1. Duty Cycle

1.1 Test Result

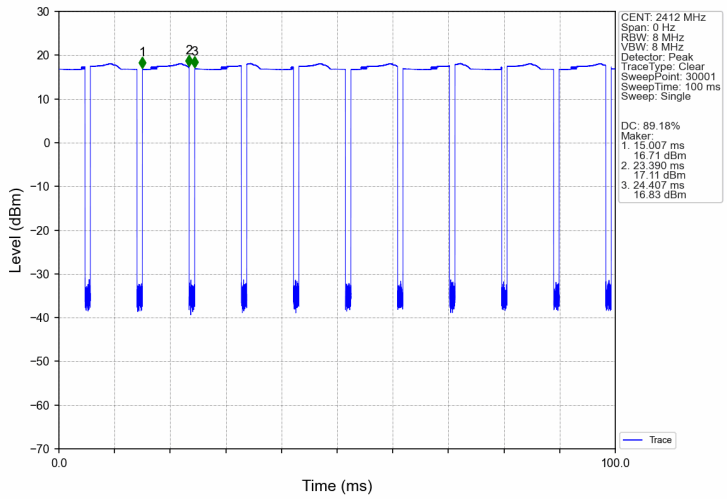
1.1.1 Ant1

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	8.383	9.400	89.18	0.50	0.45
		2437	8.383	9.390	89.28	0.49	0.93
		2462	8.386	9.393	89.28	0.49	0.96
802.11g	SISO	2412	1.392	2.363	58.91	2.30	1.39
		2437	1.392	2.363	58.91	2.30	0.50
		2462	1.392	2.363	58.91	2.30	1.40
802.11n (HT20)	SISO	2412	1.289	2.268	56.83	2.45	0.22
		2437	1.289	2.295	56.17	2.51	0.90
		2462	1.288	2.295	56.12	2.51	0.90
802.11n (HT40)	SISO	2422	0.633	1.828	34.63	4.61	4.86
		2437	0.632	1.603	39.43	4.04	17.68
		2452	0.632	1.603	39.43	4.04	18.14
802.11n (HT20)	MIMO	2412	1.290	2.268	56.88	2.45	1.63
		2437	1.289	2.258	57.09	2.43	0.04
		2462	1.290	2.268	56.88	2.45	0.24
802.11n (HT40)	MIMO	2422	0.634	1.612	39.33	4.05	1.59
		2437	0.634	1.612	39.33	4.05	0.26
		2452	0.634	1.603	39.55	4.03	0.03

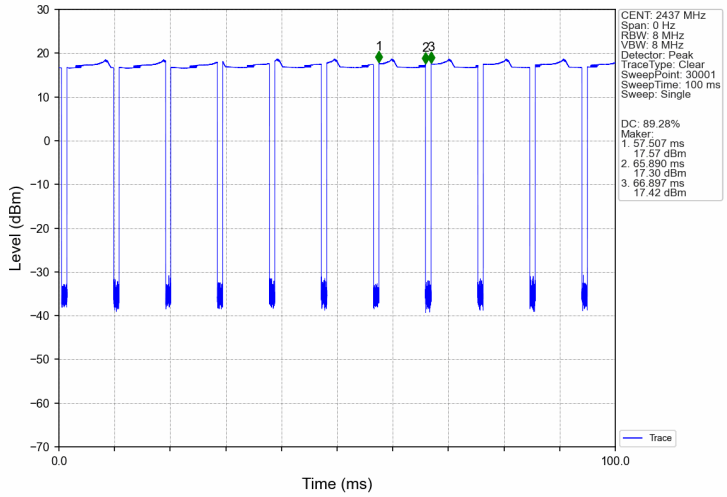
1.2 Test Graph

1.2.1 Ant1

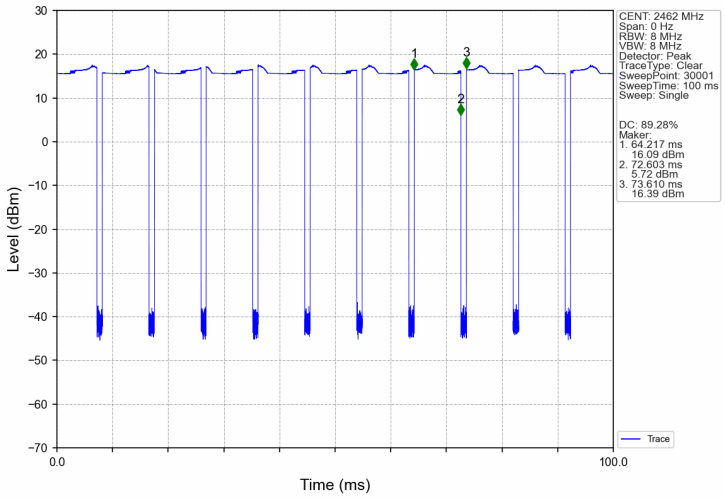
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



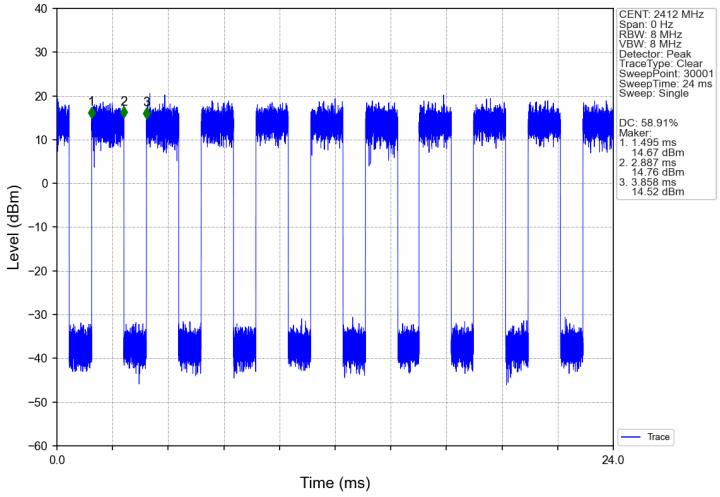
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



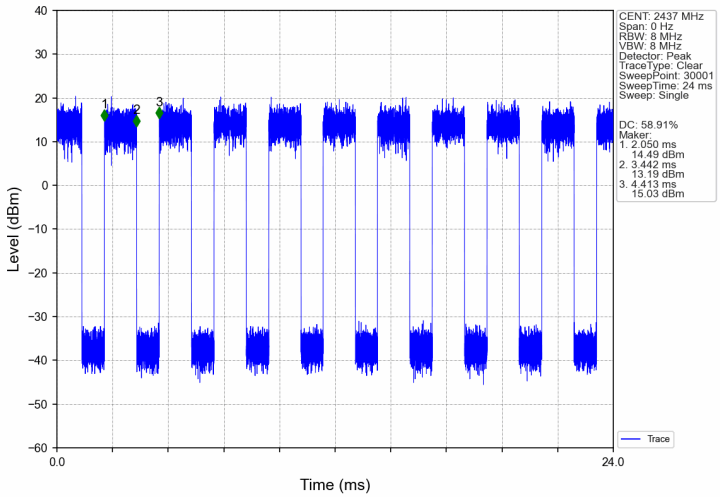
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



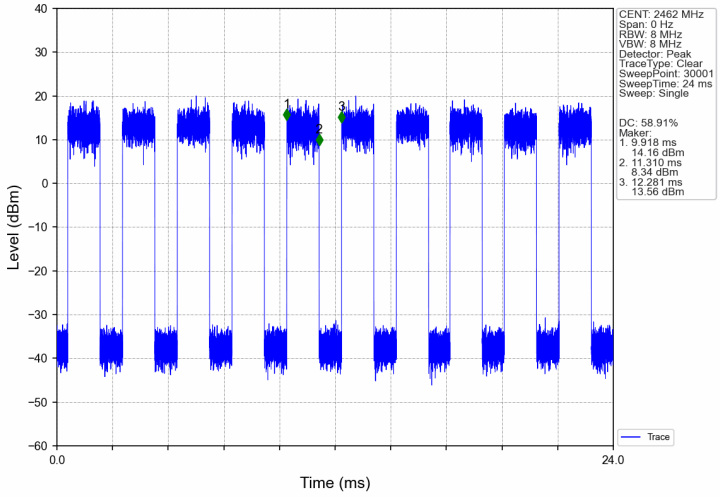
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



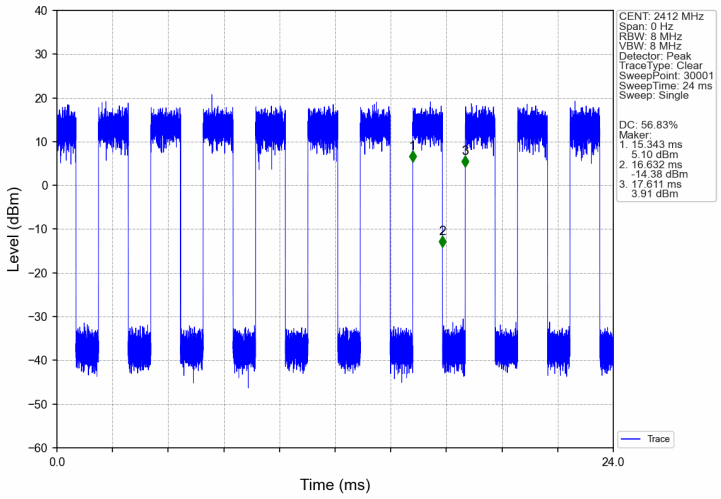
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



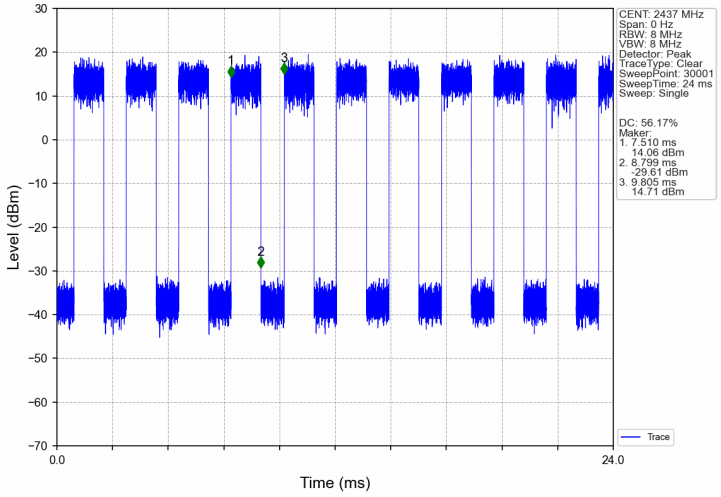
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



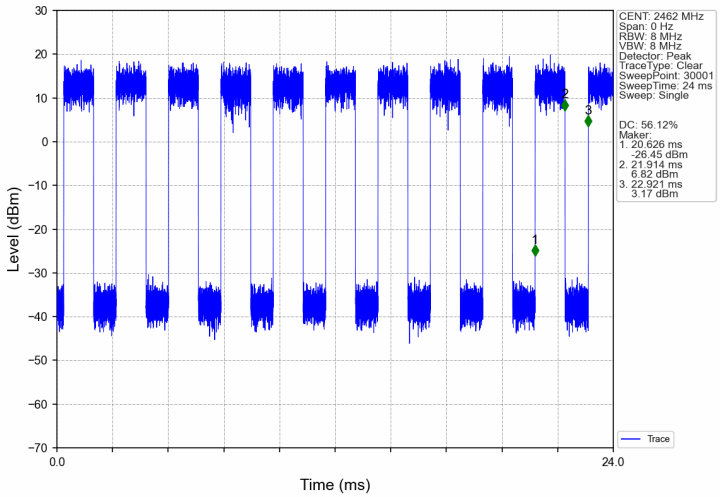
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



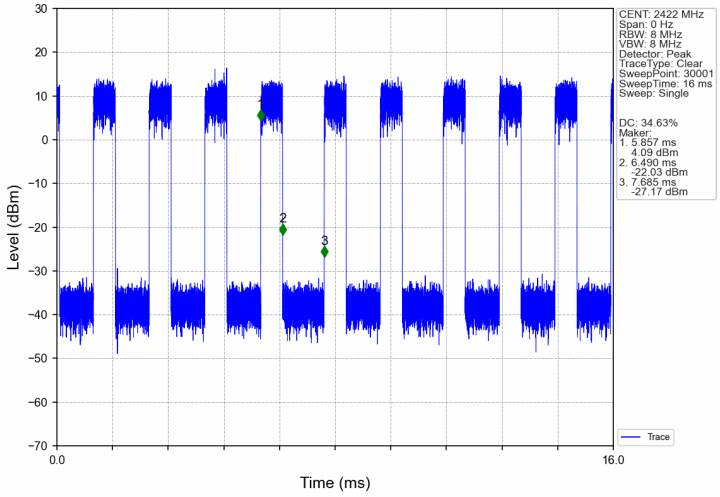
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



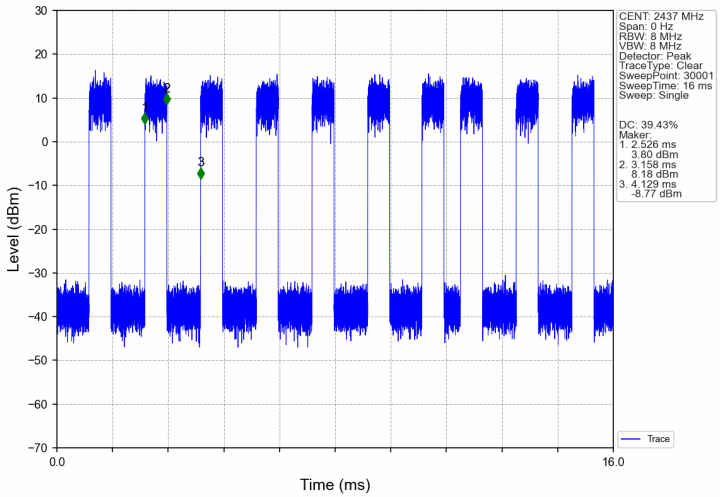
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



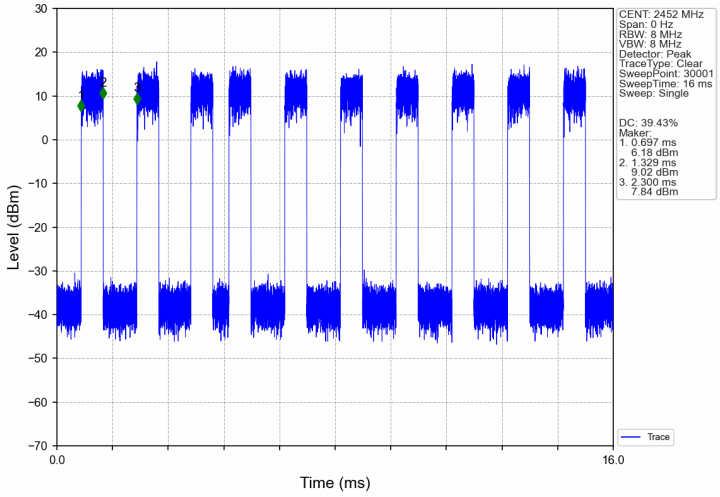
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



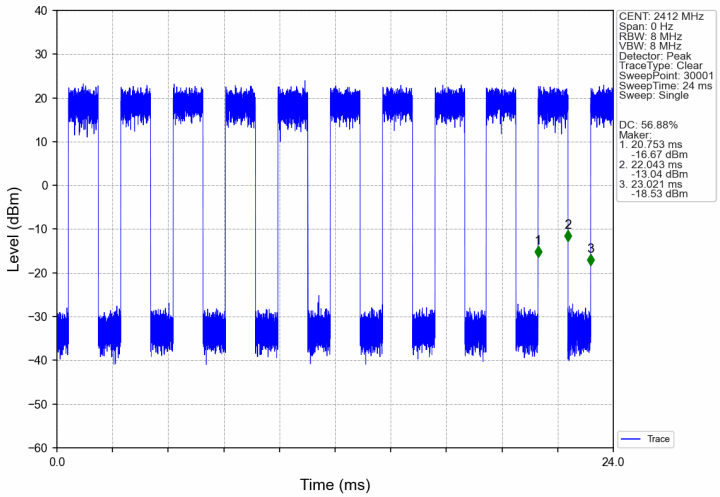
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



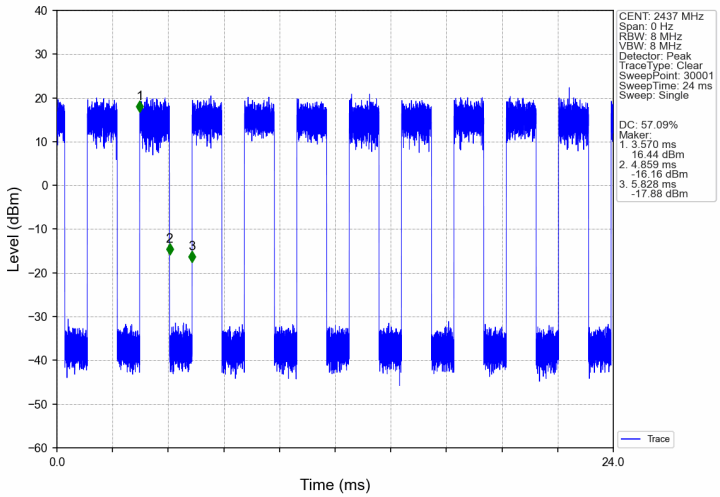
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



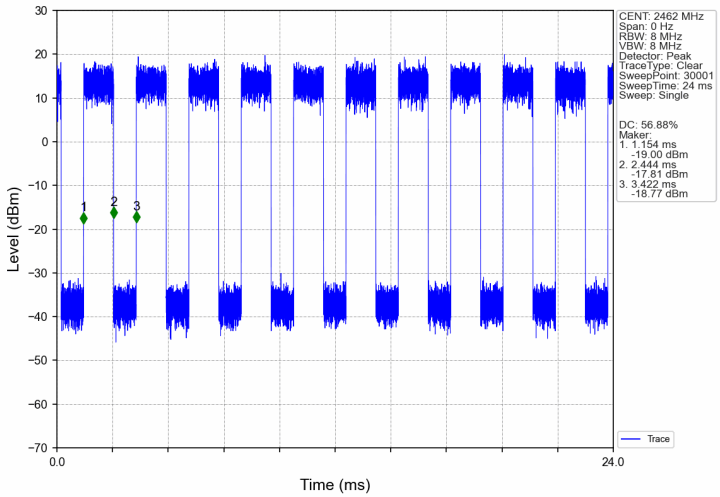
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



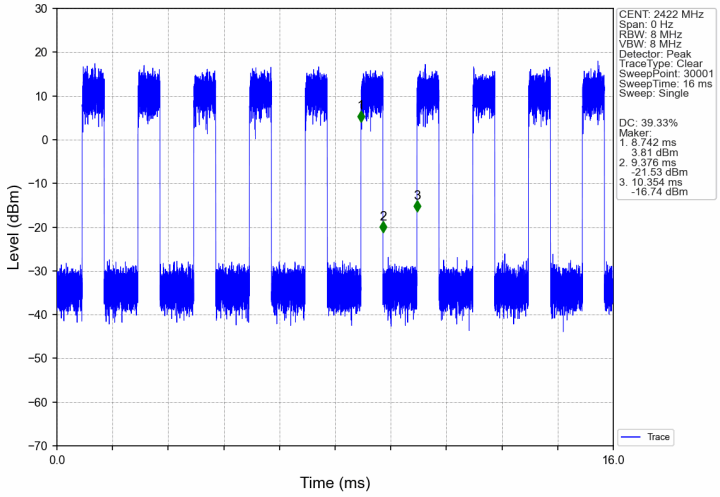
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



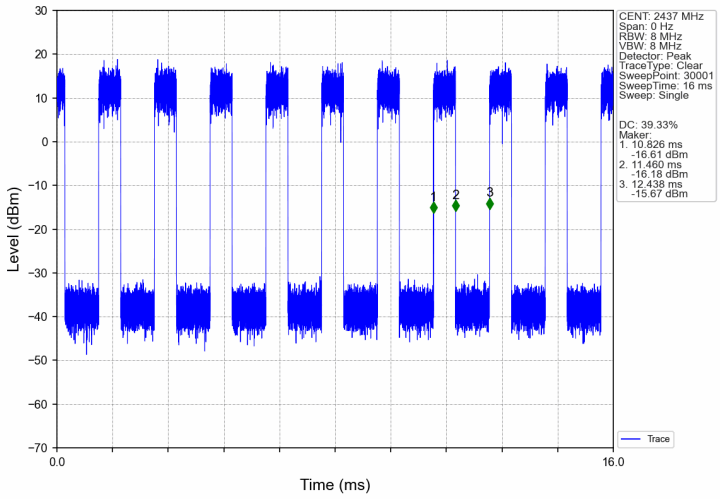
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



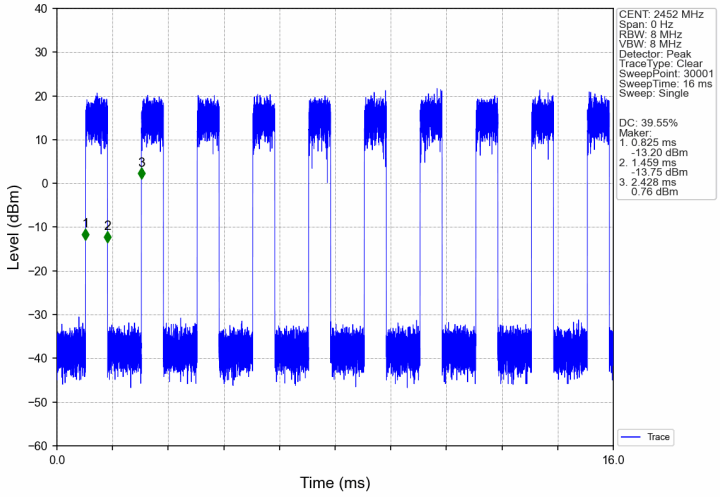
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



2. 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	12.664	/	Pass
		2437	1	12.672	/	Pass
		2462	1	13.136	/	Pass
802.11g	SISO	2412	1	17.227	/	Pass
		2437	1	17.337	/	Pass
		2462	1	17.514	/	Pass
802.11n (HT20)	SISO	2412	1	18.029	/	Pass
		2437	1	18.186	/	Pass
		2462	1	18.271	/	Pass
802.11n (HT40)	SISO	2422	1	36.613	/	Pass
		2437	1	36.117	/	Pass
		2452	1	36.362	/	Pass
802.11n (HT20)	MIMO	2412	1	18.628	/	Pass
		2437	1	18.225	/	Pass
		2462	1	18.373	/	Pass
802.11n (HT40)	MIMO	2422	1	36.804	/	Pass
		2437	1	36.166	/	Pass
		2452	1	36.703	/	Pass

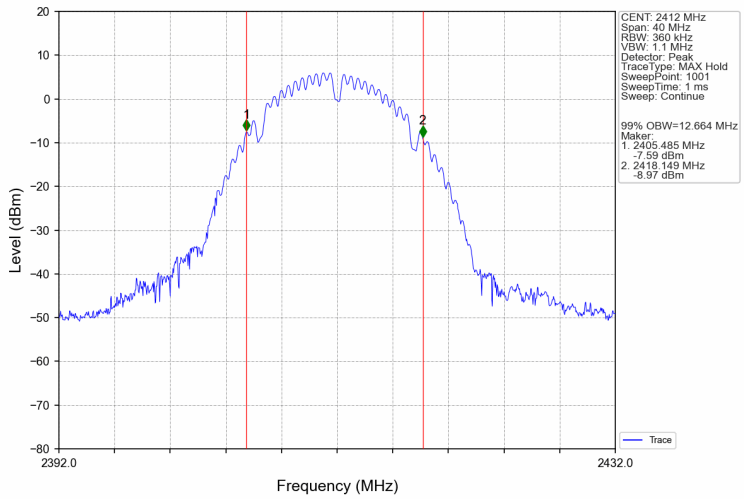
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.106	>=0.5	Pass
		2437	1	8.097	>=0.5	Pass
		2462	1	8.561	>=0.5	Pass
802.11g	SISO	2412	1	15.143	>=0.5	Pass
		2437	1	15.149	>=0.5	Pass
		2462	1	15.158	>=0.5	Pass
802.11n (HT20)	SISO	2412	1	15.165	>=0.5	Pass
		2437	1	15.152	>=0.5	Pass
		2462	1	15.165	>=0.5	Pass
802.11n (HT40)	SISO	2422	1	35.206	>=0.5	Pass
		2437	1	26.361	>=0.5	Pass
		2452	1	35.069	>=0.5	Pass
802.11n (HT20)	MIMO	2412	1	15.176	>=0.5	Pass
		2437	1	15.148	>=0.5	Pass
		2462	1	15.141	>=0.5	Pass
802.11n (HT40)	MIMO	2422	1	35.196	>=0.5	Pass
		2437	1	26.325	>=0.5	Pass
		2452	1	33.826	>=0.5	Pass

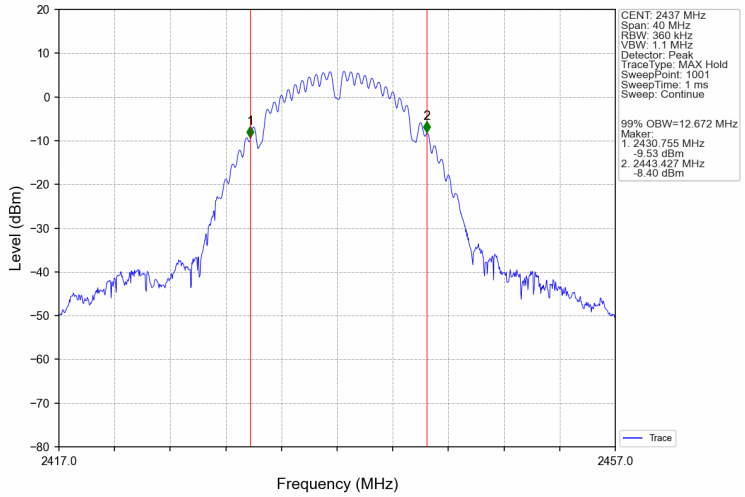
2.2 Test Graph

2.2.1 OBW

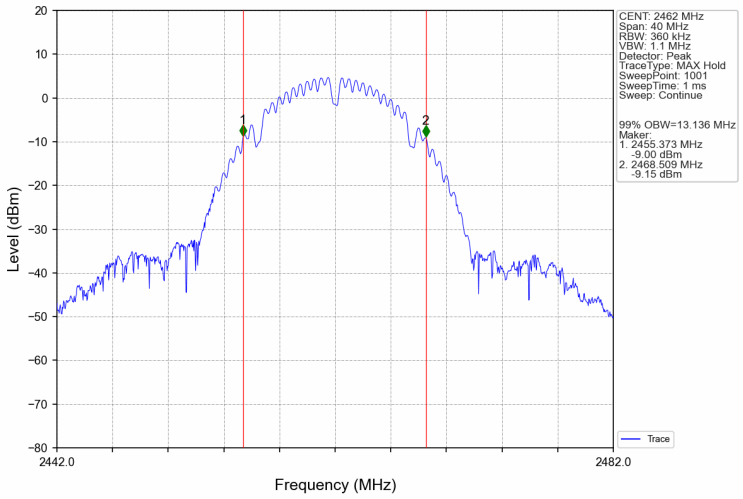
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



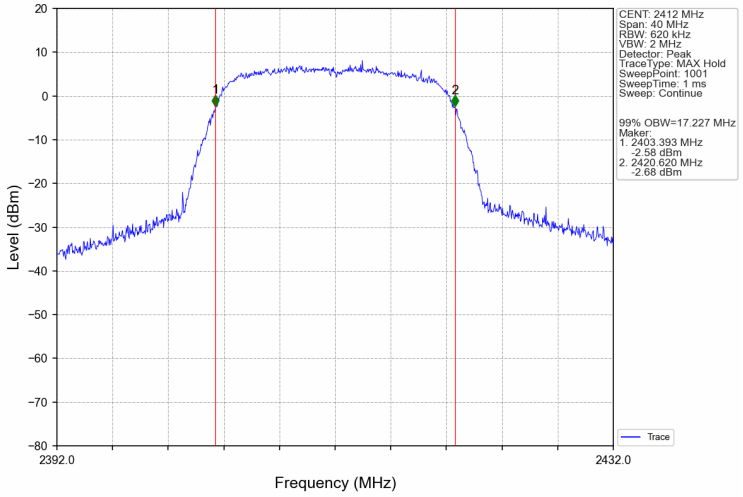
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



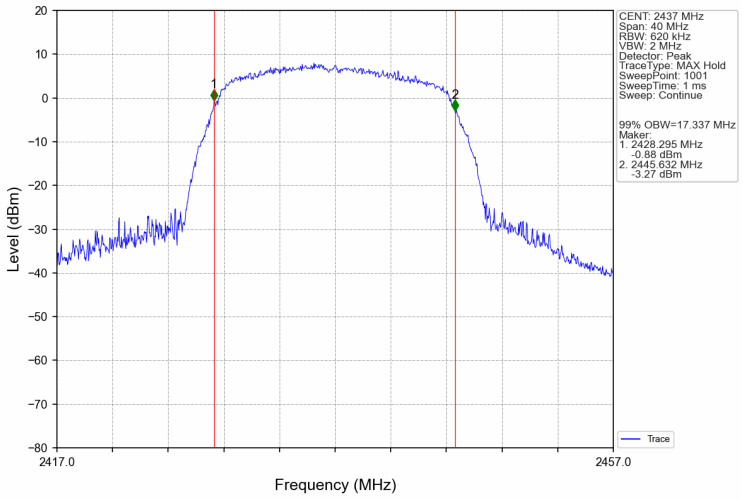
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



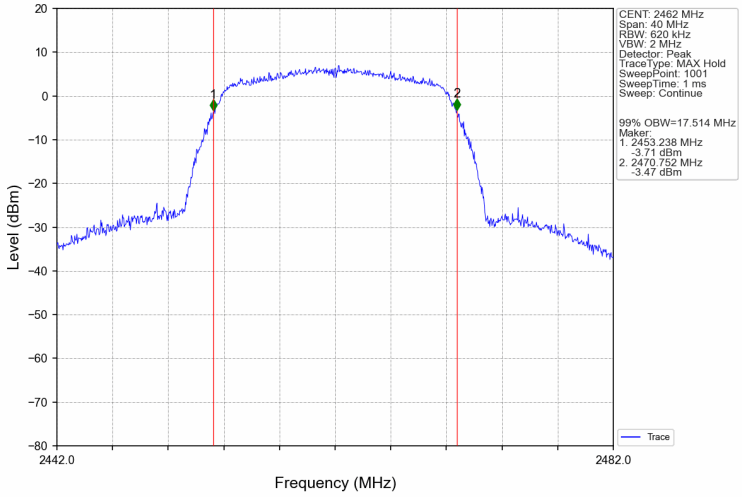
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



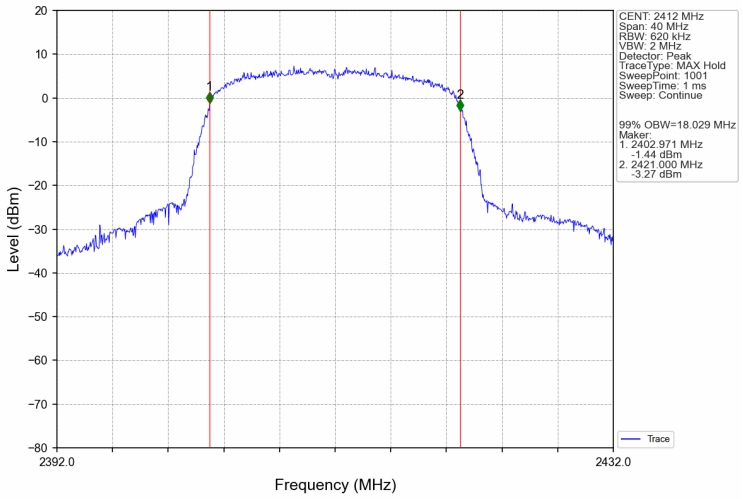
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



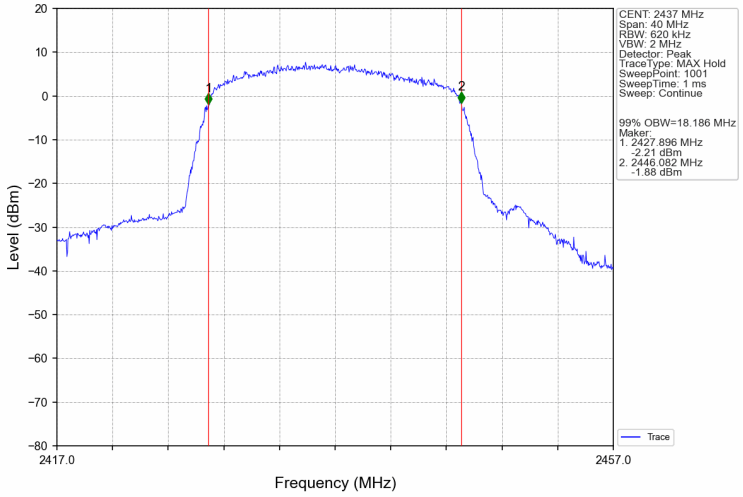
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



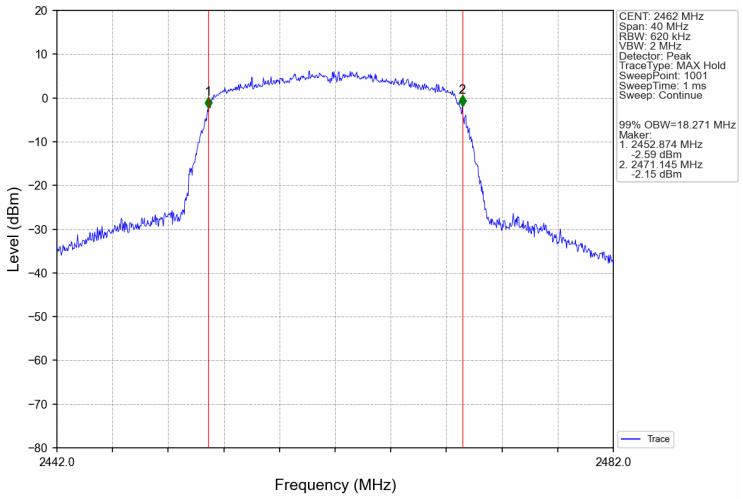
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



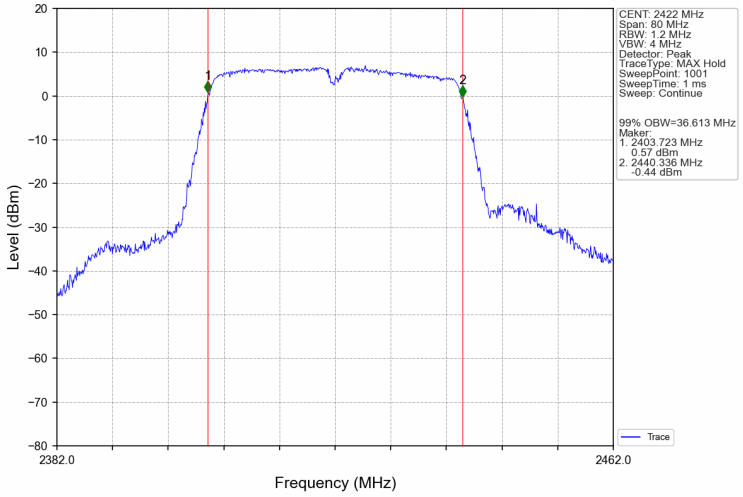
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



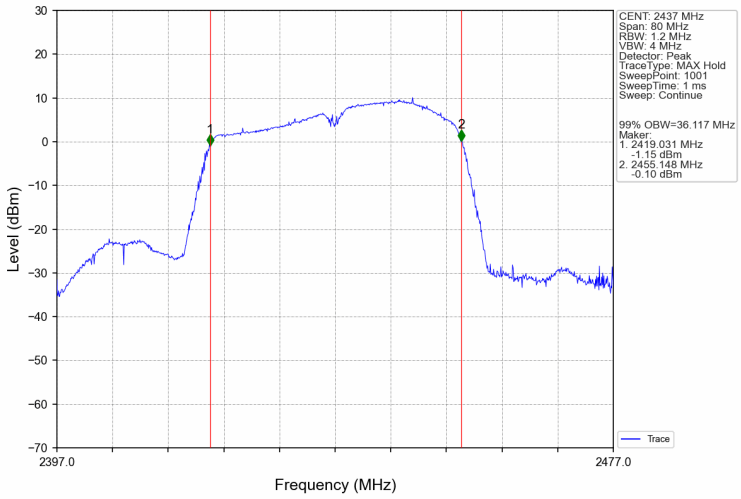
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



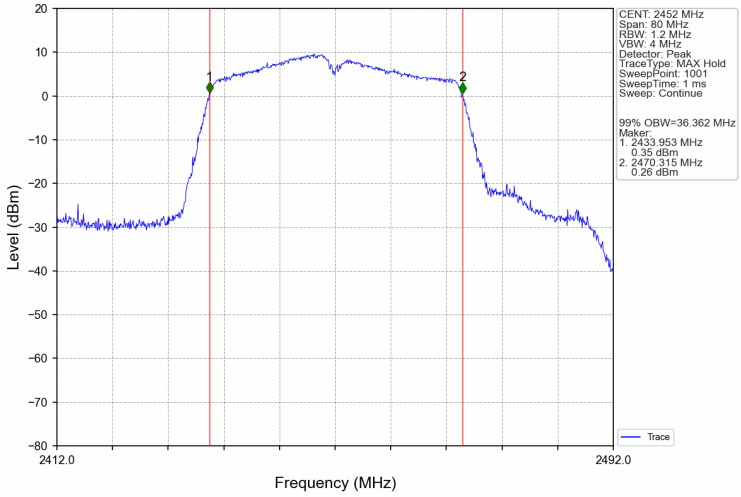
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



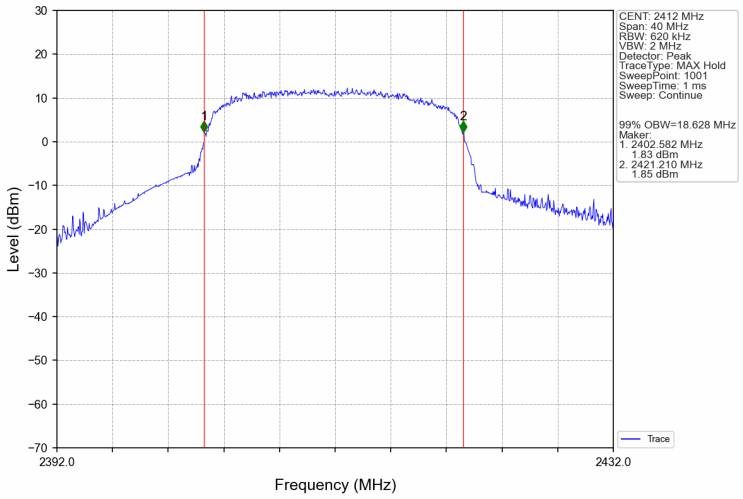
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



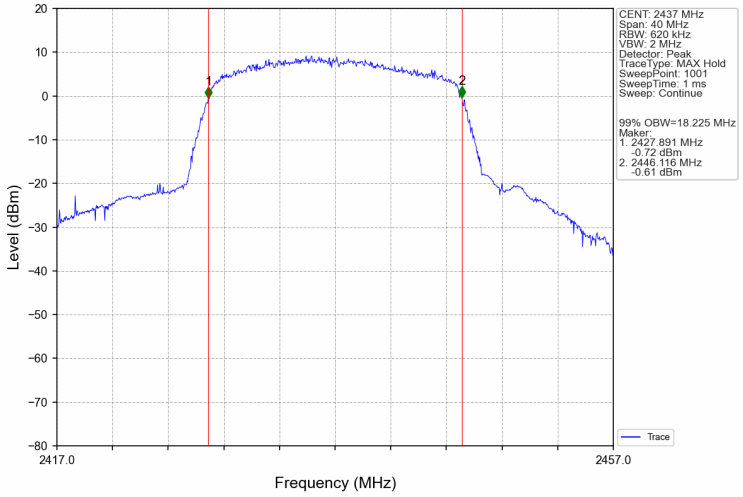
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



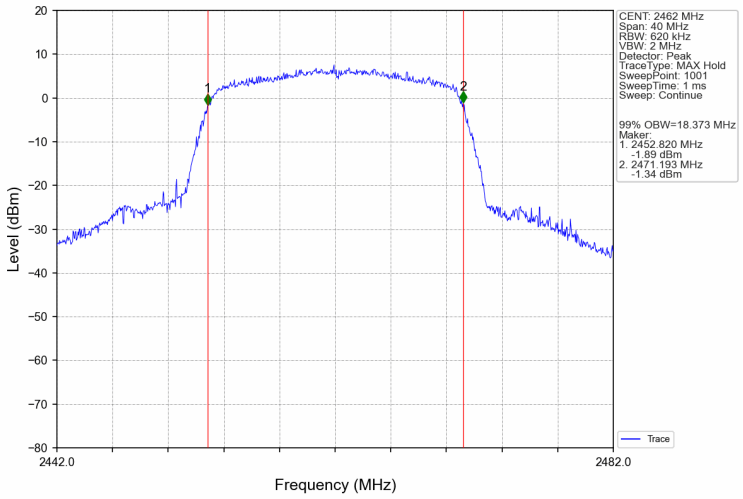
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



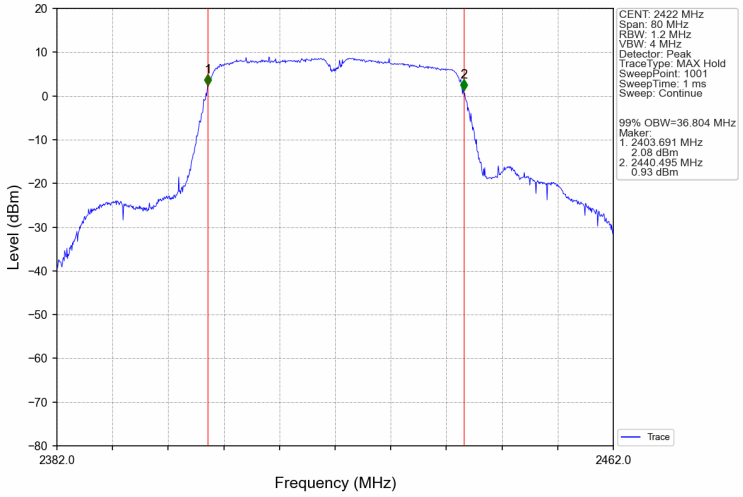
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



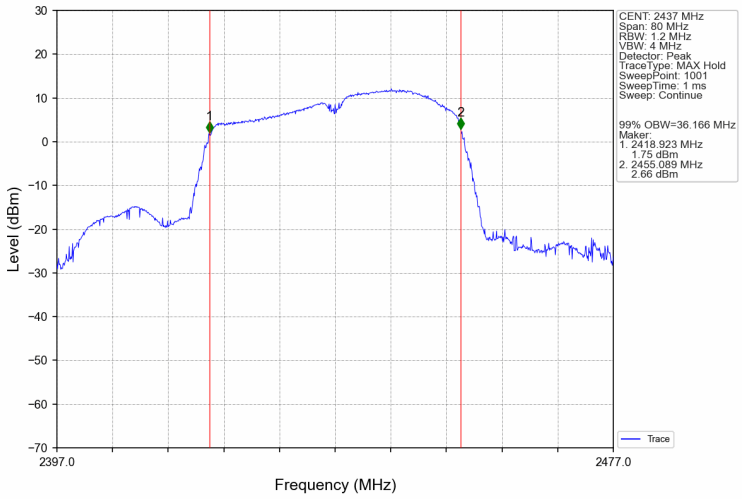
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



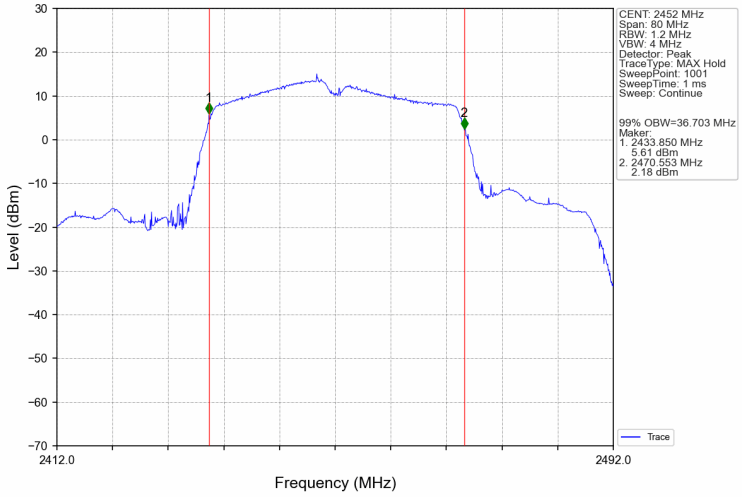
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV

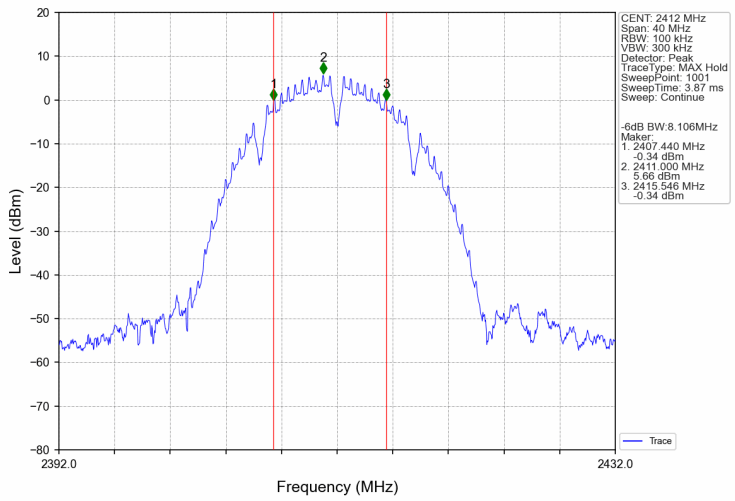


802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV

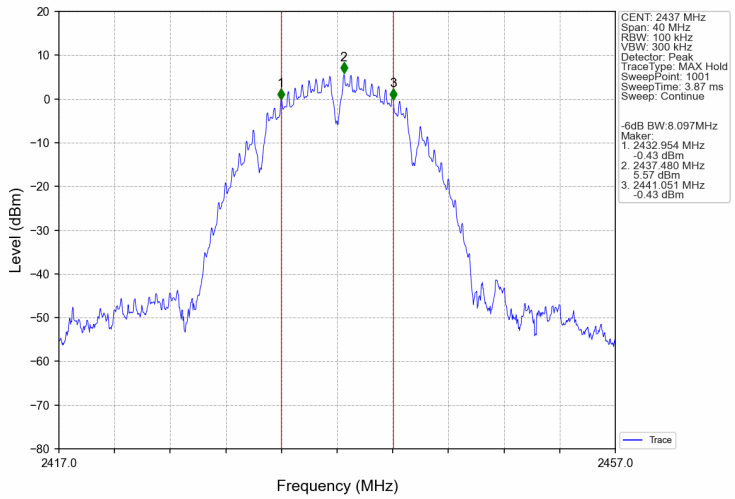


2.2.2 6dB BW

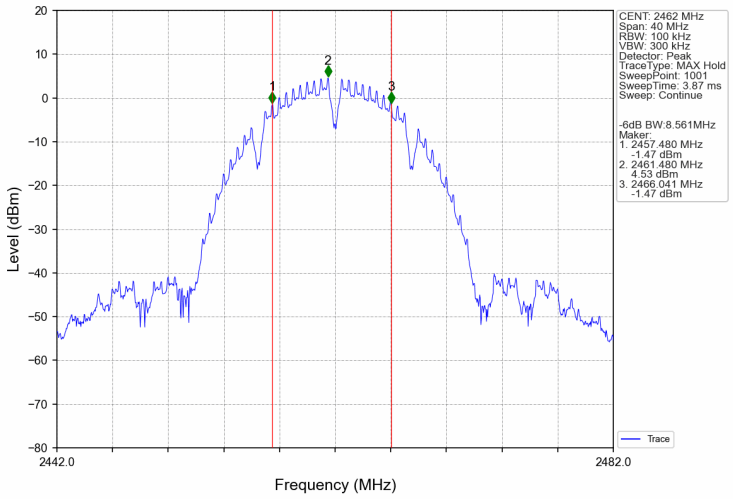
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



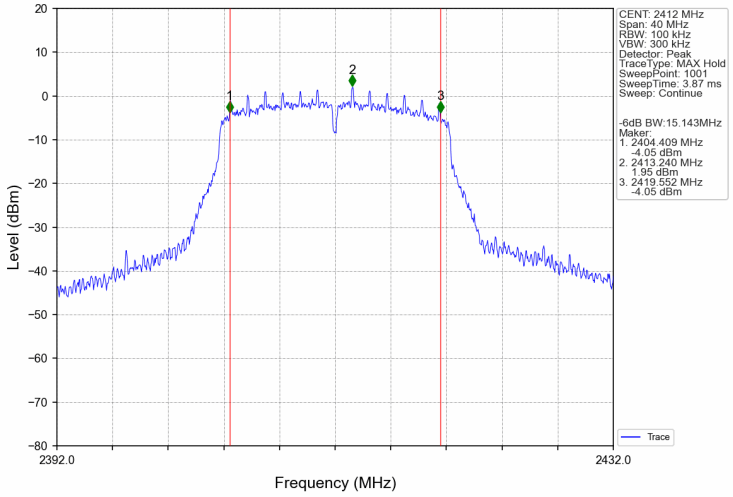
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



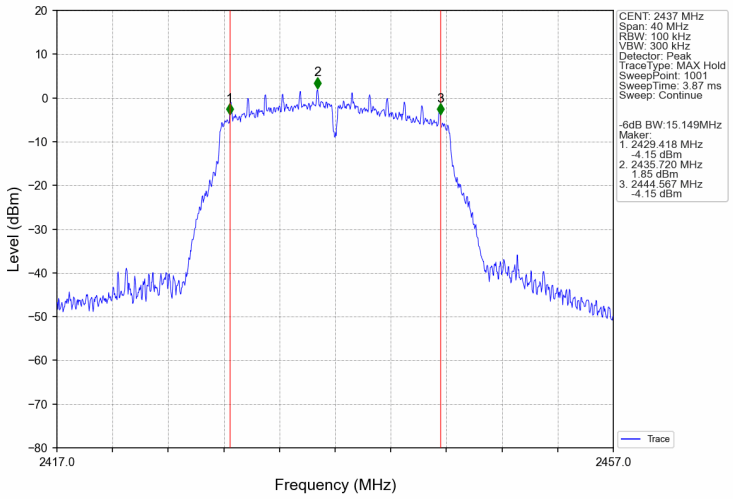
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



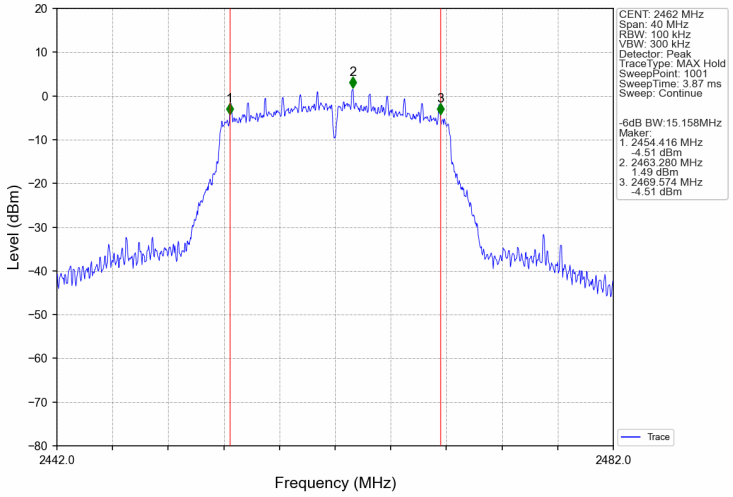
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



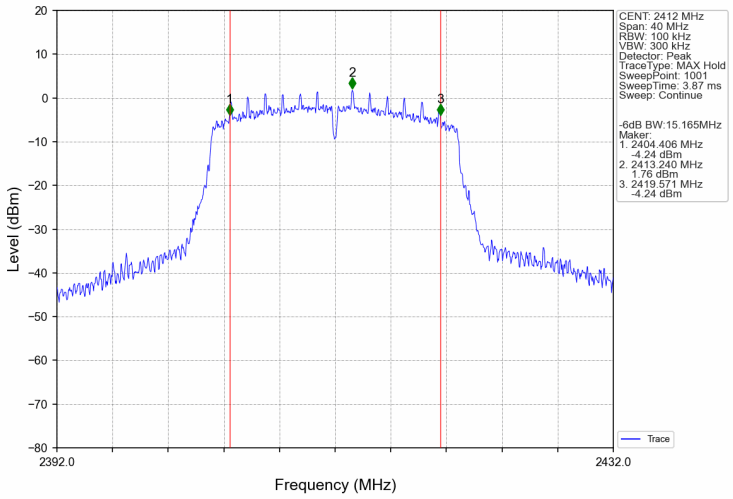
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



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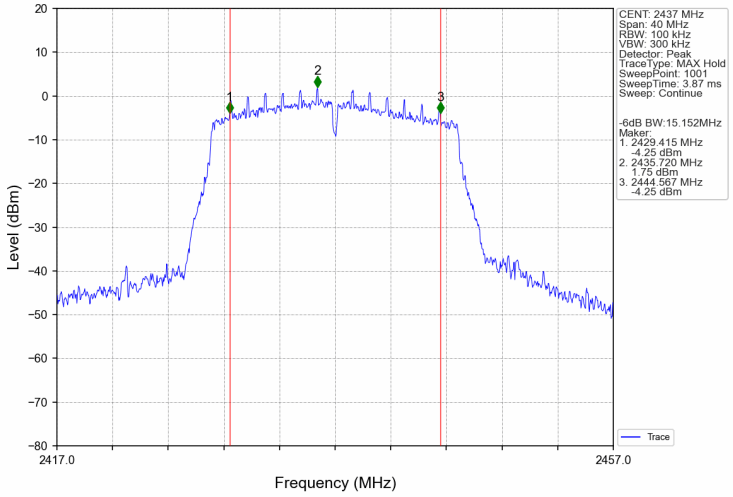
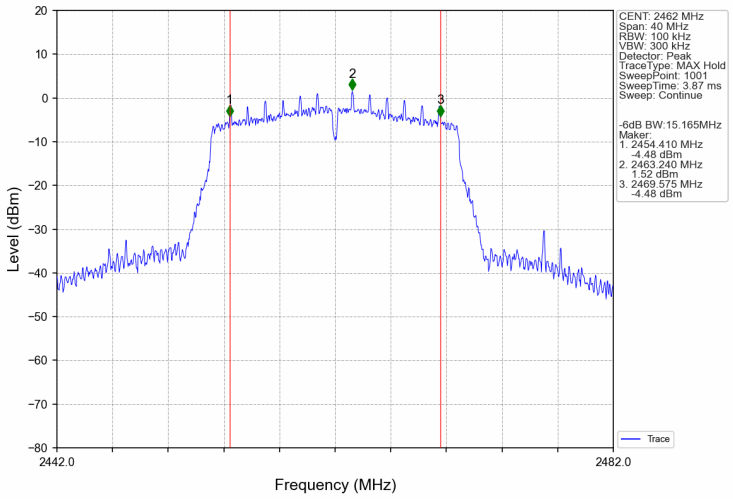
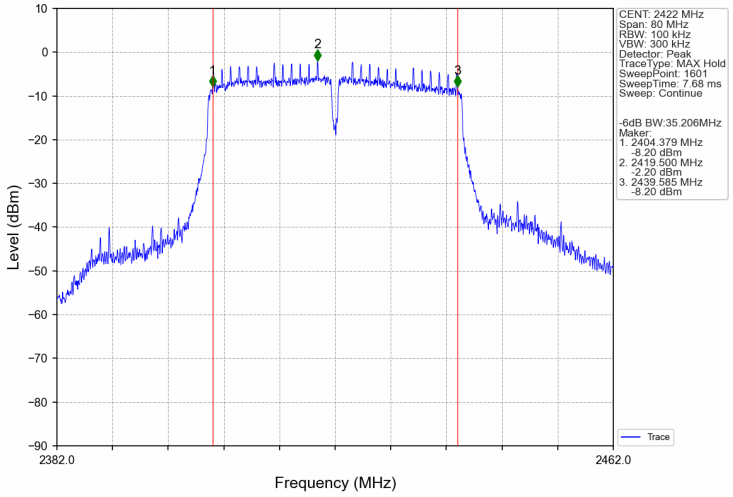


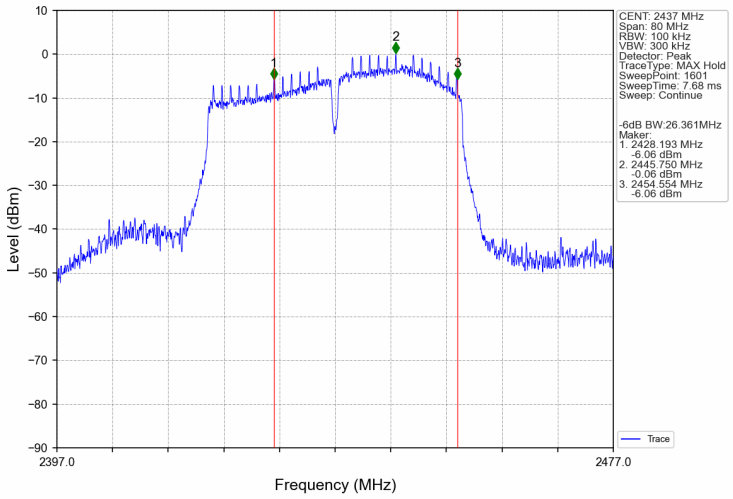
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



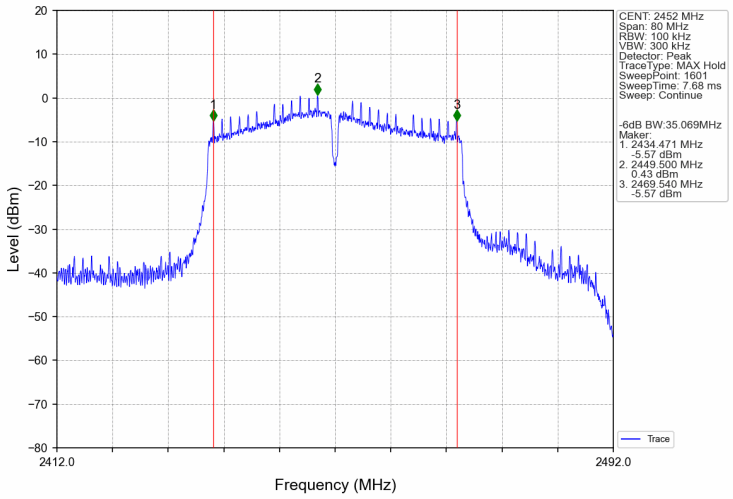
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



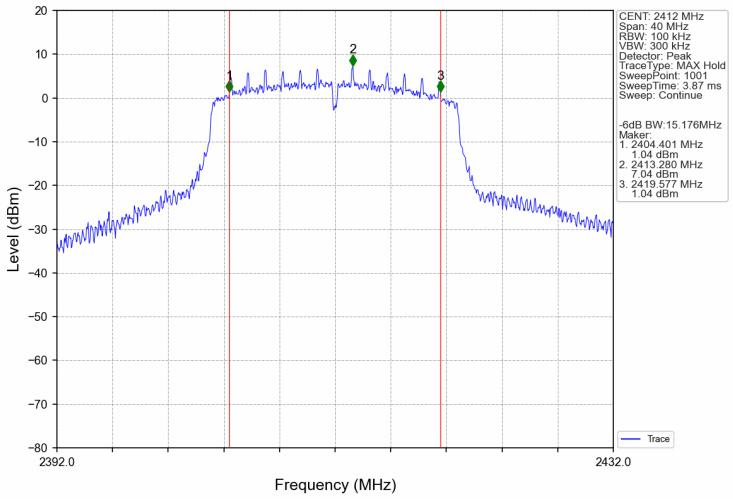
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



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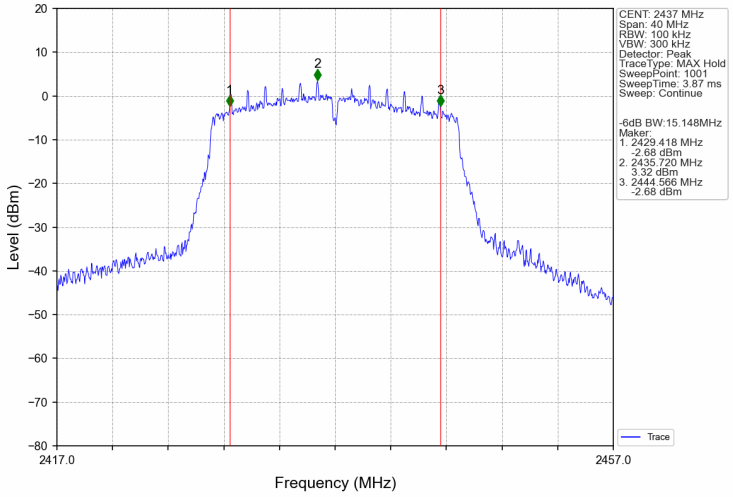
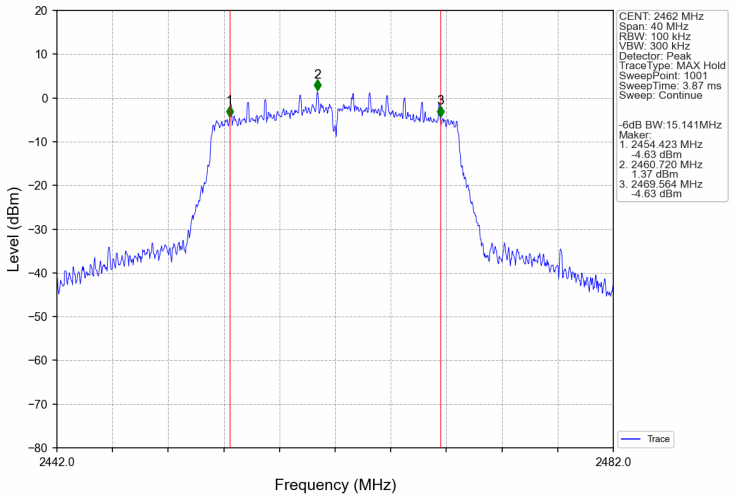
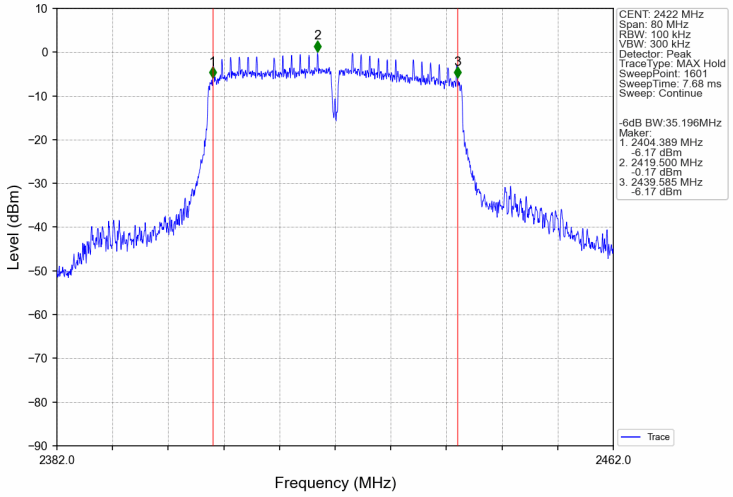


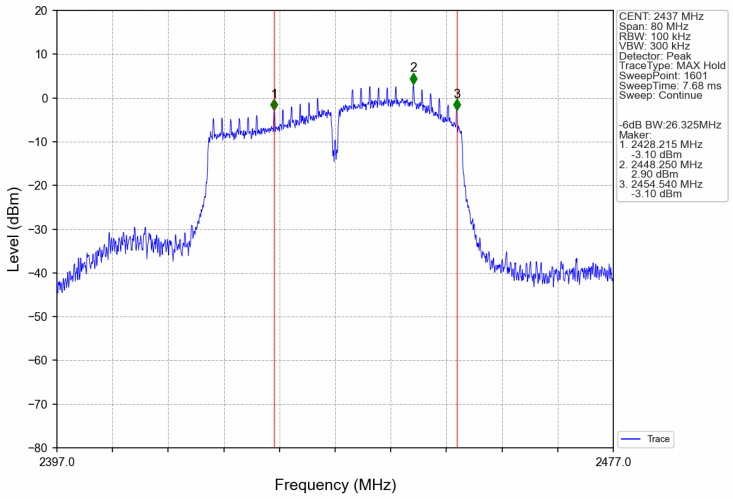
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



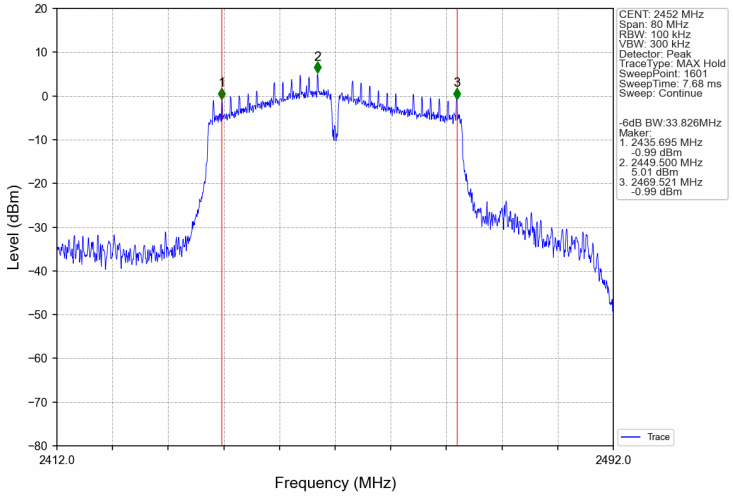
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



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	15.91	15.47	/	<=30	Pass
		2437	15.86	15.42	/	<=30	Pass
		2462	14.88	15.89	/	<=30	Pass
802.11g	SISO	2412	19.49	19.60	/	<=30	Pass
		2437	19.56	19.76	/	<=30	Pass
		2462	18.78	18.99	/	<=30	Pass
802.11n (HT20)	SISO	2412	19.27	19.90	/	<=30	Pass
		2437	19.30	19.10	/	<=30	Pass
		2462	18.51	18.26	/	<=30	Pass
802.11n (HT40)	SISO	2422	19.01	19.93	/	<=30	Pass
		2437	18.90	19.51	/	<=30	Pass
		2452	20.07	20.53	/	<=30	Pass
802.11n (HT20)	MIMO	2412	24.52	23.93	26.81	<=30	Pass
		2437	20.83	20.09	25.12	<=30	Pass
		2462	19.05	19.41	24.77	<=30	Pass
802.11n (HT40)	MIMO	2422	21.18	221.12	25.90	<=30	Pass
		2437	21.52	22.58	25.09	<=30	Pass
		2452	24.17	23.52	26.43	<=30	Pass

Note1: Antenna Gain: Ant1: 3.18dBi; Ant2: 3.18dBi;
Note2: Directional Gain: Uncorrelated(Directional Gain = Ant Gain)

4. Maximum Power Spectral Density

4.1 Test Result

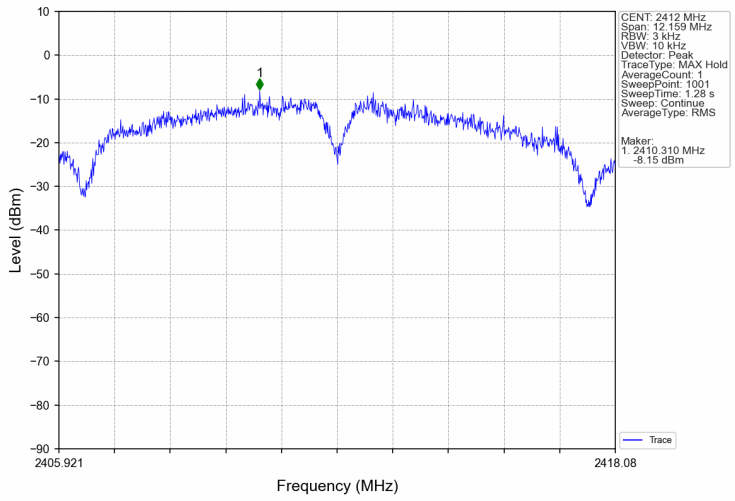
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
802.11b	SISO	2412	-8.15	-6.75	/	<=8	Pass
		2437	-8.97	-4.41	/	<=8	Pass
		2462	-9.92	-2.73	/	<=8	Pass
802.11g	SISO	2412	-12.59	-9.63	/	<=8	Pass
		2437	-12.31	-8.47	/	<=8	Pass
		2462	-14.13	-8.23	/	<=8	Pass
802.11n (HT20)	SISO	2412	-13.49	-8.56	/	<=8	Pass
		2437	-12.05	-8.97	/	<=8	Pass
		2462	-14.12	-7.83	/	<=8	Pass
802.11n (HT40)	SISO	2422	-16.94	-10.32	/	<=8	Pass
		2437	-14.31	-11.73	/	<=8	Pass
		2452	-13.43	-11.57	/	<=8	Pass
802.11n (HT20)	MIMO	2412	-8.16	-8.67	-6.94	<=7.81	Pass
		2437	-12.01	-10.28	-9.09	<=7.81	Pass
		2462	-14.06	-9.41	-8.81	<=7.81	Pass
802.11n (HT40)	MIMO	2422	-16.20	-11.66	-10.77	<=7.81	Pass
		2437	-12.33	-11.47	-10.11	<=7.81	Pass
		2452	-10.54	-11.90	-9.49	<=7.81	Pass
Note1: Antenna Gain: Ant1: 3.18dBi; Ant2: 3.18dBi; Note2: Directional Gain: Uncorrelated(Directional gain = GANT + Array Gain)							

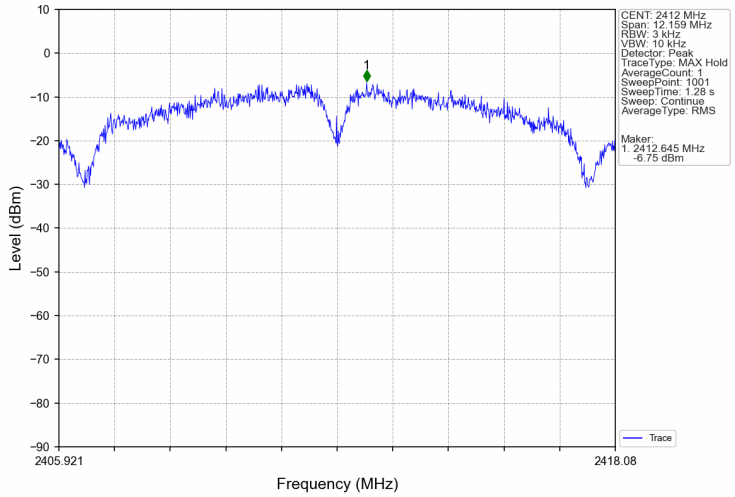
4.2 Test Graph

4.2.1 PSD

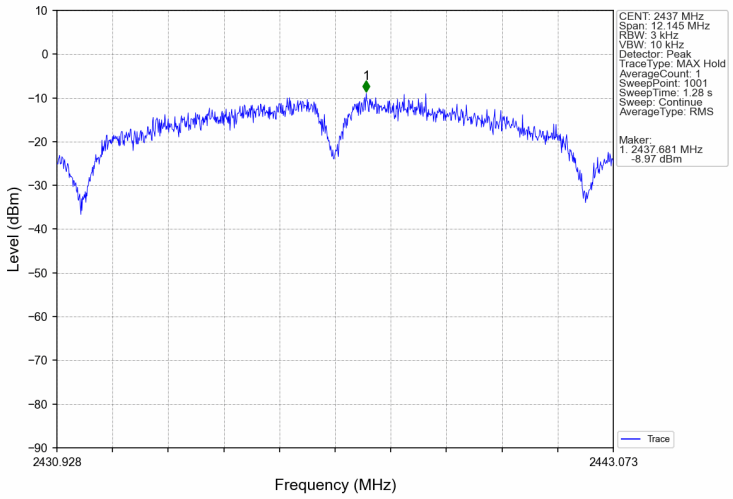
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



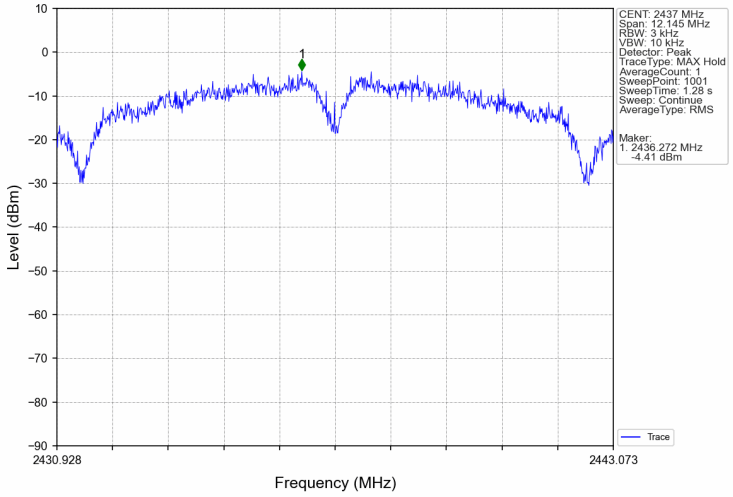
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



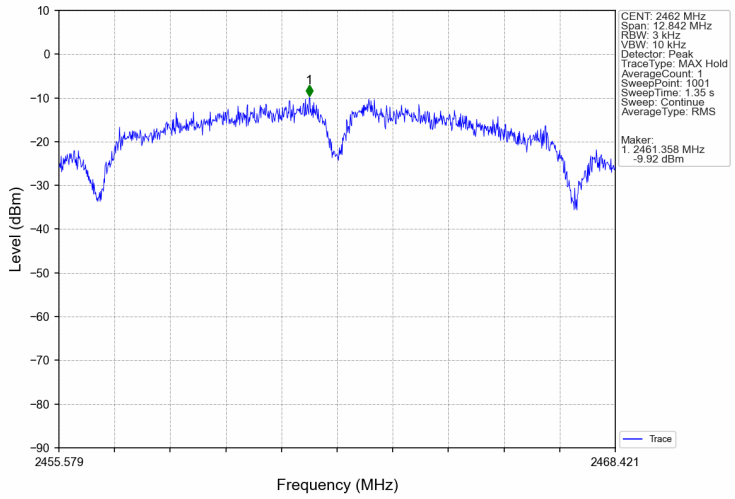
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



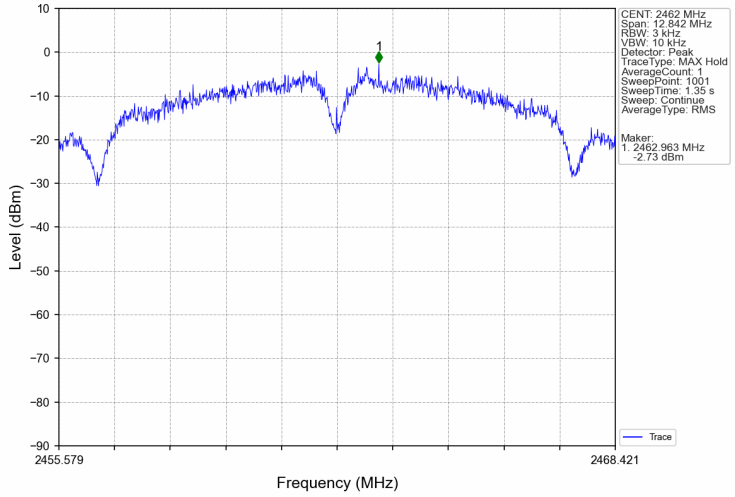
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



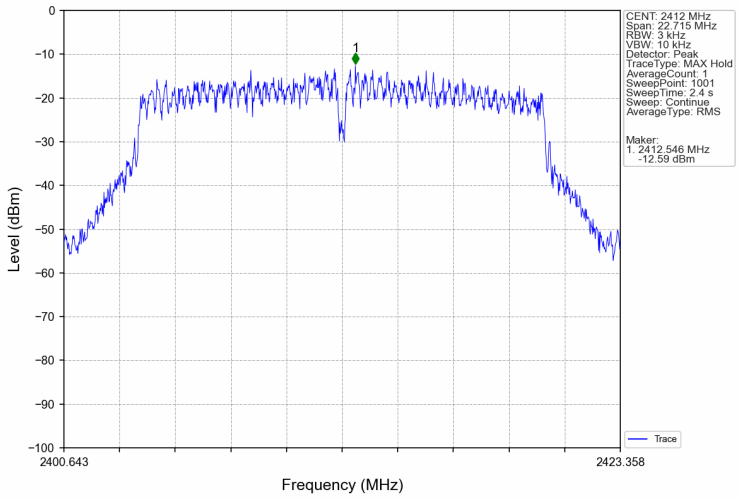
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



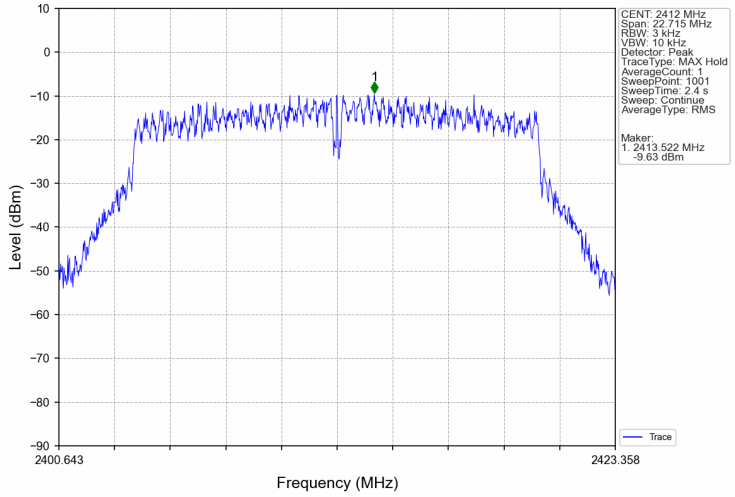
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



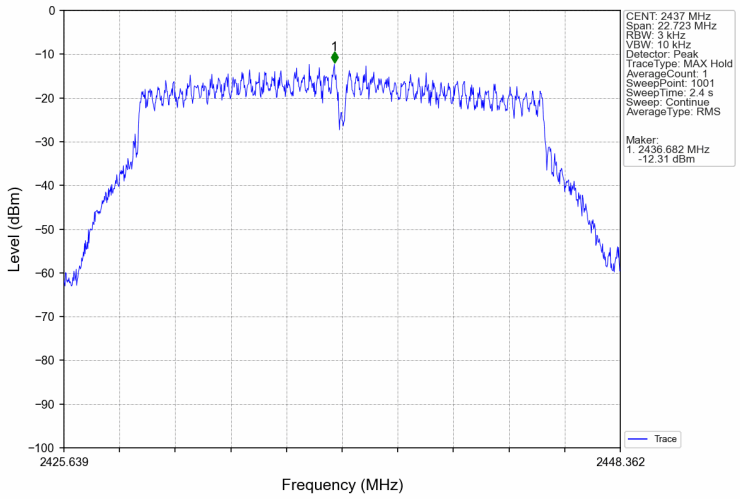
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



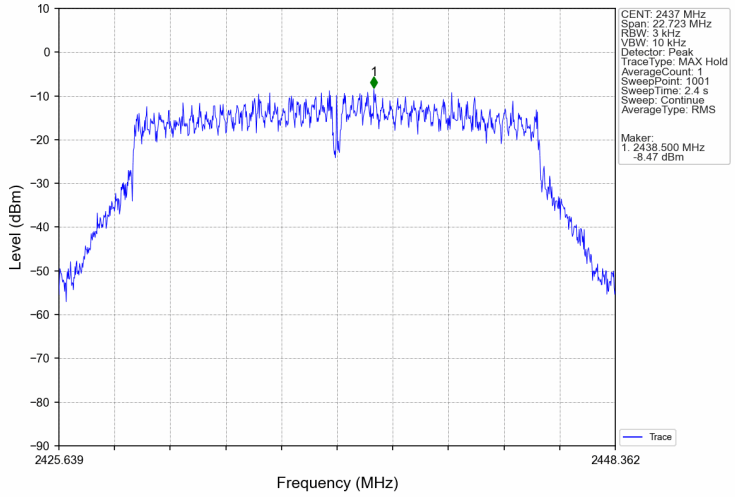
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



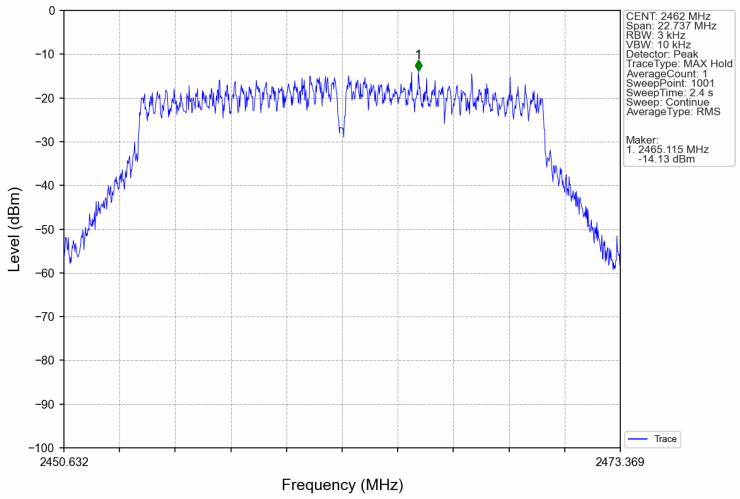
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



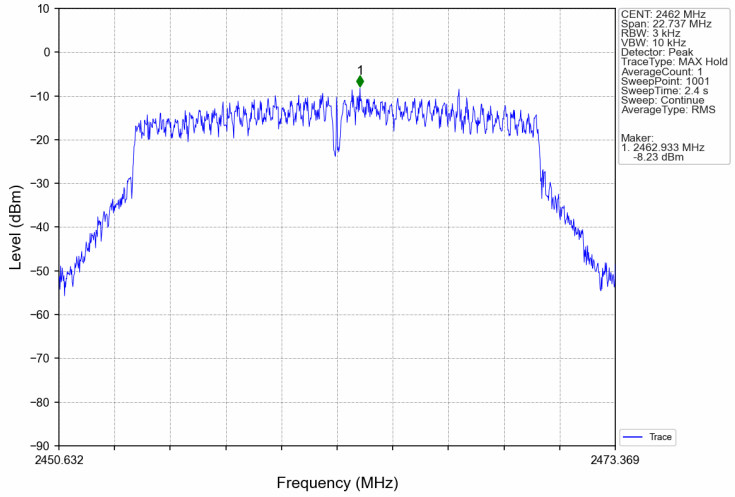
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



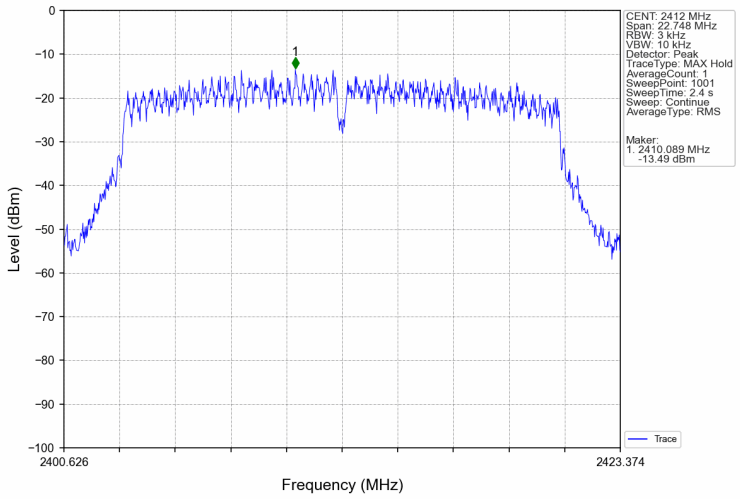
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



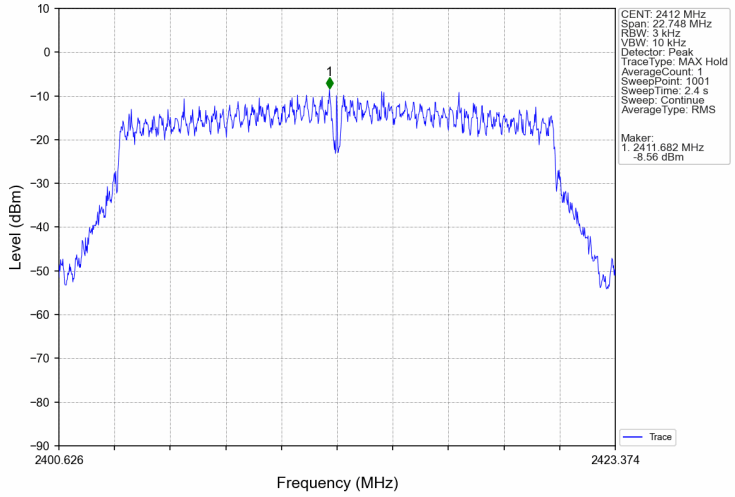
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



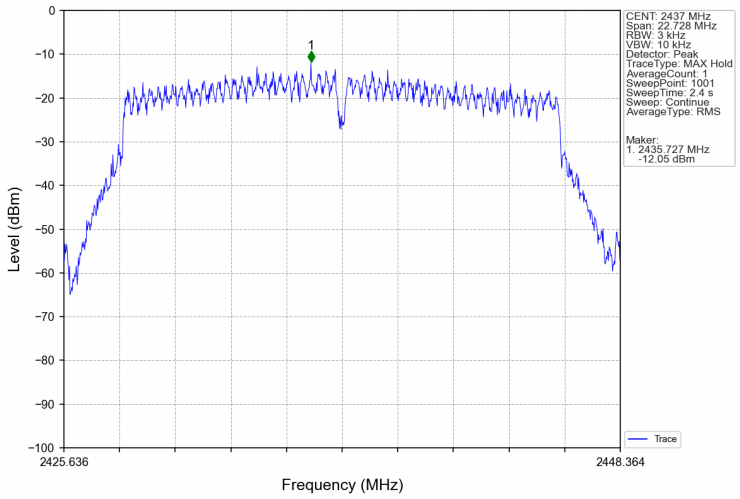
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



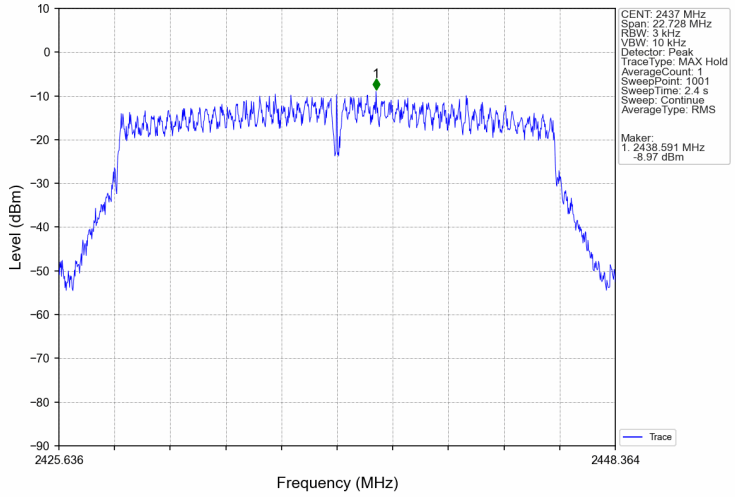
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



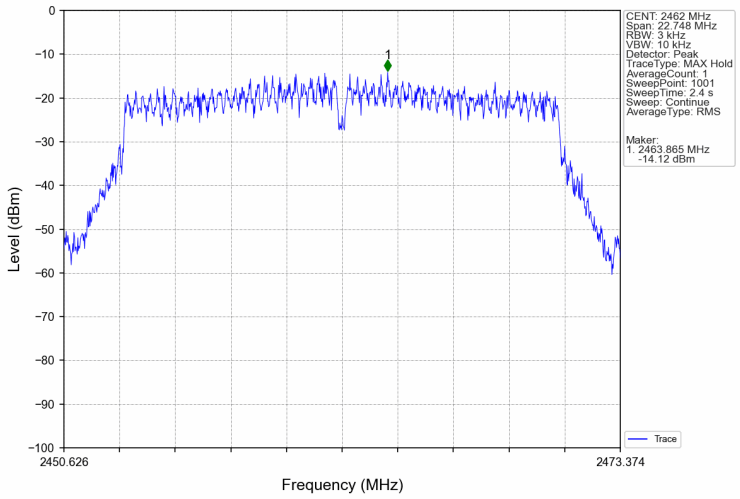
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



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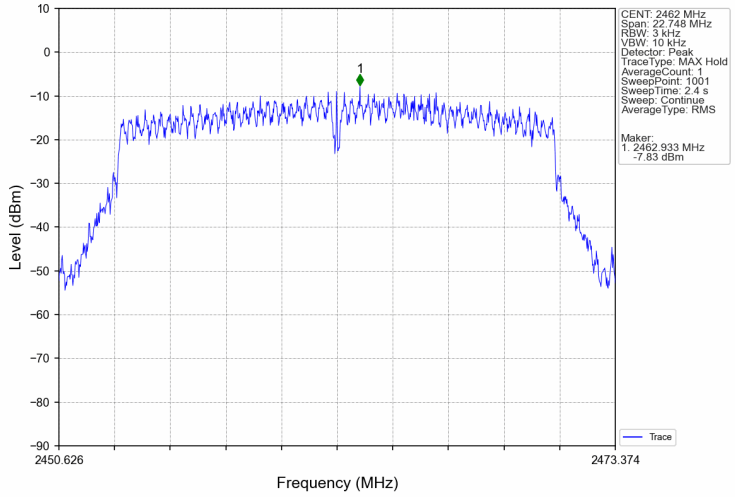
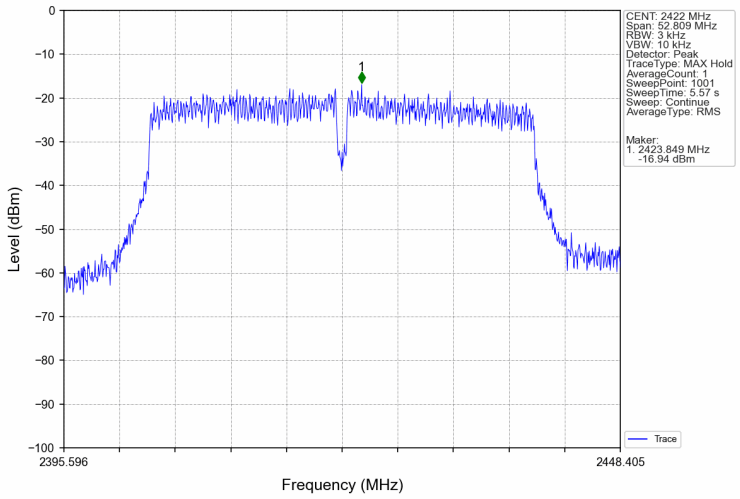
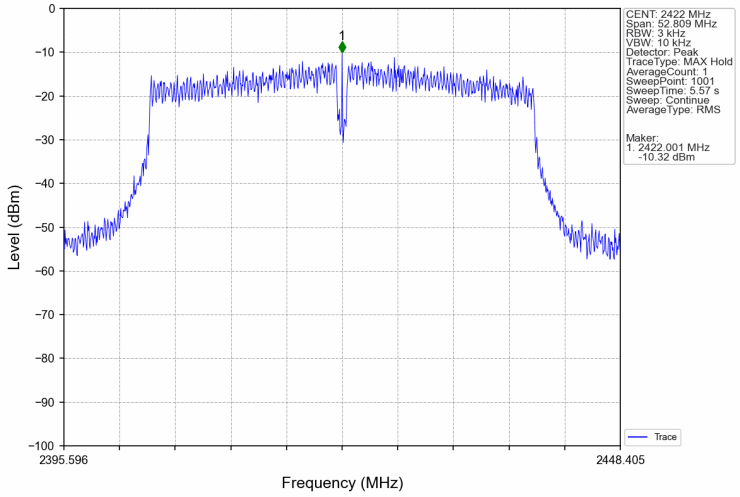


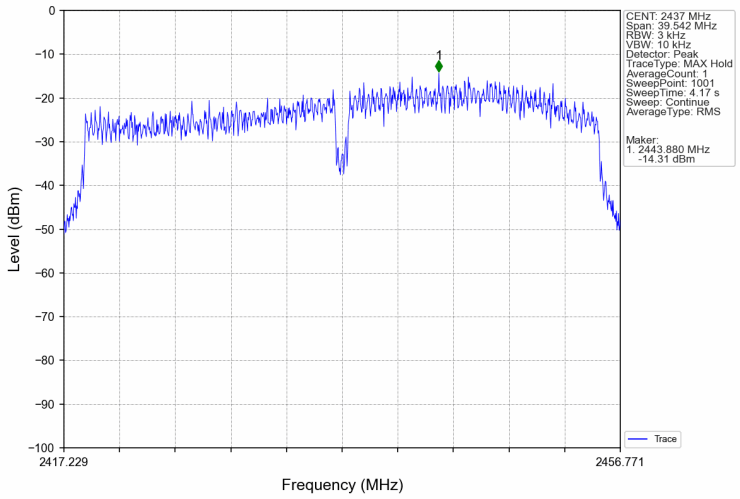
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



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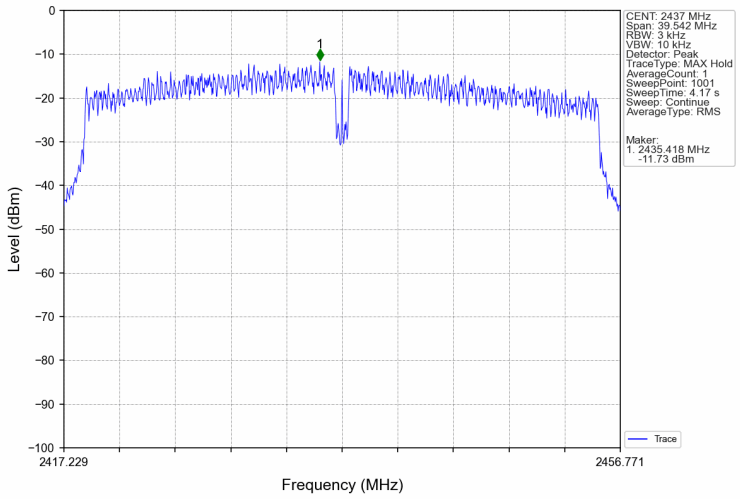
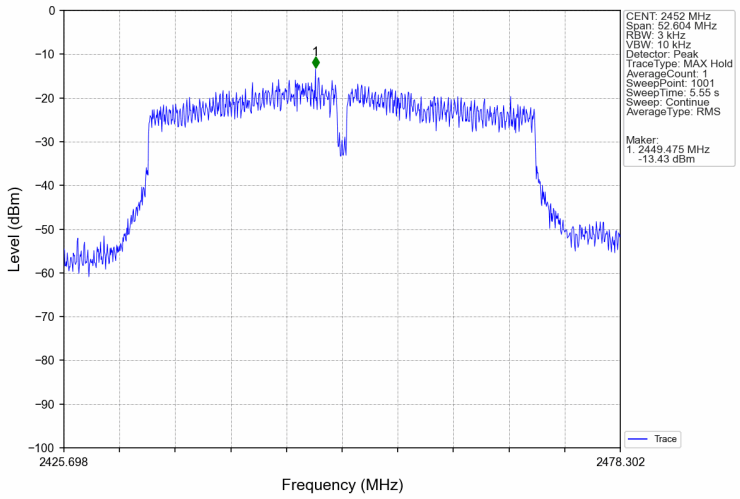
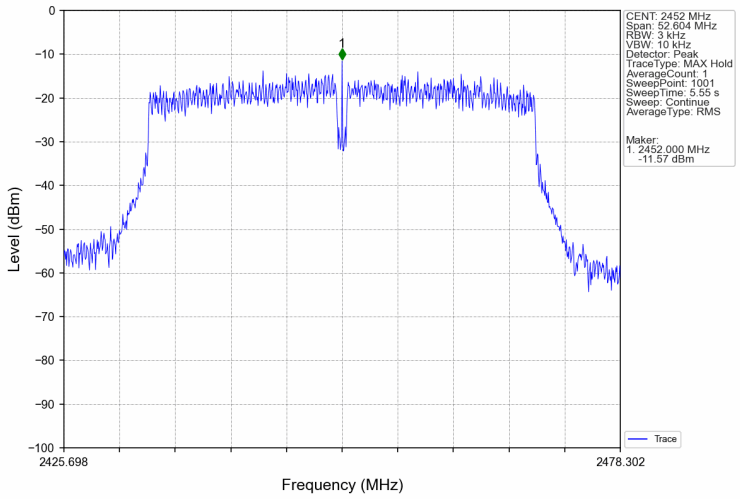


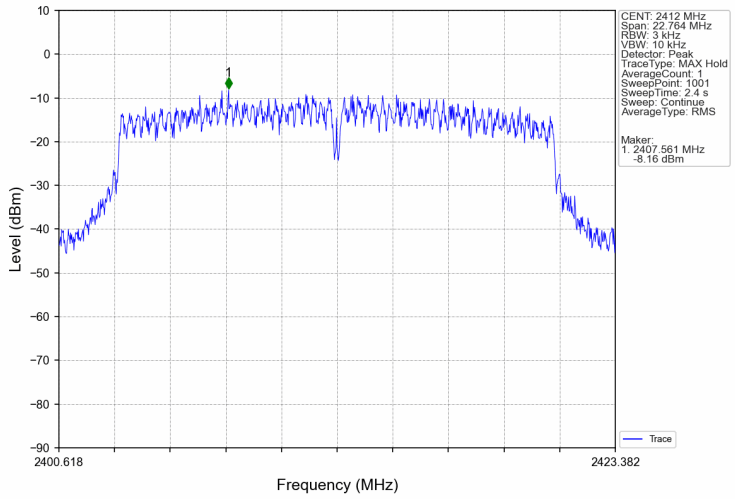
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



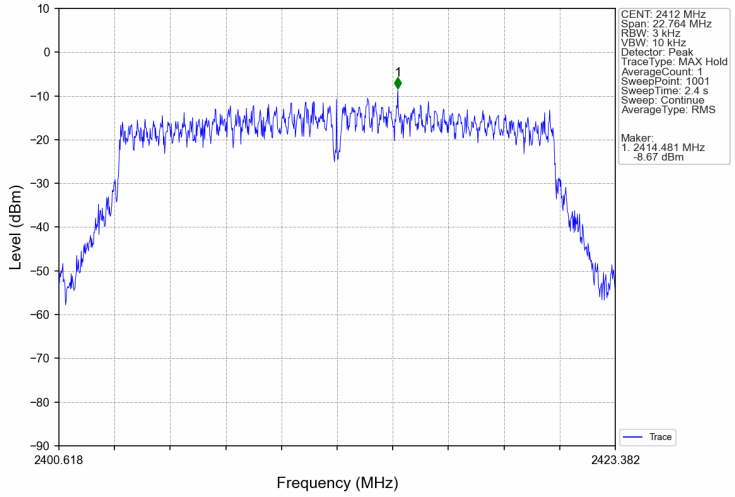
802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



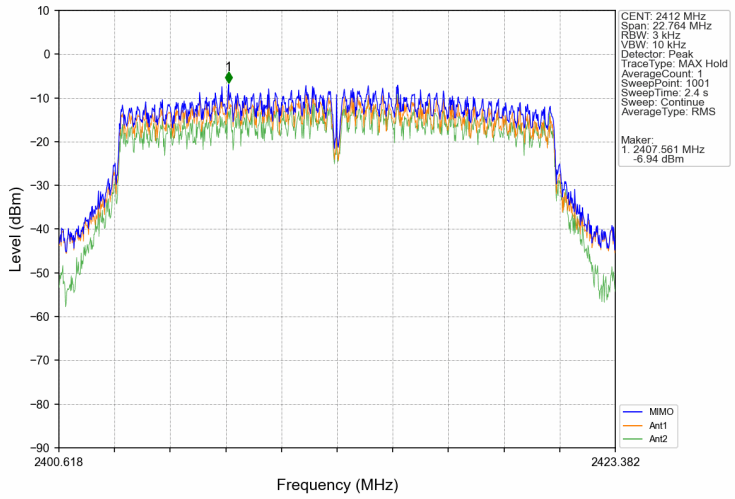
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



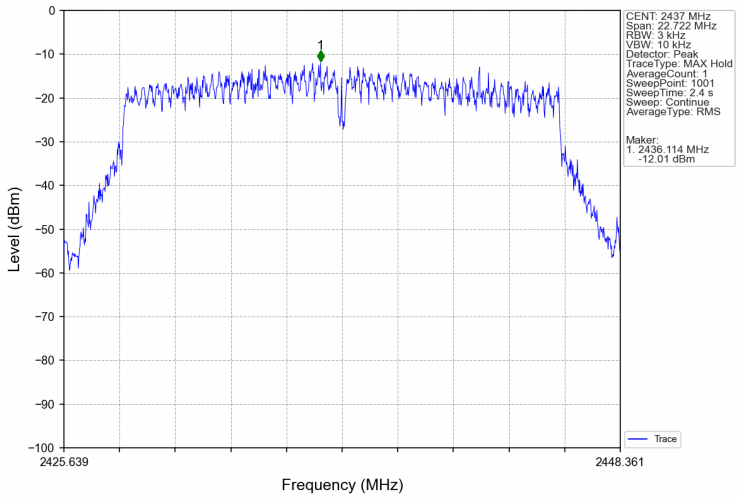
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



802.11n(HT20)_LCH_2412MHz_MIMO_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



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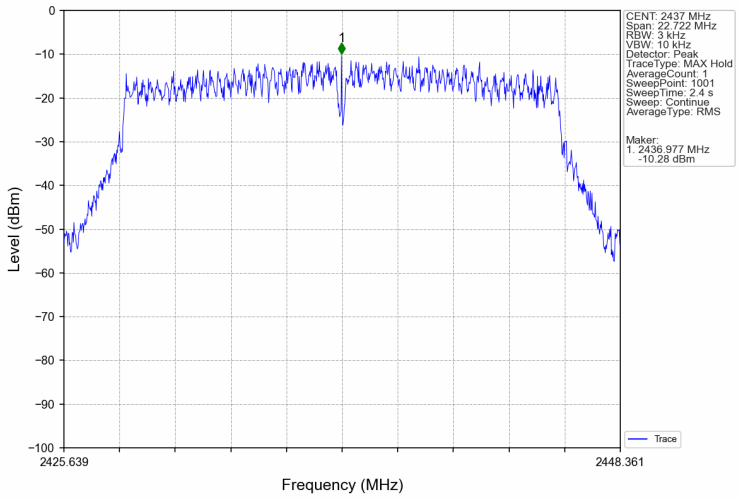
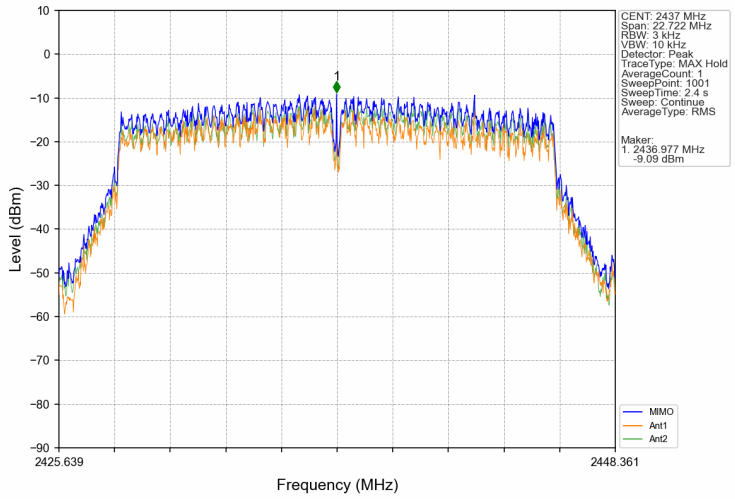
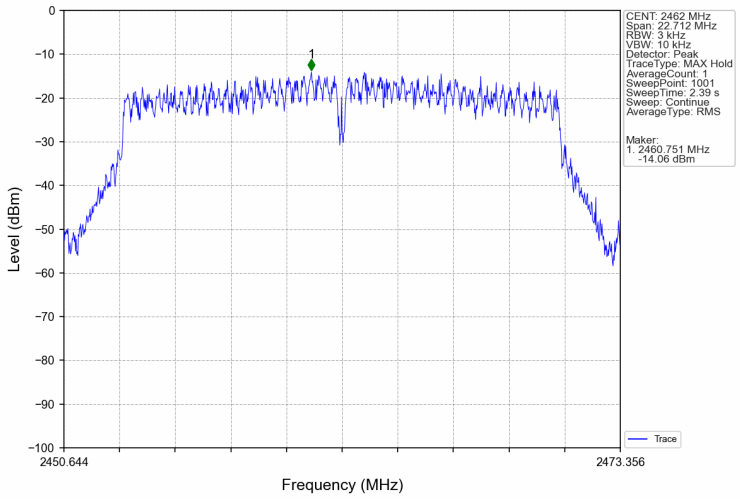


802.11n(HT20)_MCH_2437MHz_MIMO_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



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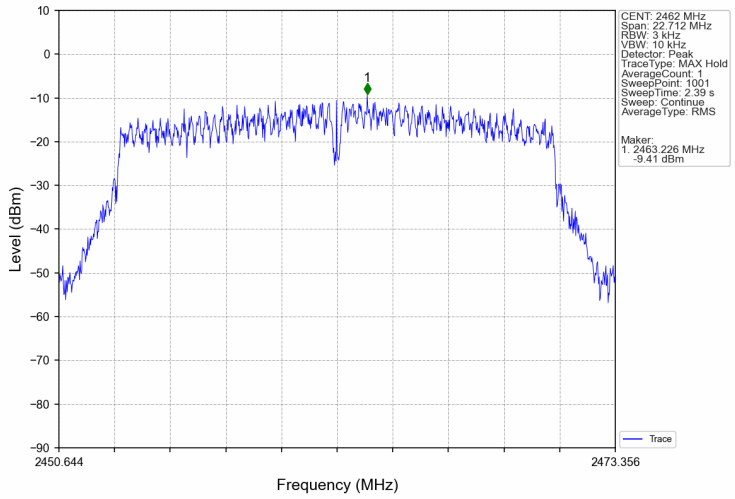
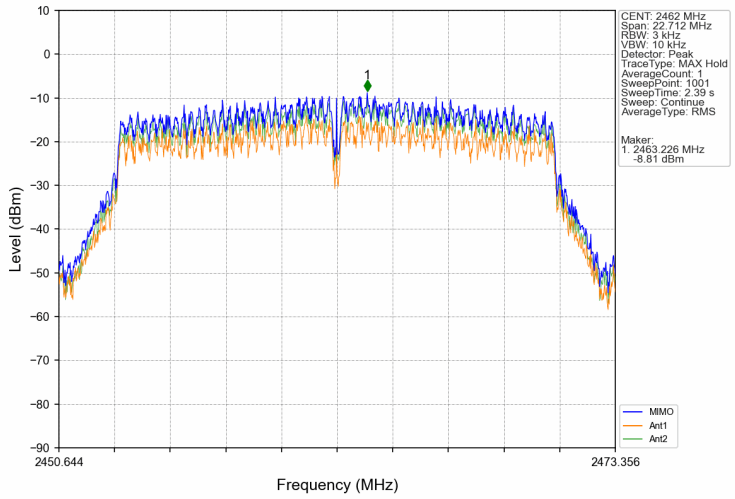
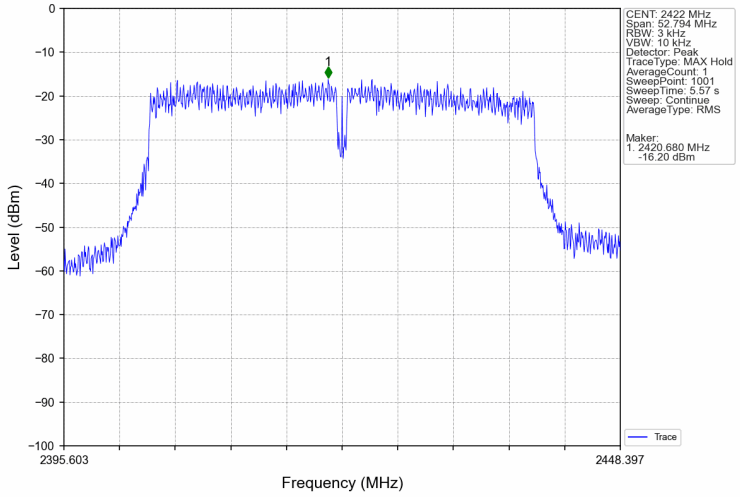


802.11n(HT20)_HCH_2462MHz_MIMO_NTNV



802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



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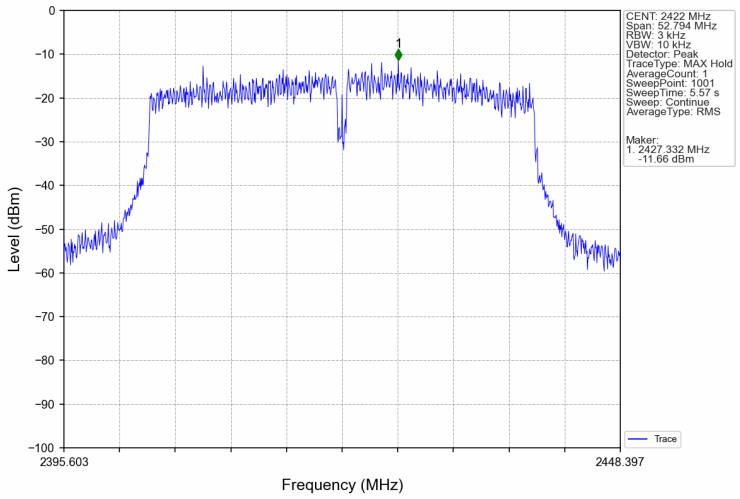
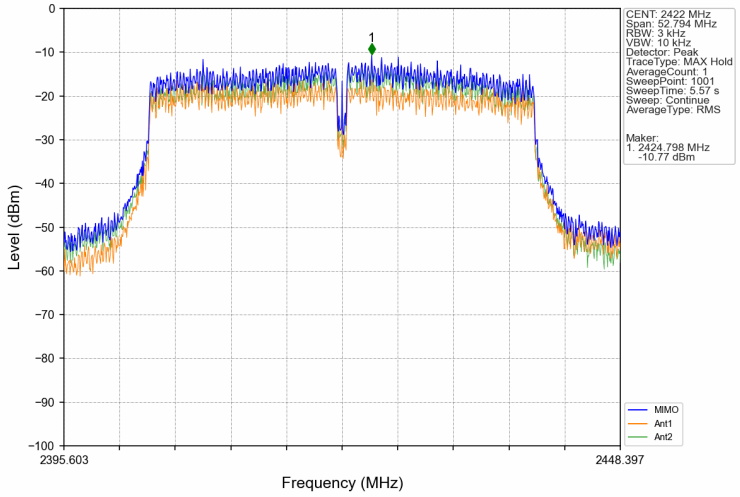
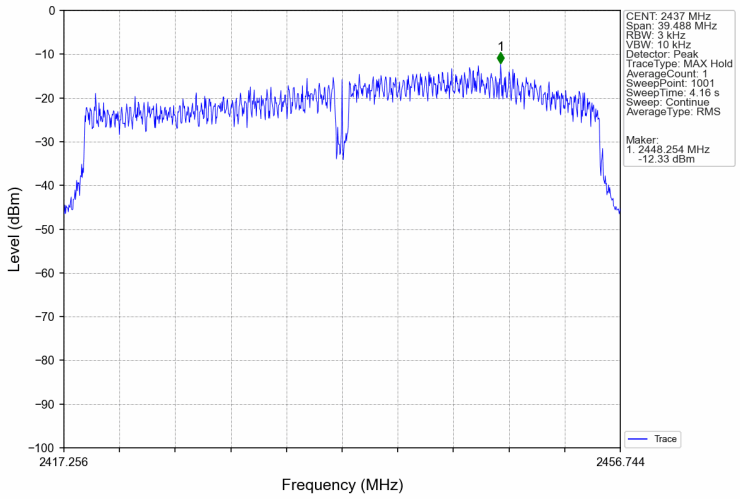


802.11n(HT40)_LCH_2422MHz_MIMO_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



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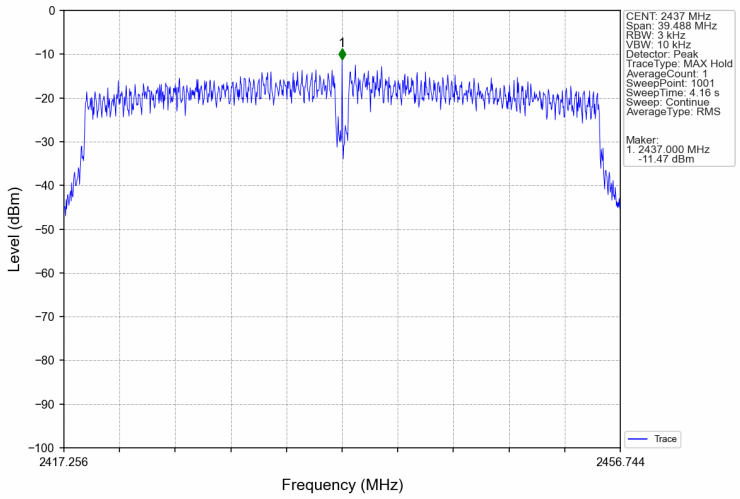
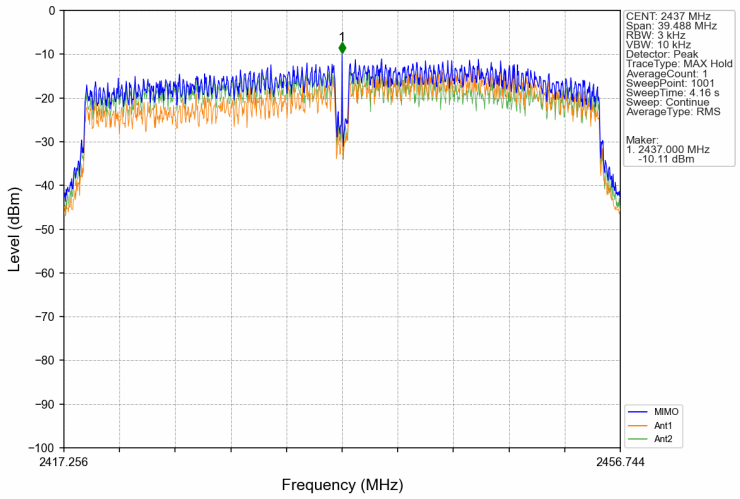
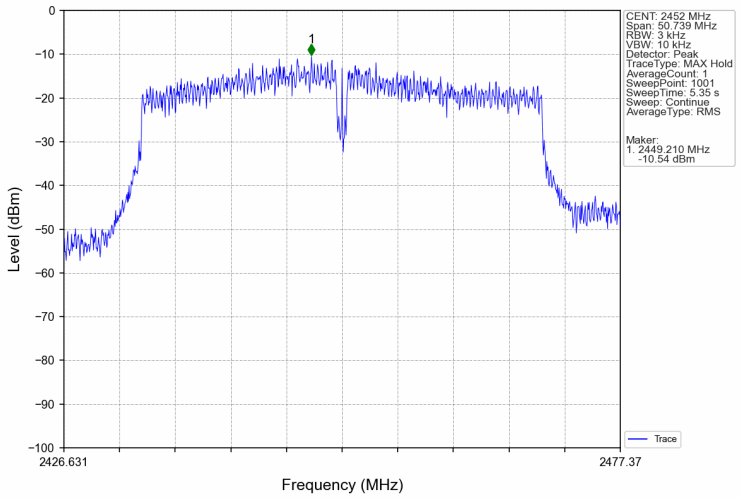


802.11n(HT40)_MCH_2437MHz_MIMO_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



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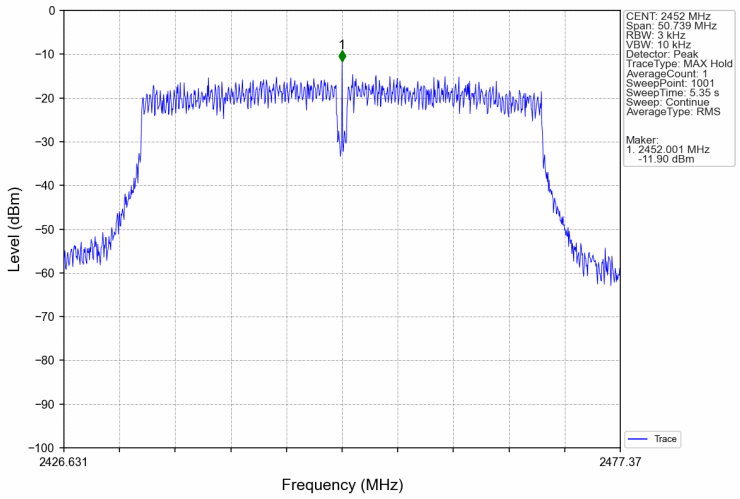
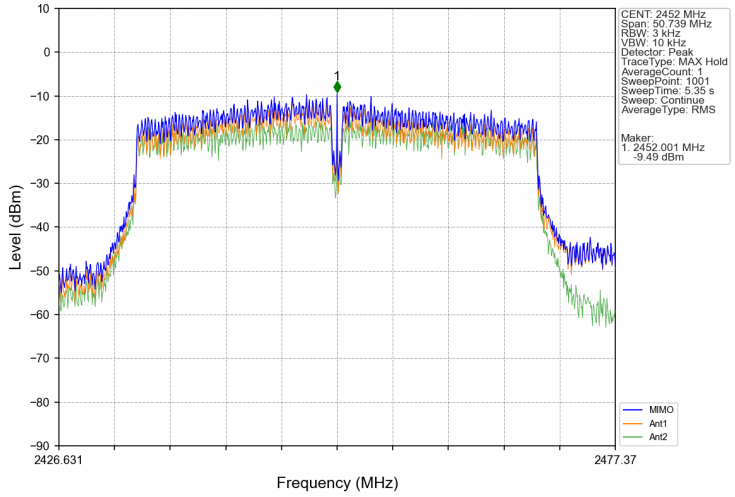


802.11n(HT40)_HCH_2452MHz_MIMO_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	5.83
			2	8.00
		2437	1	5.49
			2	10.02
		2462	1	4.31
			2	10.46
802.11g	SISO	2412	1	1.24
			2	6.07
		2437	1	1.90
			2	6.44
		2462	1	0.97
			2	6.43
802.11n (HT20)	SISO	2412	1	1.89
			2	4.83
		2437	1	1.74
			2	5.93
		2462	1	0.82
			2	6.23
802.11n (HT40)	SISO	2422	1	-2.16
			2	2.96
		2437	1	0.01
			2	2.94
		2452	1	0.53
			2	1.24
802.11n (HT20)	MIMO	2412	1	7.04
			2	5.16
		2437	1	3.28
			2	5.07
		2462	1	1.42
			2	5.81
802.11n (HT40)	MIMO	2422	1	-0.33
			2	3.15
		2437	1	2.91
			2	2.34
		2452	1	4.71
			2	1.15
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.				

5.1.2 CSE

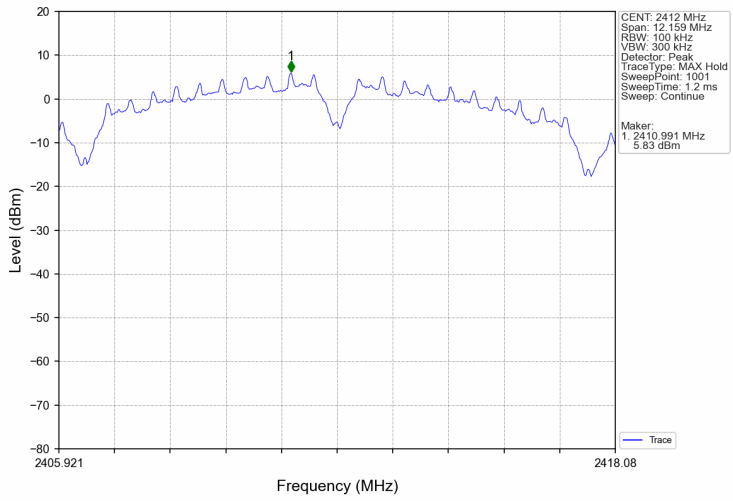
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	5.83	-14.17	Pass
			2	8.00	-12.00	Pass

		2437	1	5.49	-14.51	Pass
			2	10.02	-9.98	Pass
		2462	1	4.31	-15.69	Pass
			2	10.46	-9.54	Pass
802.11g	SISO	2412	1	1.24	-18.76	Pass
			2	6.07	-13.93	Pass
		2437	1	1.90	-18.10	Pass
			2	6.44	-13.56	Pass
		2462	1	0.97	-19.03	Pass
			2	6.43	-13.57	Pass
802.11n (HT20)	SISO	2412	1	1.89	-18.11	Pass
			2	4.83	-15.17	Pass
		2437	1	1.74	-18.26	Pass
			2	5.93	-14.07	Pass
		2462	1	0.82	-19.18	Pass
			2	6.23	-13.77	Pass
802.11n (HT40)	SISO	2422	1	-2.16	-22.16	Pass
			2	2.96	-17.04	Pass
		2437	1	0.01	-19.99	Pass
			2	2.94	-17.06	Pass
		2452	1	0.53	-19.47	Pass
			2	1.24	-18.76	Pass
802.11n (HT20)	MIMO	2412	1	7.04	-12.96	Pass
			2	5.16	-14.84	Pass
		2437	1	3.28	-16.72	Pass
			2	5.07	-14.93	Pass
		2462	1	1.42	-18.58	Pass
			2	5.81	-14.19	Pass
802.11n (HT40)	MIMO	2422	1	-0.33	-20.33	Pass
			2	3.15	-16.85	Pass
		2437	1	2.91	-17.09	Pass
			2	2.34	-17.66	Pass
		2452	1	4.71	-15.29	Pass
			2	1.15	-18.85	Pass
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.						

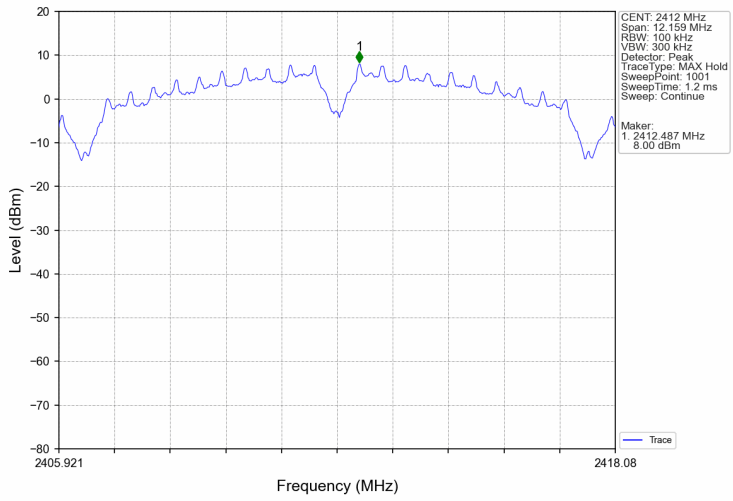
5.2 Test Graph

5.2.1 Ref

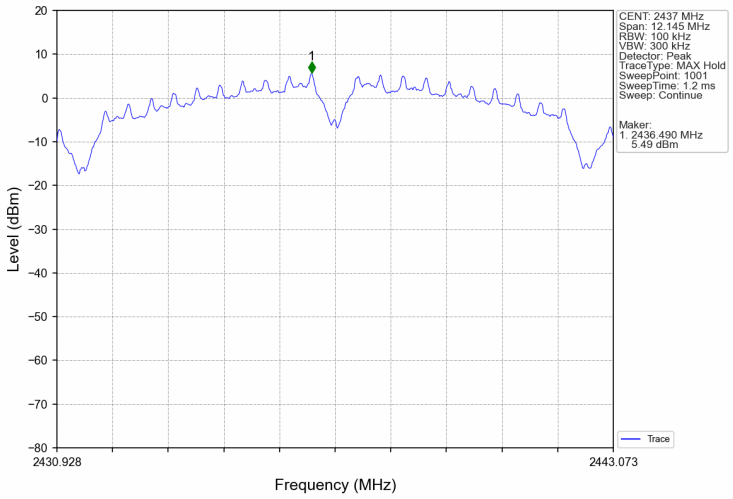
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



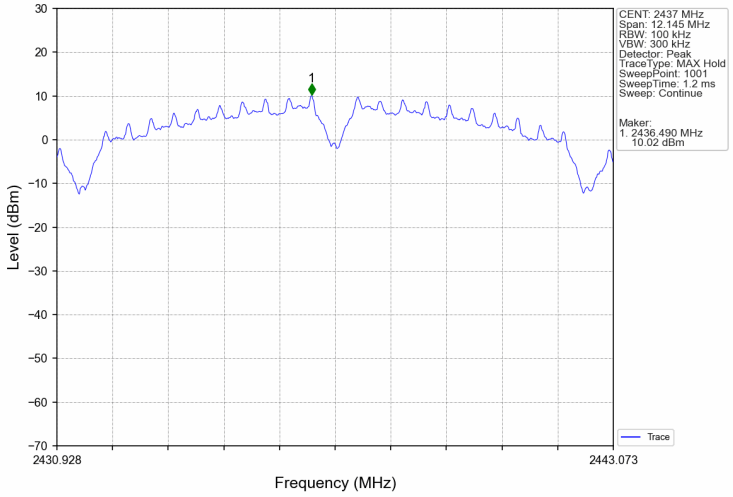
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



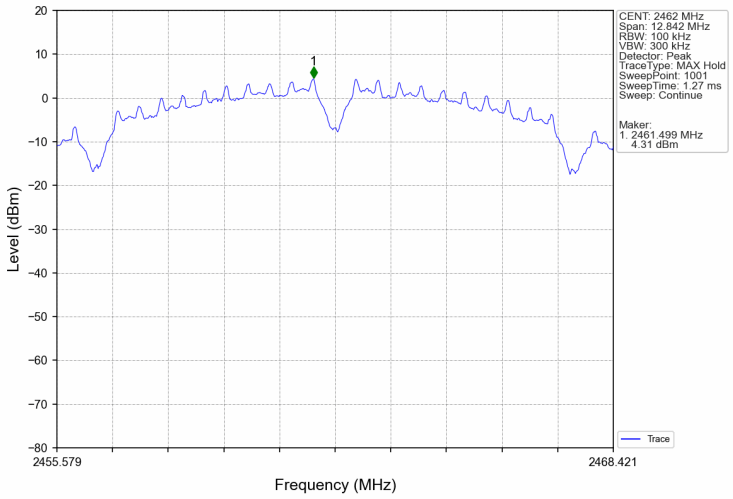
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



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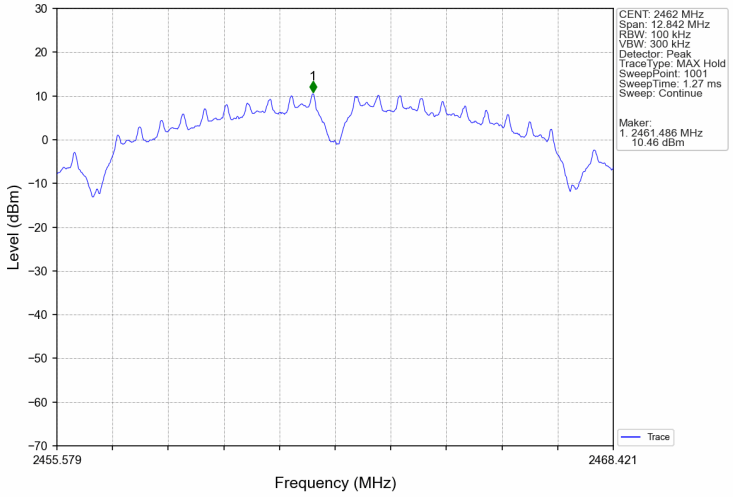
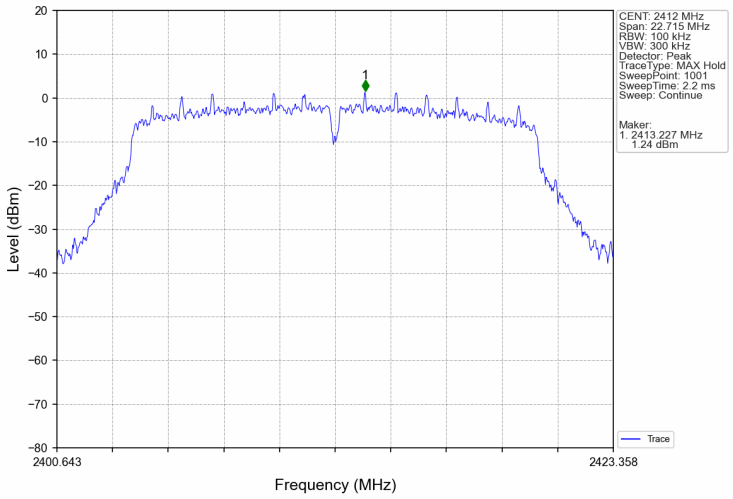


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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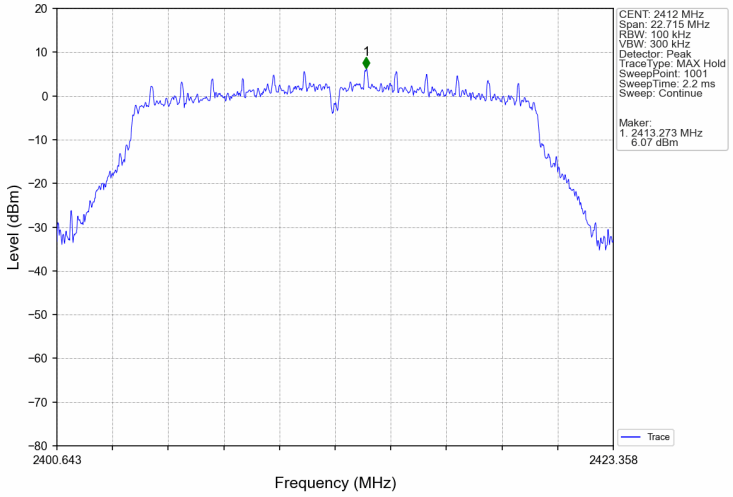
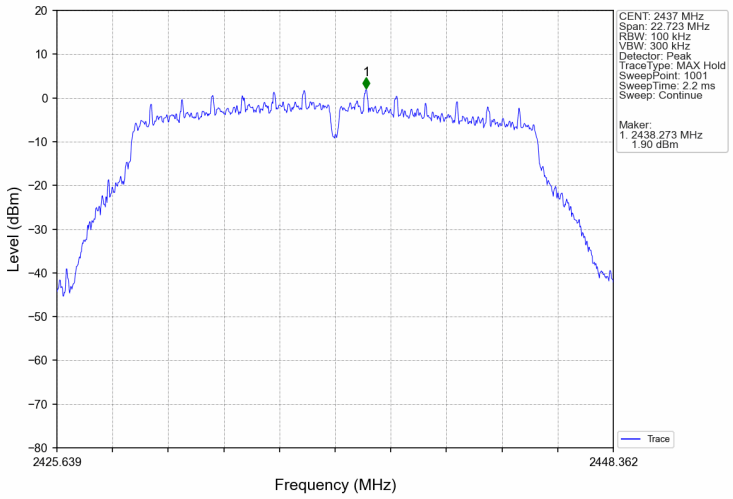
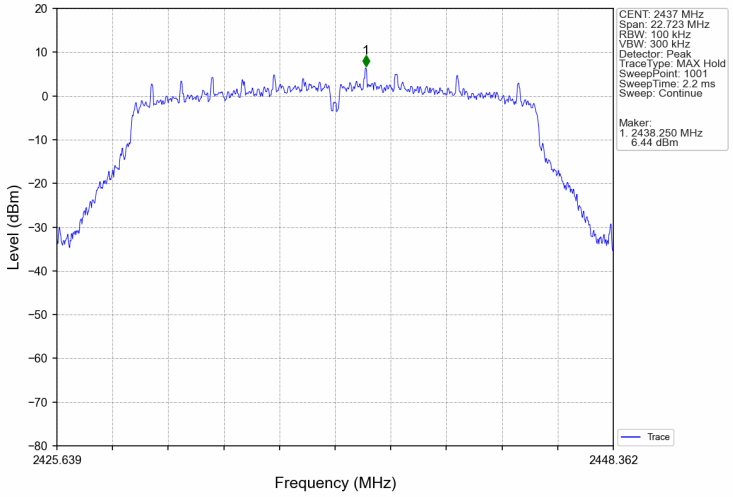


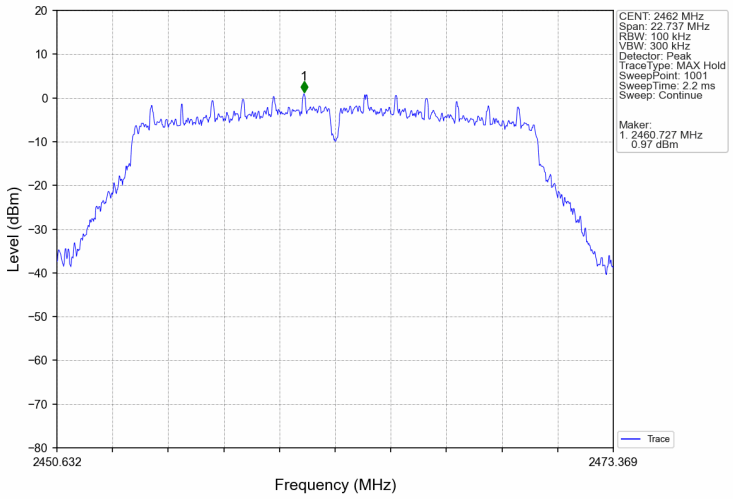
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



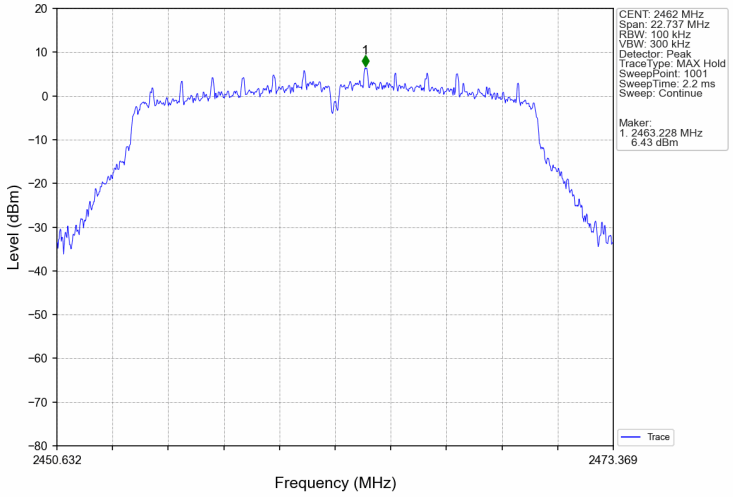
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



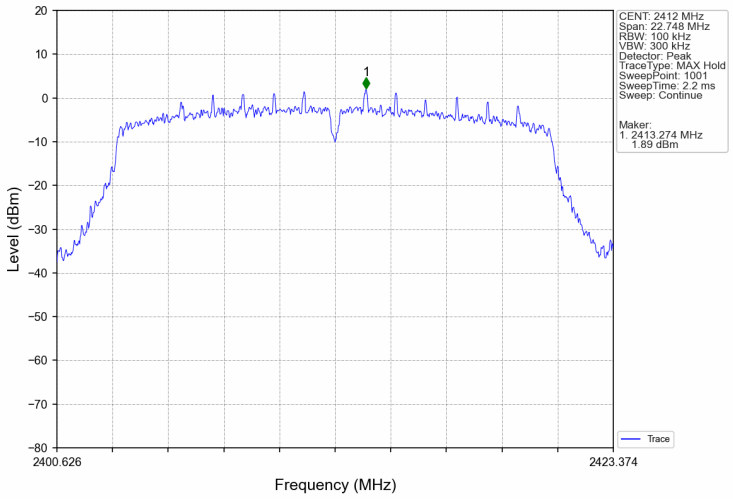
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



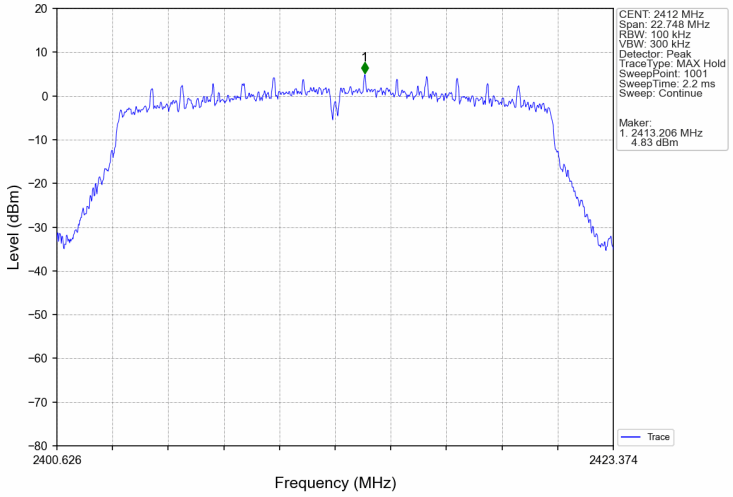
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



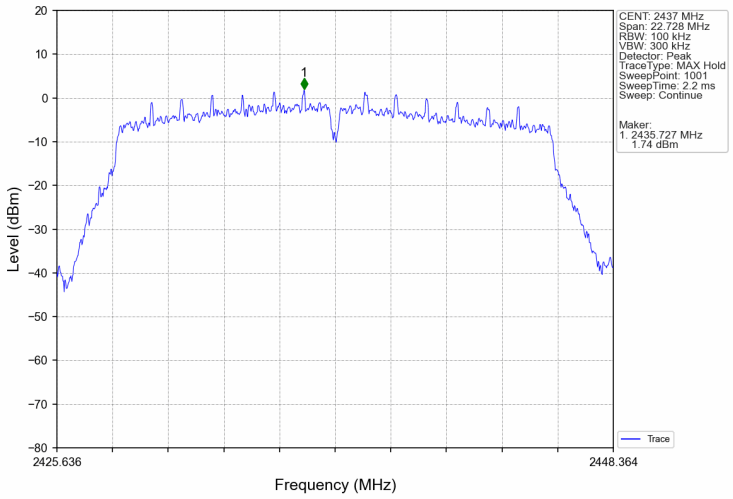
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



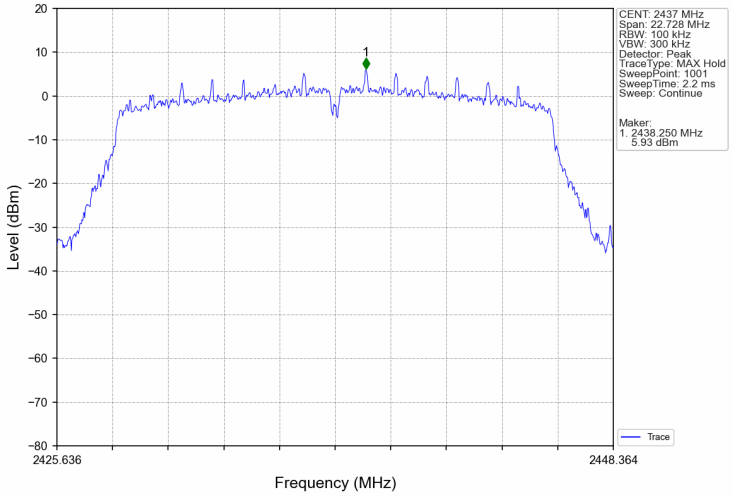
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



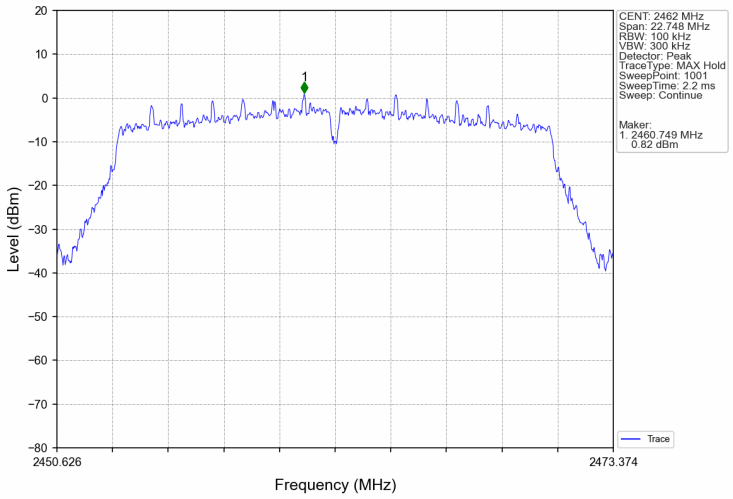
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



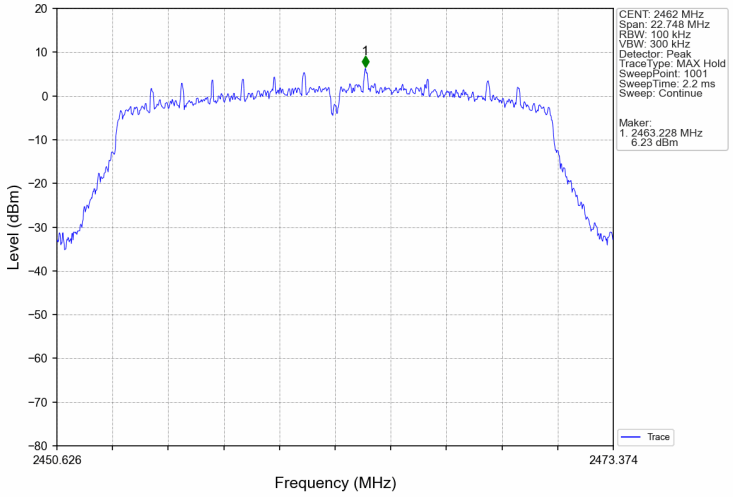
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



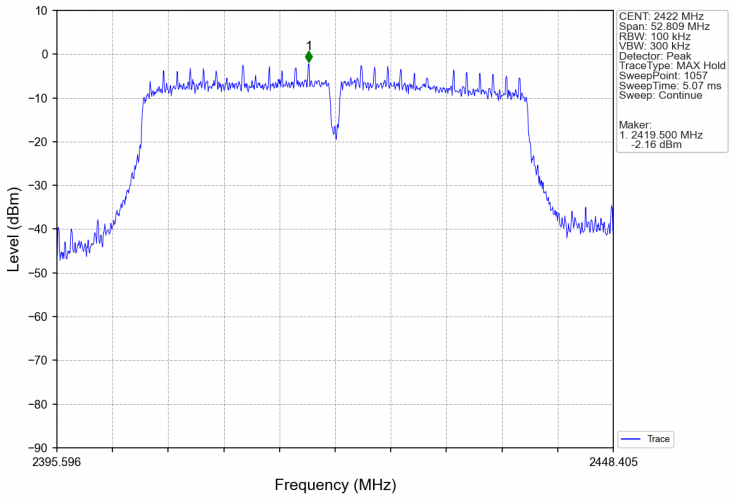
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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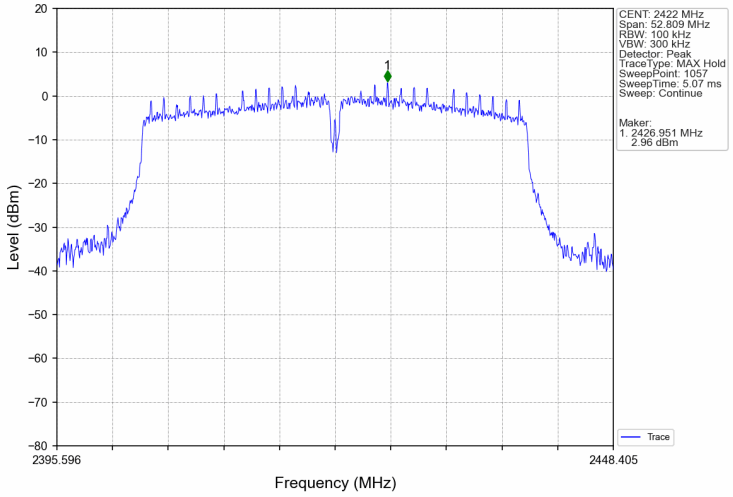
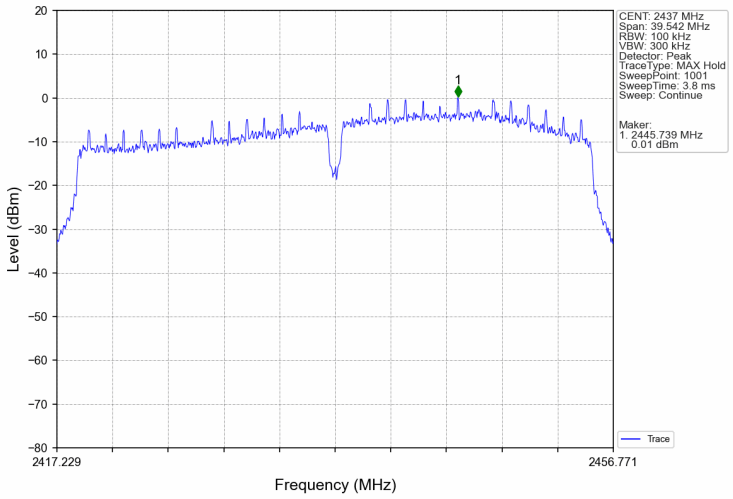
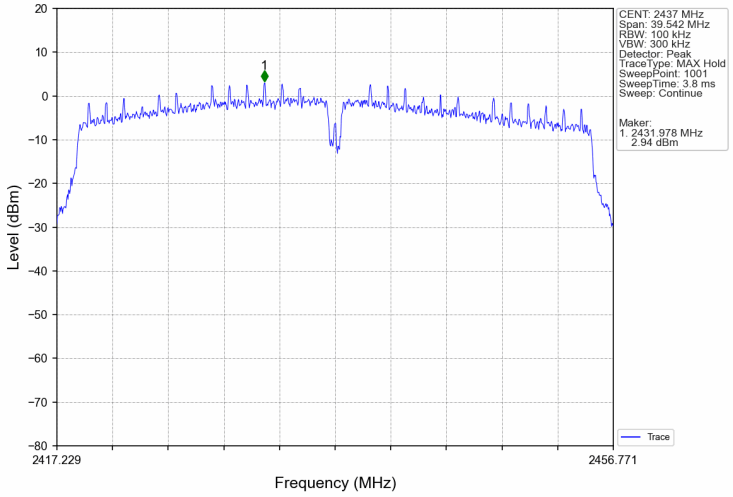


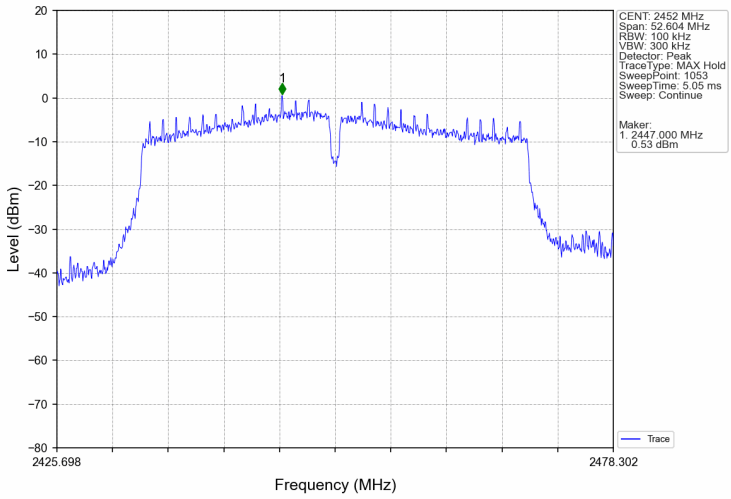
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



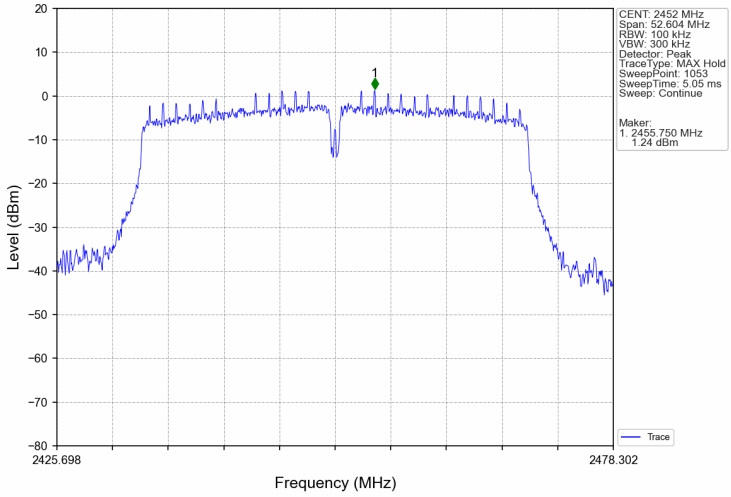
802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



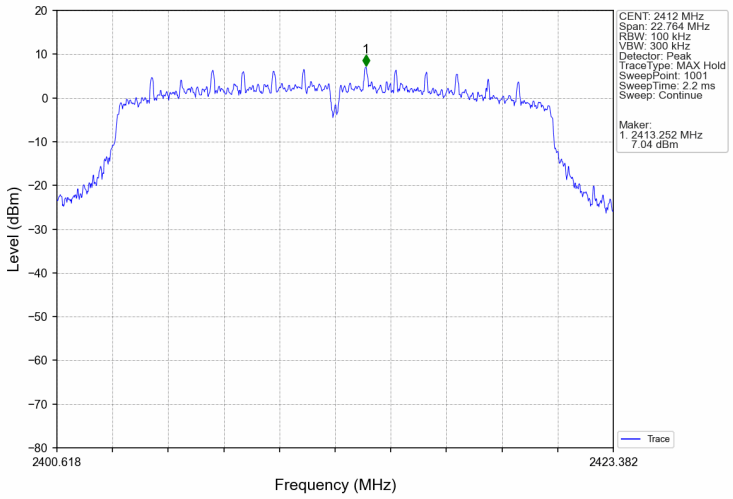
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



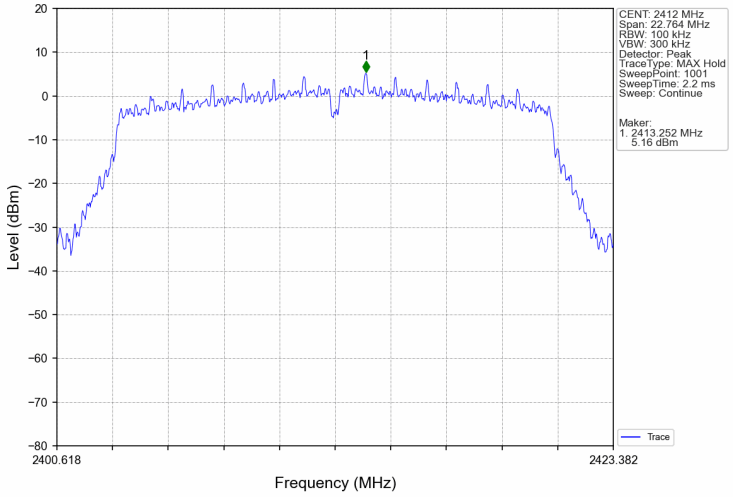
802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



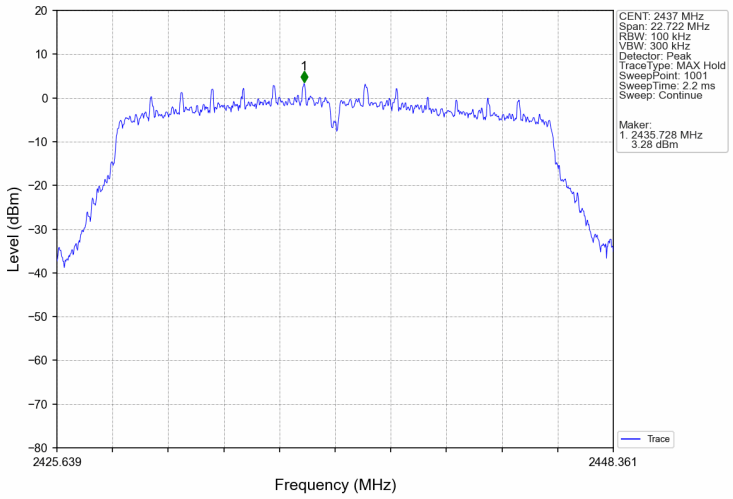
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



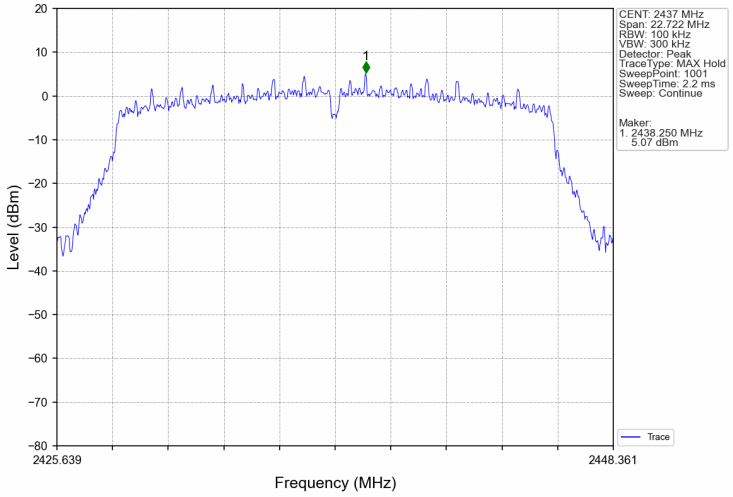
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



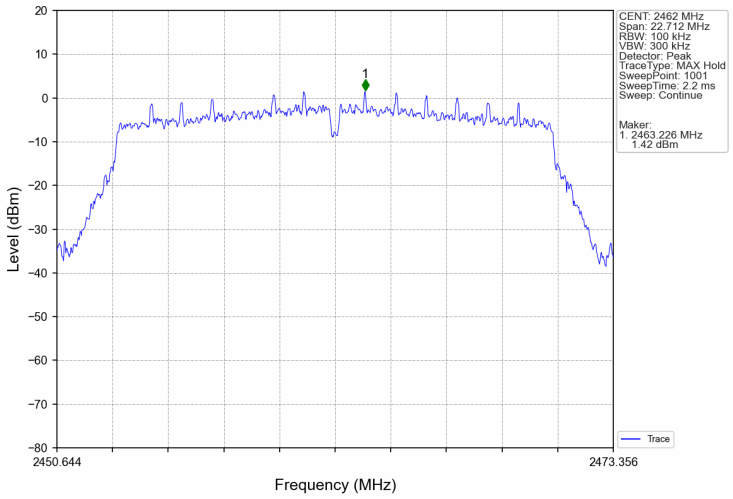
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



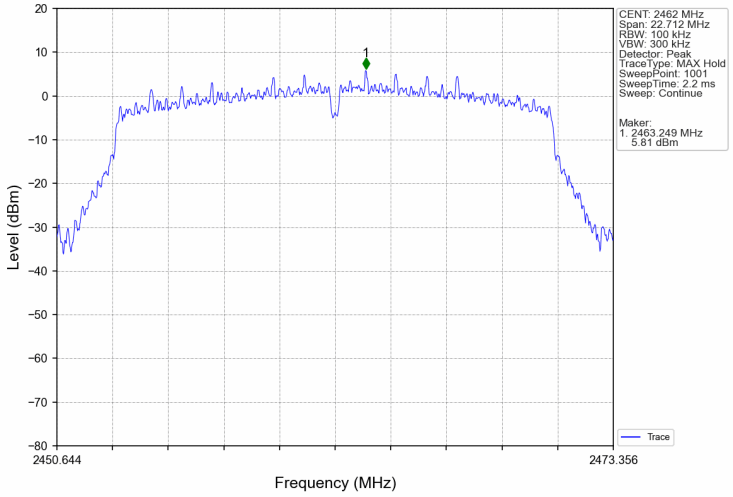
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



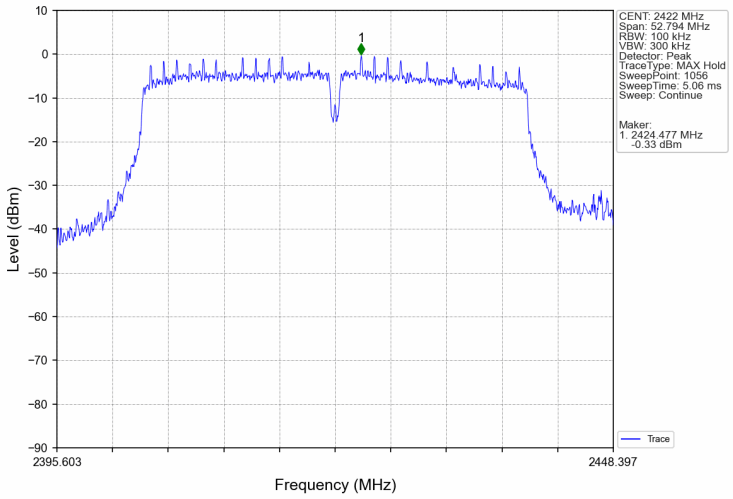
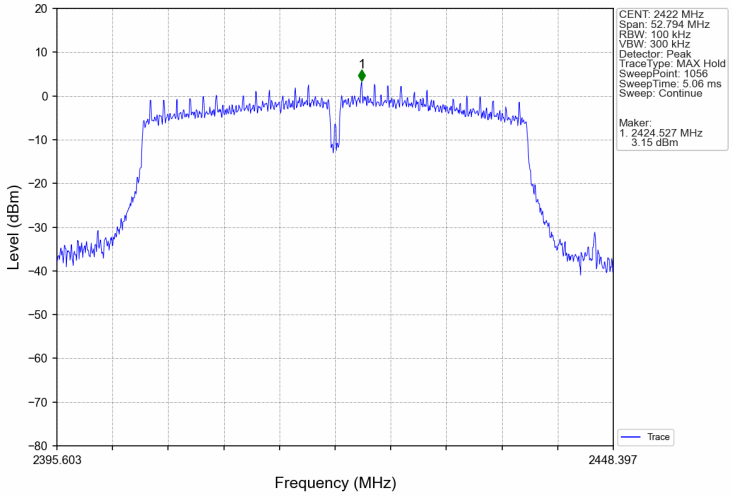
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV