

Appendix for 15.247

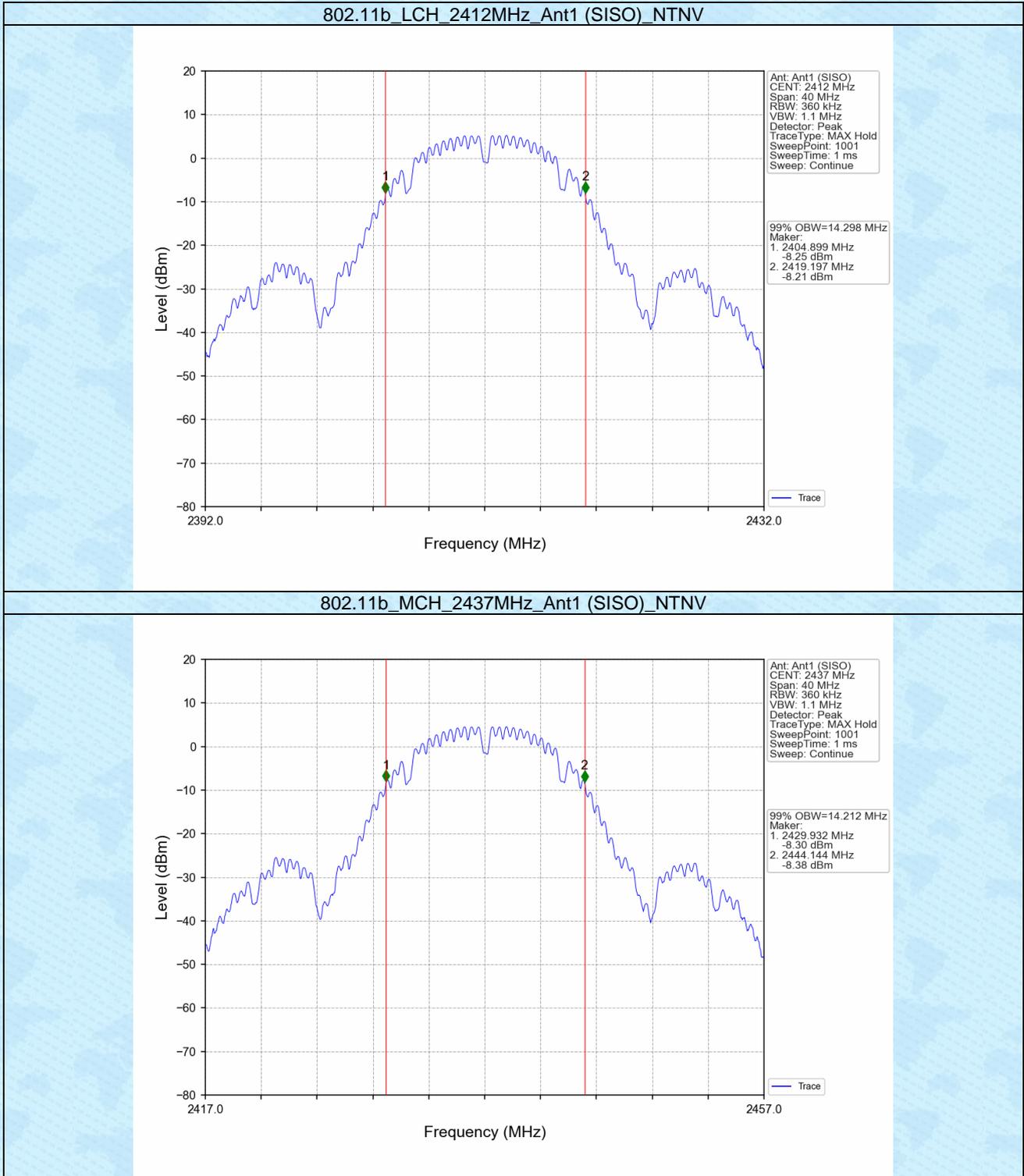
1. Bandwidth

1.1 OBW

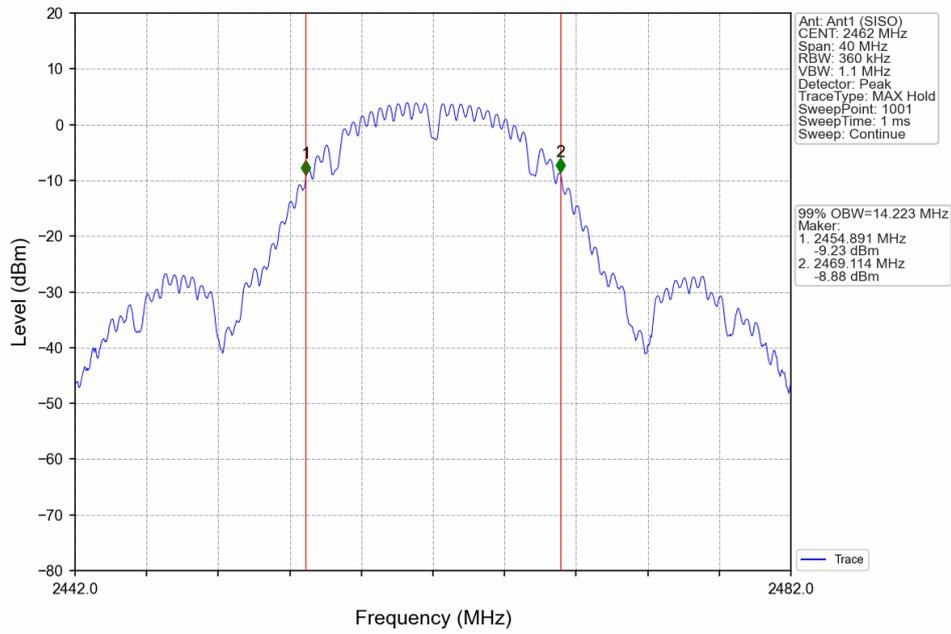
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	14.298	Pass
		2437	1	14.212	Pass
		2462	1	14.223	Pass
802.11g	SISO	2412	1	16.462	Pass
		2437	1	16.417	Pass
		2462	1	16.454	Pass
802.11n (HT20)	MIMO	2412	1	17.376	Pass
		2437	1	17.457	Pass
		2462	1	17.377	Pass
802.11n (HT40)	MIMO	2422	1	36.076	Pass
		2437	1	35.989	Pass
		2452	1	36.149	Pass

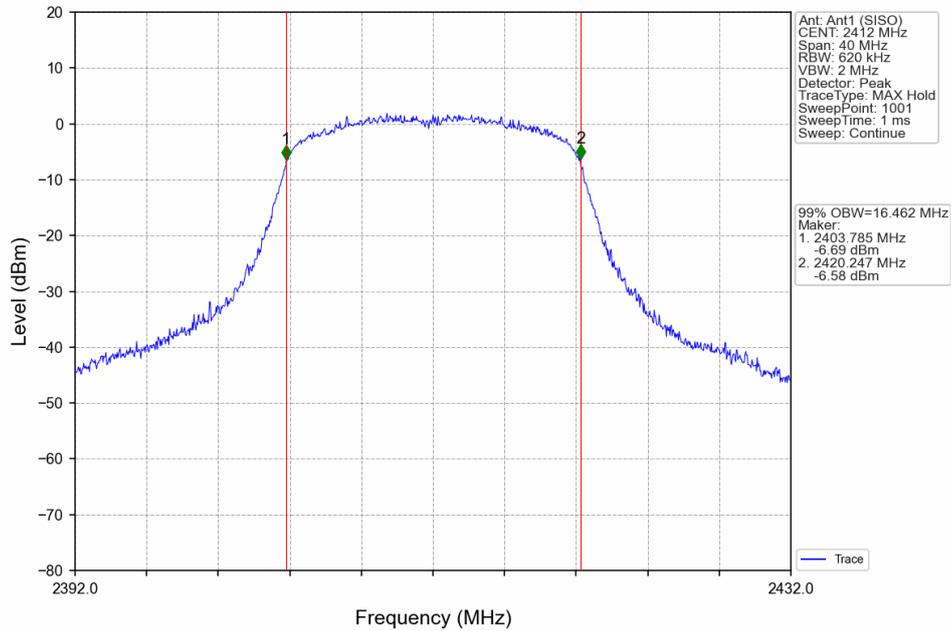
1.1.2 Test Graph



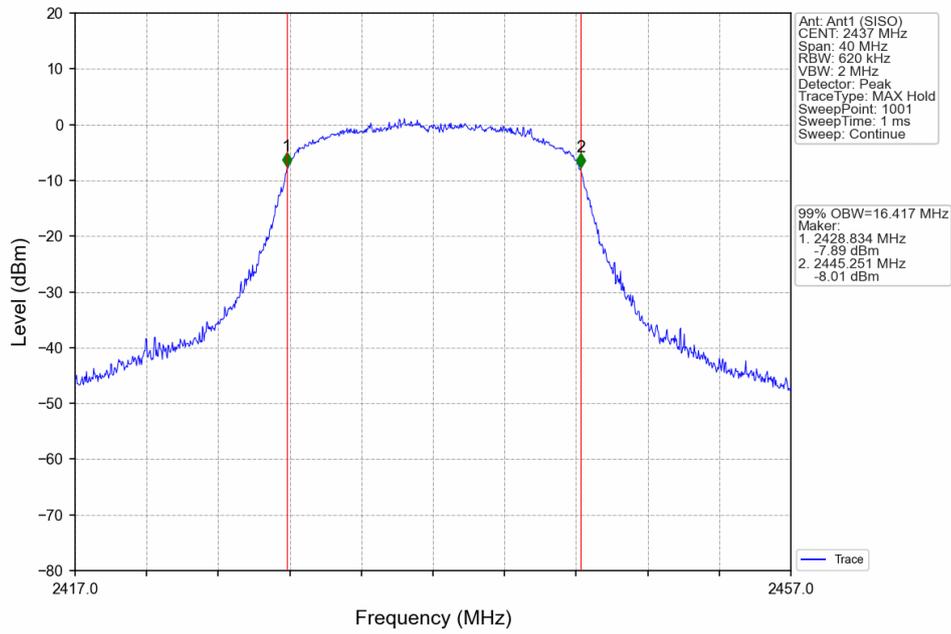
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



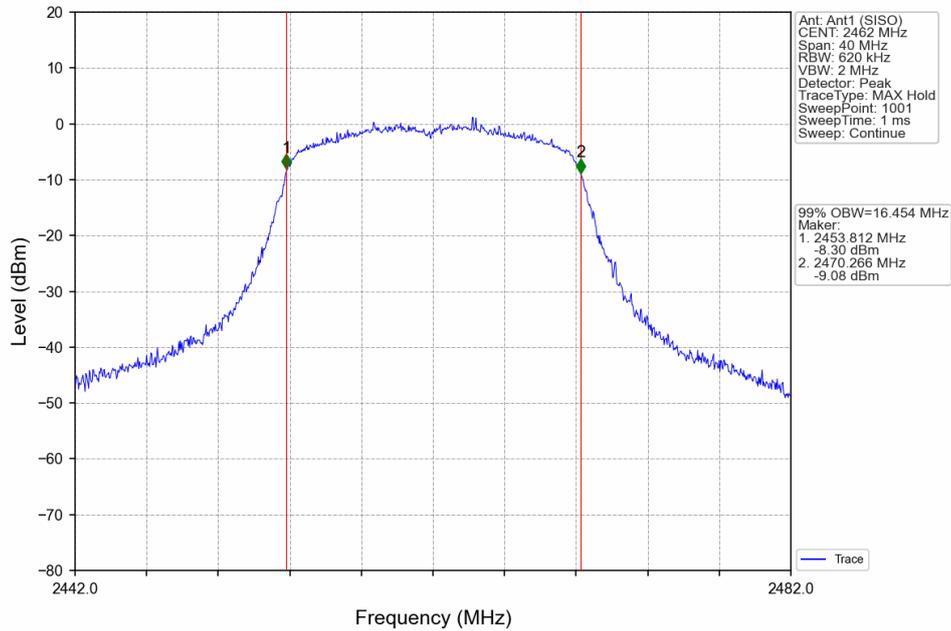
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



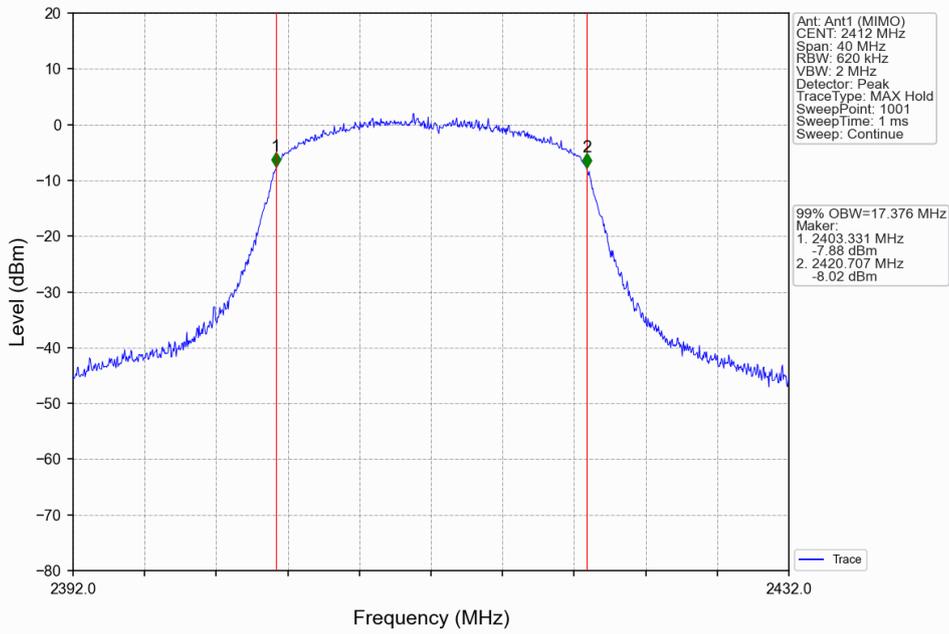
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



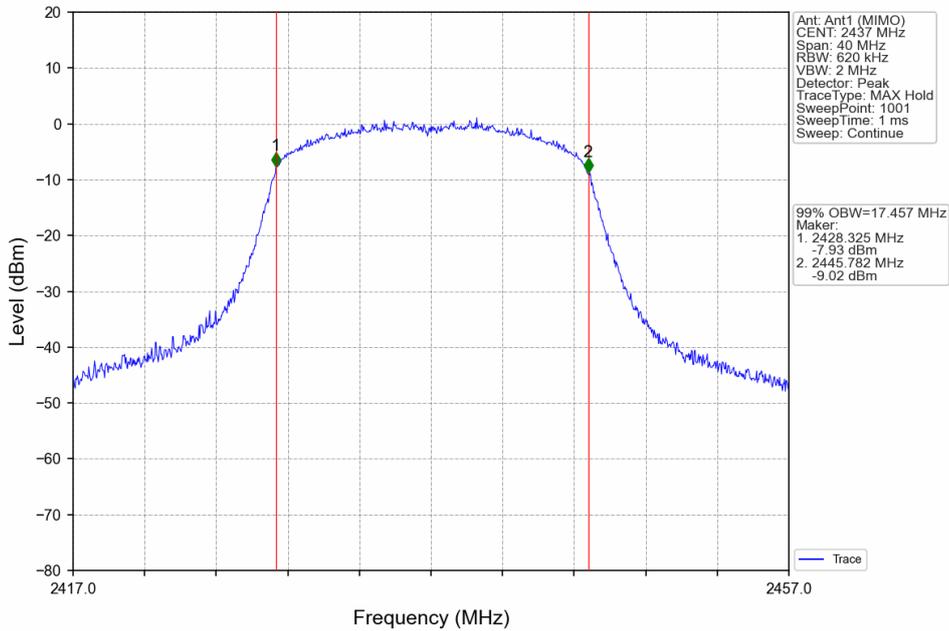
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



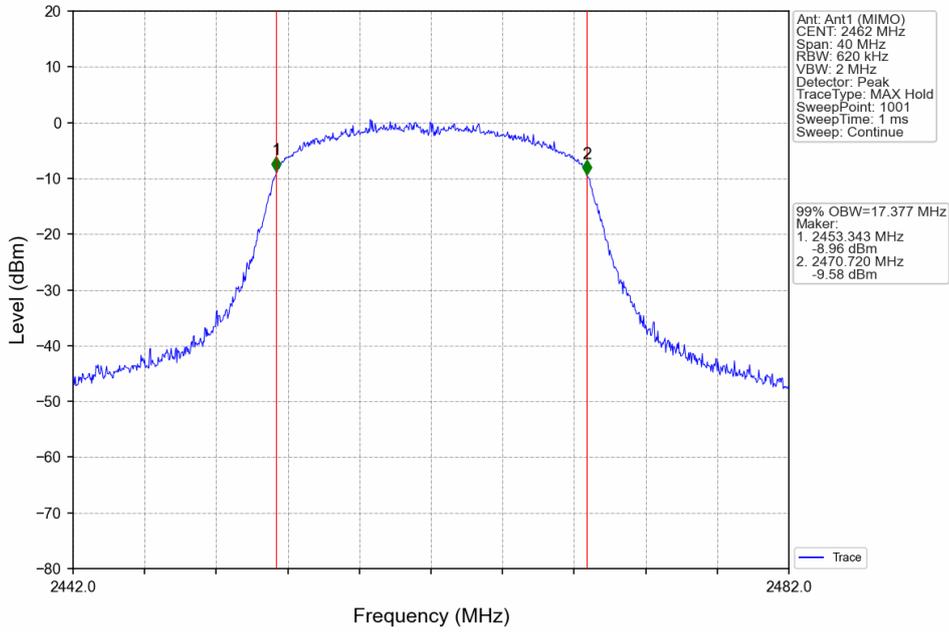
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



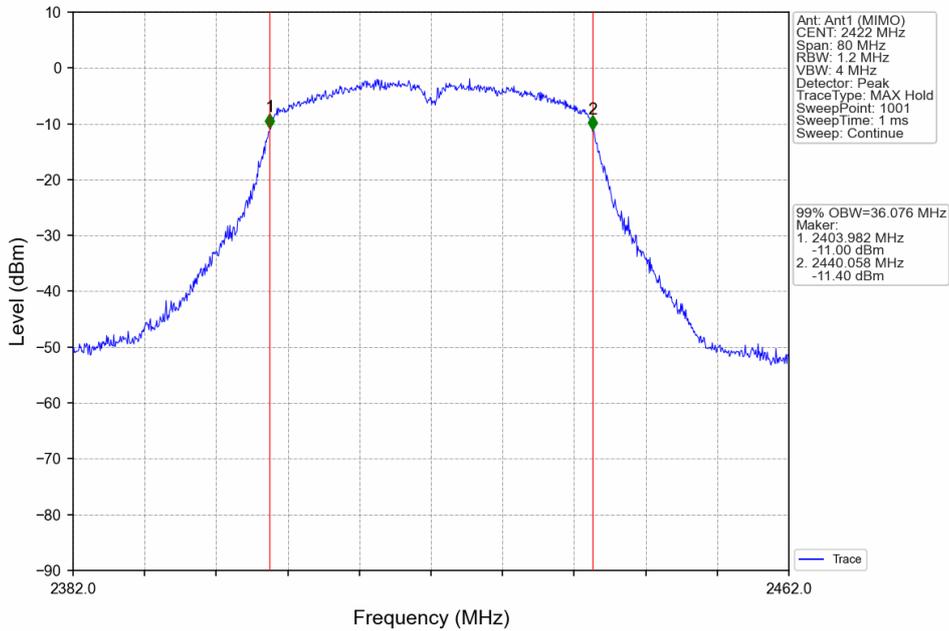
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



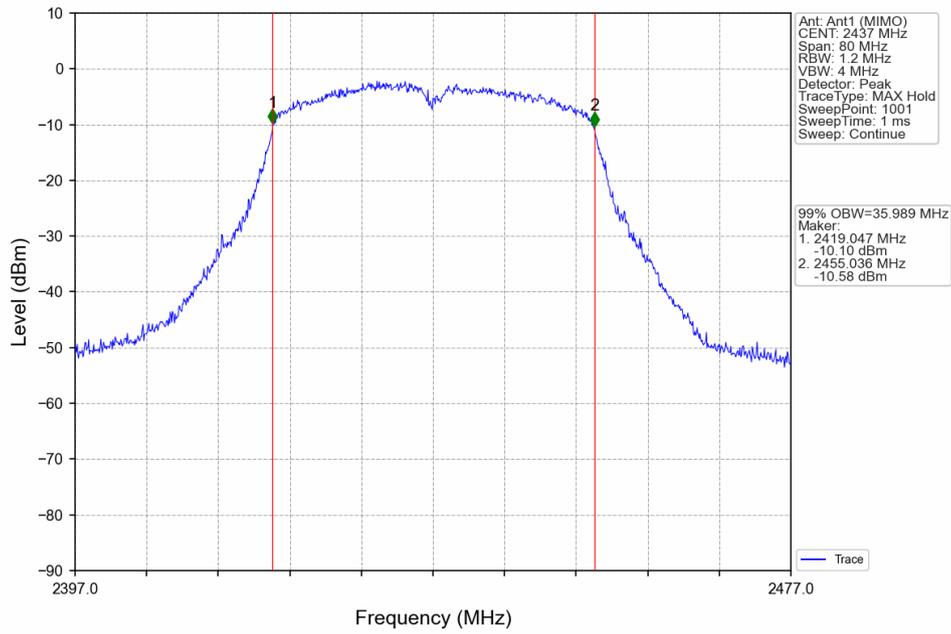
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



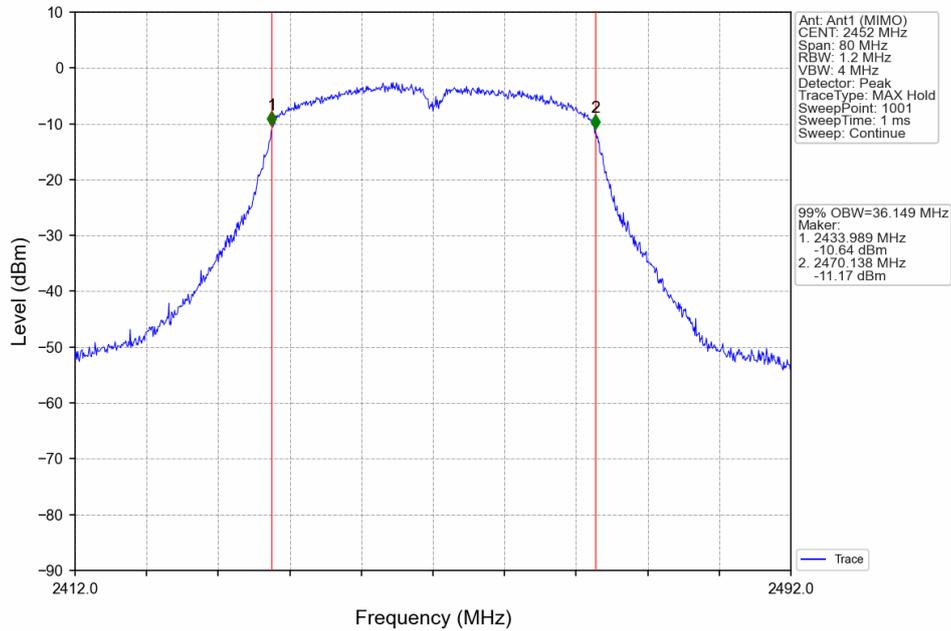
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

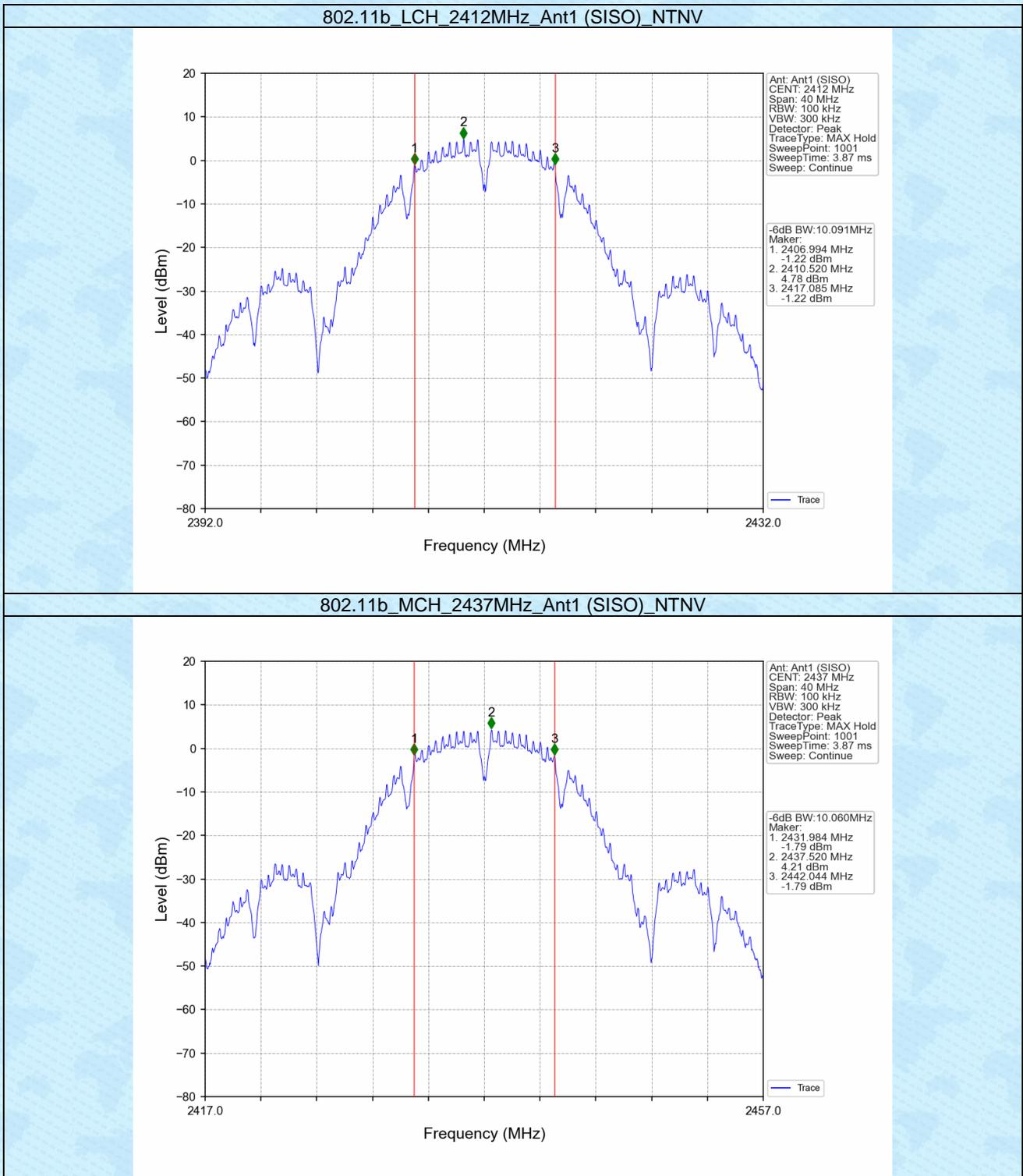


1.2 6dB BW

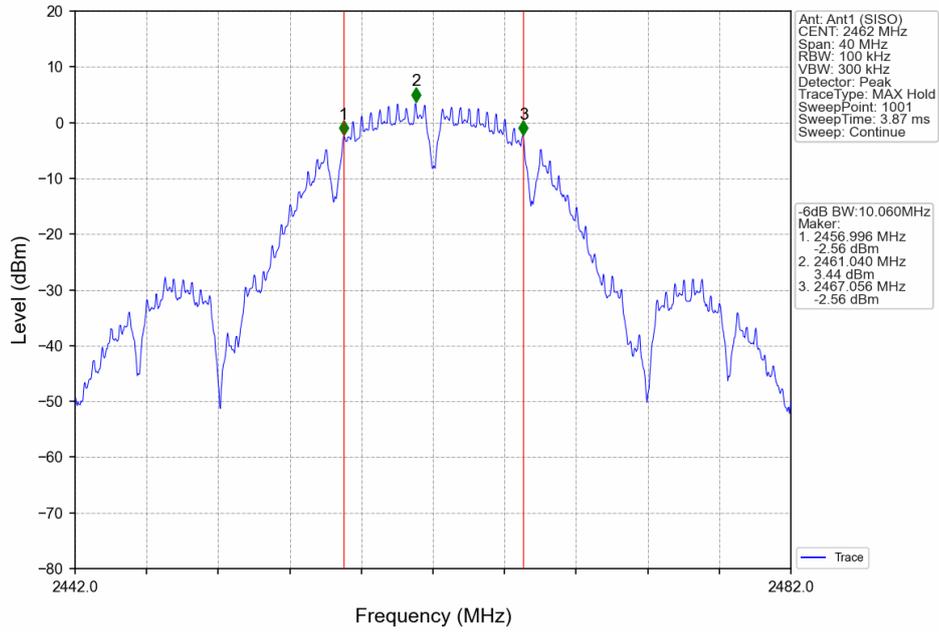
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.091	>=0.5	Pass
		2437	1	10.060	>=0.5	Pass
		2462	1	10.060	>=0.5	Pass
802.11g	SISO	2412	1	15.967	>=0.5	Pass
		2437	1	15.105	>=0.5	Pass
		2462	1	15.116	>=0.5	Pass
802.11n (HT20)	MIMO	2412	1	15.136	>=0.5	Pass
		2437	1	15.075	>=0.5	Pass
		2462	1	15.141	>=0.5	Pass
802.11n (HT40)	MIMO	2422	1	33.766	>=0.5	Pass
		2437	1	33.830	>=0.5	Pass
		2452	1	33.862	>=0.5	Pass

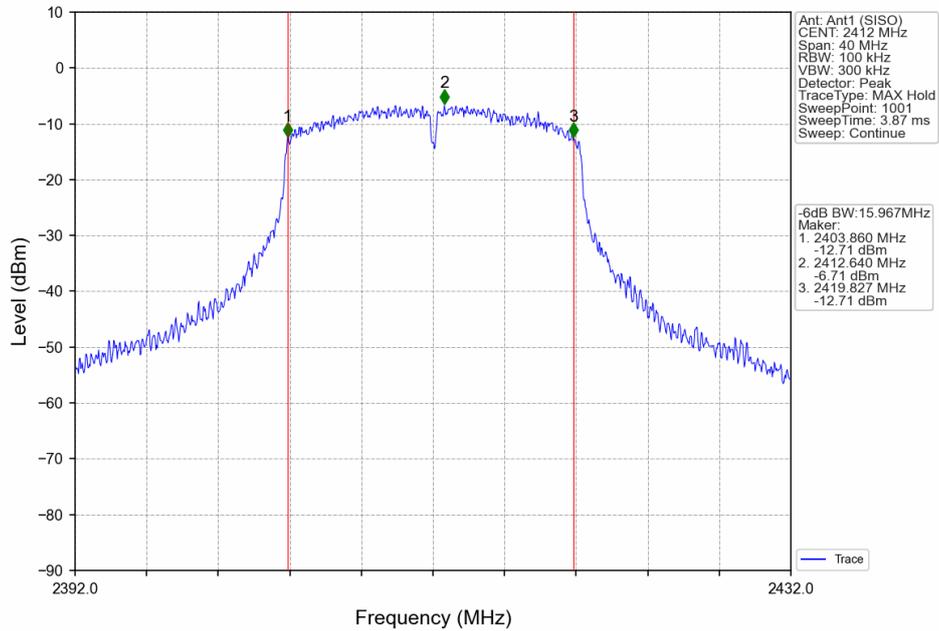
1.2.2 Test Graph



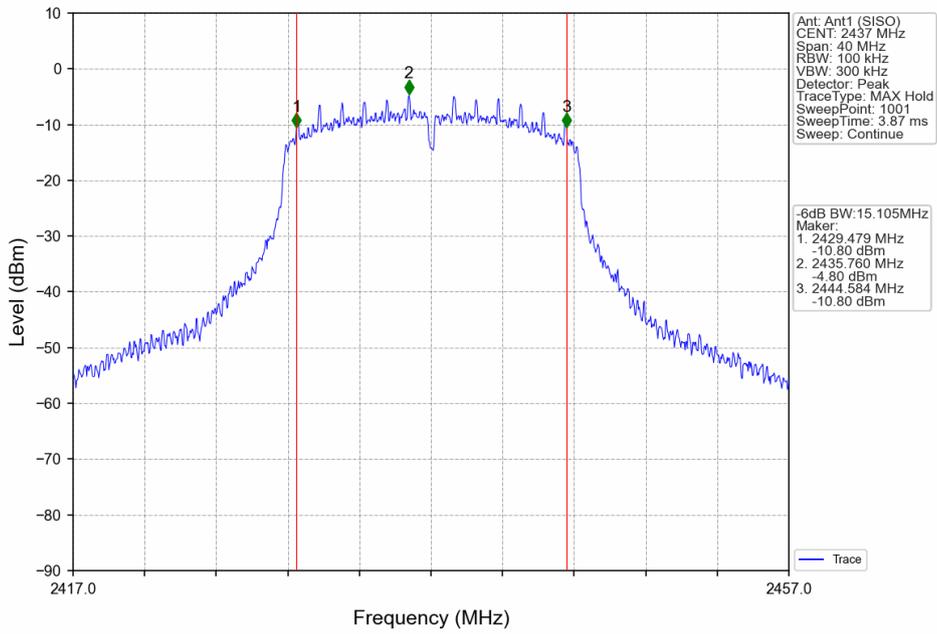
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



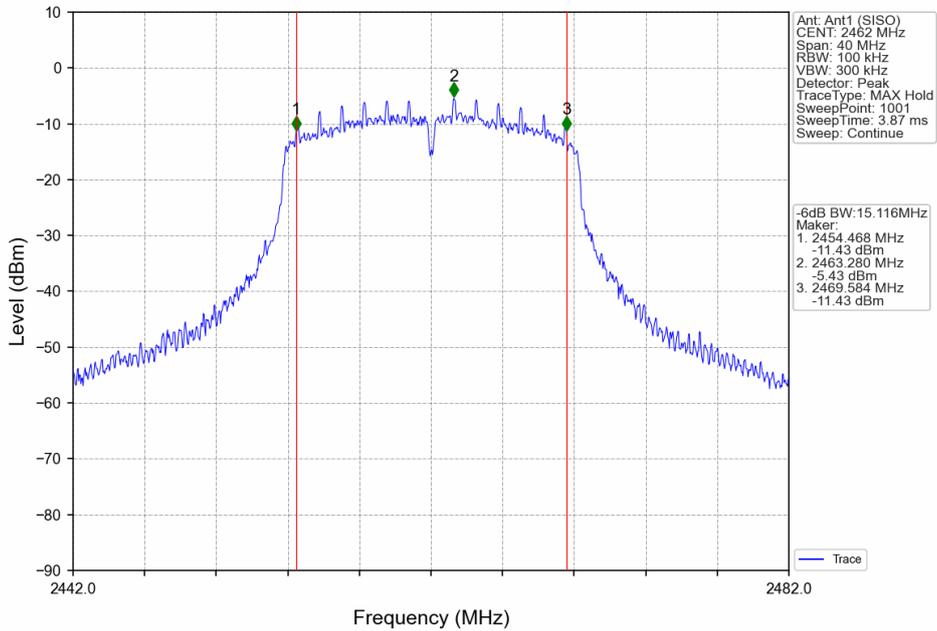
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



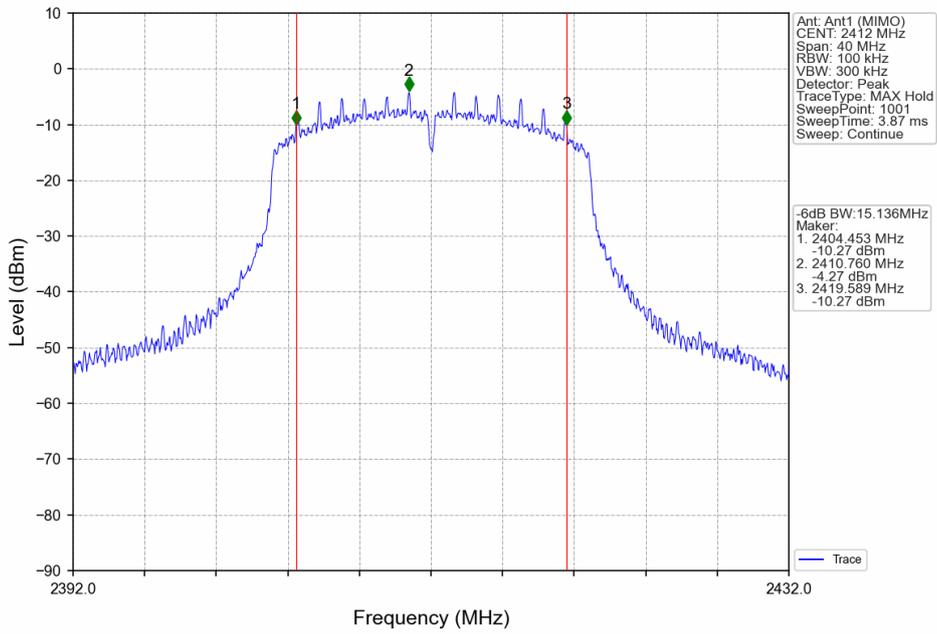
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



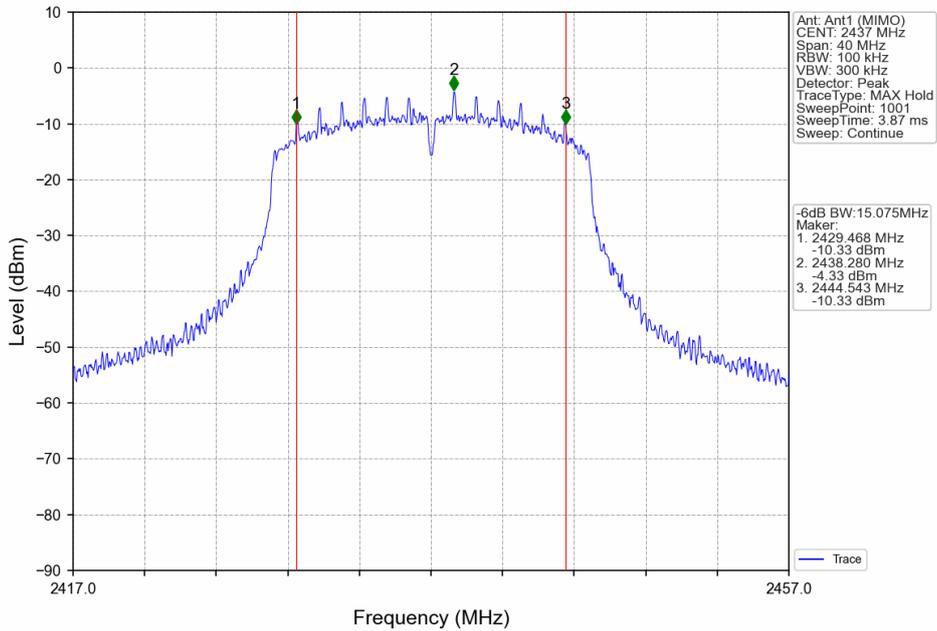
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



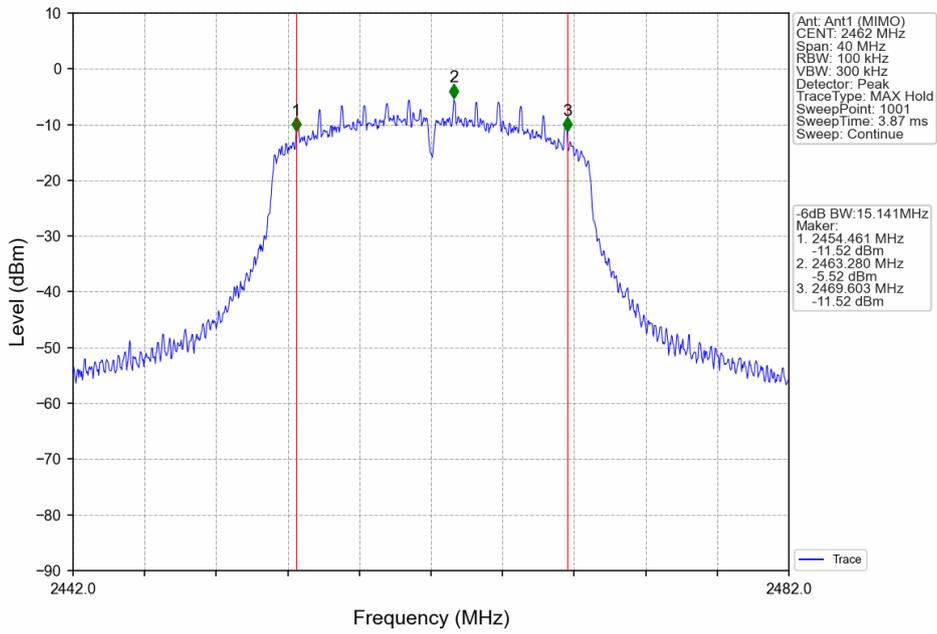
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



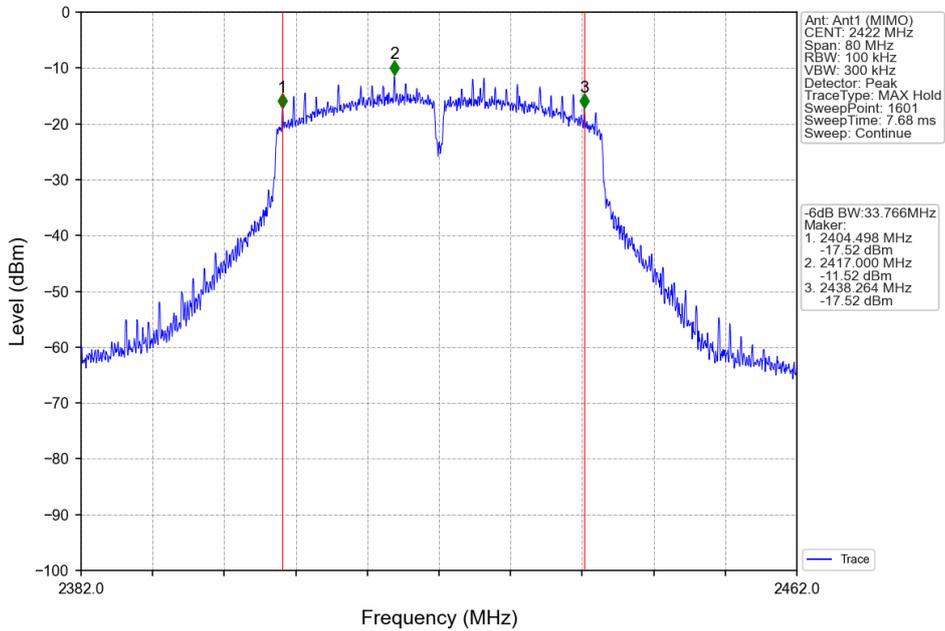
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



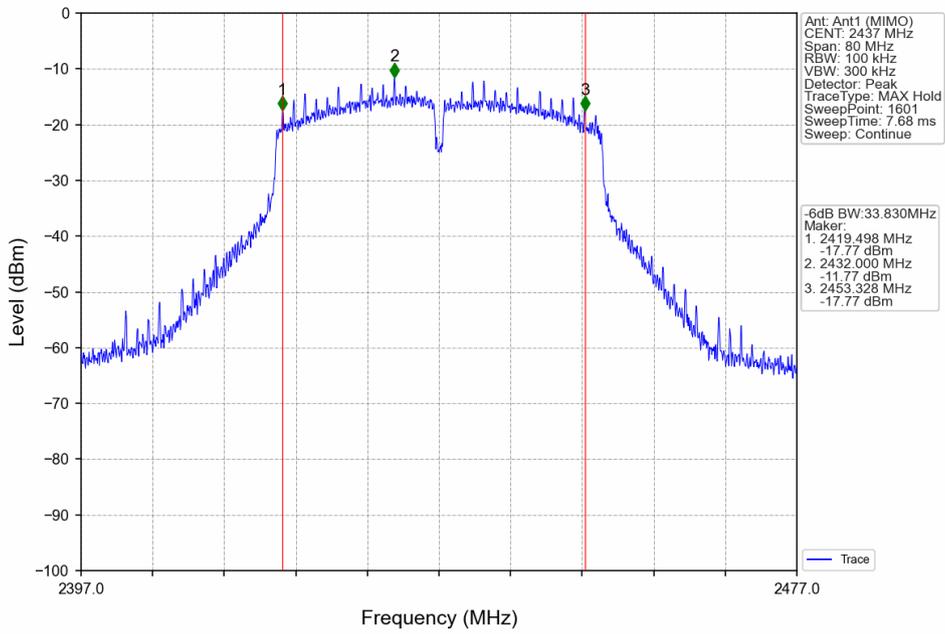
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



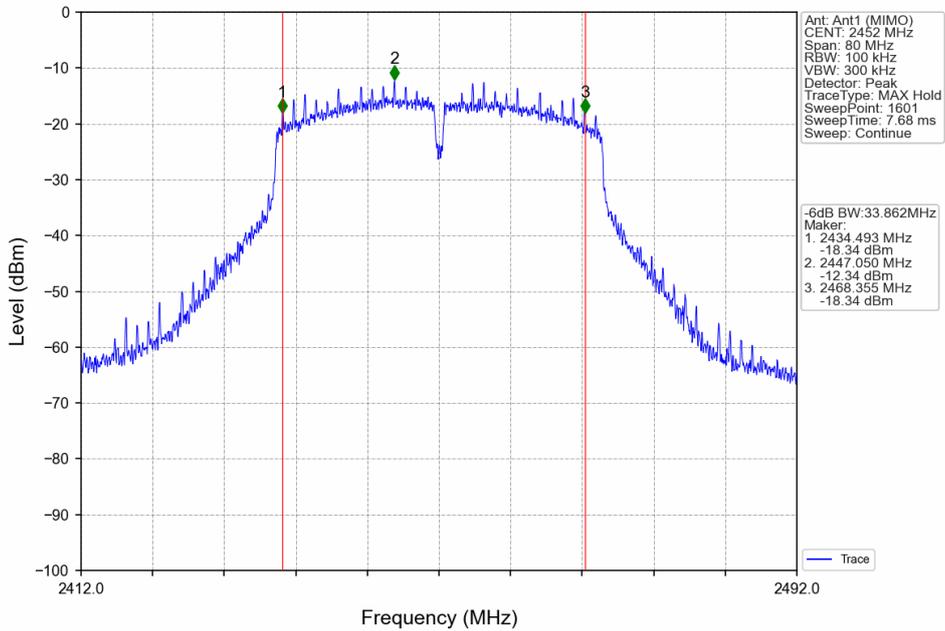
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



2. Maximum Conducted Output Power

2.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	16.57	16.03	/	<=29	Pass
		2437	15.94	15.54	/	<=29	Pass
		2462	15.21	15.42	/	<=29	Pass
802.11g	SISO	2412	14.01	13.72	/	<=29	Pass
		2437	13.03	13.12	/	<=29	Pass
		2462	12.36	12.74	/	<=29	Pass
802.11n (HT20)	MIMO	2412	13.36	13.03	16.21	<=25.99	Pass
		2437	12.63	12.35	15.50	<=25.99	Pass
		2462	12.07	11.94	15.02	<=25.99	Pass
802.11n (HT40)	MIMO	2422	9.38	8.86	12.14	<=25.99	Pass
		2437	9.06	8.67	11.88	<=25.99	Pass
		2452	8.68	8.34	11.52	<=25.99	Pass

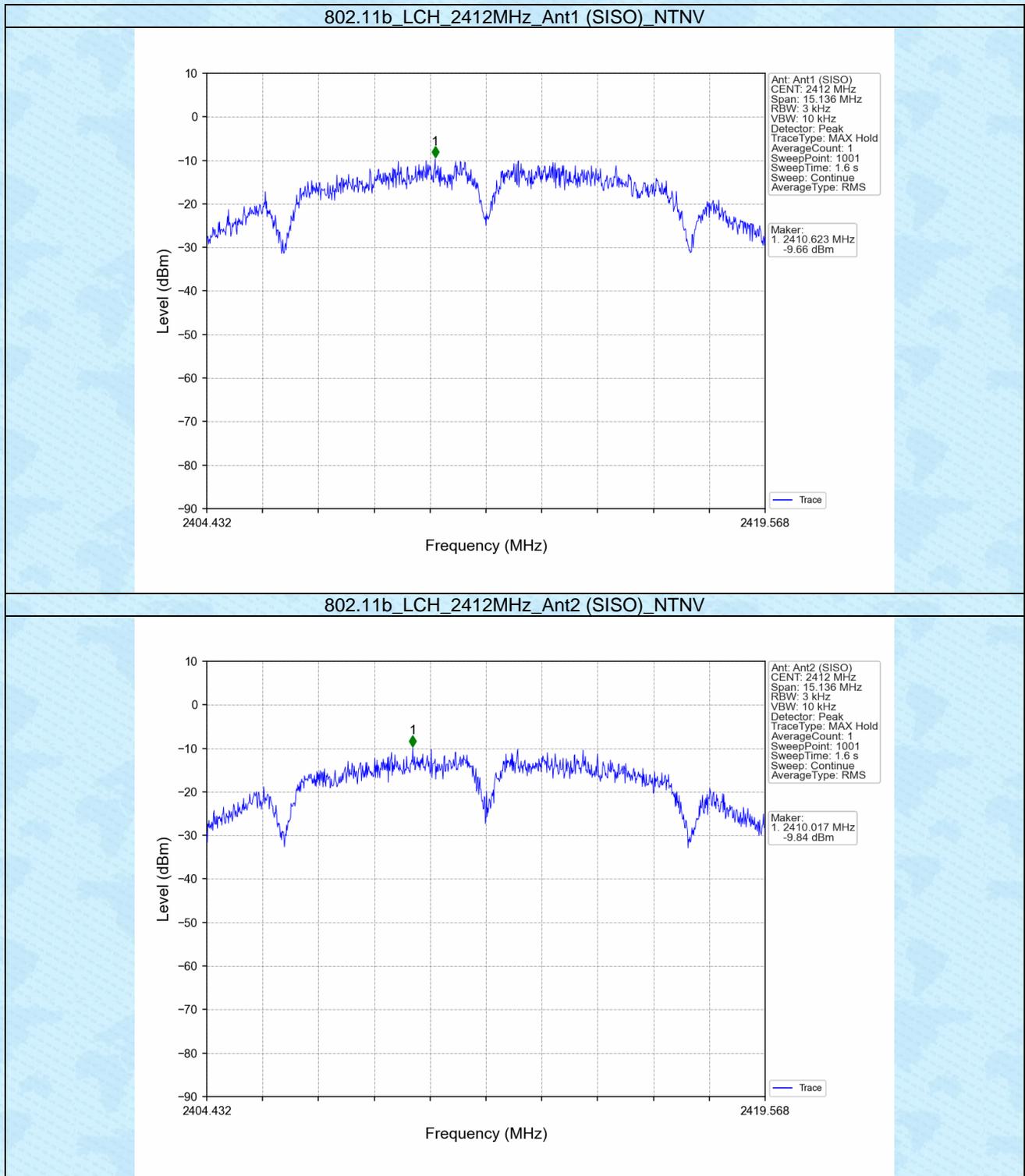
Note: transmit signals are completely correlated,
 Directional gain= $10 \times \log[(10^{7/20} + 10^{7/20})^2/2] = 10.01\text{dBi}$

3. Maximum Power Spectral Density

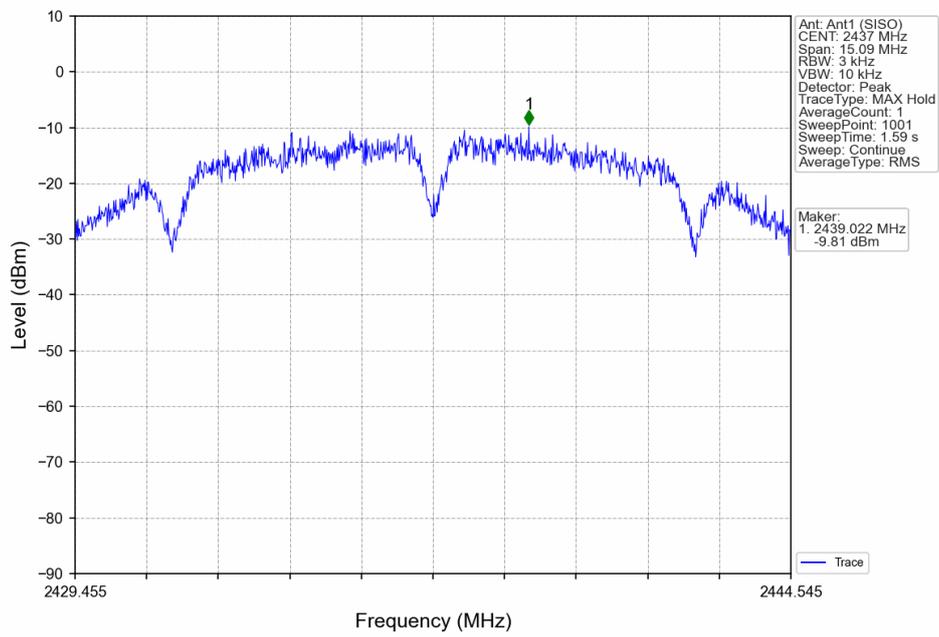
3.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	-9.66	-9.84	/	<=7	Pass
		2437	-9.81	-10.53	/	<=7	Pass
		2462	-10.17	-10.25	/	<=7	Pass
802.11g	SISO	2412	-18.59	-18.61	/	<=7	Pass
		2437	-19.63	-20.21	/	<=7	Pass
		2462	-19.77	-19.94	/	<=7	Pass
802.11n (HT20)	MIMO	2412	-19.14	-19.62	-17.30	<=3.99	Pass
		2437	-18.63	-20.22	-17.02	<=3.99	Pass
		2462	-20.92	-20.84	-18.52	<=3.99	Pass
802.11n (HT40)	MIMO	2422	-27.09	-26.67	-24.74	<=3.99	Pass
		2437	-26.72	-27.11	-24.43	<=3.99	Pass
		2452	-27.09	-27.30	-25.28	<=3.99	Pass

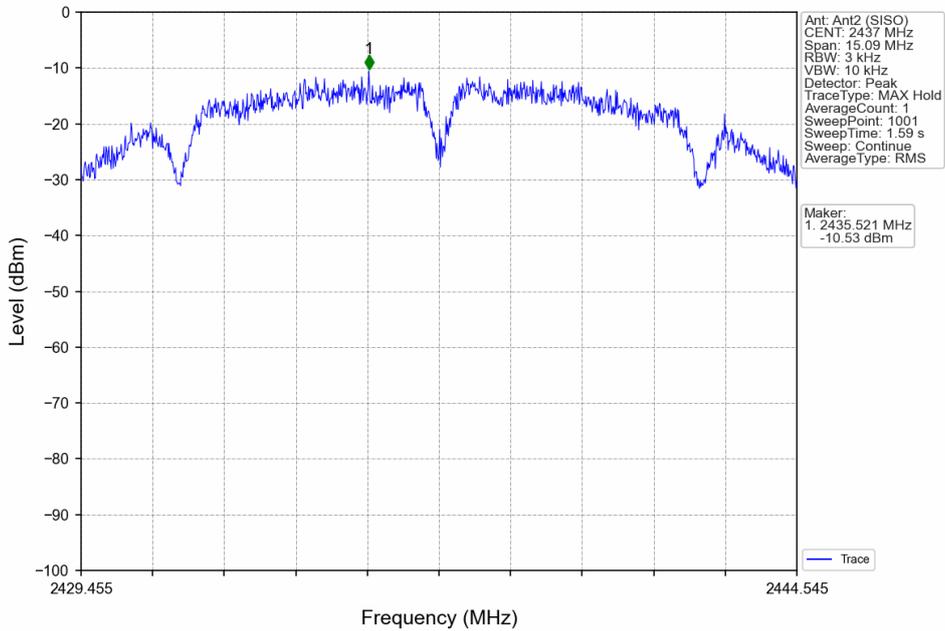
3.2 Test Graph



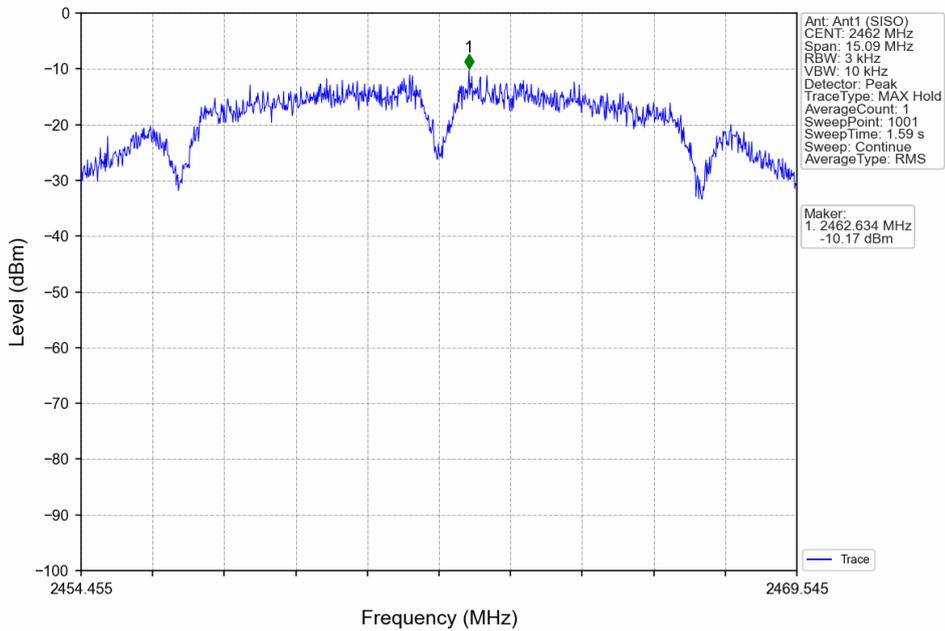
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



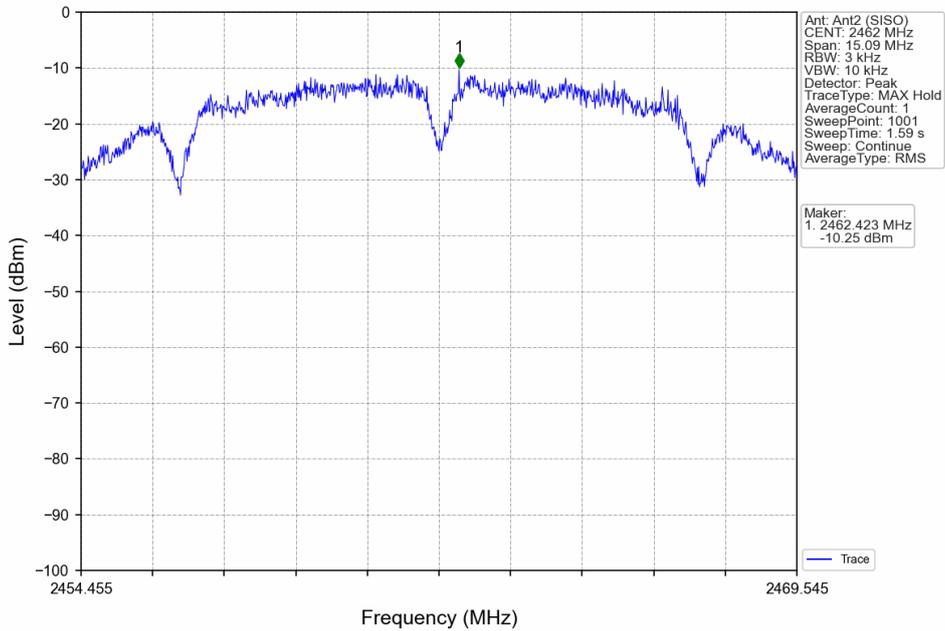
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



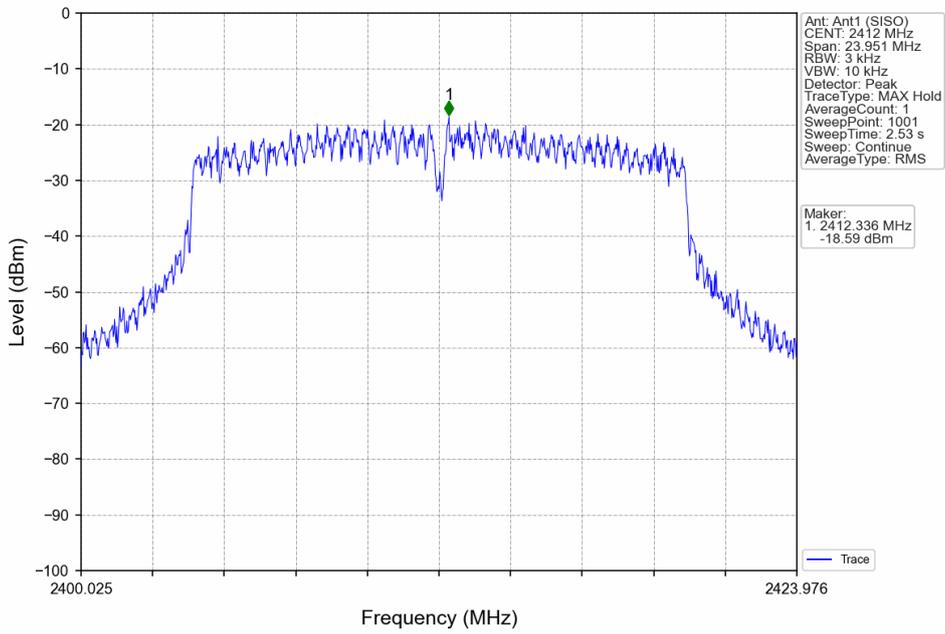
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



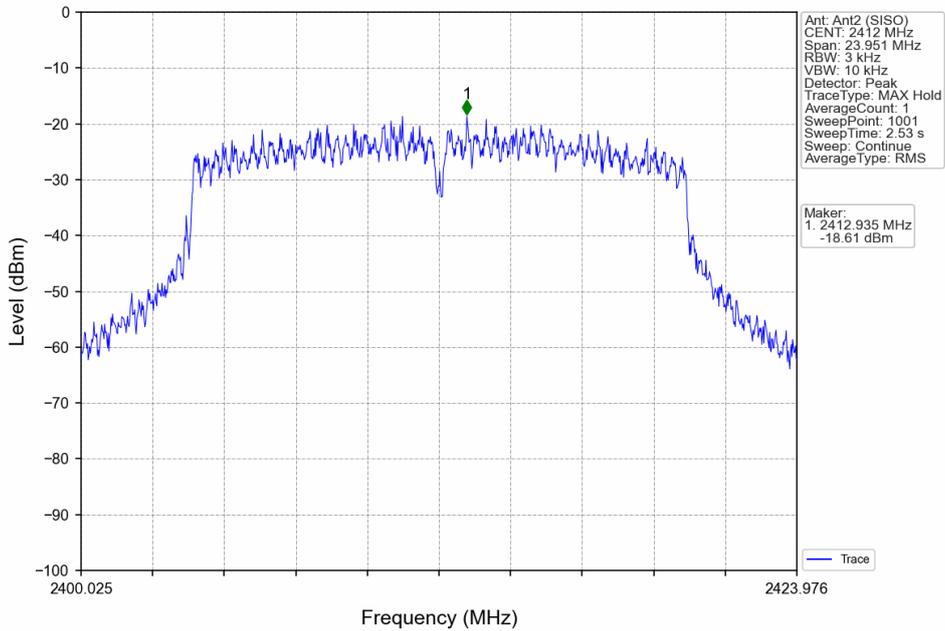
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



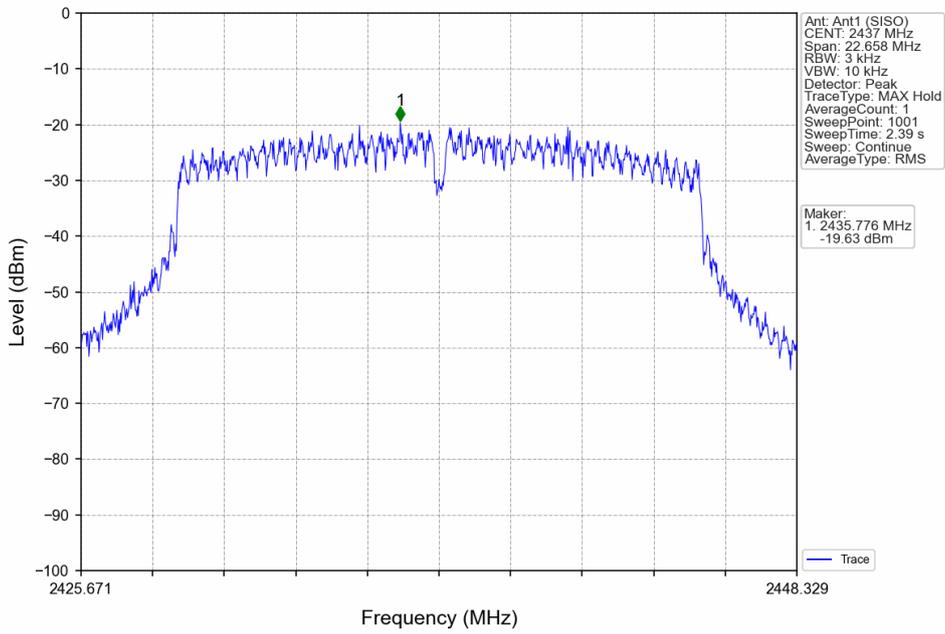
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



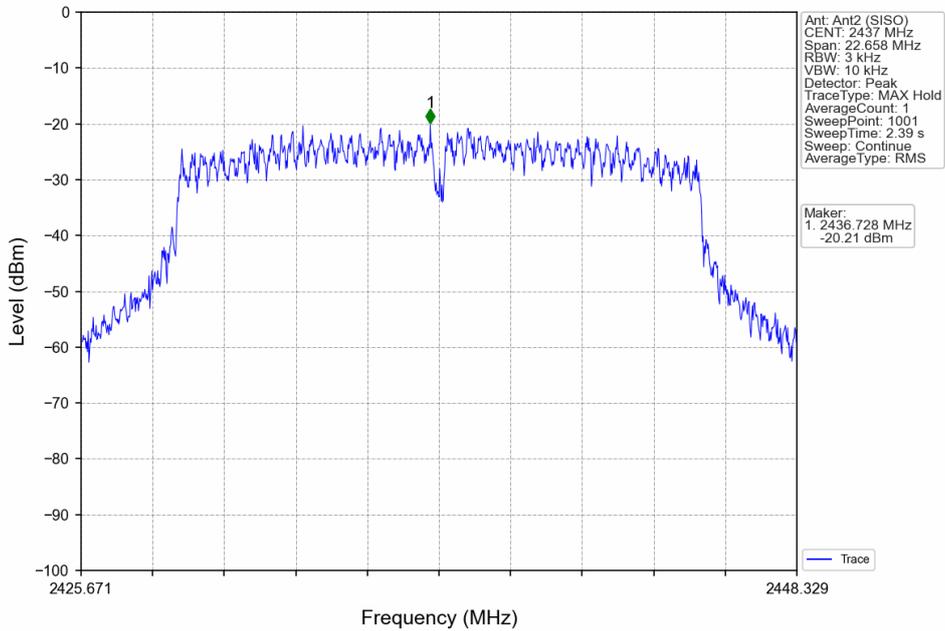
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



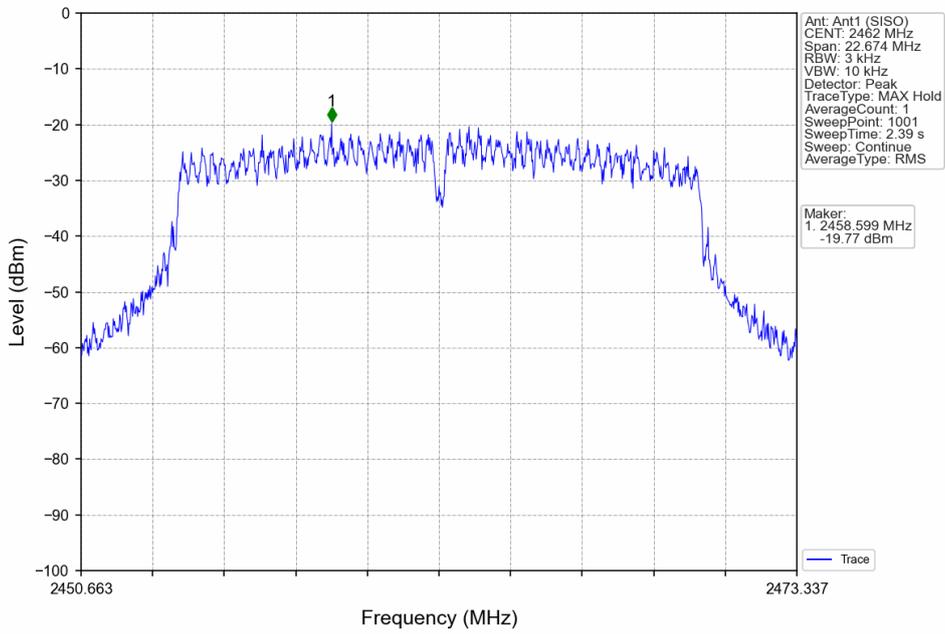
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



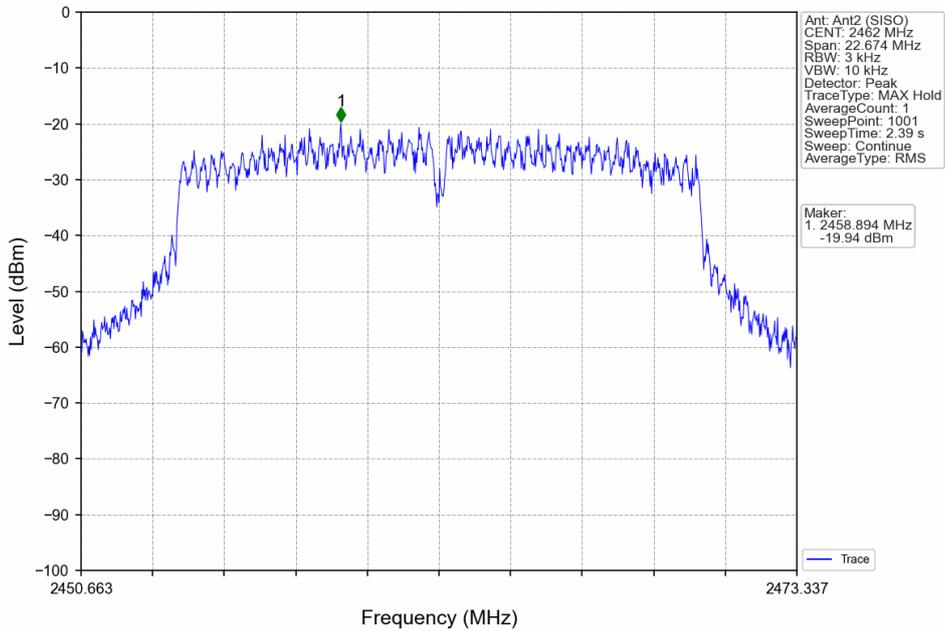
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



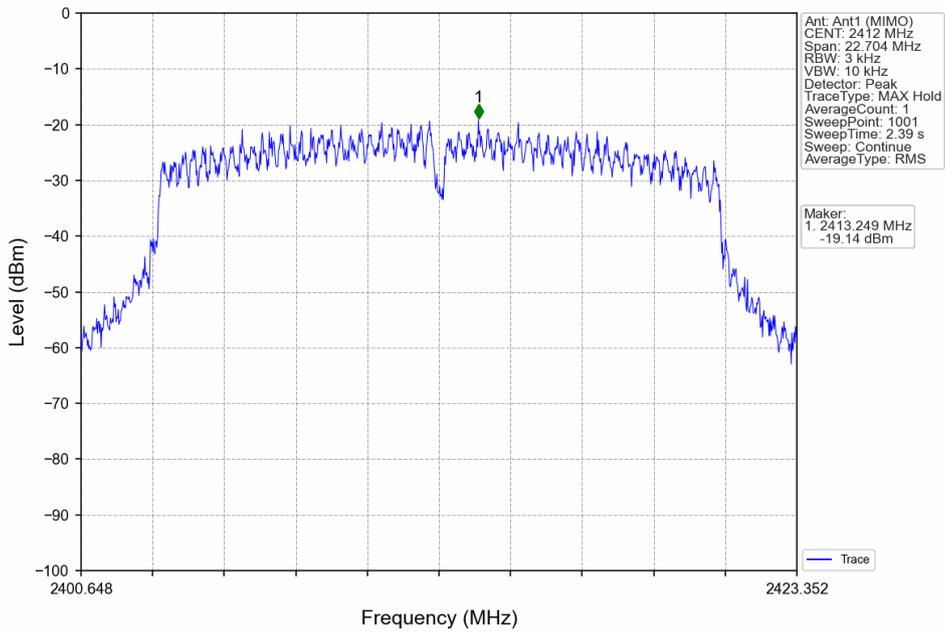
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



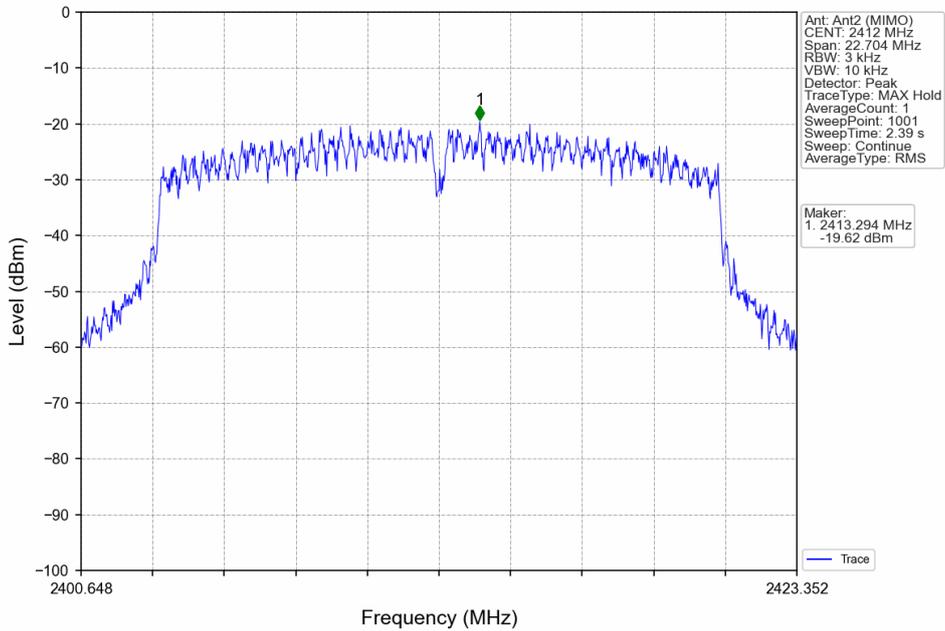
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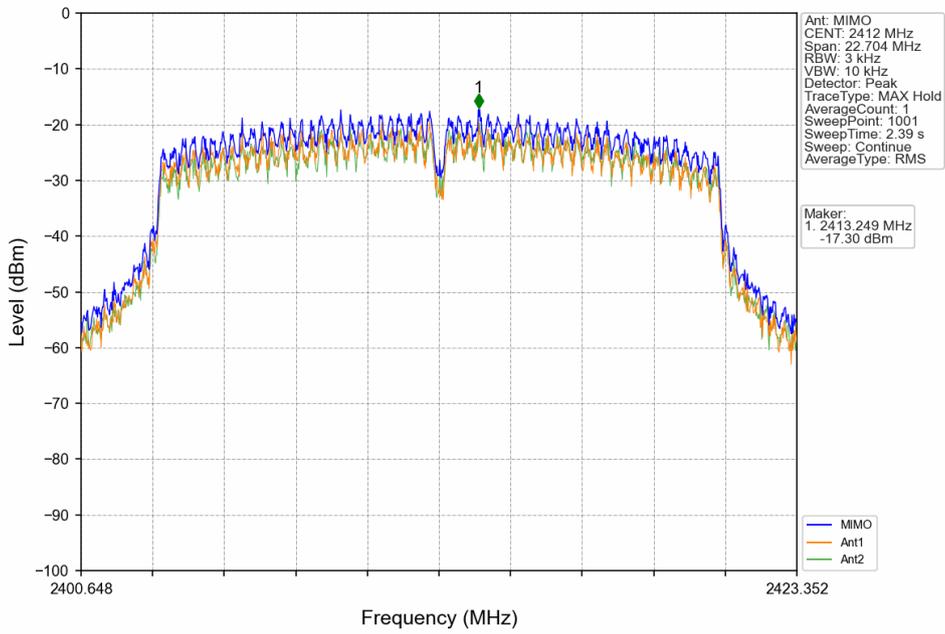
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



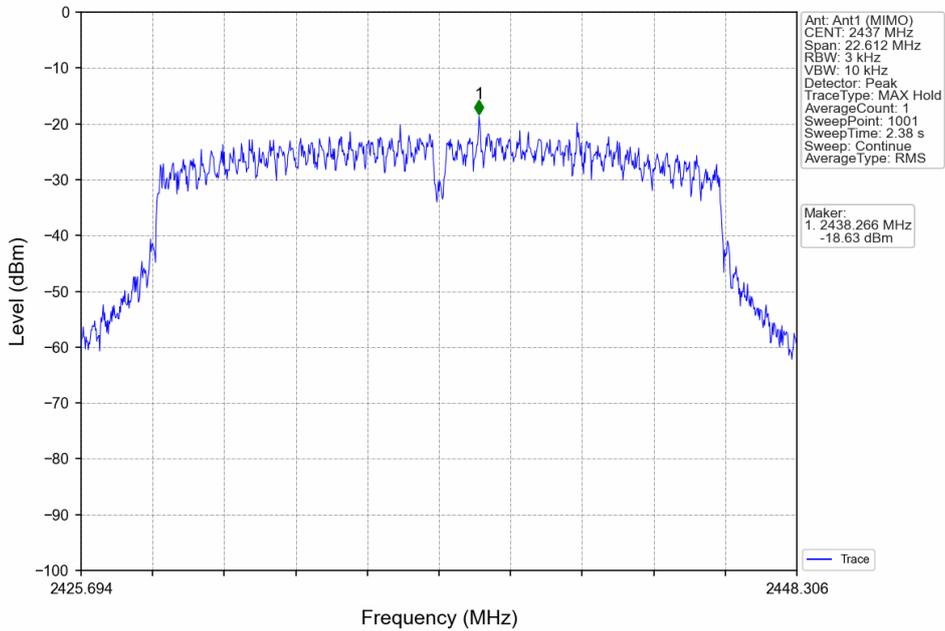
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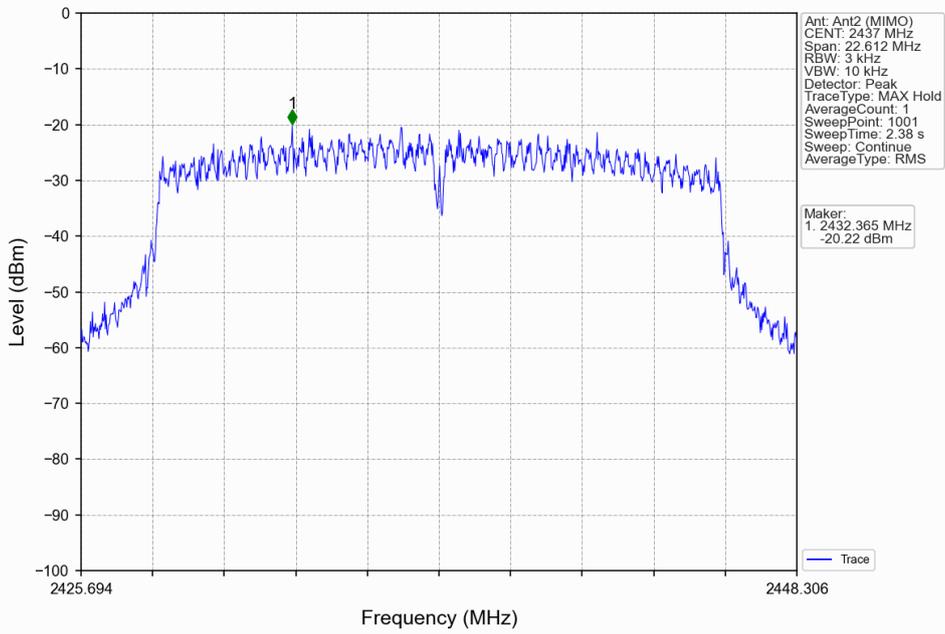
802.11n(HT20)_LCH_2412MHz_MIMO_NTNV



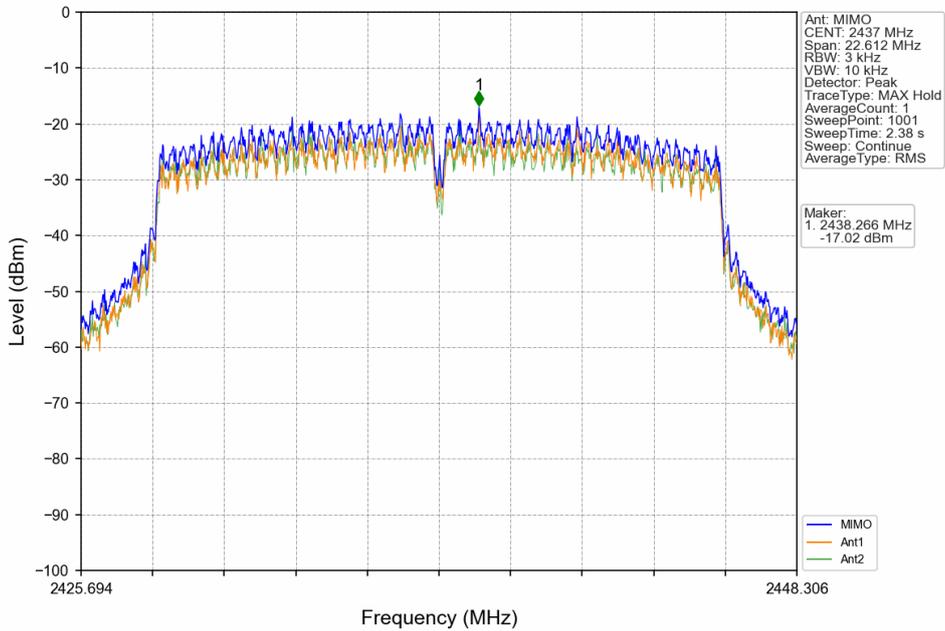
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



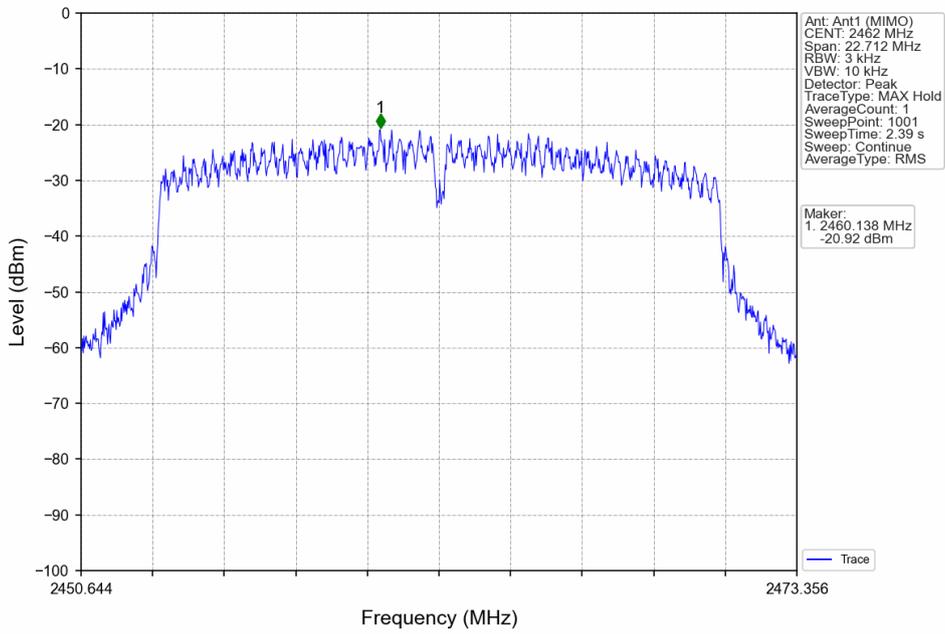
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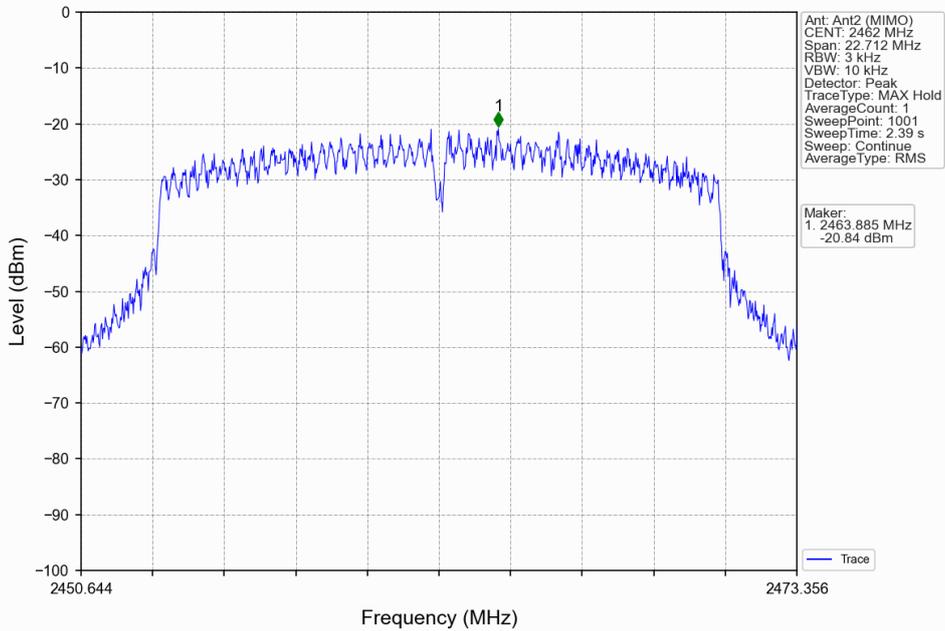
802.11n(HT20)_MCH_2437MHz_MIMO_NTNV



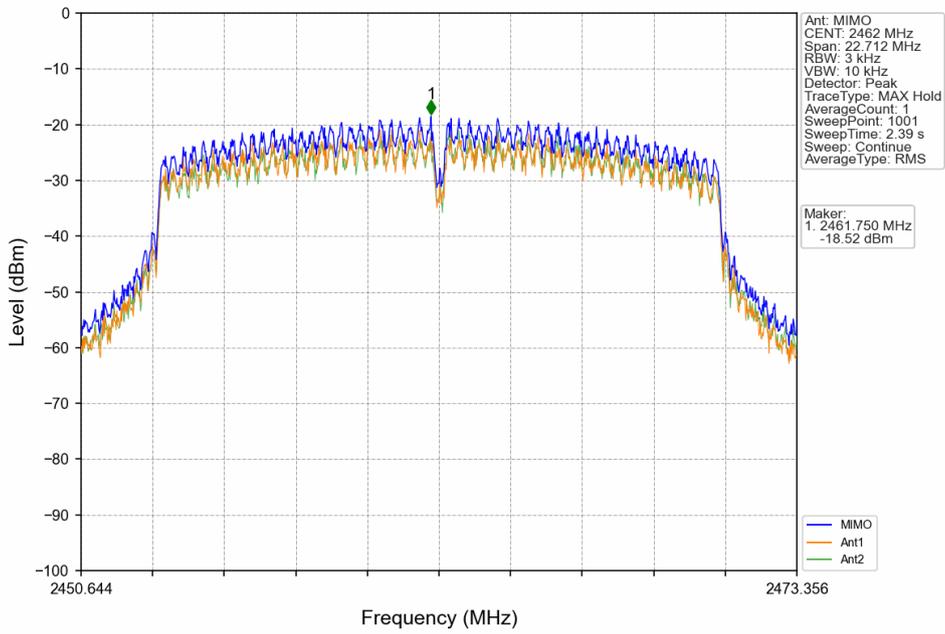
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



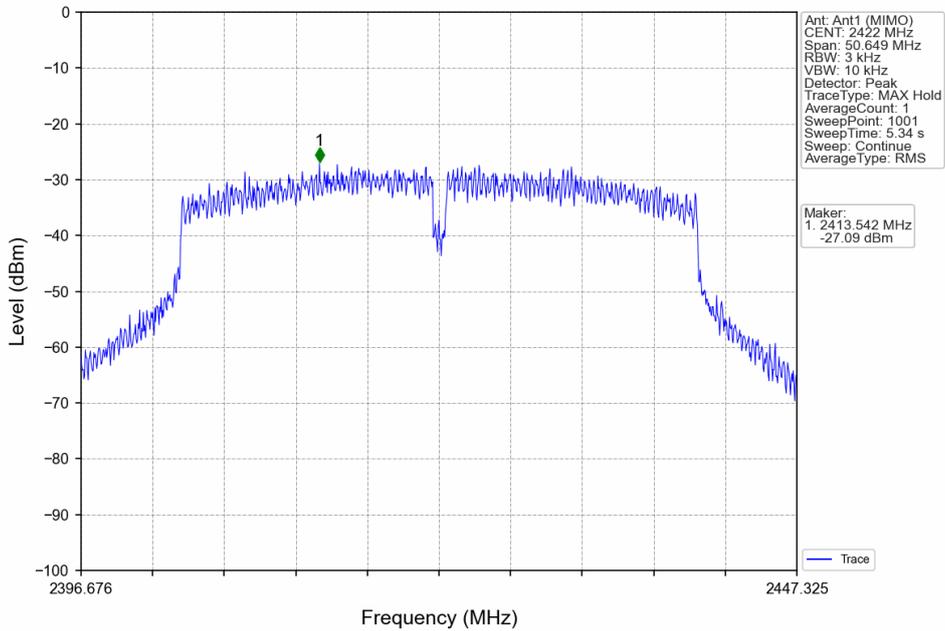
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



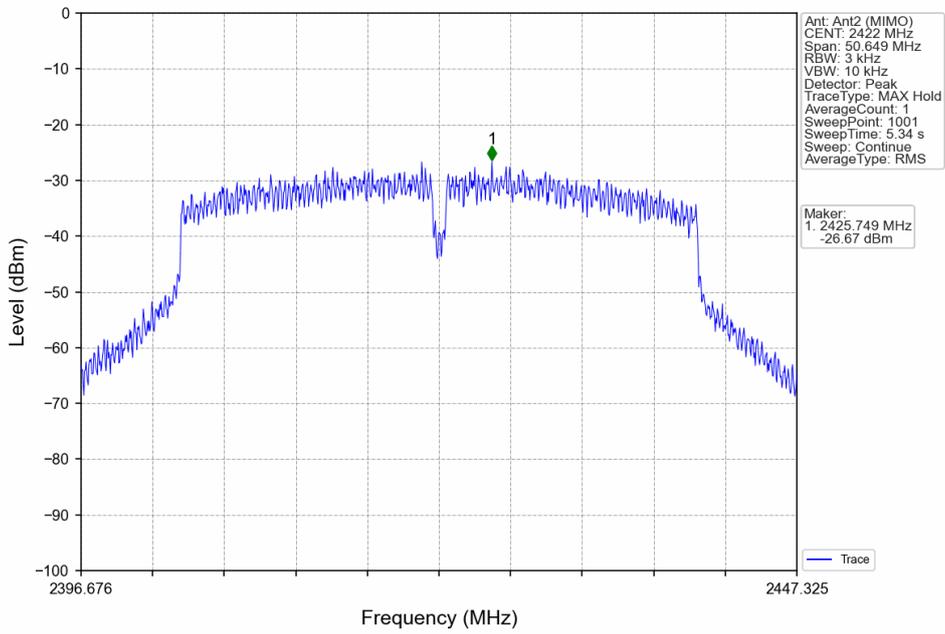
802.11n(HT20)_HCH_2462MHz_MIMO_NTNV



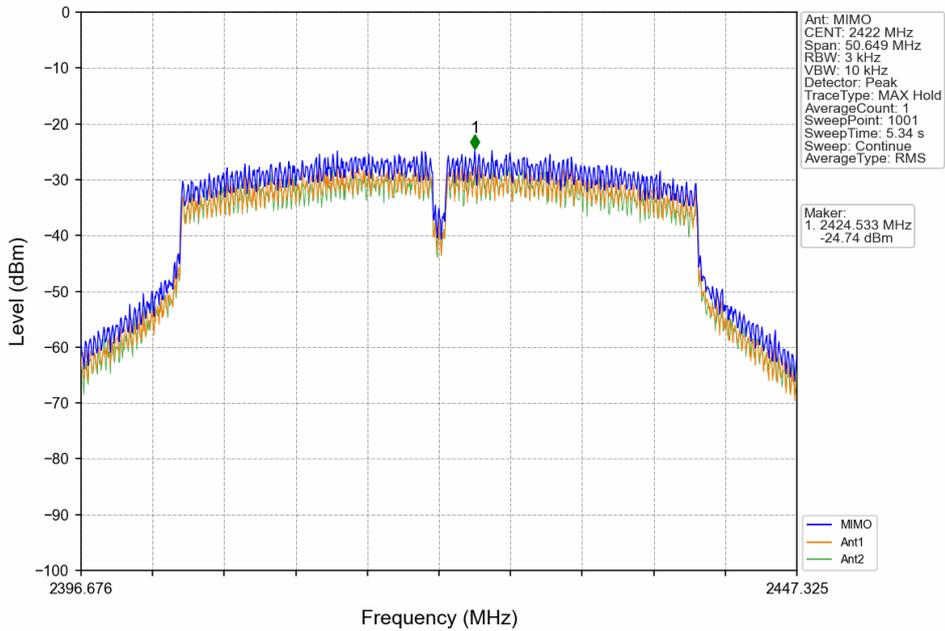
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



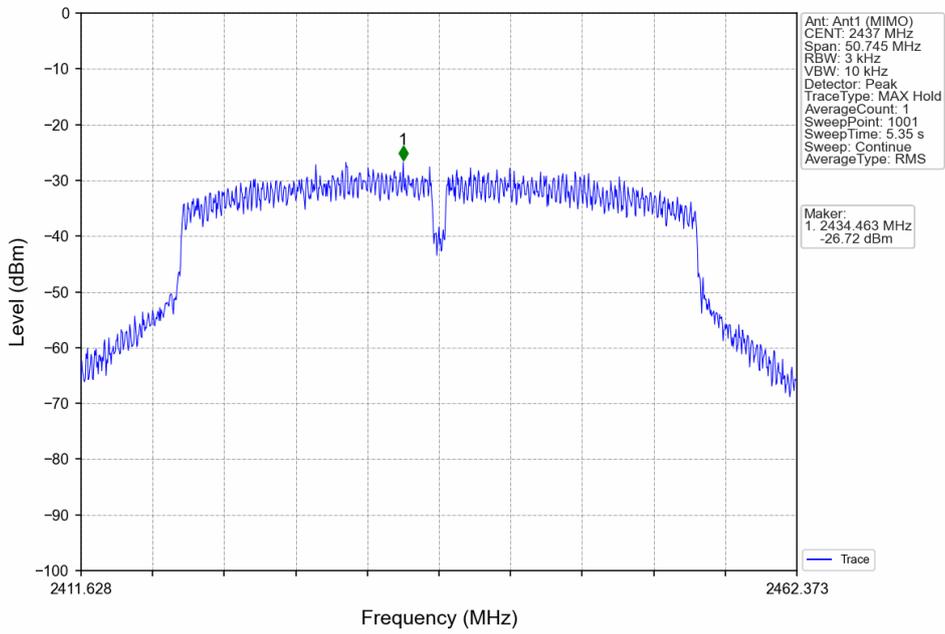
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO) NTN



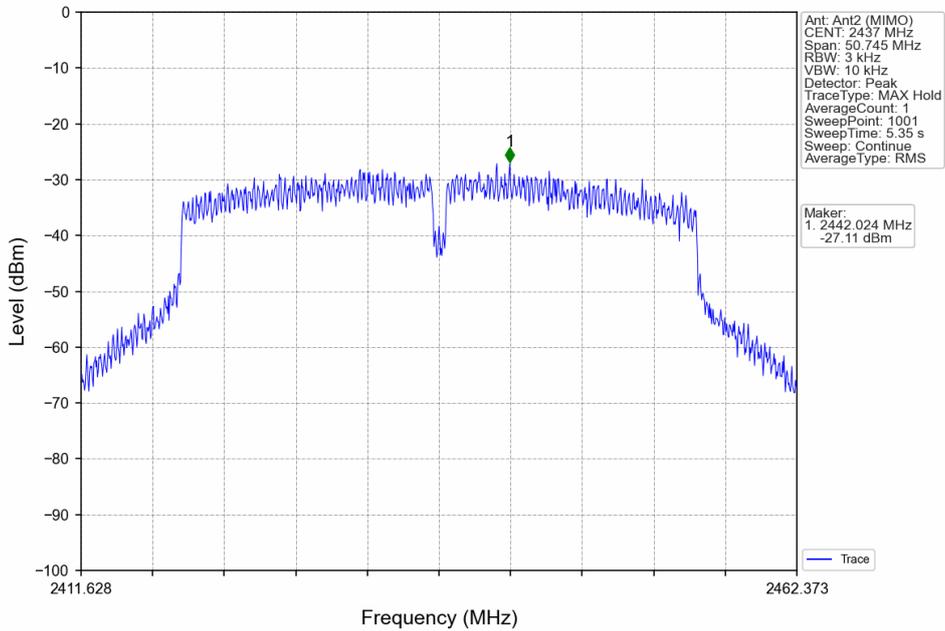
802.11n(HT40)_LCH_2422MHz_MIMO NTN



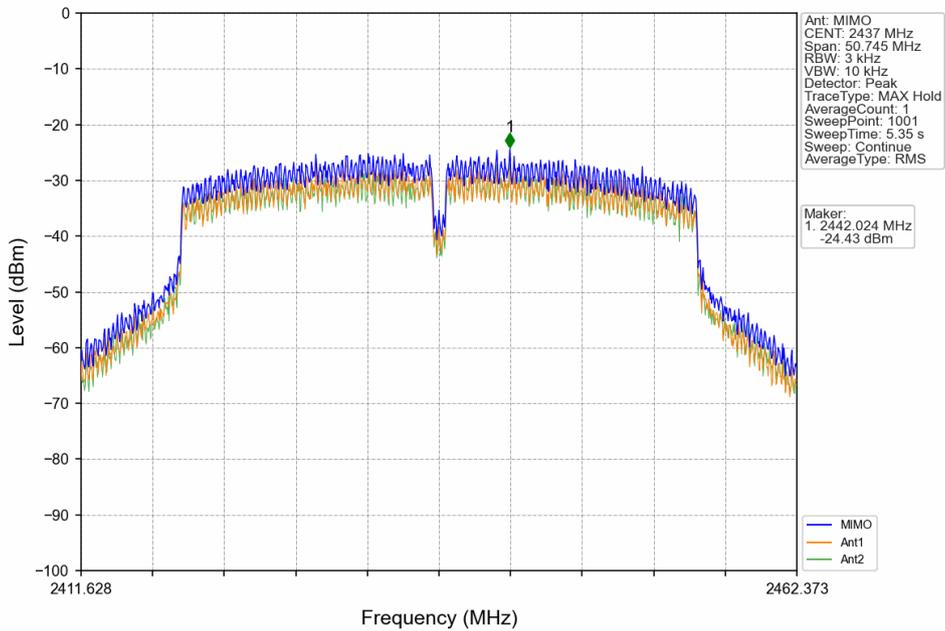
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



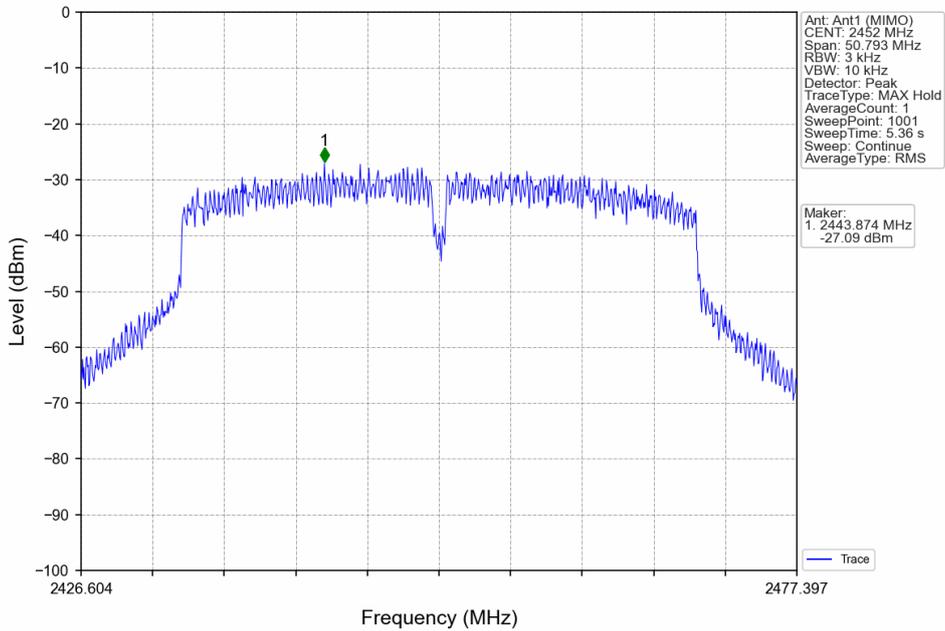
802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



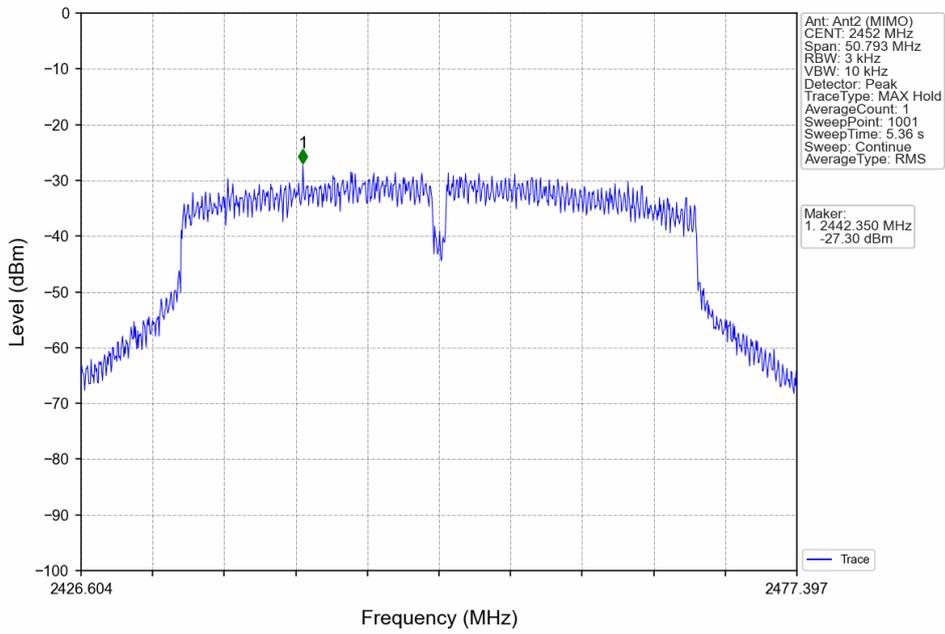
802.11n(HT40)_MCH_2437MHz_MIMO_NTNV



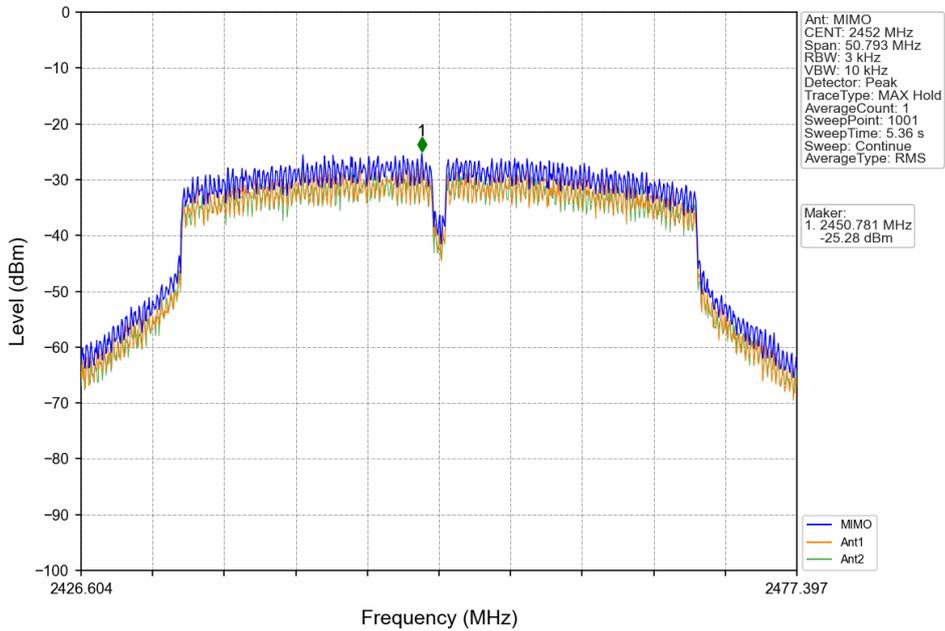
802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_MIMO_NTNV



4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Ref

4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	4.70
			2	4.07
		2437	1	3.87
			2	3.55
		2462	1	3.18
			2	3.35
802.11g	SISO	2412	1	-6.33
			2	-6.63
		2437	1	-4.87
			2	-5.01
		2462	1	-5.05
			2	-5.38
802.11n (HT20)	MIMO	2412	1	-4.23
			2	-5.04
		2437	1	-4.40
			2	-5.24
		2462	1	-5.51
			2	-6.06
802.11n (HT40)	MIMO	2422	1	-11.56
			2	-11.65
		2437	1	-11.80
			2	-11.93
		2452	1	-12.64
			2	-12.23

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

4.1.2 Test Graph

