

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

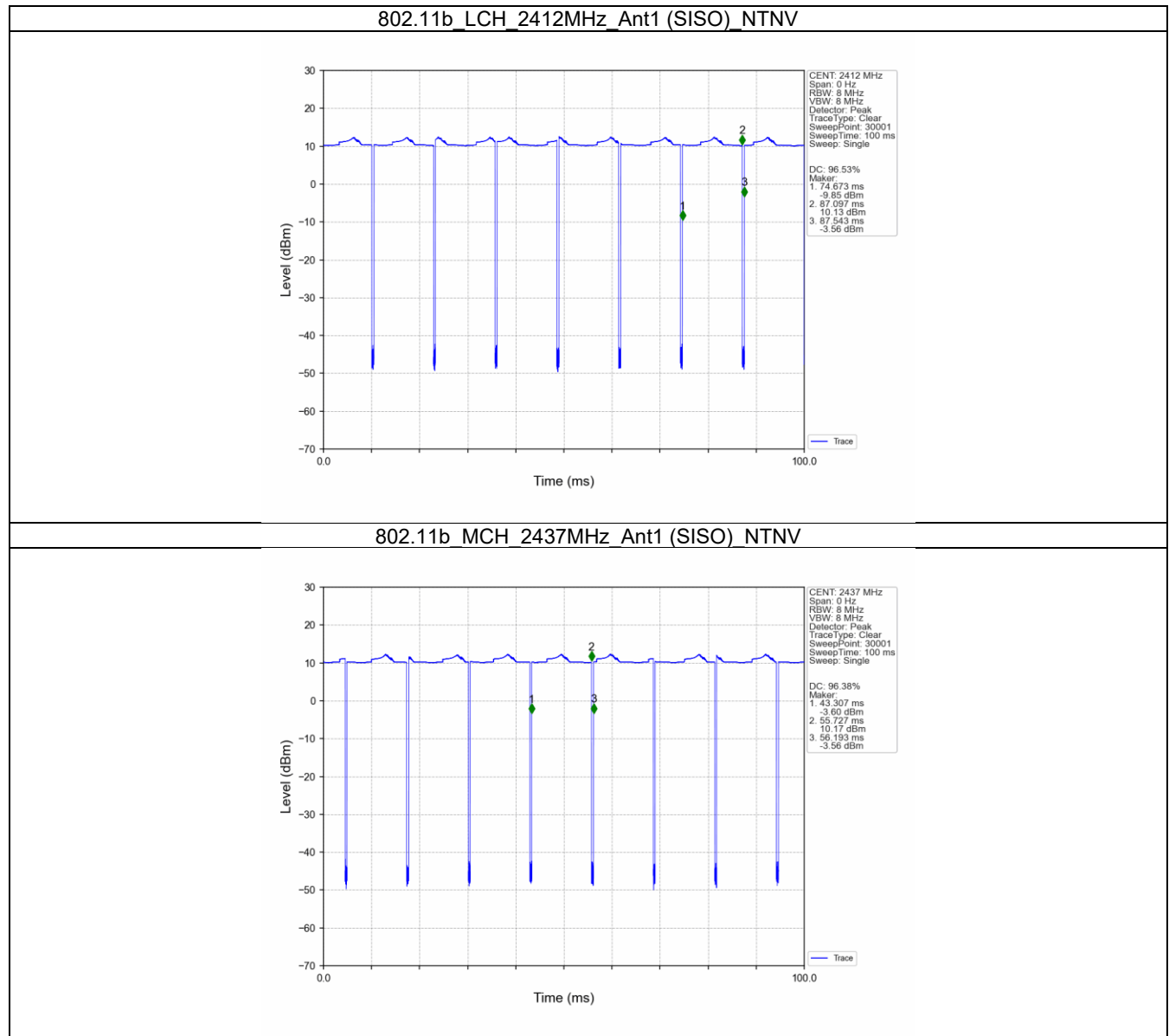
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.424	12.870	96.53	0.15	0.76
		2437	12.420	12.886	96.38	0.16	0.91
		2462	12.423	12.897	96.32	0.16	0.60
802.11g	SISO	2412	2.066	3.931	52.56	2.79	43.13
		2437	2.066	2.294	90.06	0.45	4.80
		2462	2.066	2.278	90.69	0.42	4.17
802.11n (HT20)	MIMO	2412	1.922	2.142	89.73	0.47	4.35
		2437	1.921	2.133	90.06	0.45	5.21
		2462	1.922	4.875	39.43	4.04	55.91
802.11n (HT40)	MIMO	2422	0.946	3.667	25.80	5.88	65.17
		2437	0.946	1.139	83.06	0.81	7.89
		2452	0.946	4.054	23.33	6.32	63.11

1.1.2 Ant2

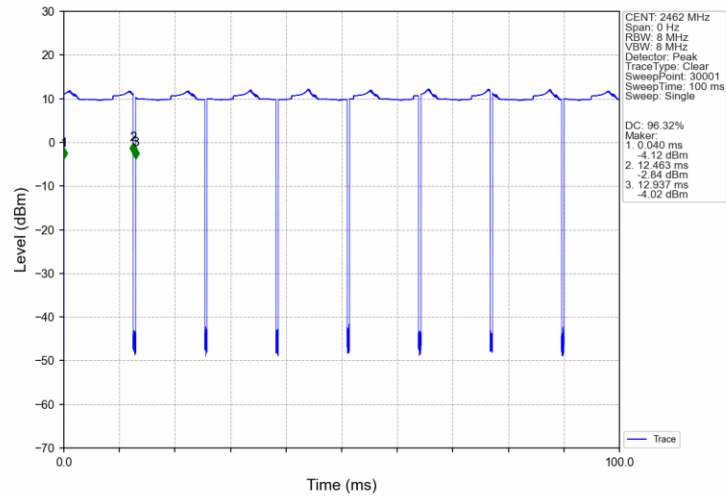
Ant2							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.420	12.897	96.30	0.16	0.43
		2437	12.420	12.903	96.26	0.17	0.96
		2462	12.423	12.906	96.26	0.17	0.95
802.11g	SISO	2412	2.066	2.250	91.82	0.37	3.81
		2437	2.067	2.260	91.46	0.39	3.78
		2462	2.065	2.277	90.69	0.42	3.34
802.11n (HT20)	MIMO	2412	1.922	2.142	89.73	0.47	4.35
		2437	1.922	4.138	46.45	3.33	48.46
		2462	1.922	2.133	90.11	0.45	5.25
802.11n (HT40)	MIMO	2422	0.946	1.157	81.76	0.87	9.20
		2437	0.945	1.166	81.05	0.91	9.84
		2452	0.945	1.175	80.43	0.95	10.47

1.2 Test Graph

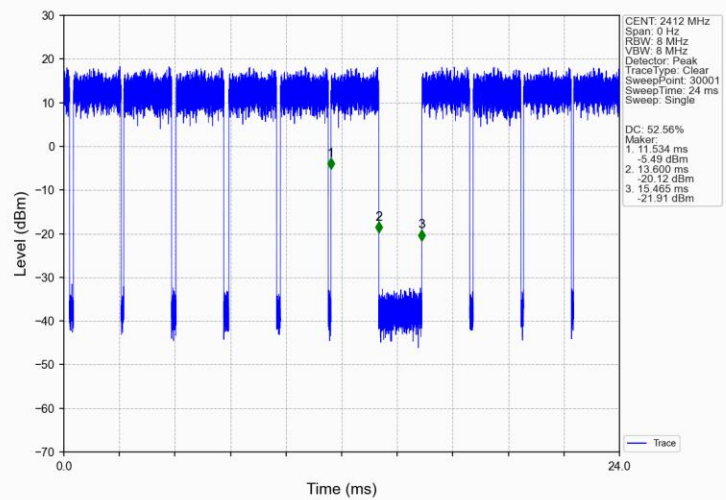
1.2.1 Ant1



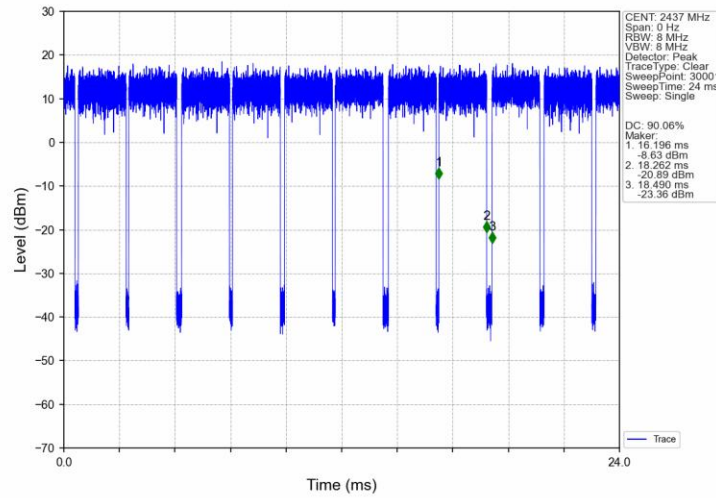
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



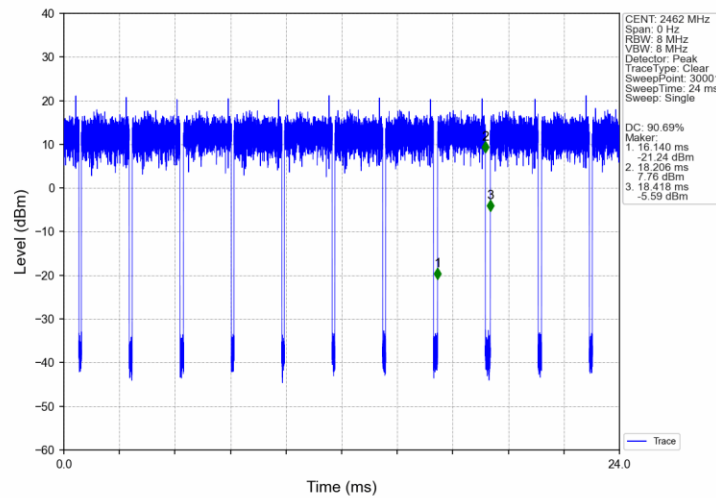
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



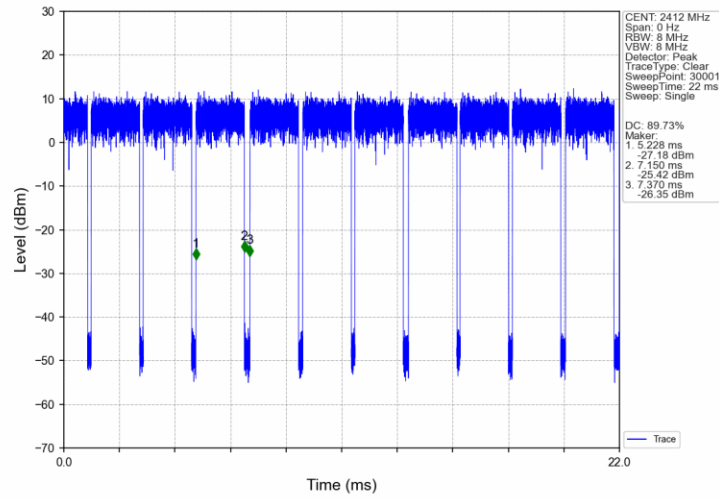
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



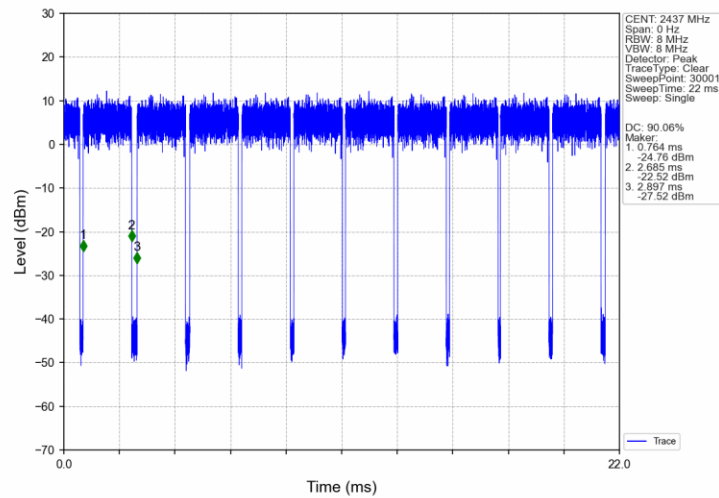
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



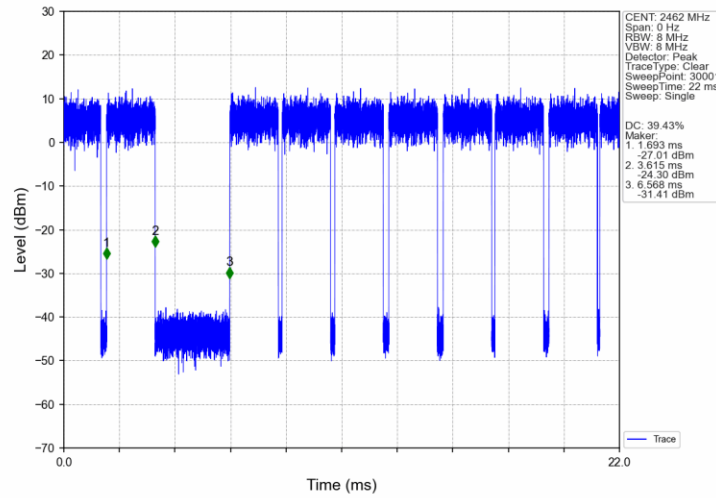
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



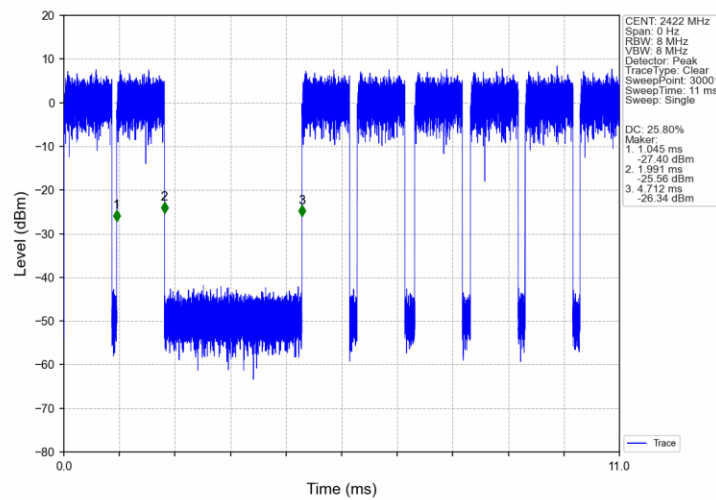
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



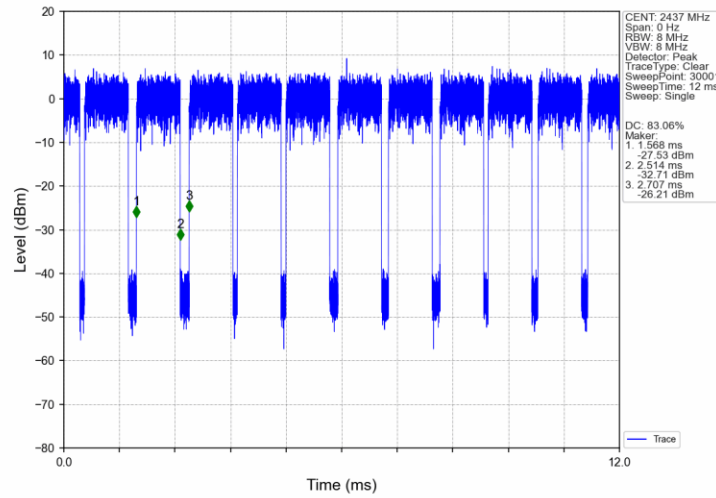
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



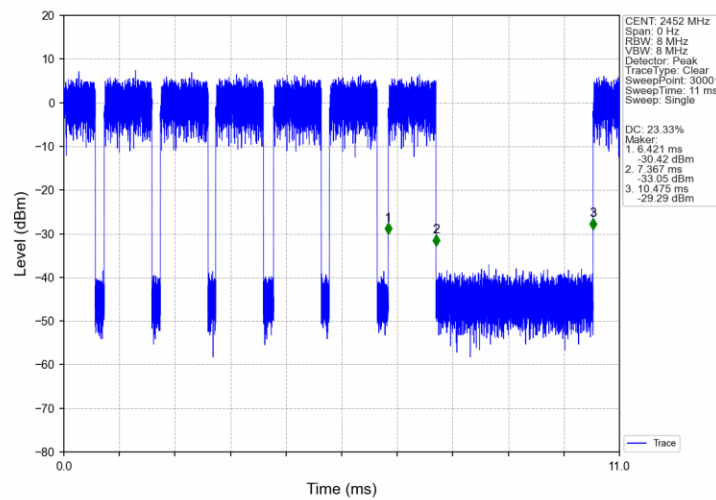
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV

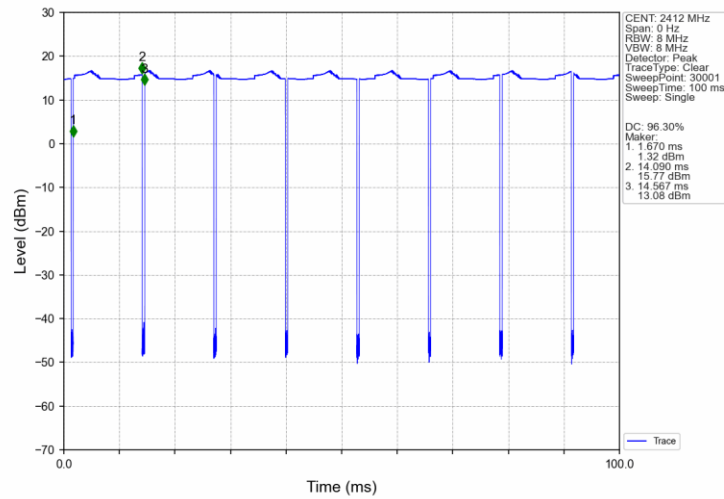


802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

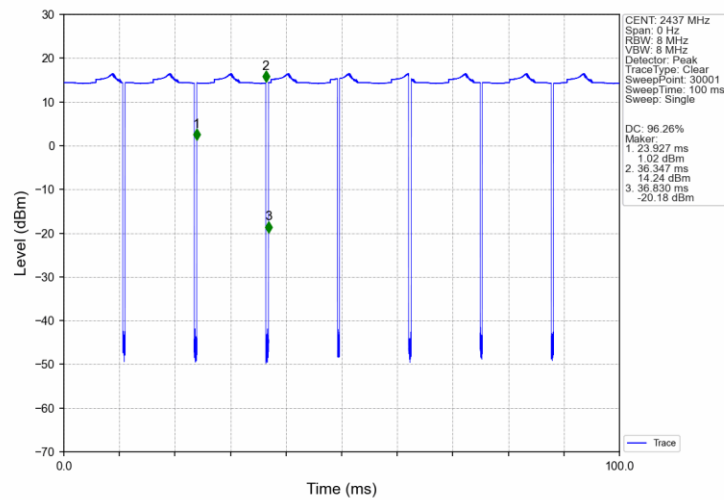


1.2.2 Ant2

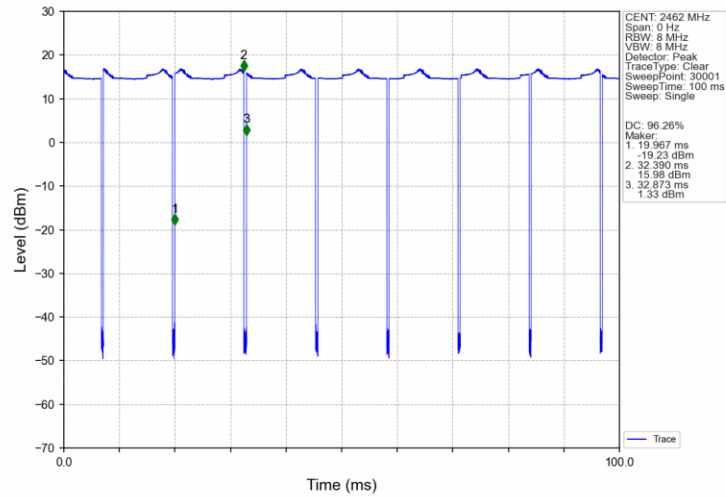
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



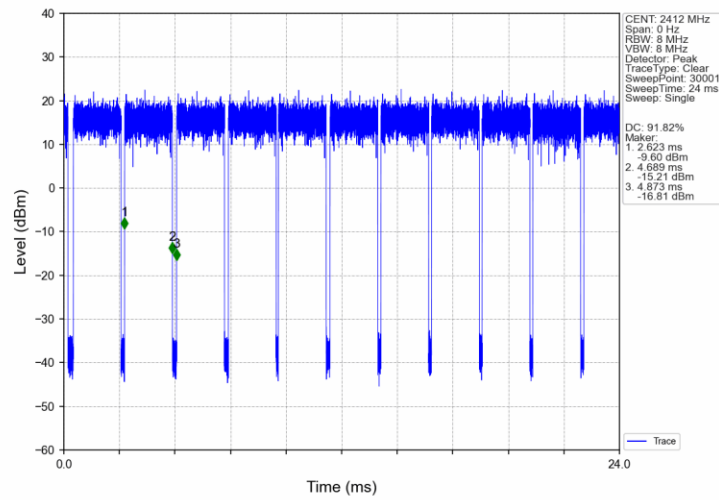
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



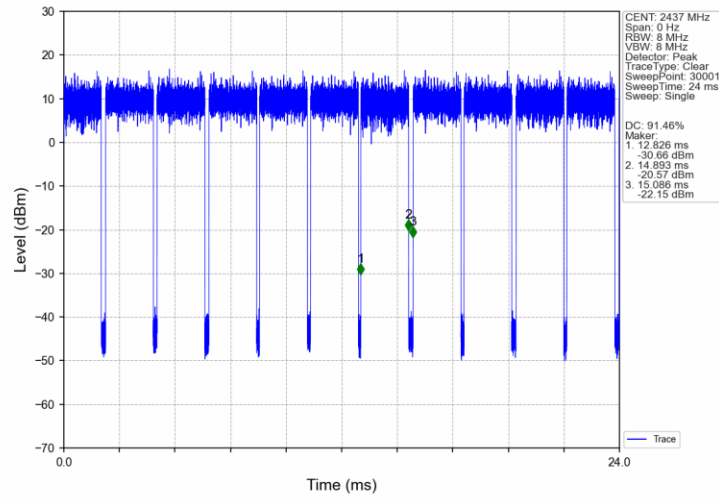
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



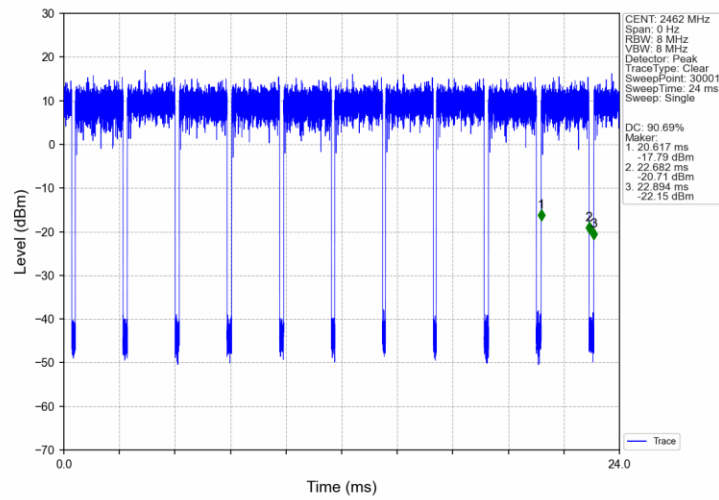
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



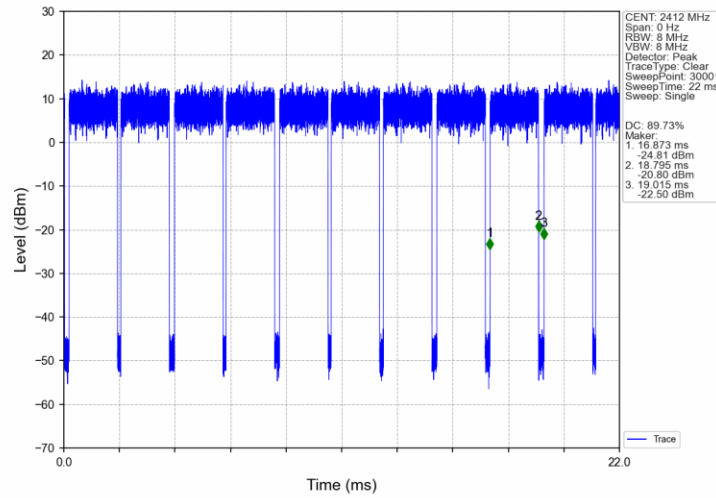
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



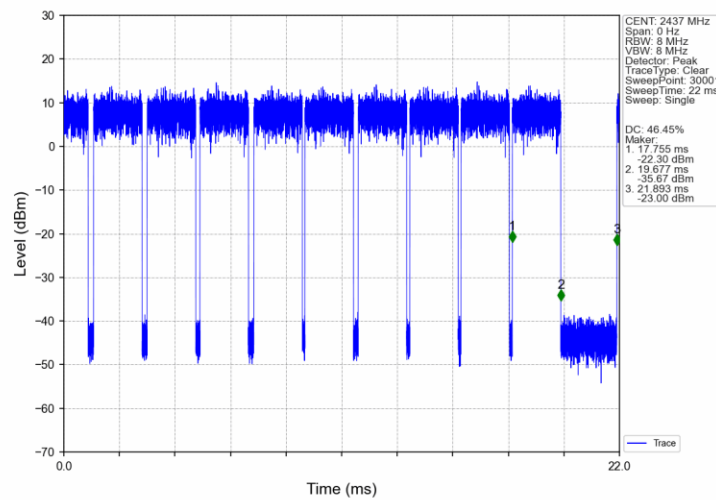
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



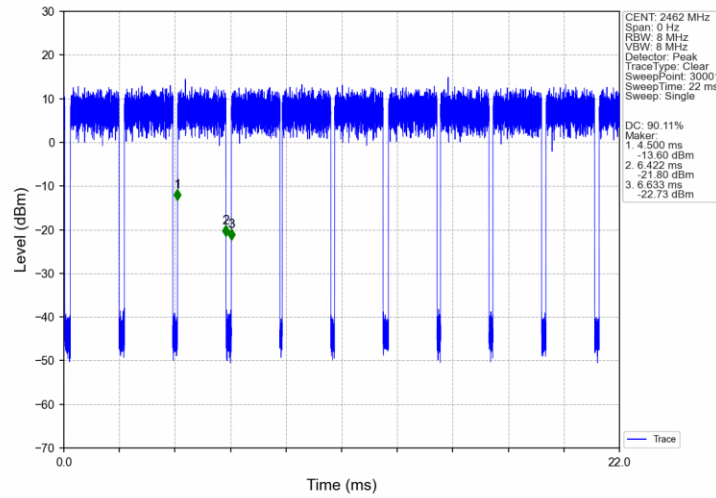
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



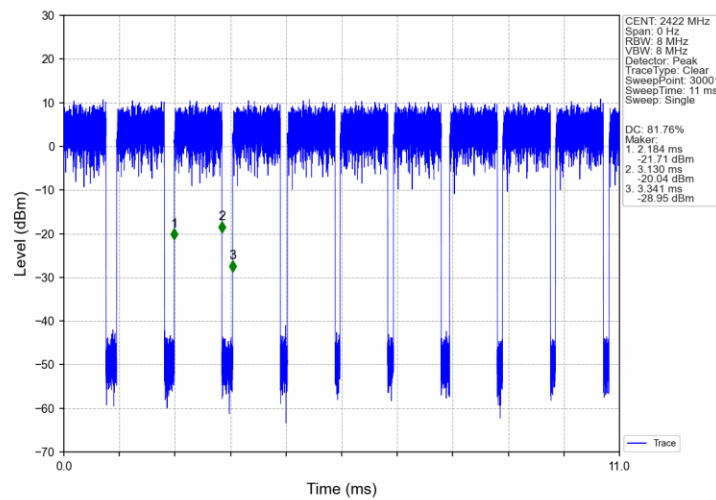
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



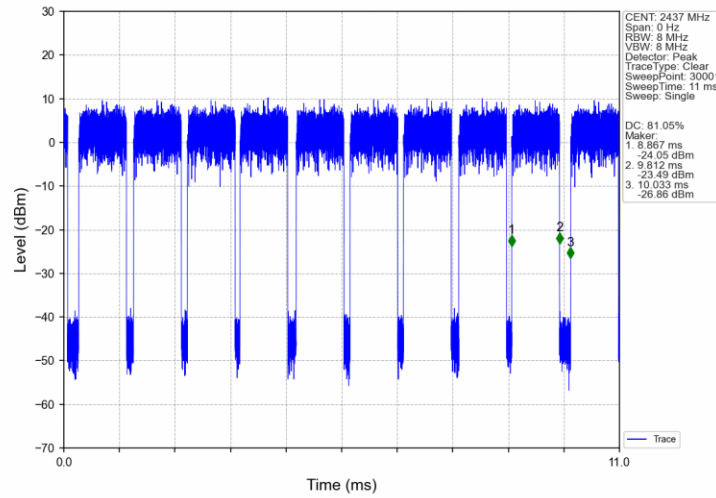
802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



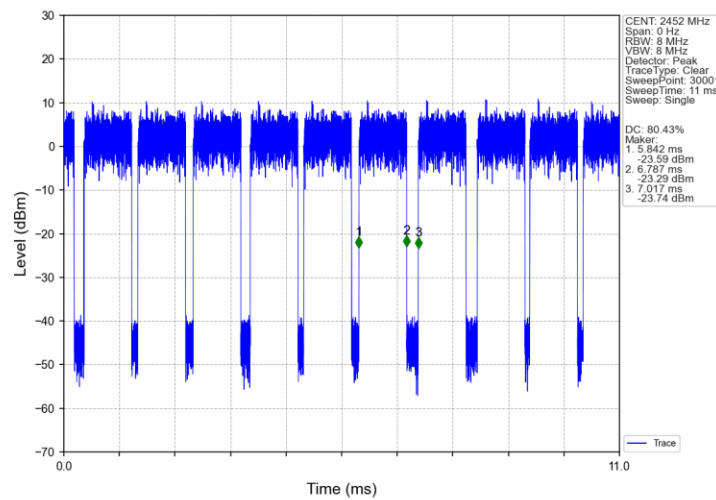
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.584	/	Pass
		2437	1	14.569	/	Pass
		2462	1	14.598	/	Pass
802.11g	SISO	2412	1	16.887	/	Pass
		2437	1	16.829	/	Pass
		2462	1	16.843	/	Pass
802.11n (HT20)	MIMO	2412	1	18.398	/	Pass
		2437	1	18.227	/	Pass
		2462	1	18.330	/	Pass
802.11n (HT40)	MIMO	2422	1	36.585	/	Pass
		2437	1	36.575	/	Pass
		2452	1	36.503	/	Pass

Remark: All modes have been tested, and only the worst data is displayed

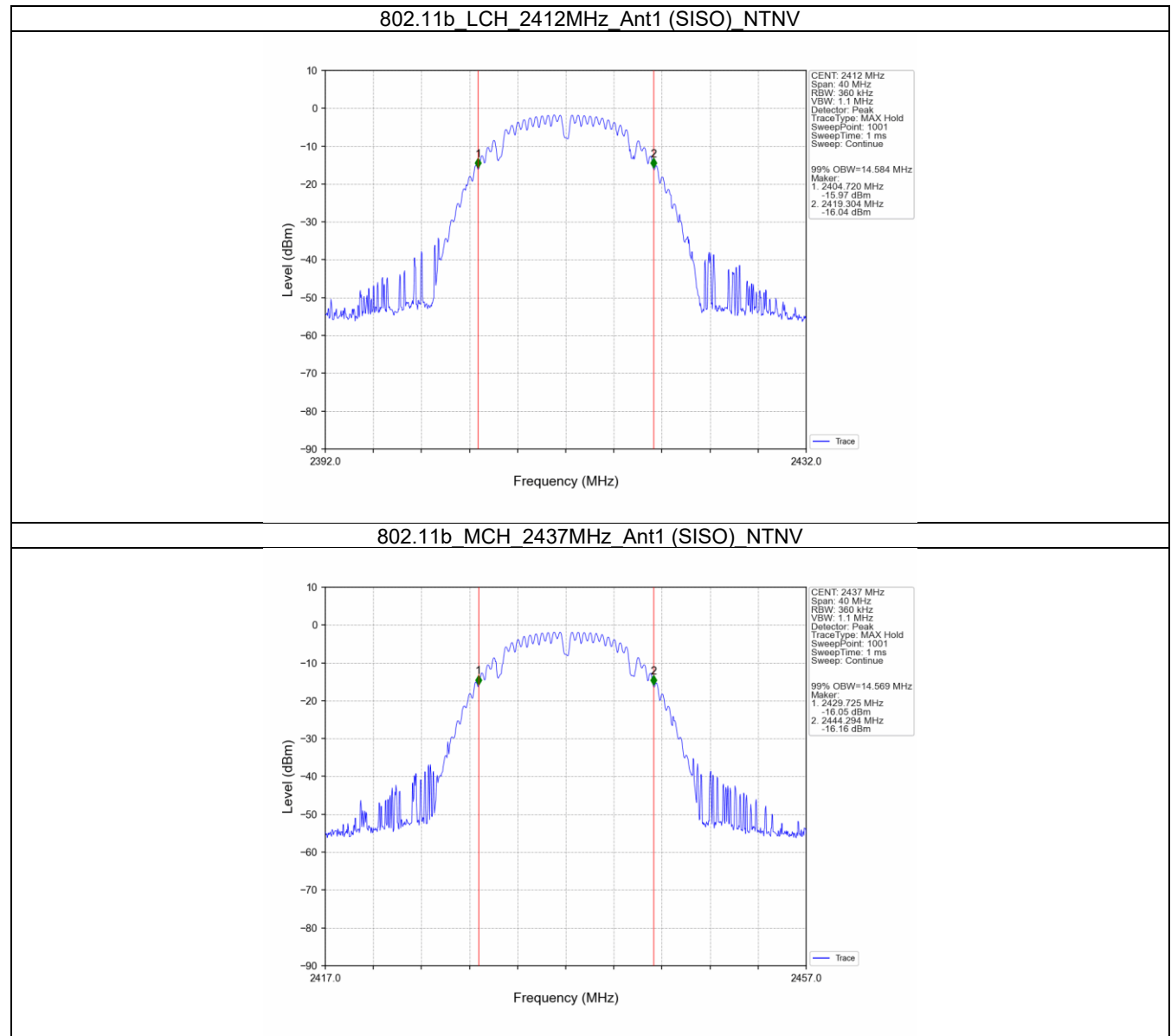
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.132	≥ 0.5	Pass
		2437	1	10.145	≥ 0.5	Pass
		2462	1	10.105	≥ 0.5	Pass
802.11g	SISO	2412	1	16.015	≥ 0.5	Pass
		2437	1	15.915	≥ 0.5	Pass
		2462	1	16.064	≥ 0.5	Pass
802.11n (HT20)	MIMO	2412	1	16.279	≥ 0.5	Pass
		2437	1	15.770	≥ 0.5	Pass
		2462	1	16.578	≥ 0.5	Pass
802.11n (HT40)	MIMO	2422	1	35.172	≥ 0.5	Pass
		2437	1	35.154	≥ 0.5	Pass
		2452	1	35.159	≥ 0.5	Pass

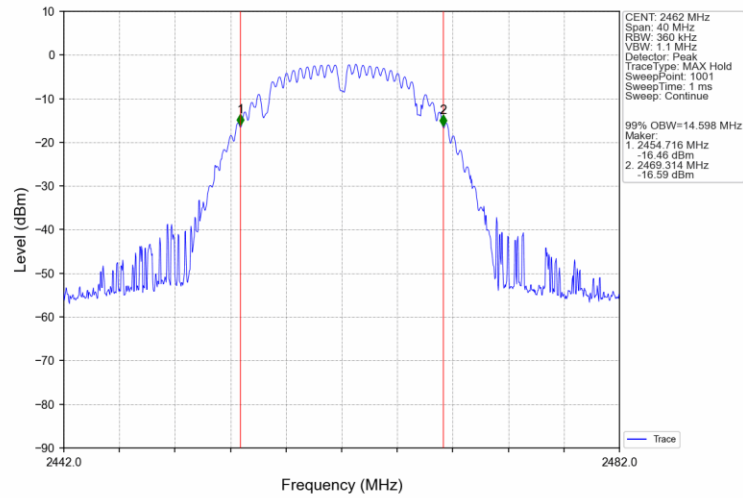
Remark: All modes have been tested, and only the worst data is displayed

2.2 Test Graph

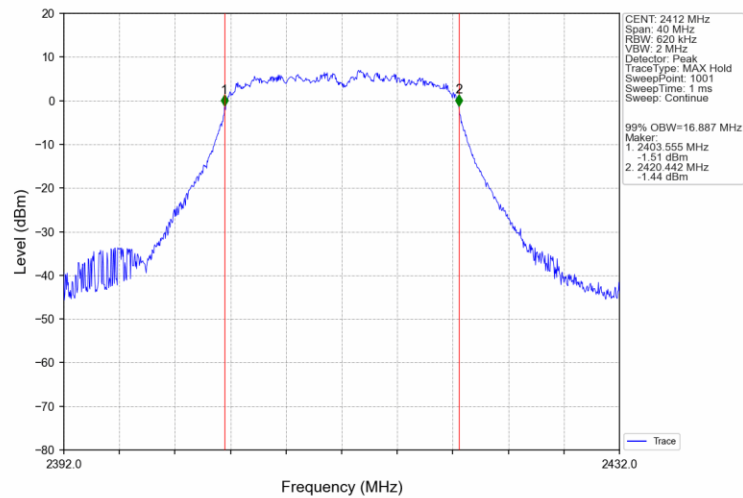
2.2.1 OBW



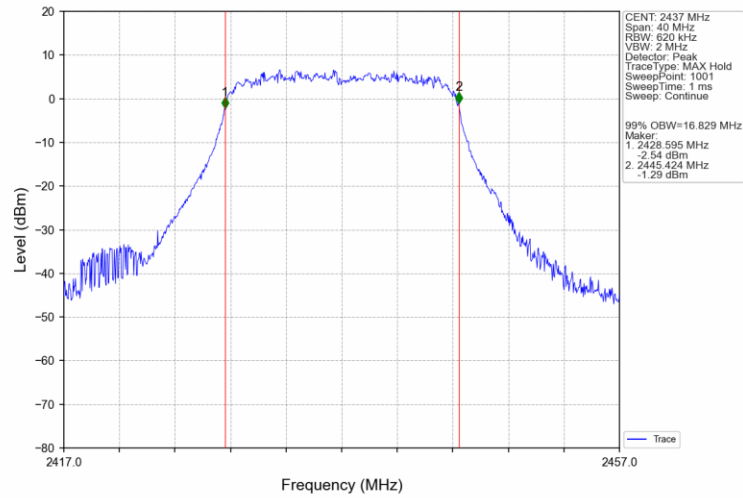
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



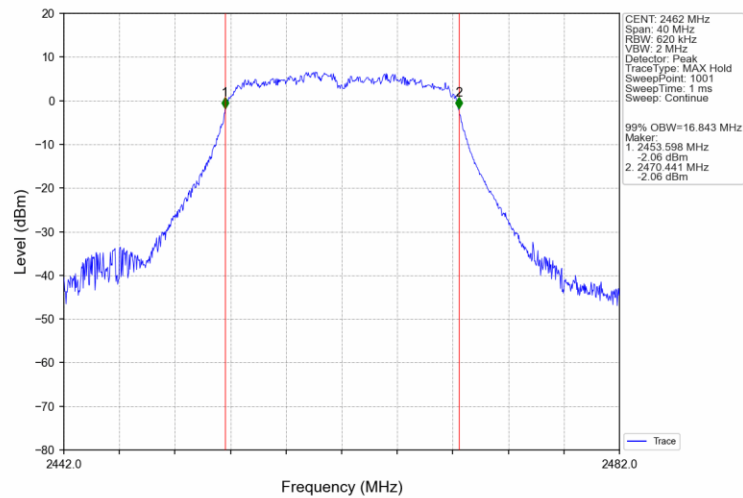
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



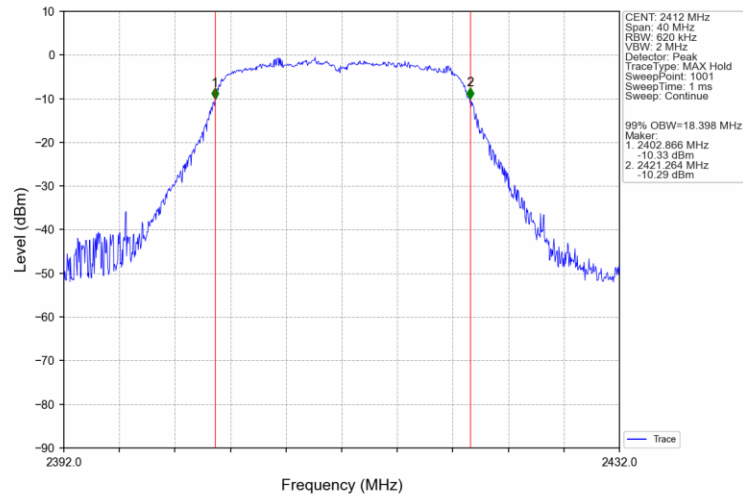
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



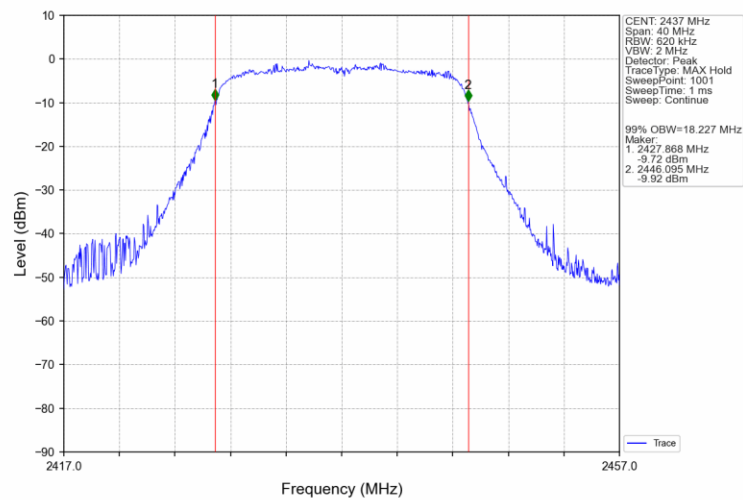
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



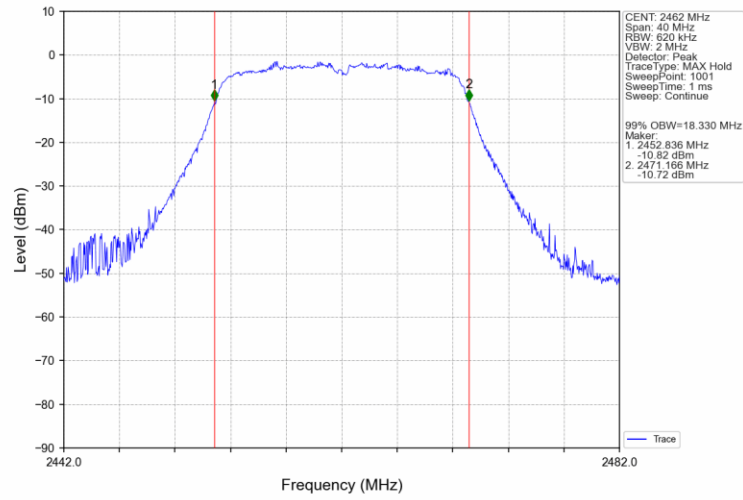
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



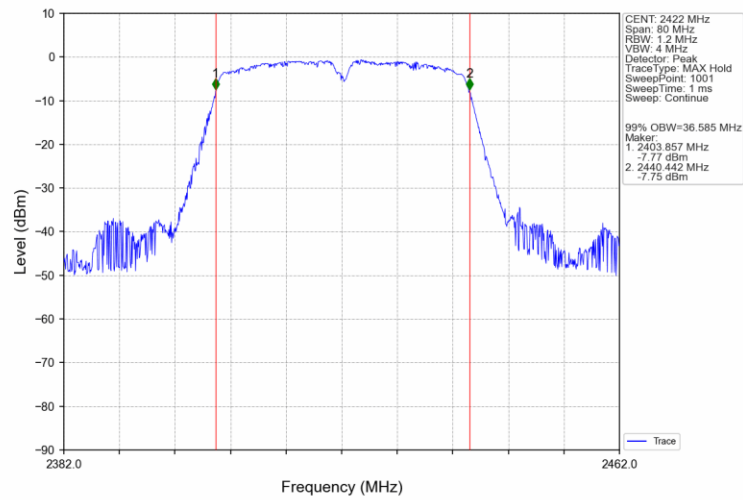
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



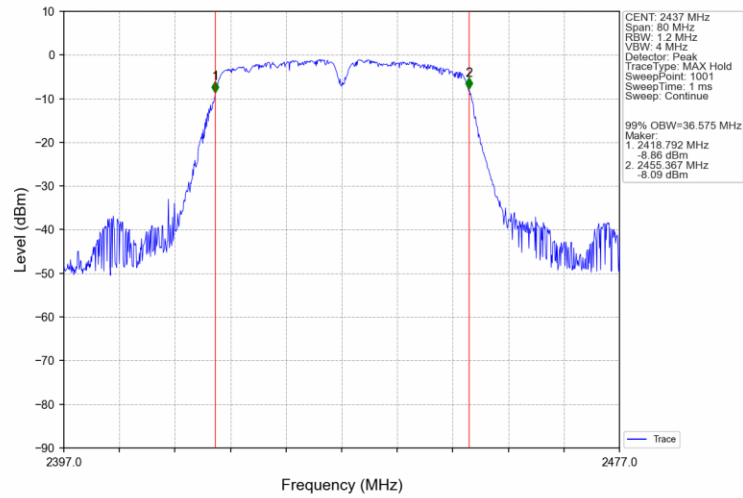
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



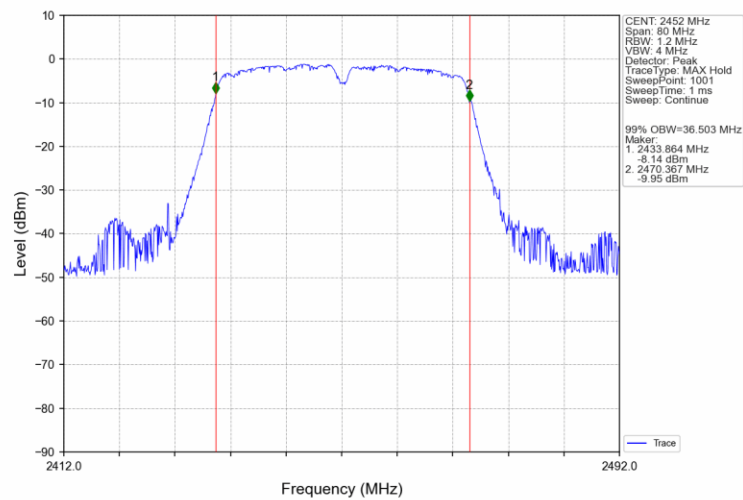
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV

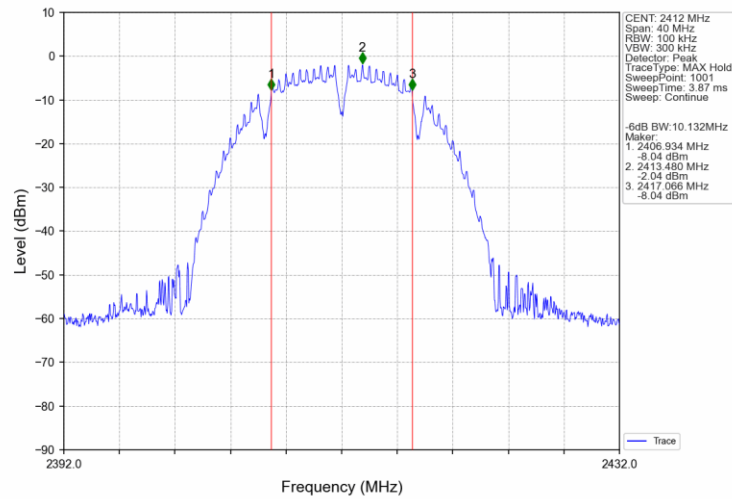


802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

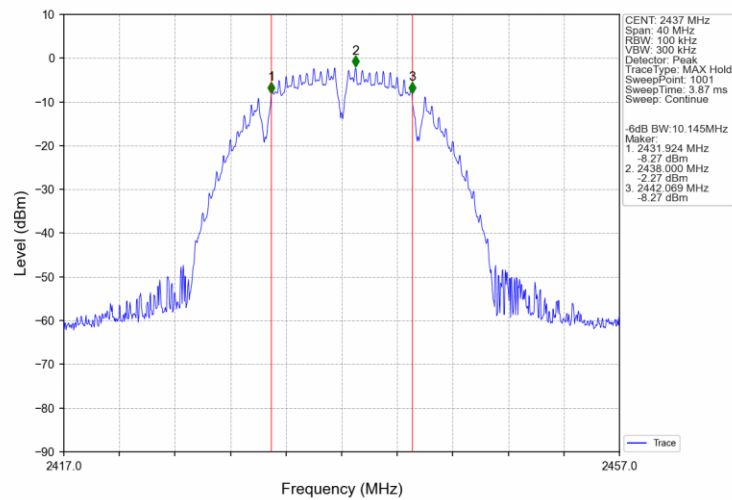


2.2.2 6dB BW

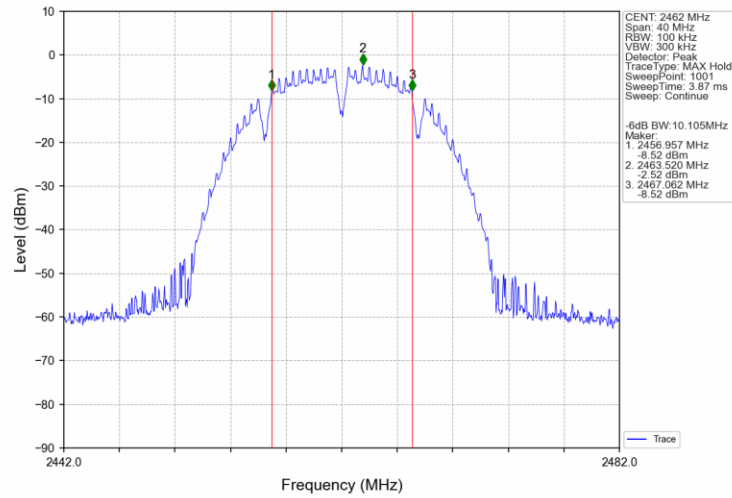
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



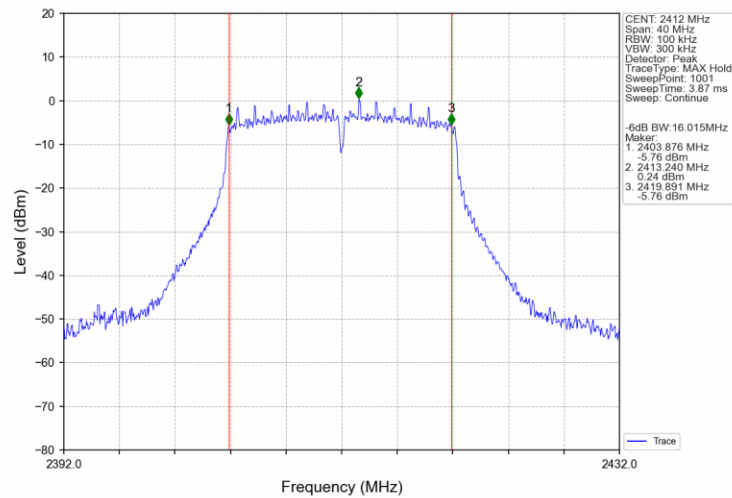
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



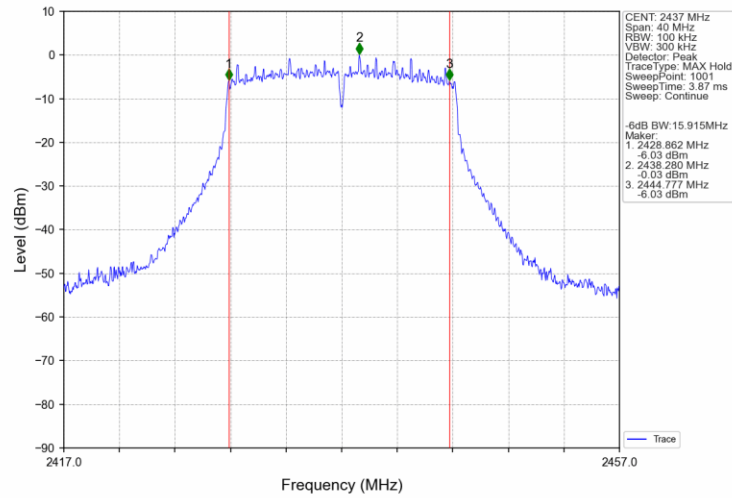
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



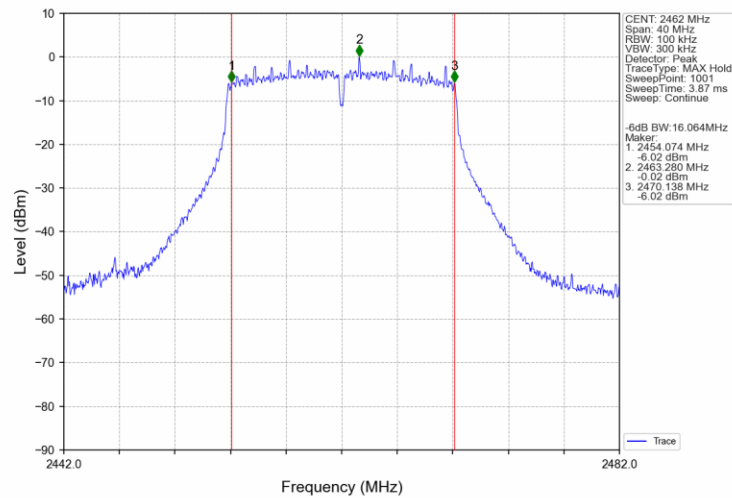
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



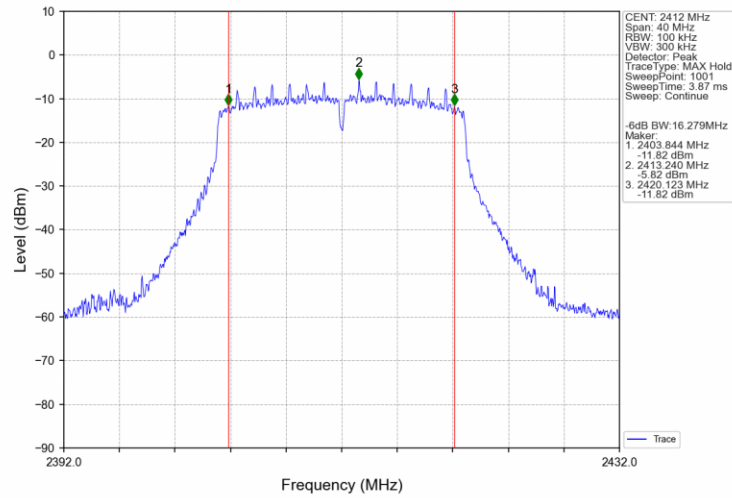
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



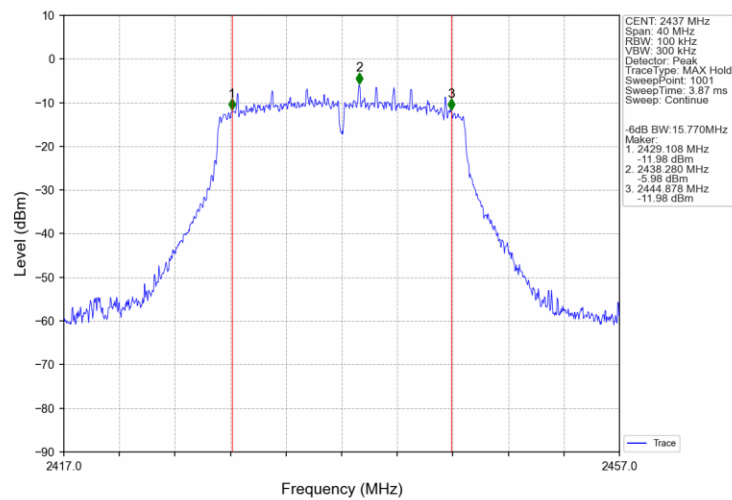
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



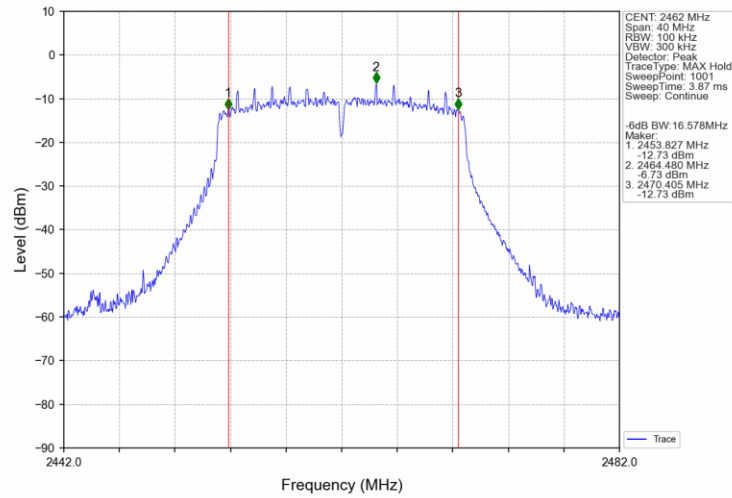
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



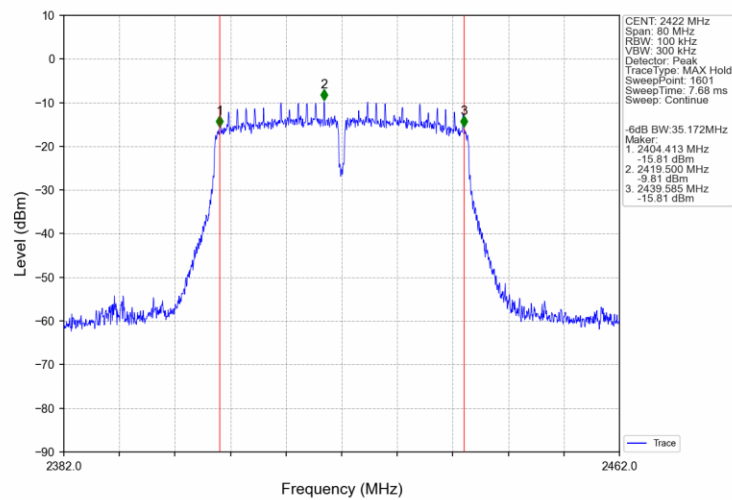
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



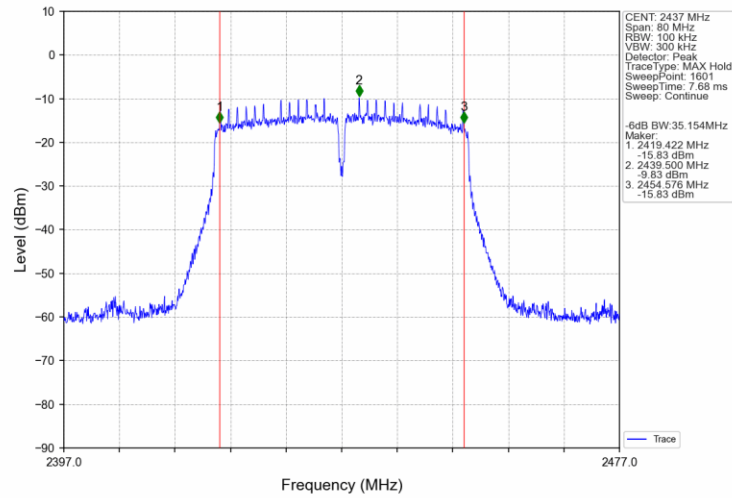
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



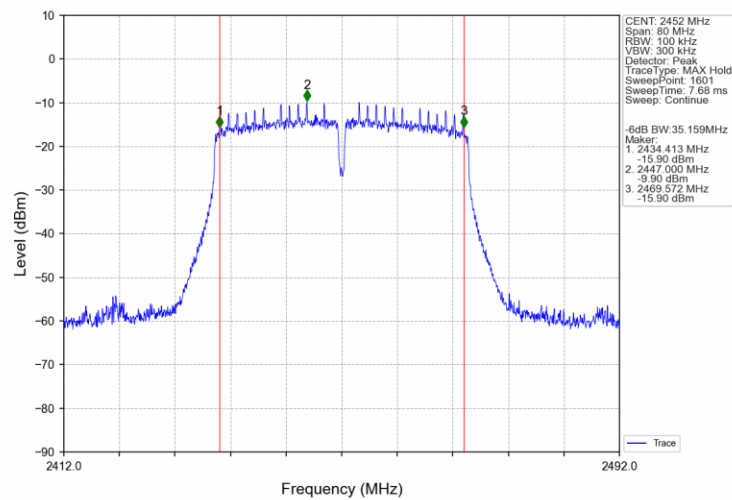
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	10.32	13.42	/	<=30	Pass
		2437	10.73	12.85	/	<=30	Pass
		2462	10.41	13.12	/	<=30	Pass
802.11g	SISO	2412	13.84	16.43	/	<=30	Pass
		2437	13.36	16.04	/	<=30	Pass
		2462	12.97	15.83	/	<=30	Pass
802.11n (HT20)	MIMO	2412	12.55	14.63	16.72	<=30	Pass
		2437	12.23	14.19	16.33	<=30	Pass
		2462	12.01	14.04	16.15	<=30	Pass
802.11n (HT40)	MIMO	2422	11.82	15.11	16.78	<=30	Pass
		2437	11.47	13.92	15.88	<=30	Pass
		2452	11.38	13.76	15.74	<=30	Pass

Note1: Antenna Gain: Ant1: 2.68dBi; Ant2: 2.68dBi; Directional gain : 5.69dBi
Note2: Note2: Directional Gain: $Directional\ gain = G_{ANT} + 10 \log(N_{ANT}/N_{SS})\ dBi$, where N_{SS} = the number of independent spatial streams of data and G_{ANT} is the antenna gain in dBi. For this devices $N_{SS} = 1$.

4. Maximum Power Spectral Density

4.1 Test Result

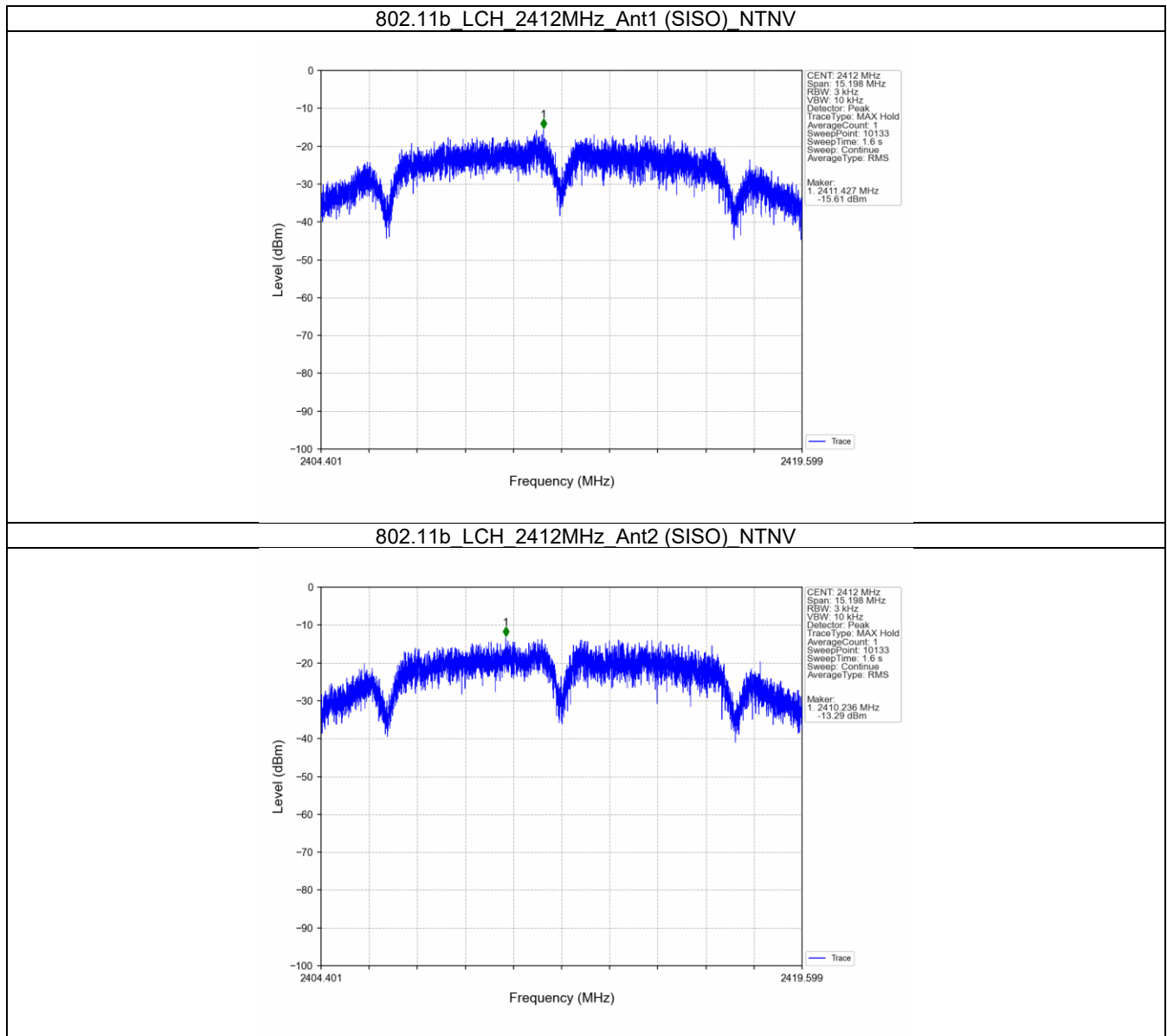
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	-15.61	-13.29	/	<=8	Pass
		2437	-15.89	-12.96	/	<=8	Pass
		2462	-15.53	-12.59	/	<=8	Pass
802.11g	SISO	2412	-18.81	-15.78	/	<=8	Pass
		2437	-18.44	-17.08	/	<=8	Pass
		2462	-19.98	-16.86	/	<=8	Pass
802.11n (HT20)	MIMO	2412	-20.36	-18.36	-17.89	<=8	Pass
		2437	-18.68	-18.20	-17.36	<=8	Pass
		2462	-20.04	-17.82	-17.44	<=8	Pass
802.11n (HT40)	MIMO	2422	-24.38	-18.78	-18.63	<=8	Pass
		2437	-24.35	-21.85	-21.14	<=8	Pass
		2452	-24.57	-22.34	-20.93	<=8	Pass

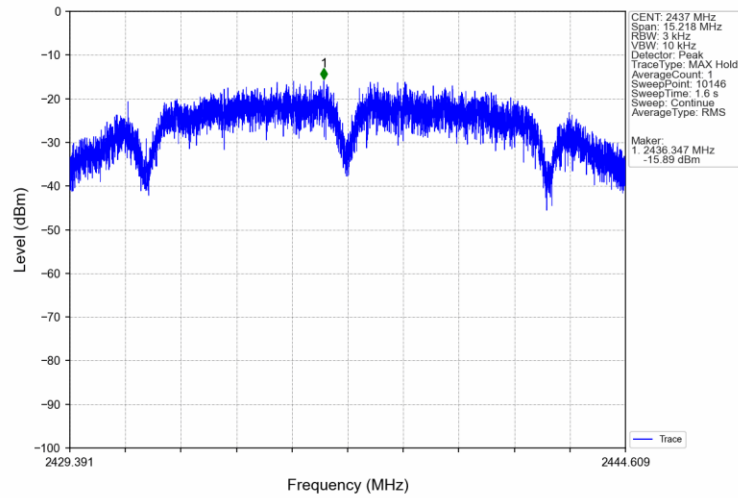
Note1: Antenna Gain: Ant1: 2.68dBi; Ant2: 2.68dBi; Directional gain : 5.69dBi
Note2: Note2: Directional Gain: $Directional\ gain = G_{ANT} + 10 \log(N_{ANT}/N_{SS})\ dBi$, where N_{SS} = the number of independent spatial streams of data and G_{ANT} is the antenna gain in dBi. For this devices $N_{SS} = 1$.

4.2 Test Graph

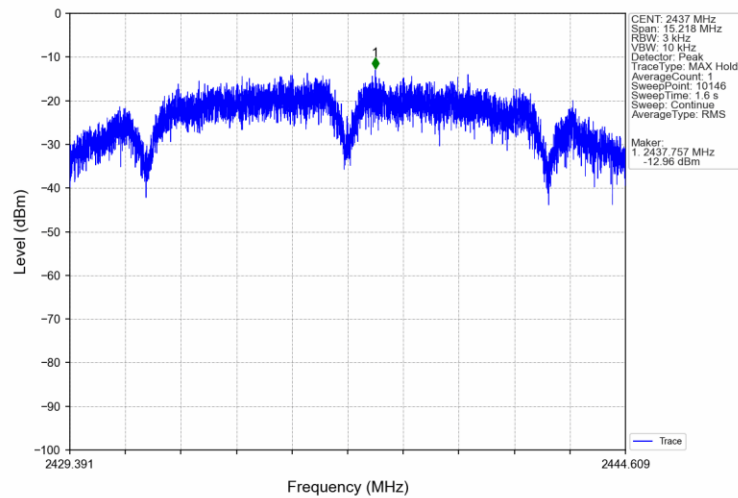
4.2.1 PSD



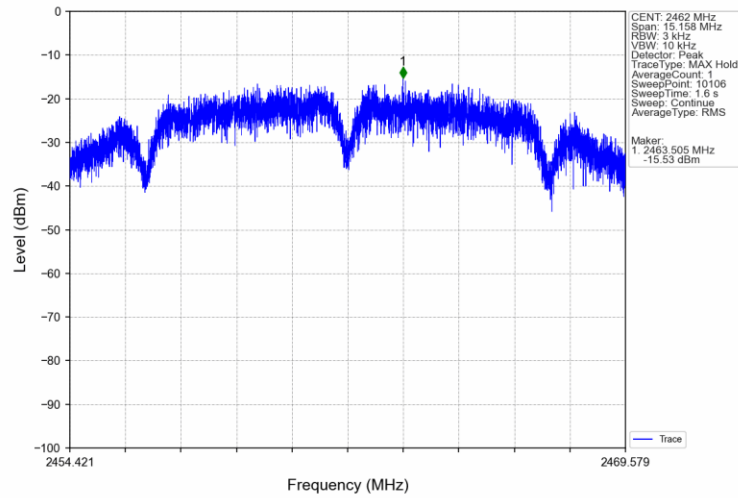
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



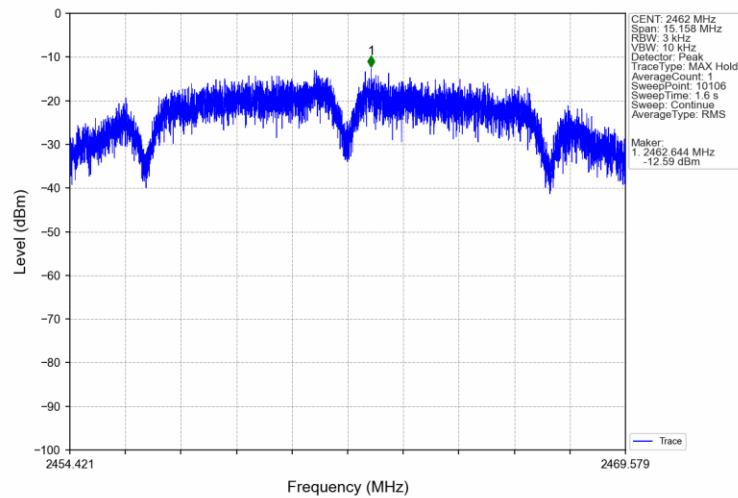
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



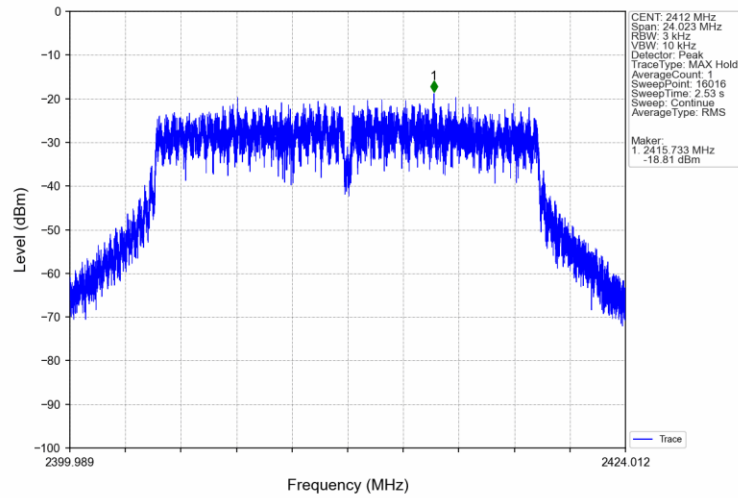
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



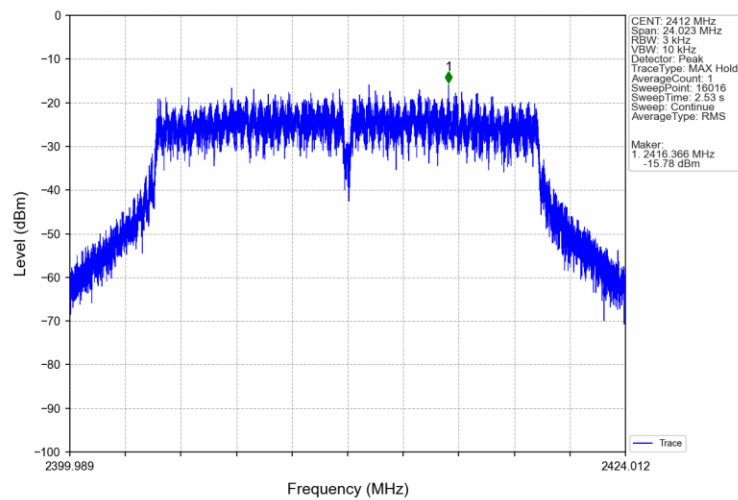
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



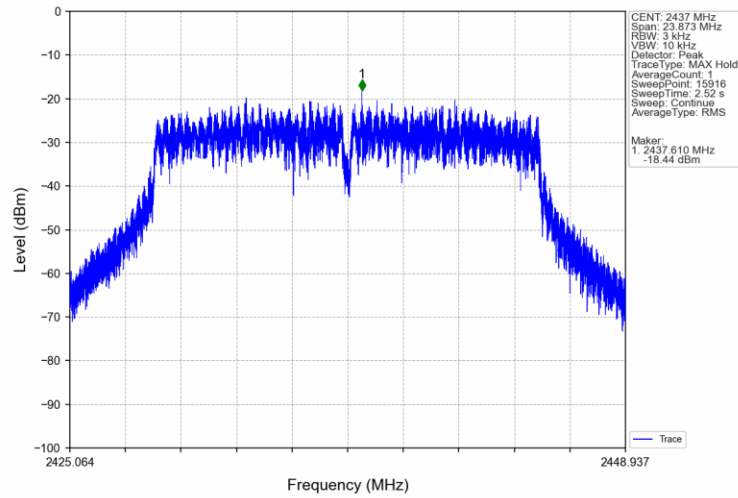
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



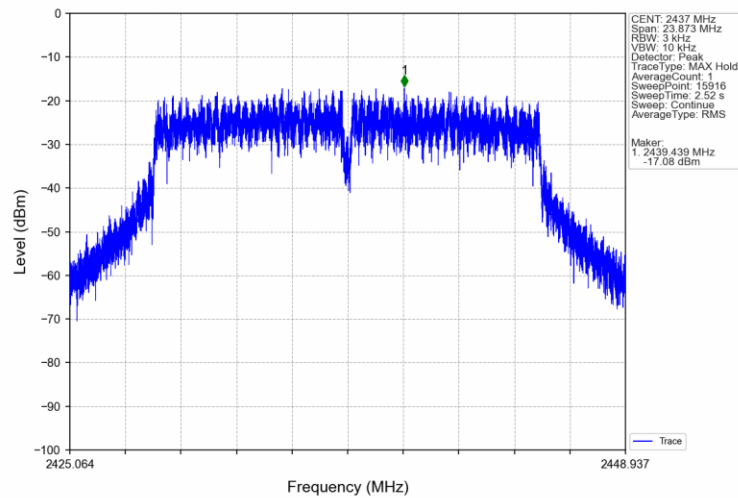
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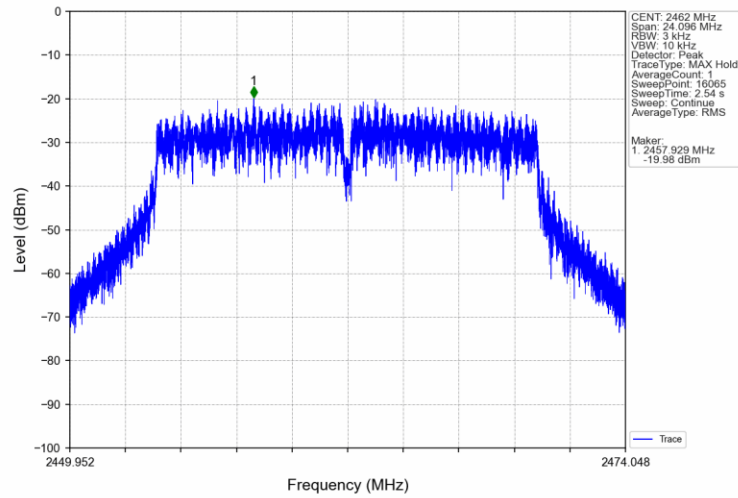
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



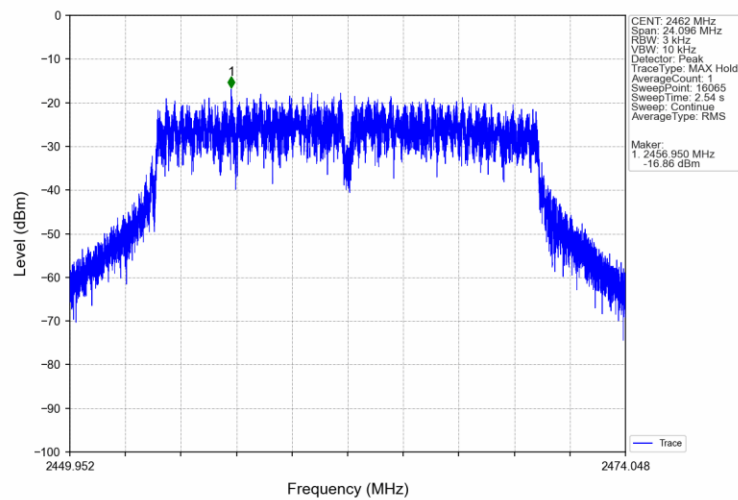
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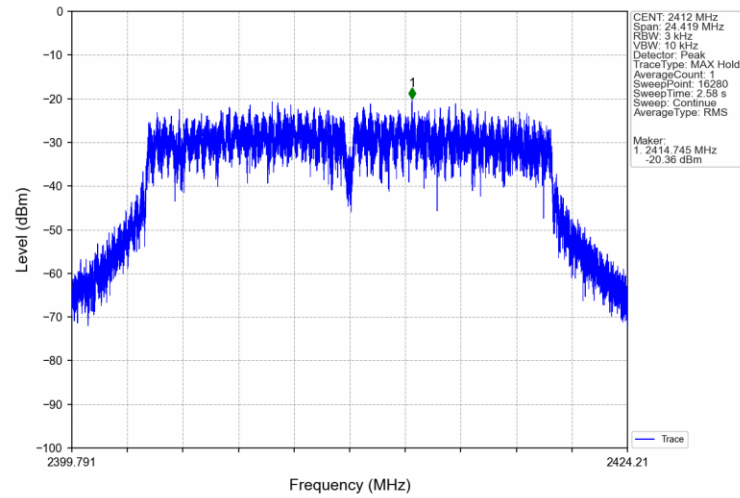
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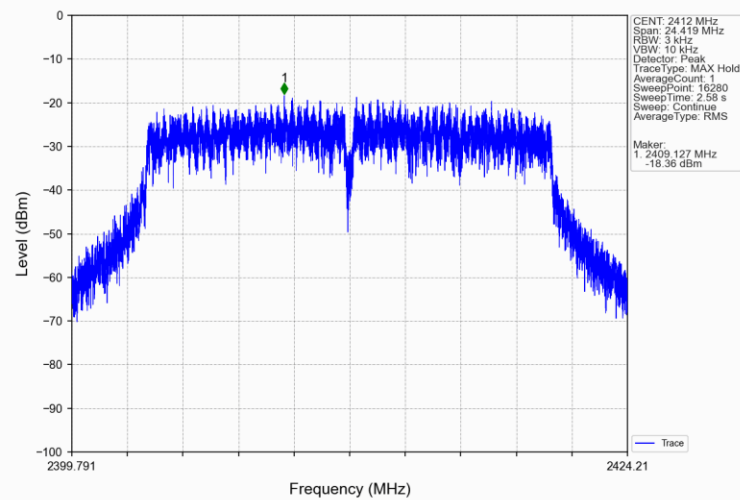
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



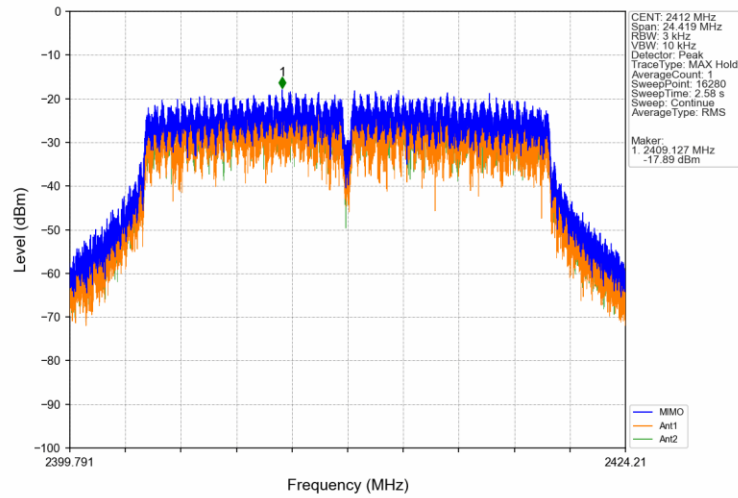
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



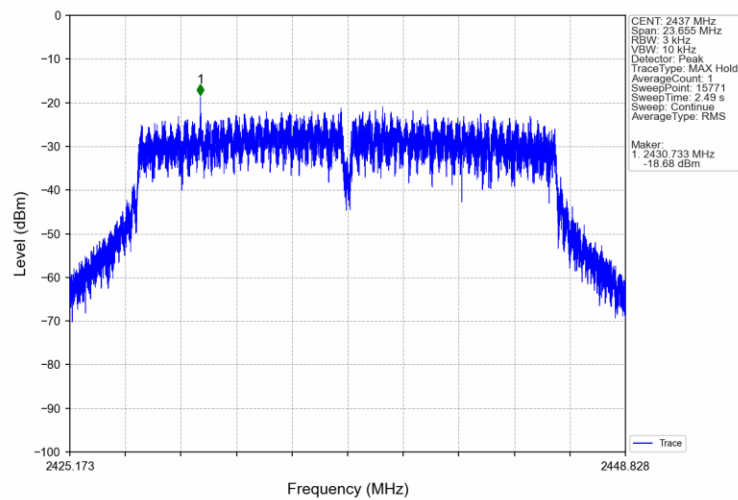
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



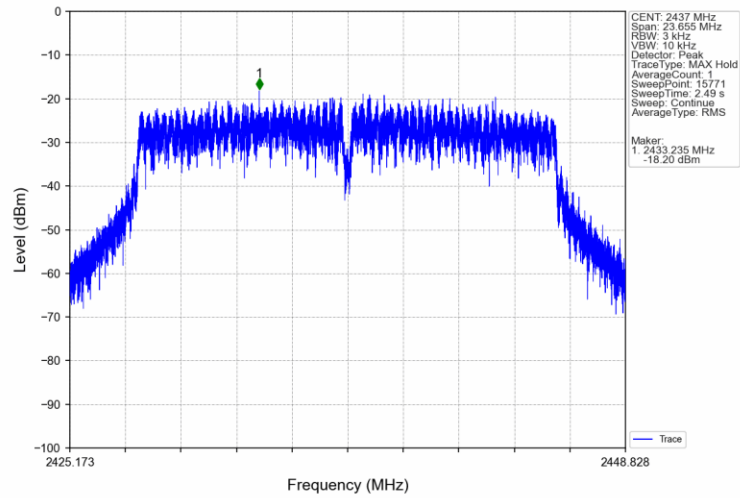
802.11n(HT20)_LCH_2412MHz_MIMO_NTNV



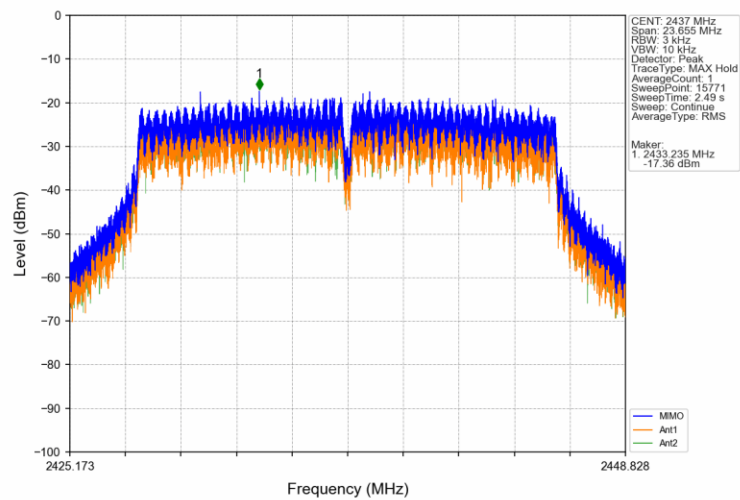
802.11n(HT20)_MCH_2437MHz_Ant1(MIMO)_NTNV



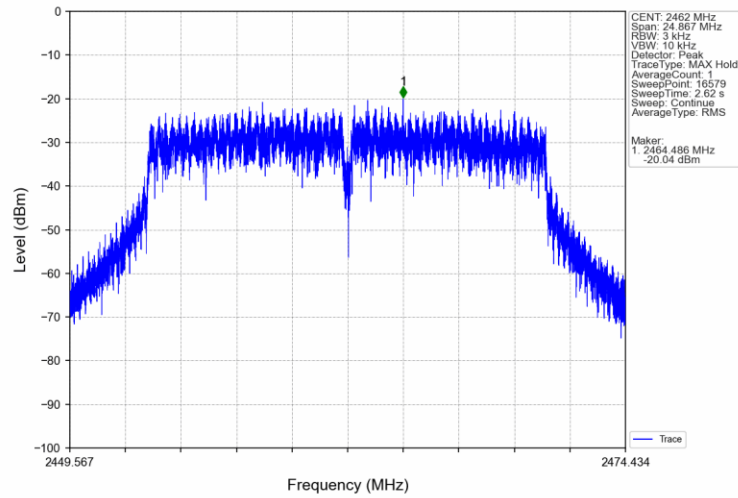
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



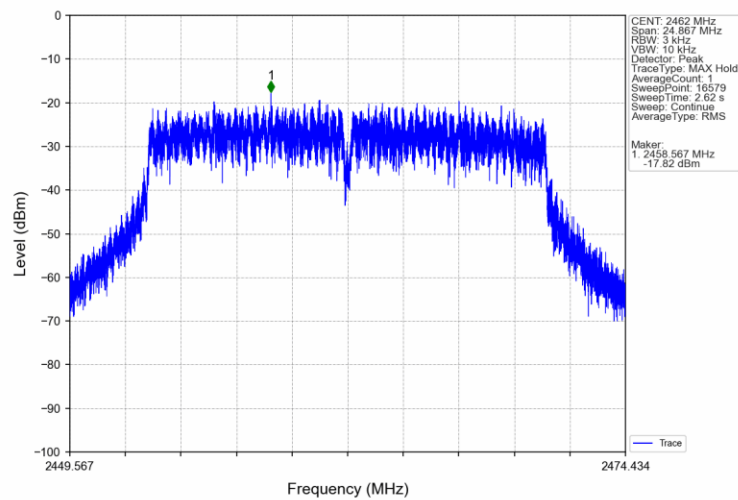
802.11n(HT20)_MCH_2437MHz MIMO NTV



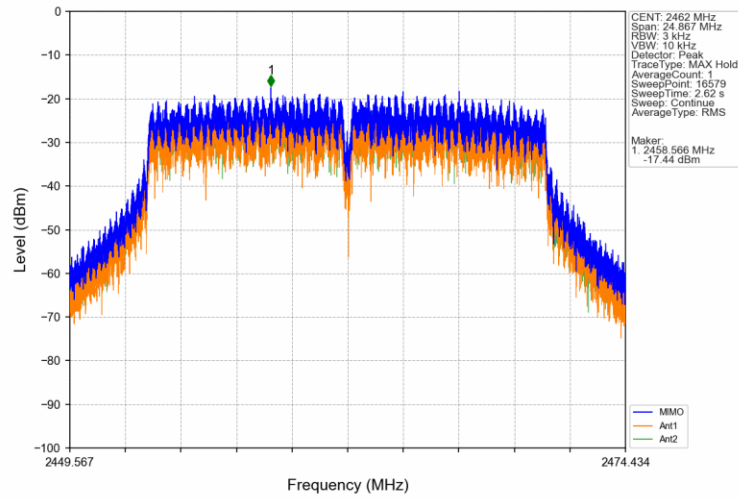
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



802.11n(HT20)_HCH_2462MHz_MIMO_NTNV



802.11n(HT40)_LCH_2422MHz_Ant1(MIMO)_NTNV

