

Appendix RF test data for WIFI2.4G

1. Duty Cycle

1.1 Test Result

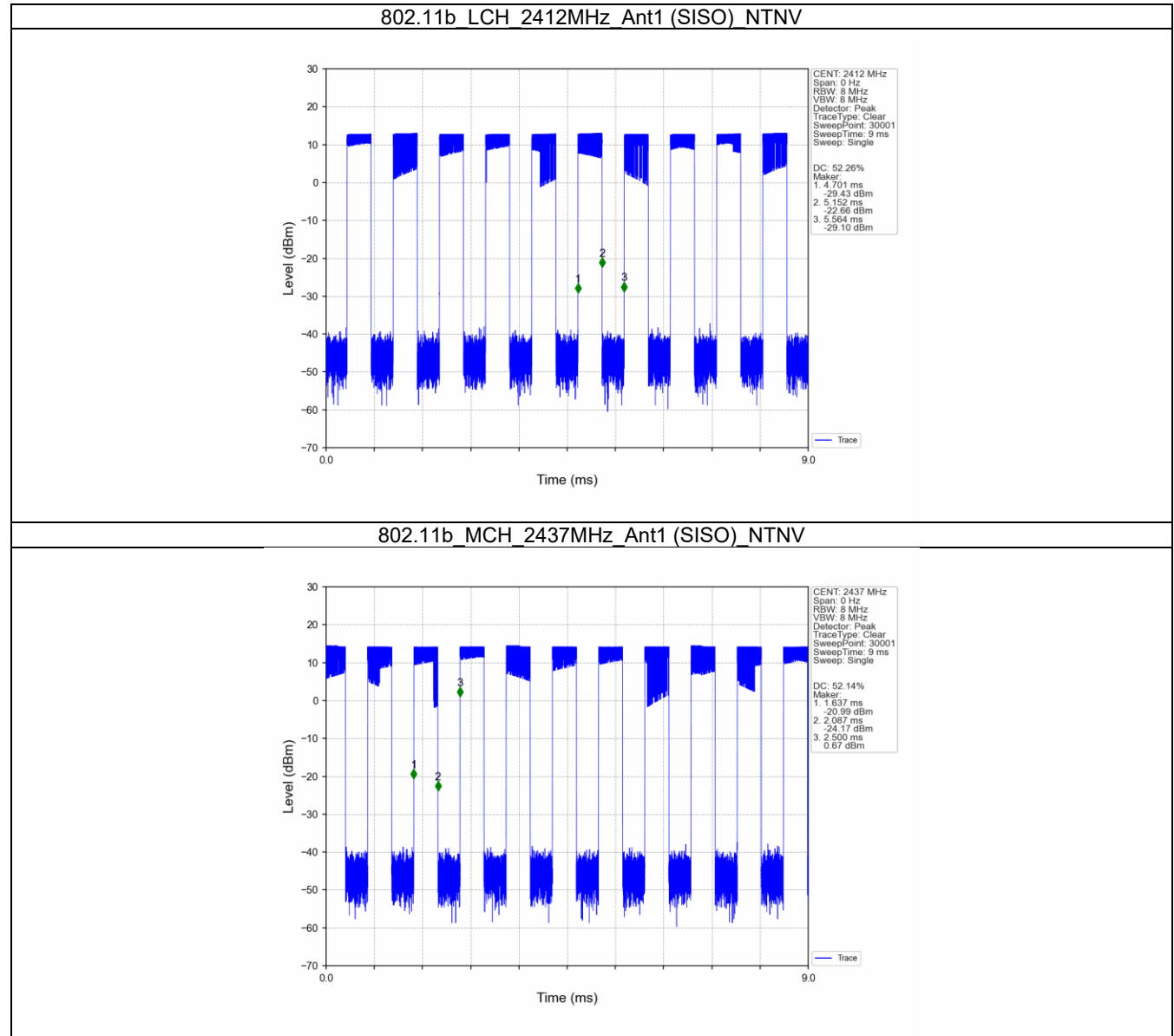
1.1.1 Ant1

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	/	/	0.451	0.863	52.26	2.82	0.03
		2437	/	/	0.450	0.863	52.14	2.83	0.03
		2462	/	/	0.450	0.863	52.14	2.83	0.03
802.11g	SISO	2412	/	/	0.708	1.121	63.16	2.00	0.03
		2437	/	/	0.708	1.121	63.16	2.00	0.07
		2462	/	/	0.709	1.121	63.25	1.99	0.03
802.11n (HT20)	MIMO	2412	/	/	0.332	0.745	44.56	3.51	0.02
		2437	/	/	1.174	1.534	76.53	1.16	8.49
		2462	/	/	1.174	1.435	81.81	0.87	5.48
802.11n (HT40)	MIMO	2422	/	/	0.315	0.731	43.09	3.66	0.28
		2437	/	/	0.315	0.727	43.33	3.63	0.05
		2452	/	/	0.315	0.727	43.33	3.63	0.03
802.11ax (HEW20)	MIMO	2412	SU	/	0.645	1.057	61.02	2.15	0.06
		2437	SU	/	0.644	1.056	60.98	2.15	0.01
		2462	SU	/	0.644	1.057	60.93	2.15	0.03
802.11ax (HEW40)	MIMO	2422	SU	/	0.644	1.057	60.93	2.15	0.06
		2437	SU	/	0.644	1.057	60.93	2.15	0.06
		2452	SU	/	0.644	1.057	60.93	2.15	0.03

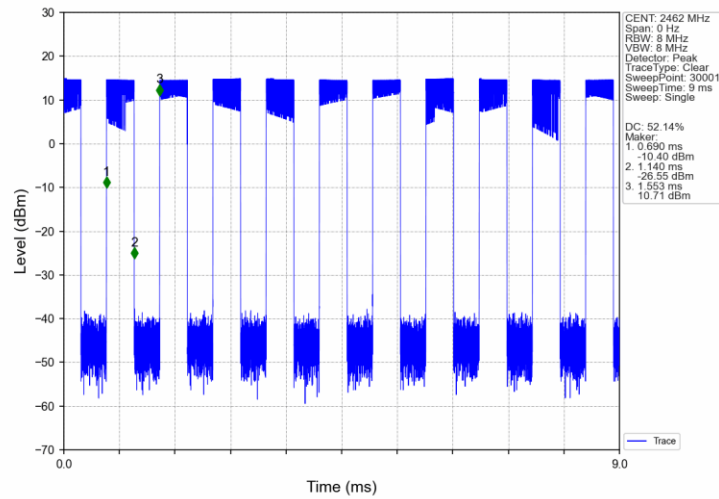
Note: This project only tests the worst mode

1.2 Test Graph

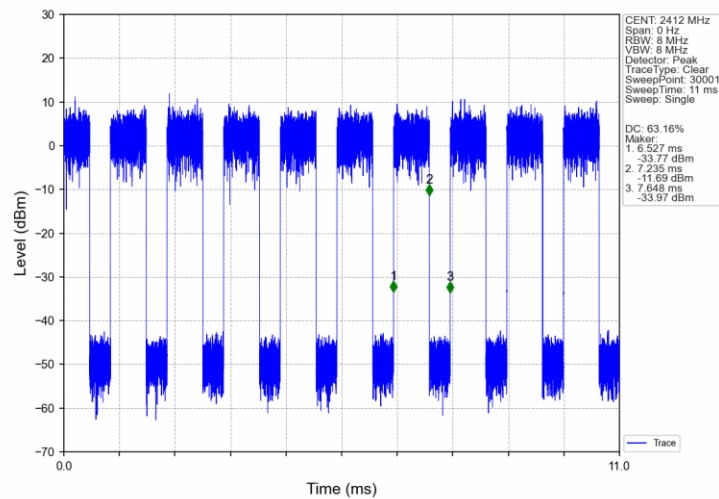
1.2.1 Ant1



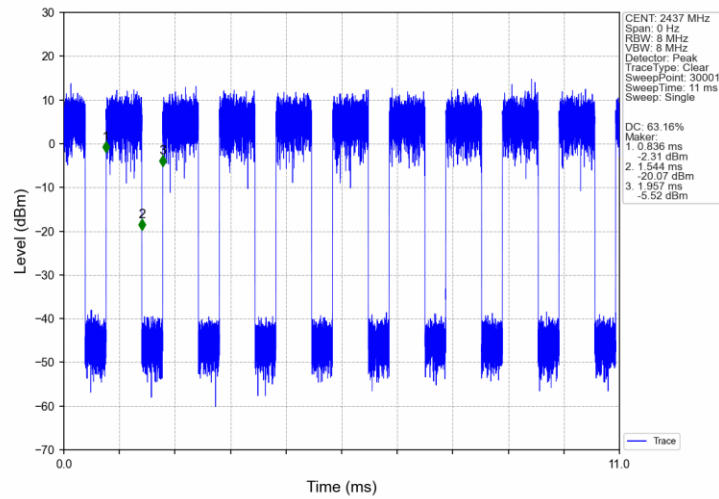
802.11b HCH 2462MHz Ant1 (SISO) NTN



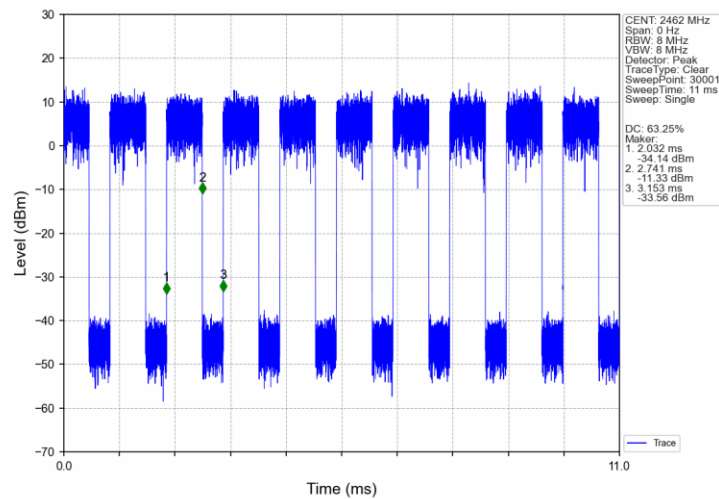
802.11g LCH 2412MHz Ant1 (SISO) NTN



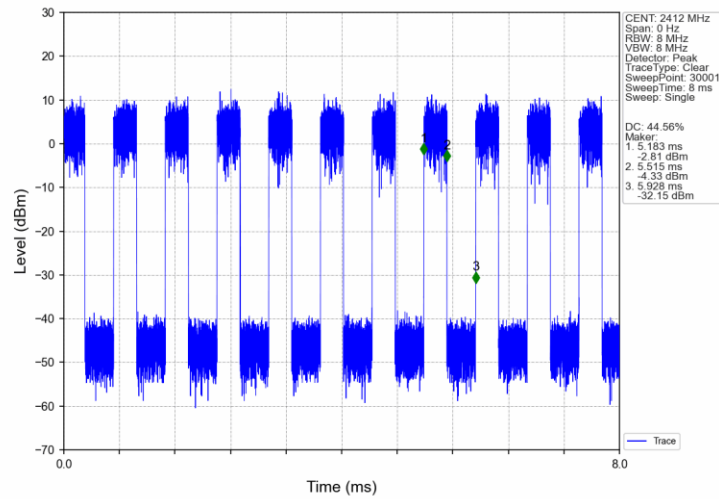
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



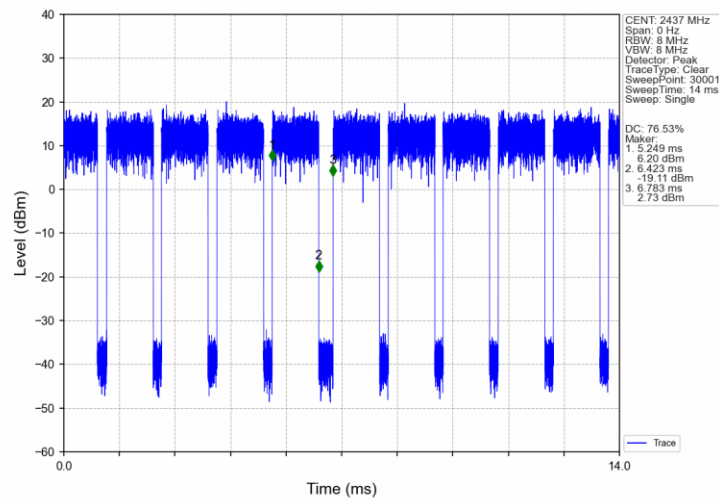
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



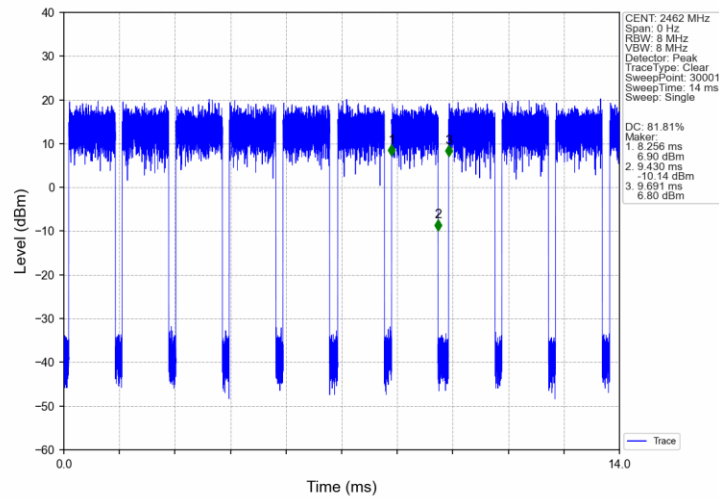
802.11n(HT20) LCH 2412MHz_Ant1 (MIMO) NTN



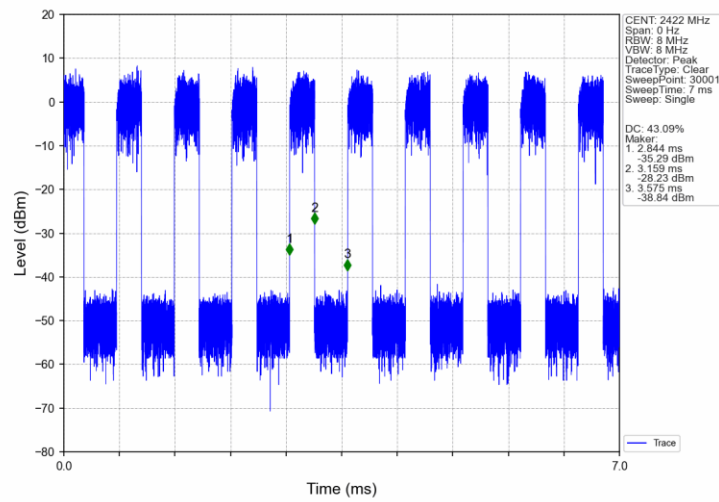
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTN



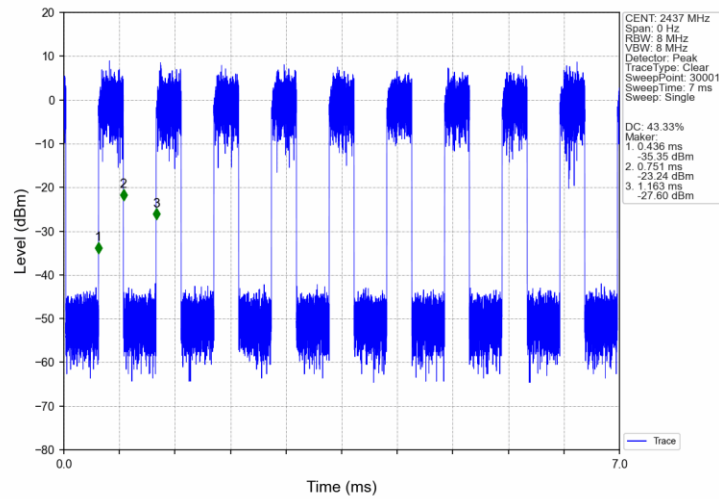
802.11n(HT20) HCH 2462MHz Ant1 (MIMO) NTNV



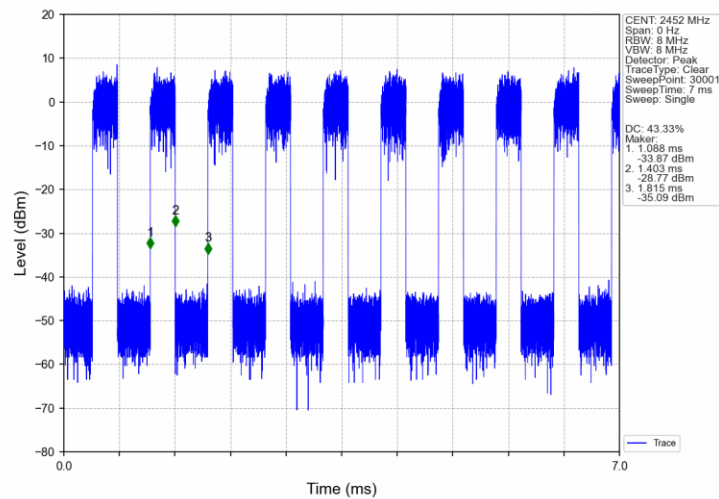
802.11n(HT40) LCH 2422MHz Ant1 (MIMO) NTNV



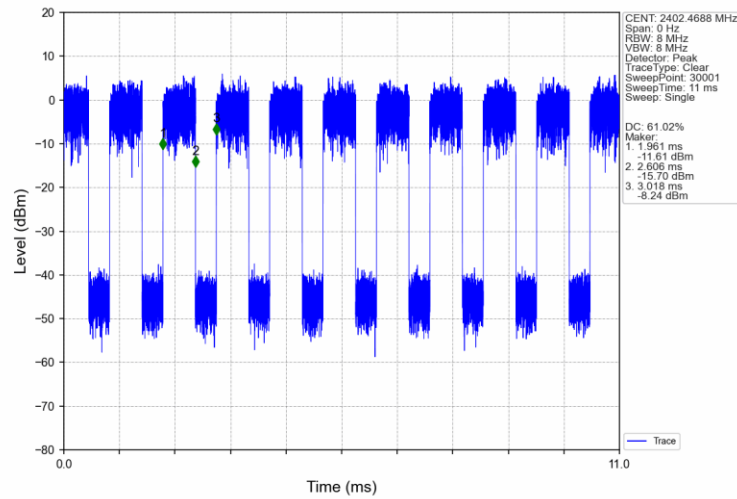
802.11n(HT40) MCH 2437MHz Ant1 (MIMO) NTNV



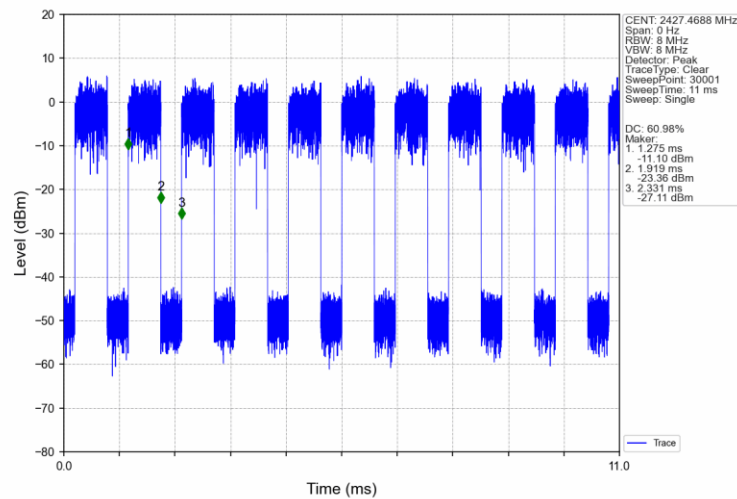
802.11n(HT40) HCH 2452MHz Ant1 (MIMO) NTNV



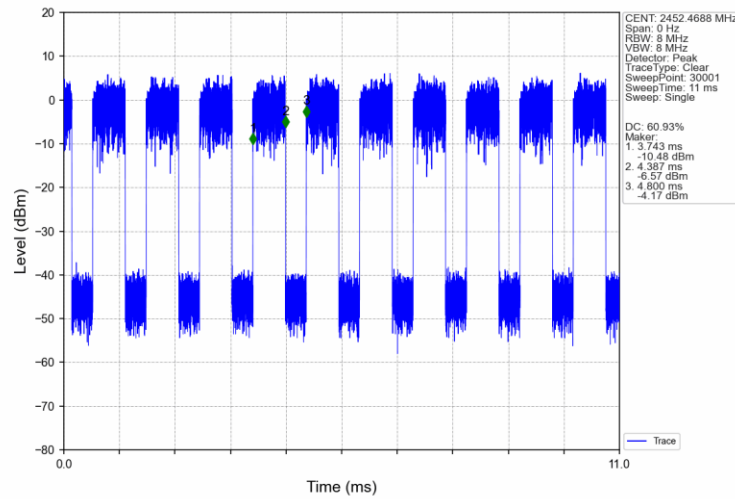
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (MIMO) NTN



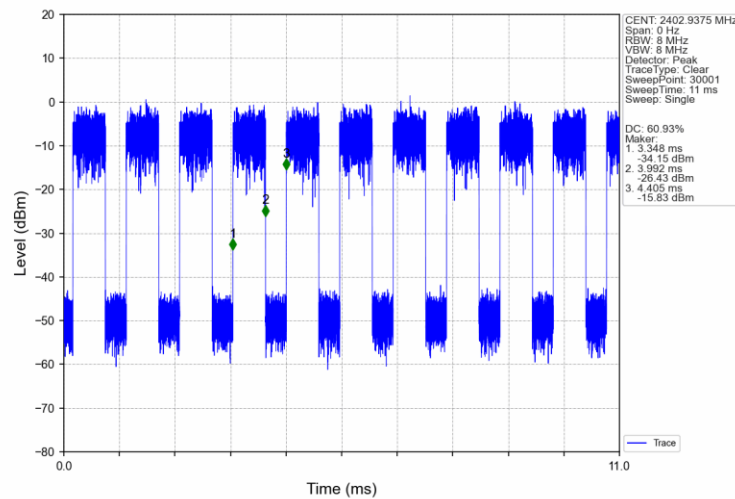
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (MIMO) NTN



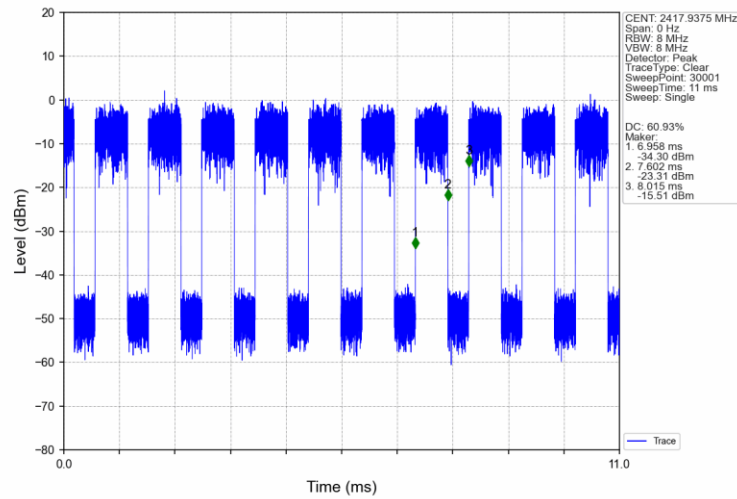
802.11ax(HEW20) HCH 2462MHz SU / Ant1 (MIMO) NTNV



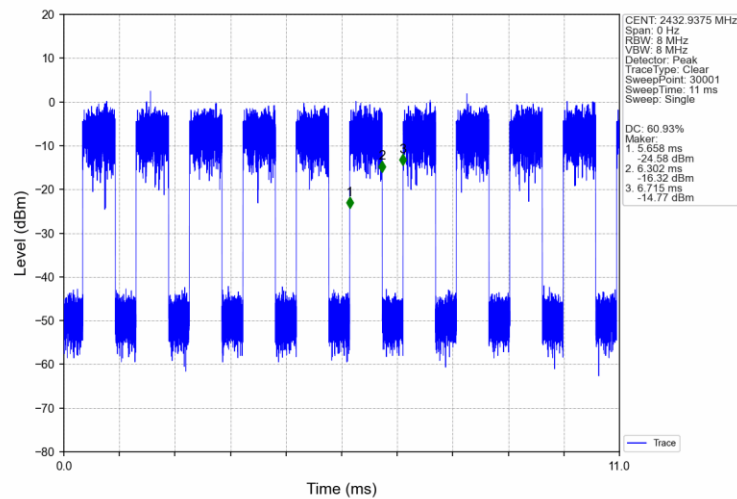
802.11ax(HEW40) LCH 2422MHz SU / Ant1 (MIMO) NTNV



802.11ax(HEW40) MCH 2437MHz SU / Ant1 (MIMO) NTVN



802.11ax(HEW40) HCH 2452MHz SU / Ant1 (MIMO) NTVN



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	11.464	/	Pass
		2437	/	/	1	10.347	/	Pass
		2462	/	/	1	10.365	/	Pass
802.11g	SISO	2412	/	/	1	17.481	/	Pass
		2437	/	/	1	17.572	/	Pass
		2462	/	/	1	17.481	/	Pass
802.11n (HT20)	MIMO	2412	/	/	1	18.239	/	Pass
		2437	/	/	1	18.290	/	Pass
		2462	/	/	1	18.269	/	Pass
802.11n (HT40)	MIMO	2422	/	/	1	36.840	/	Pass
		2437	/	/	1	36.777	/	Pass
		2452	/	/	1	36.806	/	Pass
802.11ax (HEW20)	MIMO	2412	SU	/	1	19.120	/	Pass
		2437	SU	/	1	19.219	/	Pass
		2462	SU	/	1	19.058	/	Pass
802.11ax (HEW40)	MIMO	2422	SU	/	1	38.179	/	Pass
		2437	SU	/	1	38.135	/	Pass
		2452	SU	/	1	38.125	/	Pass

Note: This project only tests the worst mode

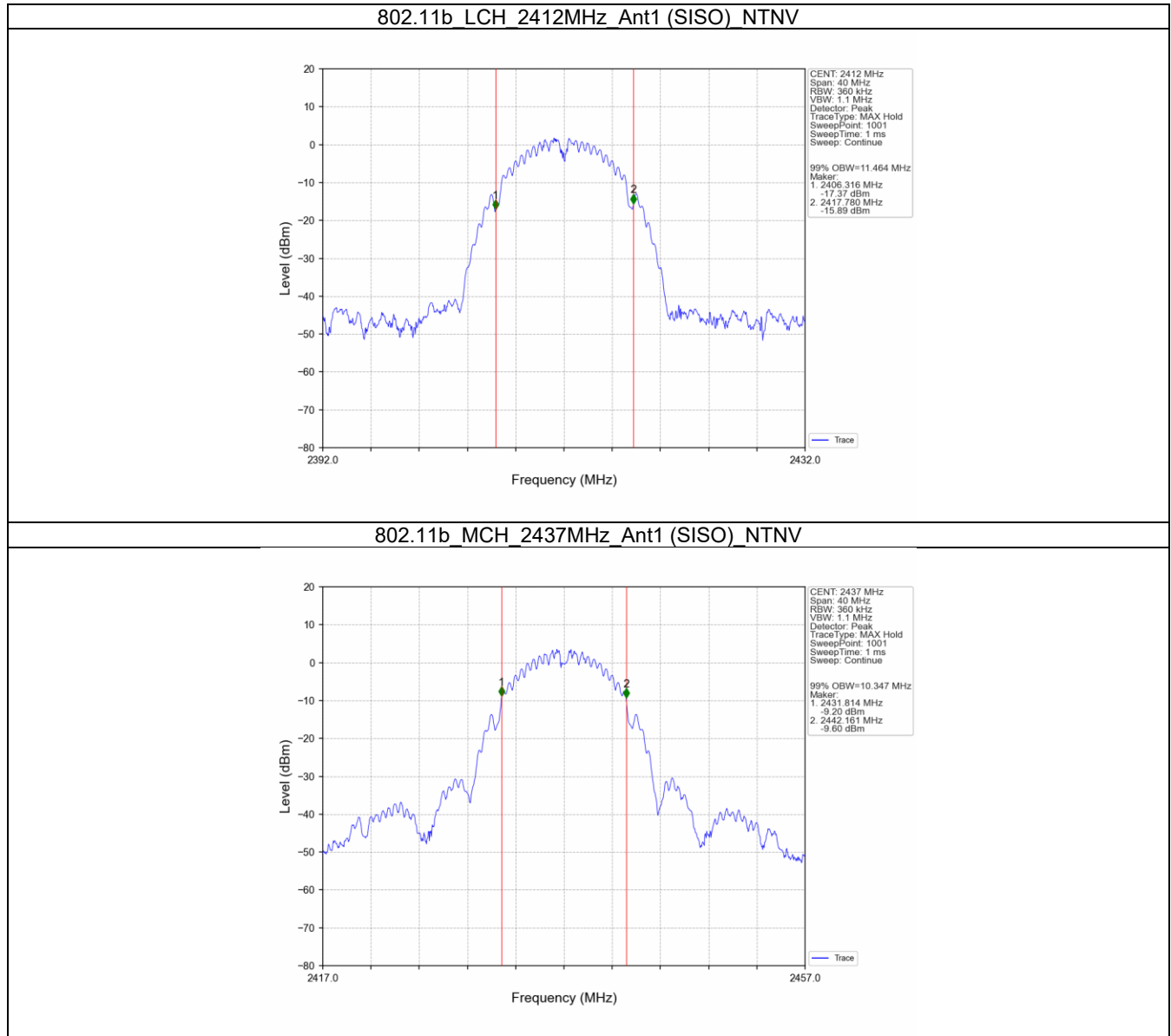
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	7.245	>=0.5	Pass
		2437	/	/	1	7.199	>=0.5	Pass
		2462	/	/	1	7.222	>=0.5	Pass
802.11g	SISO	2412	/	/	1	16.253	>=0.5	Pass
		2437	/	/	1	16.331	>=0.5	Pass
		2462	/	/	1	16.075	>=0.5	Pass
802.11n (HT20)	MIMO	2412	/	/	1	17.106	>=0.5	Pass
		2437	/	/	1	16.979	>=0.5	Pass
		2462	/	/	1	16.722	>=0.5	Pass
802.11n (HT40)	MIMO	2422	/	/	1	34.851	>=0.5	Pass
		2437	/	/	1	35.154	>=0.5	Pass
		2452	/	/	1	35.279	>=0.5	Pass
802.11ax (HEW20)	MIMO	2412	SU	/	1	18.548	>=0.5	Pass
		2437	SU	/	1	18.065	>=0.5	Pass
		2462	SU	/	1	18.588	>=0.5	Pass
802.11ax (HEW40)	MIMO	2422	SU	/	1	35.600	>=0.5	Pass
		2437	SU	/	1	37.097	>=0.5	Pass
		2452	SU	/	1	34.579	>=0.5	Pass

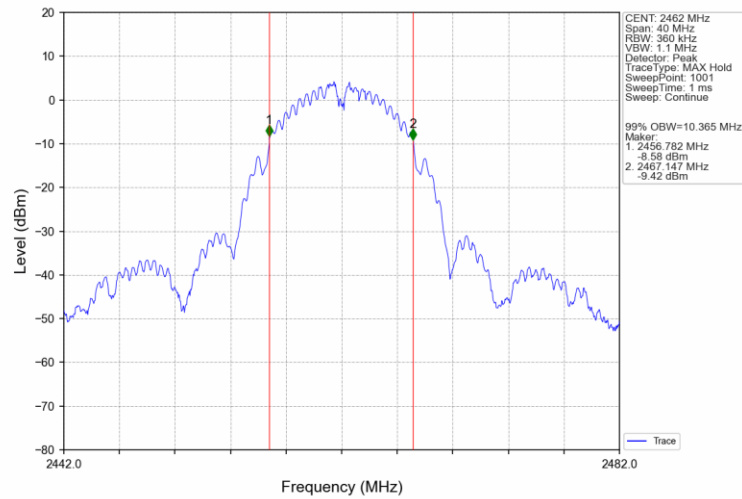
Note: This project only tests the worst mode

2.2 Test Graph

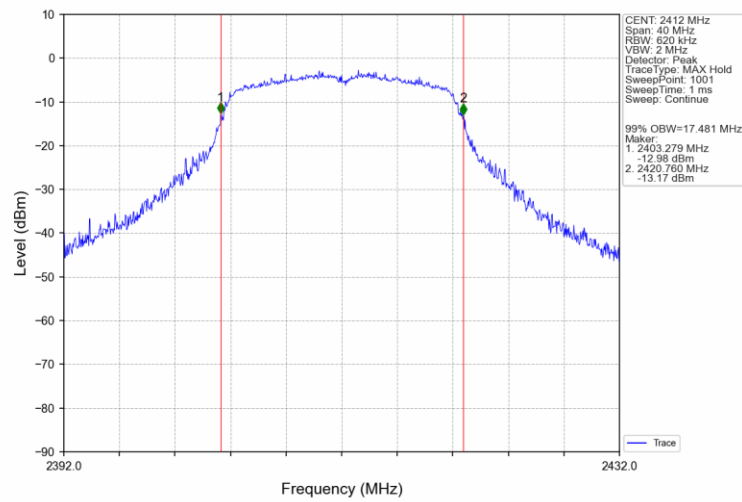
2.2.1 OBW



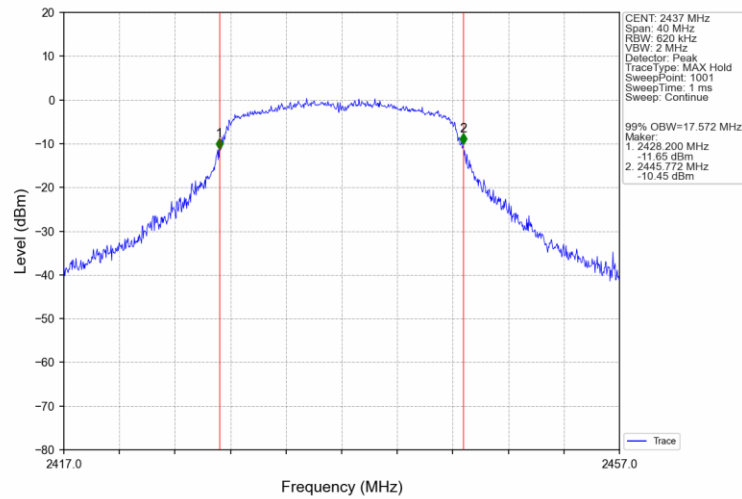
802.11b HCH 2462MHz_Ant1 (SISO) NTNv



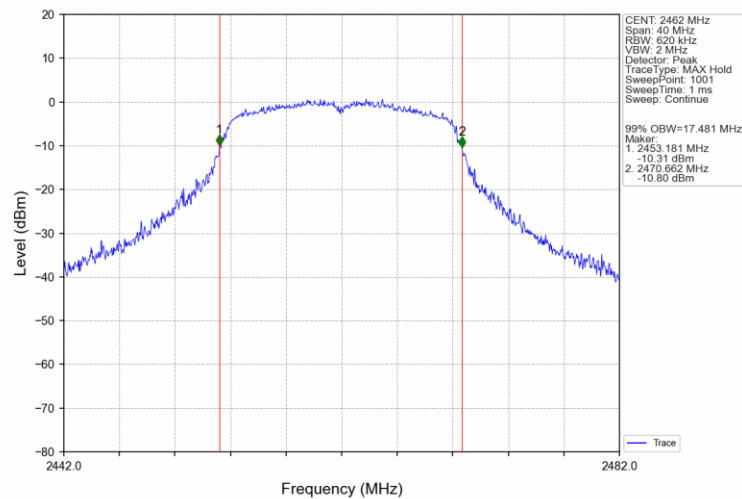
802.11g LCH 2412MHz_Ant1 (SISO) NTNv



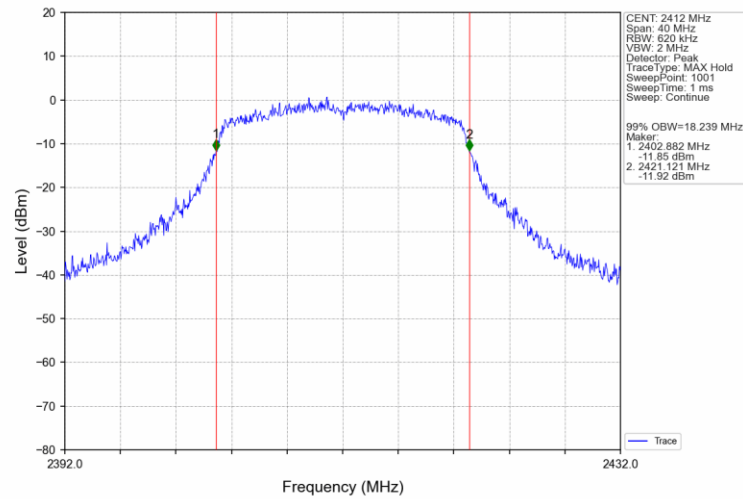
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



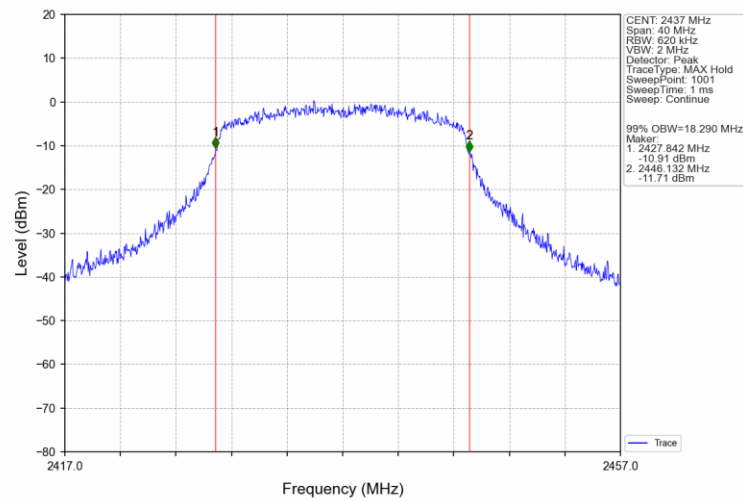
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



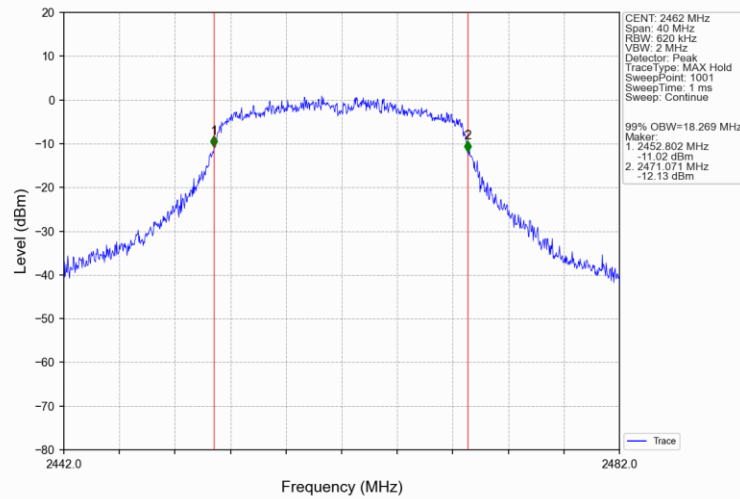
802.11n(HT20) LCH 2412MHz Ant1 (MIMO) NTNV



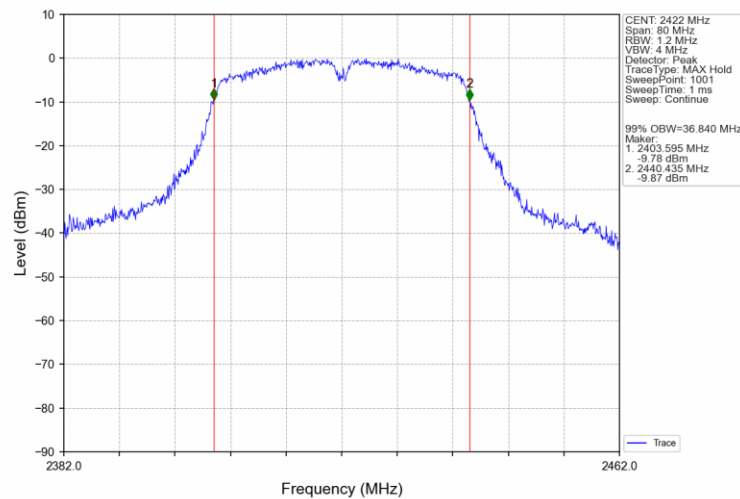
802.11n(HT20) MCH 2437MHz Ant1 (MIMO) NTNV



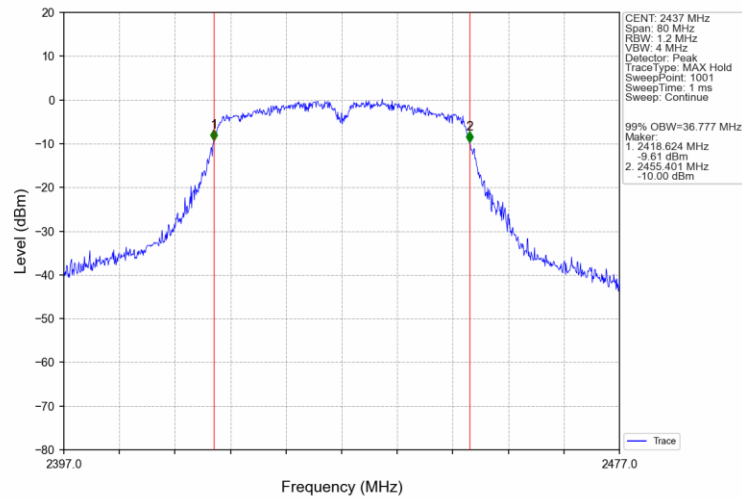
802.11n(HT20) HCH 2462MHz_Ant1 (MIMO) NTNv



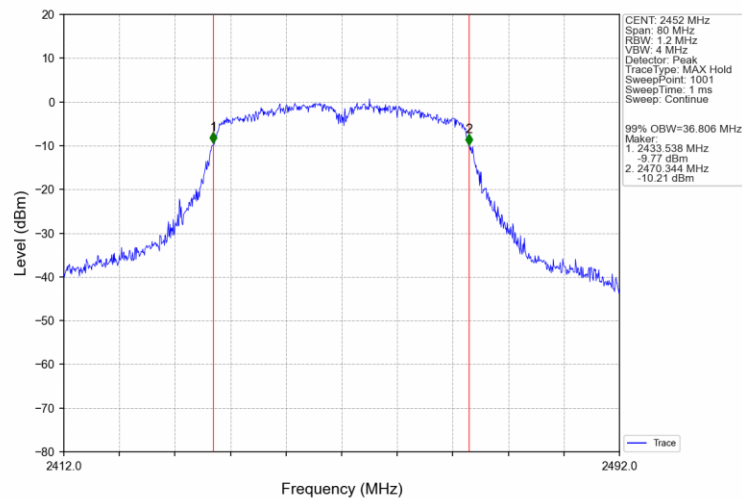
802.11n(HT40) LCH 2422MHz_Ant1 (MIMO) NTNv



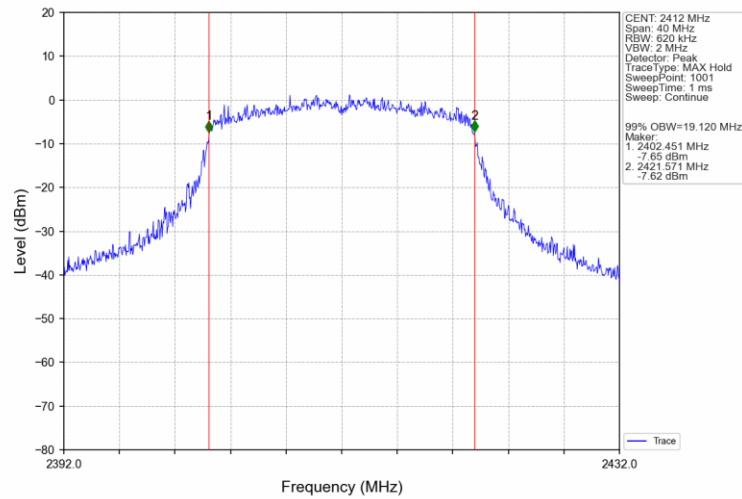
802.11n(HT40) MCH 2437MHz Ant1 (MIMO) NTNV



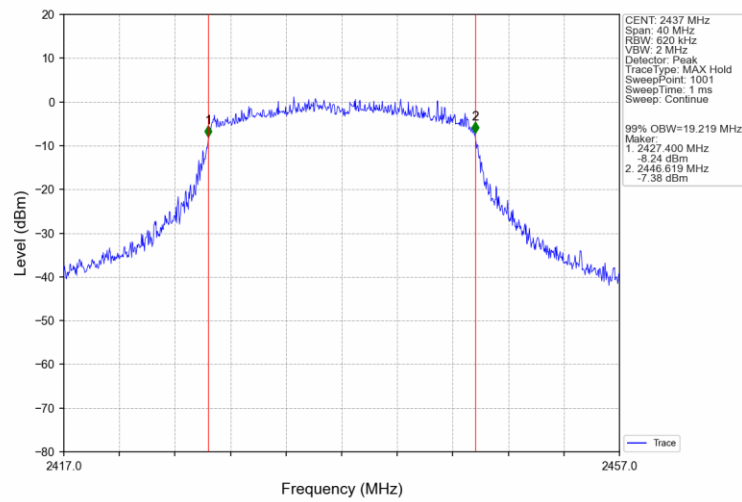
802.11n(HT40) HCH 2452MHz Ant1 (MIMO) NTNV



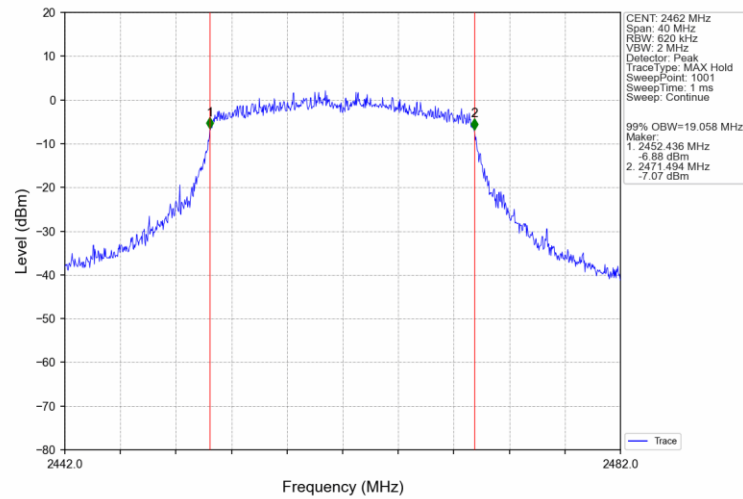
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (MIMO) NTN



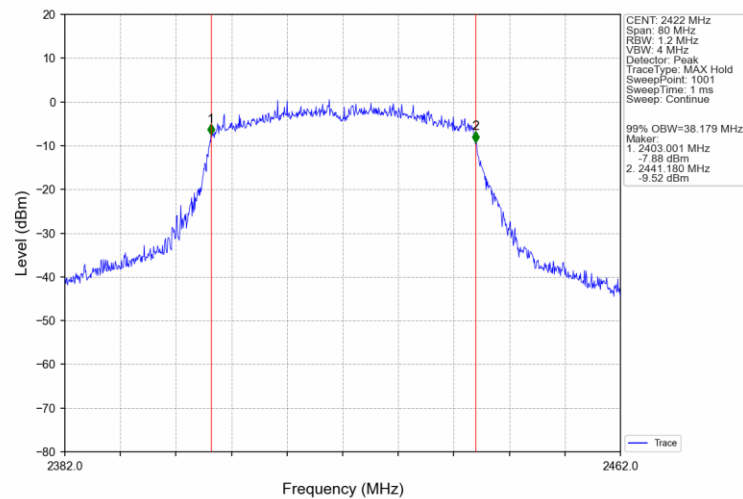
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (MIMO) NTN



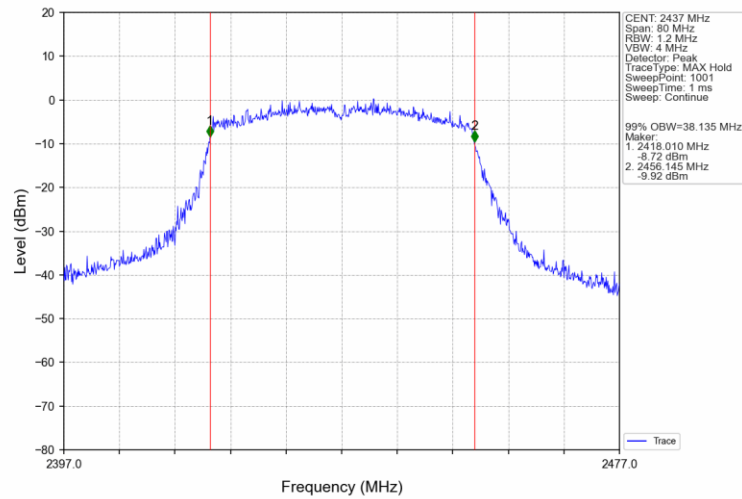
802.11ax(HEW20) HCH 2462MHz SU / Ant1 (MIMO) NTN



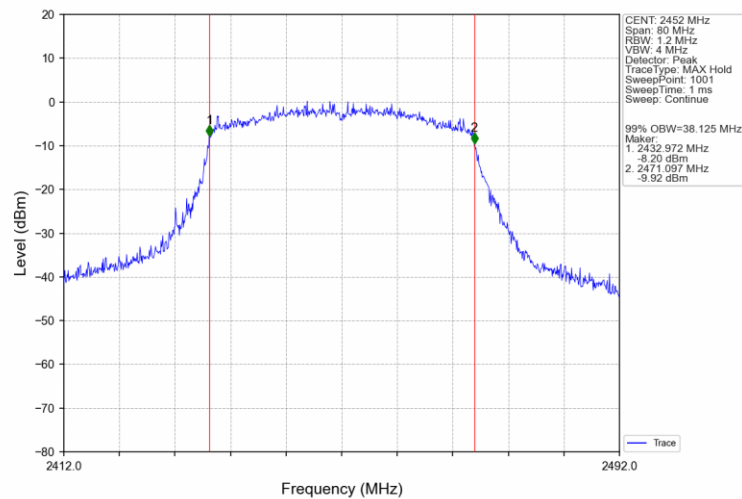
802.11ax(HEW40) LCH 2422MHz SU / Ant1 (MIMO) NTN



802.11ax(HEW40) MCH 2437MHz SU / Ant1 (MIMO) NTNv

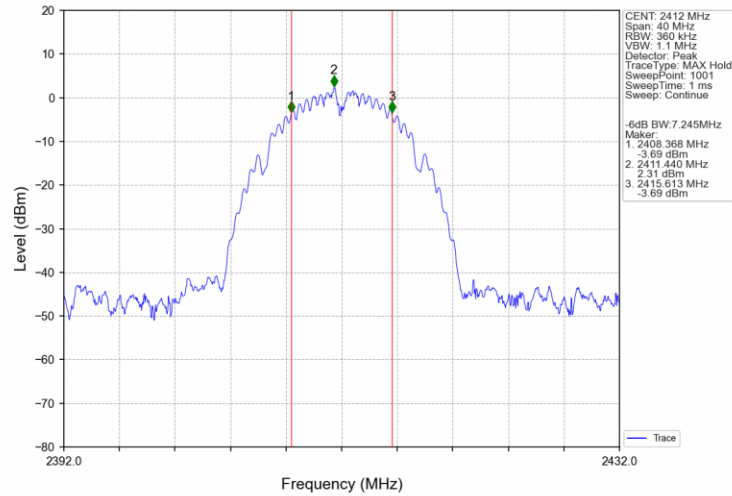


802.11ax(HEW40) HCH 2452MHz SU / Ant1 (MIMO) NTNv

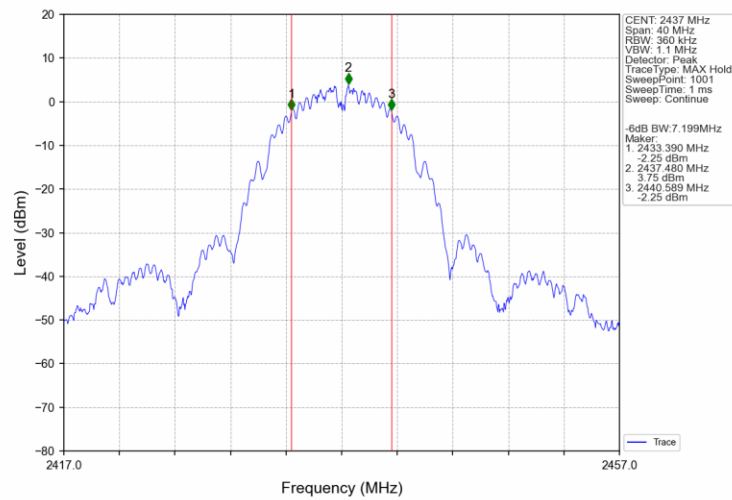


2.2.2 6dB BW

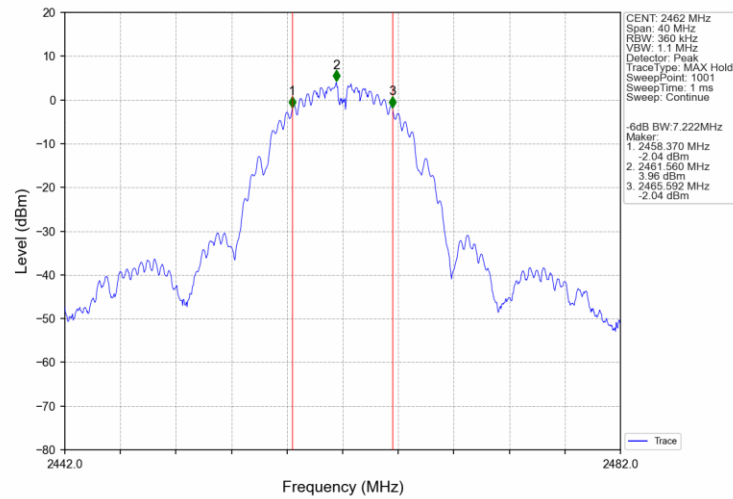
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



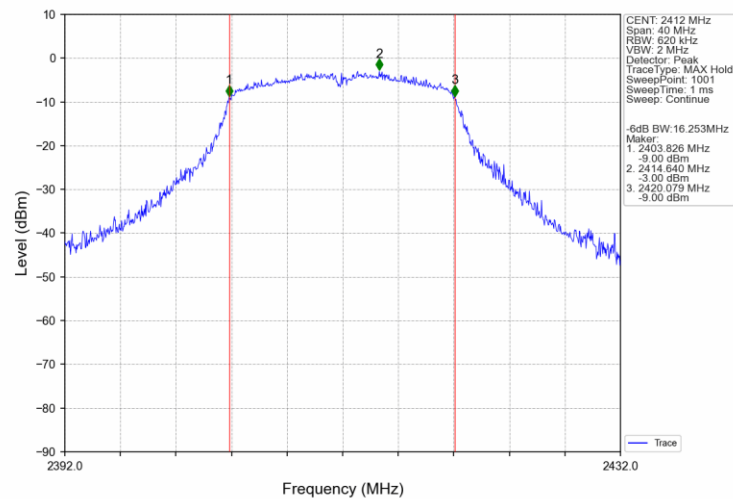
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



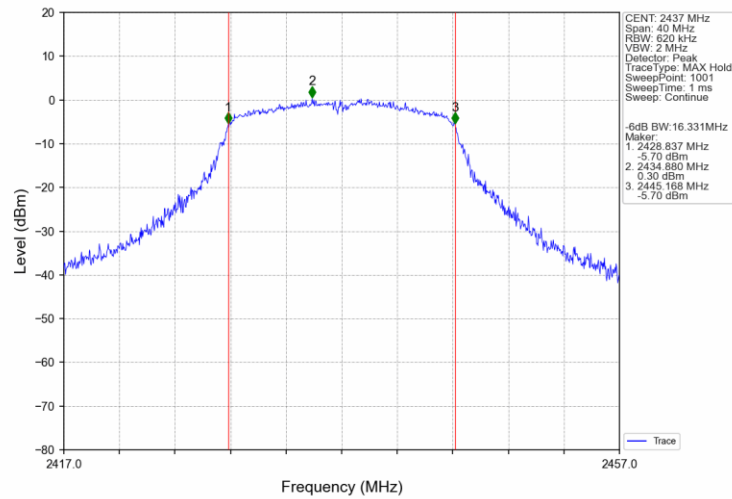
802.11b HCH 2462MHz_Ant1 (SISO) NTNv



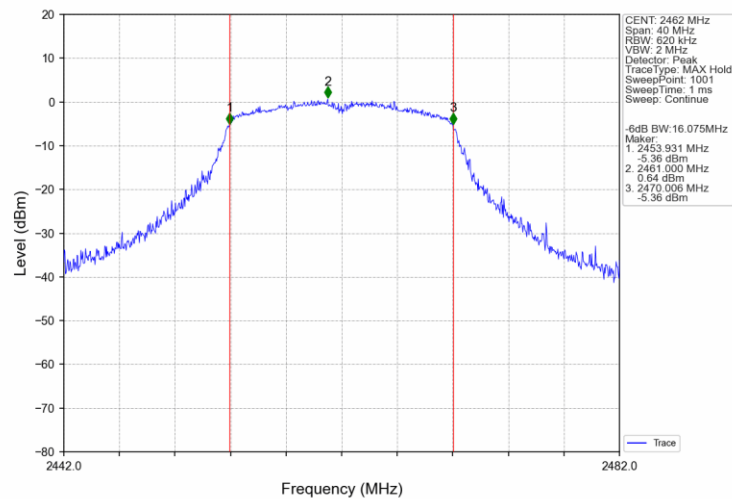
802.11g LCH 2412MHz_Ant1 (SISO) NTNv



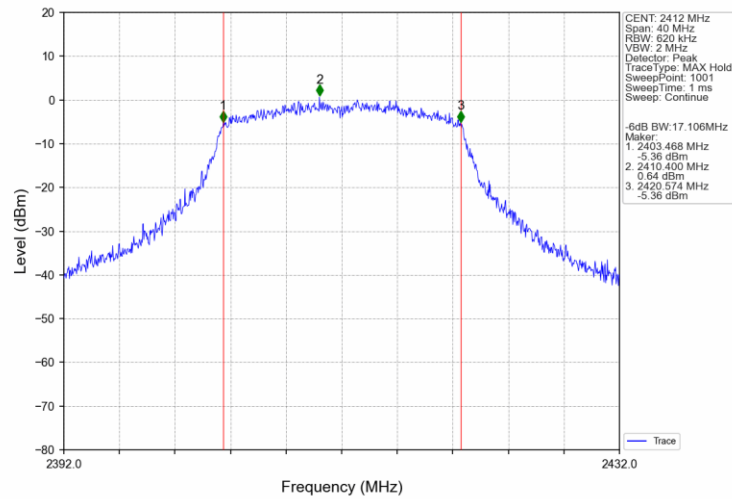
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



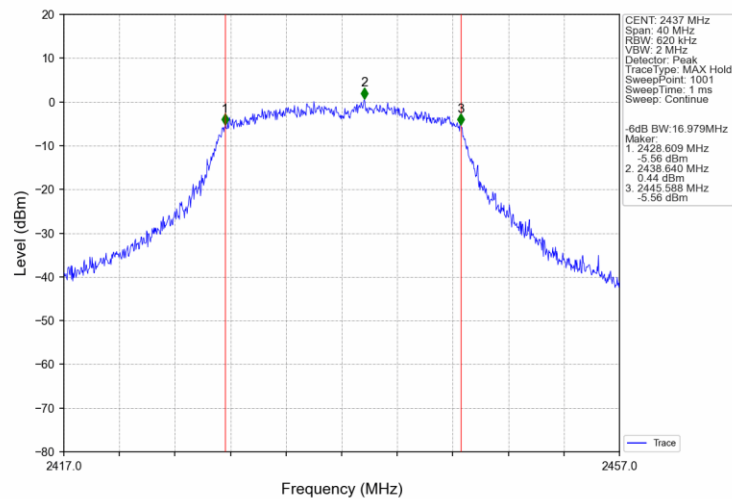
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



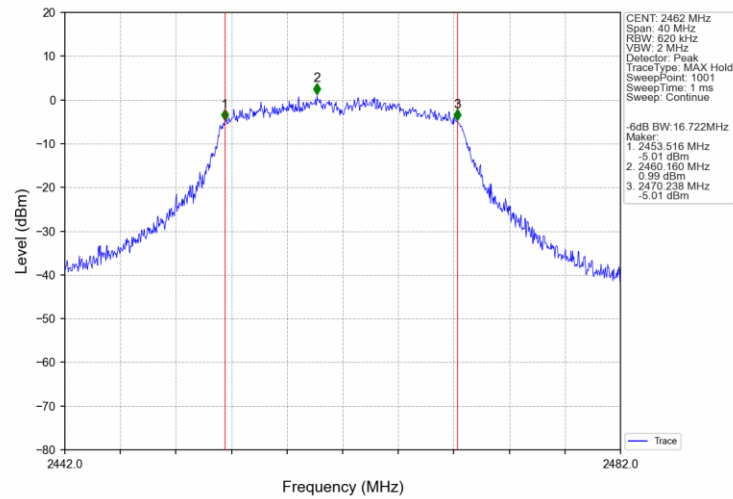
802.11n(HT20) LCH 2412MHz Ant1 (MIMO) NTNV



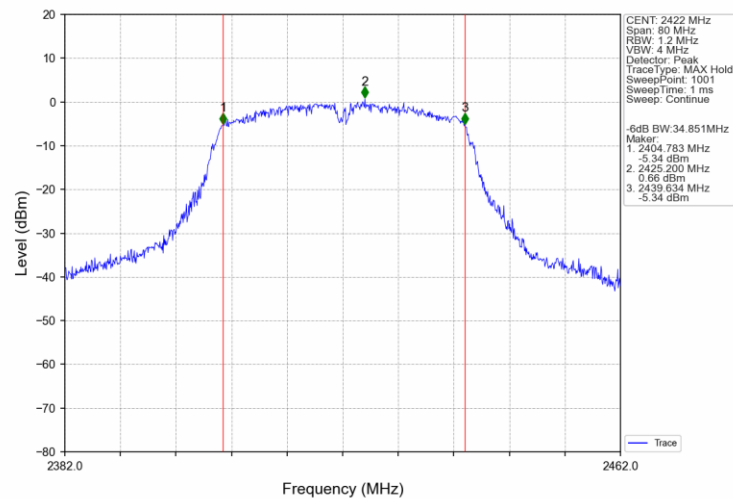
802.11n(HT20) MCH 2437MHz Ant1 (MIMO) NTNV



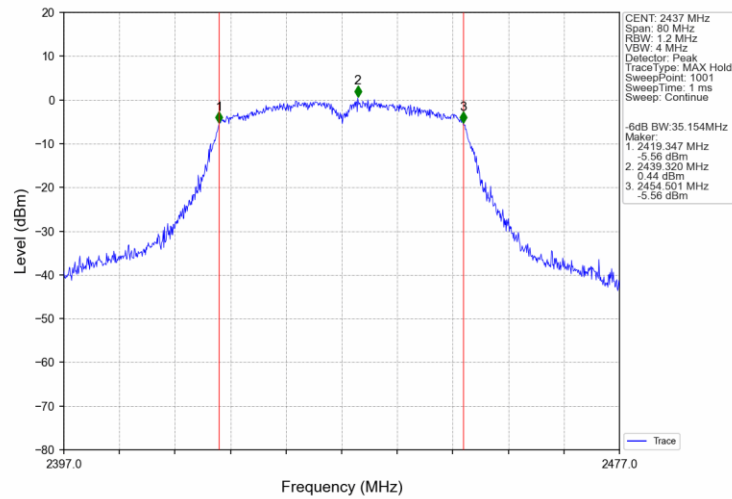
802.11n(HT20) HCH 2462MHz_Ant1 (MIMO) NTNV



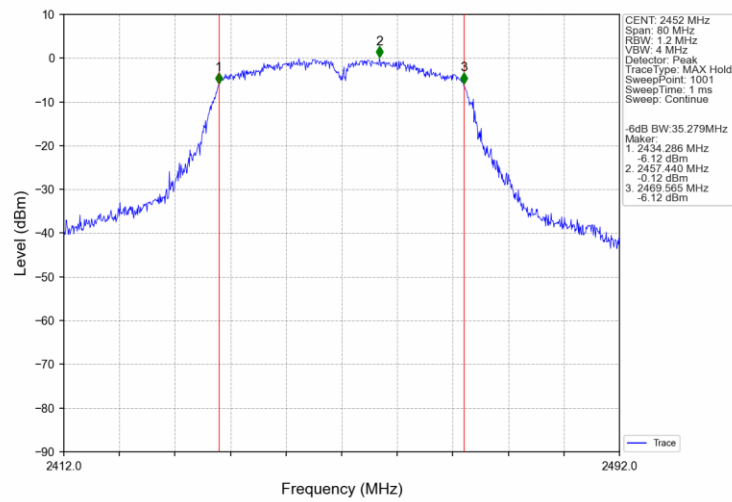
802.11n(HT40) LCH 2422MHz_Ant1 (MIMO) NTNV



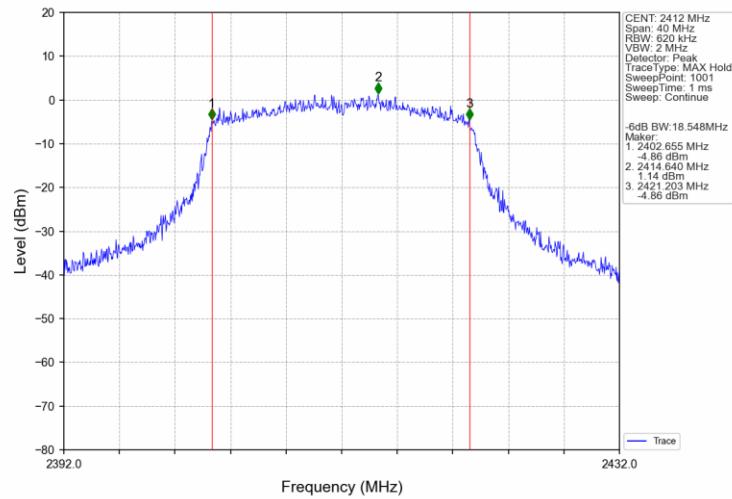
802.11n(HT40) MCH 2437MHz Ant1 (MIMO) NTNV



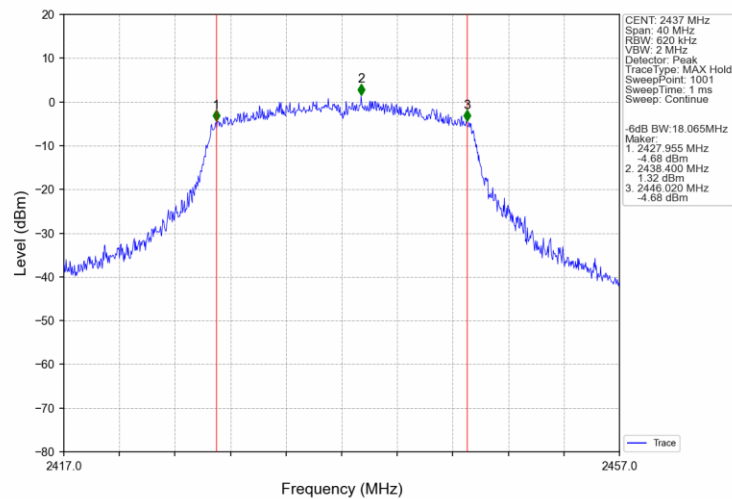
802.11n(HT40) HCH 2452MHz Ant1 (MIMO) NTNV



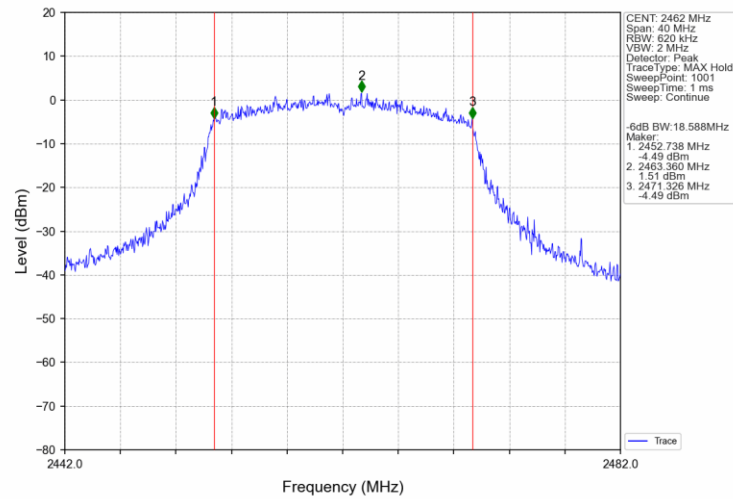
802.11ax(HEW20) LCH 2412MHz SU / Ant1 (MIMO) NTN



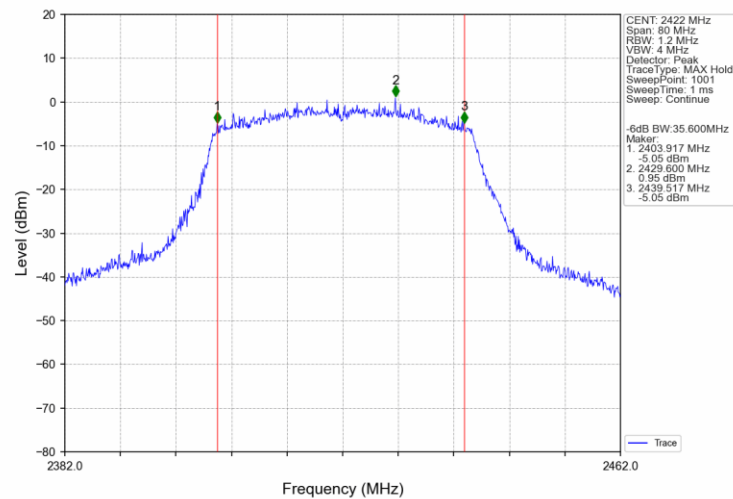
802.11ax(HEW20) MCH 2437MHz SU / Ant1 (MIMO) NTN



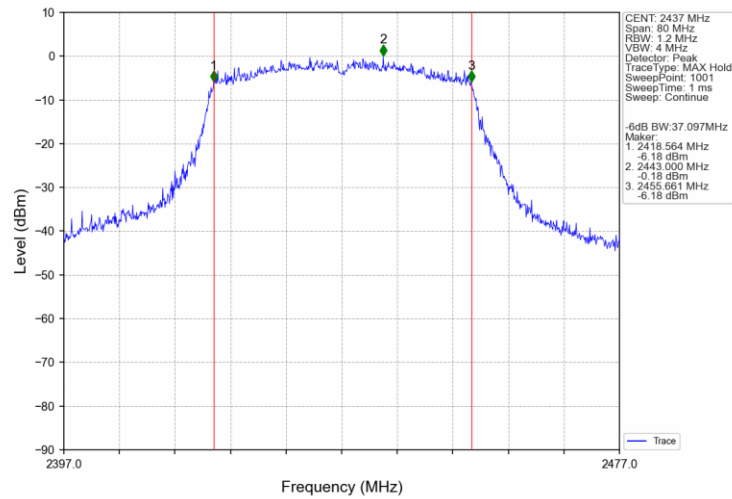
802.11ax(HEW20) HCH 2462MHz SU / Ant1 (MIMO) NTN



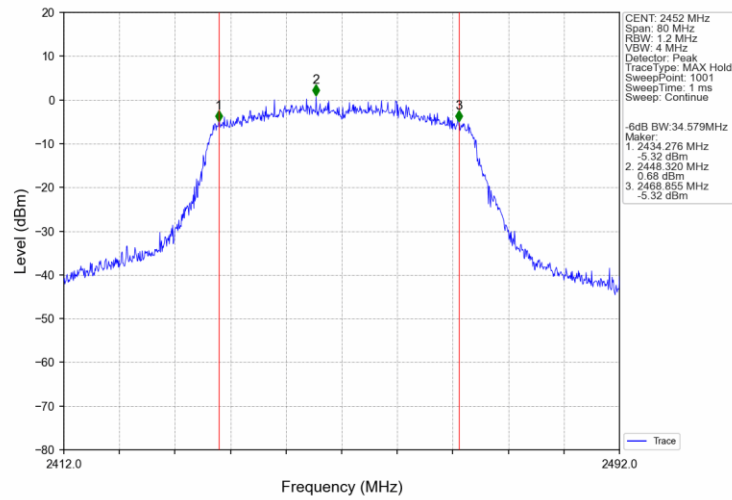
802.11ax(HEW40) LCH 2422MHz SU / Ant1 (MIMO) NTN



802.11ax(HEW40) MCH 2437MHz SU / Ant1 (MIMO) NTNv



802.11ax(HEW40) HCH 2452MHz SU / Ant1 (MIMO) NTNv



Note2: Directional Gain: 4.83dBi

4. Maximum Power Spectral Density

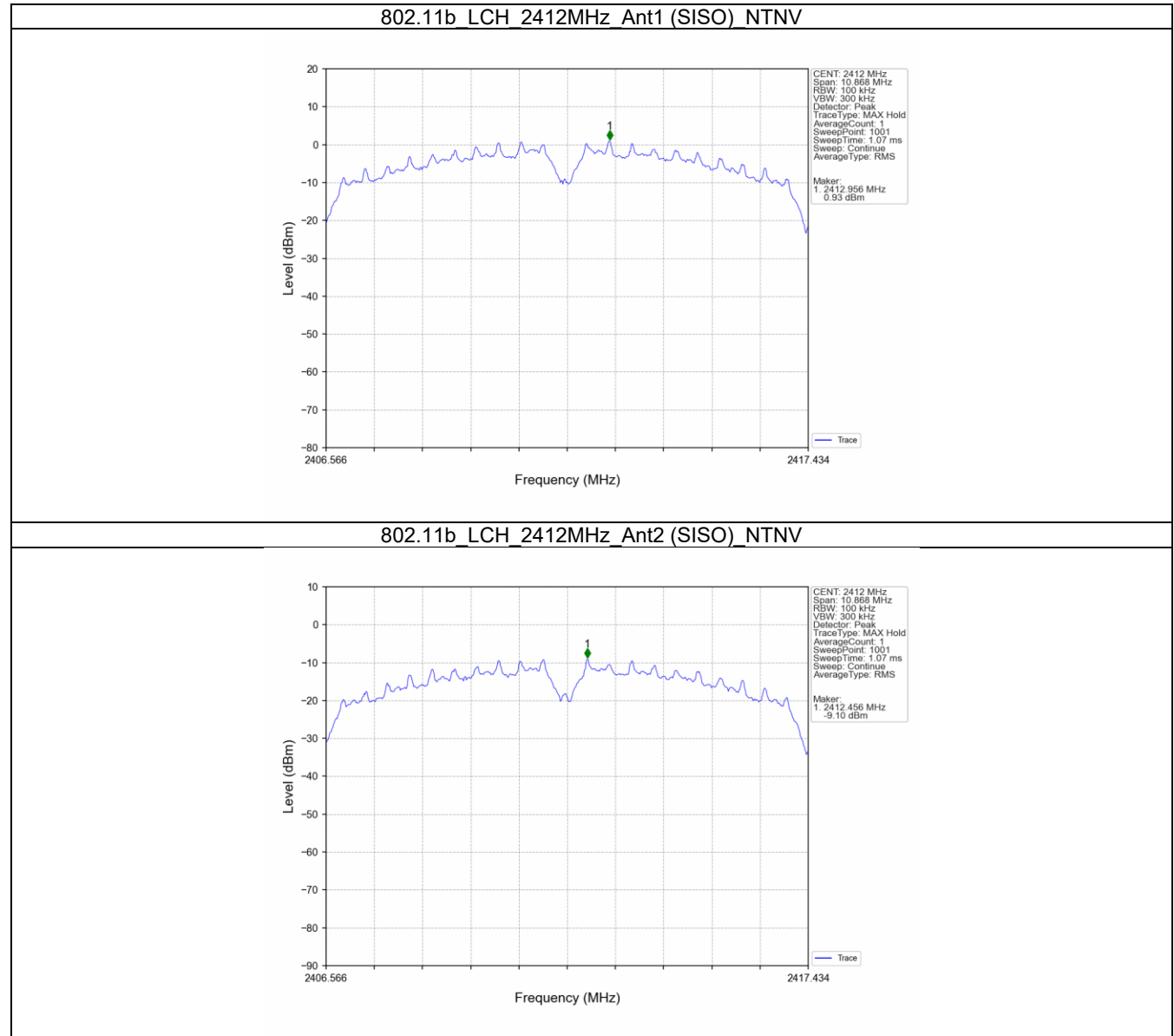
4.1 Test Result

4.1.1 PSD

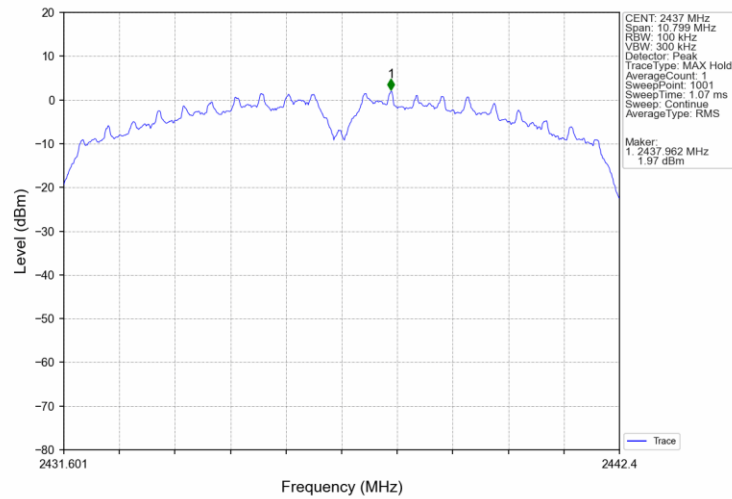
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm)				Verdict
					ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	/	/	0.93	-9.10	/	<=8	Pass
		2437	/	/	1.97	-0.74	/	<=8	Pass
		2462	/	/	2.59	4.57	/	<=8	Pass
802.11g	SISO	2412	/	/	-7.78	-7.68	/	<=8	Pass
		2437	/	/	-5.40	-5.54	/	<=8	Pass
		2462	/	/	-5.32	-5.18	/	<=8	Pass
802.11n (HT20)	MIMO	2412	/	/	-6.30	-7.23	-3.73	<=8	Pass
		2437	/	/	-7.00	-6.26	-3.73	<=8	Pass
		2462	/	/	-6.26	-5.75	-3.04	<=8	Pass
802.11n (HT40)	MIMO	2422	/	/	-9.82	-10.62	-7.25	<=8	Pass
		2437	/	/	-9.87	-9.40	-6.65	<=8	Pass
		2452	/	/	-9.81	-9.61	-6.70	<=8	Pass
802.11ax (HEW20)	MIMO	2412	SU	/	-6.35	-7.29	-3.78	<=8	Pass
		2437	SU	/	-7.07	-6.59	-3.82	<=8	Pass
		2462	SU	/	-6.53	-5.88	-3.29	<=8	Pass
802.11ax (HEW40)	MIMO	2422	SU	/	-11.20	-11.46	-8.32	<=8	Pass
		2437	SU	/	-11.22	-10.63	-8.04	<=8	Pass
		2452	SU	/	-11.06	-10.87	-8.02	<=8	Pass
Note1: Antenna Gain: Ant1: 1.82dBi; Ant2: 1.82dBi; Note2: Directional Gain: 4.83dBi									

4.2 Test Graph

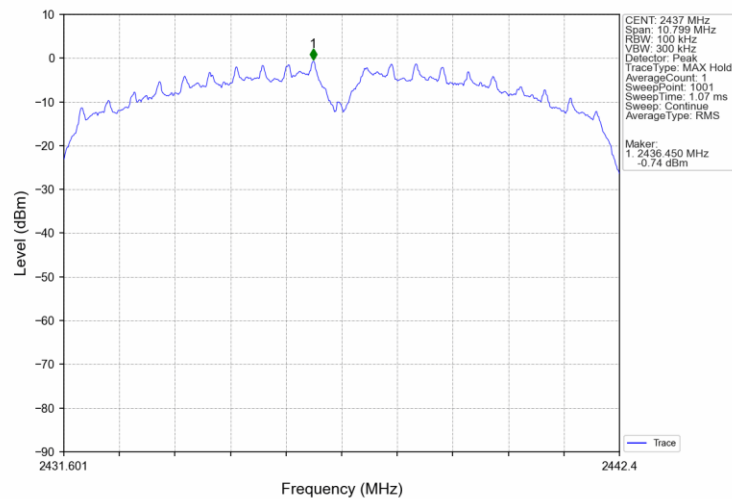
4.2.1 PSD



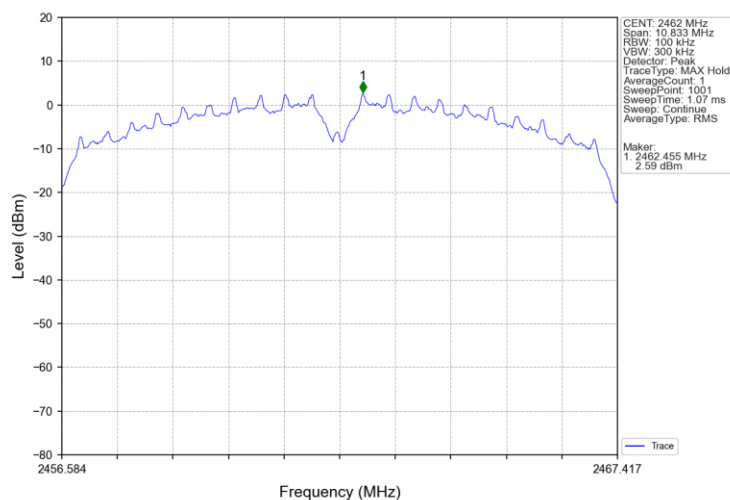
802.11b MCH 2437MHz Ant1 (SISO) NTN



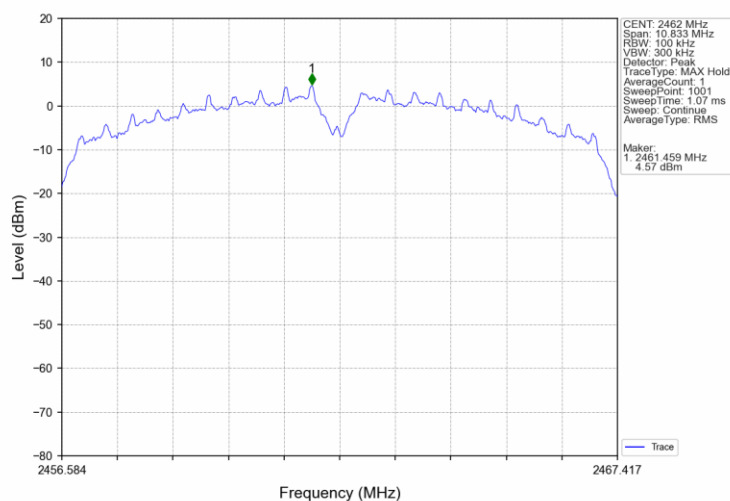
802.11b MCH 2437MHz Ant2 (SISO) NTN



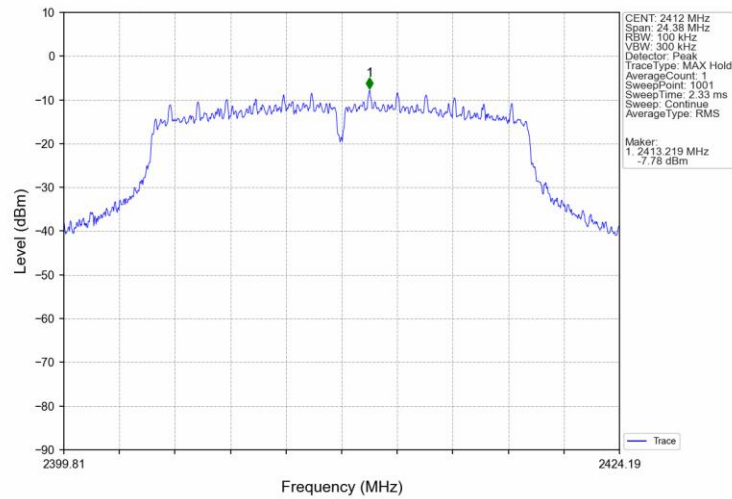
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



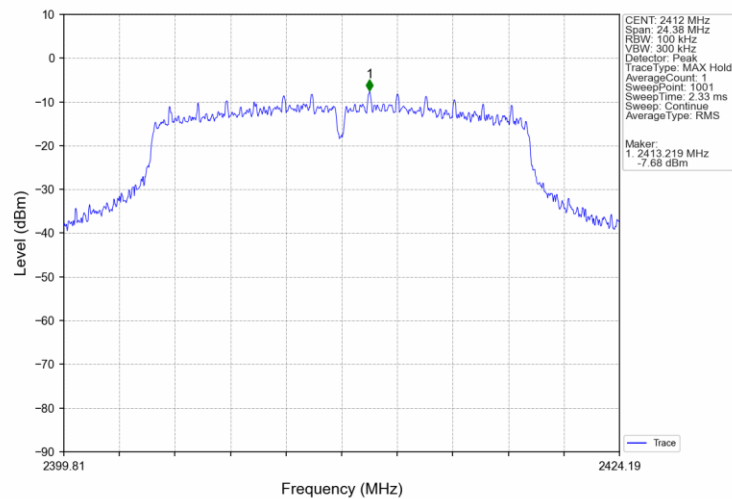
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



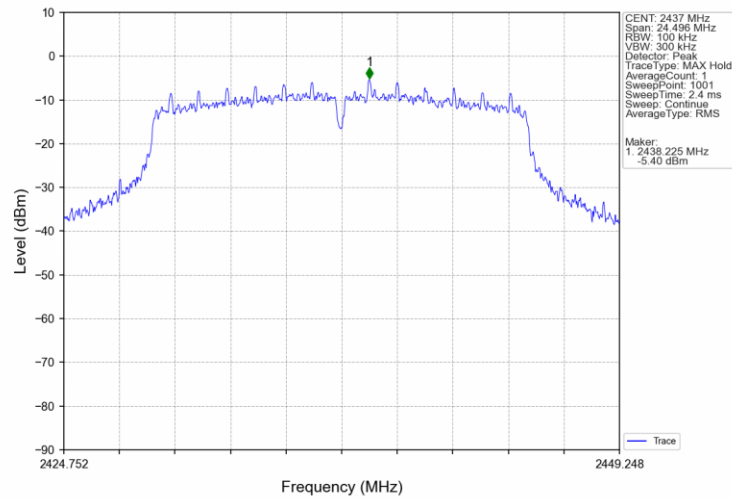
802.11g LCH 2412MHz Ant1 (SISO) NTN



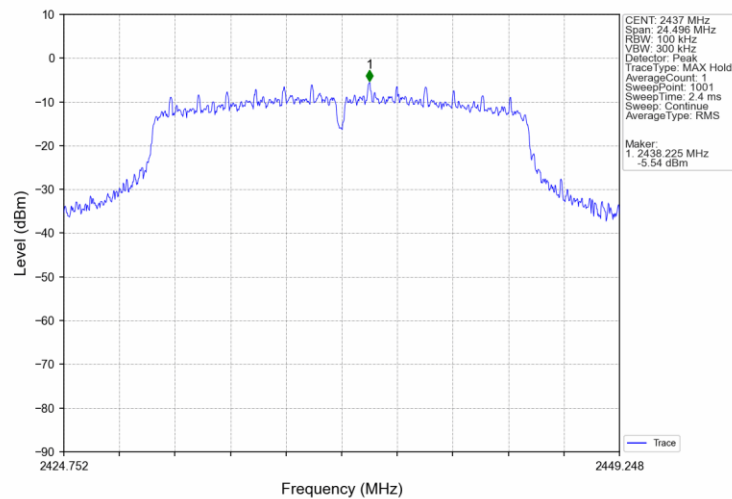
802.11g LCH 2412MHz Ant2 (SISO) NTN



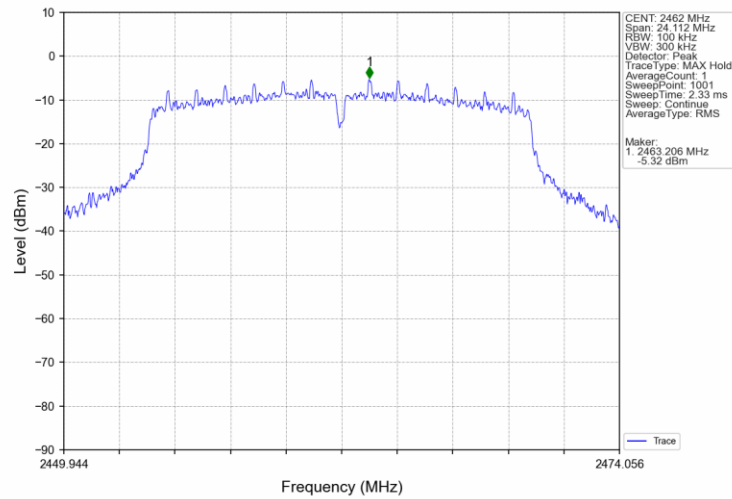
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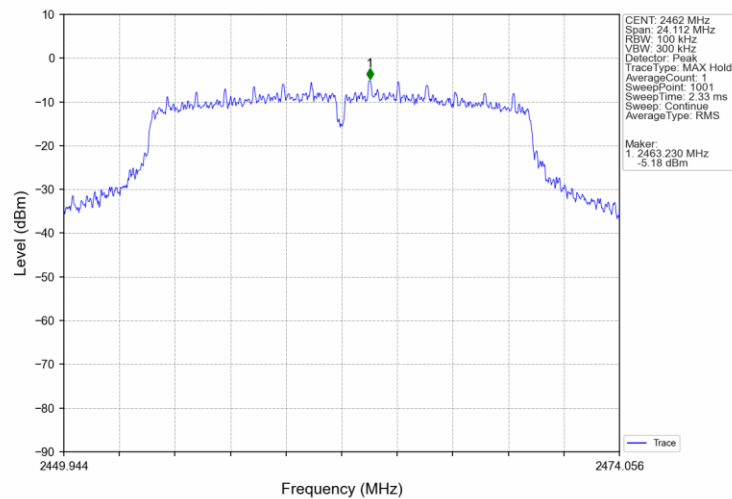
802.11g MCH 2437MHz Ant2 (SISO) NTN



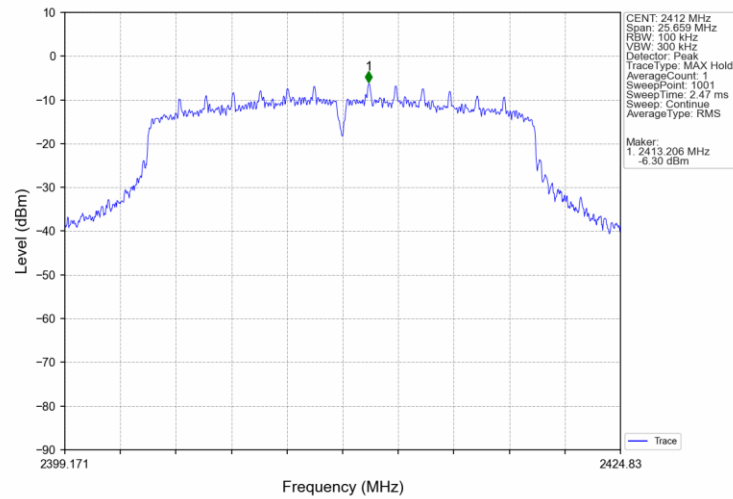
802.11g HCH 2462MHz Ant1 (SISO) NTN



802.11g HCH 2462MHz Ant2 (SISO) NTN



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



802.11n(HT20) LCH 2412MHz Ant2 (MIMO) NTNV

