

Appendix RF test data for WIFI2.4G

1. Duty Cycle

1.1 Test Result

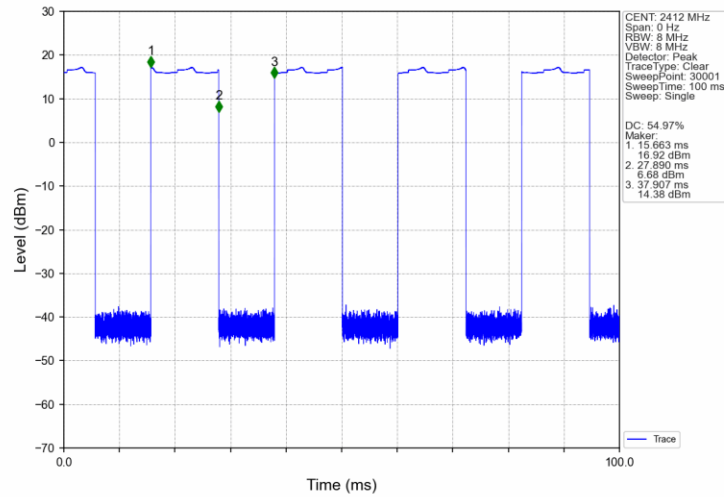
1.1.1 Ant1

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	/	/	12.227	22.244	54.97	2.60	0.00
		2437	/	/	12.224	22.244	54.95	2.60	0.02
		2462	/	/	12.223	22.246	54.94	2.60	0.02
802.11g	SISO	2412	/	/	2.033	14.440	14.08	8.51	2.81
		2437	/	/	2.033	2.150	94.56	0.24	3.27
		2462	/	/	2.033	2.253	90.24	0.45	4.58
802.11n (HT20)	SISO	2412	/	/	1.892	2.064	91.67	0.38	5.97
		2437	/	/	1.899	2.063	92.05	0.36	5.99
		2462	/	/	1.892	2.120	89.25	0.49	5.23
802.11n (HT40)	SISO	2422	/	/	0.932	1.094	85.19	0.70	7.67
		2437	/	/	0.932	1.142	81.61	0.88	7.71
		2452	/	/	0.932	1.161	80.28	0.95	5.34
802.11ax (HEW20)	SISO	2412	SU	/	1.462	1.624	90.02	0.46	5.29
		2437	SU	/	1.462	1.673	87.39	0.59	5.54
		2462	SU	/	1.462	1.637	89.31	0.49	3.60
802.11ax (HEW40)	SISO	2422	SU	/	0.763	0.915	83.39	0.79	11.19
		2437	SU	/	0.763	1.254	60.85	2.16	6.80
		2452	SU	/	0.763	0.933	81.78	0.87	11.73

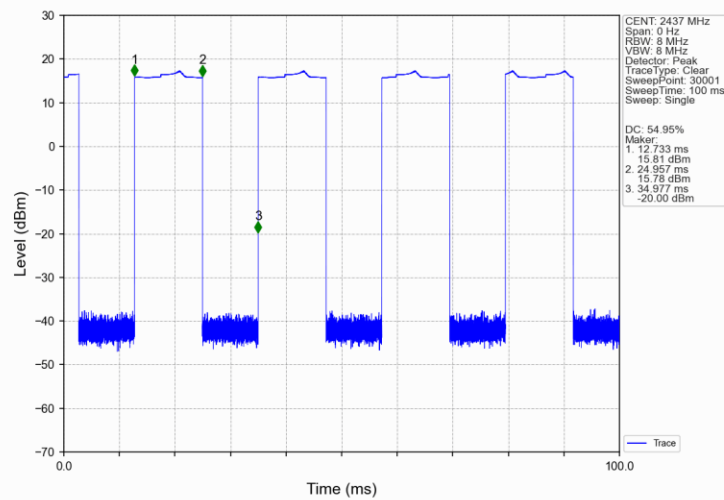
1.2 Test Graph

1.2.1 Ant1

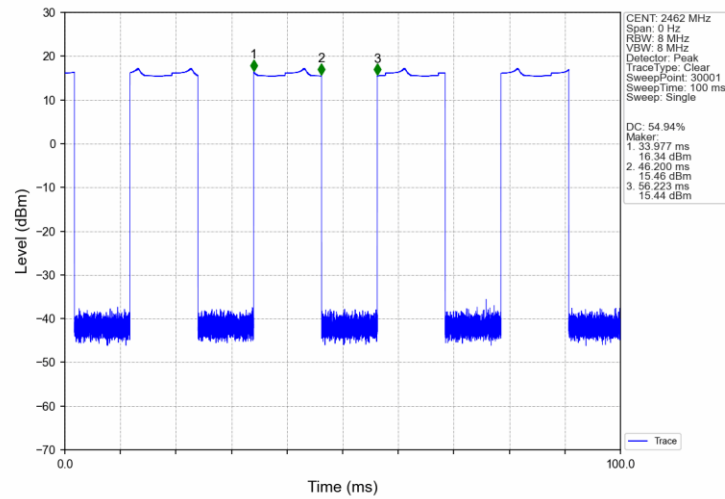
802.11b_LCH_2412MHz_Ant1 (SISO) NTN



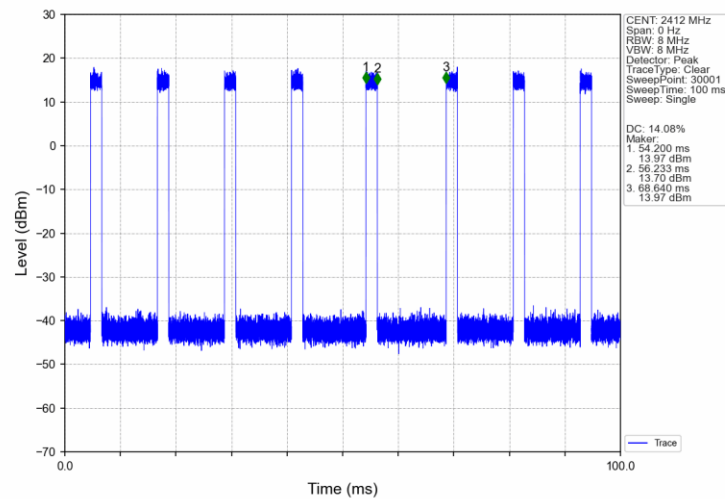
802.11b_MCH_2437MHz_Ant1 (SISO) NTN



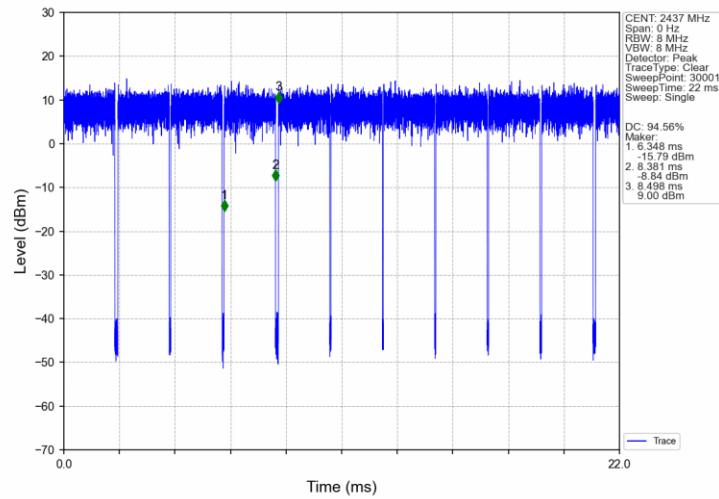
802.11b HCH 2462MHz_Ant1 (SISO) NTN



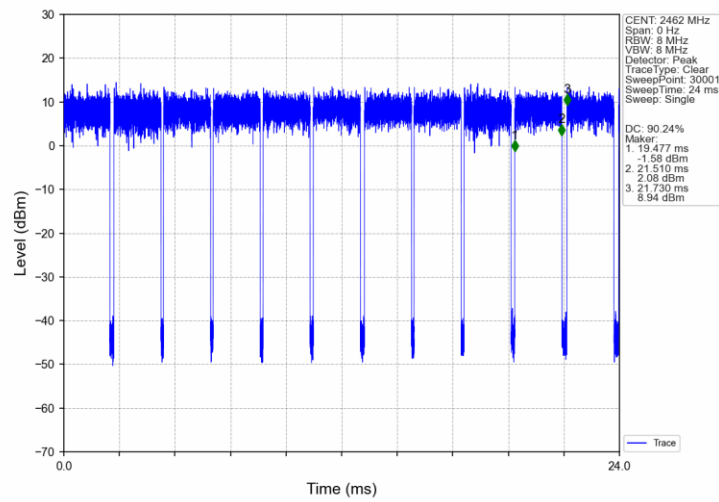
802.11g LCH 2412MHz_Ant1 (SISO) NTN



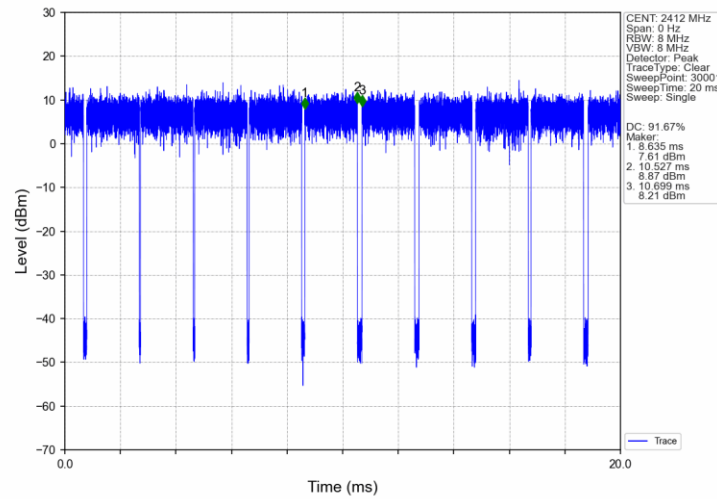
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



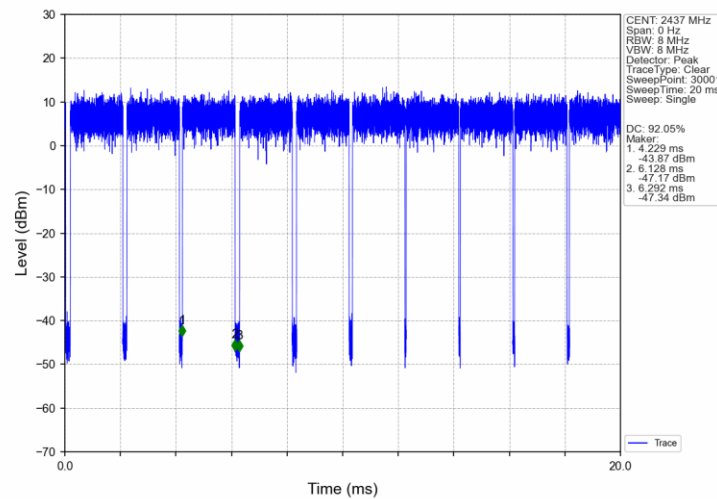
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



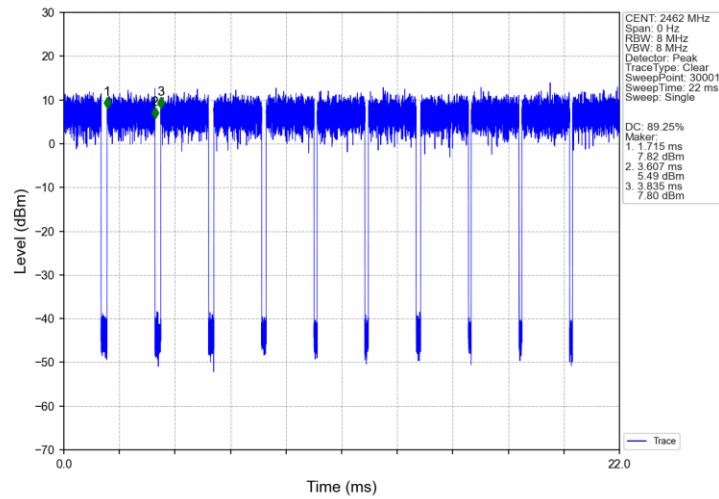
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



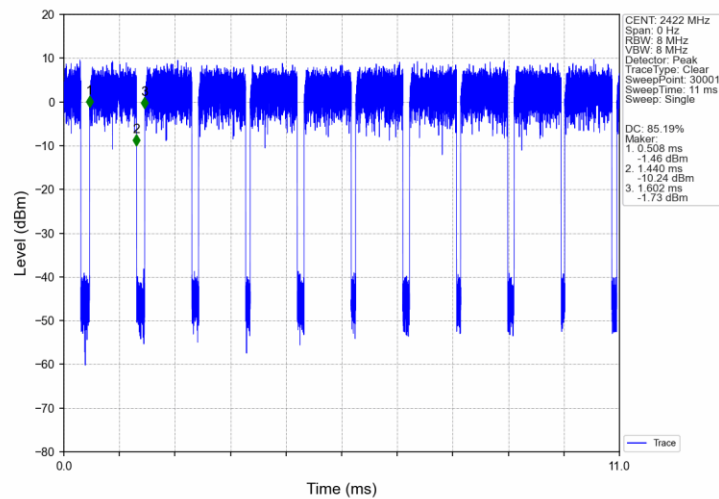
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



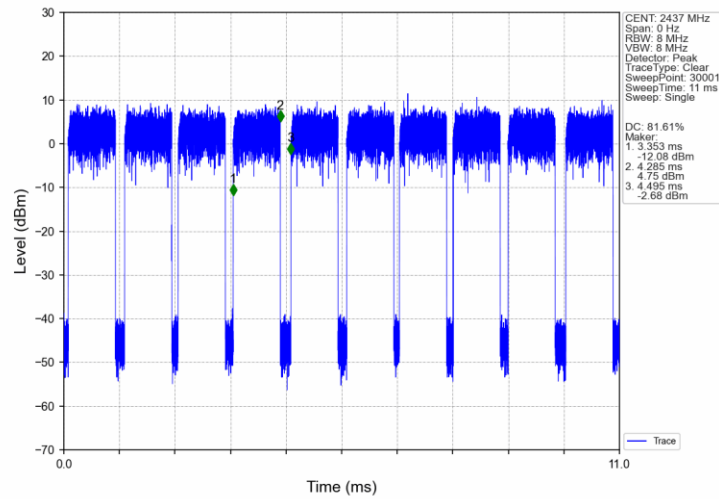
802.11n(HT20) HCH_2462MHz_Ant1 (SISO)_NTNV



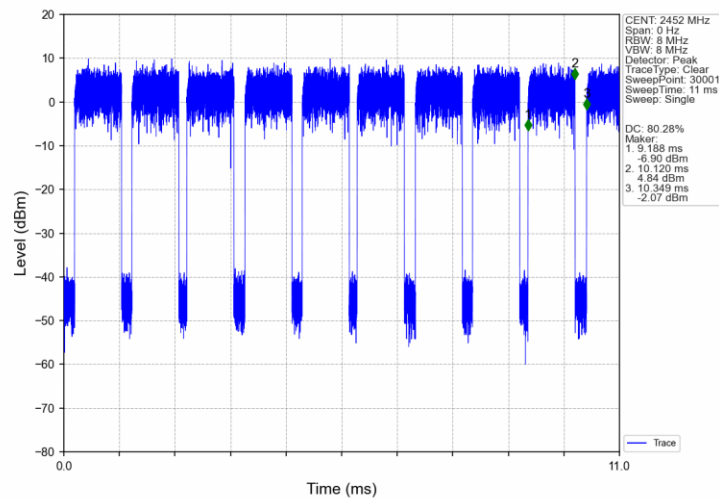
802.11n(HT40) LCH_2422MHz_Ant1 (SISO)_NTNV



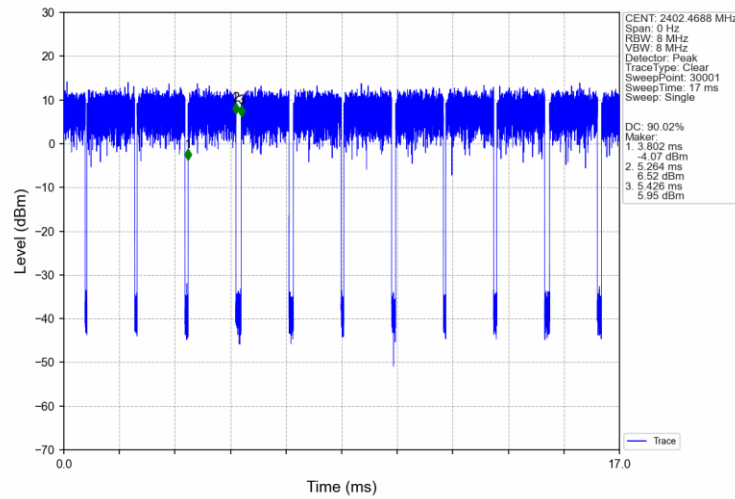
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTNV



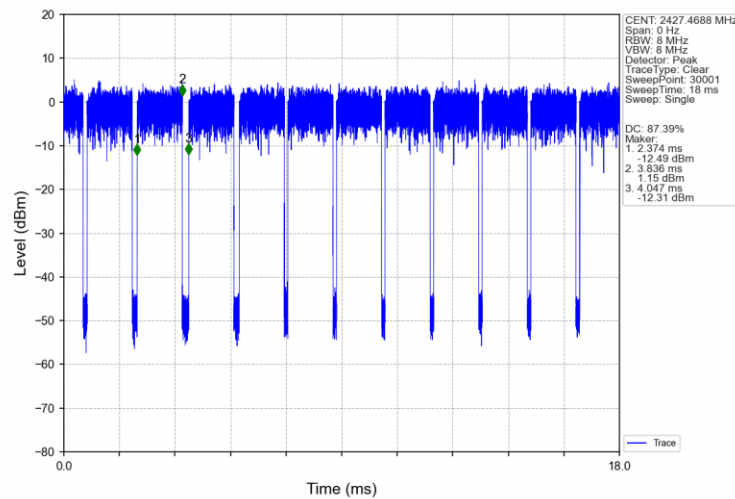
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTNV



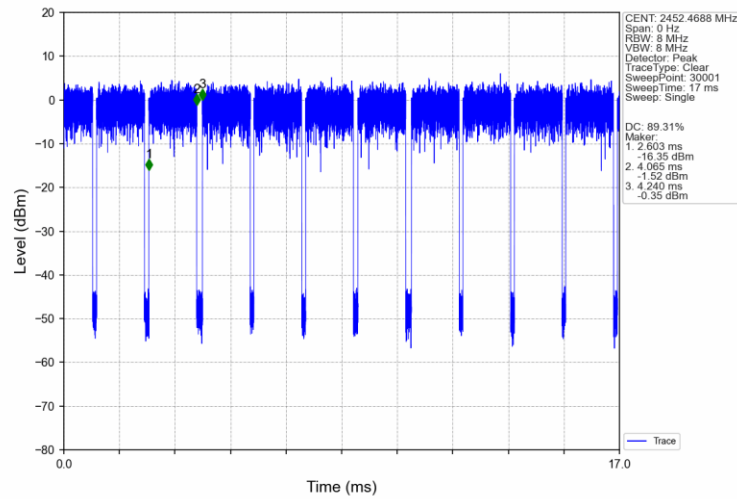
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (SISO) NTN



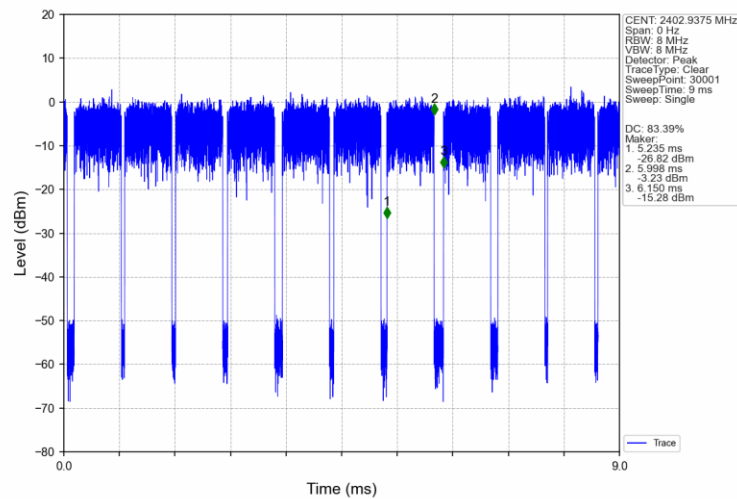
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (SISO) NTN



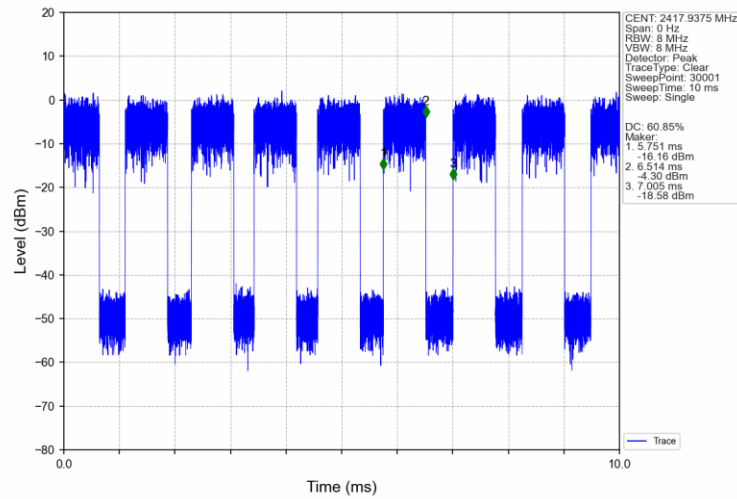
802.11ax(HEW20) HCH 2462MHz_SU / Ant1 (SISO) NTN



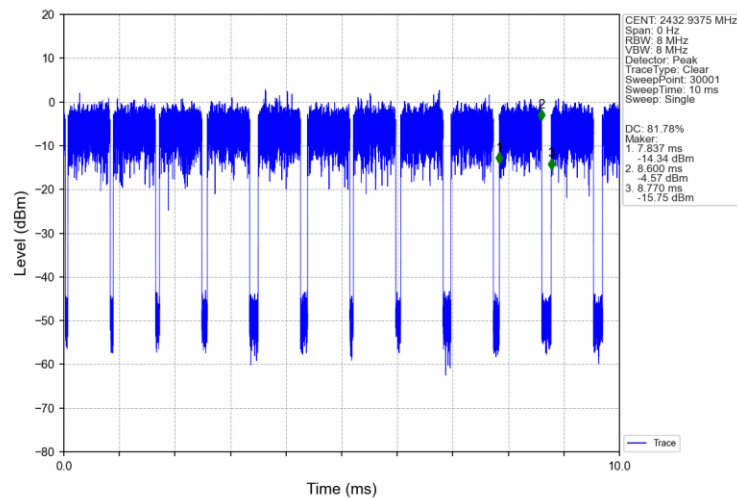
802.11ax(HEW40) LCH 2422MHz_SU / Ant1 (SISO) NTN



802.11ax(HEW40) MCH 2437MHz SU / Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz SU / Ant1 (SISO) NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

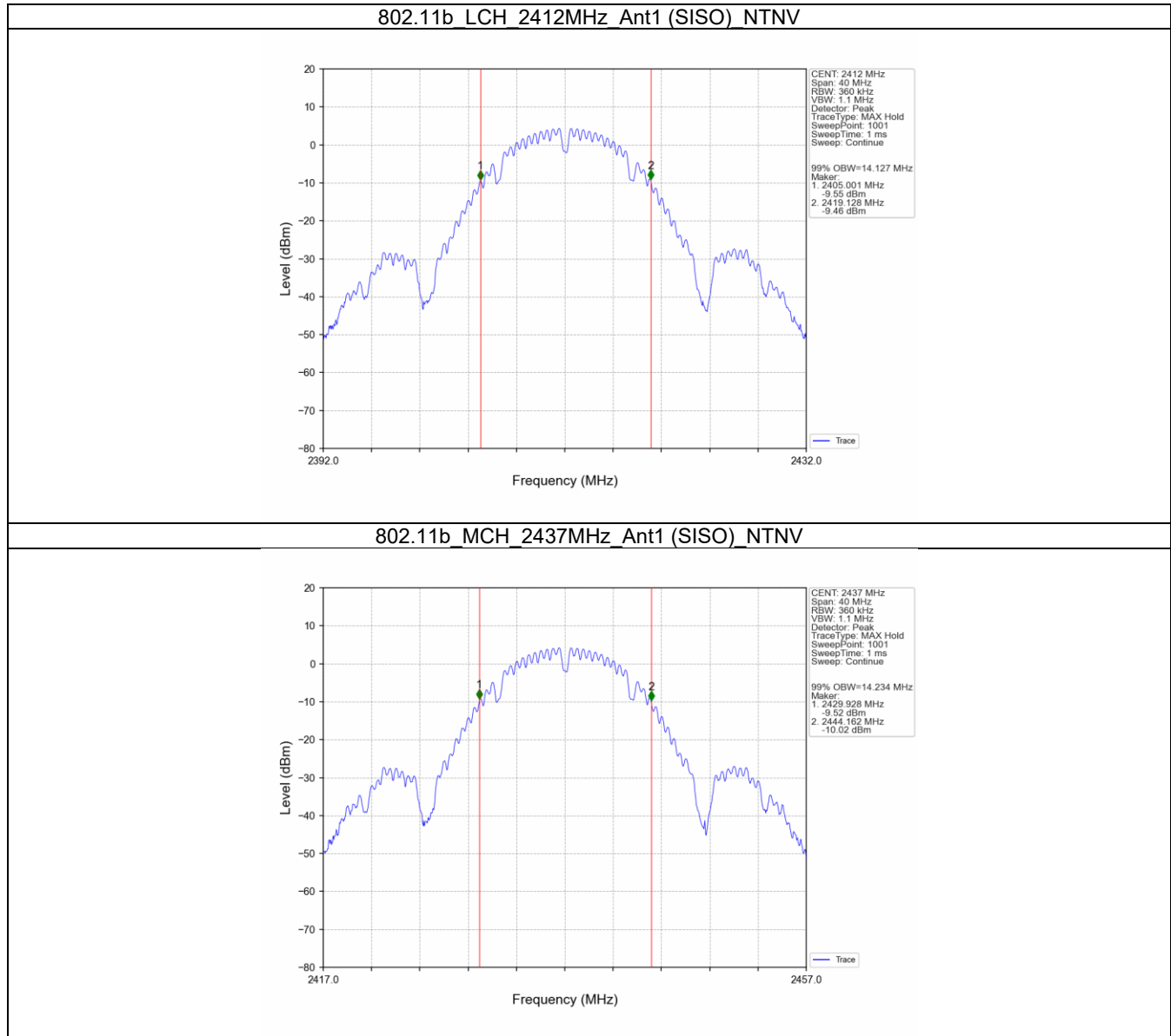
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	14.127	/	Pass
		2437	/	/	1	14.234	/	Pass
		2462	/	/	1	14.206	/	Pass
802.11g	SISO	2412	/	/	1	19.843	/	Pass
		2437	/	/	1	18.683	/	Pass
		2462	/	/	1	18.696	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	19.573	/	Pass
		2437	/	/	1	19.497	/	Pass
		2462	/	/	1	19.515	/	Pass
802.11n (HT40)	SISO	2422	/	/	1	37.523	/	Pass
		2437	/	/	1	37.499	/	Pass
		2452	/	/	1	37.456	/	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	20.503	/	Pass
		2437	SU	/	1	20.372	/	Pass
		2462	SU	/	1	20.417	/	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	39.741	/	Pass
		2437	SU	/	1	39.835	/	Pass
		2452	SU	/	1	39.483	/	Pass

2.1.2 6dB BW

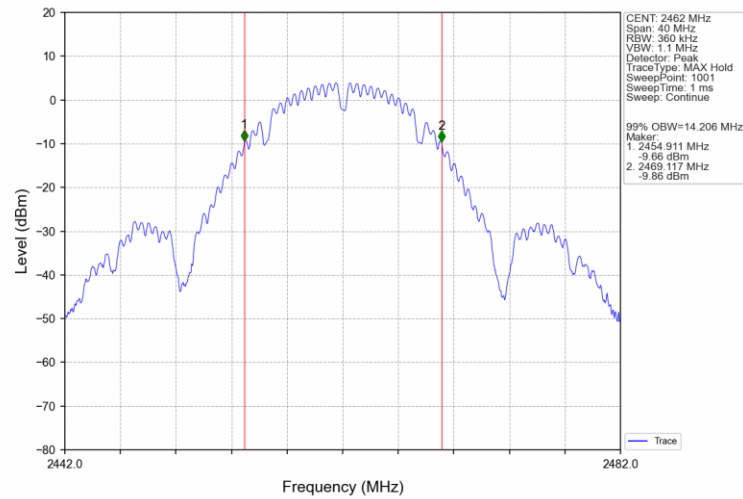
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	9.708	>=0.5	Pass
		2437	/	/	1	9.719	>=0.5	Pass
		2462	/	/	1	10.077	>=0.5	Pass
802.11g	SISO	2412	/	/	1	16.352	>=0.5	Pass
		2437	/	/	1	16.717	>=0.5	Pass
		2462	/	/	1	16.606	>=0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.782	>=0.5	Pass
		2437	/	/	1	17.770	>=0.5	Pass
		2462	/	/	1	17.772	>=0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	35.955	>=0.5	Pass
		2437	/	/	1	36.332	>=0.5	Pass
		2452	/	/	1	36.241	>=0.5	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	18.859	>=0.5	Pass
		2437	SU	/	1	18.978	>=0.5	Pass
		2462	SU	/	1	18.988	>=0.5	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	37.314	>=0.5	Pass
		2437	SU	/	1	37.710	>=0.5	Pass
		2452	SU	/	1	37.339	>=0.5	Pass

2.2 Test Graph

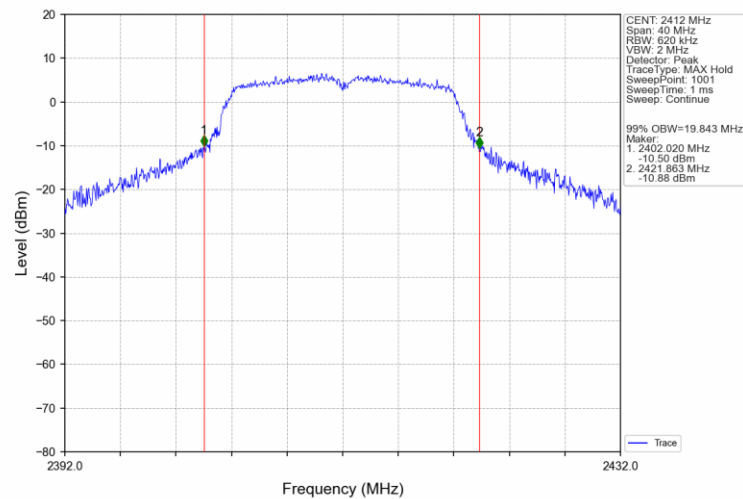
2.2.1 OBW



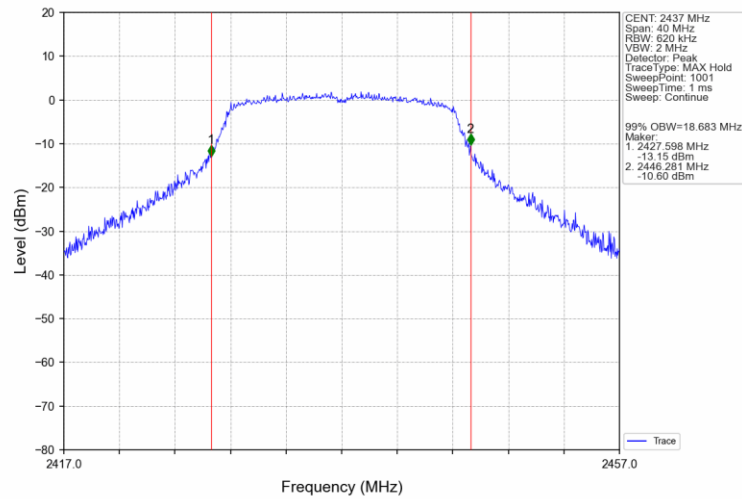
802.11b HCH 2462MHz_Ant1 (SISO) NTN



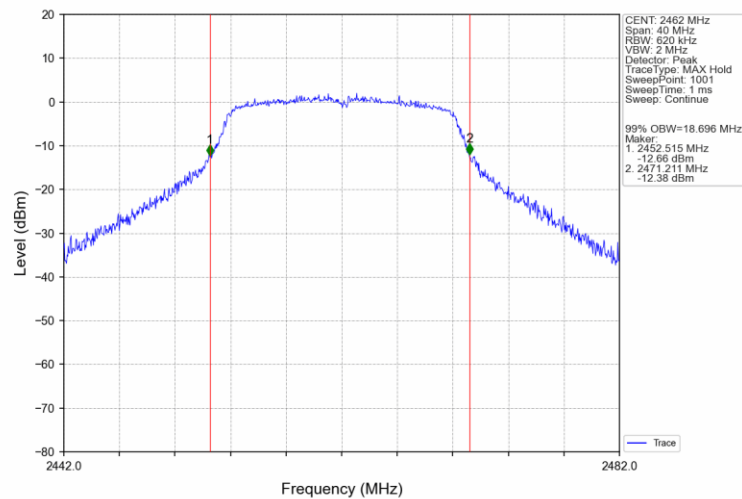
802.11g LCH 2412MHz_Ant1 (SISO) NTN



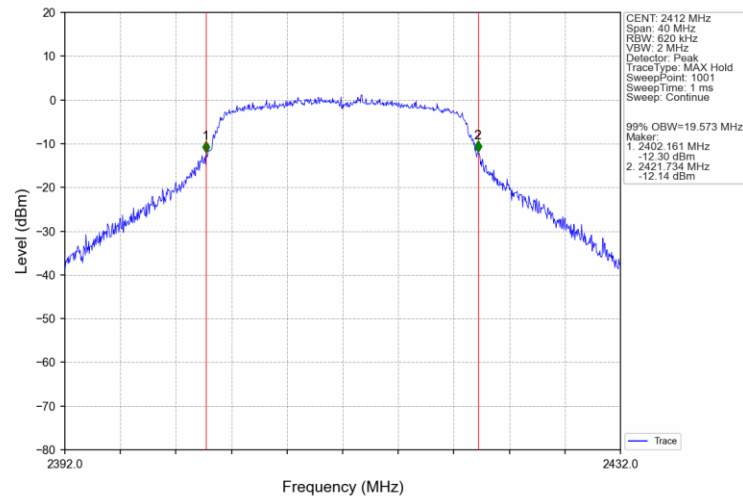
802.11g MCH 2437MHz_Ant1 (SISO) NTN



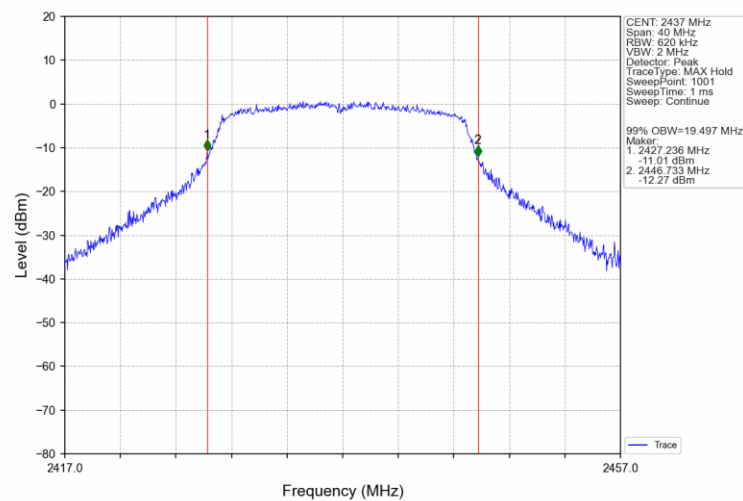
802.11g HCH 2462MHz_Ant1 (SISO) NTN



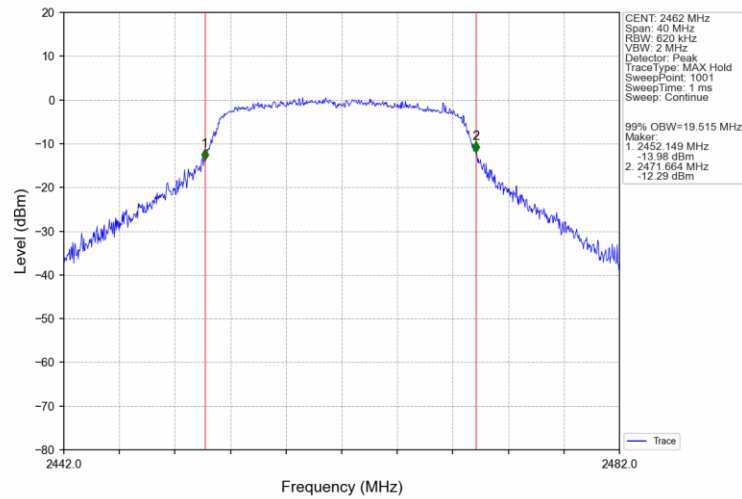
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



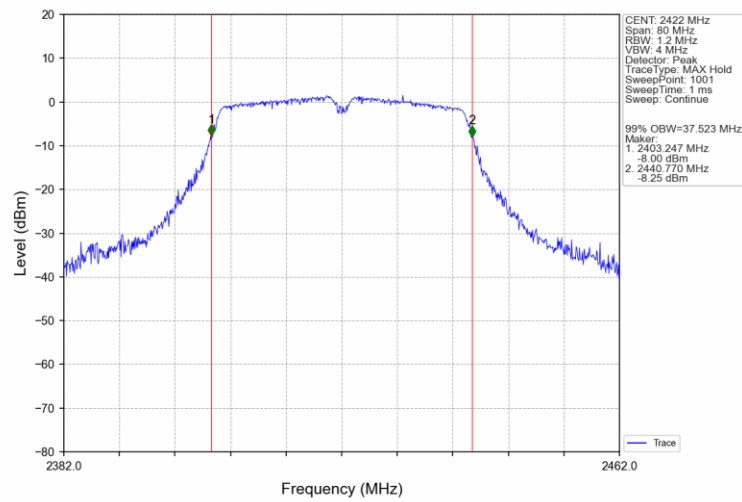
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



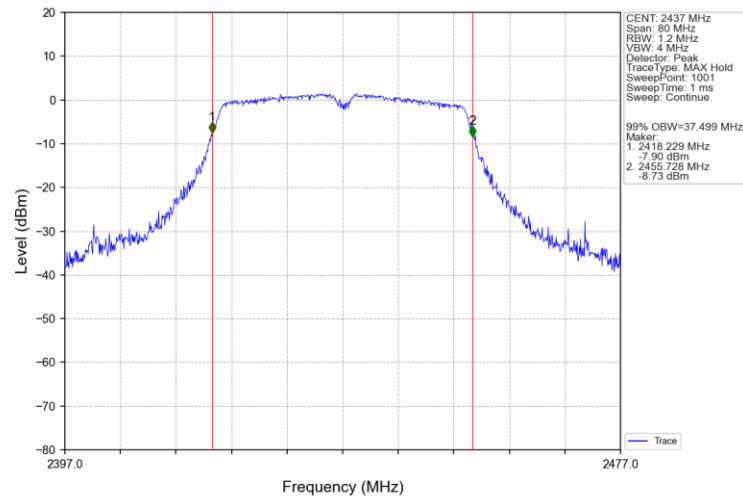
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



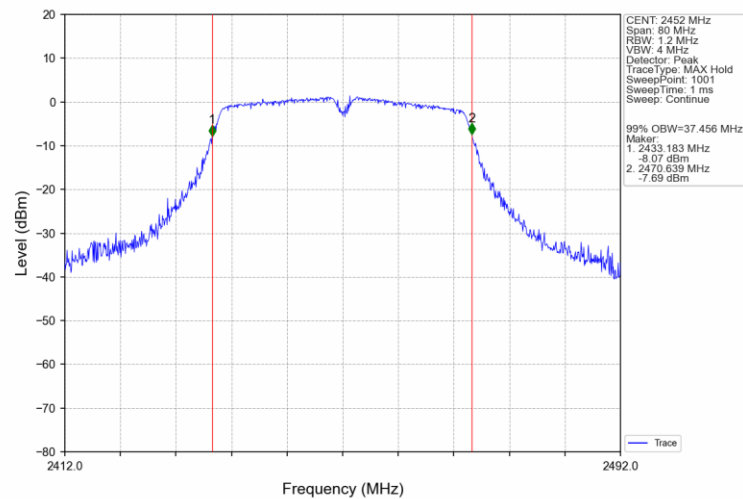
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



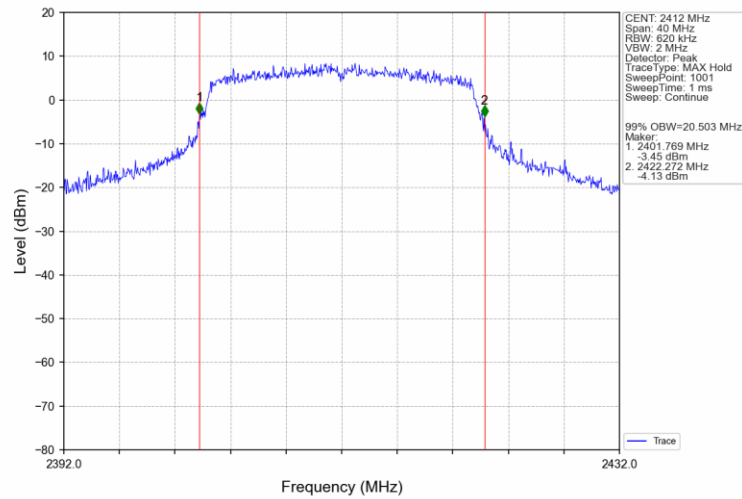
802.11n(HT40) MCH_2437MHz_Ant1(SISO) NTNV



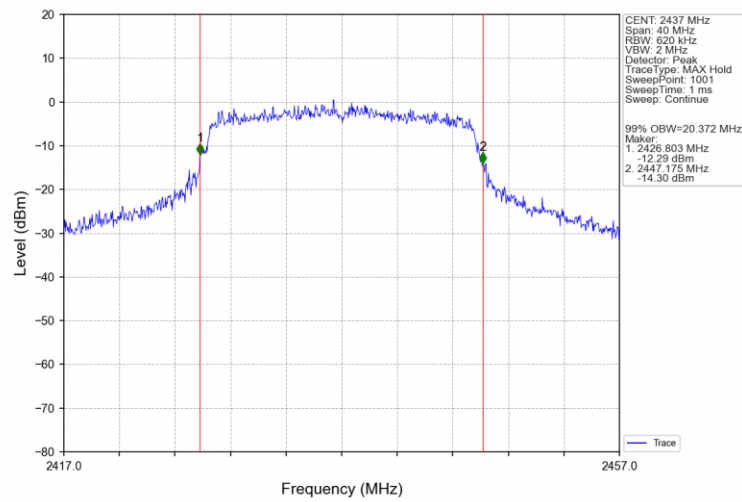
802.11n(HT40) HCH_2452MHz_Ant1(SISO) NTNV



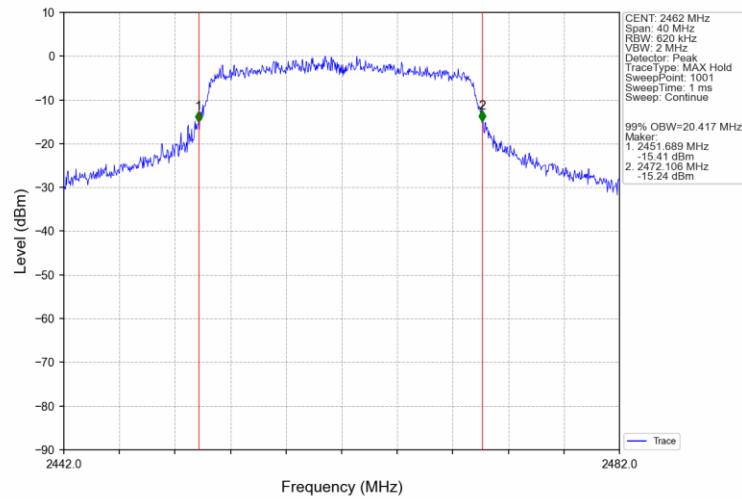
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (SISO) NTN



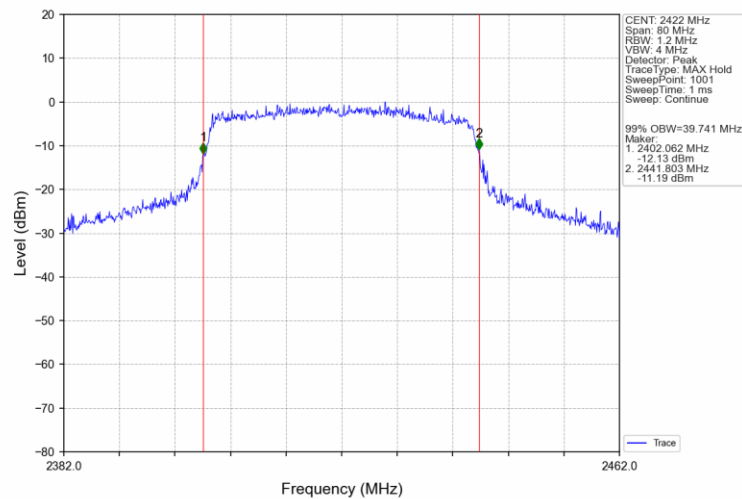
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (SISO) NTN



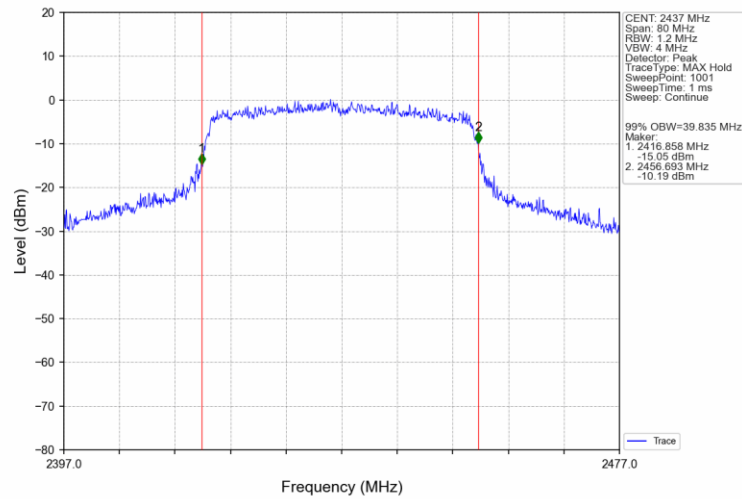
802.11ax(HEW20) HCH 2462MHz_SU / Ant1 (SISO) NTN



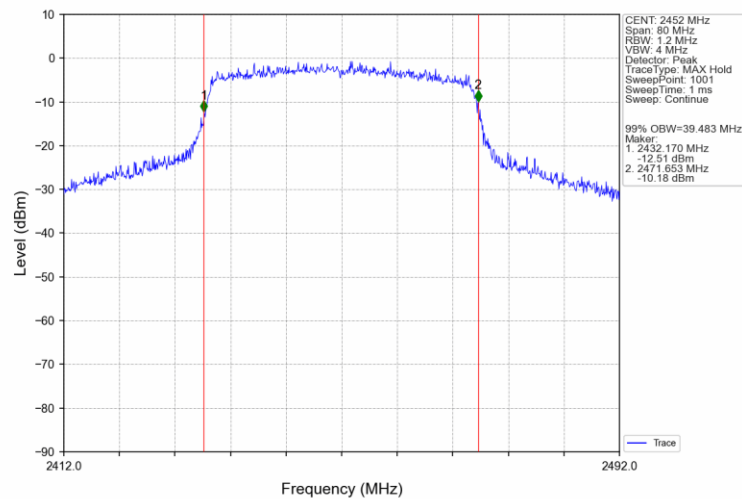
802.11ax(HEW40) LCH 2422MHz_SU / Ant1 (SISO) NTN



802.11ax(HEW40) MCH 2437MHz_SU / Ant1 (SISO) NTNv

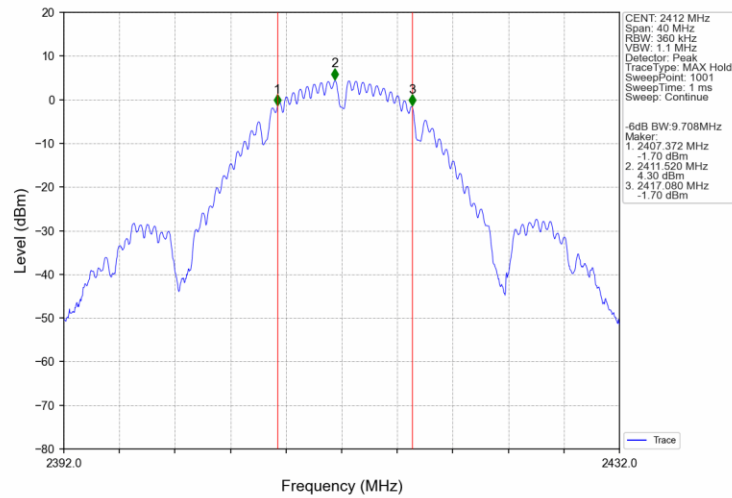


802.11ax(HEW40) HCH 2452MHz_SU / Ant1 (SISO) NTNv

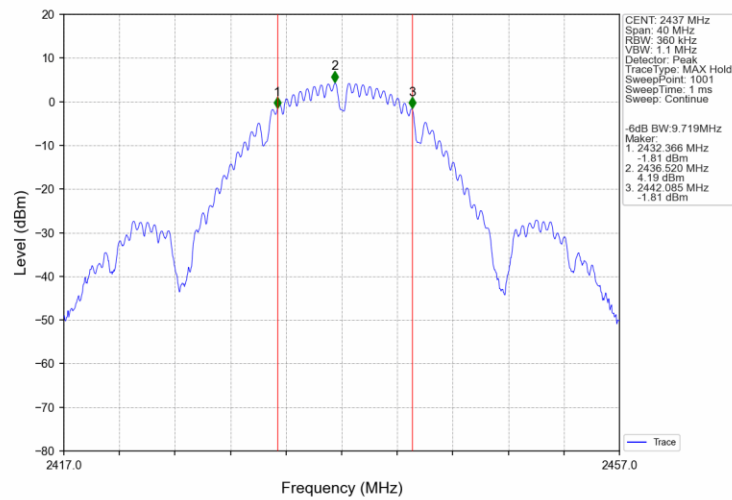


2.2.2 6dB BW

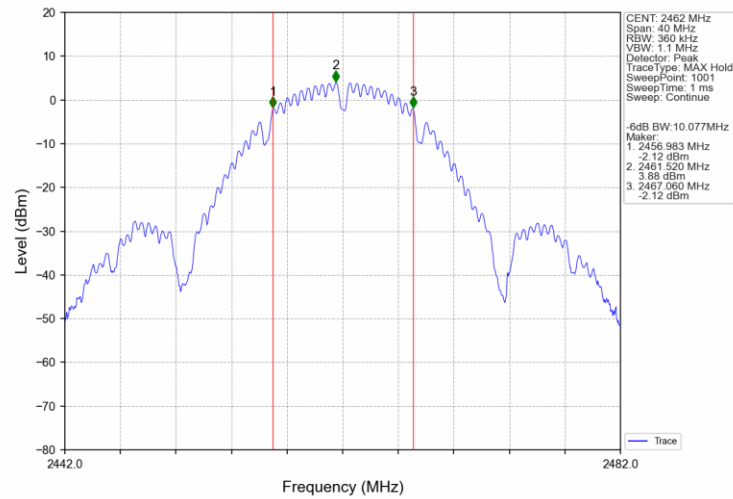
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



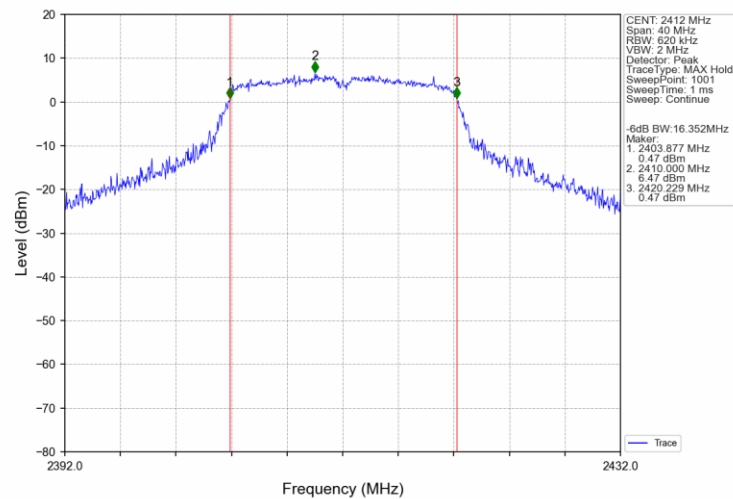
802.11b MCH 2437MHz_Ant1 (SISO)_NTNV



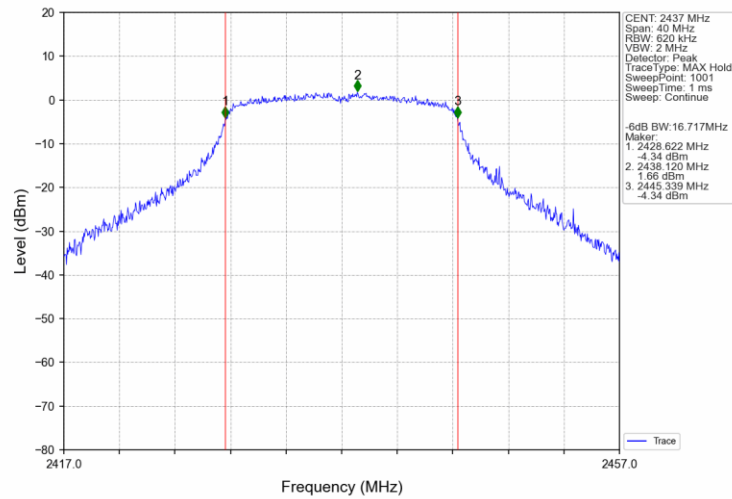
802.11b HCH 2462MHz_Ant1 (SISO) NTN



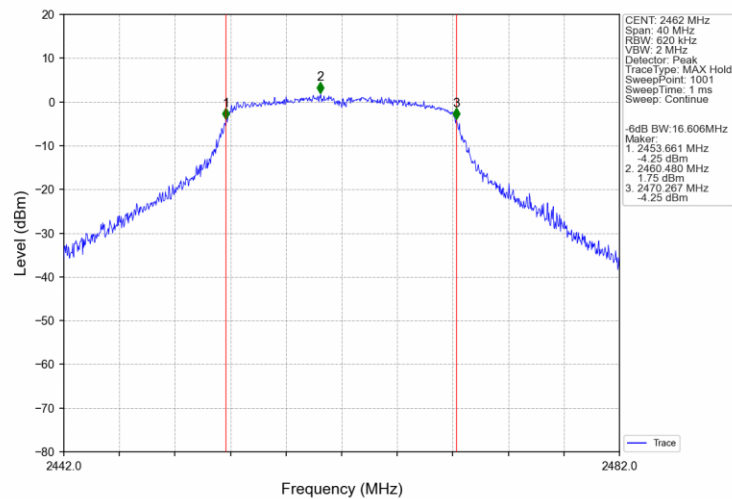
802.11g LCH 2412MHz_Ant1 (SISO) NTN



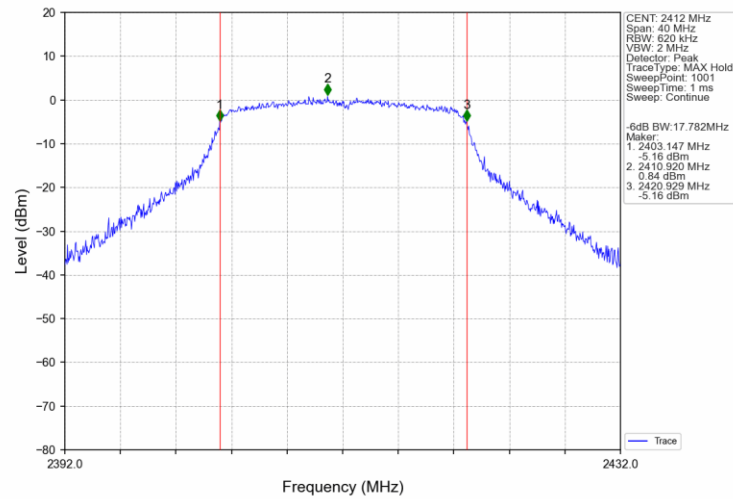
802.11g_MCH_2437MHz_Ant1 (SISO) NTNv



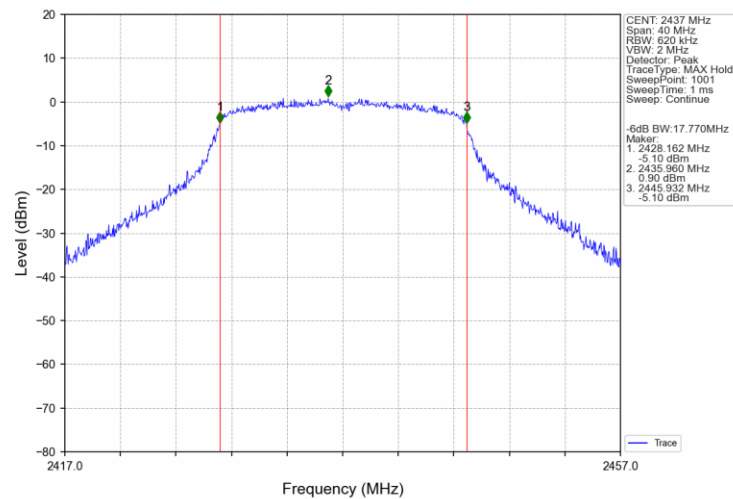
802.11g_HCH_2462MHz_Ant1 (SISO) NTNv



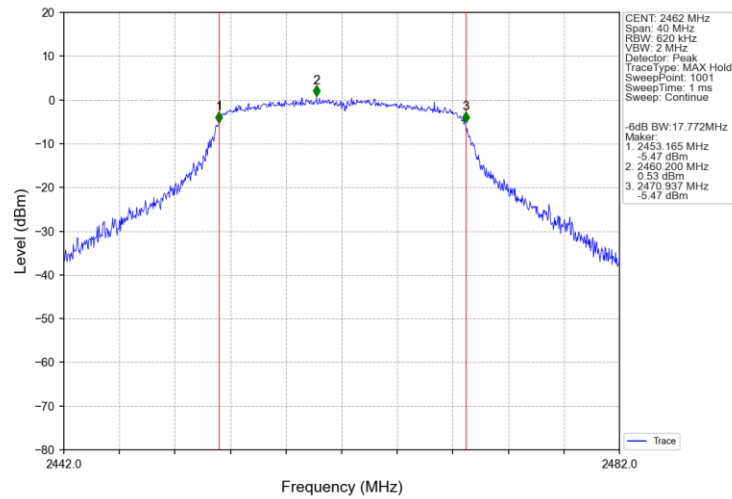
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



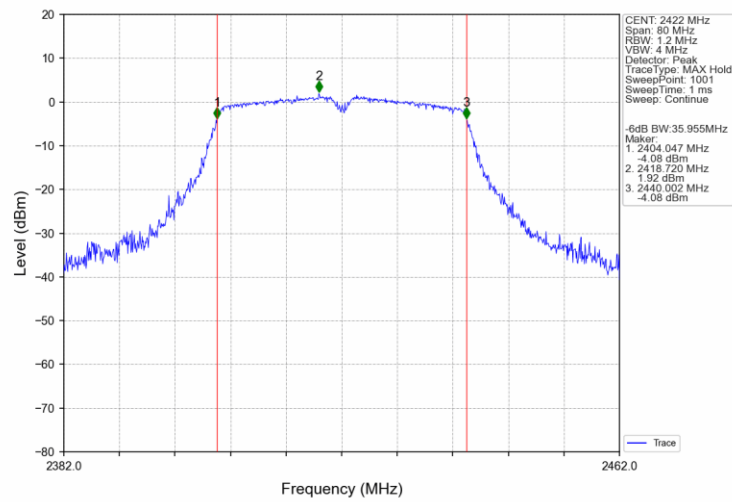
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



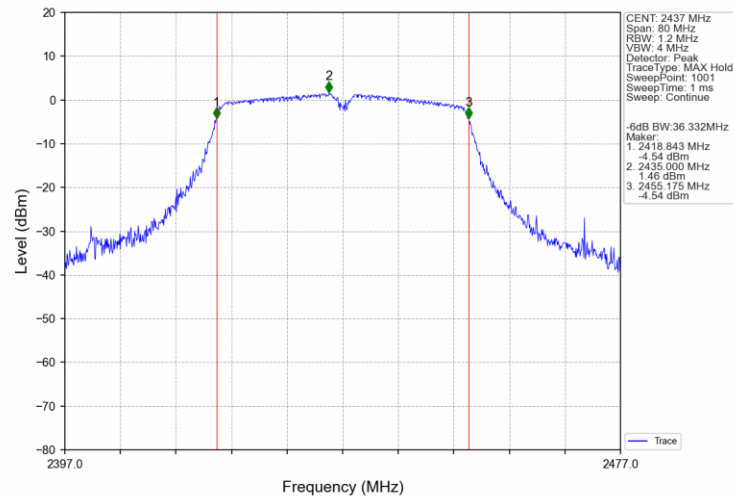
802.11n(HT20) HCH_2462MHz_Ant1 (SISO)_NTNV



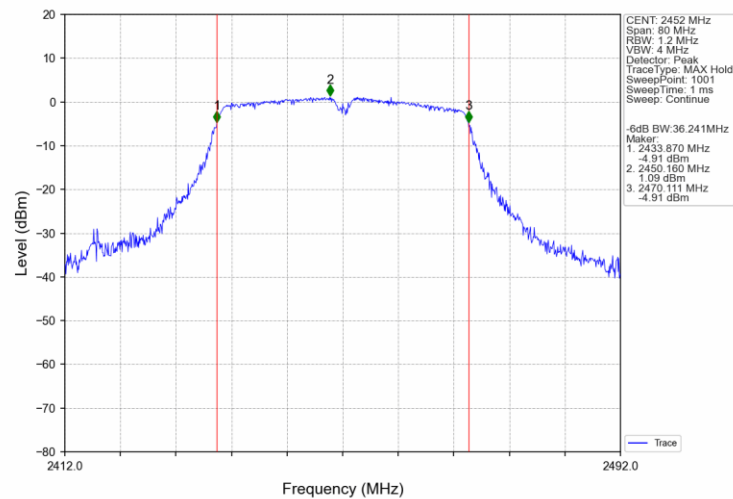
802.11n(HT40) LCH_2422MHz_Ant1 (SISO)_NTNV



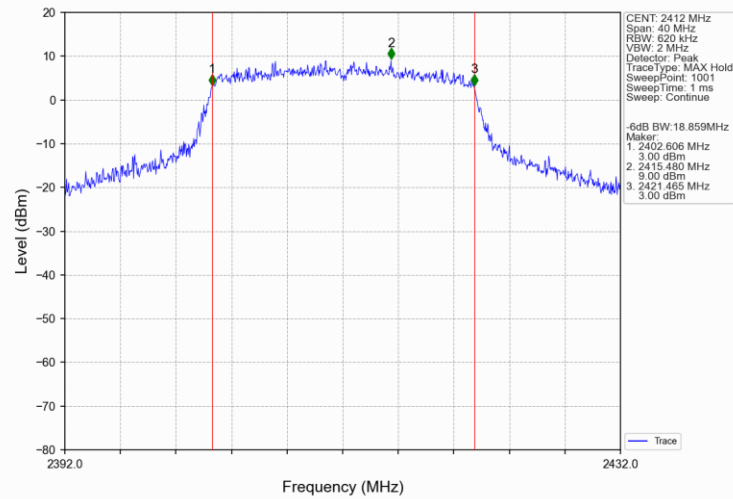
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTN



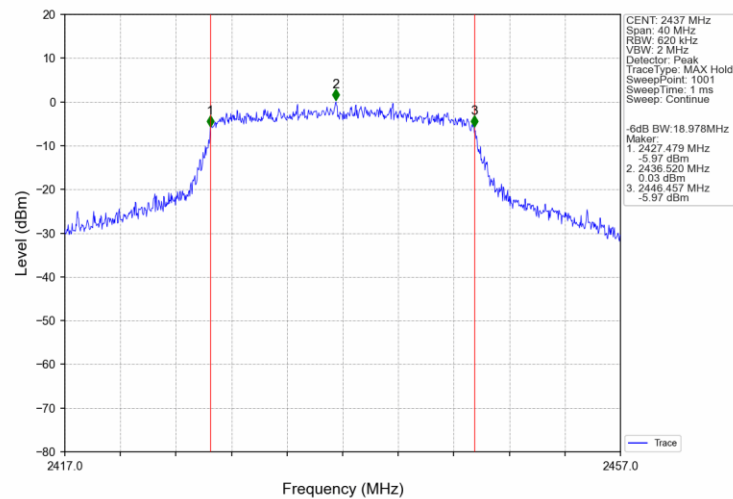
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTN



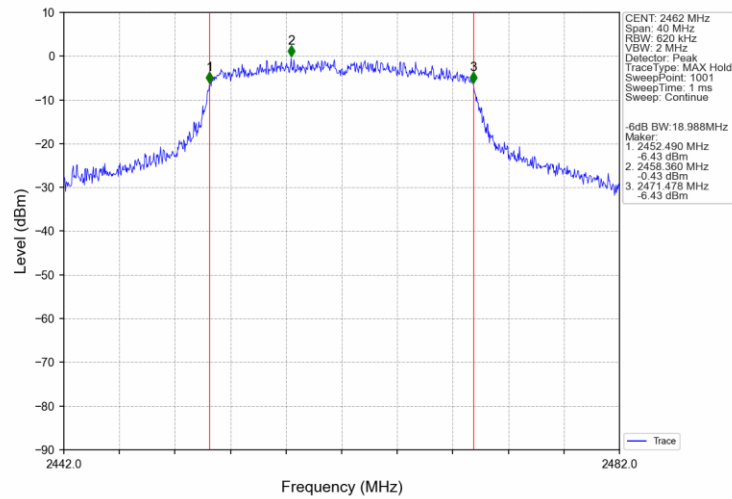
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (SISO) NTN



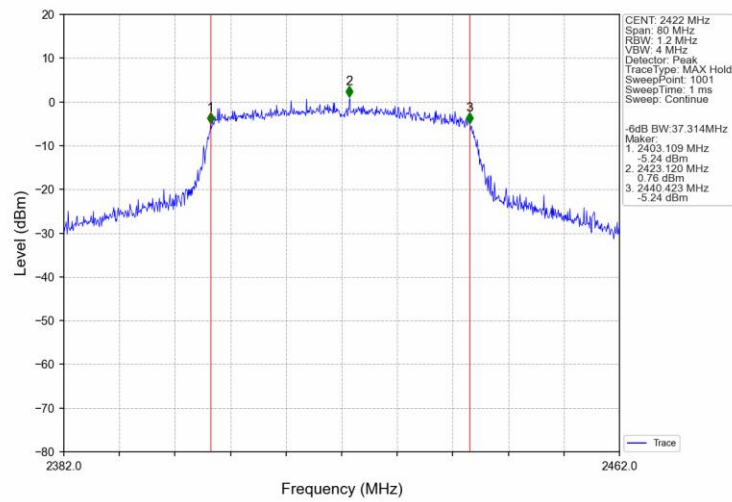
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (SISO) NTN



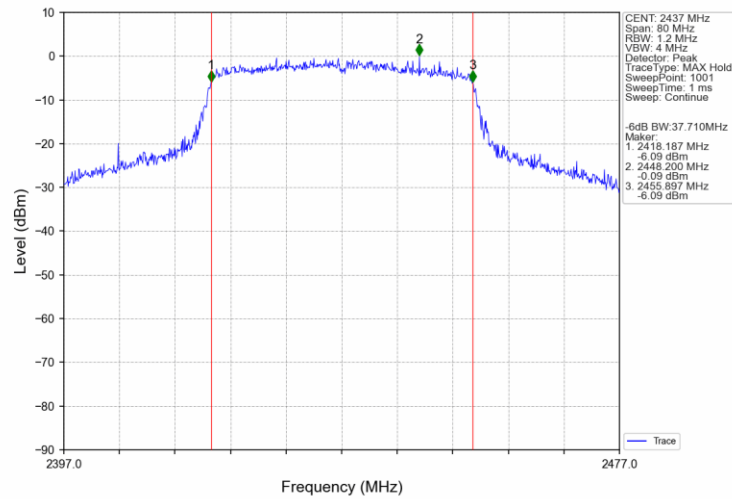
802.11ax(HEW20) HCH 2462MHz_SU / Ant1 (SISO) NTNv



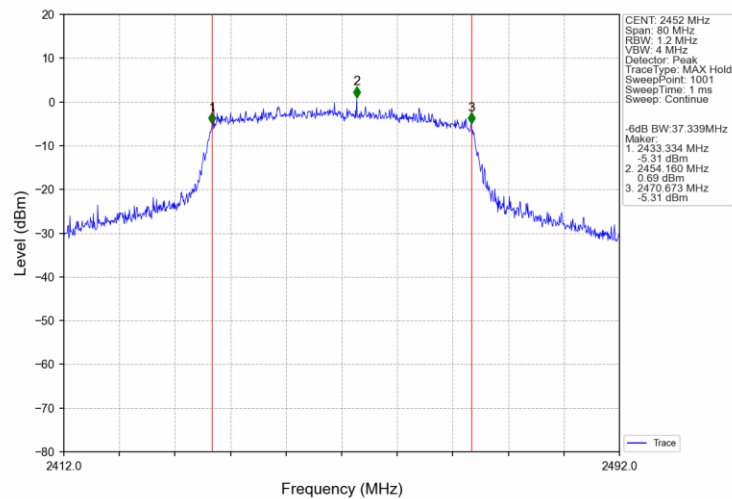
802.11ax(HEW40) LCH 2422MHz_SU / Ant1 (SISO) NTNv

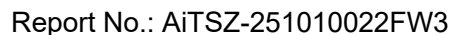


802.11ax(HEW40) MCH 2437MHz SU / Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz SU / Ant1 (SISO) NTN





Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	15.24	<=30	Pass
		2437	/	/	15.13	<=30	Pass
		2462	/	/	14.88	<=30	Pass
802.11g	SISO	2412	/	/	14.77	<=30	Pass
		2437	/	/	14.83	<=30	Pass
		2462	/	/	14.60	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	13.81	<=30	Pass
		2437	/	/	13.90	<=30	Pass
		2462	/	/	13.71	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	13.70	<=30	Pass
		2437	/	/	13.95	<=30	Pass
		2452	/	/	13.62	<=30	Pass
802.11ax (HEW20)	SISO	2412	SU	/	11.59	<=30	Pass
		2437	SU	/	11.44	<=30	Pass
		2462	SU	/	11.45	<=30	Pass
802.11ax (HEW40)	SISO	2422	SU	/	11.74	<=30	Pass
		2437	SU	/	11.83	<=30	Pass
		2452	SU	/	11.14	<=30	Pass
Note1: Antenna Gain: Ant1: 3.00dBi;							

4. Maximum Power Spectral Density

4.1 Test Result

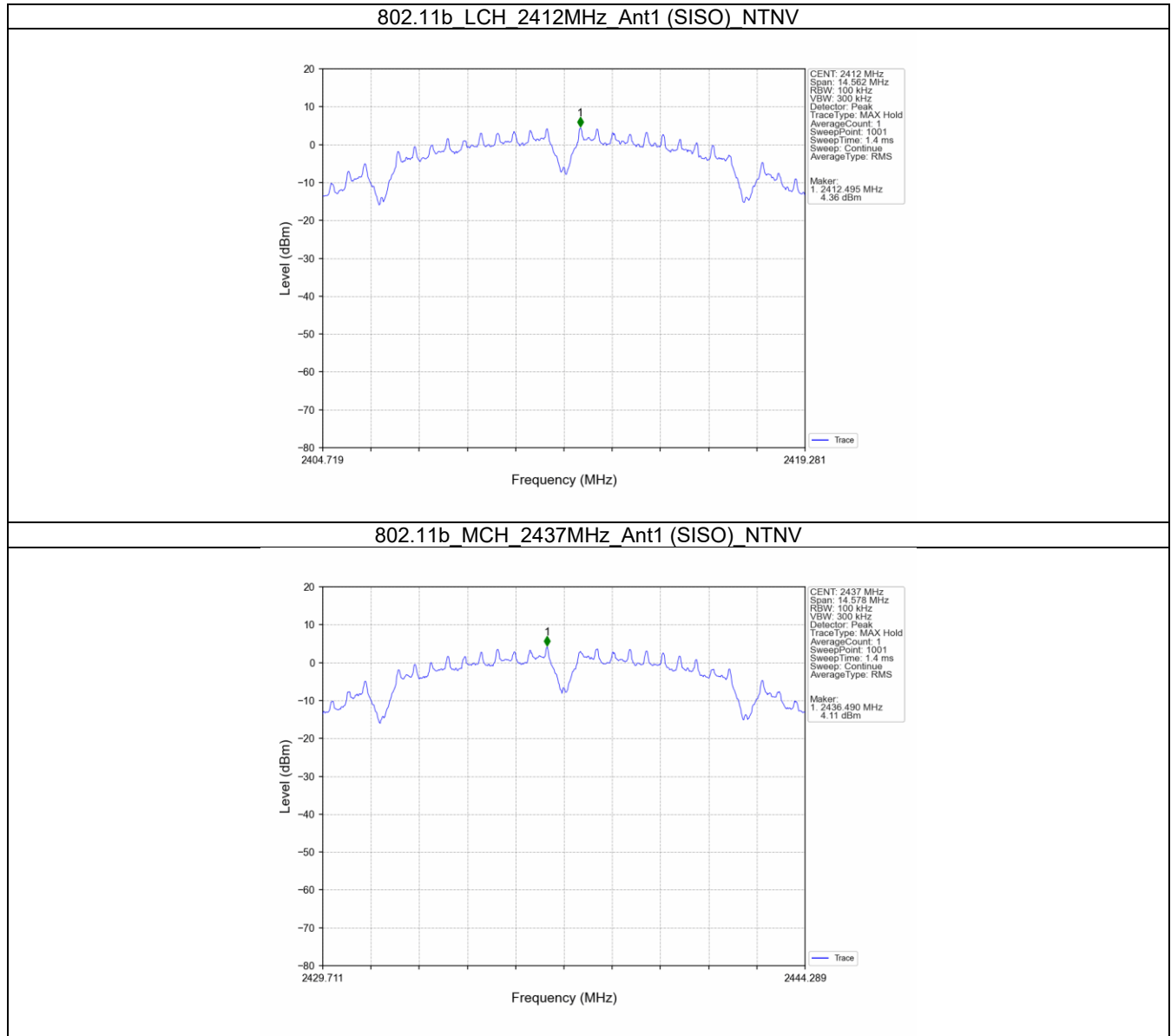
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	4.36	<=8	Pass
		2437	/	/	4.11	<=8	Pass
		2462	/	/	3.86	<=8	Pass
802.11g	SISO	2412	/	/	-0.04	<=8	Pass
		2437	/	/	-3.37	<=8	Pass
		2462	/	/	-3.77	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-4.54	<=8	Pass
		2437	/	/	-4.65	<=8	Pass
		2462	/	/	-4.39	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-7.52	<=8	Pass
		2437	/	/	-7.44	<=8	Pass
		2452	/	/	-7.88	<=8	Pass
802.11ax (HEW20)	SISO	2412	SU	/	-7.05	<=8	Pass
		2437	SU	/	-7.26	<=8	Pass
		2462	SU	/	-7.16	<=8	Pass
802.11ax (HEW40)	SISO	2422	SU	/	-10.36	<=8	Pass
		2437	SU	/	-10.31	<=8	Pass
		2452	SU	/	-11.17	<=8	Pass

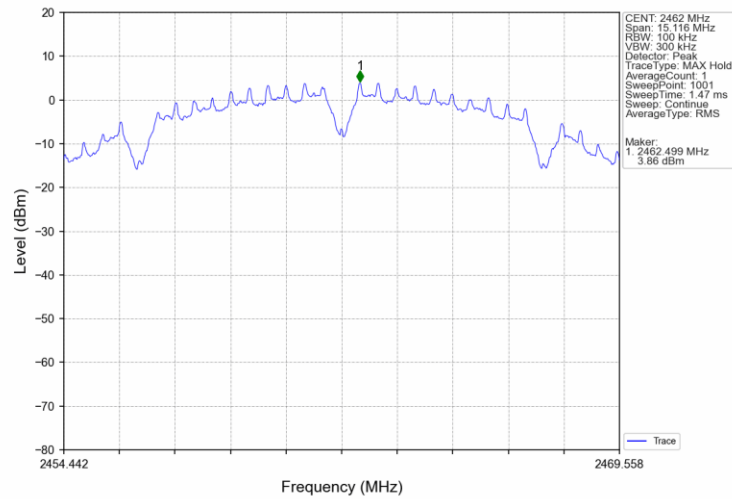
Note1: Antenna Gain: Ant1: 3.00dBi;

4.2 Test Graph

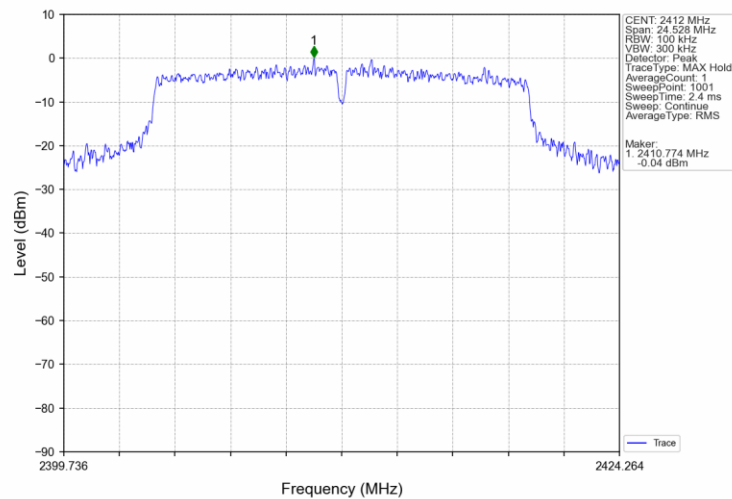
4.2.1 PSD



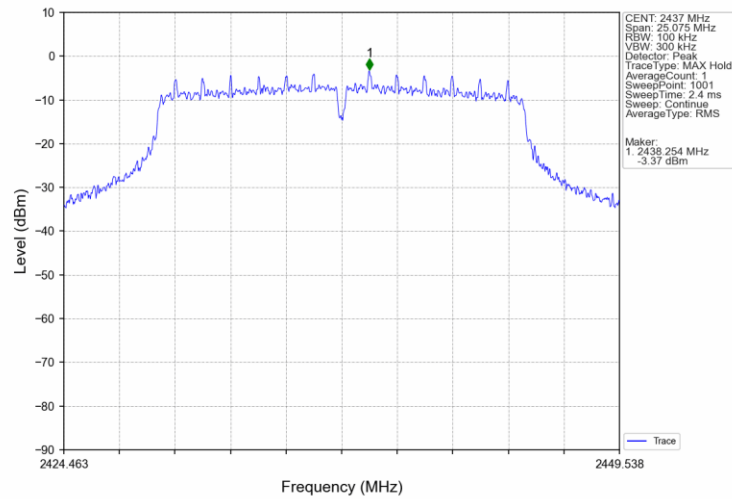
802.11b HCH 2462MHz_Ant1 (SISO) NTN



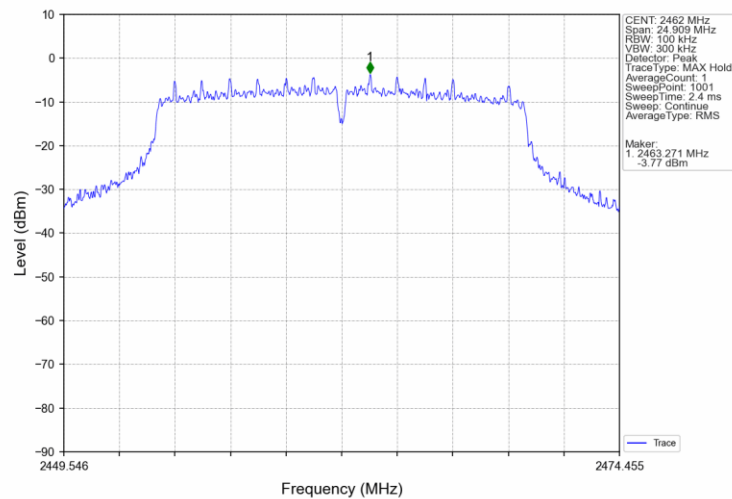
802.11g LCH 2412MHz_Ant1 (SISO) NTN



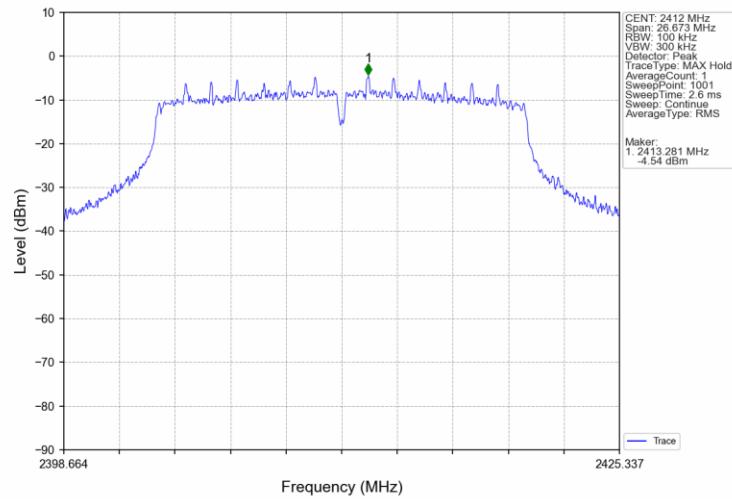
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



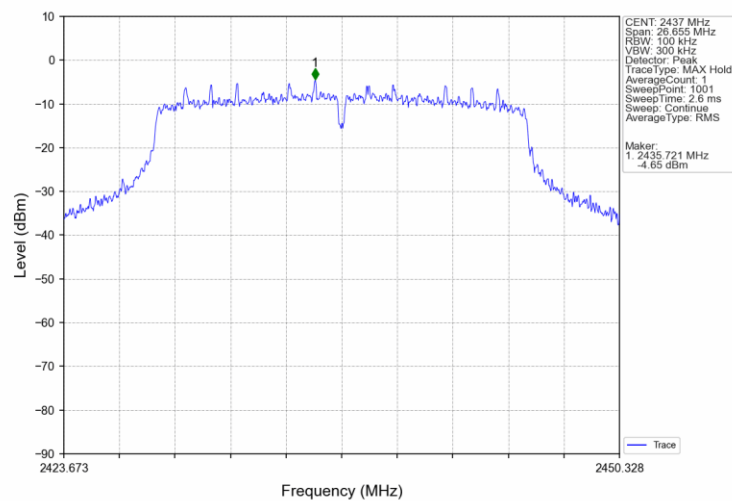
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



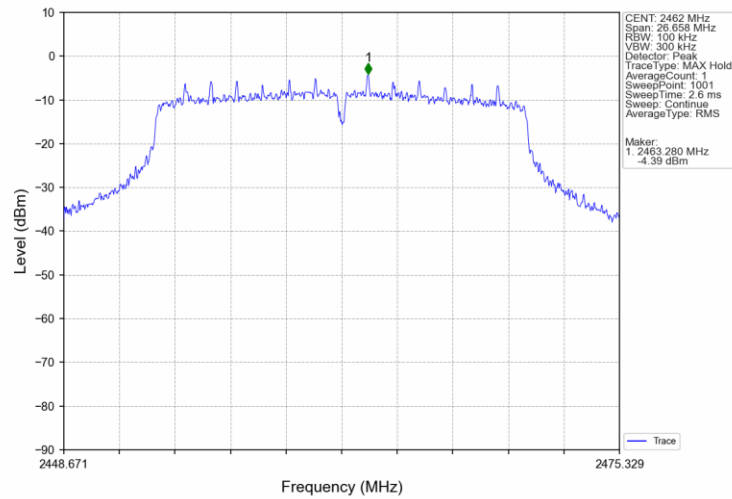
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



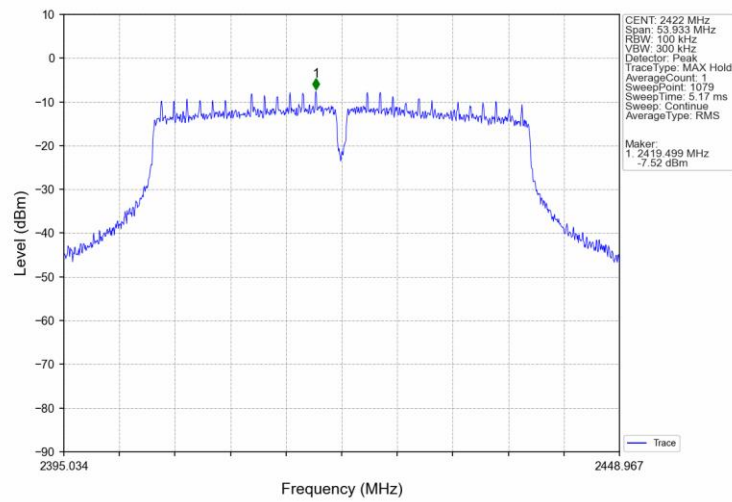
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



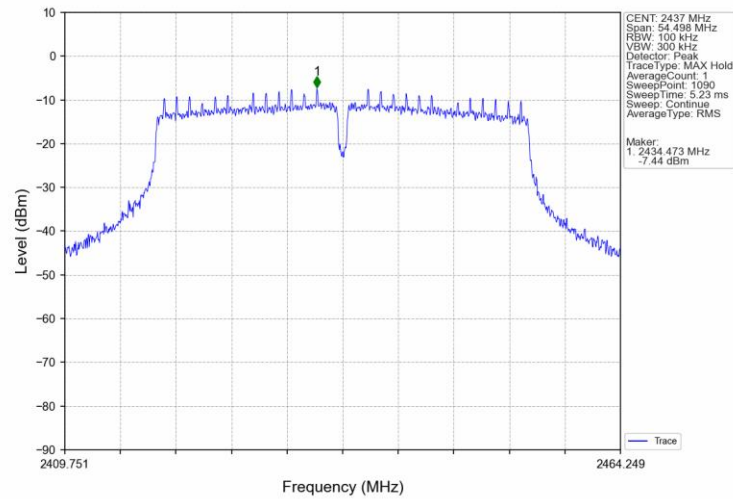
802.11n(HT20) HCH_2462MHz_Ant1 (SISO) _NTNV



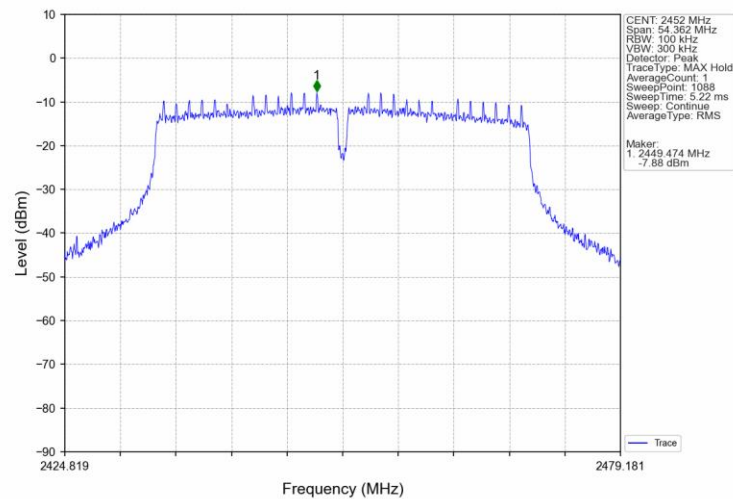
802.11n(HT40) _LCH_2422MHz_Ant1 (SISO) _NTNV



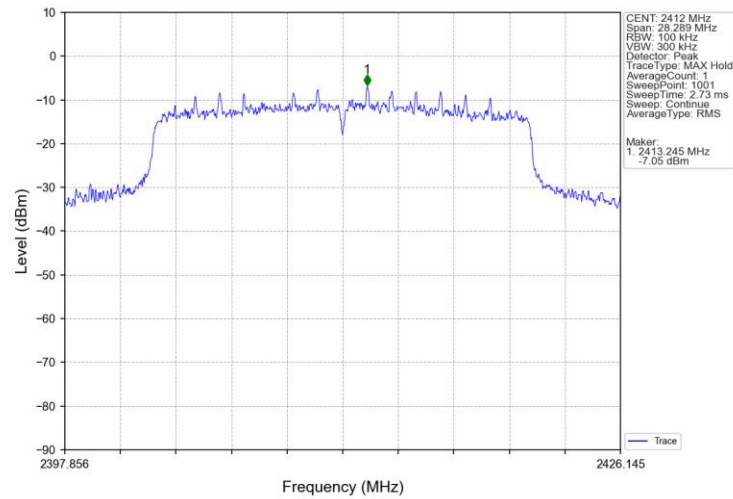
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTNV



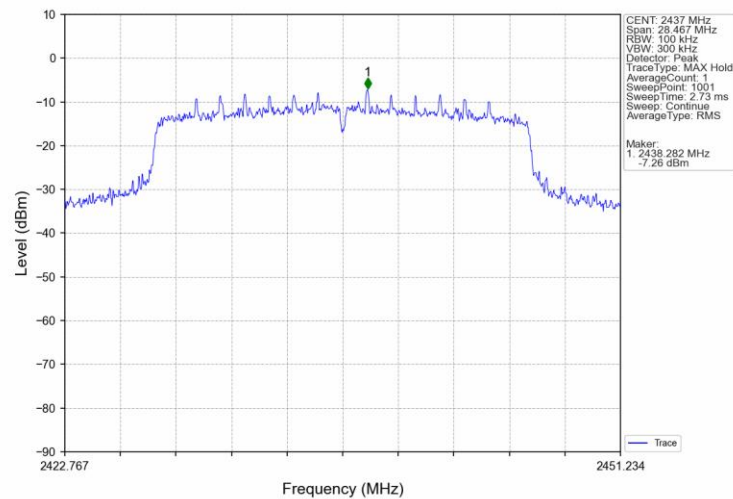
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTNV



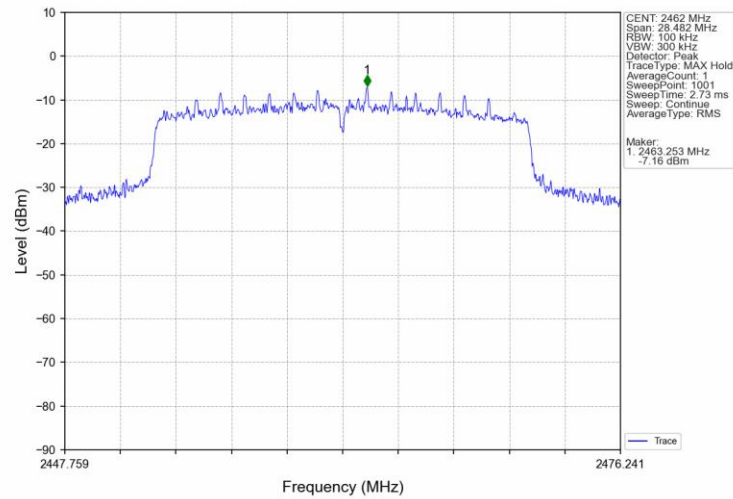
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (SISO) NTN



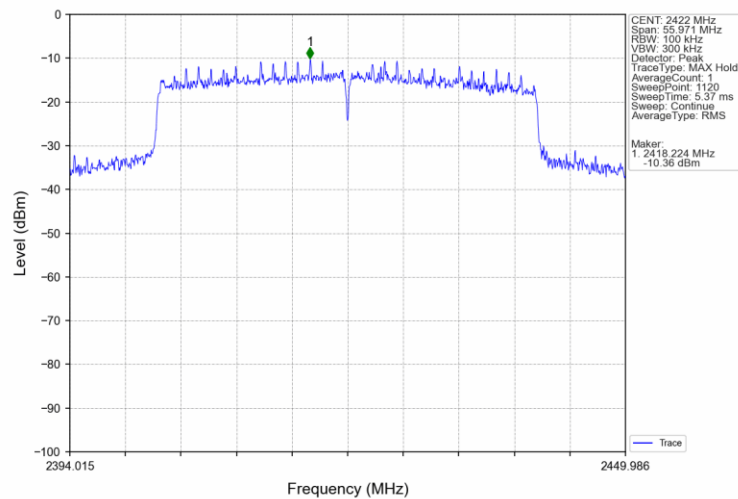
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (SISO) NTN



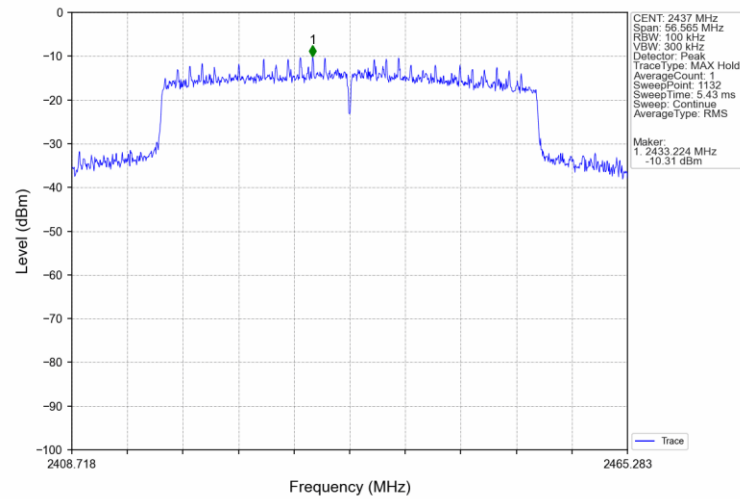
802.11ax(HEW20) HCH 2462MHz SU / Ant1 (SISO) NTN



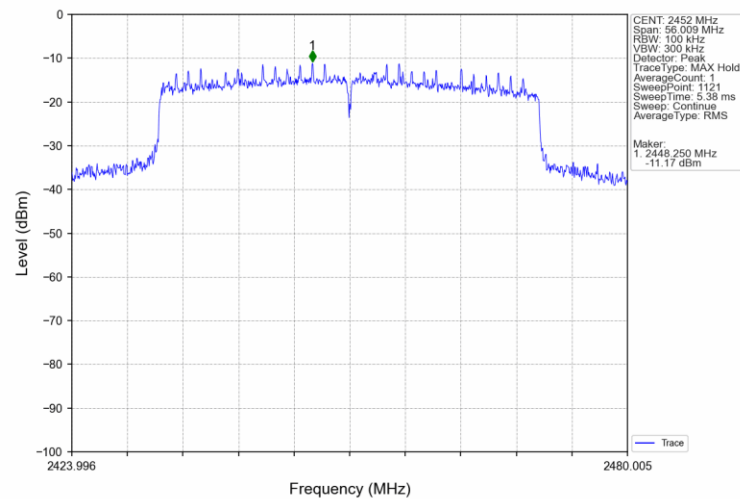
802.11ax(HEW40) LCH 2422MHz SU / Ant1 (SISO) NTN



802.11ax(HEW40) MCH 2437MHz SU / Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz SU / Ant1 (SISO) NTN



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	4.26
		2437	/	/	1	4.22
		2462	/	/	1	3.95
802.11g	SISO	2412	/	/	1	0.71
		2437	/	/	1	-3.97
		2462	/	/	1	-4.18
802.11n (HT20)	SISO	2412	/	/	1	-5.03
		2437	/	/	1	-4.30
		2462	/	/	1	-4.53
802.11n (HT40)	SISO	2422	/	/	1	-7.54
		2437	/	/	1	-7.46
		2452	/	/	1	-7.64
802.11ax (HEW20)	SISO	2412	SU	/	1	1.87
		2437	SU	/	1	-7.42
		2462	SU	/	1	-8.08
802.11ax (HEW40)	SISO	2422	SU	/	1	-10.45
		2437	SU	/	1	-10.32
		2452	SU	/	1	-11.04

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.

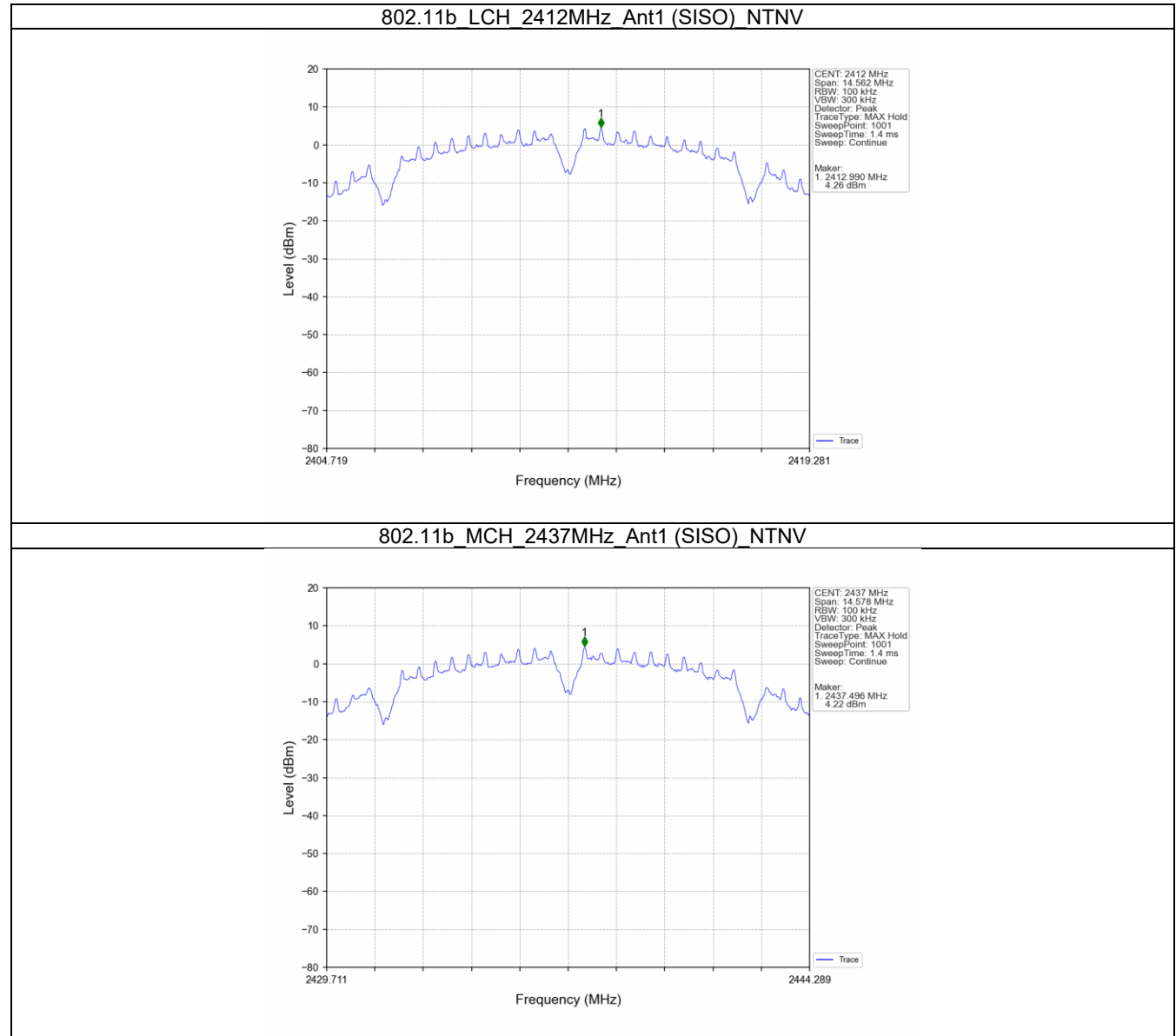
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	4.26	-15.74	Pass
		2437	/	/	1	4.22	-15.78	Pass
		2462	/	/	1	3.95	-16.05	Pass
802.11g	SISO	2412	/	/	1	0.71	-19.29	Pass
		2437	/	/	1	-3.97	-23.97	Pass
		2462	/	/	1	-4.18	-24.18	Pass
802.11n (HT20)	SISO	2412	/	/	1	-5.03	-25.03	Pass
		2437	/	/	1	-4.30	-24.30	Pass
		2462	/	/	1	-4.53	-24.53	Pass
802.11n (HT40)	SISO	2422	/	/	1	-7.54	-27.54	Pass
		2437	/	/	1	-7.46	-27.46	Pass
		2452	/	/	1	-7.64	-27.64	Pass
802.11ax (HEW20)	SISO	2412	SU	/	1	1.87	-18.13	Pass
		2437	SU	/	1	-7.42	-27.42	Pass
		2462	SU	/	1	-8.08	-28.08	Pass
802.11ax (HEW40)	SISO	2422	SU	/	1	-10.45	-30.45	Pass
		2437	SU	/	1	-10.32	-30.32	Pass
		2452	SU	/	1	-11.04	-31.04	Pass

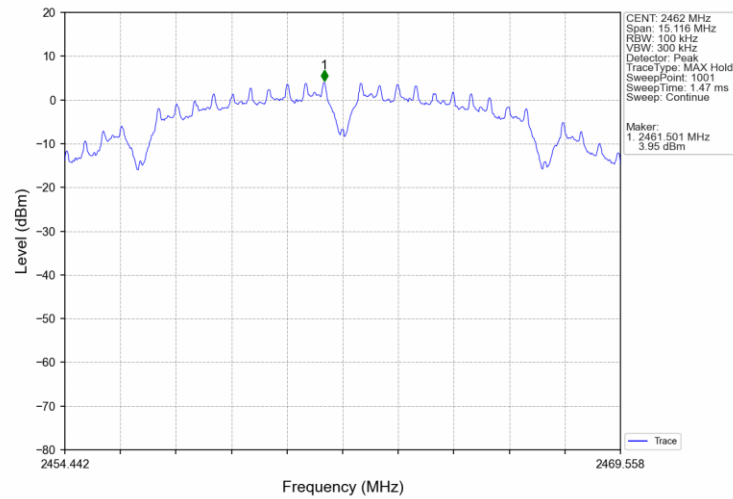
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

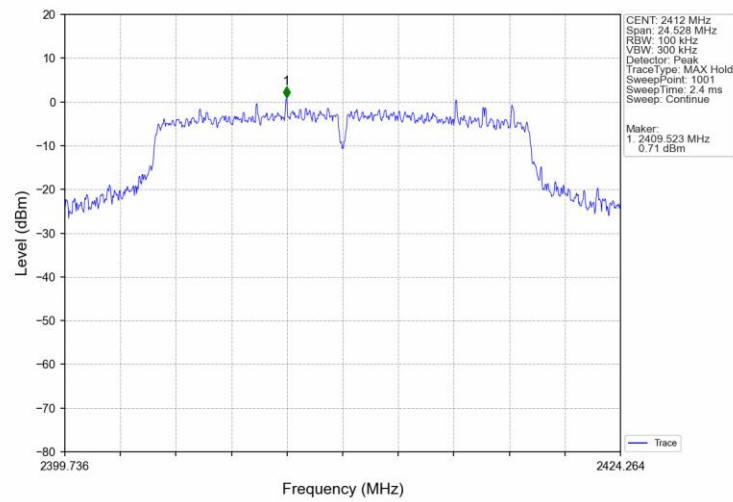
5.2.1 Ref



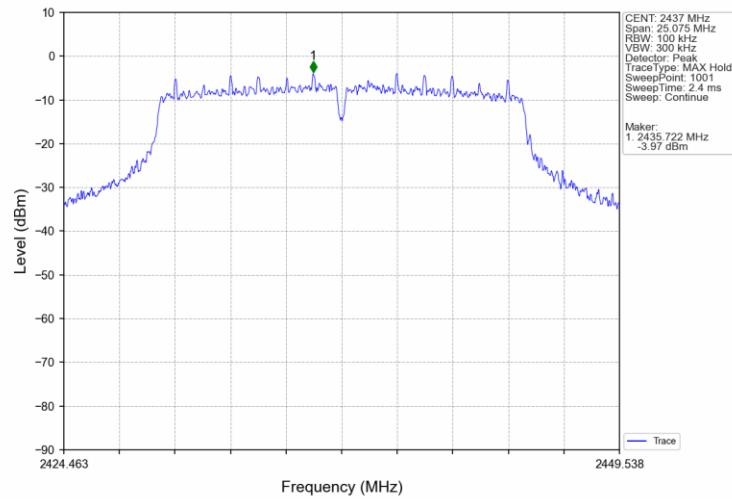
802.11b HCH 2462MHz_Ant1 (SISO) NTN



802.11g LCH 2412MHz_Ant1 (SISO) NTN



802.11g_MCH_2437MHz_Ant1 (SISO) NTN



802.11g_HCH_2462MHz_Ant1 (SISO) NTN

