

Appendix Test Data for 2.4G WIFI

1. Duty Cycle

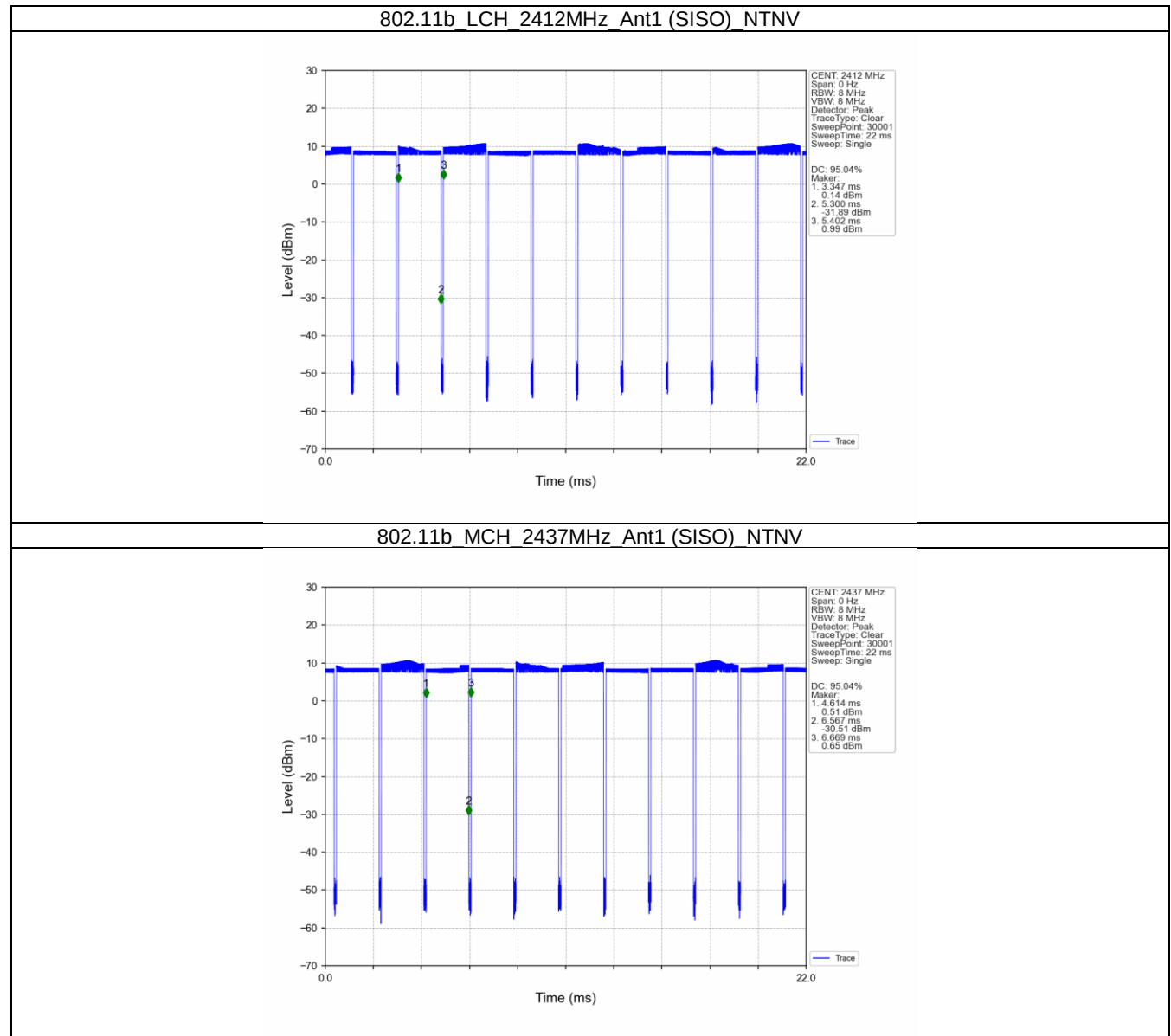
1.1 Test Result

1.1.1 Ant1

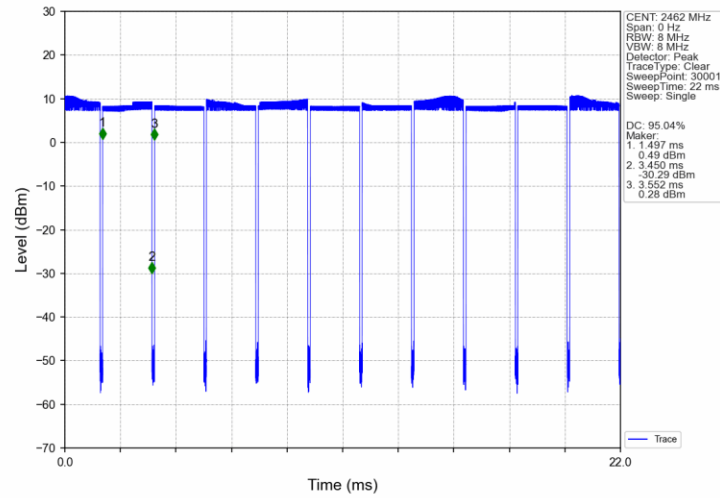
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	/	/	1.953	2.055	95.04	0.22	0.04
		2437	/	/	1.953	2.055	95.04	0.22	0.04
		2462	/	/	1.953	2.055	95.04	0.22	0.04
802.11g	SISO	2412	/	/	0.336	0.438	76.71	1.15	0.05
		2437	/	/	0.337	0.439	76.77	1.15	0.03
		2462	/	/	0.337	0.439	76.77	1.15	0.03
802.11n (HT20)	SISO	2412	/	/	0.329	0.430	76.51	1.16	0.01
		2437	/	/	0.328	0.430	76.28	1.18	0.03
		2462	/	/	0.329	0.430	76.51	1.16	0.03
802.11n (HT40)	SISO	2422	/	/	0.176	0.278	63.31	1.99	0.06
		2437	/	/	0.176	0.279	63.08	2.00	0.09
		2452	/	/	0.180	0.279	64.52	1.90	0.12
802.11ax (HEW20)	SISO	2412	SU	/	0.274	0.376	72.87	1.37	0.04
		2437	SU	/	0.274	0.376	72.87	1.37	0.04
		2462	SU	/	0.274	0.376	72.87	1.37	0.04
802.11ax (HEW40)	SISO	2422	SU	/	0.165	0.417	39.57	4.03	0.05
		2437	SU	/	0.165	0.417	39.57	4.03	0.03
		2452	SU	/	0.165	0.418	39.47	4.04	0.04

1.2 Test Graph

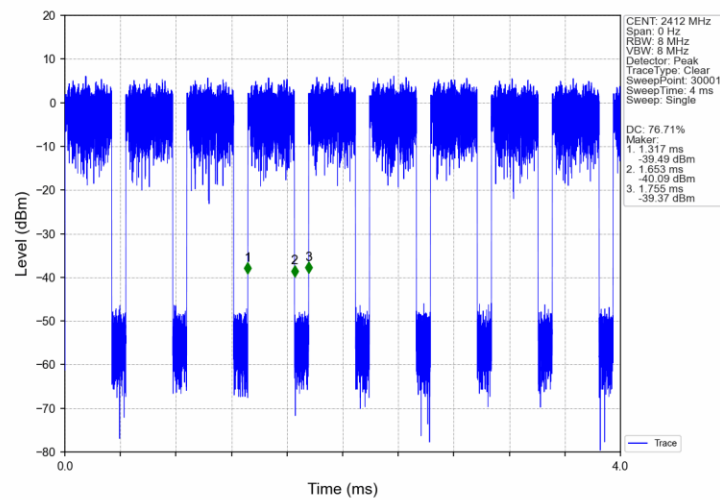
1.2.1 Ant1



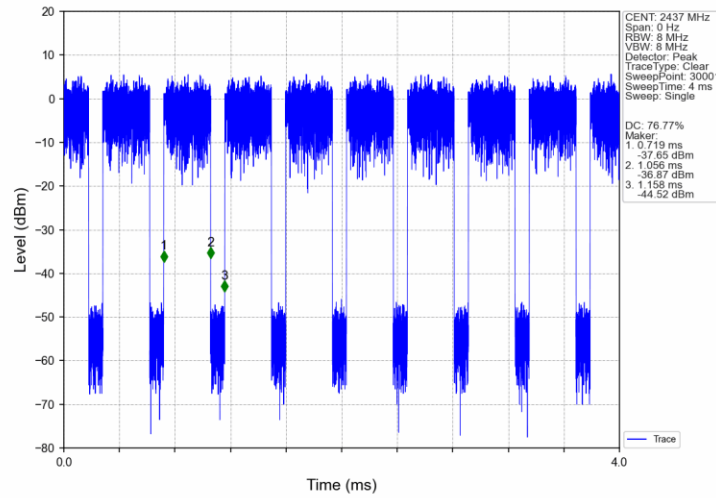
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



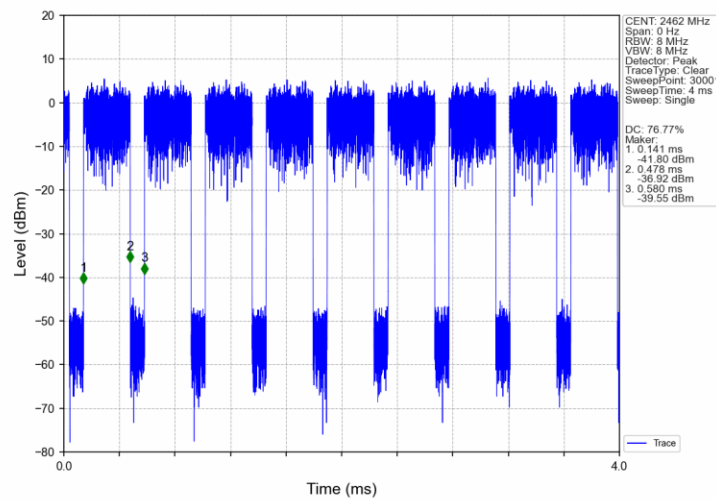
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



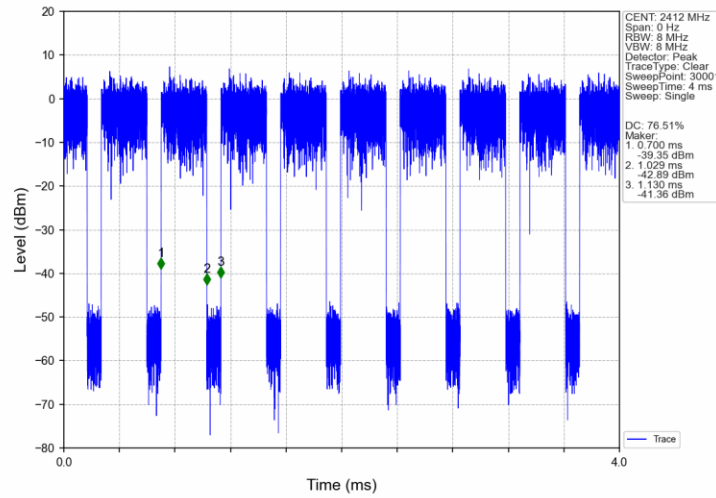
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



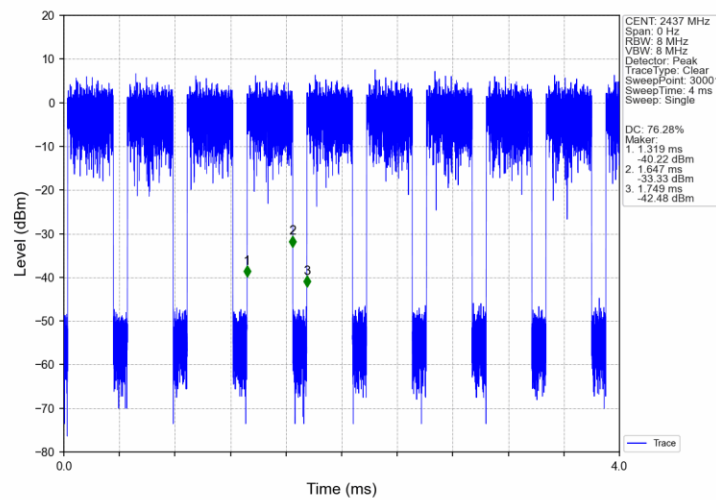
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



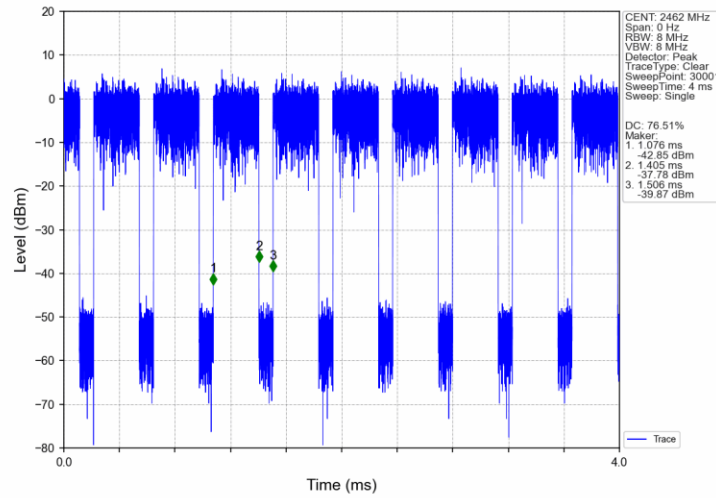
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



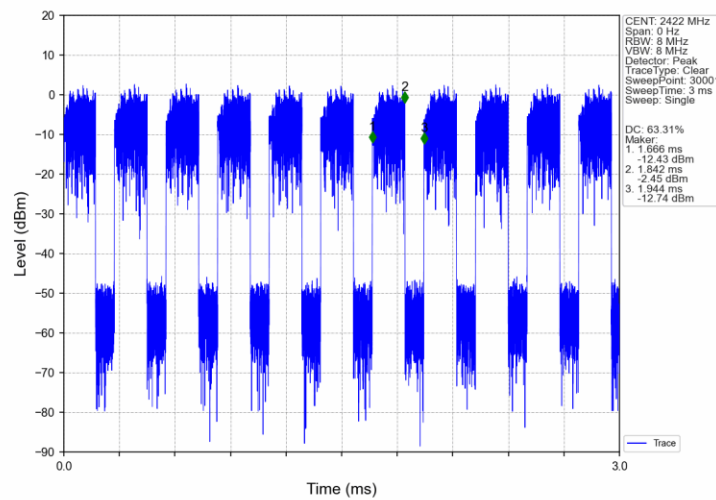
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



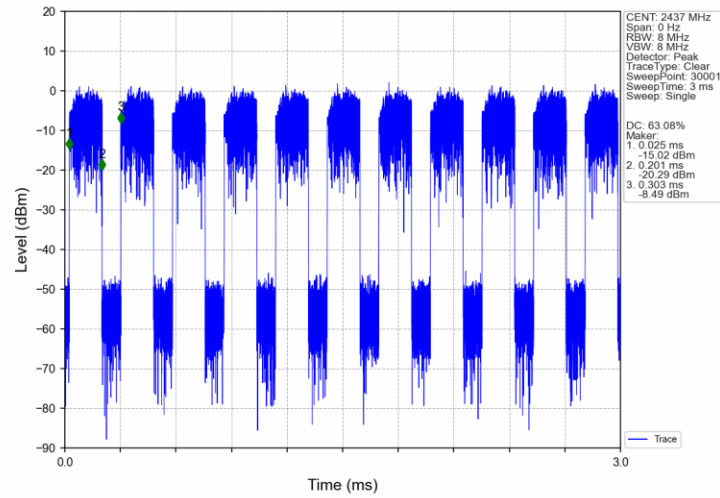
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



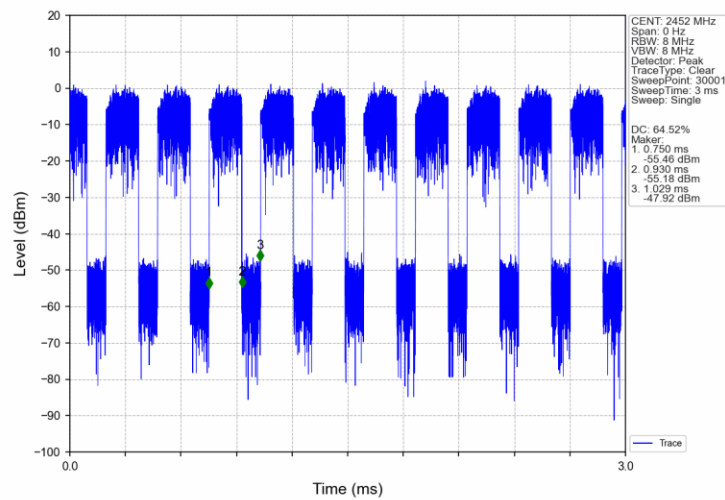
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



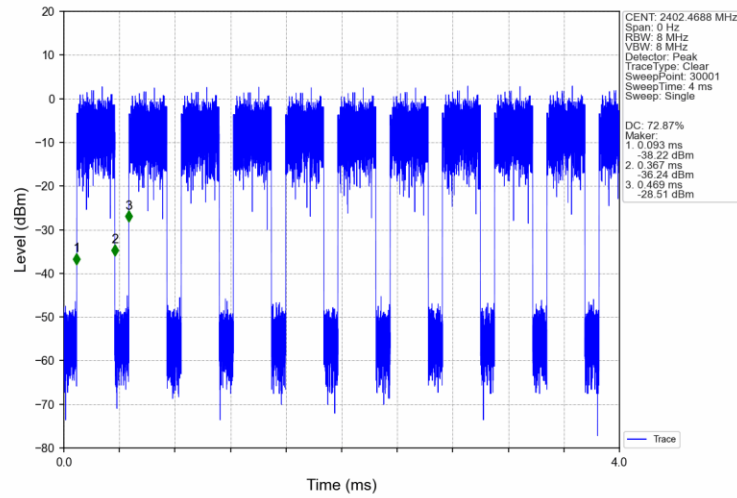
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



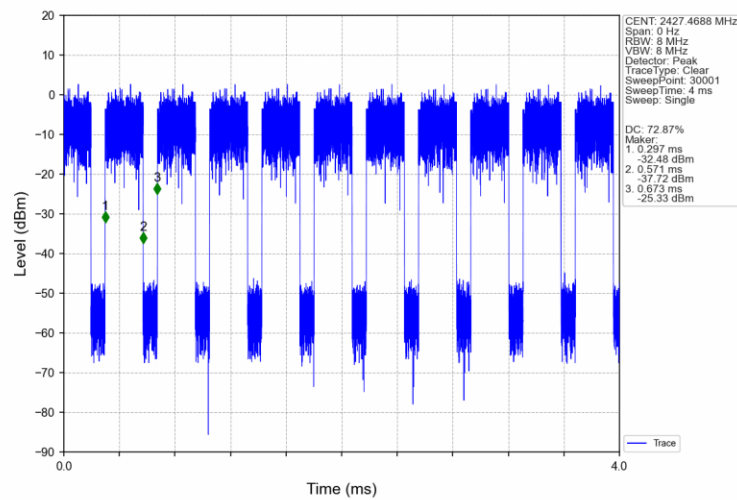
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



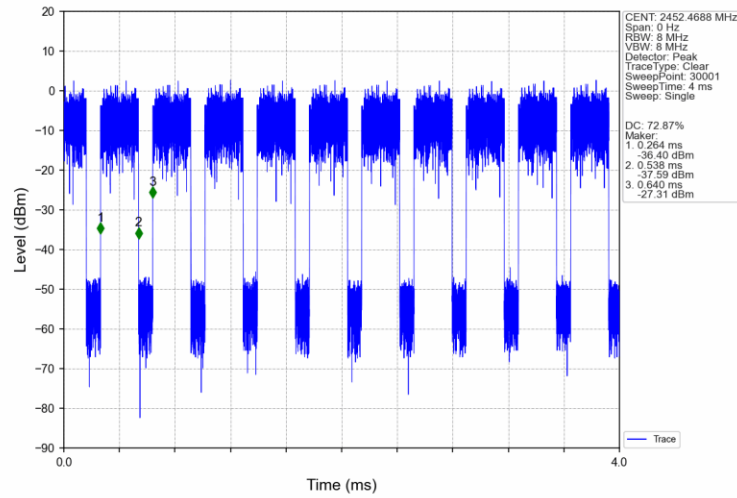
802.11ax(HEW20)_LCH_2412MHz_SU_/_Ant1 (SISO)_NTNV



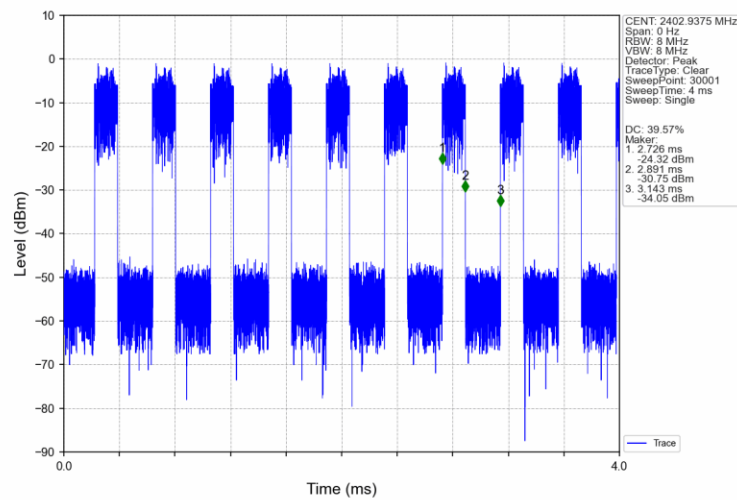
802.11ax(HEW20)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



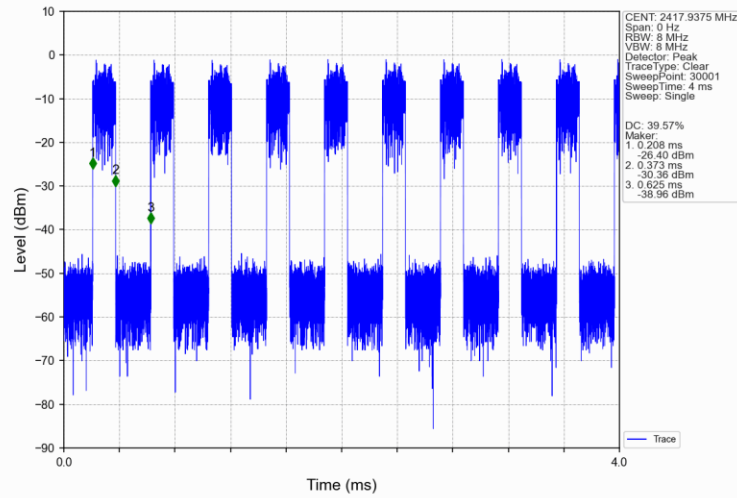
802.11ax(HEW20)_HCH_2462MHz_SU_/_Ant1 (SISO)_NTNV



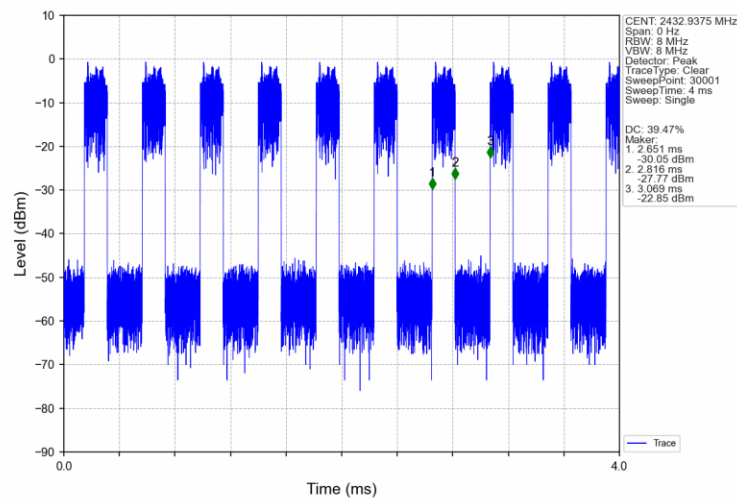
802.11ax(HEW40)_LCH_2422MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_SU_/_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

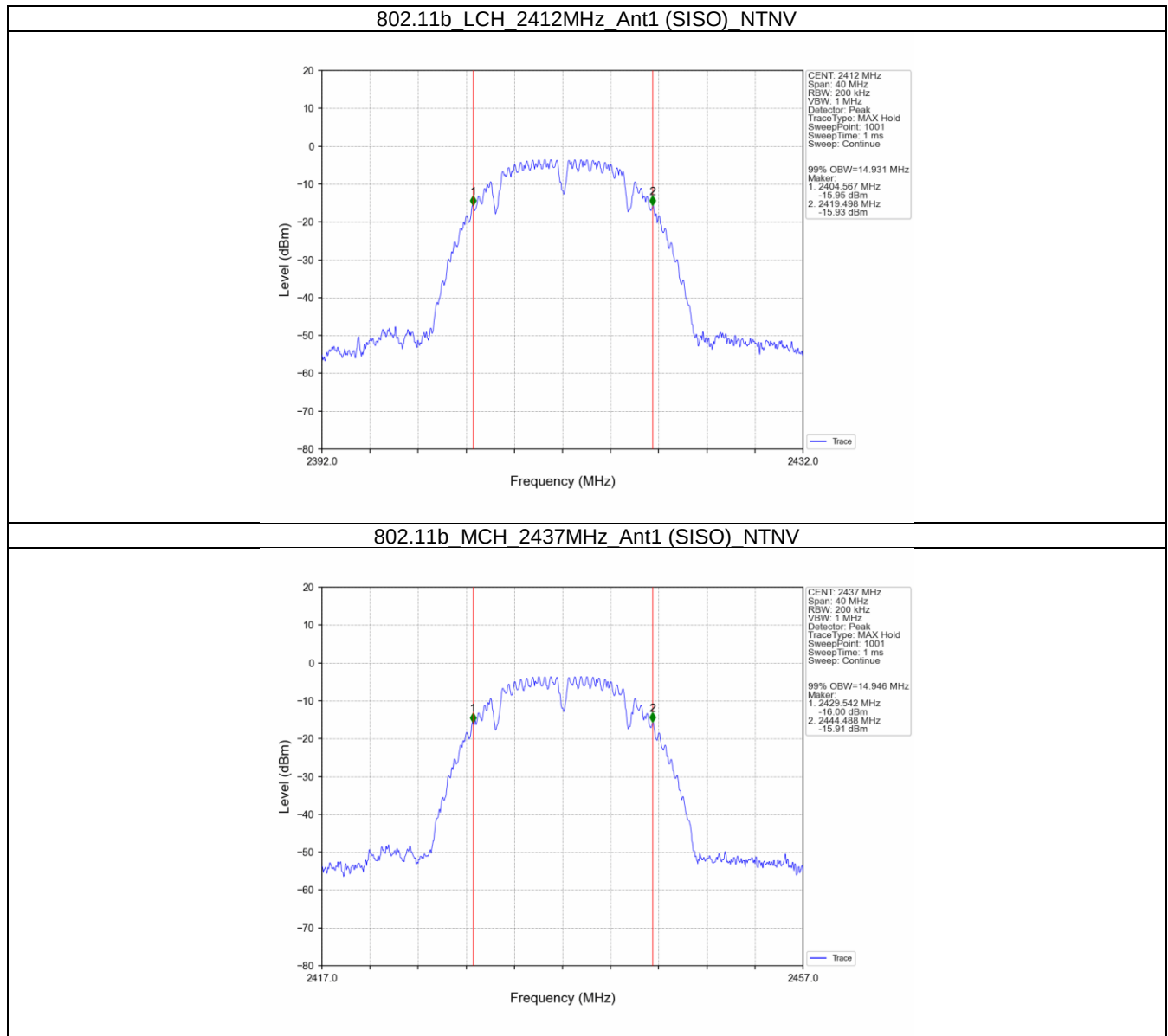
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	14.931	/	Pass
		2437	/	/	1	14.946	/	Pass
		2462	/	/	1	14.964	/	Pass
802.11g	SISO	2412	/	/	1	16.335	/	Pass
		2437	/	/	1	16.330	/	Pass
		2462	/	/	1	16.344	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.512	/	Pass
		2437	/	/	1	17.515	/	Pass
		2462	/	/	1	17.527	/	Pass
802.11n (HT40)	SISO	2422	/	/	1	36.265	/	Pass
		2437	/	/	1	36.322	/	Pass
		2452	/	/	1	36.386	/	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	18.888	/	Pass
		2437	SU	/	1	18.895	/	Pass
		2462	SU	/	1	18.901	/	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	37.916	/	Pass
		2437	SU	/	1	37.875	/	Pass
		2452	SU	/	1	37.942	/	Pass

2.1.2 6dB BW

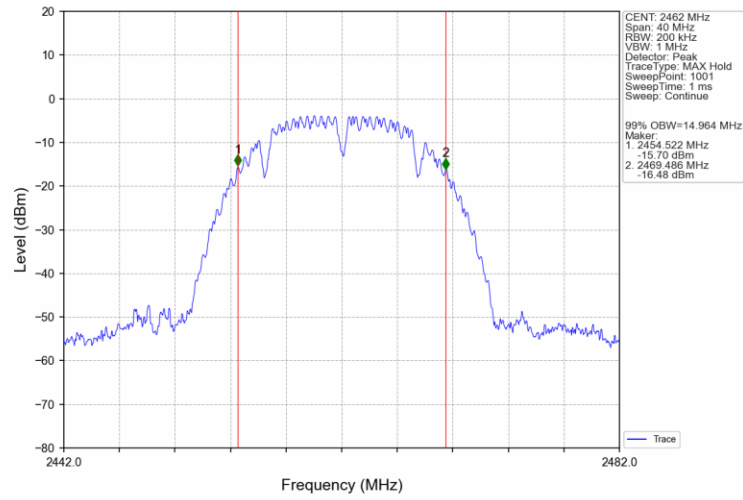
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	12.082	>=0.5	Pass
		2437	/	/	1	12.090	>=0.5	Pass
		2462	/	/	1	11.188	>=0.5	Pass
802.11g	SISO	2412	/	/	1	16.355	>=0.5	Pass
		2437	/	/	1	16.359	>=0.5	Pass
		2462	/	/	1	16.362	>=0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.579	>=0.5	Pass
		2437	/	/	1	17.613	>=0.5	Pass
		2462	/	/	1	17.618	>=0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	36.521	>=0.5	Pass
		2437	/	/	1	36.539	>=0.5	Pass
		2452	/	/	1	36.510	>=0.5	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	19.015	>=0.5	Pass
		2437	SU	/	1	19.033	>=0.5	Pass
		2462	SU	/	1	18.997	>=0.5	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	37.367	>=0.5	Pass
		2437	SU	/	1	37.237	>=0.5	Pass
		2452	SU	/	1	37.311	>=0.5	Pass

2.2 Test Graph

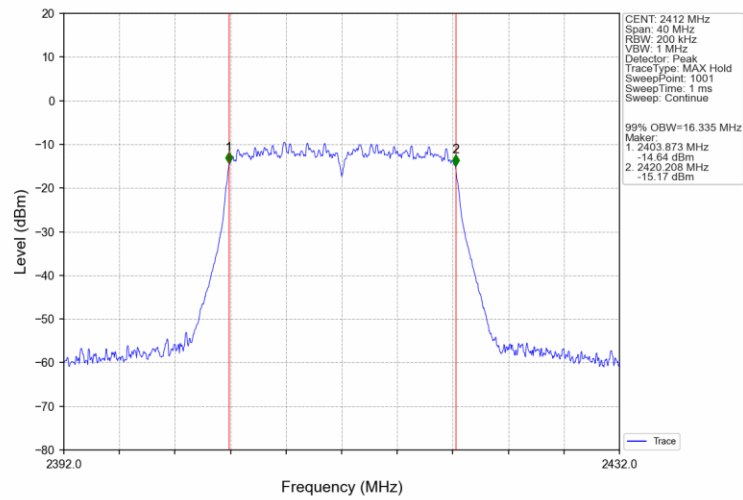
2.2.1 OBW



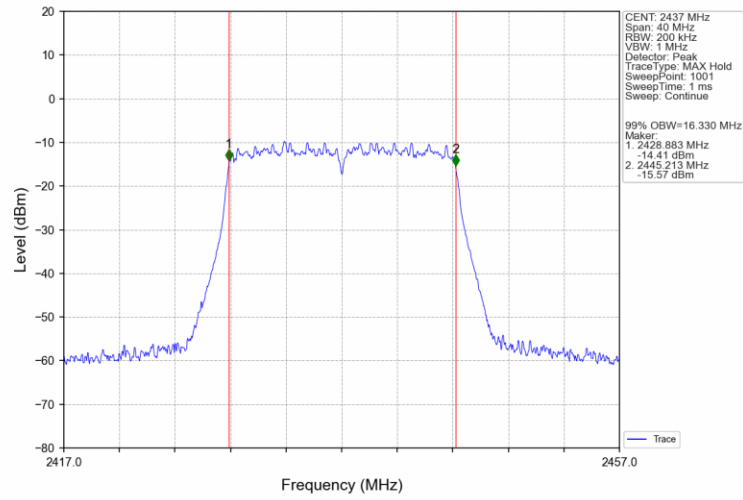
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



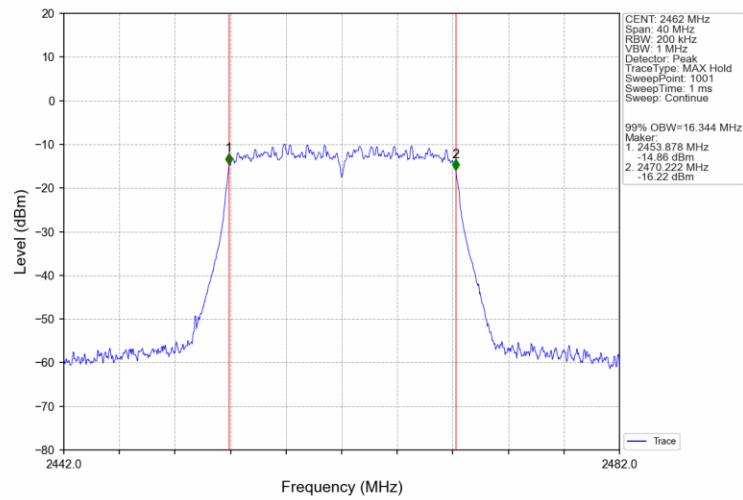
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



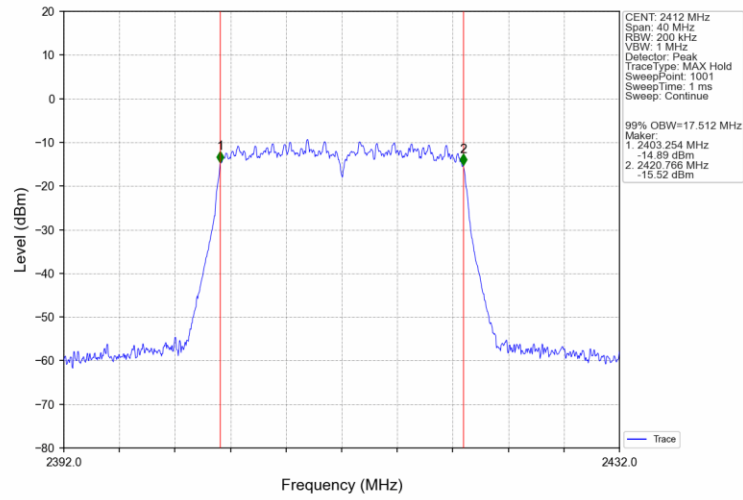
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



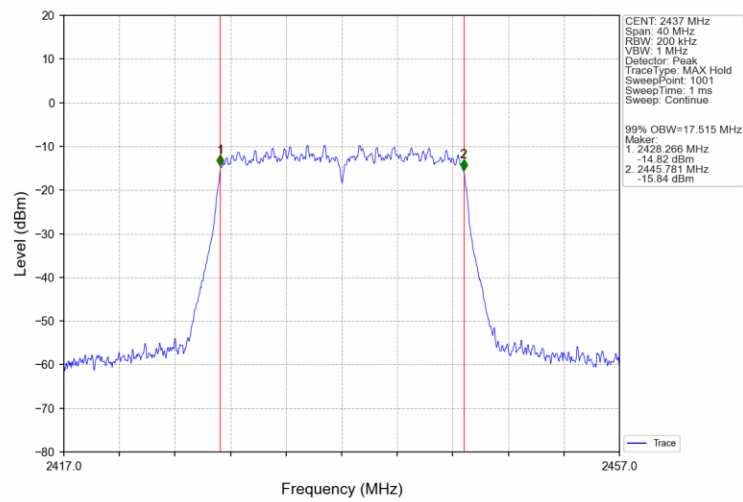
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



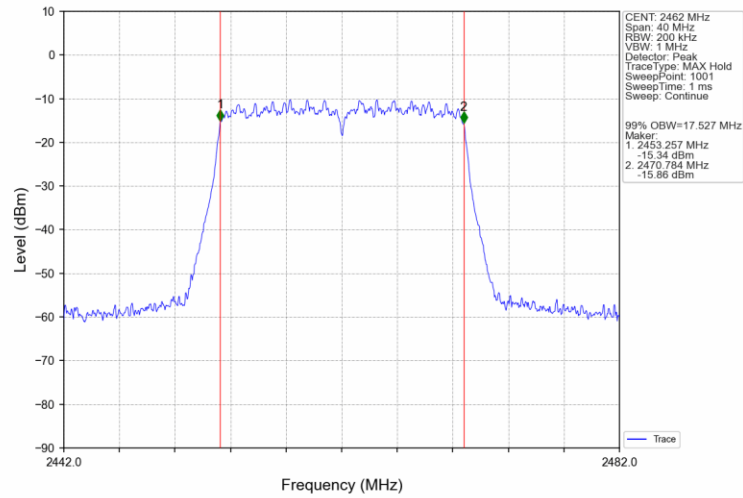
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



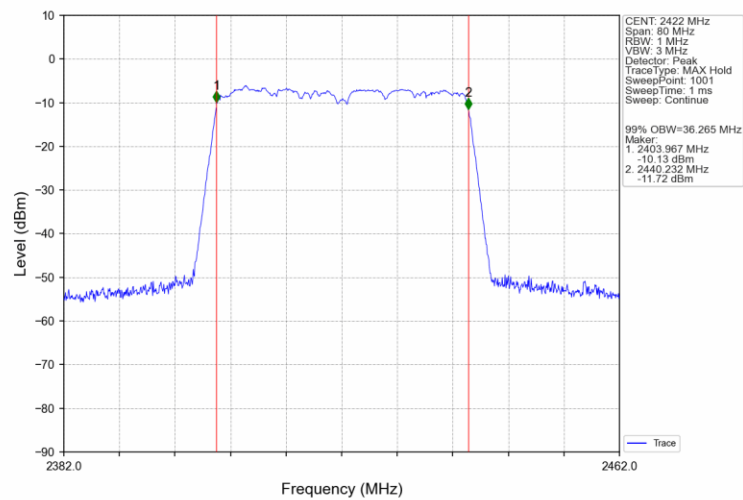
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



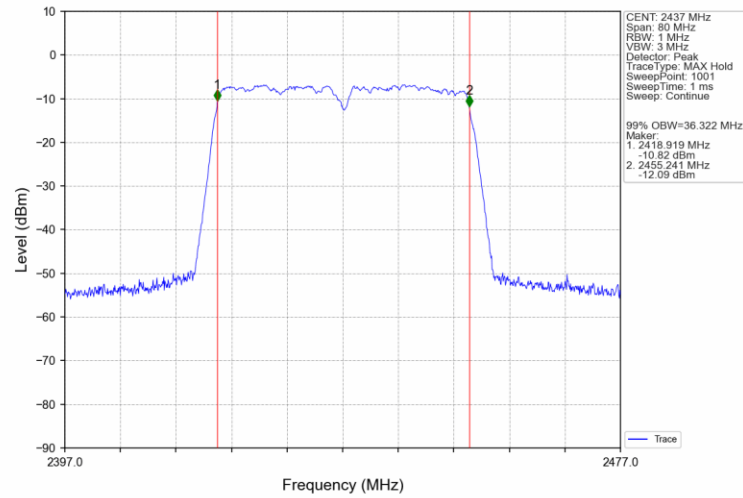
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



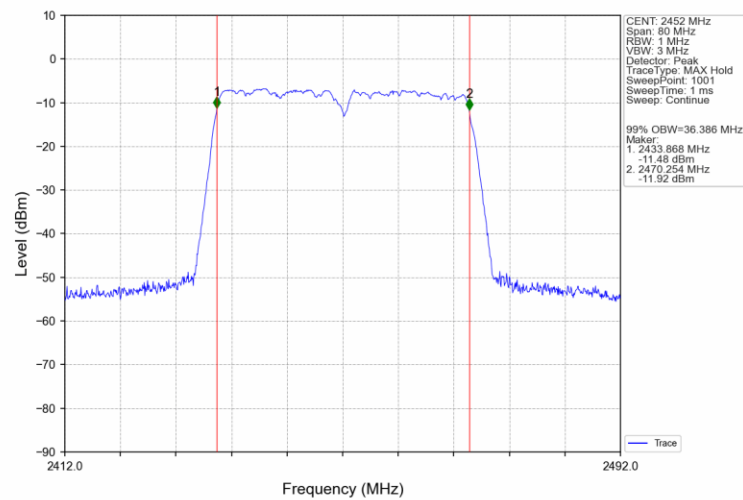
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



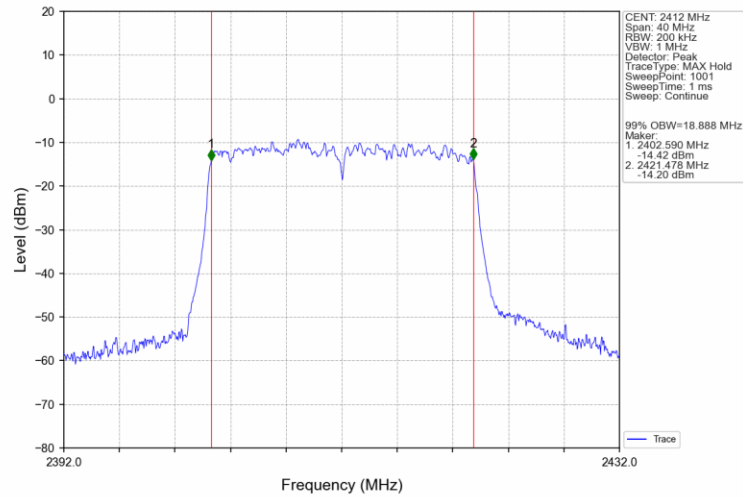
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



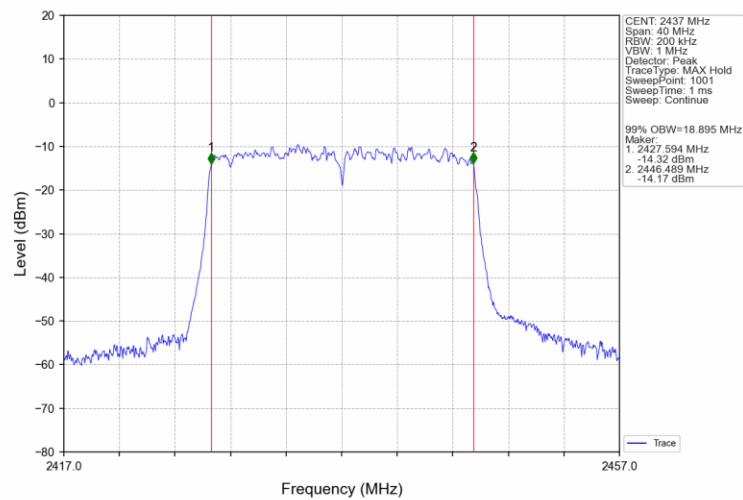
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



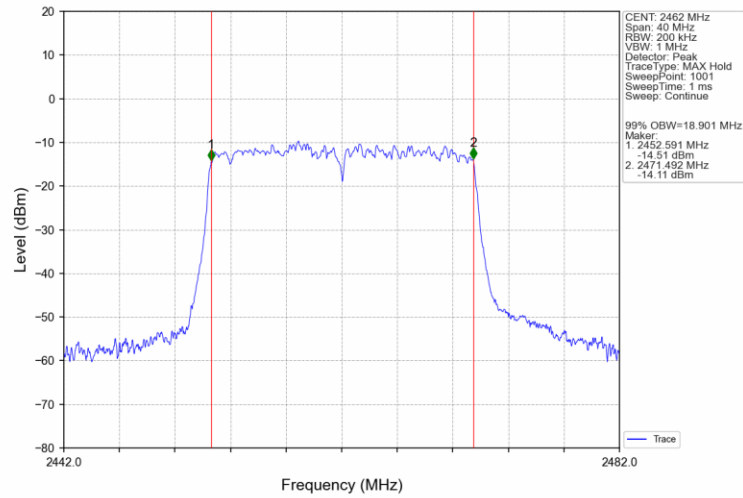
802.11ax(HEW20)_LCH_2412MHz_SU / _Ant1 (SISO)_NTNV



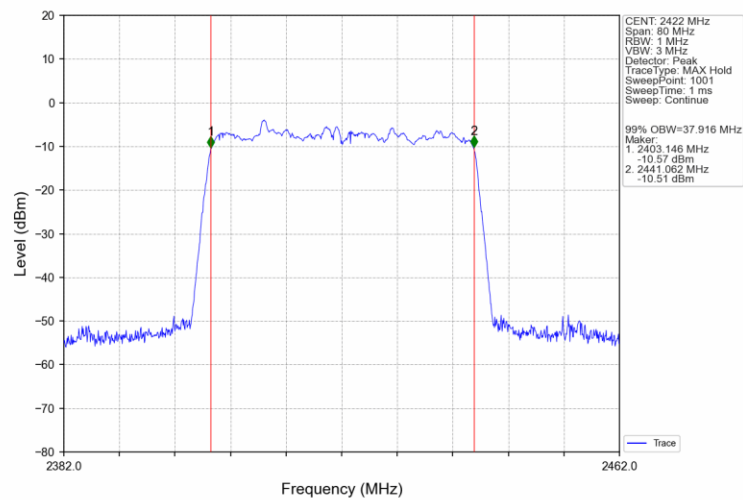
802.11ax(HEW20)_MCH_2437MHz_SU / _Ant1 (SISO)_NTNV



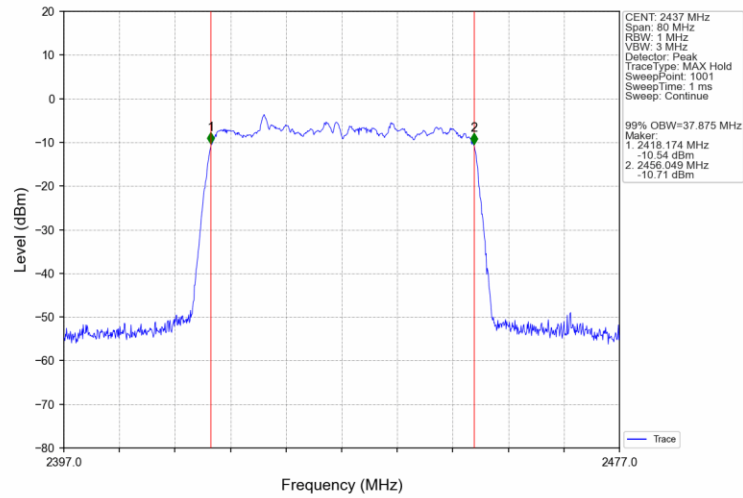
802.11ax(HEW20)_HCH_2462MHz_SU_/_Ant1 (SISO)_NTNV



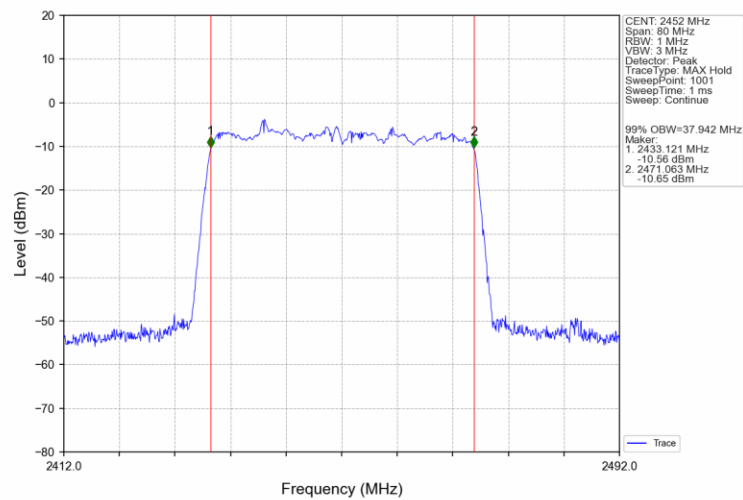
802.11ax(HEW40)_LCH_2422MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV

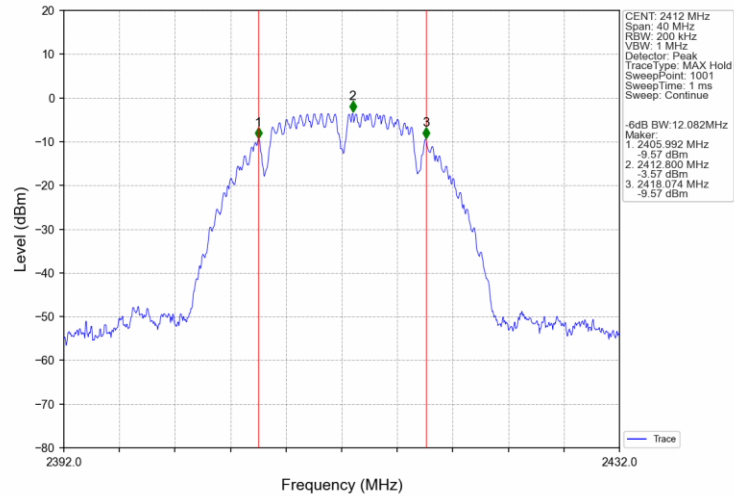


802.11ax(HEW40)_HCH_2452MHz_SU_/_Ant1 (SISO)_NTNV

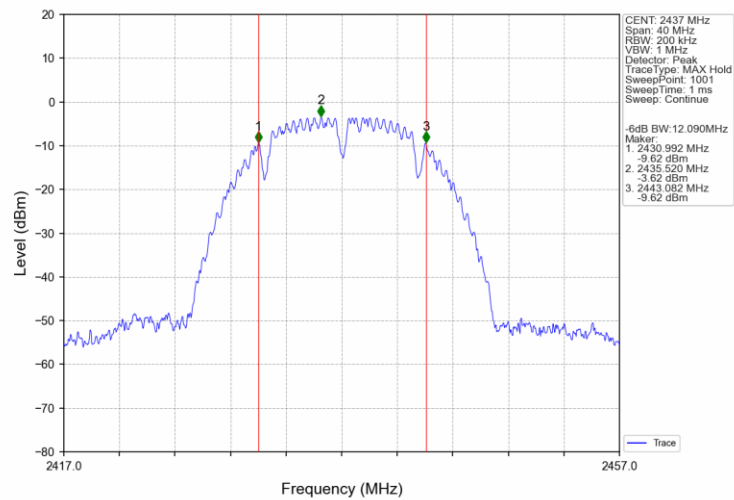


2.2.2 6dB BW

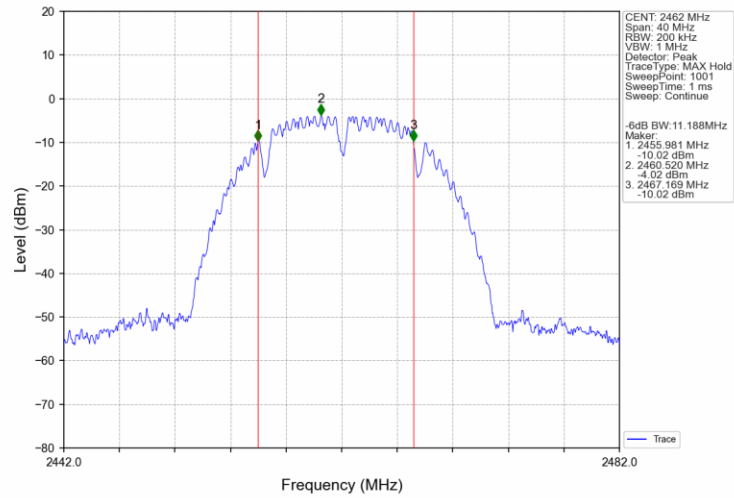
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



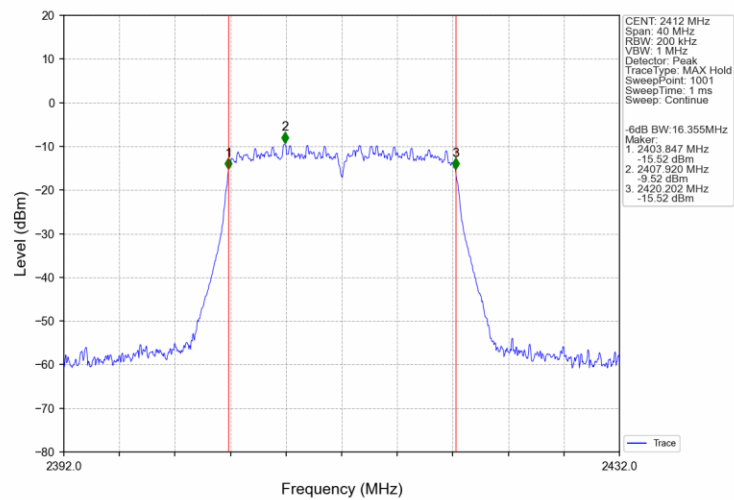
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



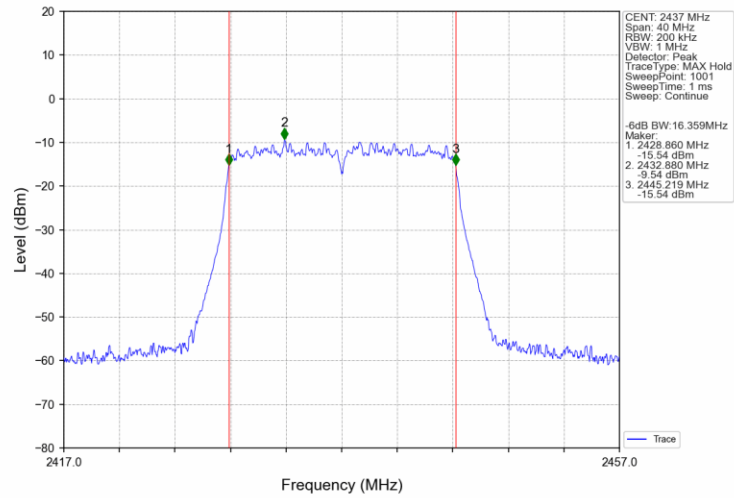
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



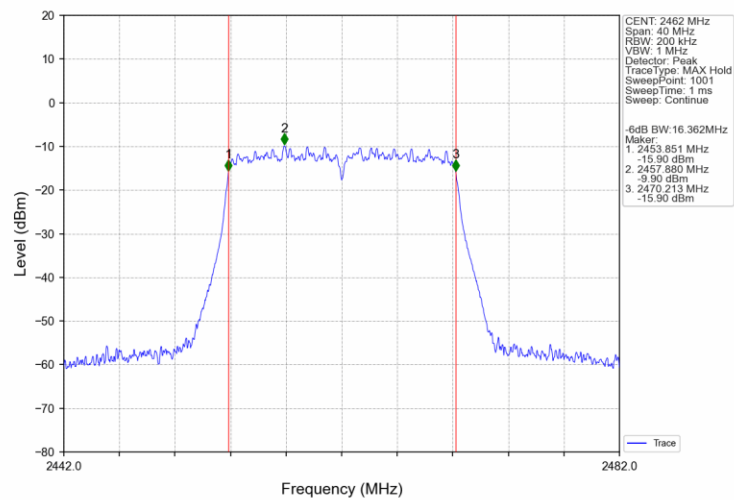
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



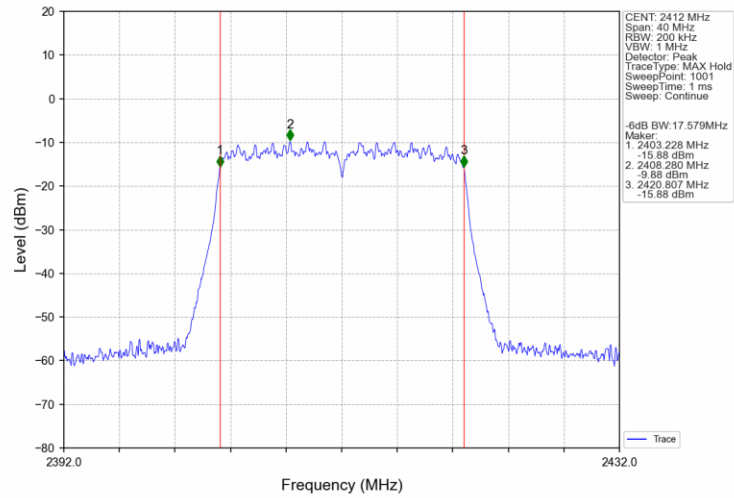
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



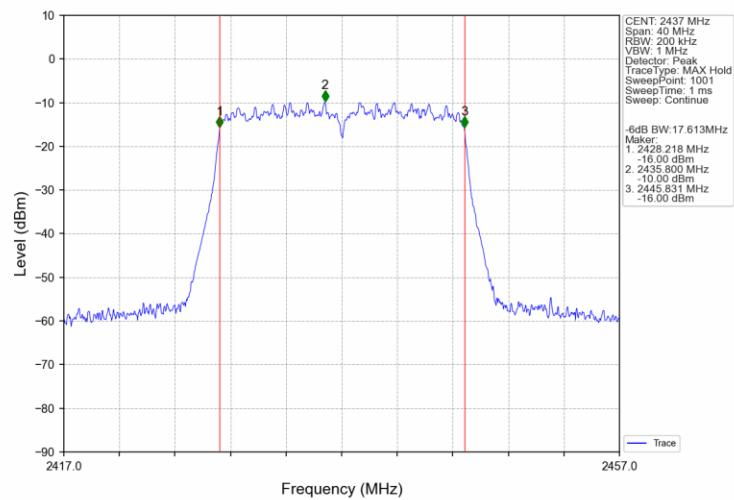
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



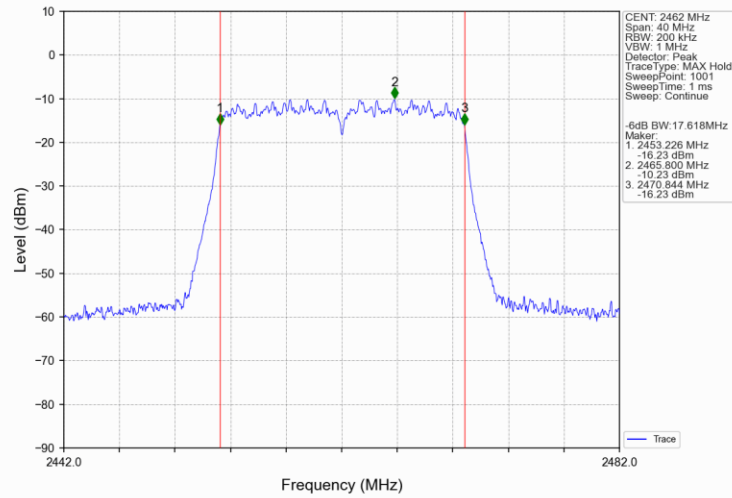
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



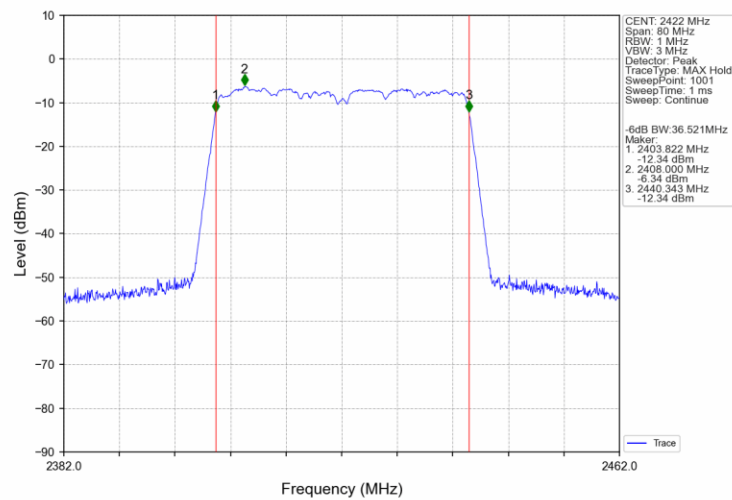
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



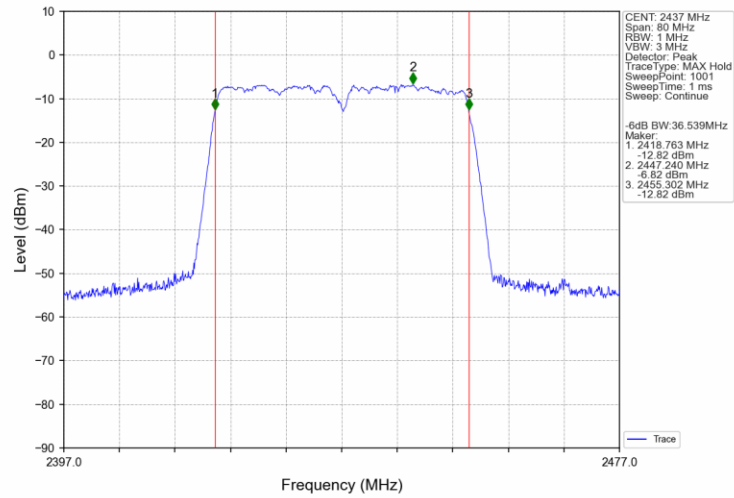
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



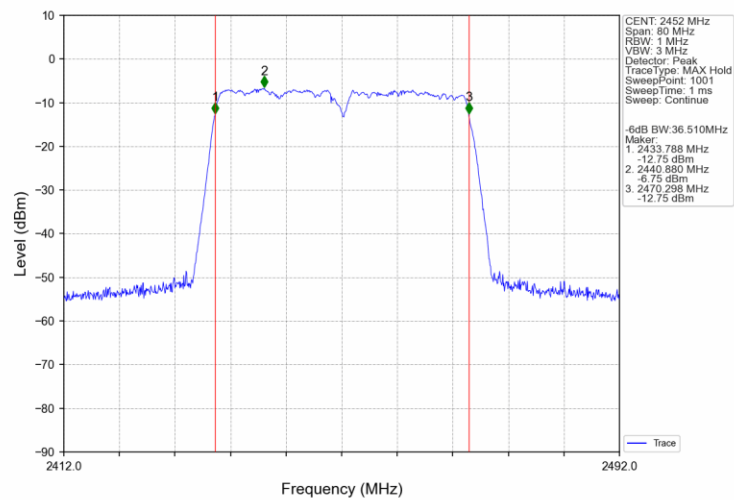
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



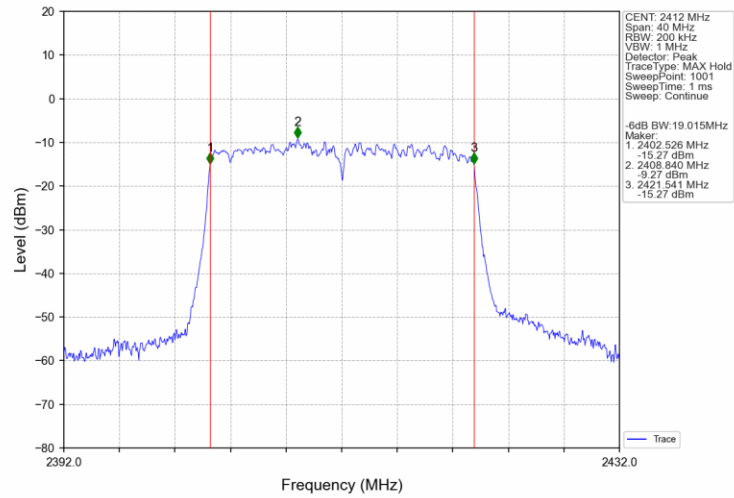
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



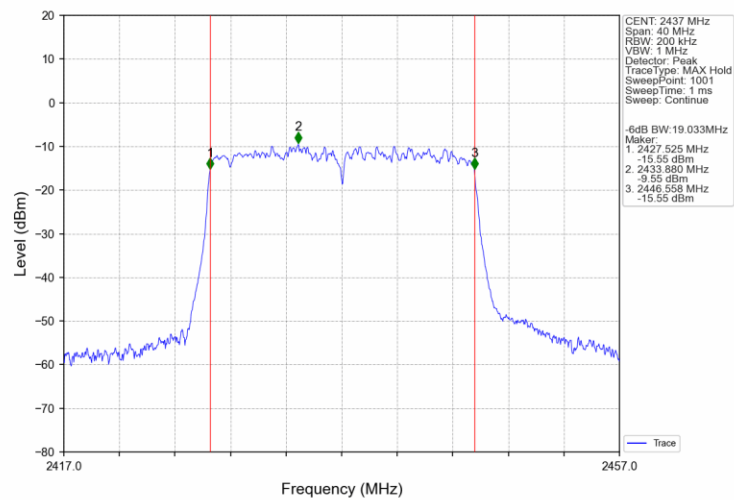
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



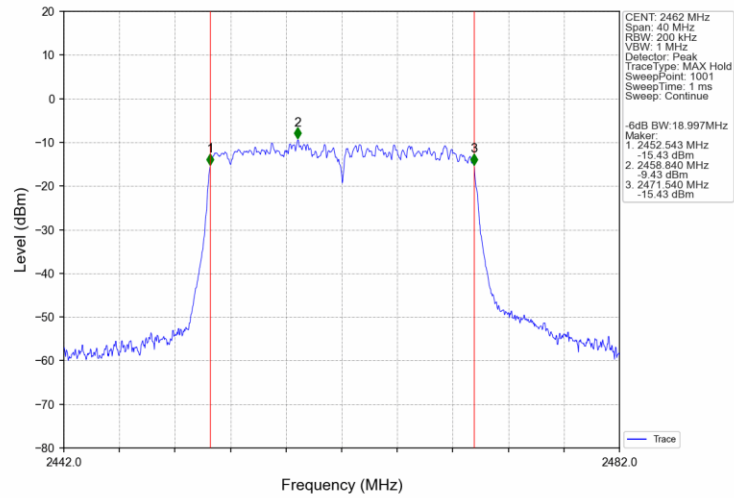
802.11ax(HEW20)_LCH_2412MHz_SU_/_Ant1 (SISO)_NTNV



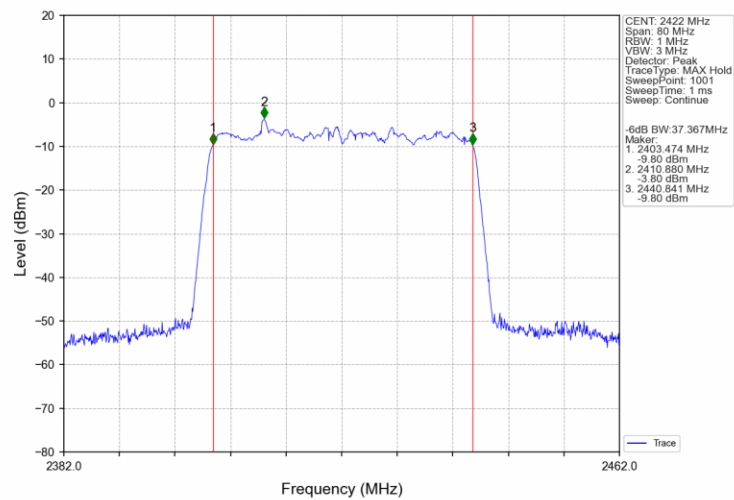
802.11ax(HEW20)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



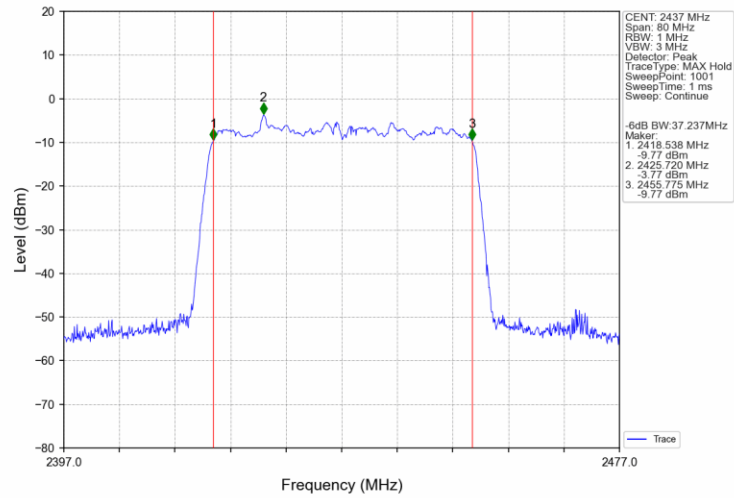
802.11ax(HEW20)_HCH_2462MHz_SU_/_Ant1 (SISO)_NTNV



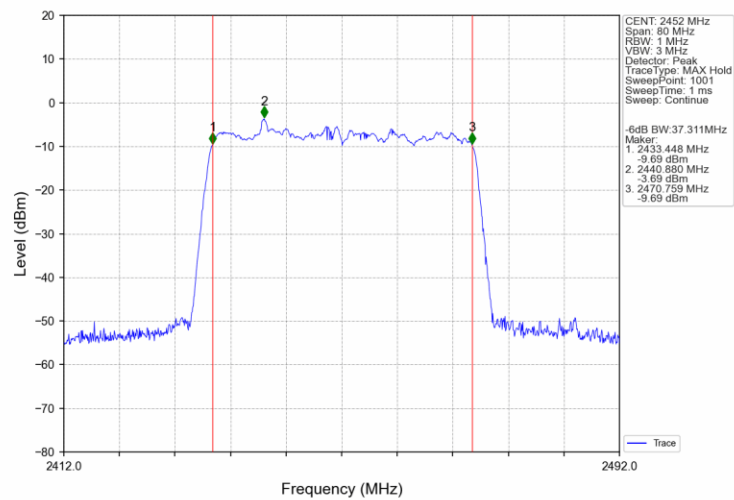
802.11ax(HEW40)_LCH_2422MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_SU_/_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	8.90	<=30	Pass
		2437	/	/	8.83	<=30	Pass
		2462	/	/	8.29	<=30	Pass
802.11g	SISO	2412	/	/	7.88	<=30	Pass
		2437	/	/	7.79	<=30	Pass
		2462	/	/	7.54	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	7.79	<=30	Pass
		2437	/	/	7.72	<=30	Pass
		2462	/	/	7.50	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	7.56	<=30	Pass
		2437	/	/	7.39	<=30	Pass
		2452	/	/	7.29	<=30	Pass
802.11ax (HEW20)	SISO	2412	SU	/	8.51	<=30	Pass
		2437	SU	/	8.46	<=30	Pass
		2462	SU	/	8.21	<=30	Pass
802.11ax (HEW40)	SISO	2422	SU	/	8.00	<=30	Pass
		2437	SU	/	8.05	<=30	Pass
		2452	SU	/	8.00	<=30	Pass

Note1: Antenna Gain: Ant1: 4.32dBi;



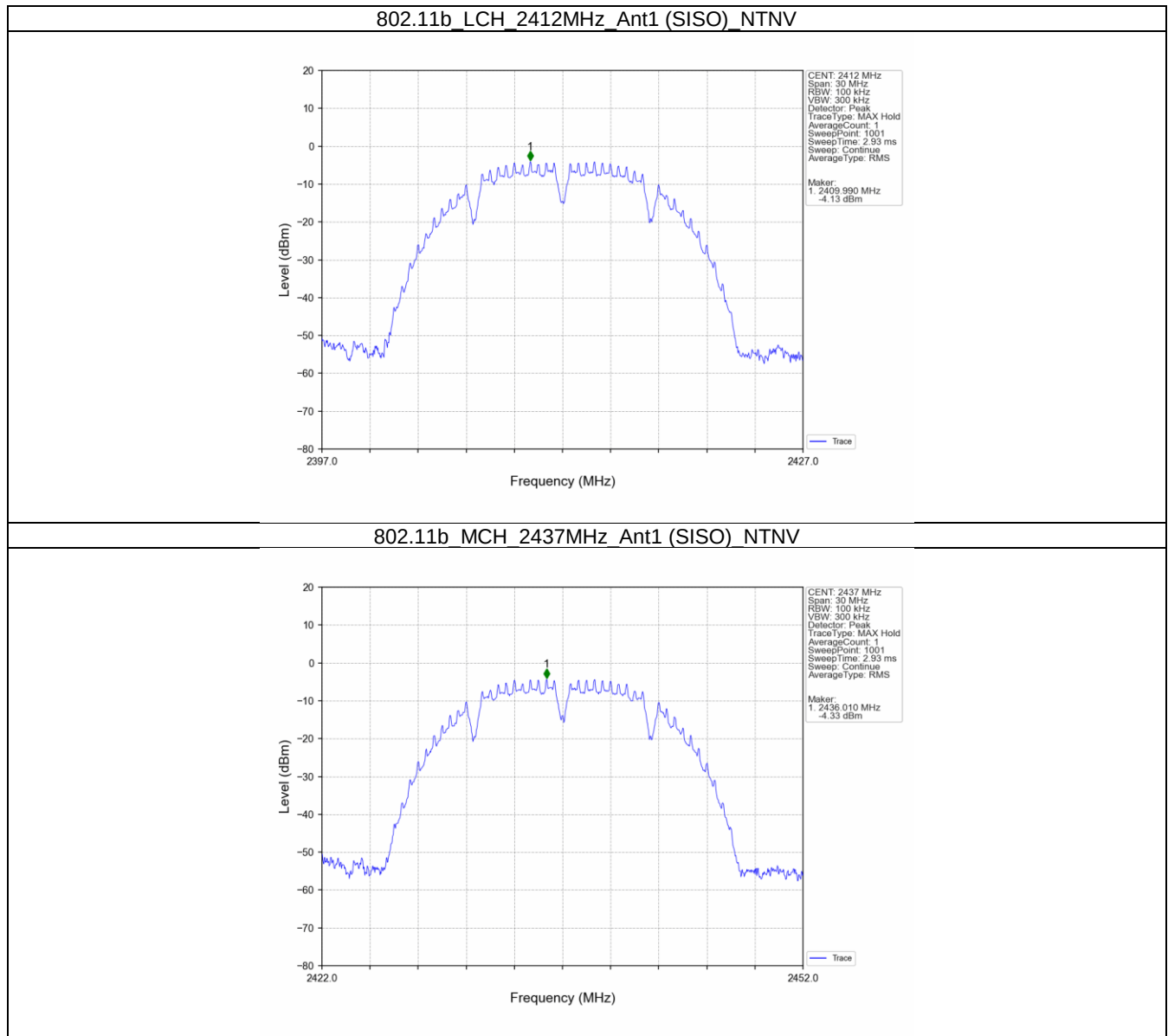
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm)		Verdict
					ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	/	/	-4.13dBm/100kHz	<=8	Pass
		2437	/	/	-4.33dBm/100kHz	<=8	Pass
		2462	/	/	-4.51dBm/100kHz	<=8	Pass
802.11g	SISO	2412	/	/	-10.86dBm/100kHz	<=8	Pass
		2437	/	/	-11.06dBm/100kHz	<=8	Pass
		2462	/	/	-11.18dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-10.90dBm/100kHz	<=8	Pass
		2437	/	/	-10.73dBm/100kHz	<=8	Pass
		2462	/	/	-11.16dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-13.92dBm/100kHz	<=8	Pass
		2437	/	/	-13.94dBm/100kHz	<=8	Pass
		2452	/	/	-13.94dBm/100kHz	<=8	Pass
802.11ax (HEW20)	SISO	2412	SU	/	-10.81dBm/100kHz	<=8	Pass
		2437	SU	/	-11.34dBm/100kHz	<=8	Pass
		2462	SU	/	-11.50dBm/100kHz	<=8	Pass
802.11ax (HEW40)	SISO	2422	SU	/	-14.03dBm/100kHz	<=8	Pass
		2437	SU	/	-14.35dBm/100kHz	<=8	Pass
		2452	SU	/	-14.07dBm/100kHz	<=8	Pass

Note1: Antenna Gain: Ant1: 4.32dBi;

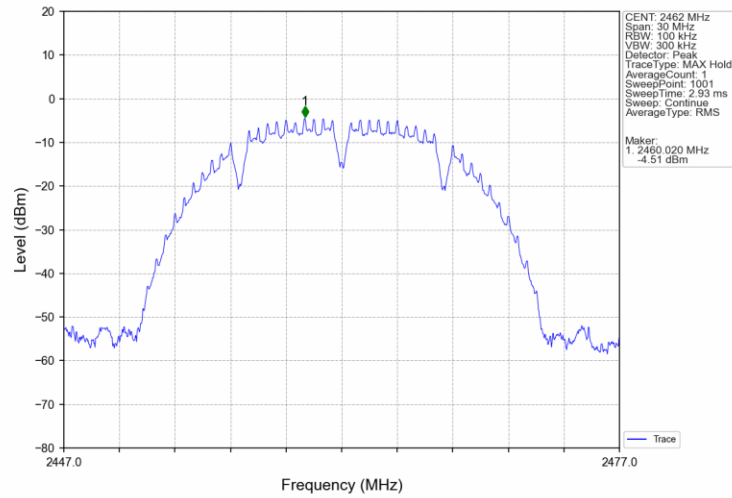
4.2 Test Graph

4.2.1 PSD

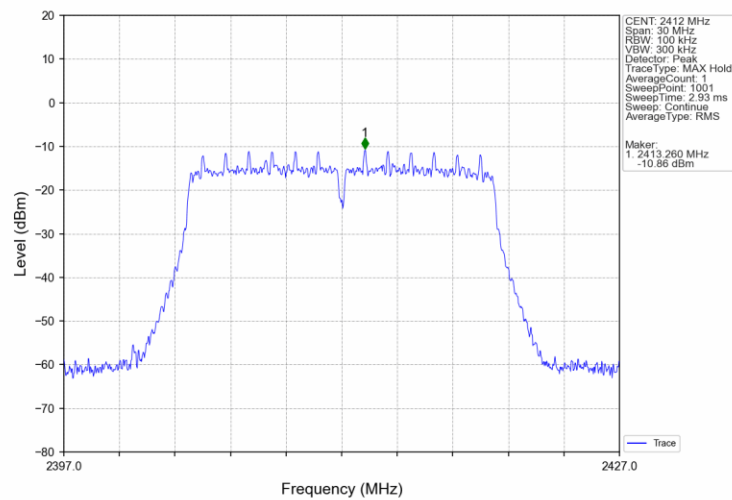




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

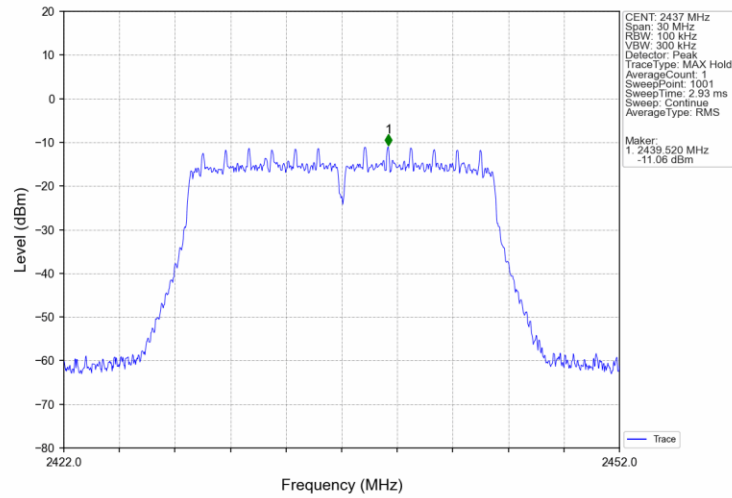


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

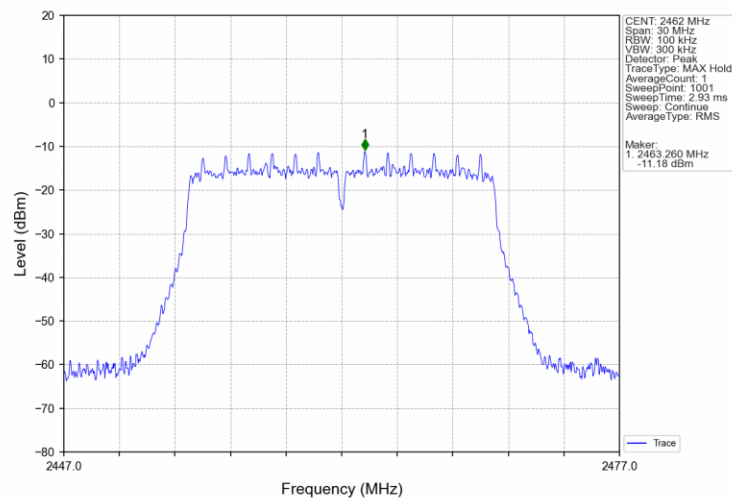




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

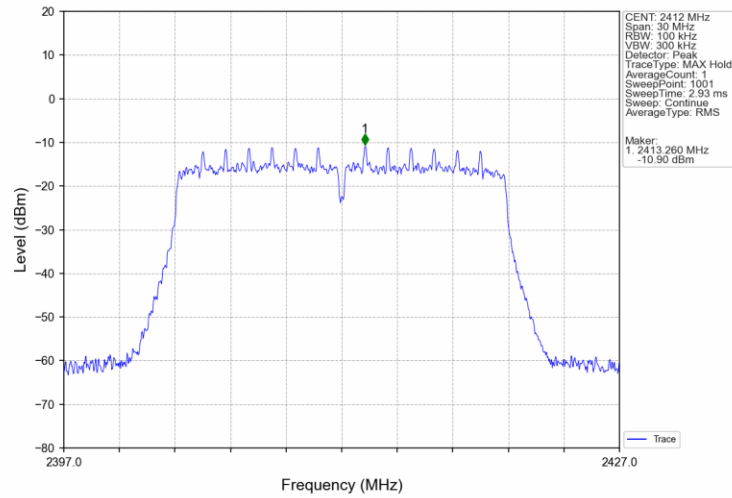


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

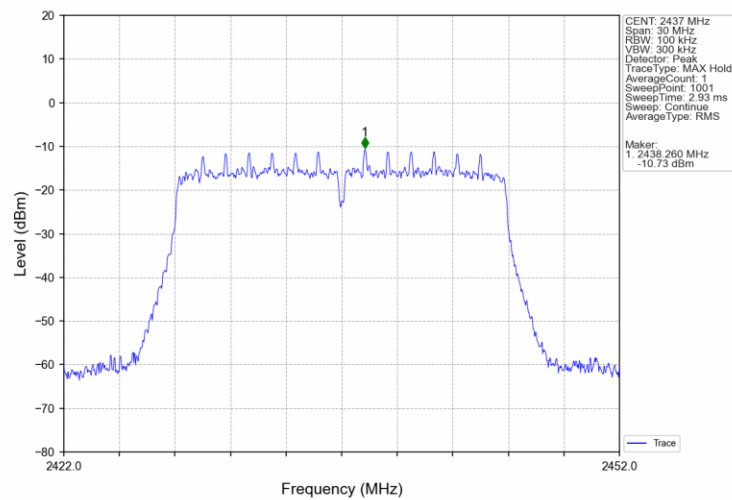




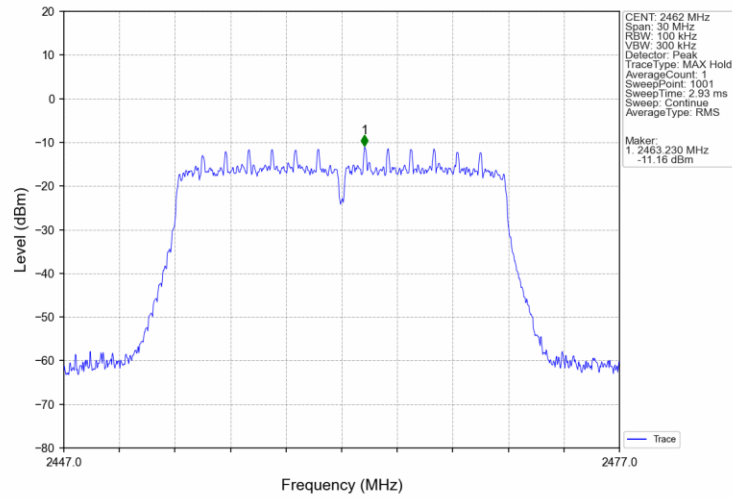
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



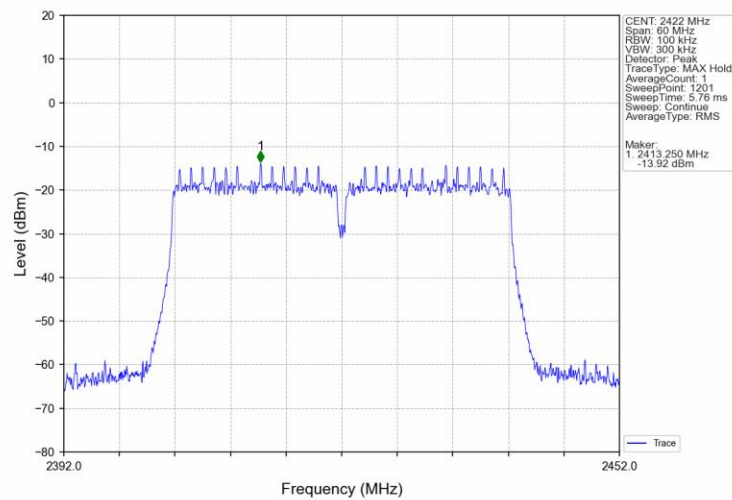
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



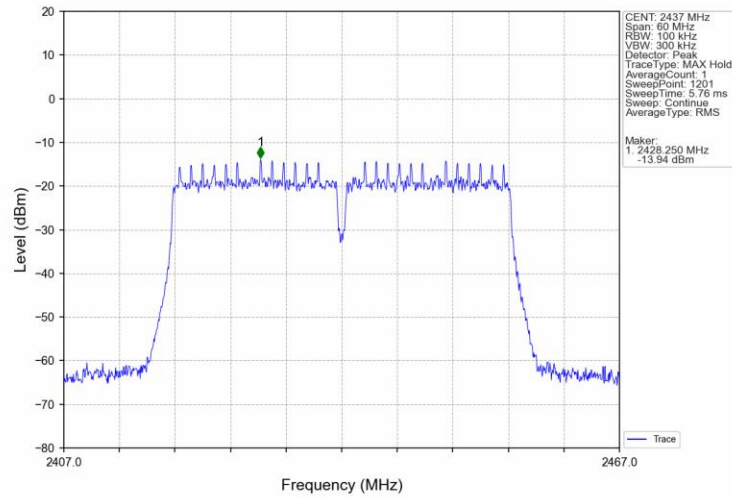
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



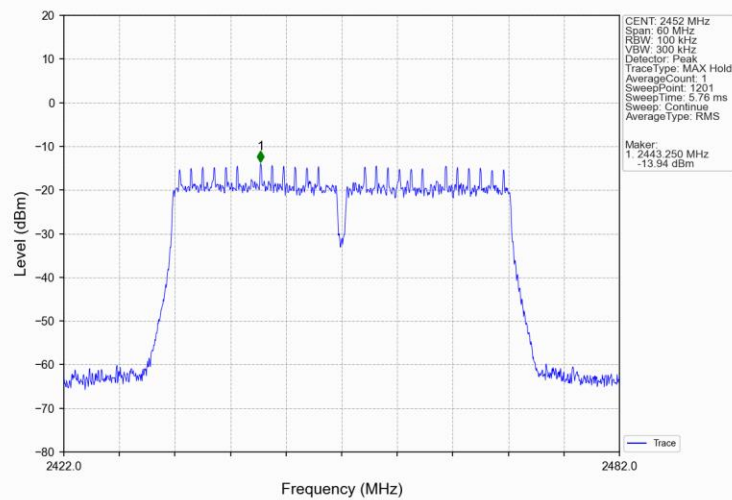
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



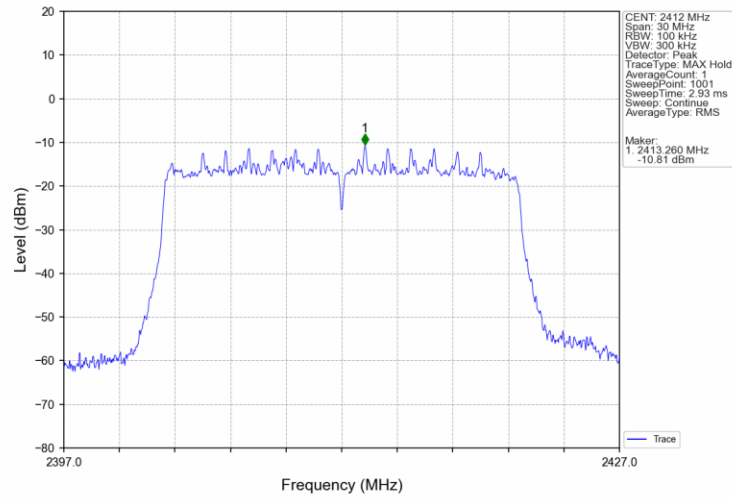
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



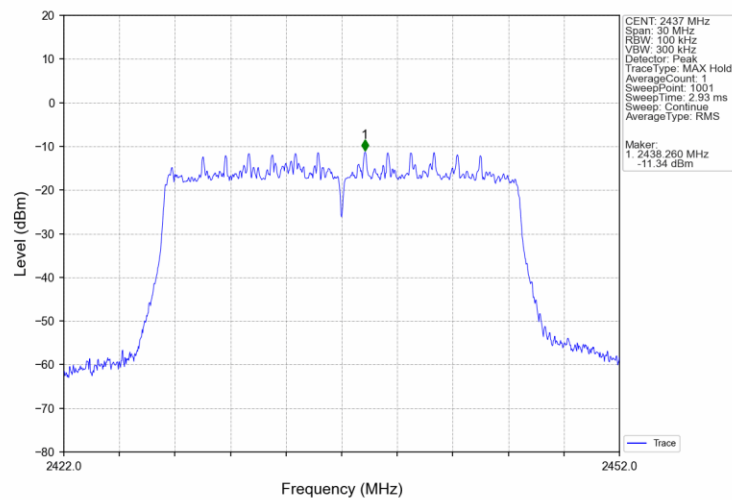
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



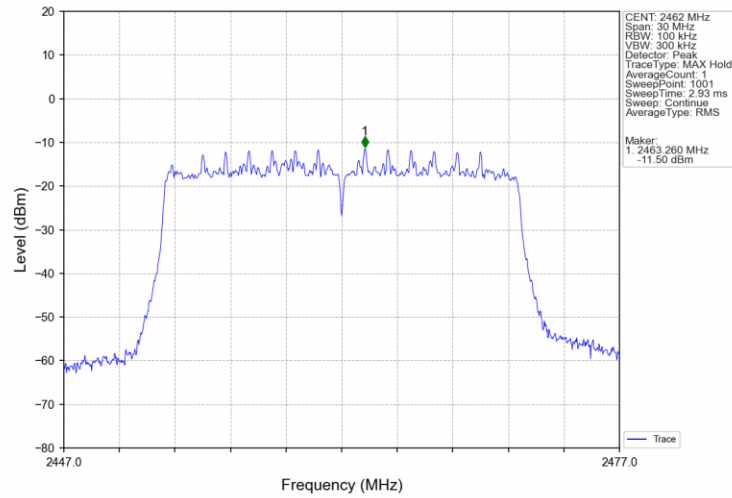
802.11ax(HEW20)_LCH_2412MHz_SU_/_Ant1 (SISO)_NTNV



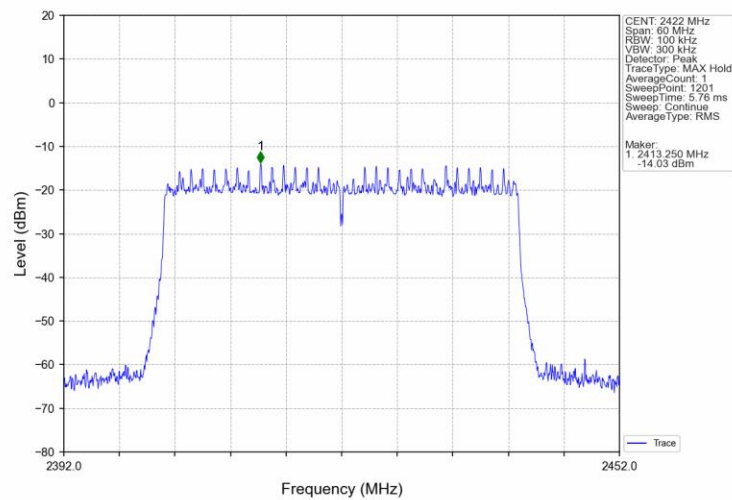
802.11ax(HEW20)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



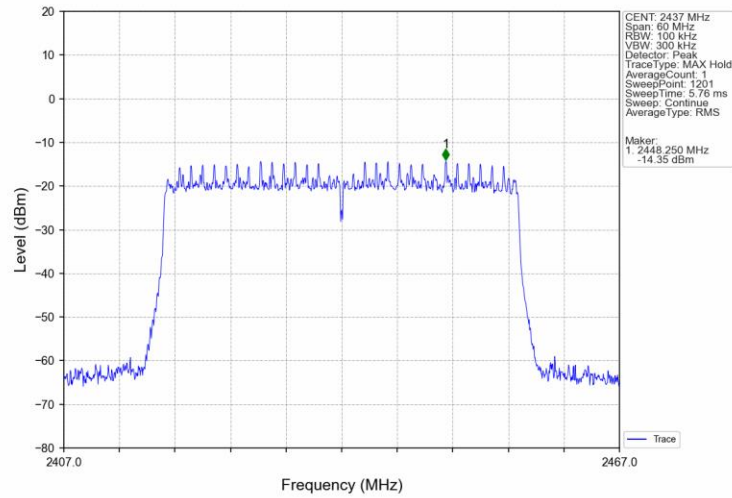
802.11ax(HEW20)_HCH_2462MHz_SU_/_Ant1 (SISO)_NTNV



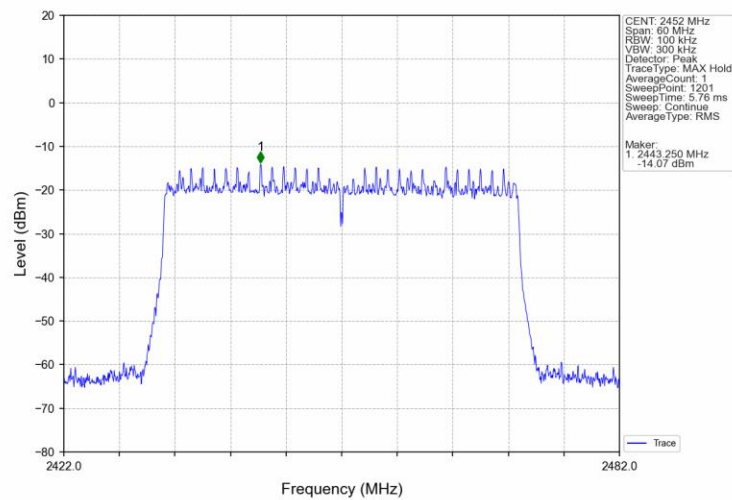
802.11ax(HEW40)_LCH_2422MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_SU_/_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_SU_/_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)
802.11b	SISO	2412	/	/	1	-4.35
		2437	/	/	1	-4.29
		2462	/	/	1	-4.58
802.11g	SISO	2412	/	/	1	-10.87
		2437	/	/	1	-10.80
		2462	/	/	1	-11.30
802.11n (HT20)	SISO	2412	/	/	1	-10.74
		2437	/	/	1	-11.01
		2462	/	/	1	-11.41
802.11n (HT40)	SISO	2422	/	/	1	-13.92
		2437	/	/	1	-14.10
		2452	/	/	1	-14.16
802.11ax (HEW20)	SISO	2412	SU	/	1	-10.97
		2437	SU	/	1	-11.38
		2462	SU	/	1	-11.35
802.11ax (HEW40)	SISO	2422	SU	/	1	-13.94
		2437	SU	/	1	-14.32
		2452	SU	/	1	-14.31

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	-4.35	-24.35	Pass
		2437	/	/	1	-4.29	-24.29	Pass
		2462	/	/	1	-4.58	-24.58	Pass
802.11g	SISO	2412	/	/	1	-10.87	-30.87	Pass
		2437	/	/	1	-10.80	-30.80	Pass
		2462	/	/	1	-11.30	-31.30	Pass
802.11n (HT20)	SISO	2412	/	/	1	-10.74	-30.74	Pass
		2437	/	/	1	-11.01	-31.01	Pass
		2462	/	/	1	-11.41	-31.41	Pass
802.11n (HT40)	SISO	2422	/	/	1	-13.92	-33.92	Pass
		2437	/	/	1	-14.10	-34.10	Pass
		2452	/	/	1	-14.16	-34.16	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	-10.97	-30.97	Pass
		2437	SU	/	1	-11.38	-31.38	Pass
		2462	SU	/	1	-11.35	-31.35	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	-13.94	-33.94	Pass
		2437	SU	/	1	-14.32	-34.32	Pass
		2452	SU	/	1	-14.31	-34.31	Pass

5.2 Test Graph

5.2.1 Ref

