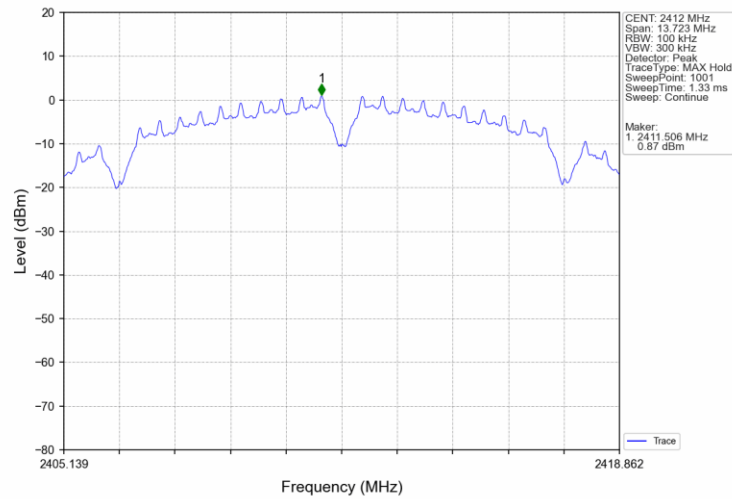
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	0.87	-19.13	Pass
		2437	1	-3.50	-23.50	Pass
		2462	1	-4.54	-24.54	Pass

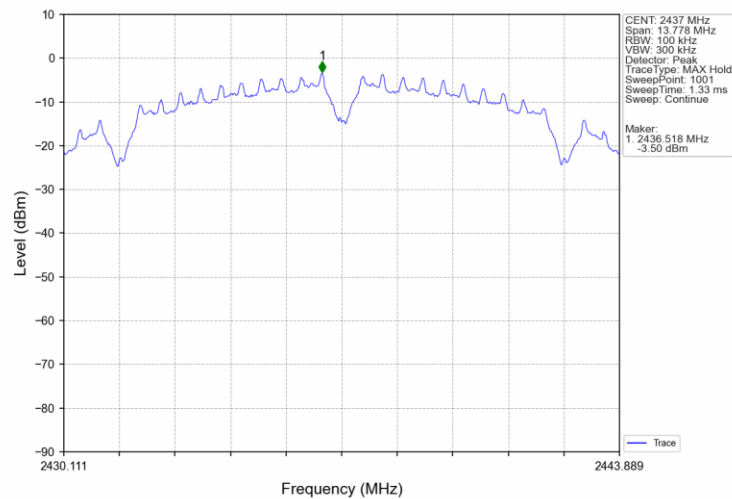
5.2 Test Graph

5.2.1 Ref

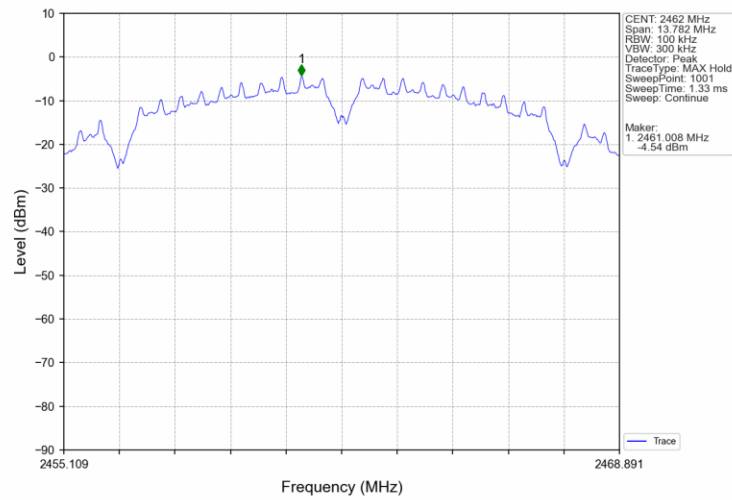
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



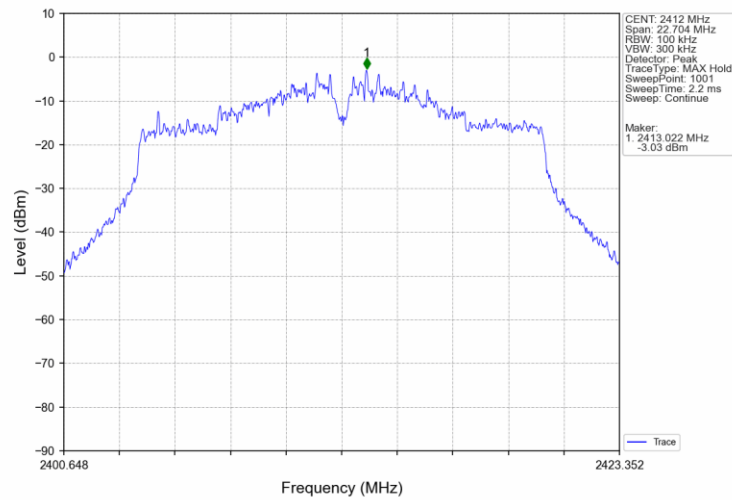
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



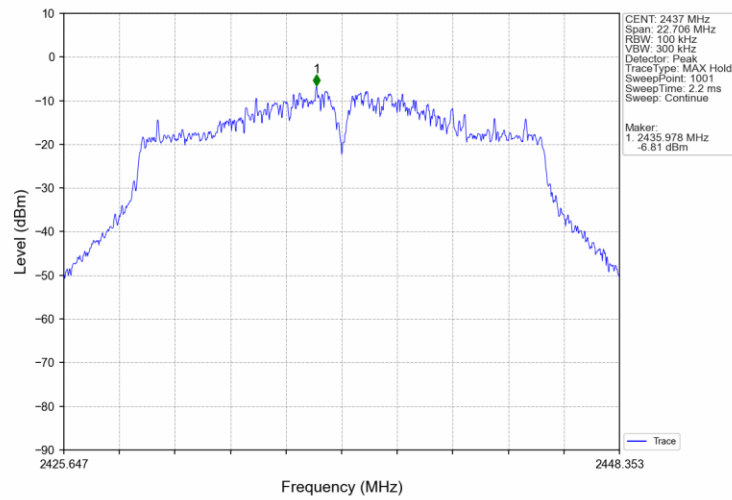
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



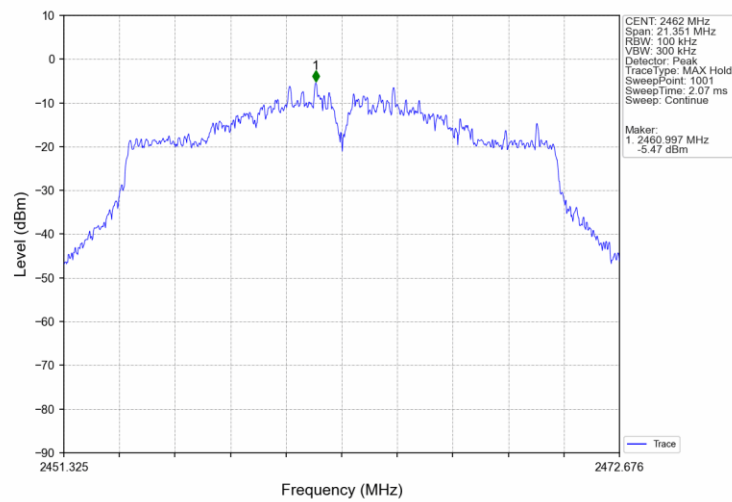
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



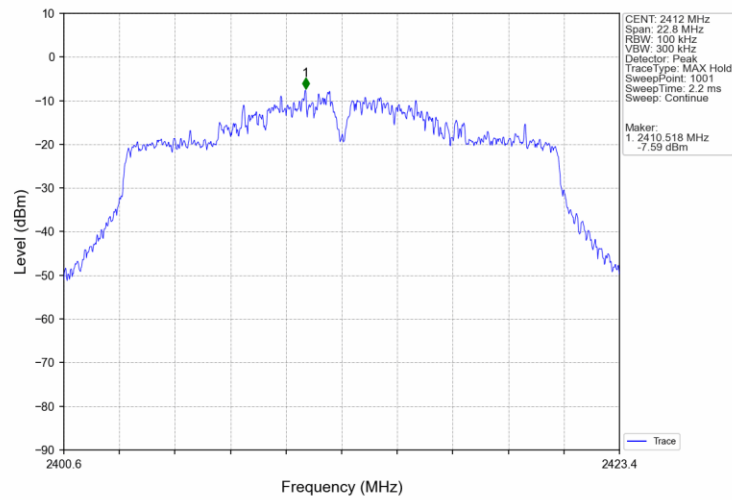
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



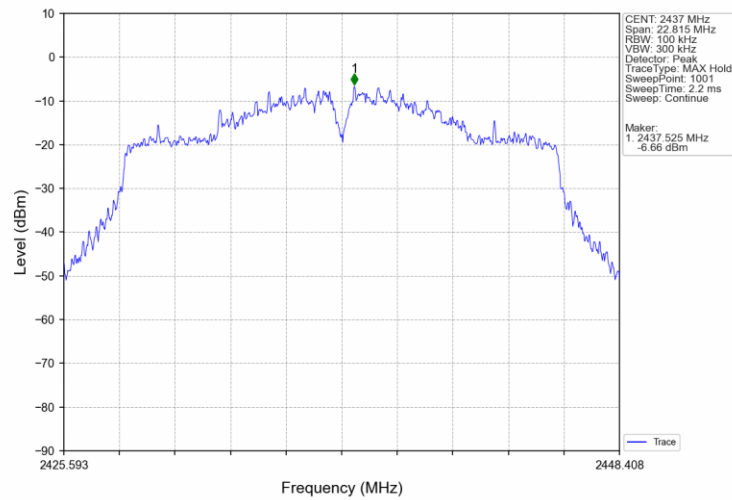
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



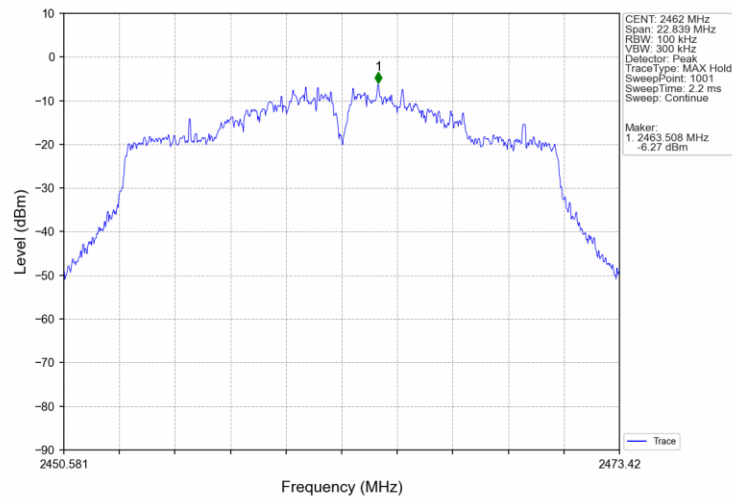
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



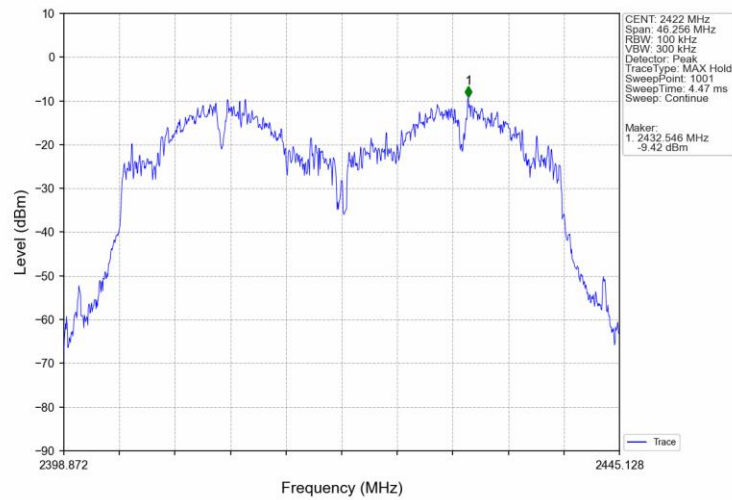
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



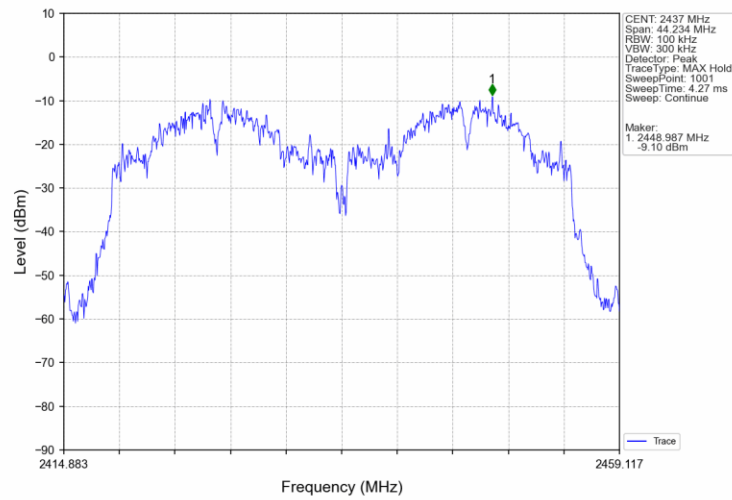
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



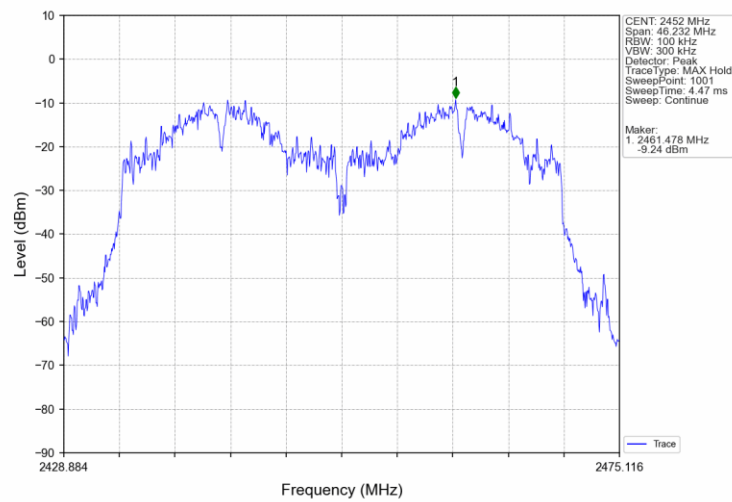
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

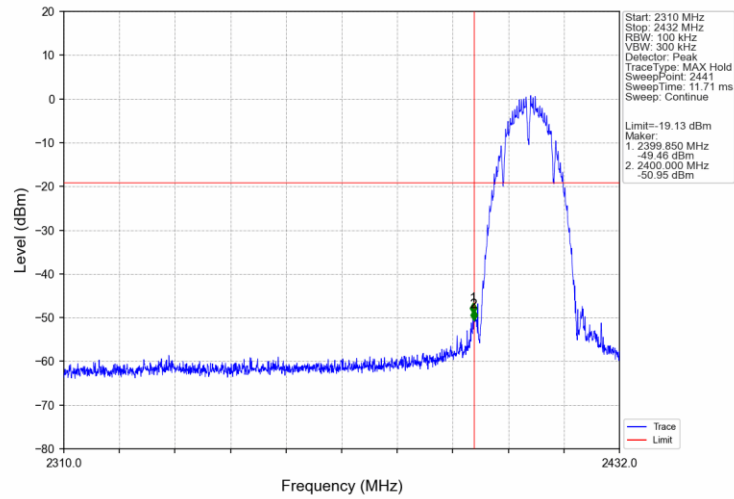


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

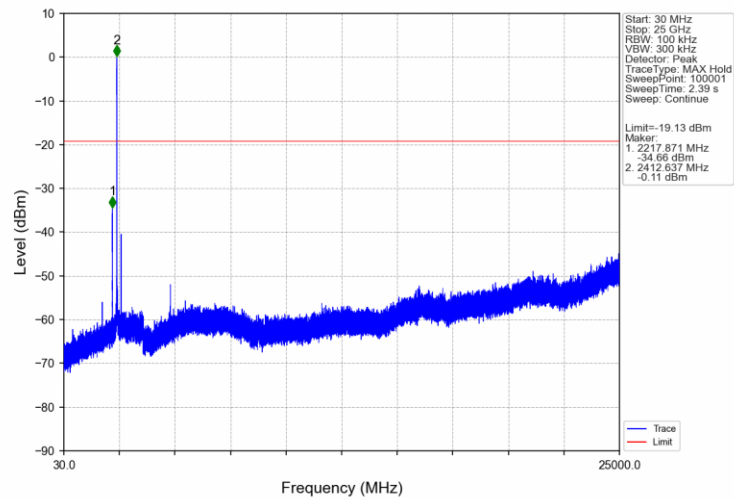


5.2.2 CSE

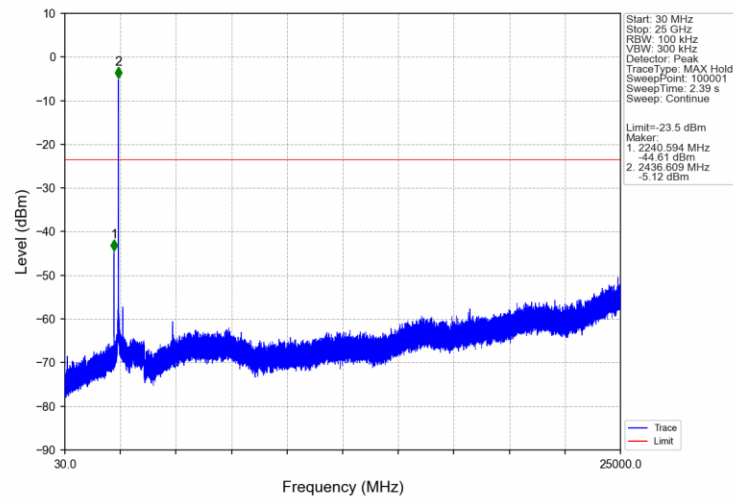
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

