

1. Bandwidth

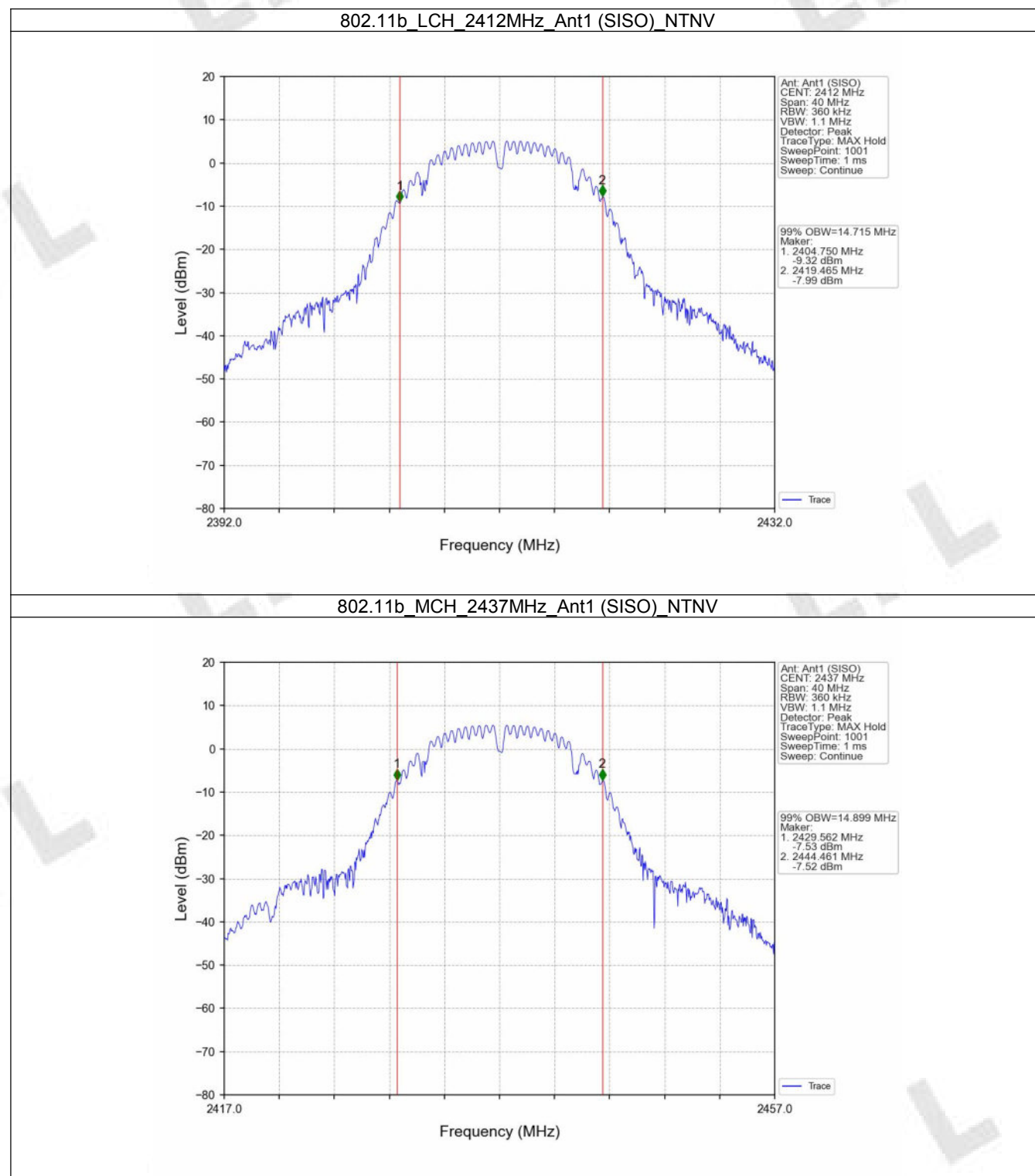
1.1 OBW

1.1.1 Test Result

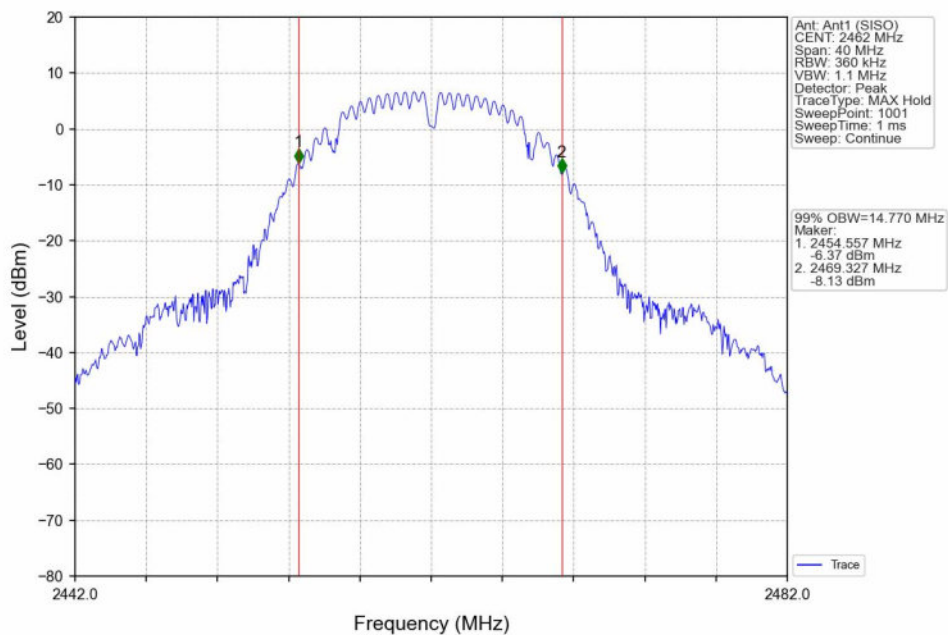
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	14.715	Pass
		2437	1	14.899	Pass
		2462	1	14.770	Pass
802.11g	SISO	2412	1	17.240	Pass
		2437	1	17.345	Pass
		2462	1	17.191	Pass
802.11n (HT20)	SISO	2412	1	18.331	Pass
		2437	1	18.349	Pass
		2462	1	18.427	Pass
802.11n (HT40)	SISO	2422	1	36.408	Pass
		2437	1	36.652	Pass
		2452	1	36.474	Pass

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	2	14.710	Pass
		2437	2	14.750	Pass
		2462	2	14.647	Pass
802.11g	SISO	2412	2	17.130	Pass
		2437	2	17.271	Pass
		2462	2	16.972	Pass
802.11n (HT20)	SISO	2412	2	18.445	Pass
		2437	2	18.364	Pass
		2462	2	18.165	Pass
802.11n (HT40)	SISO	2422	2	36.319	Pass
		2437	2	36.443	Pass
		2452	2	36.569	Pass

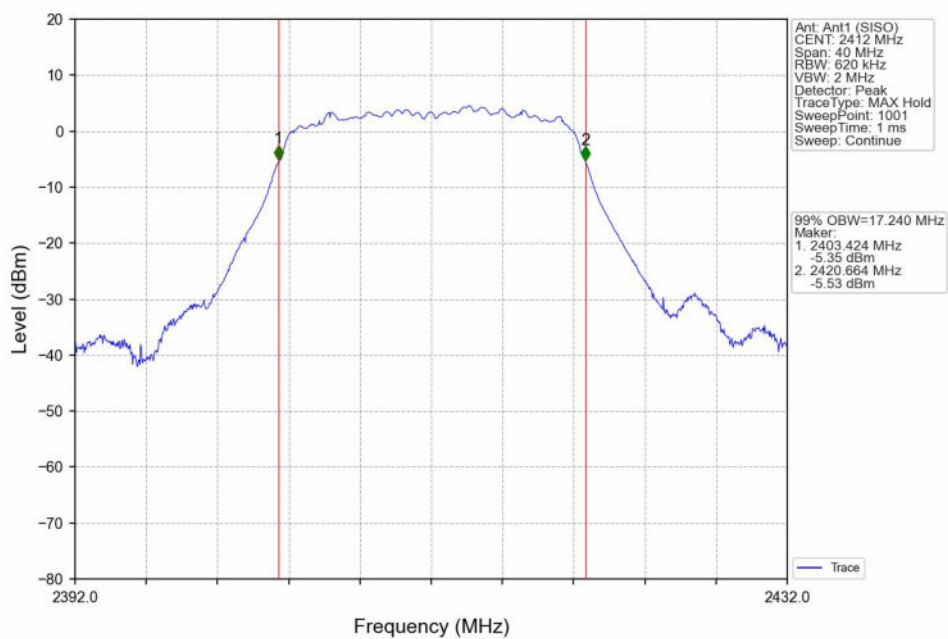
1.1.2 Test Graph



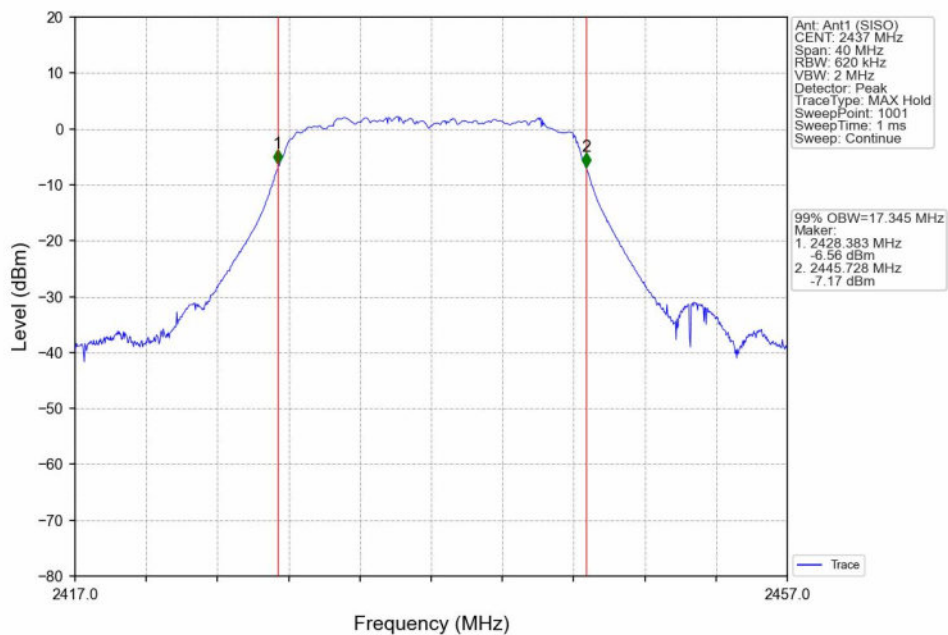
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



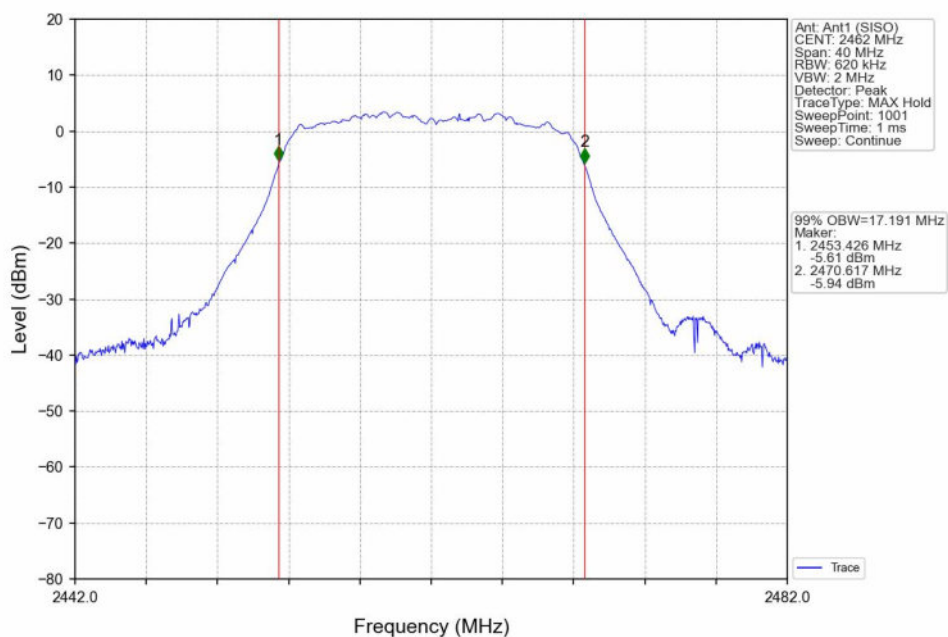
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



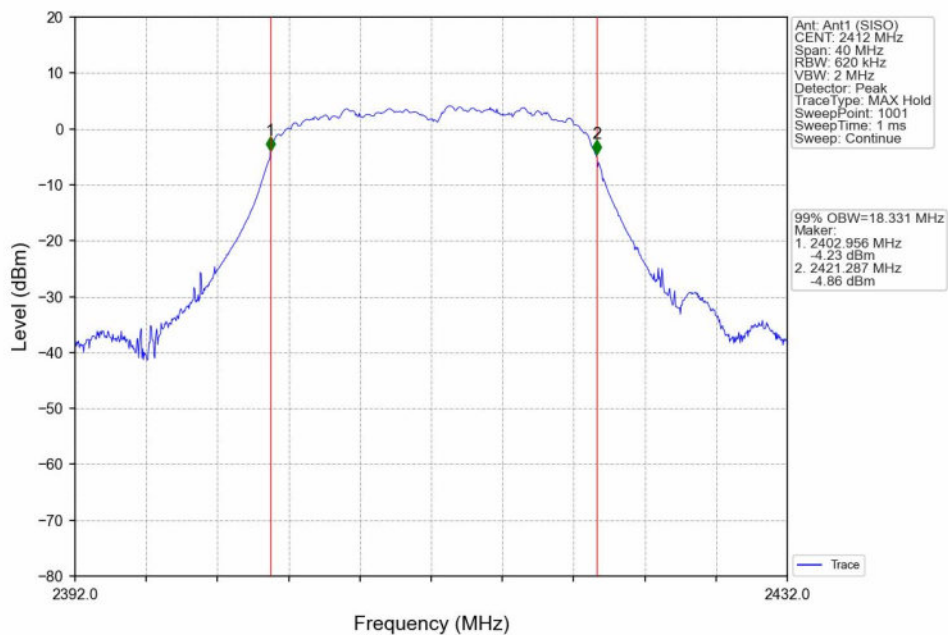
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



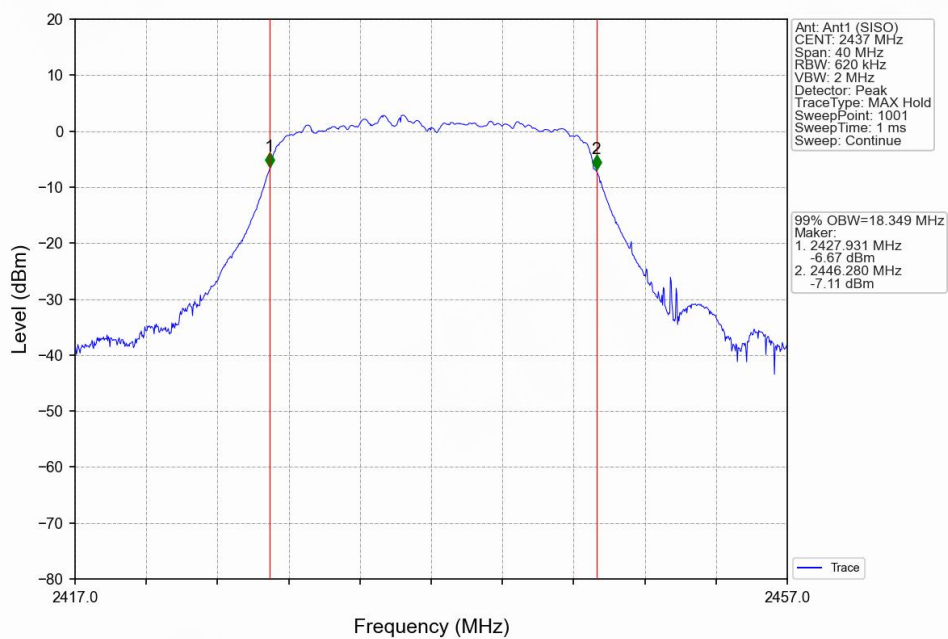
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



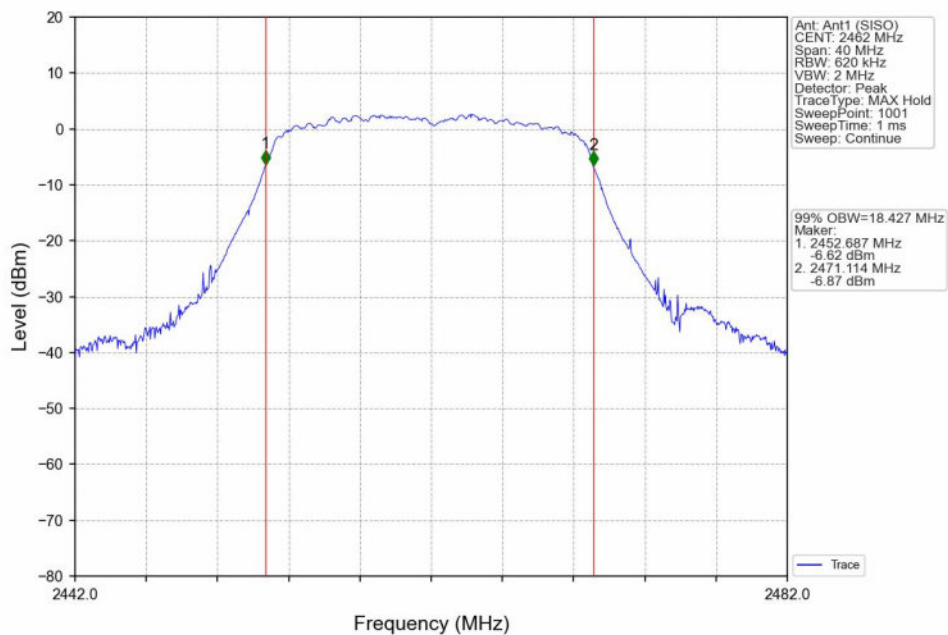
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



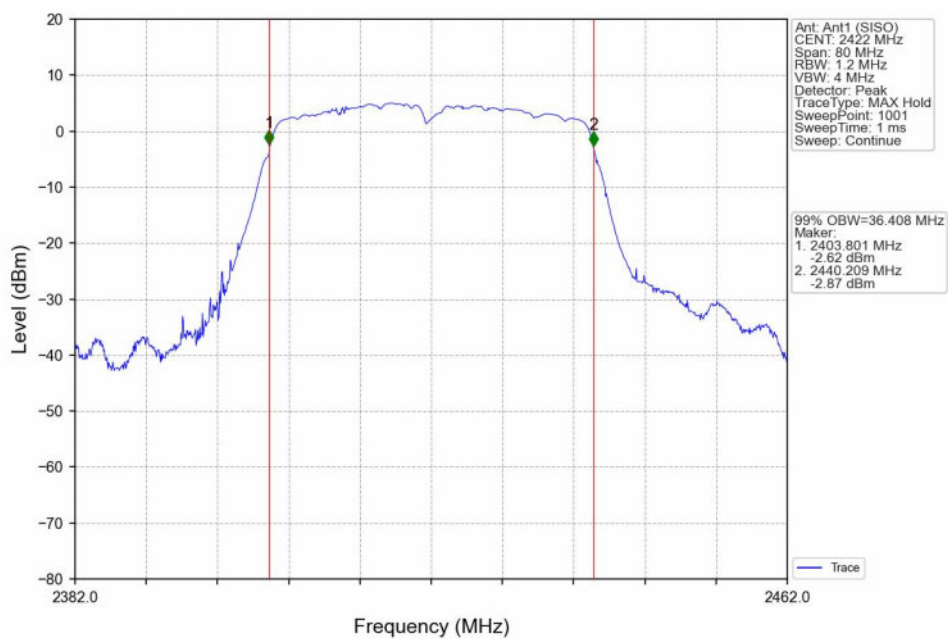
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



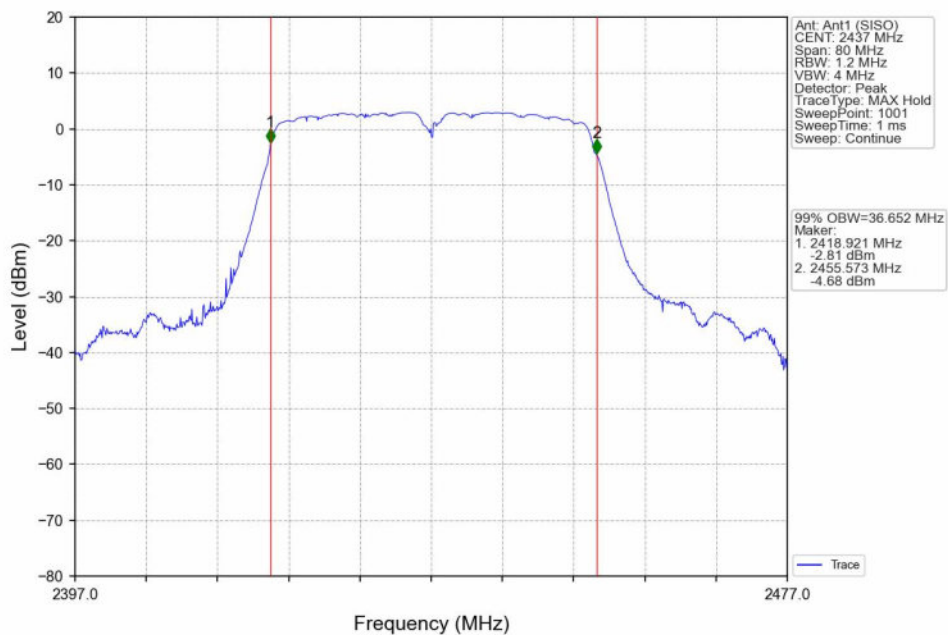
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



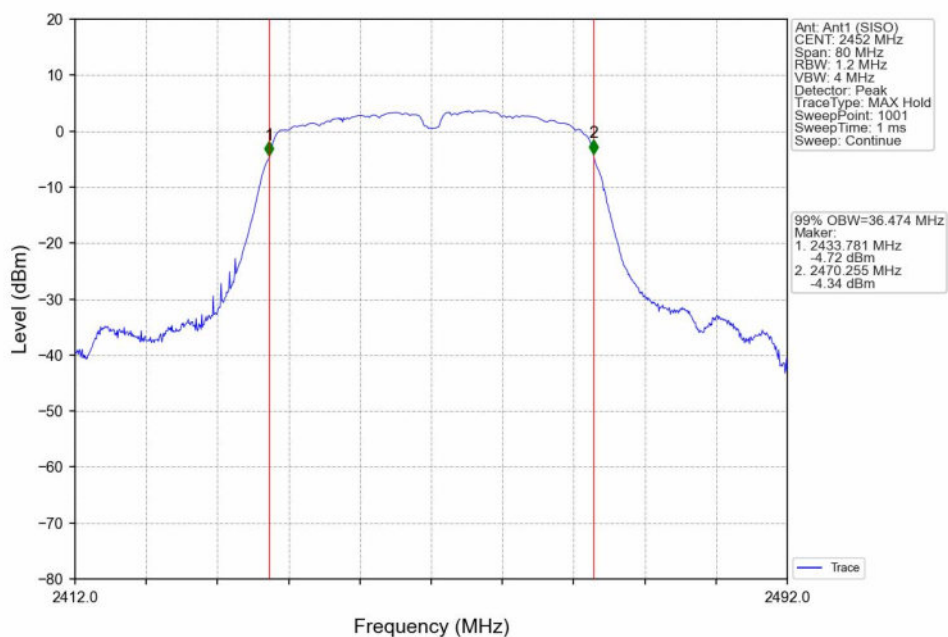
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



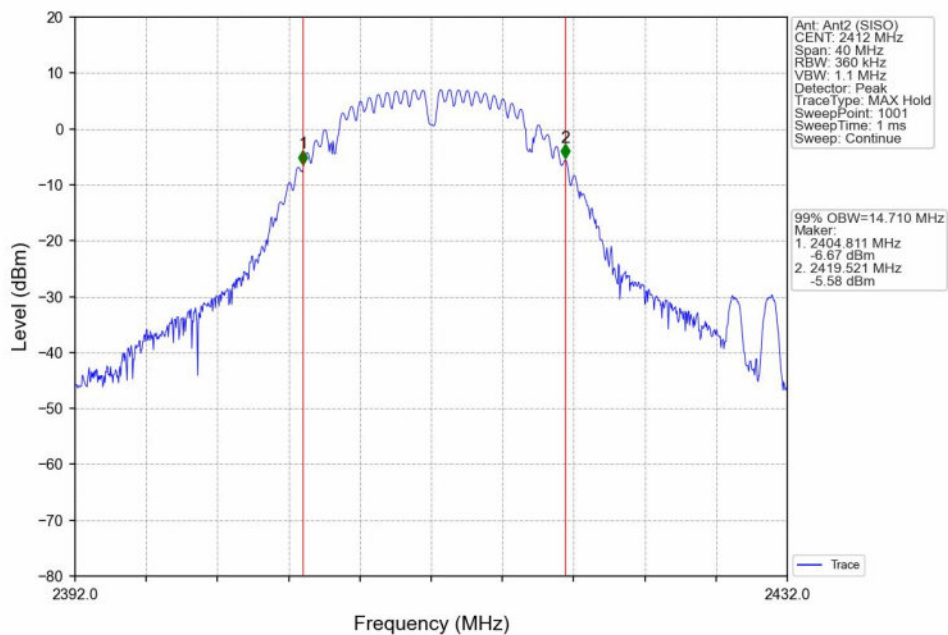
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



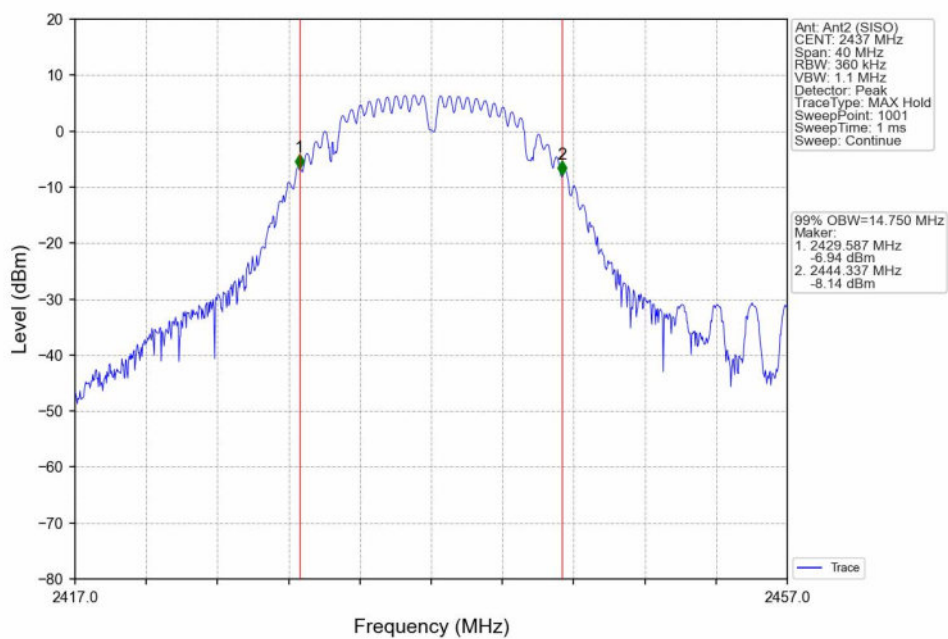
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



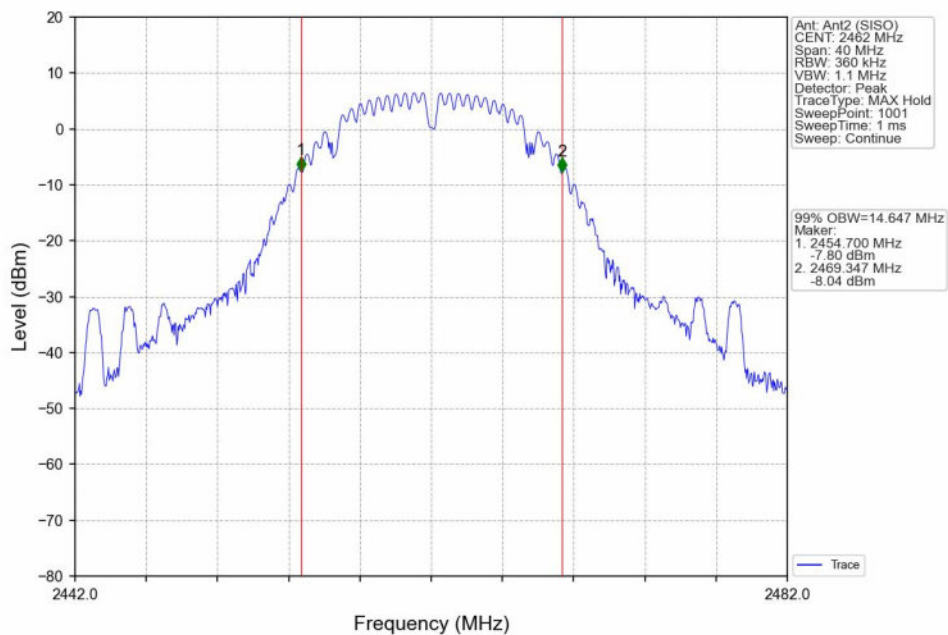
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



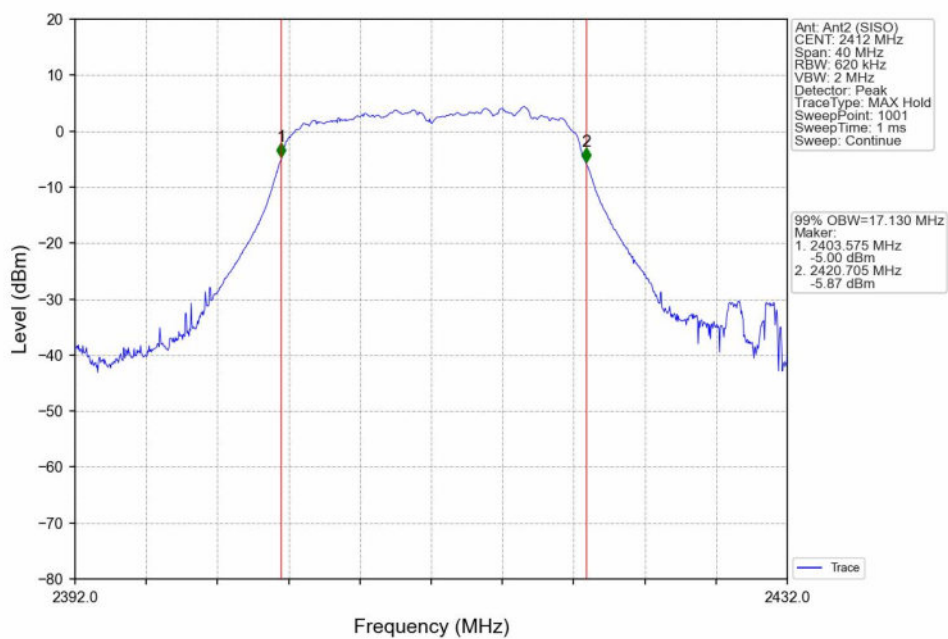
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



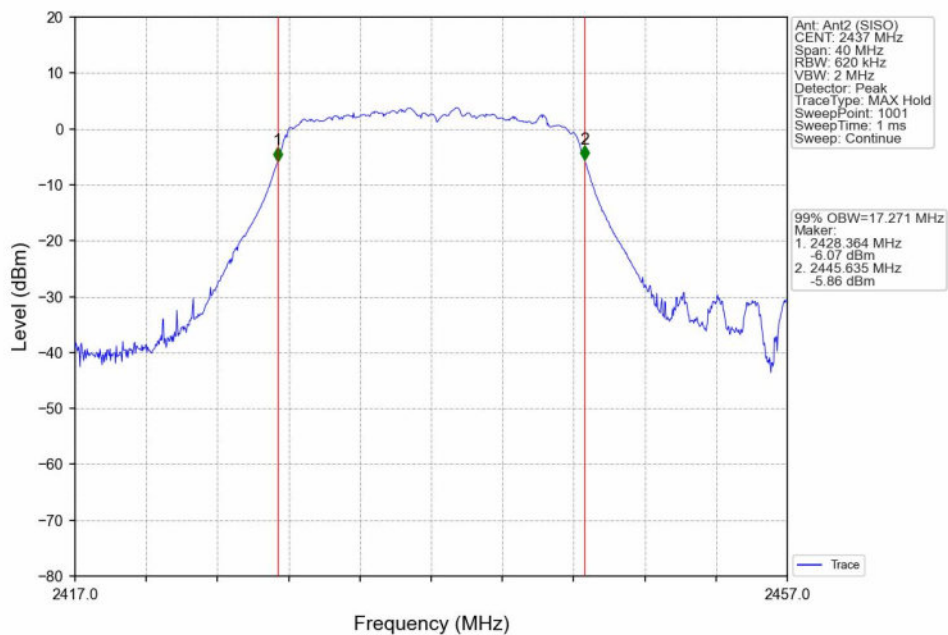
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



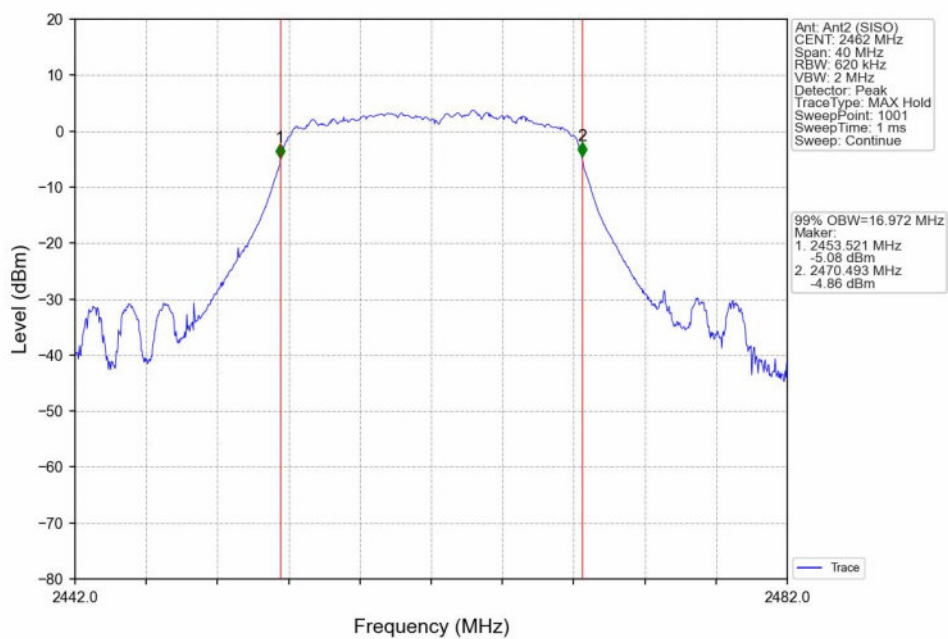
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



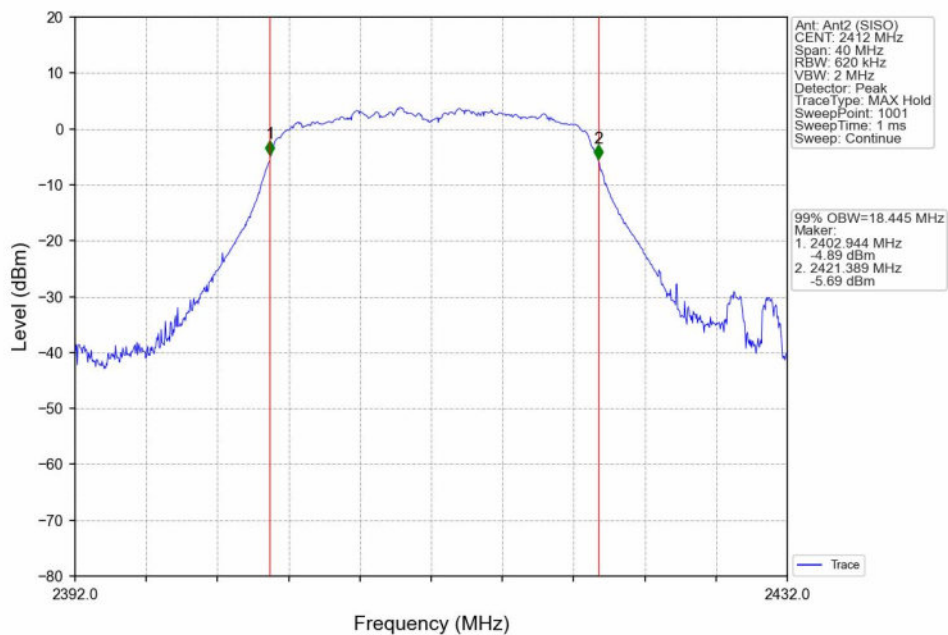
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



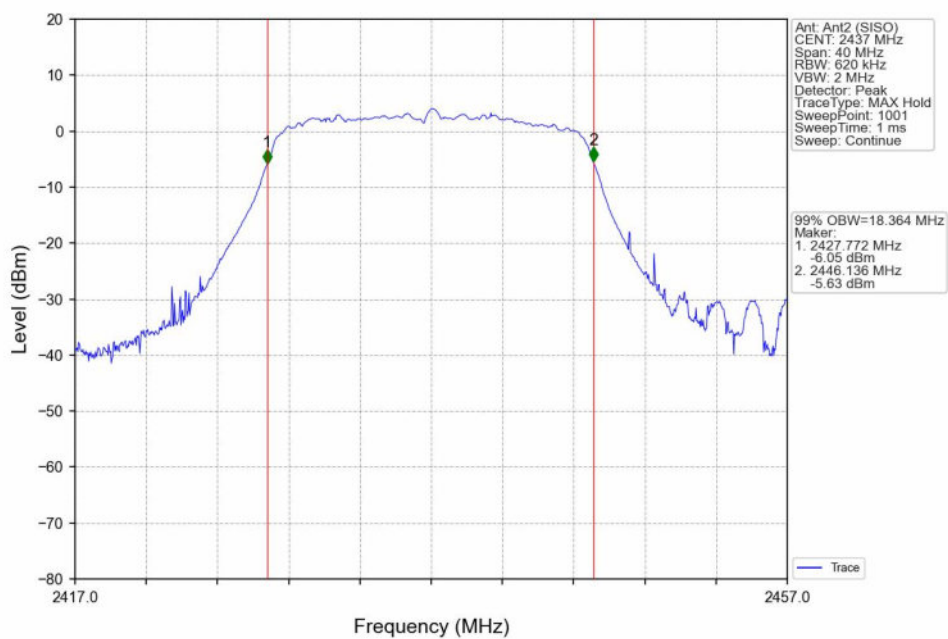
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



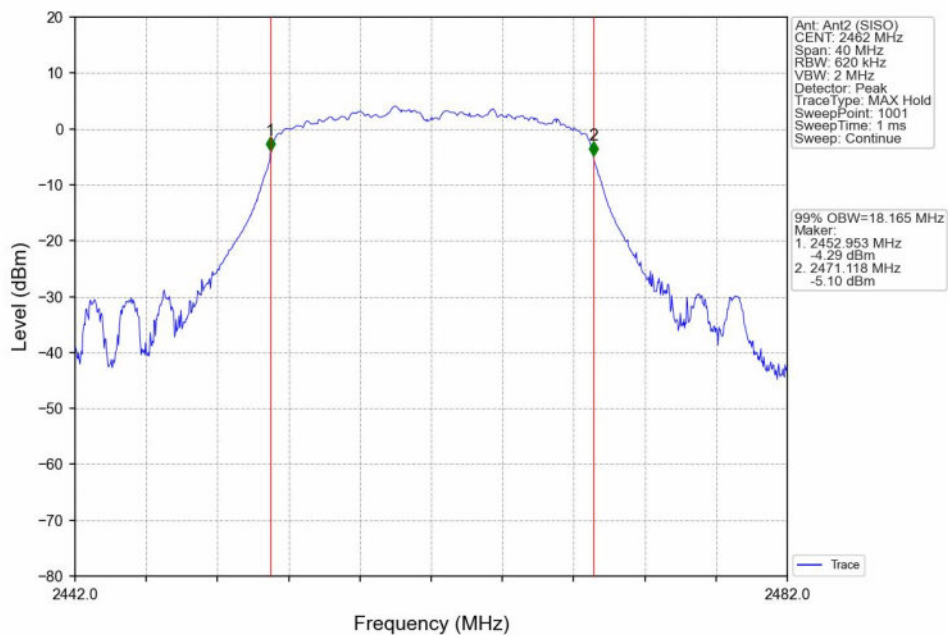
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



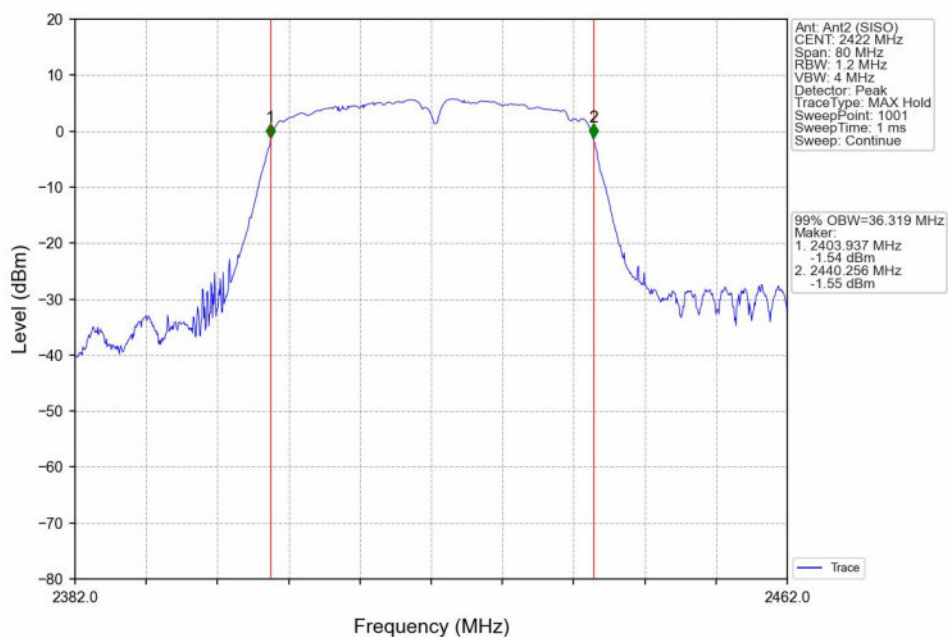
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



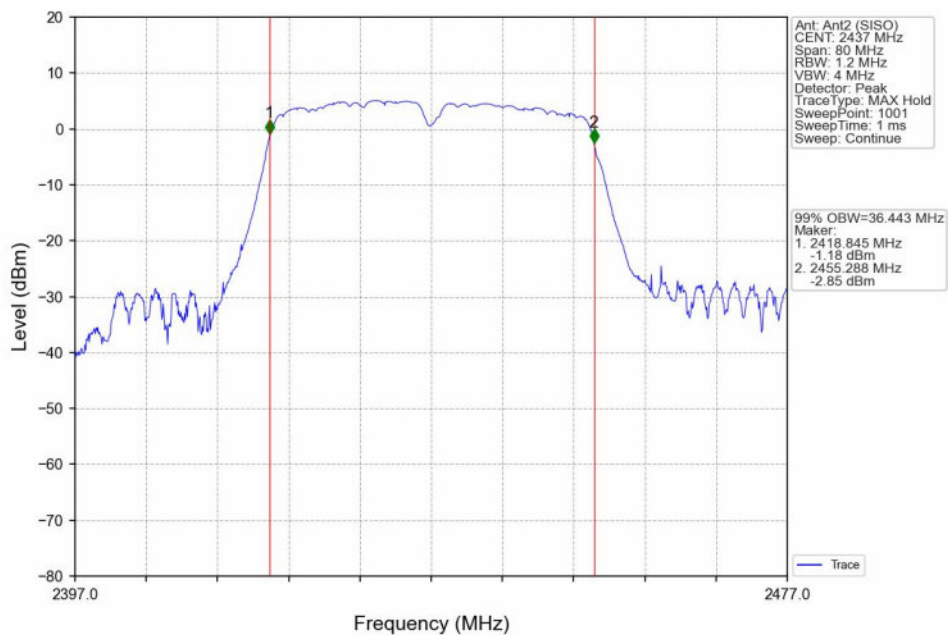
802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



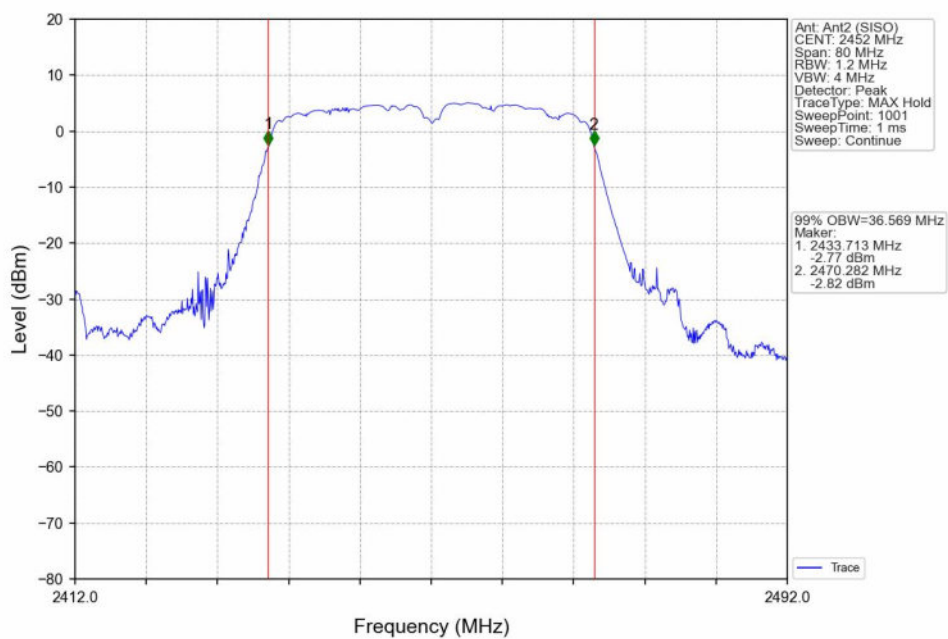
802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



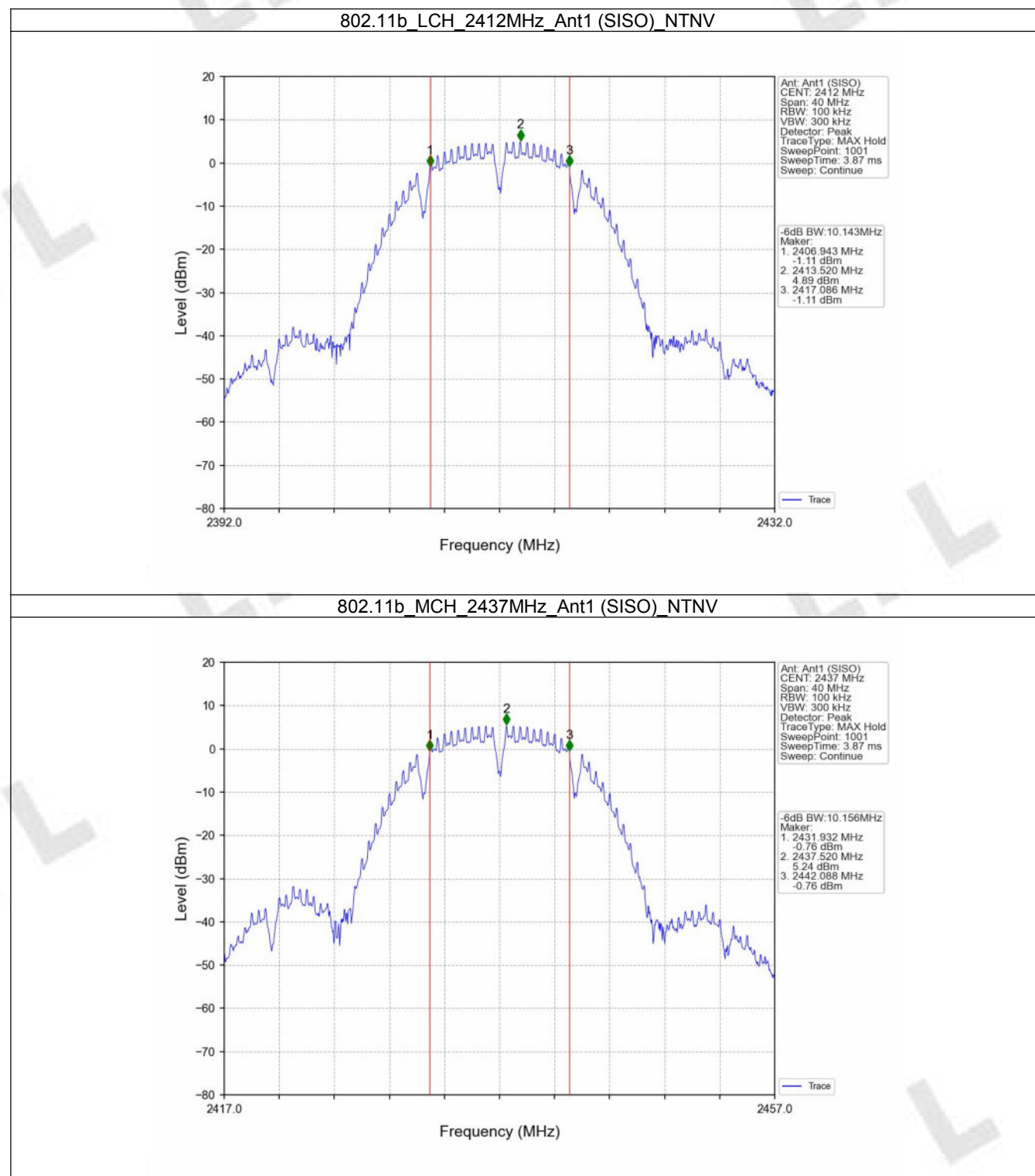
1.2 6dB BW

1.2.1 Test Result

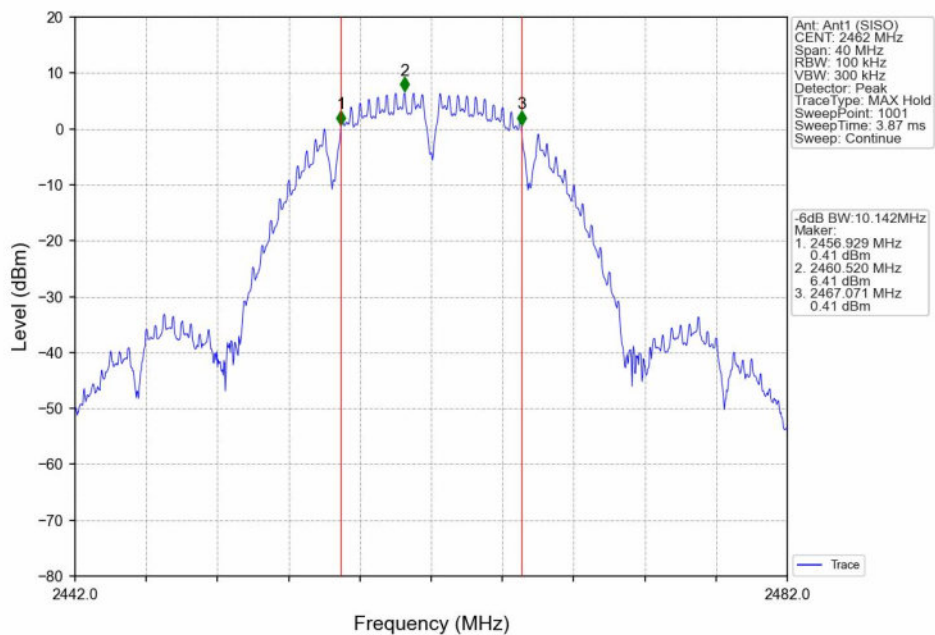
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.143	≥ 0.5	Pass
		2437	1	10.156	≥ 0.5	Pass
		2462	1	10.142	≥ 0.5	Pass
802.11g	SISO	2412	1	15.504	≥ 0.5	Pass
		2437	1	15.809	≥ 0.5	Pass
		2462	1	15.651	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.508	≥ 0.5	Pass
		2437	1	16.888	≥ 0.5	Pass
		2462	1	15.729	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.168	≥ 0.5	Pass
		2437	1	35.587	≥ 0.5	Pass
		2452	1	35.161	≥ 0.5	Pass

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	2	10.152	≥ 0.5	Pass
		2437	2	10.148	≥ 0.5	Pass
		2462	2	10.144	≥ 0.5	Pass
802.11g	SISO	2412	2	15.929	≥ 0.5	Pass
		2437	2	15.967	≥ 0.5	Pass
		2462	2	15.853	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	2	15.478	≥ 0.5	Pass
		2437	2	16.157	≥ 0.5	Pass
		2462	2	15.184	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	2	35.145	≥ 0.5	Pass
		2437	2	35.195	≥ 0.5	Pass
		2452	2	35.195	≥ 0.5	Pass

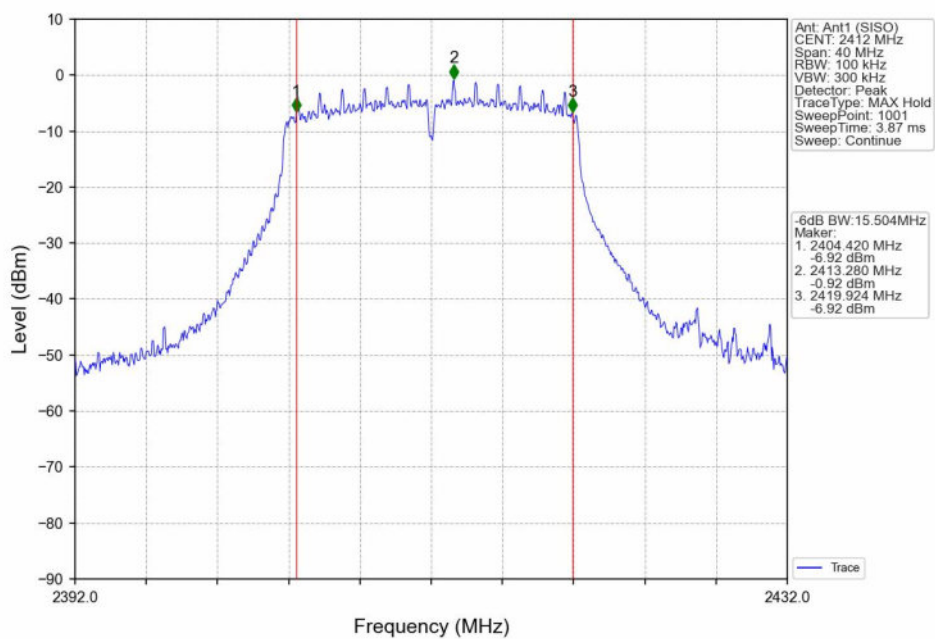
1.2.2 Test Graph



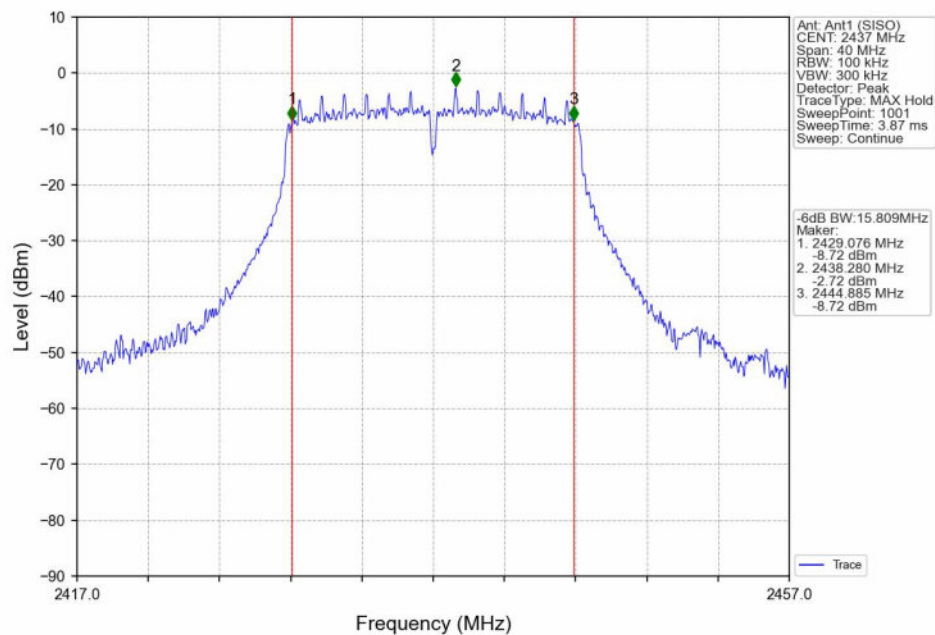
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



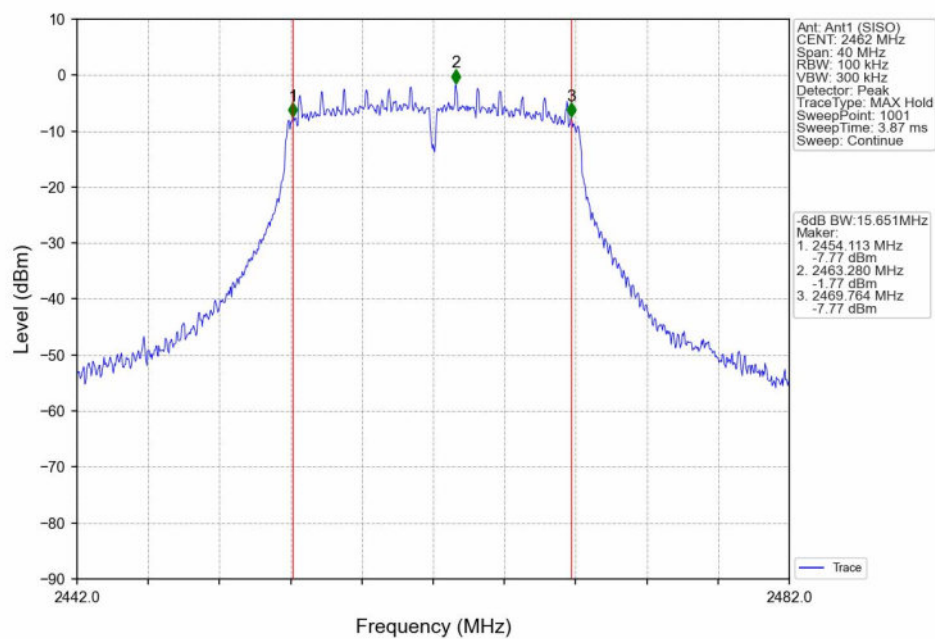
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



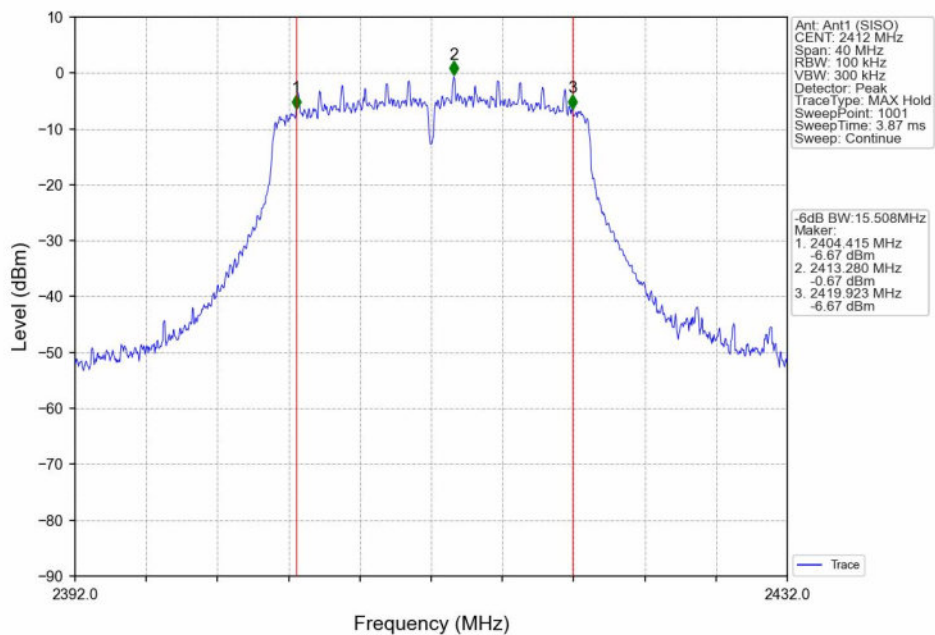
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



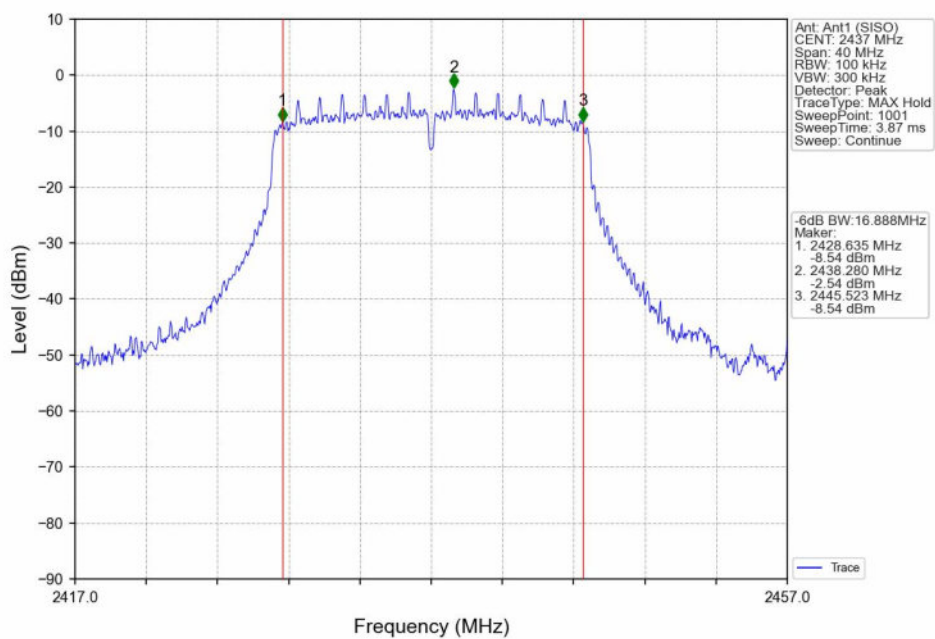
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



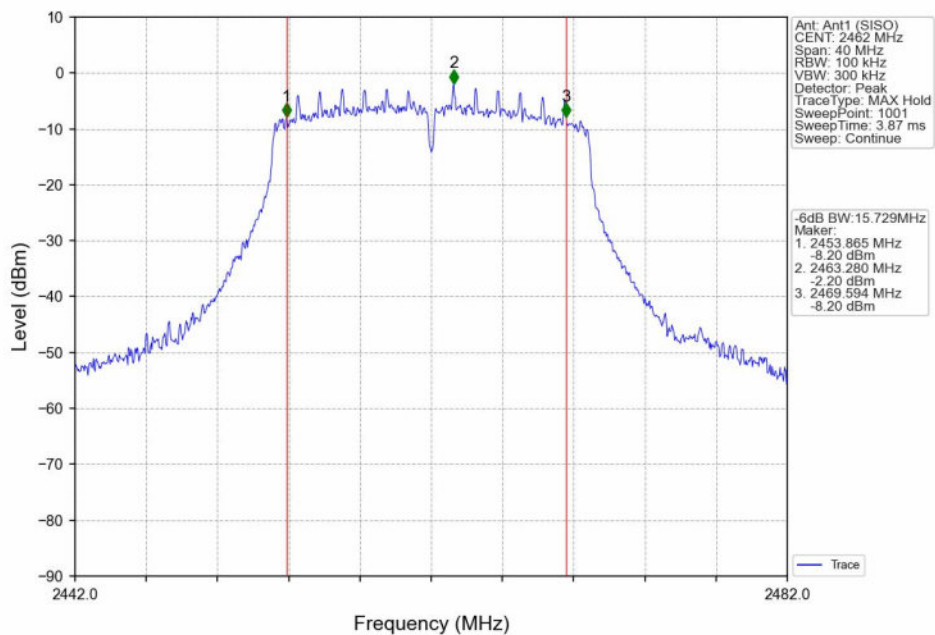
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



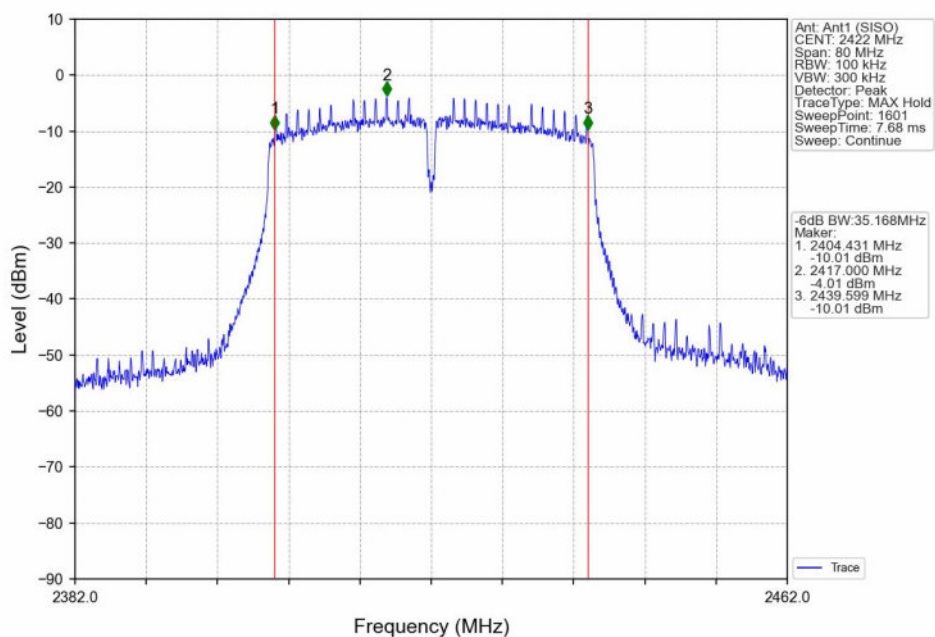
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



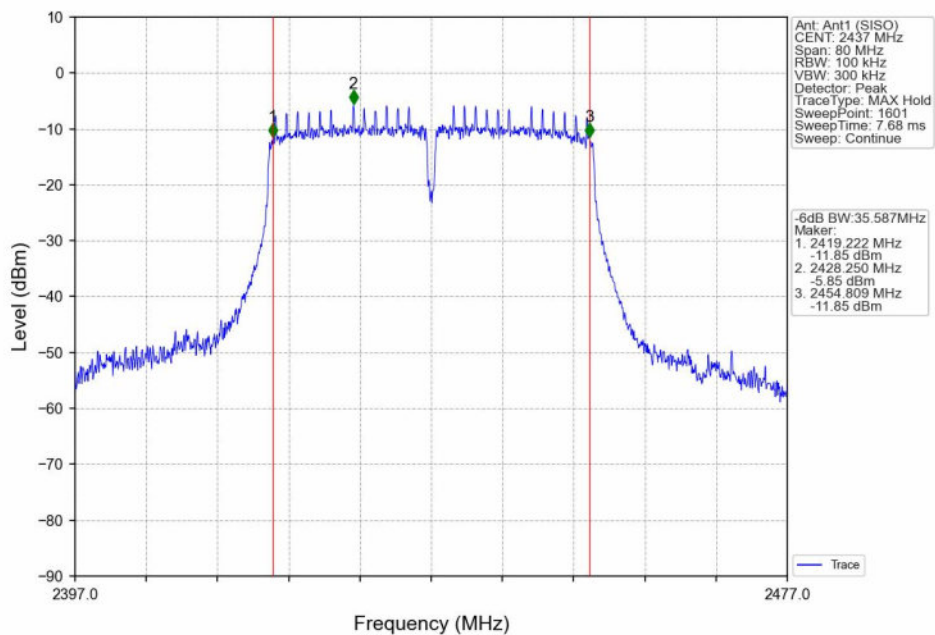
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



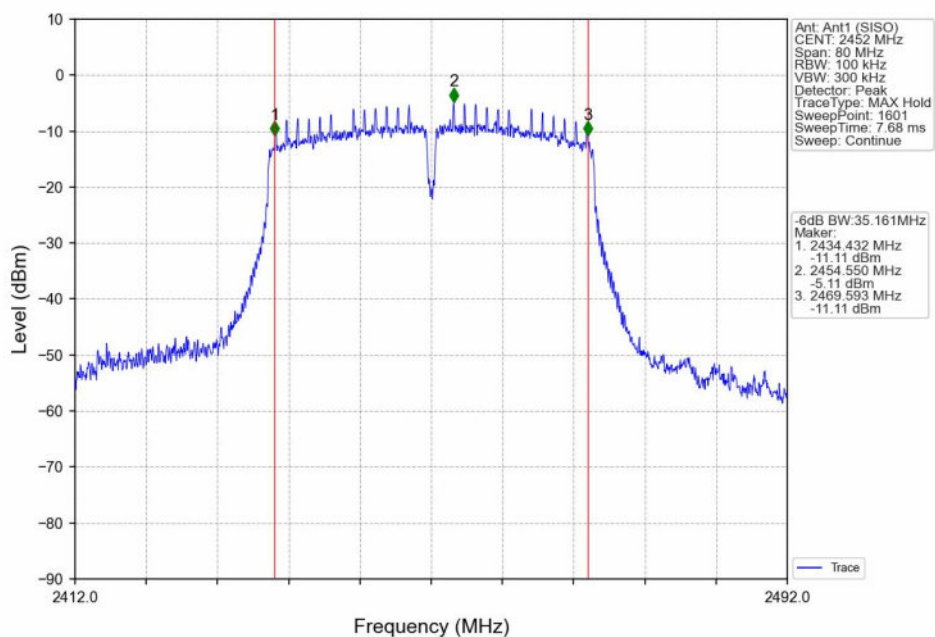
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



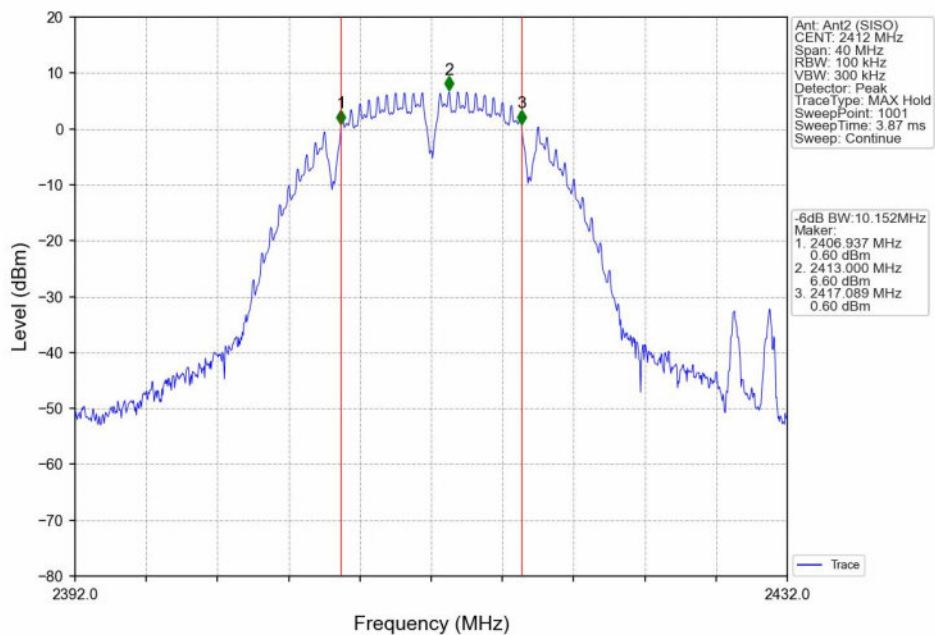
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



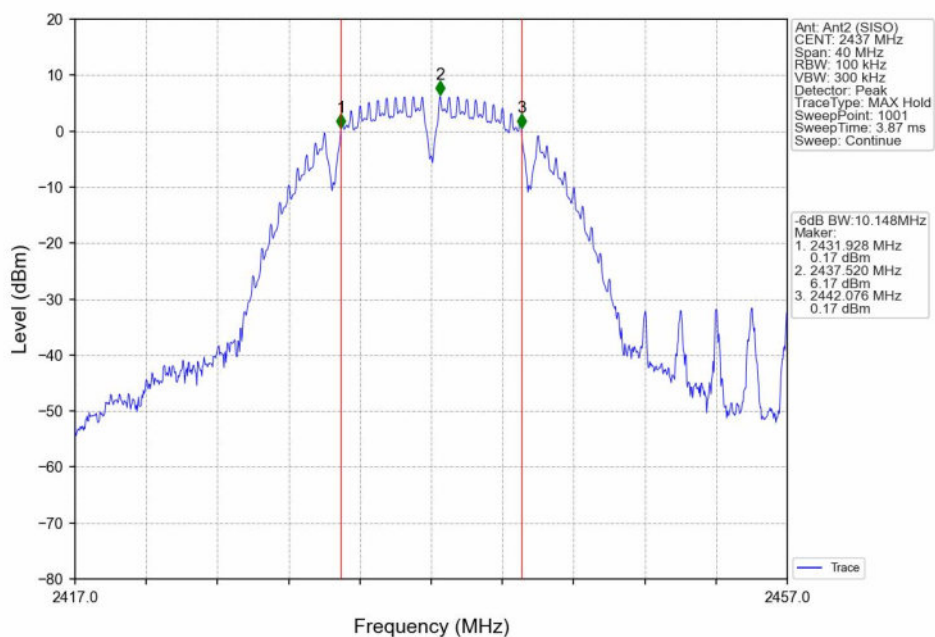
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



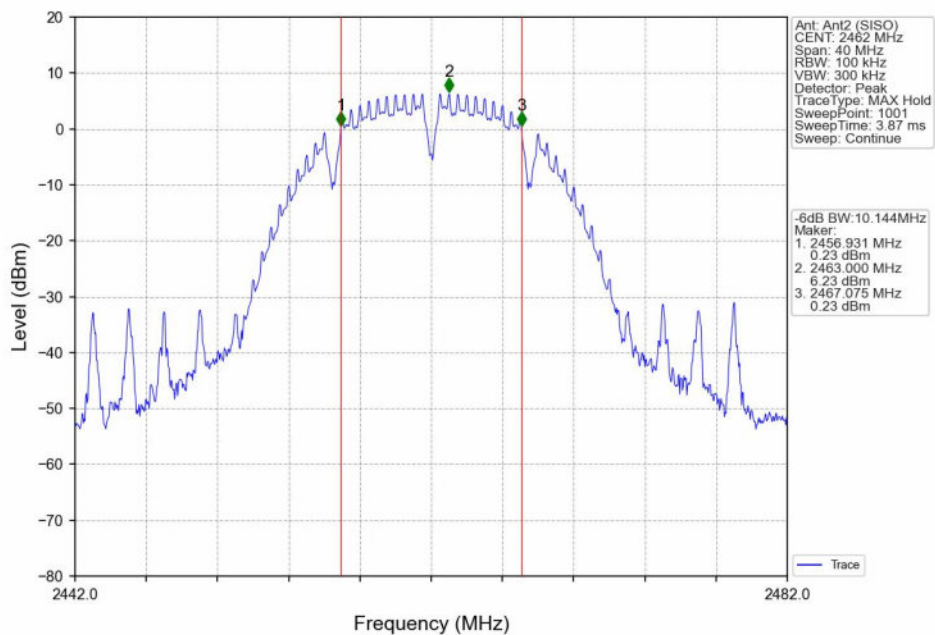
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



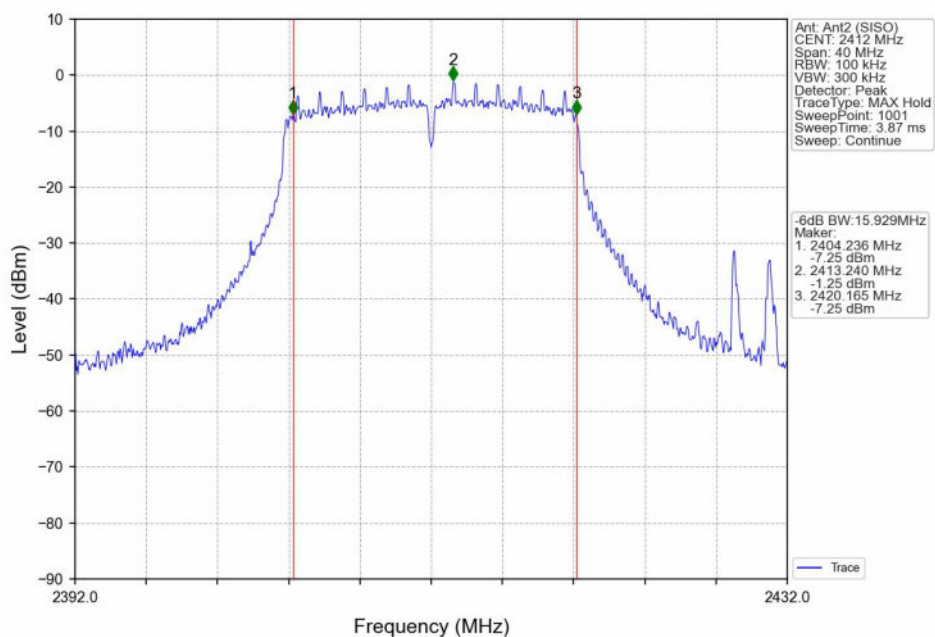
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



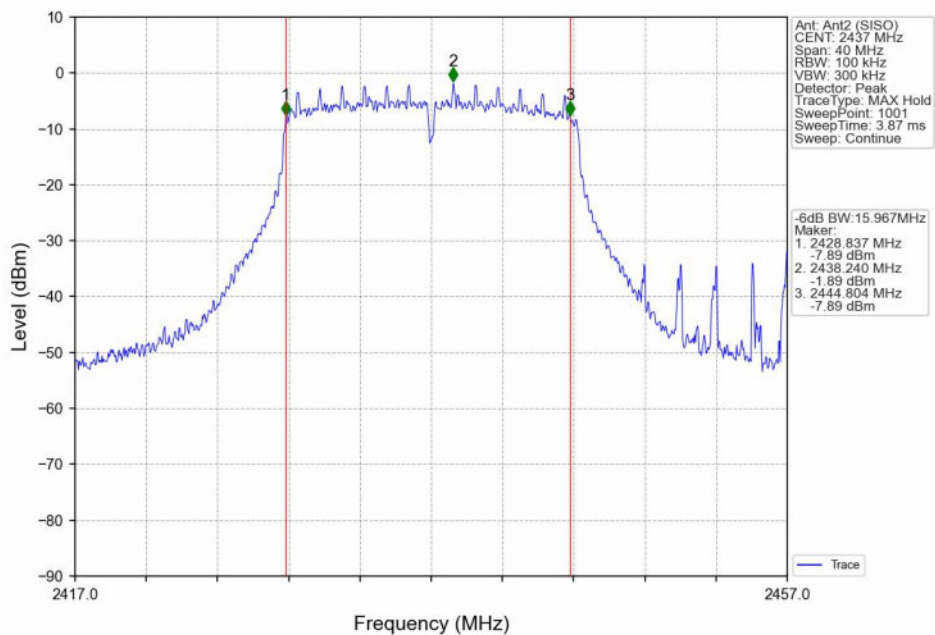
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



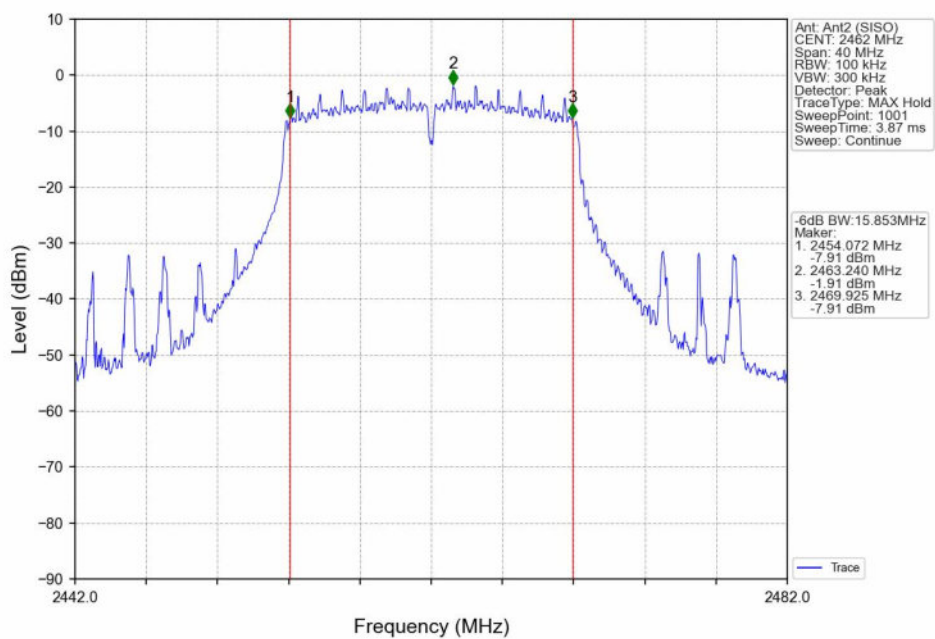
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



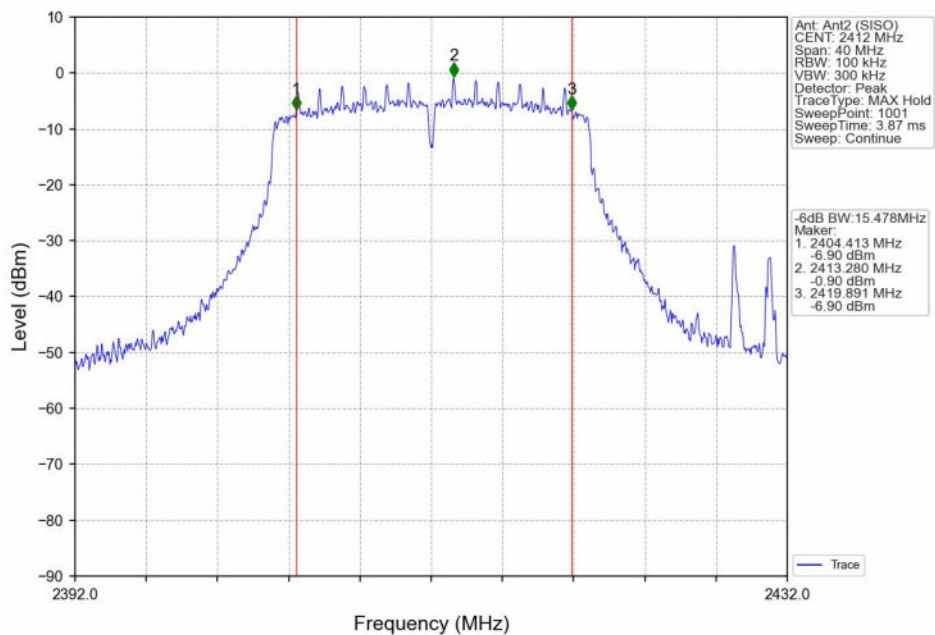
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



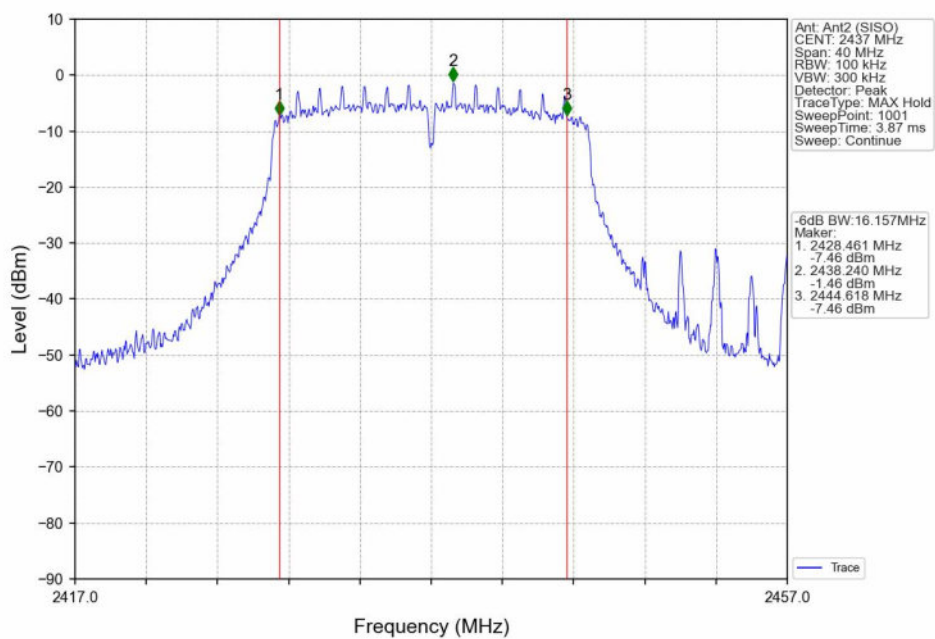
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



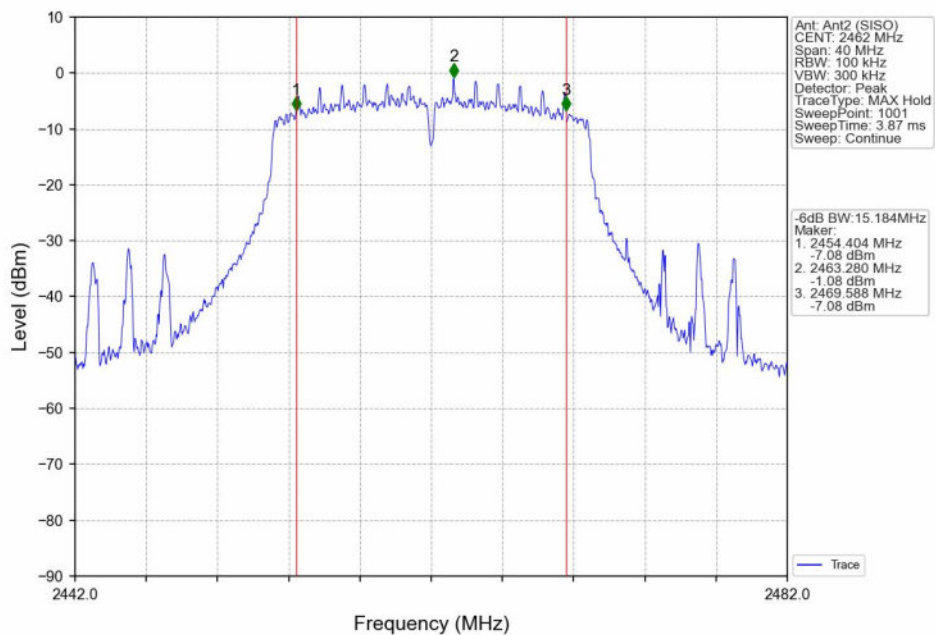
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



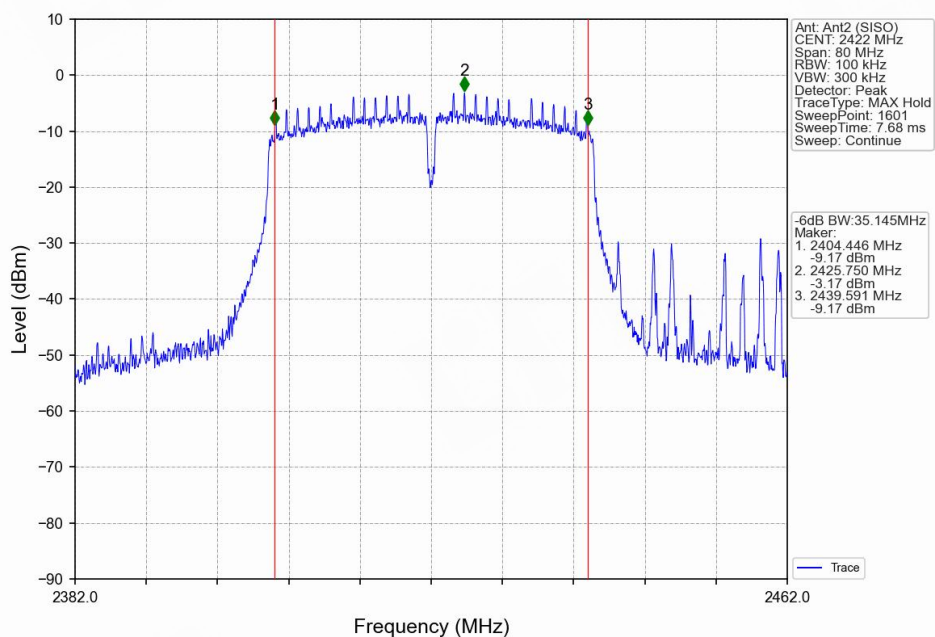
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



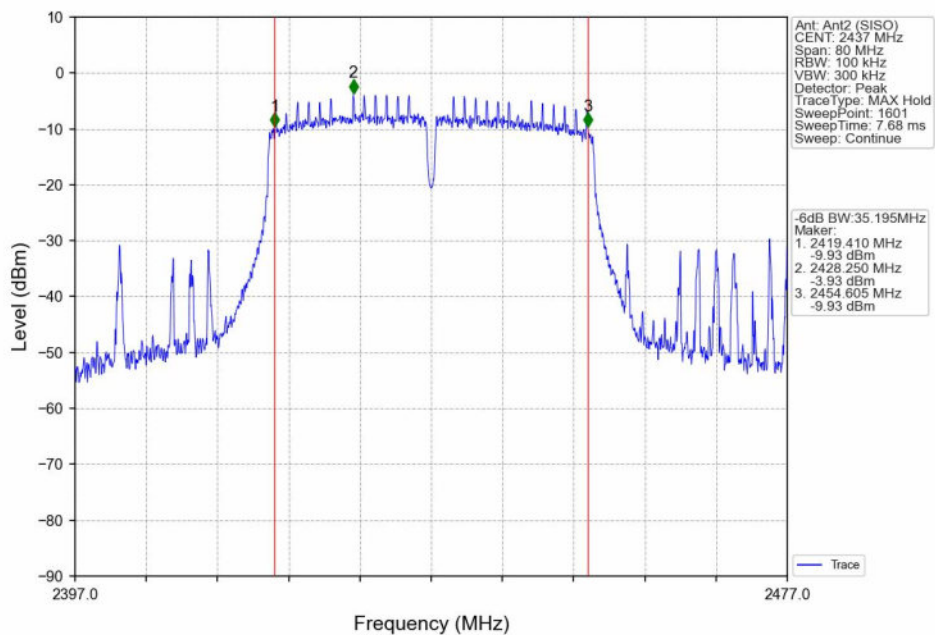
802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



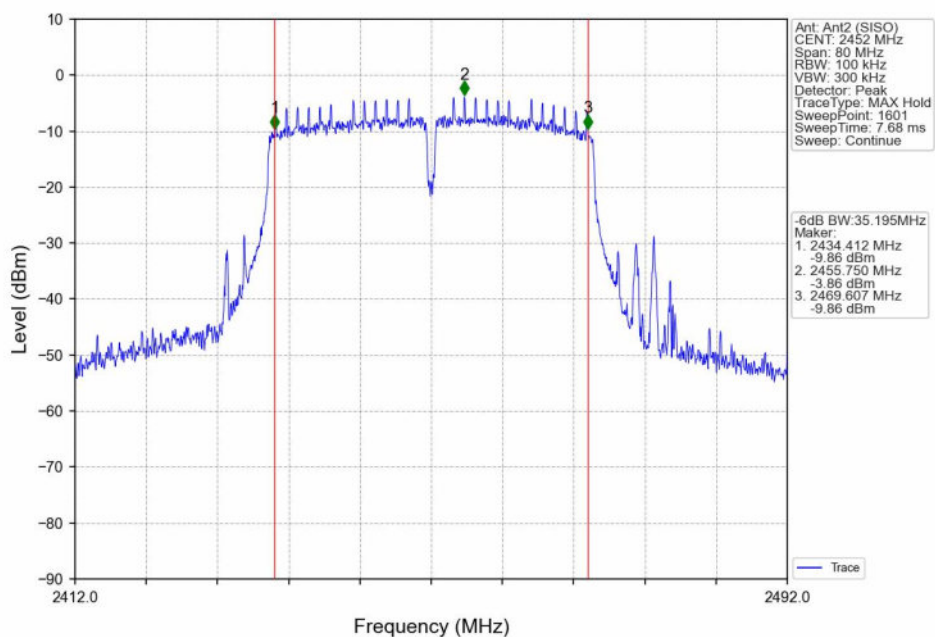
802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV

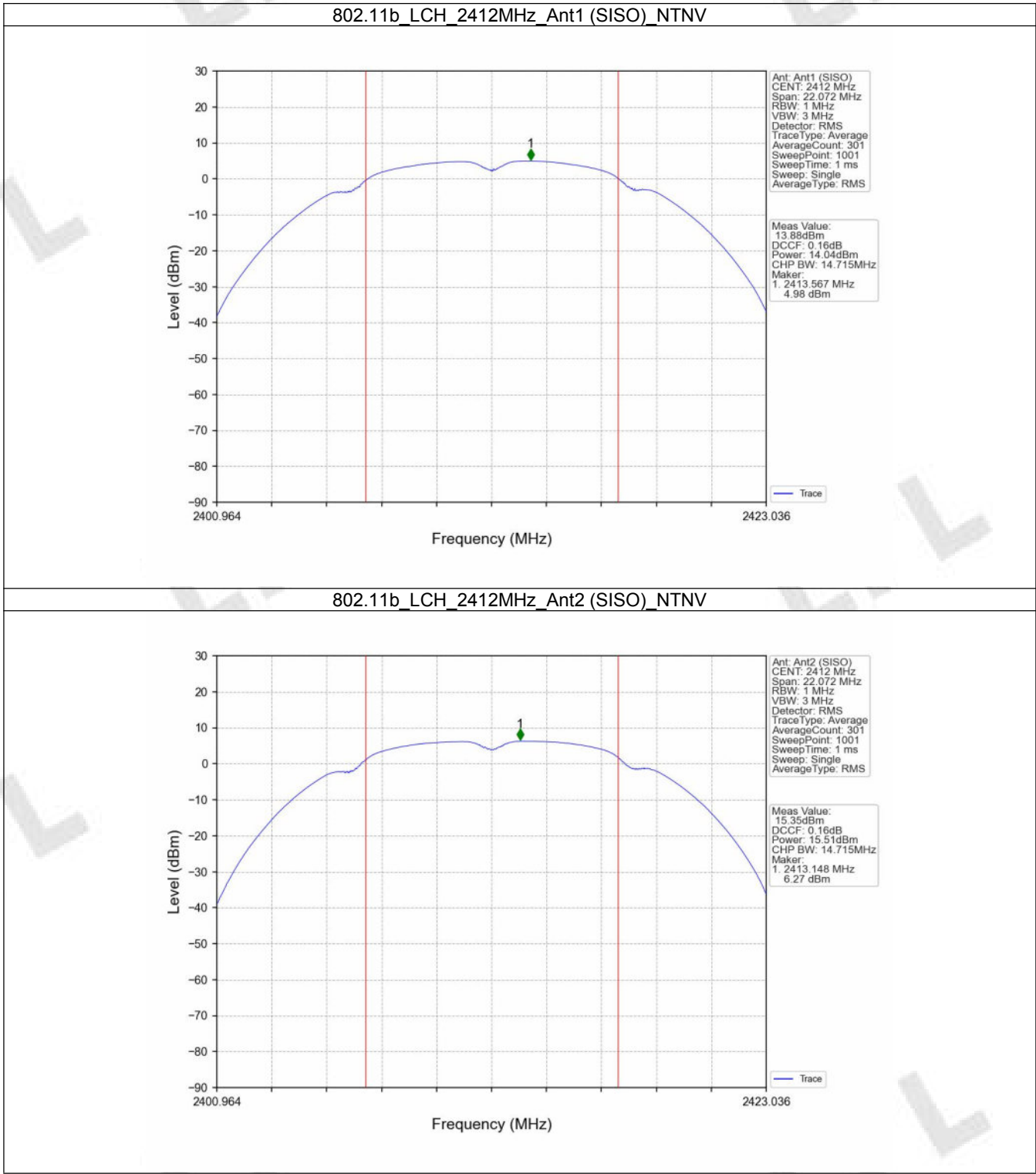


2.1.1 Test Result

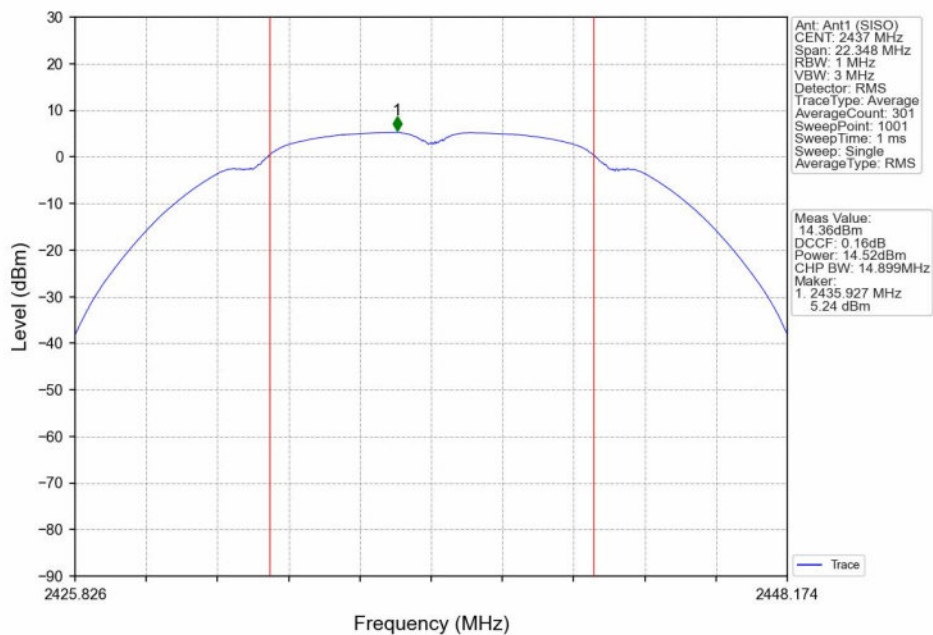
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	14.04	15.51	/	<=30	Pass
		2437	14.52	14.70	/	<=30	Pass
		2462	15.51	14.86	/	<=30	Pass
802.11g	SISO	2412	9.17	8.52	/	<=30	Pass
		2437	7.75	8.52	/	<=30	Pass
		2462	8.64	8.50	/	<=30	Pass
802.11n (HT20)	SISO	2412	9.71	9.15	/	<=30	Pass
		2437	8.02	8.86	/	<=30	Pass
		2462	8.31	8.68	/	<=30	Pass
802.11n (HT40)	SISO	2422	9.41	9.12	/	<=30	Pass
		2437	8.05	8.68	/	<=30	Pass
		2452	8.12	8.48	/	<=30	Pass
802.11n (HT20)	MIMO	2412	9.52	8.38	12.00	<=30	Pass
		2437	7.80	8.12	10.97	<=30	Pass
		2462	7.63	8.00	10.83	<=30	Pass
802.11n (HT40)	MIMO	2422	9.00	8.72	11.87	<=30	Pass
		2437	7.54	8.33	10.96	<=30	Pass
		2452	7.55	8.07	10.83	<=30	Pass

Note2: Directional gain= $10\log[(10^{G1/20}+10^{G2/20}+\dots+10^{GN/20})^2/N_{ANT}]$ dBi [Note the “20” s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

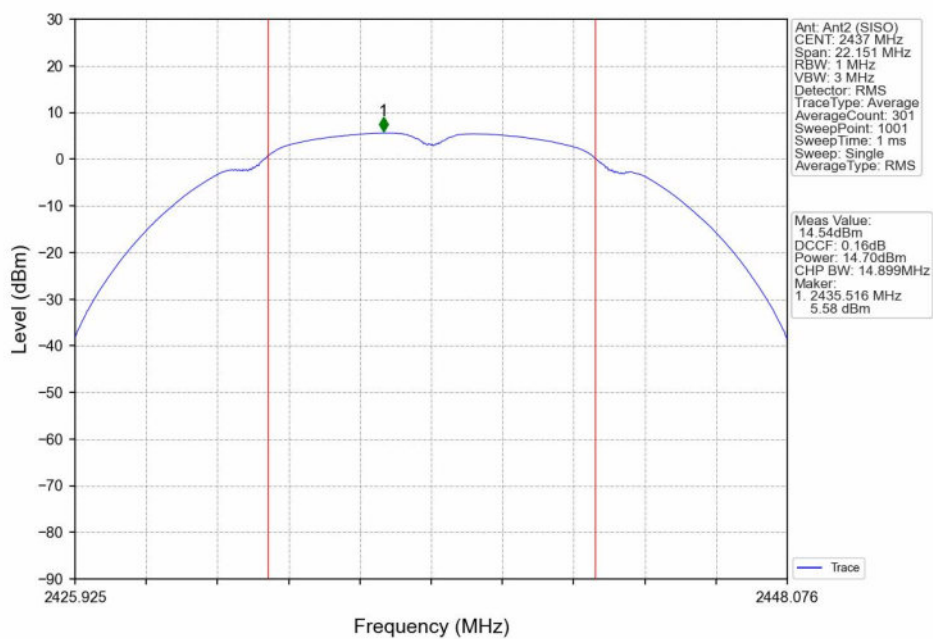
2.1.2 Test Graph



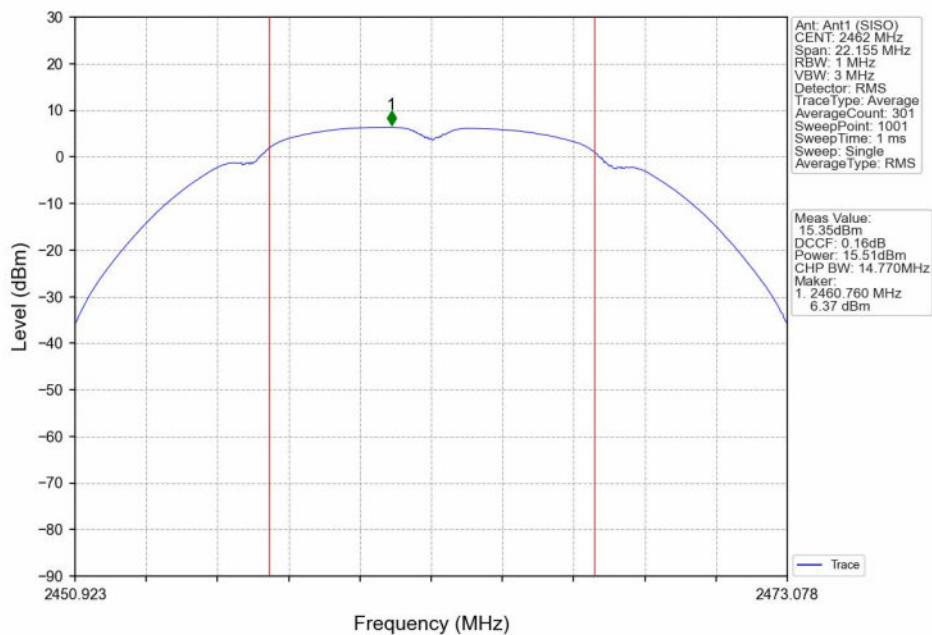
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



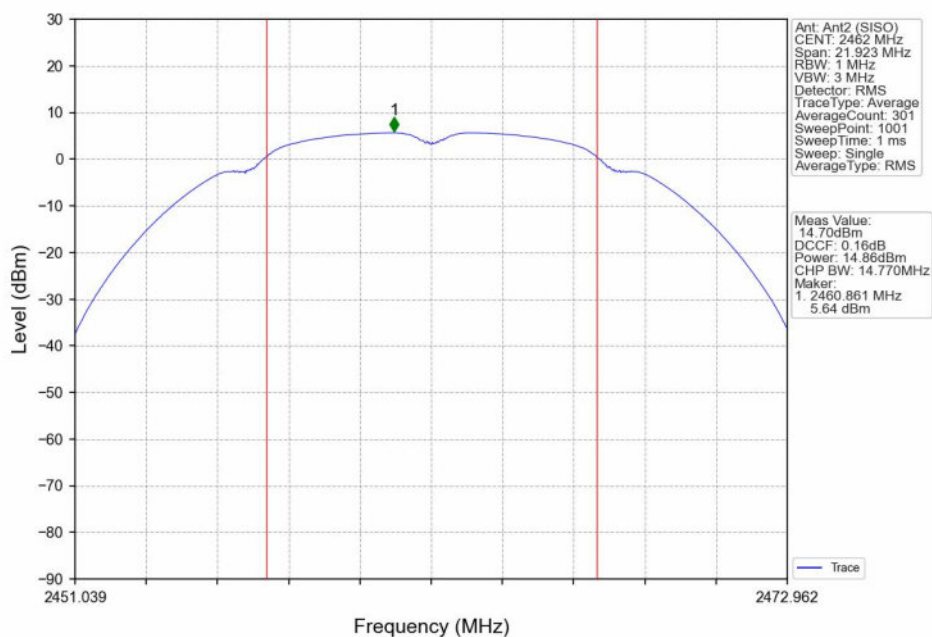
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



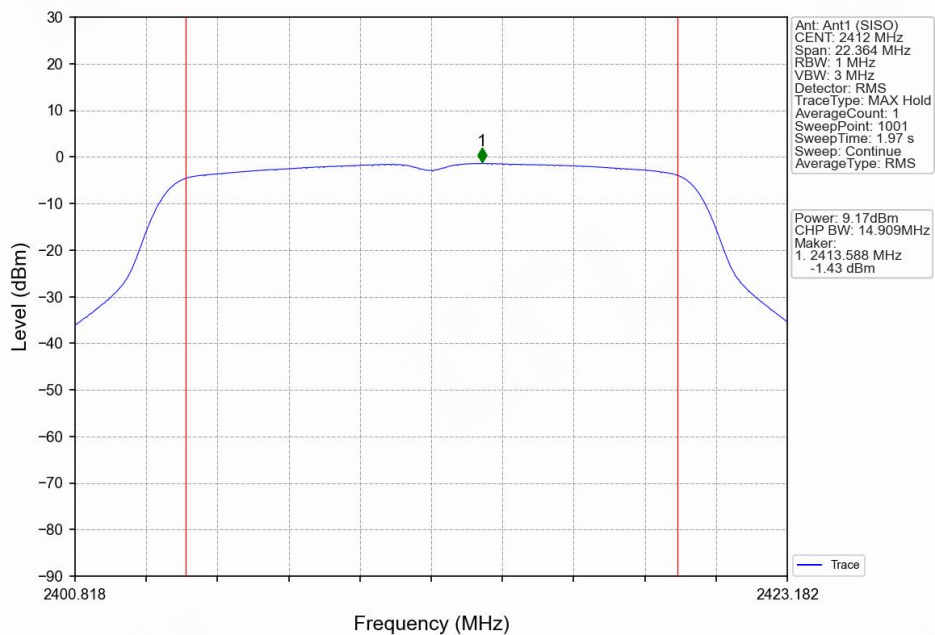
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



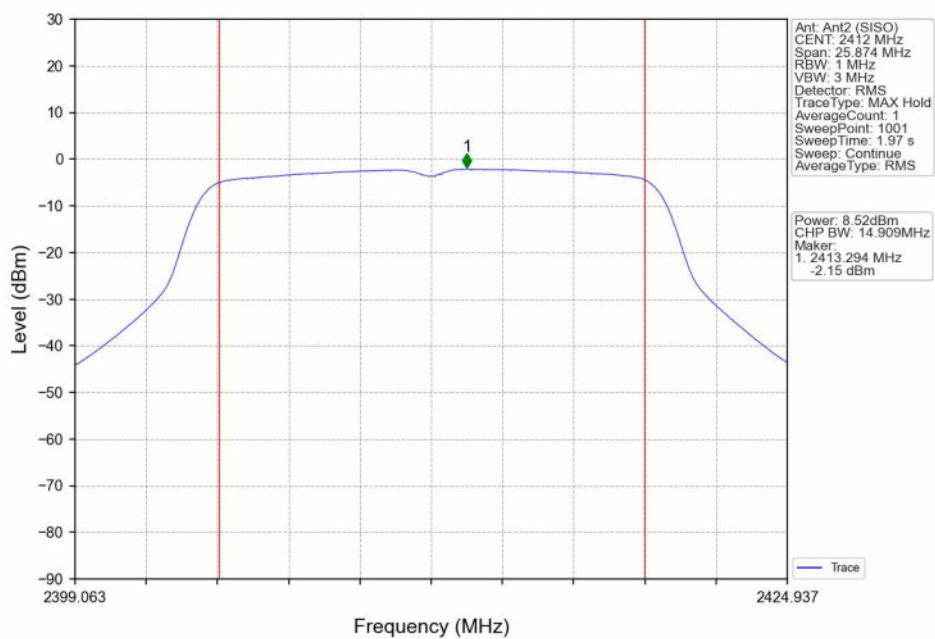
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



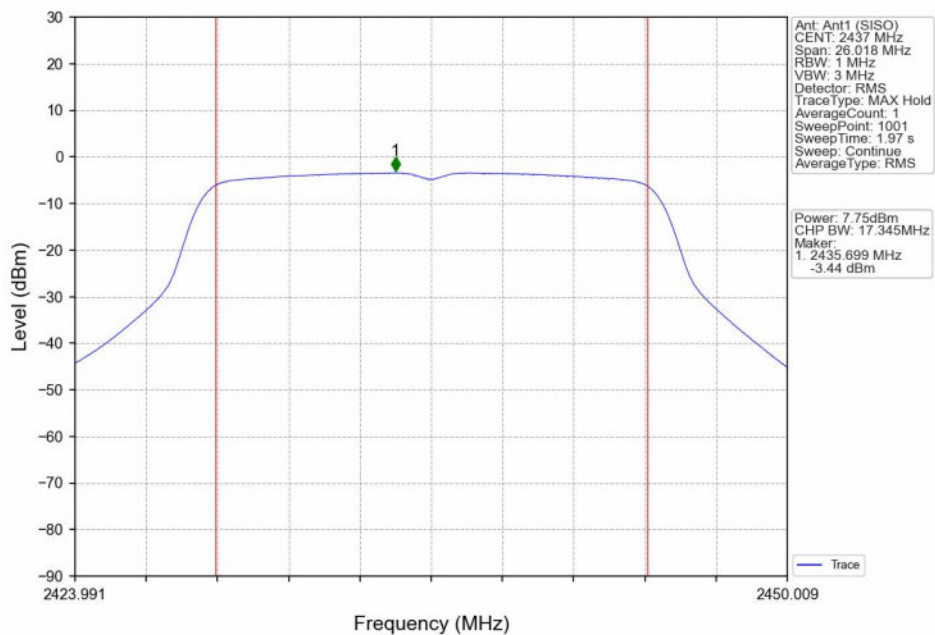
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



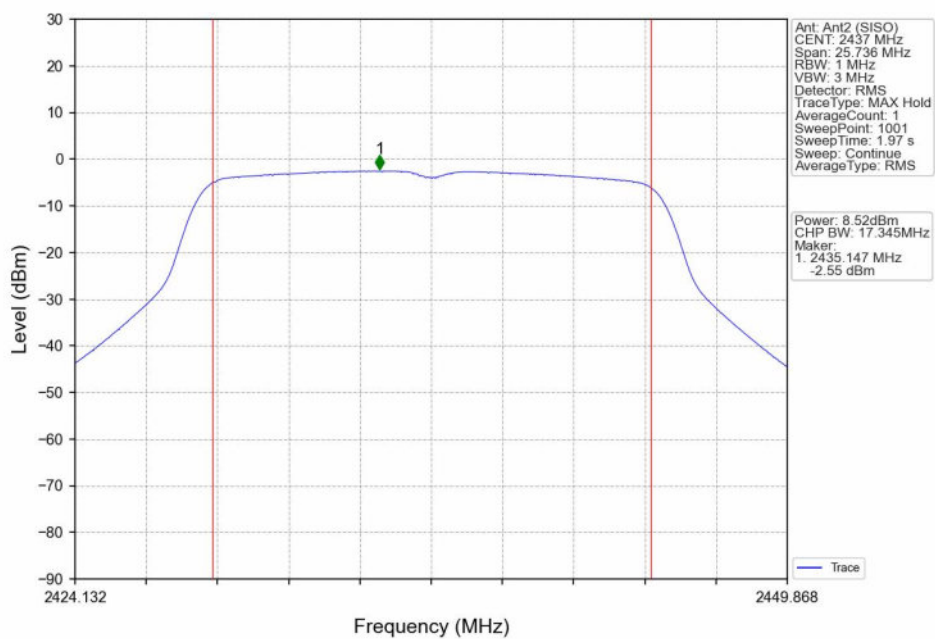
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



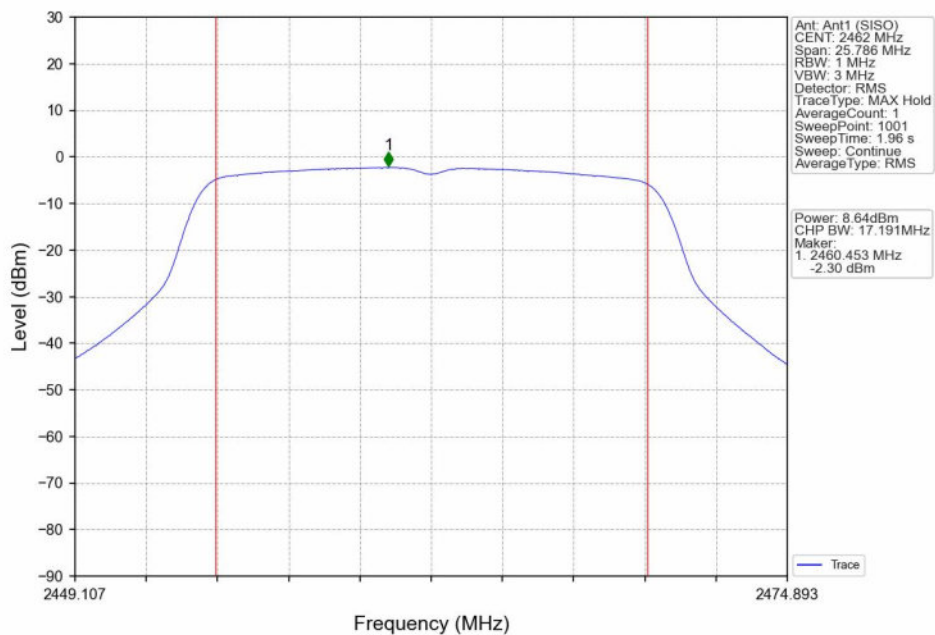
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



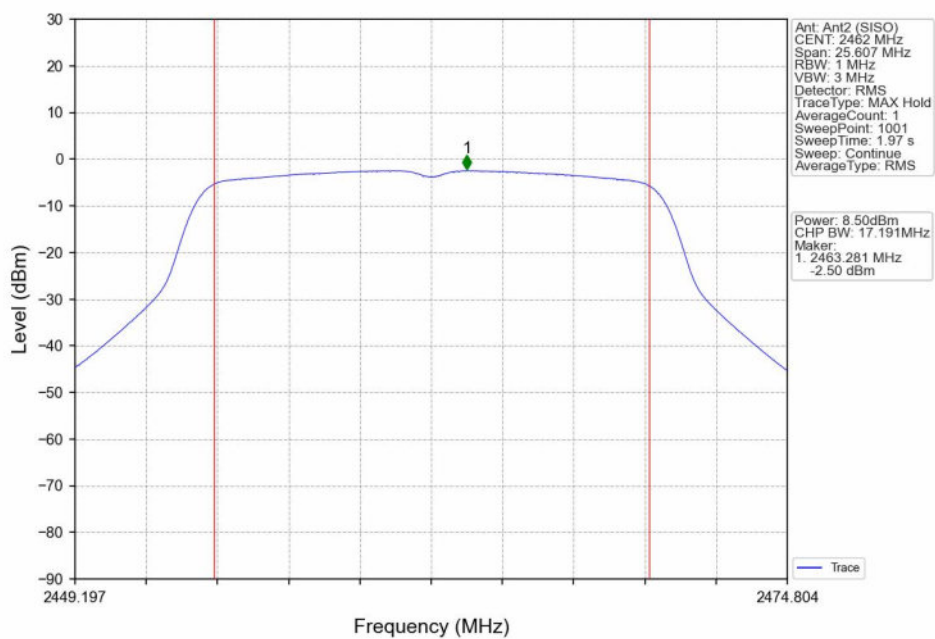
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



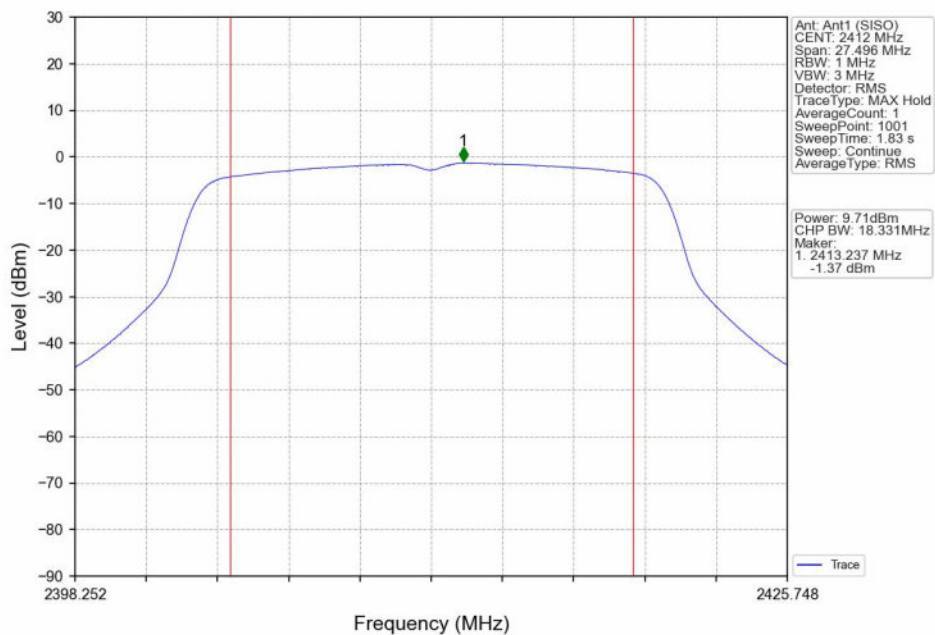
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



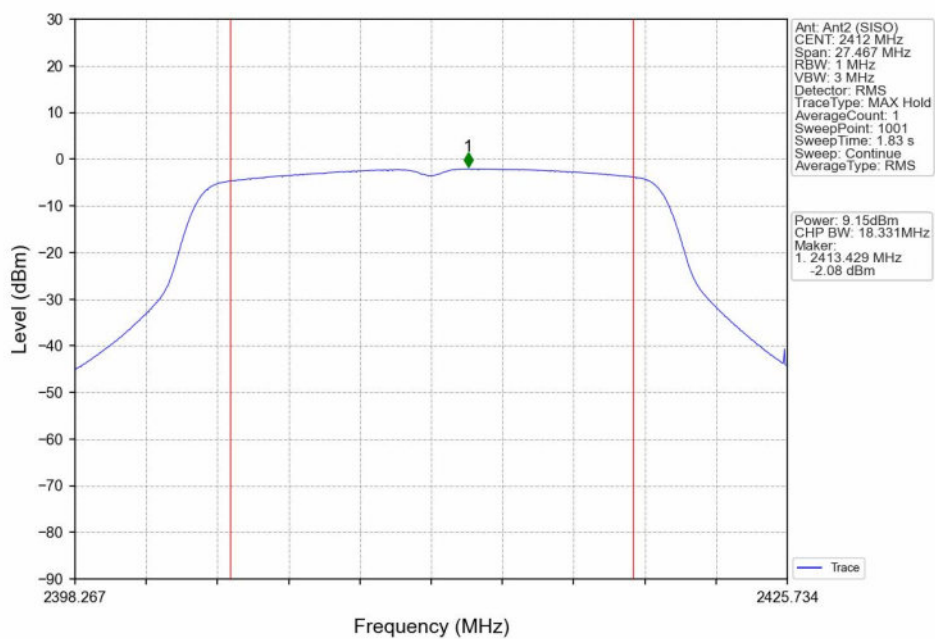
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



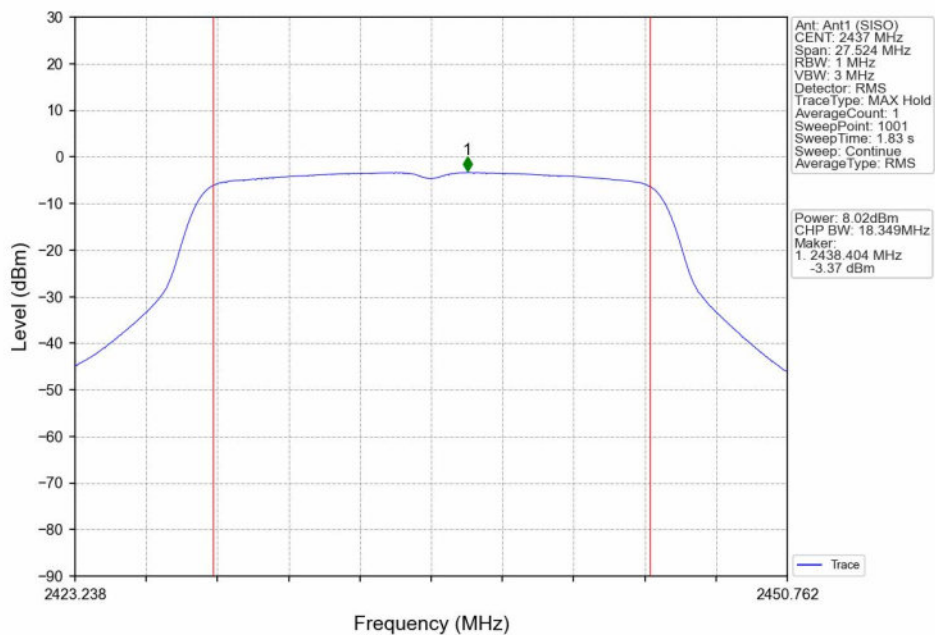
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



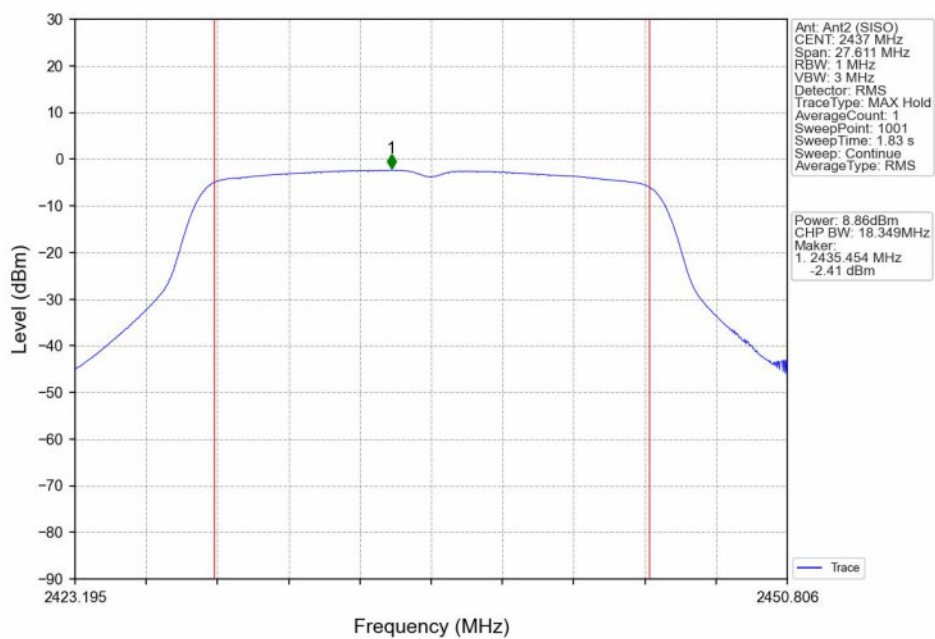
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



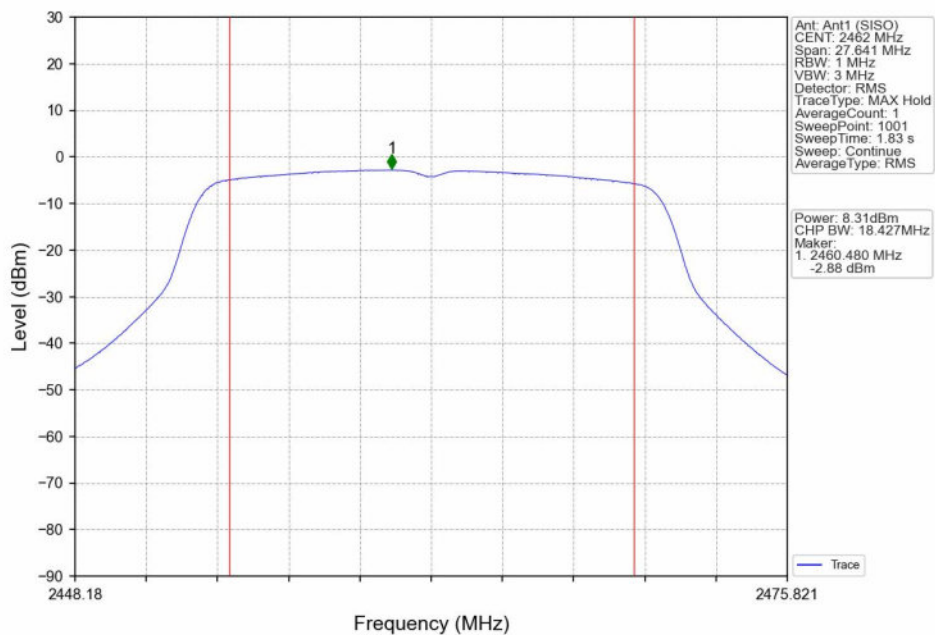
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



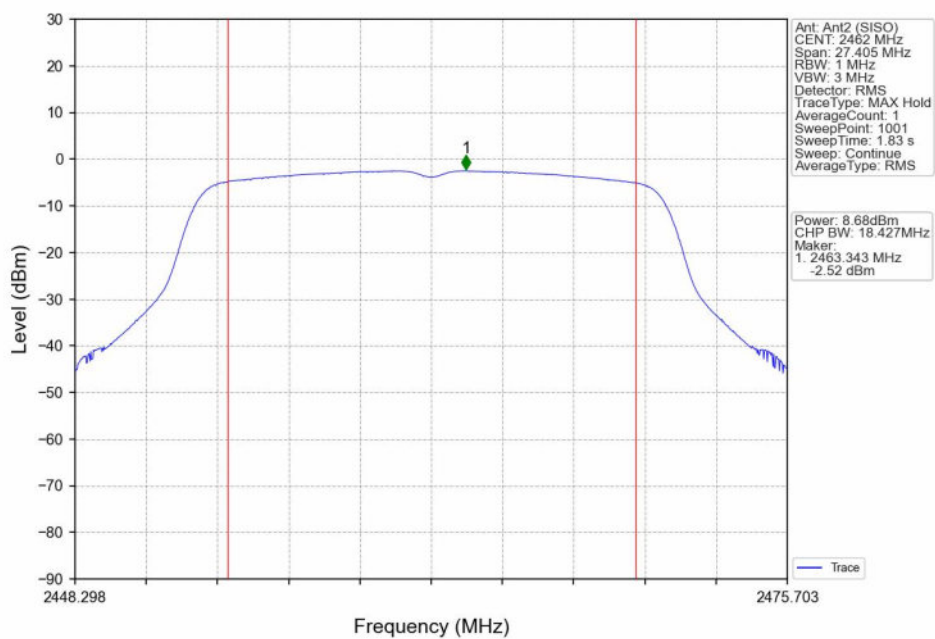
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



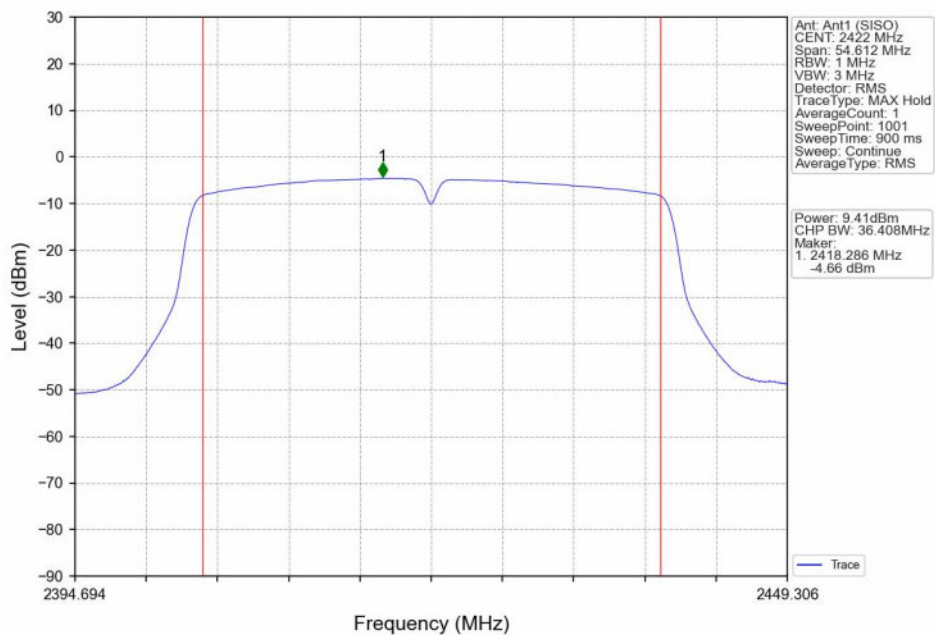
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



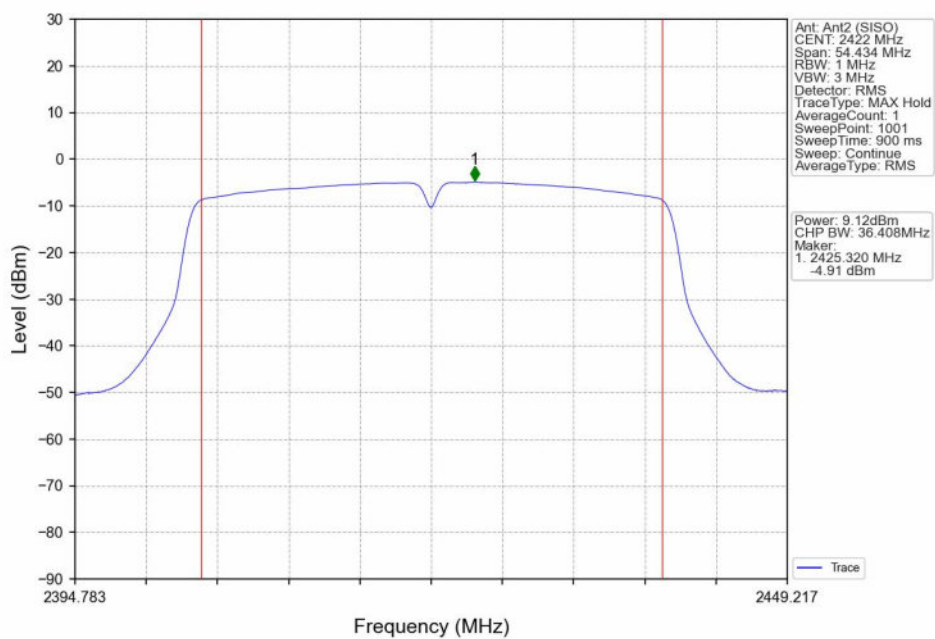
802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



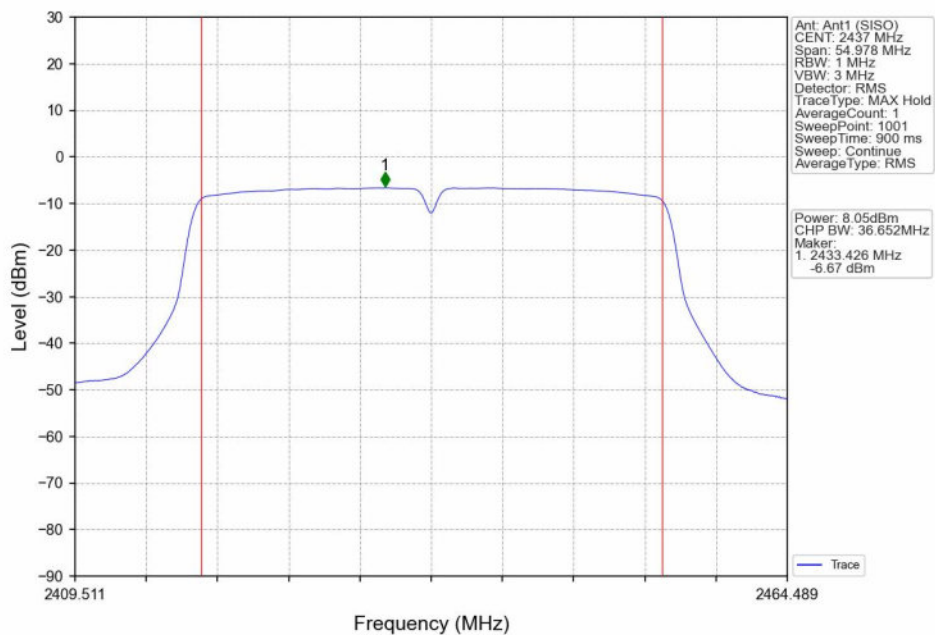
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



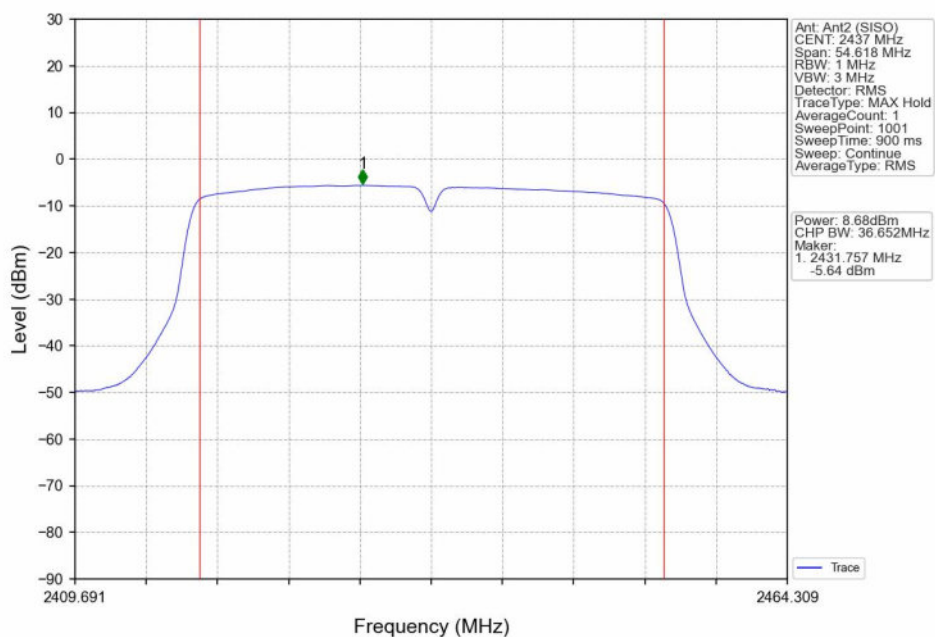
802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



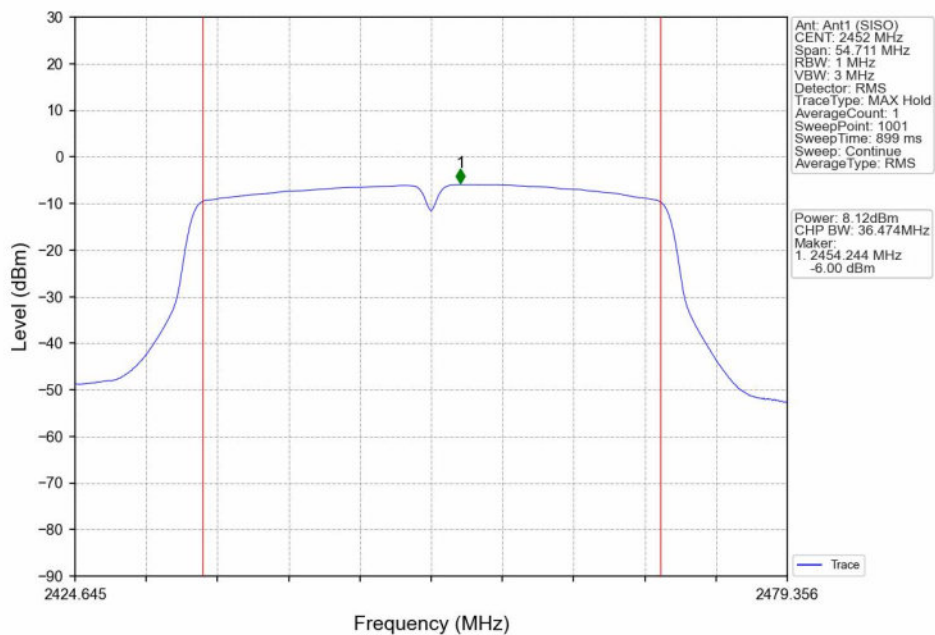
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



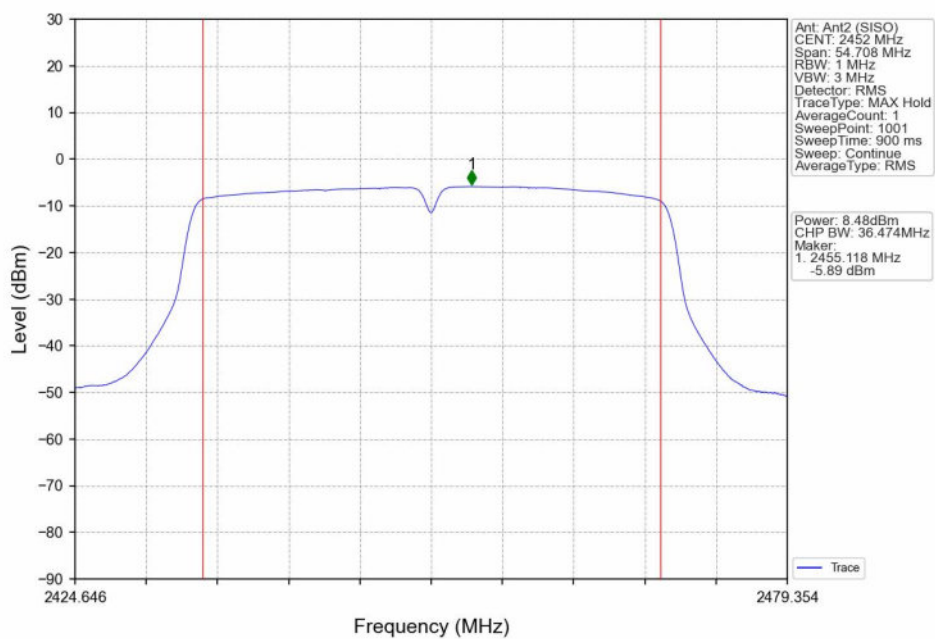
802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



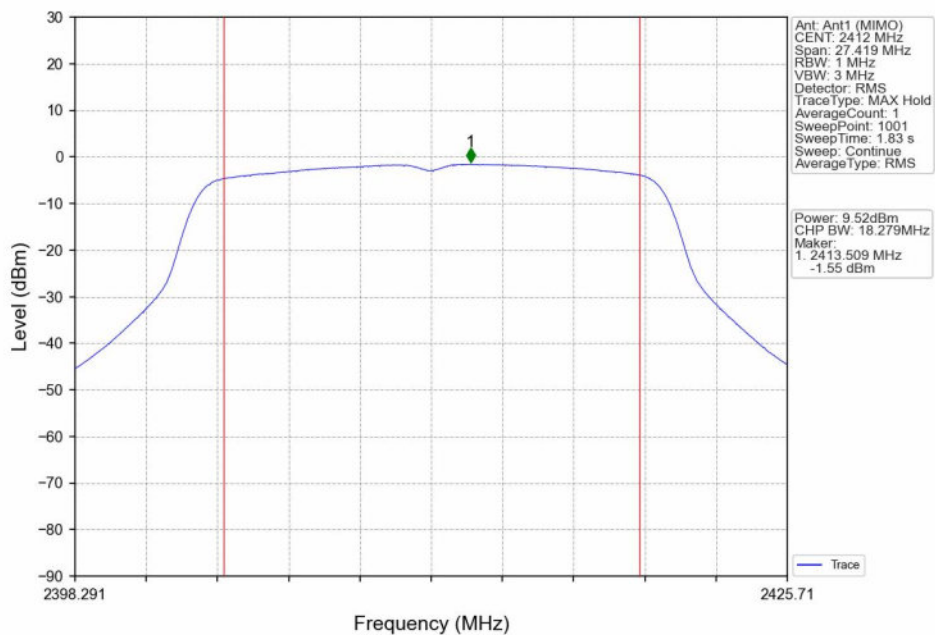
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



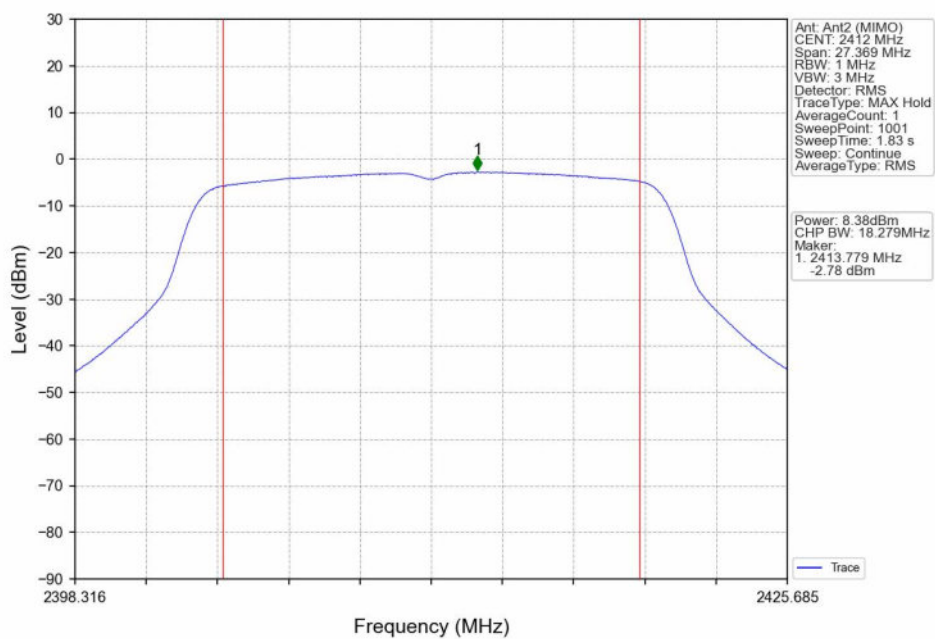
802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



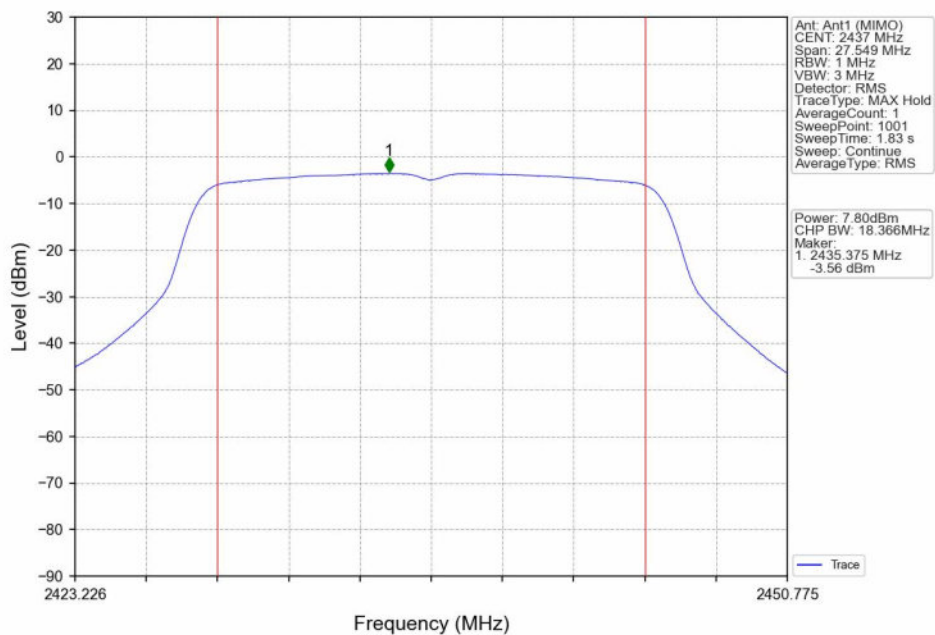
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



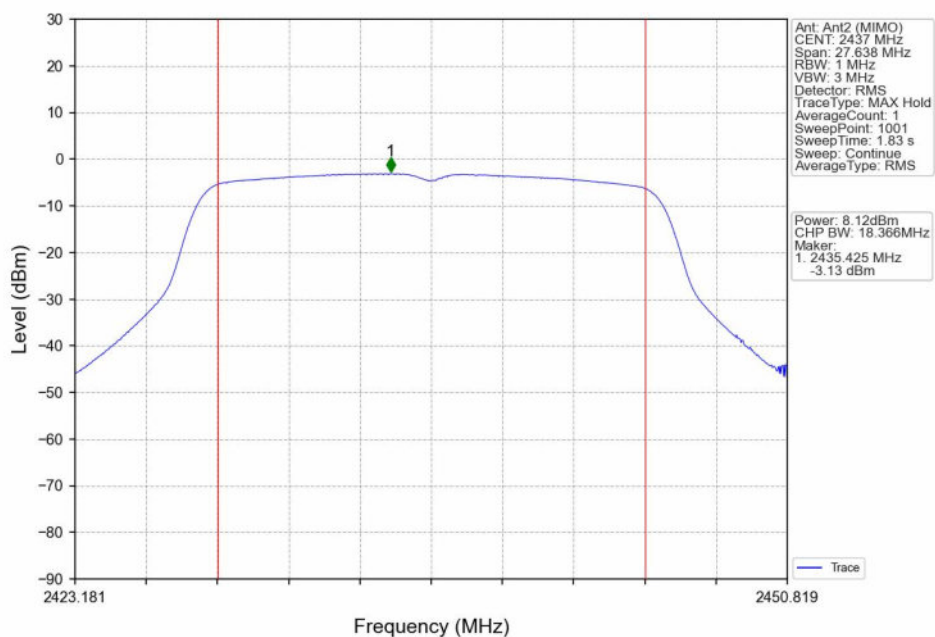
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



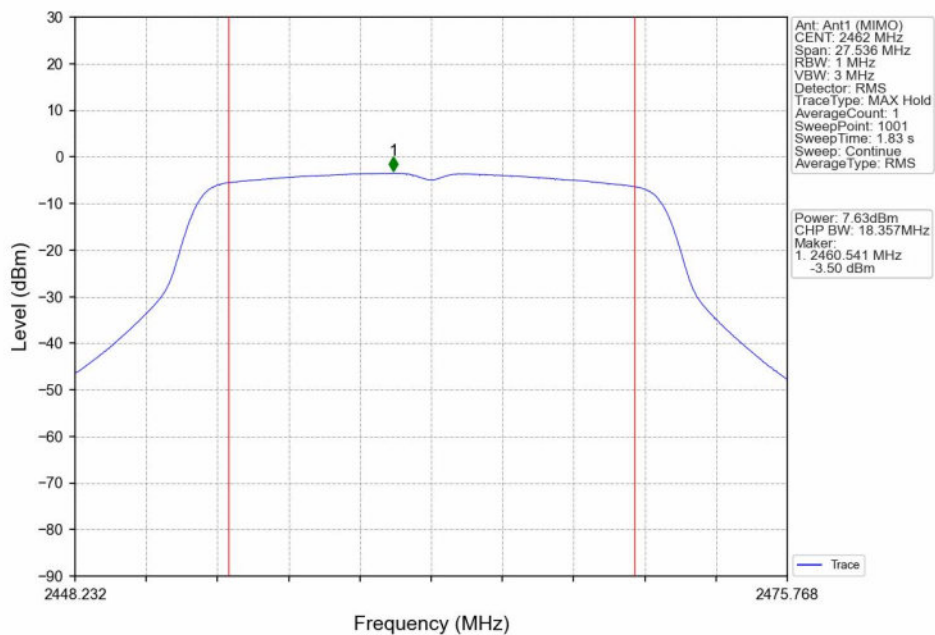
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



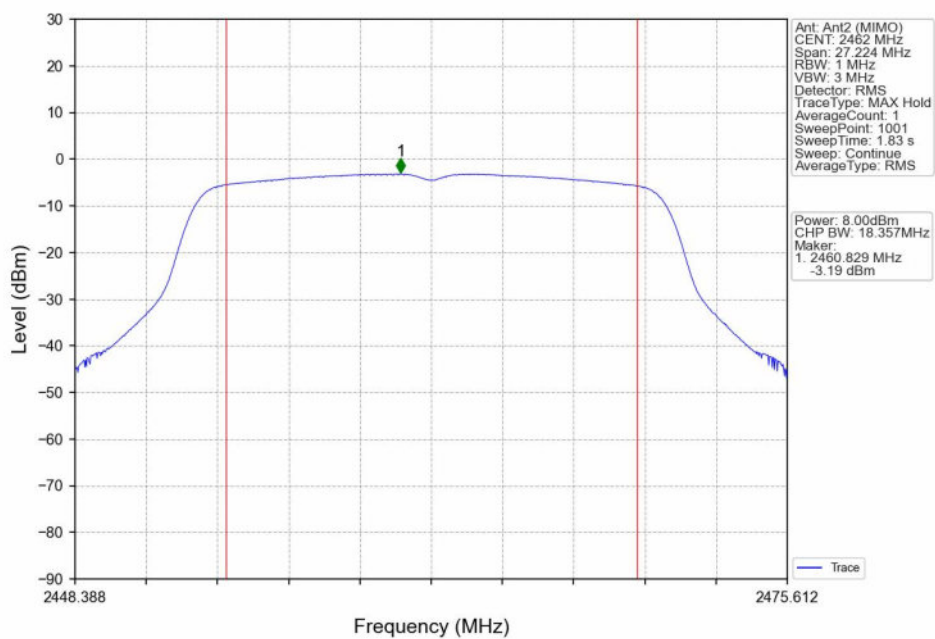
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



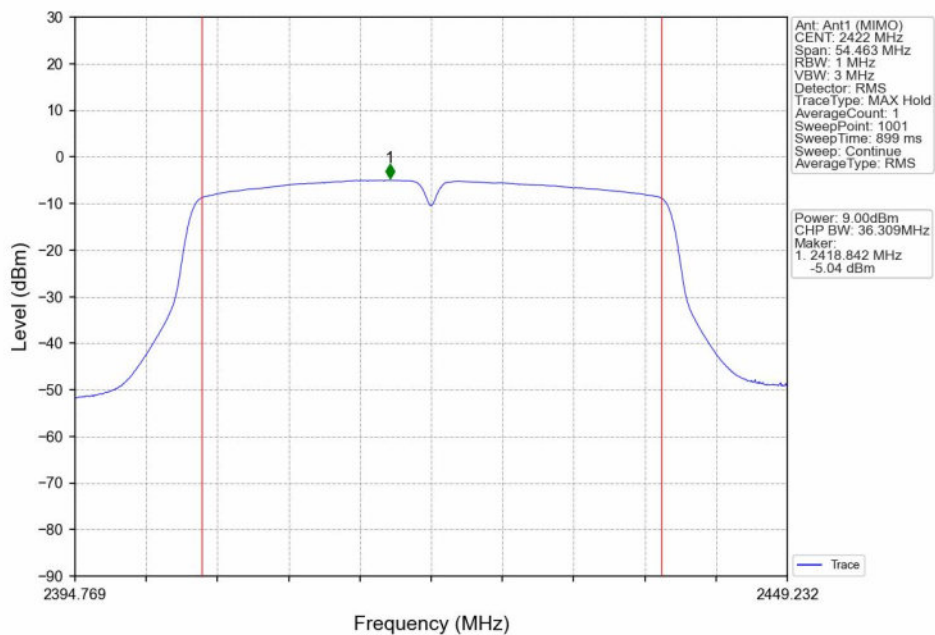
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



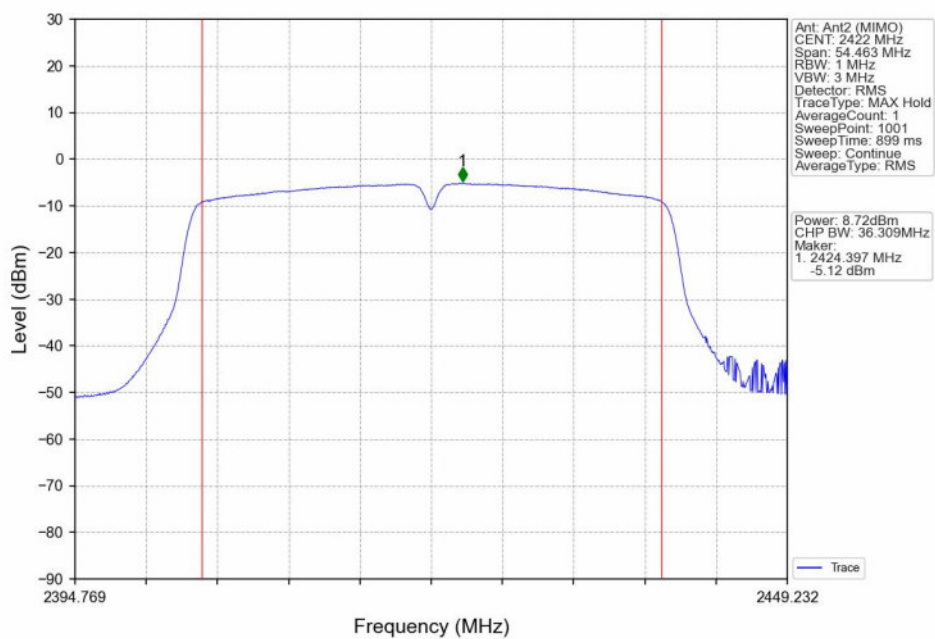
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



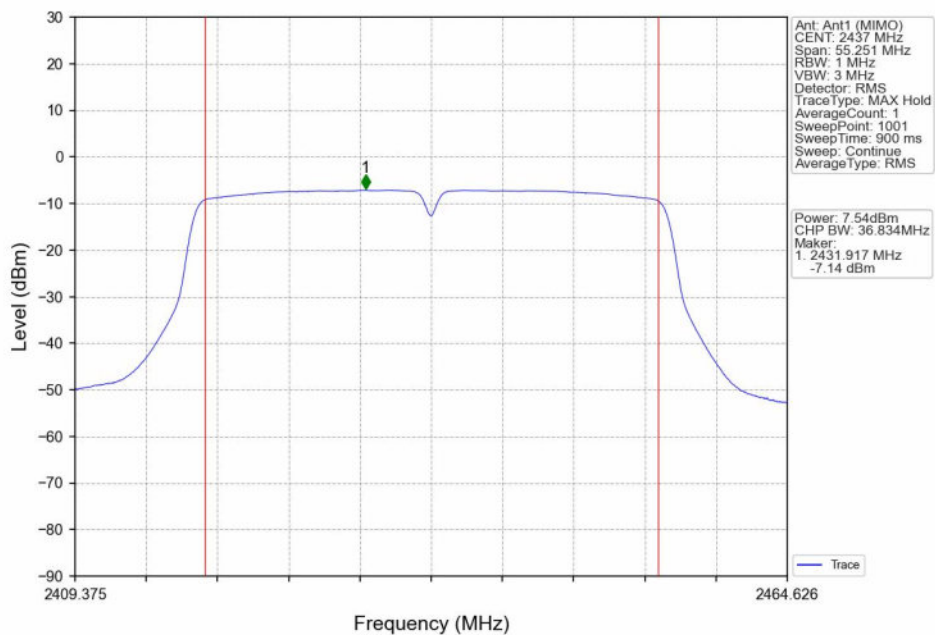
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



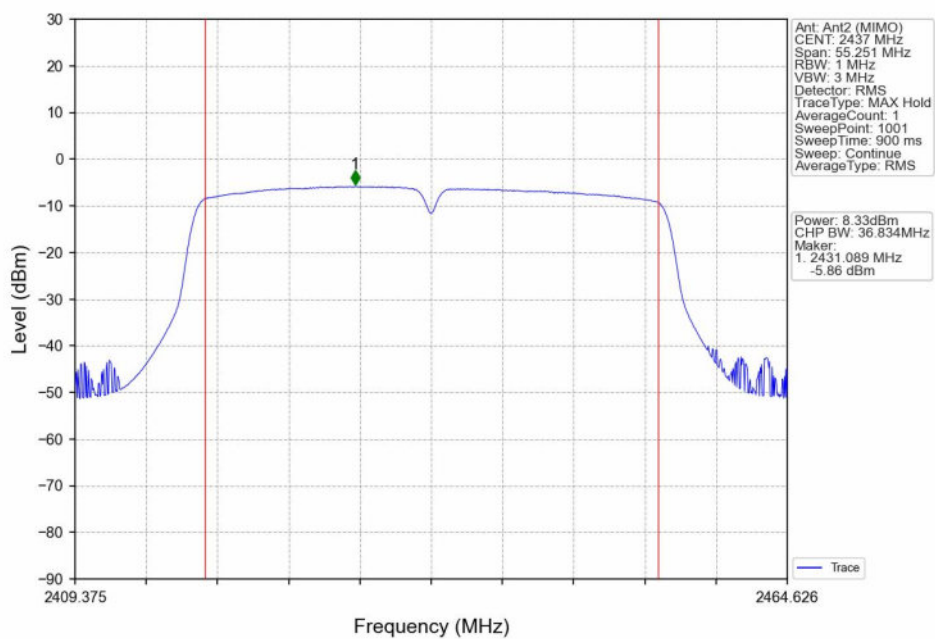
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



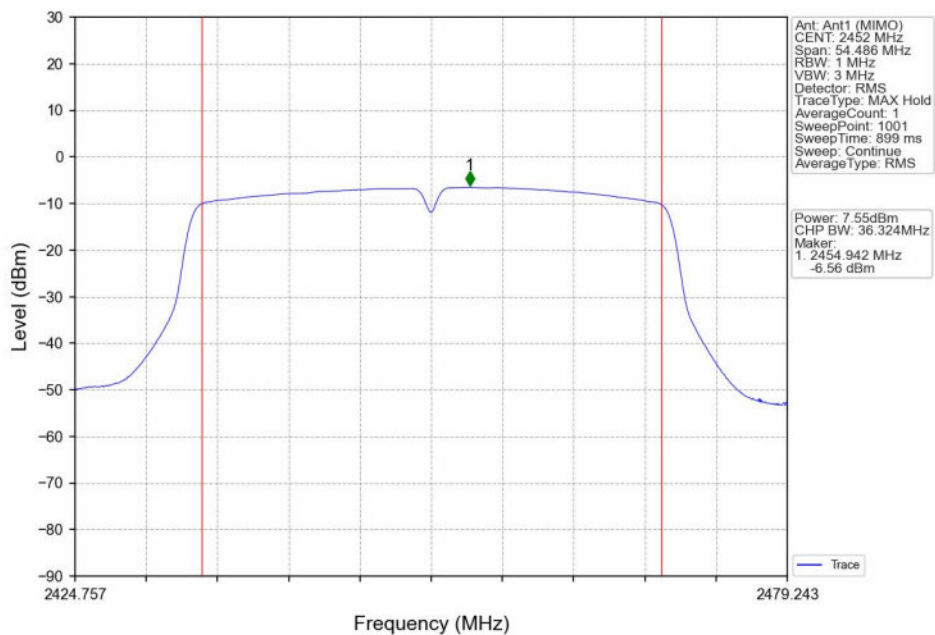
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



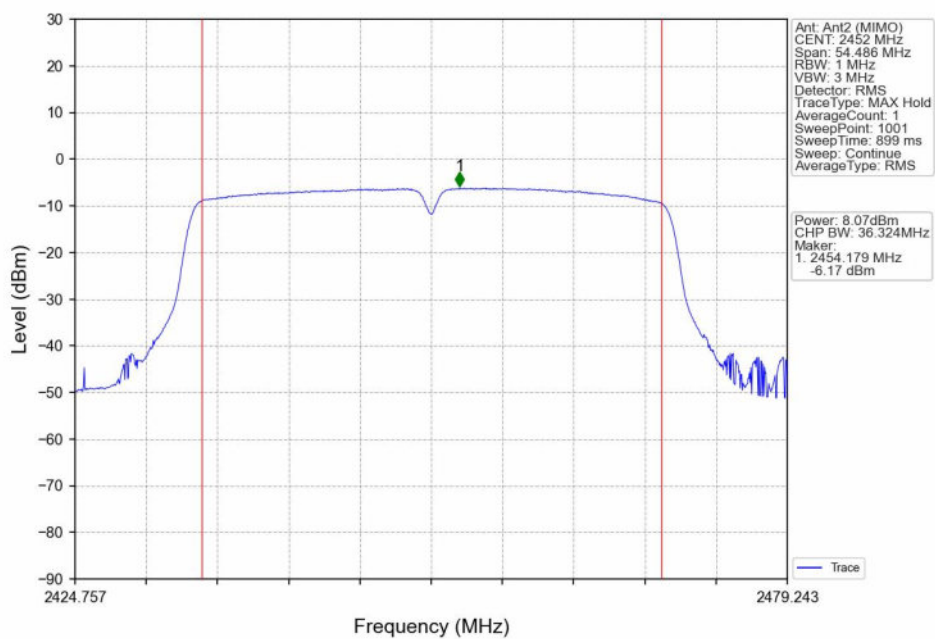
802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



3. Maximum Power Spectral Density

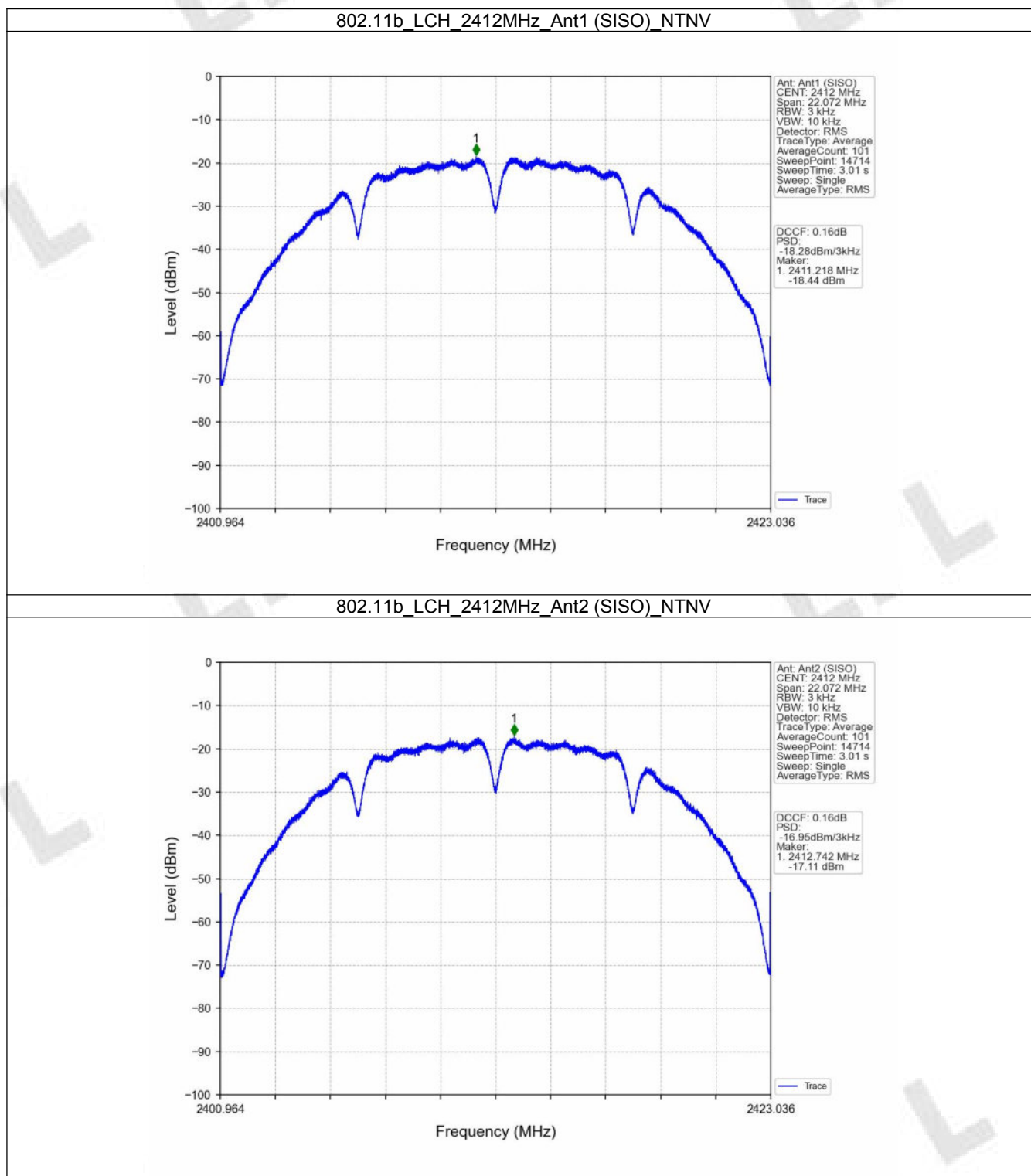
3.1 PSD

3.1.1 Test Result

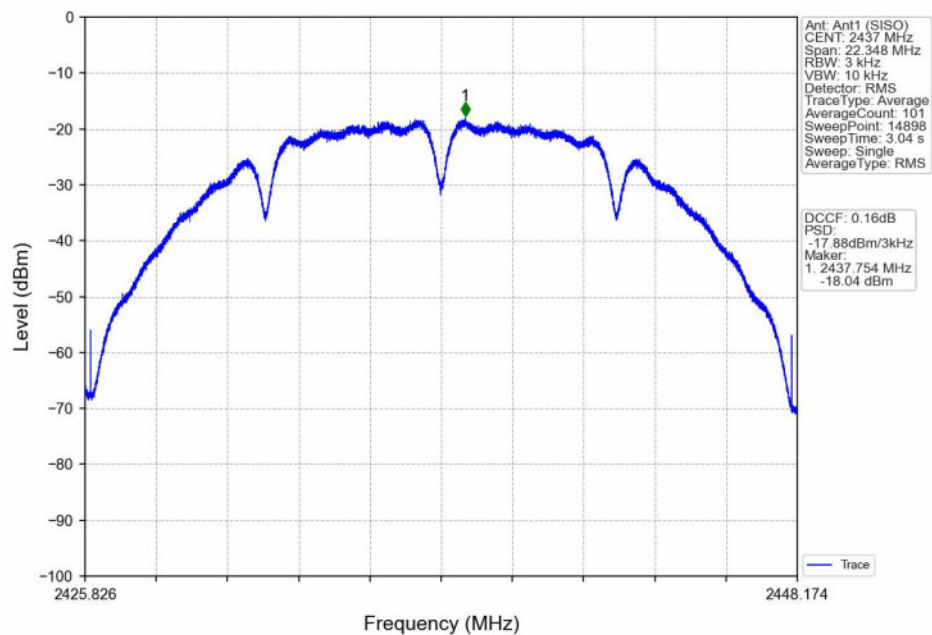
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	-18.28	-16.95	/	<=8	Pass
		2437	-17.88	-16.94	/	<=8	Pass
		2462	-16.97	-16.63	/	<=8	Pass
802.11g	SISO	2412	-21.65	-21.72	/	<=8	Pass
		2437	-23.46	-22.05	/	<=8	Pass
		2462	-22.61	-22.75	/	<=8	Pass
802.11n (HT20)	SISO	2412	-20.85	-21.34	/	<=8	Pass
		2437	-22.45	-21.52	/	<=8	Pass
		2462	-22.31	-22.25	/	<=8	Pass
802.11n (HT40)	SISO	2422	-23.58	-23.76	/	<=8	Pass
		2437	-25.73	-24.59	/	<=8	Pass
		2452	-25.25	-24.91	/	<=8	Pass
802.11n (HT20)	MIMO	2412	-21.63	-22.43	-19.00	<=8	Pass
		2437	-23.66	-23.16	-21.34	<=8	Pass
		2462	-22.68	-22.69	-20.74	<=8	Pass
802.11n (HT40)	MIMO	2422	-24.12	-24.21	-23.42	<=8	Pass
		2437	-25.69	-25.50	-24.05	<=8	Pass
		2452	-25.88	-25.75	-24.30	<=8	Pass

Note1: Antenna Gain: Ant1: 2.43dBi; Ant2: 0.45dBi;
 Note2: Directional gain= $10\log[(10^{G1/20}+10^{G2/20}+\dots +10^{GN/20})^2/N_{ANT}]$ dBi [Note the "20" s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

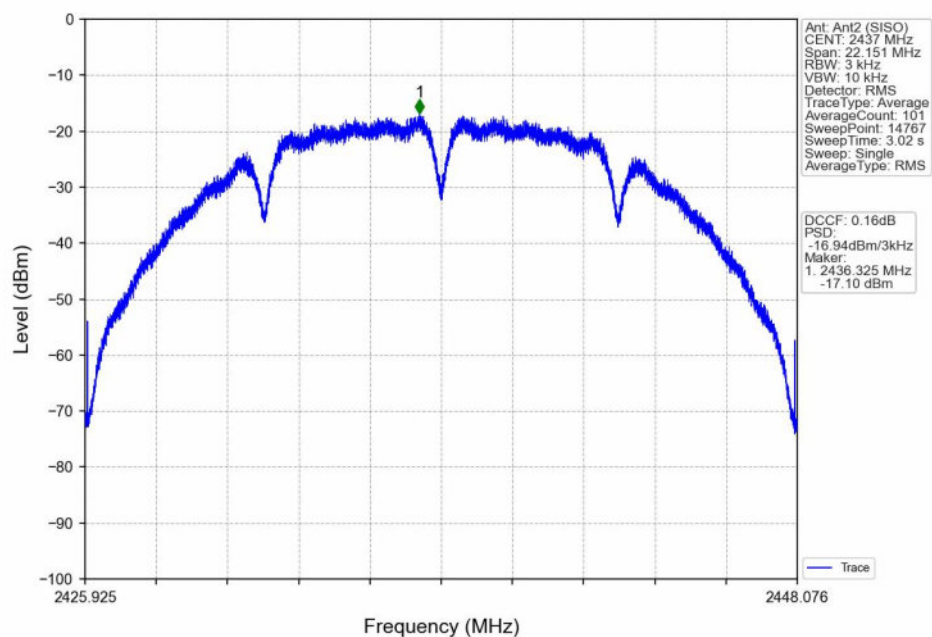
3.1.2 Test Graph



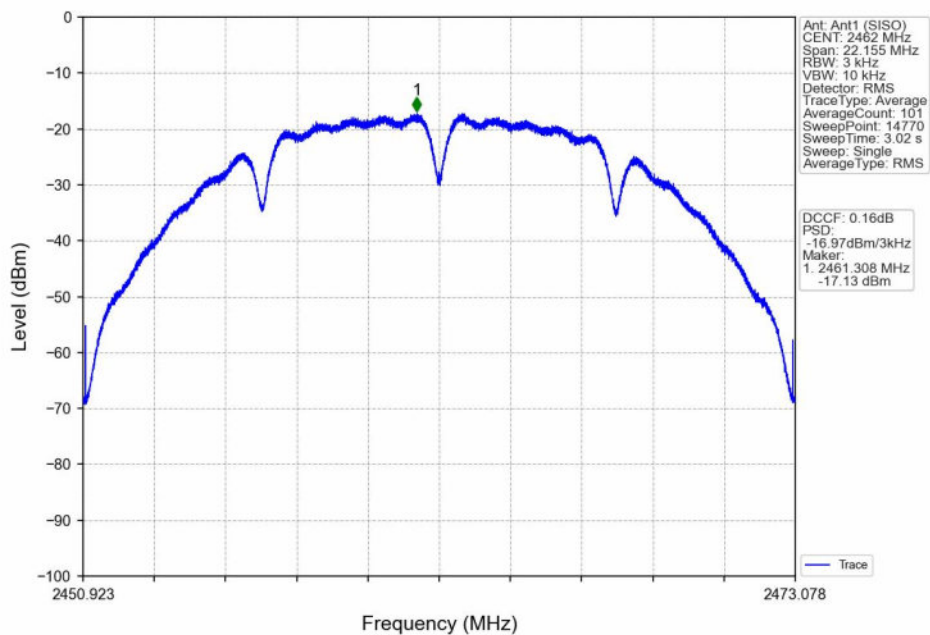
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



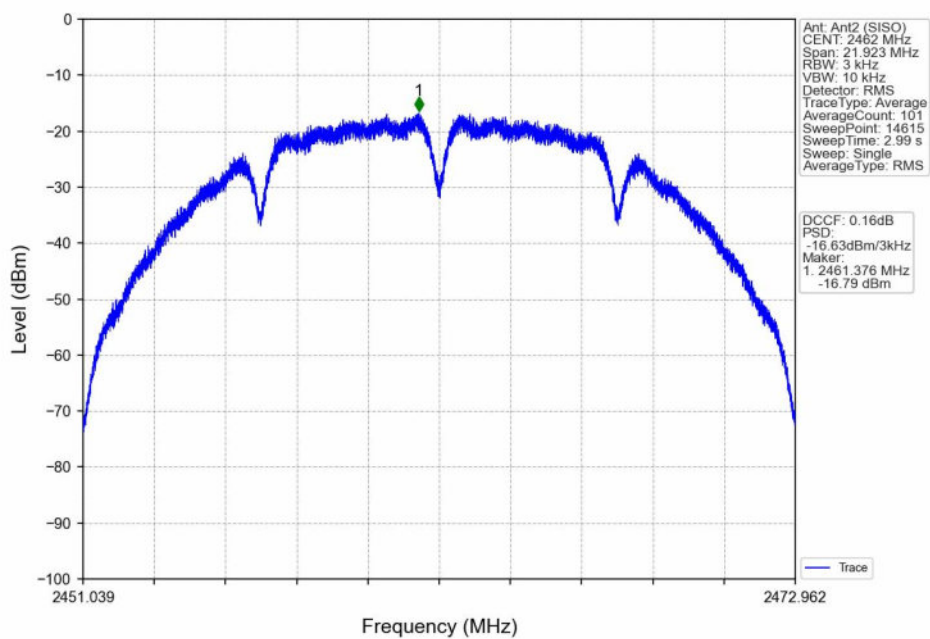
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



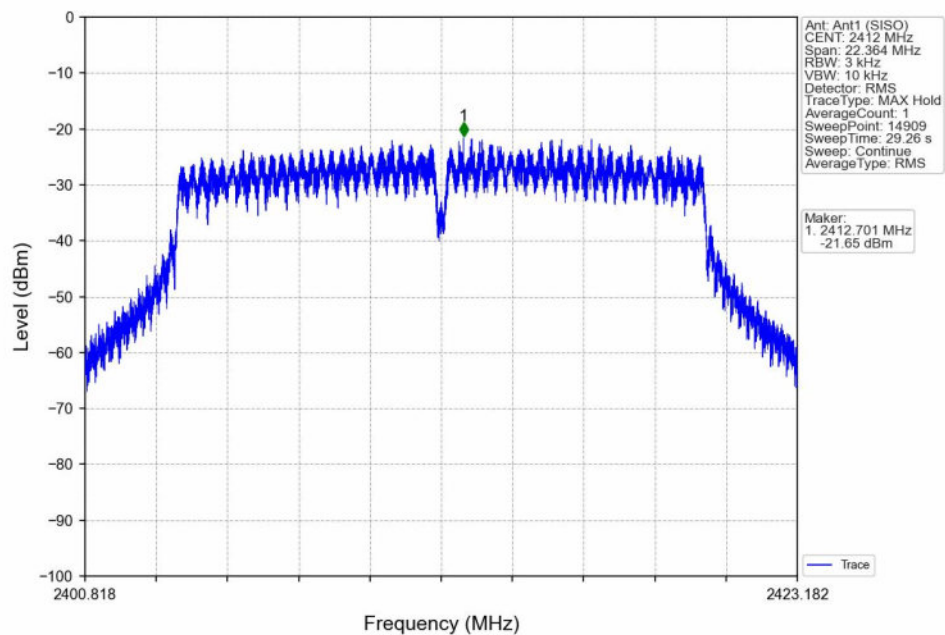
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV

