

Appendix RF test data for WIFI2.4G

1. Duty Cycle

1.1 Test Result

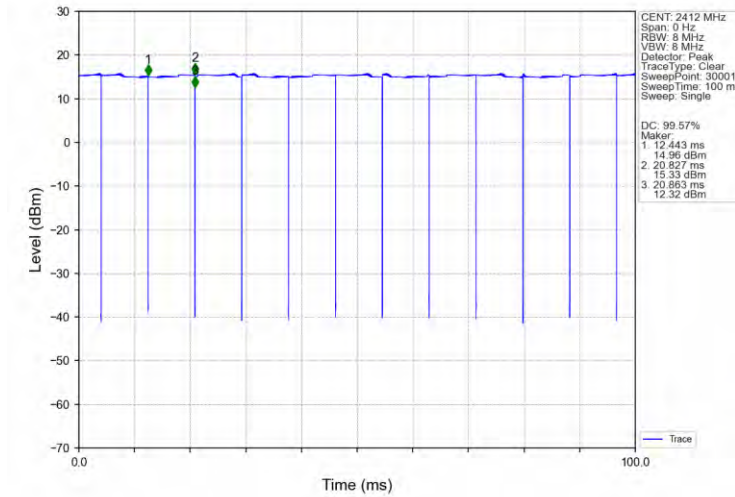
1.1.1 Ant1

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	8.384	8.420	99.57	0.02	0.00
		2437	8.384	8.420	99.57	0.02	0.04
		2462	8.383	8.420	99.56	0.02	0.04
802.11g	SISO	2412	8.383	8.420	99.56	0.02	0.00
		2437	8.383	8.420	99.56	0.02	0.00
		2462	8.383	8.420	99.56	0.02	0.04
802.11n (HT20)	SISO	2412	1.290	1.333	96.77	0.14	0.04
		2437	1.290	1.333	96.77	0.14	0.00
		2462	1.290	1.332	96.85	0.14	0.04
802.11n (HT40)	SISO	2422	0.638	0.680	93.82	0.28	0.03
		2437	0.637	0.680	93.68	0.28	0.03
		2452	0.638	0.680	93.82	0.28	0.00

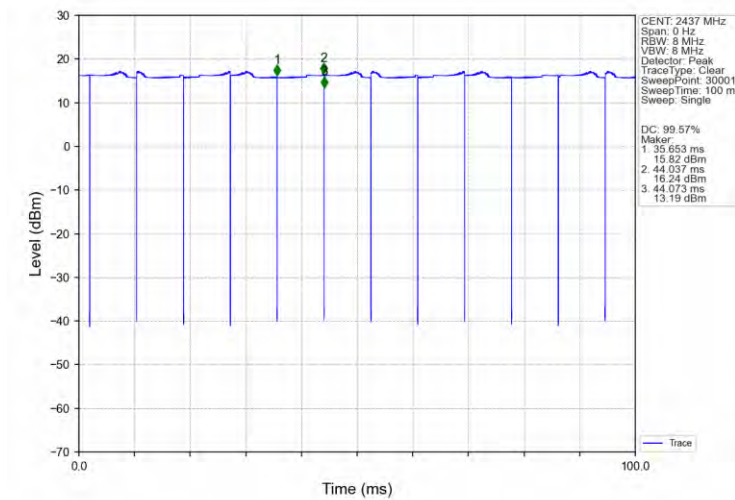
1.2 Test Graph

1.2.1 Ant1

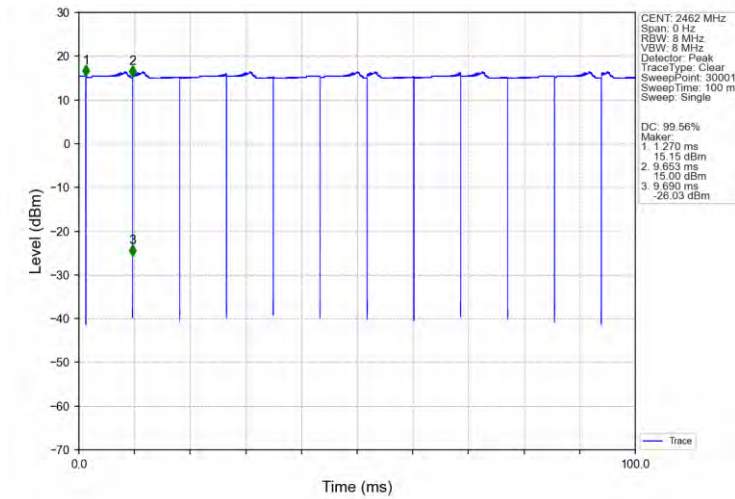
802.11b LCH 2412MHz_Ant1 (SISO) NTN



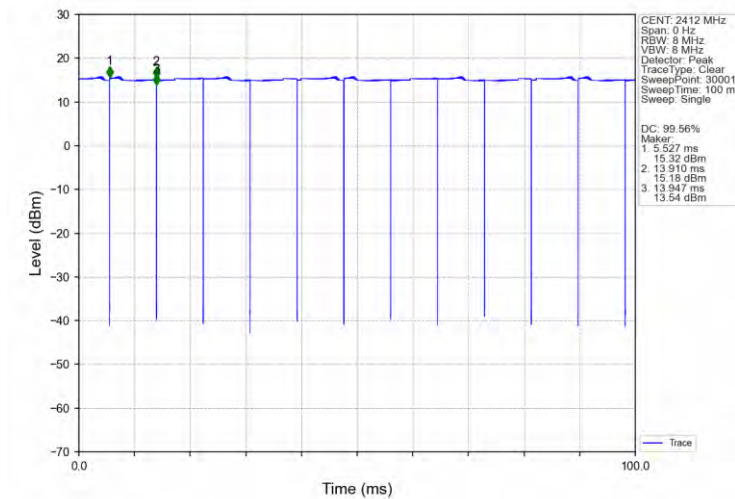
802.11b MCH 2437MHz_Ant1 (SISO) NTN



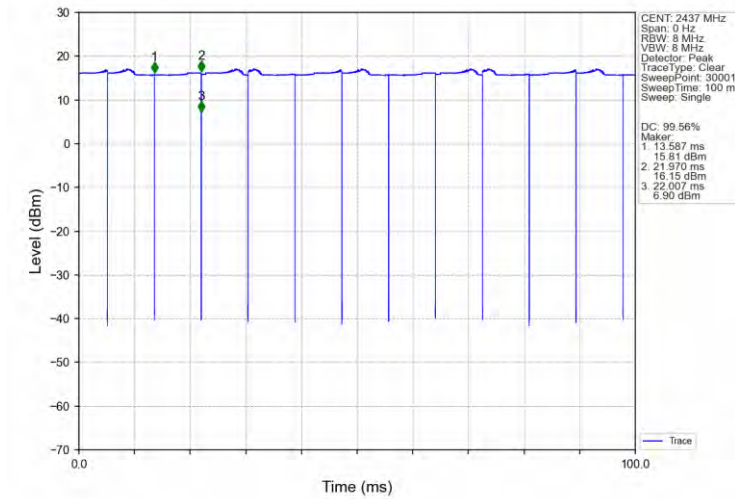
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



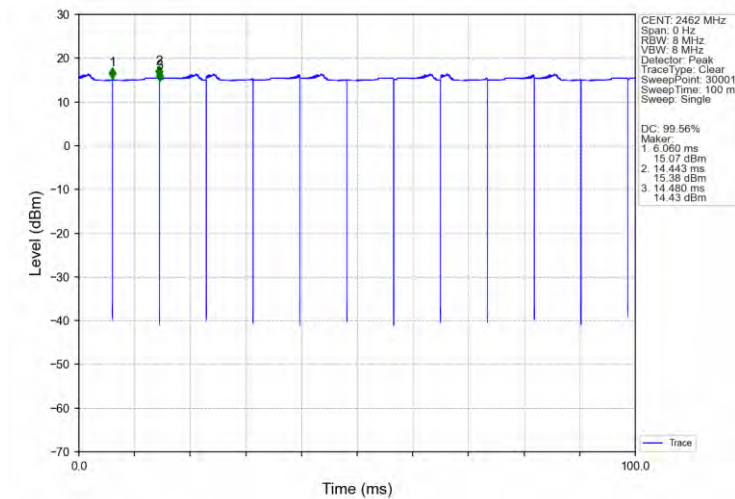
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



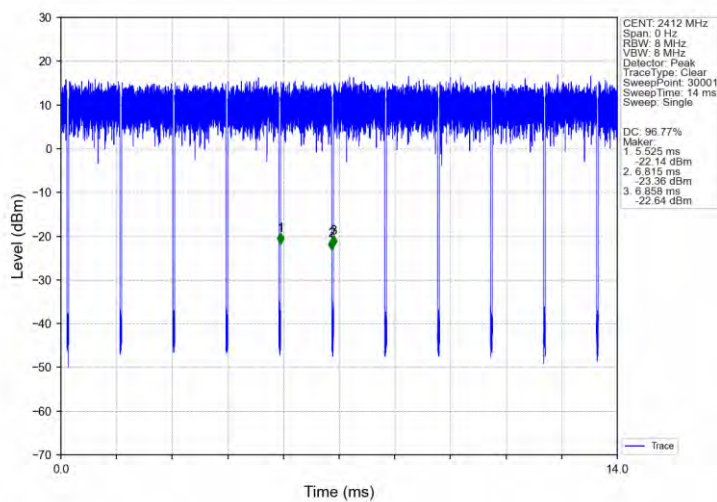
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



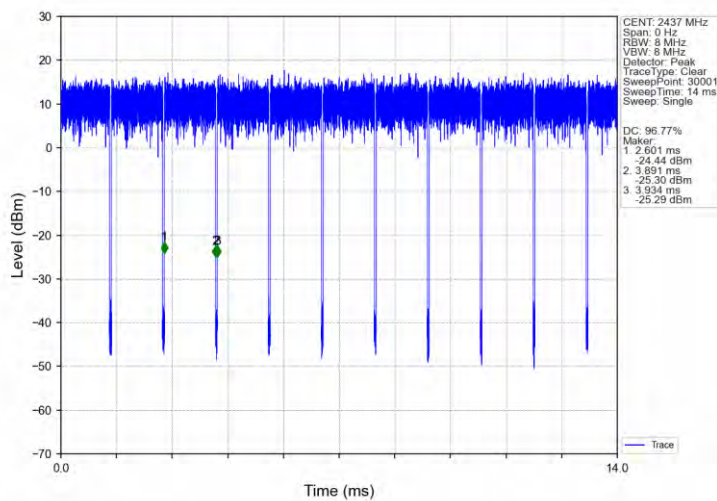
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



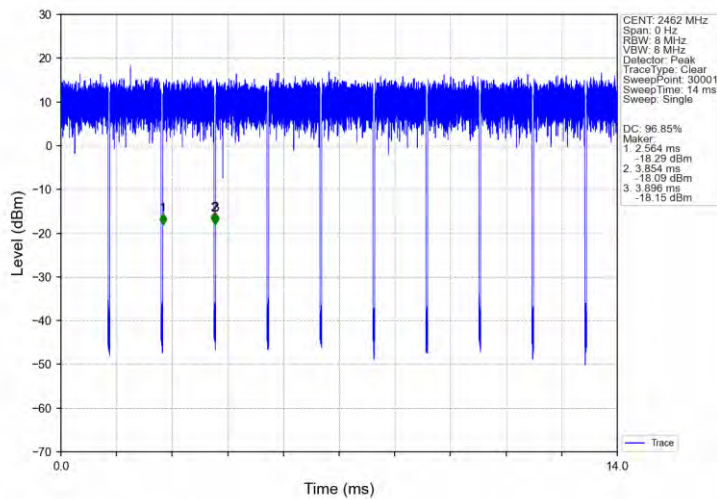
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



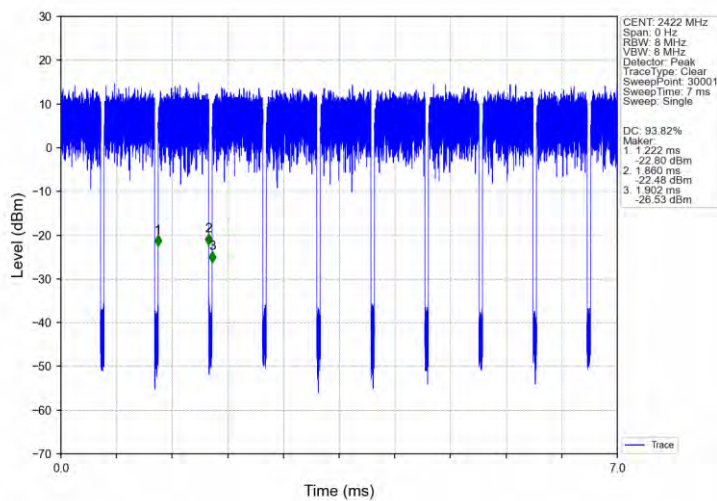
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



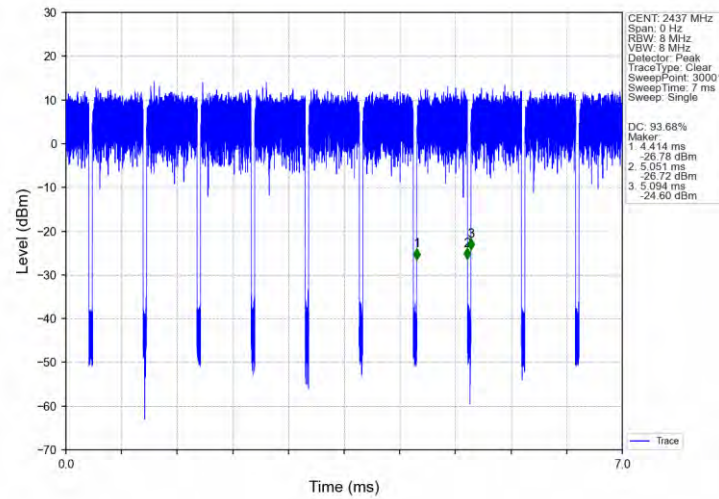
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



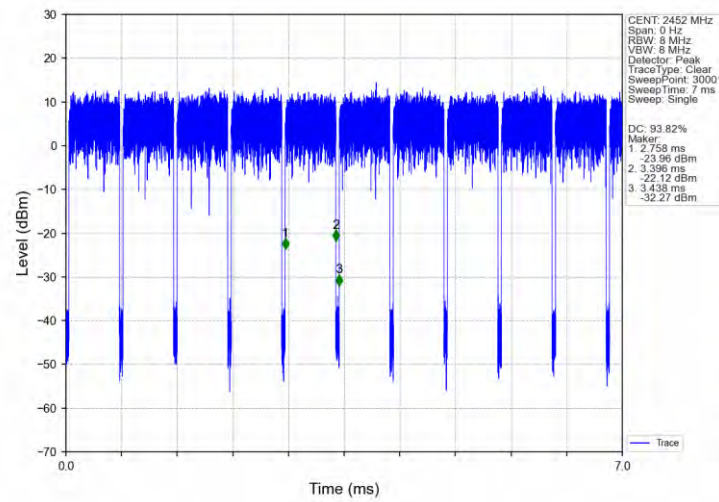
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	12.460	/	Pass
		2437	1	12.955	/	Pass
		2462	1	12.436	/	Pass
802.11g	SISO	2412	1	12.440	/	Pass
		2437	1	12.943	/	Pass
		2462	1	12.466	/	Pass
802.11n (HT20)	SISO	2412	1	18.025	/	Pass
		2437	1	18.427	/	Pass
		2462	1	18.015	/	Pass
802.11n (HT40)	SISO	2422	1	35.860	/	Pass
		2437	1	37.385	/	Pass
		2452	1	36.440	/	Pass

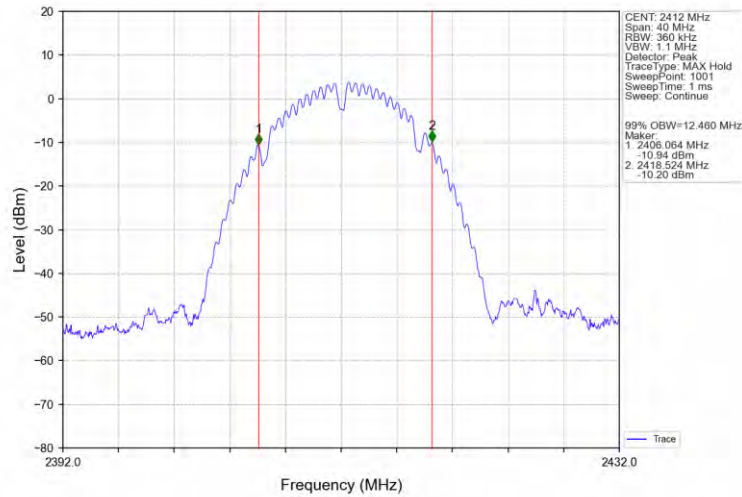
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.063	≥ 0.5	Pass
		2437	1	8.112	≥ 0.5	Pass
		2462	1	8.085	≥ 0.5	Pass
802.11g	SISO	2412	1	7.600	≥ 0.5	Pass
		2437	1	8.107	≥ 0.5	Pass
		2462	1	8.051	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	13.899	≥ 0.5	Pass
		2437	1	15.528	≥ 0.5	Pass
		2462	1	15.123	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	30.067	≥ 0.5	Pass
		2437	1	36.088	≥ 0.5	Pass
		2452	1	33.860	≥ 0.5	Pass

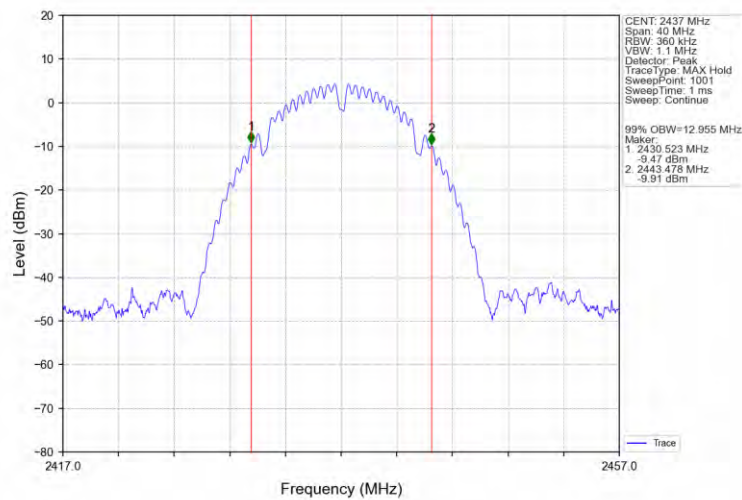
2.2 Test Graph

2.2.1 OBW

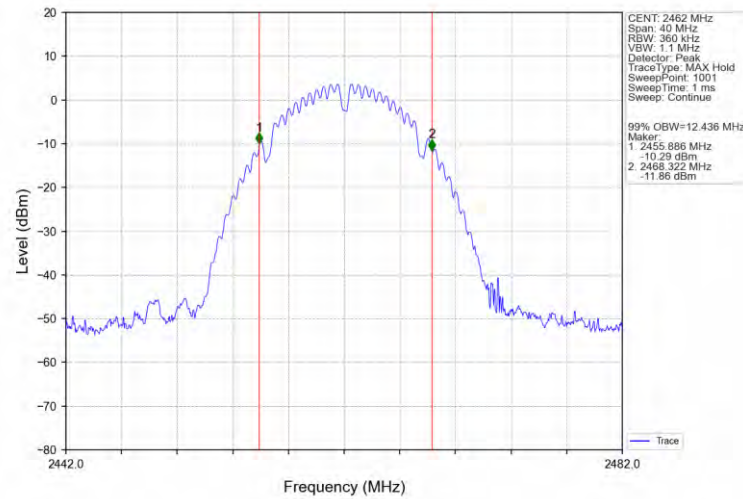
802.11b LCH 2412MHz_Ant1 (SISO) NTN



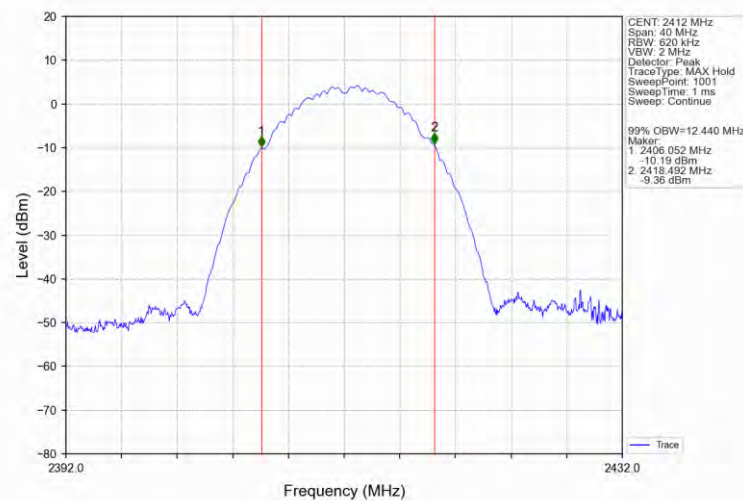
802.11b MCH 2437MHz_Ant1 (SISO) NTN



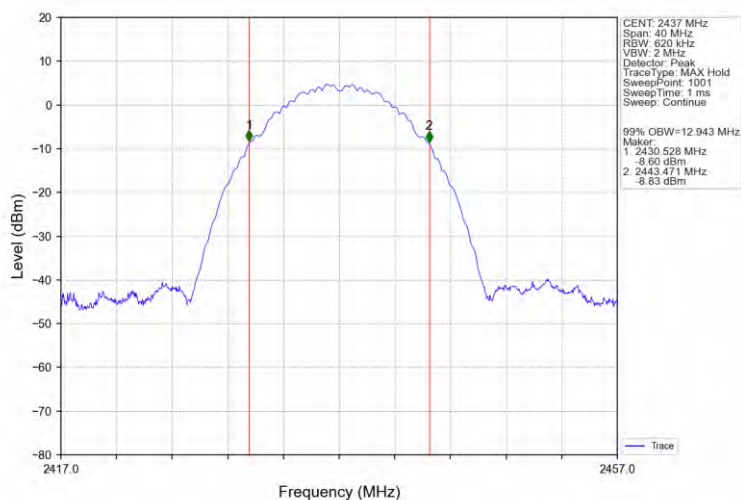
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



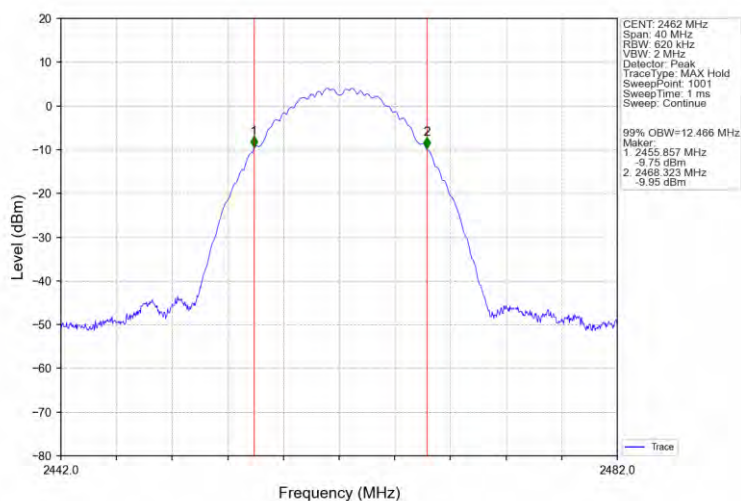
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



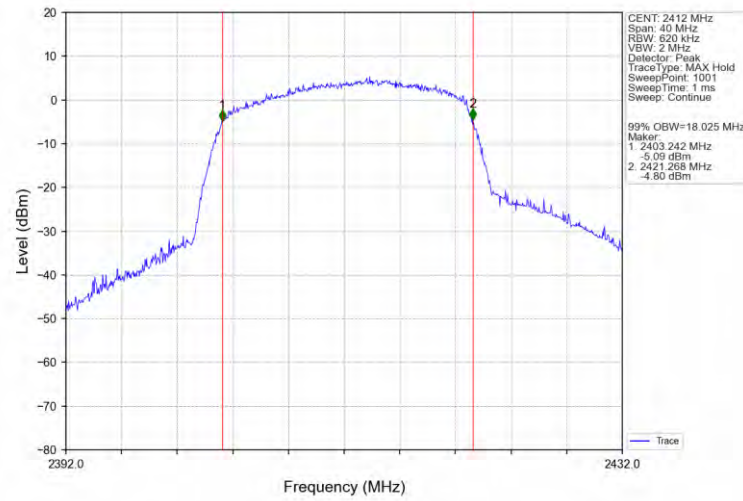
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



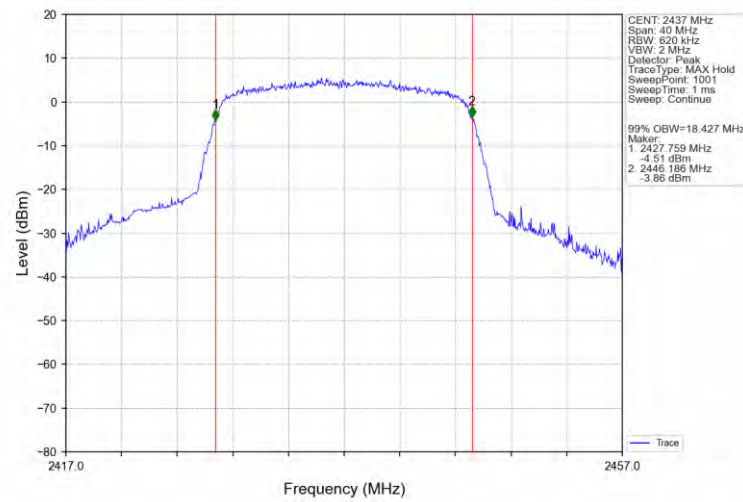
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



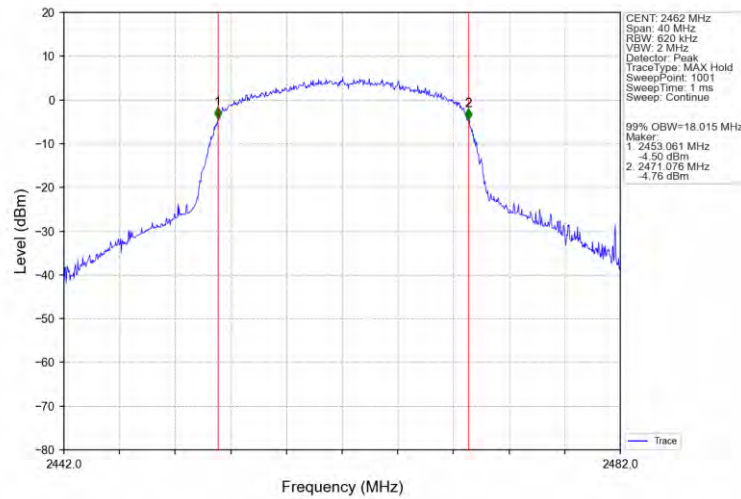
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



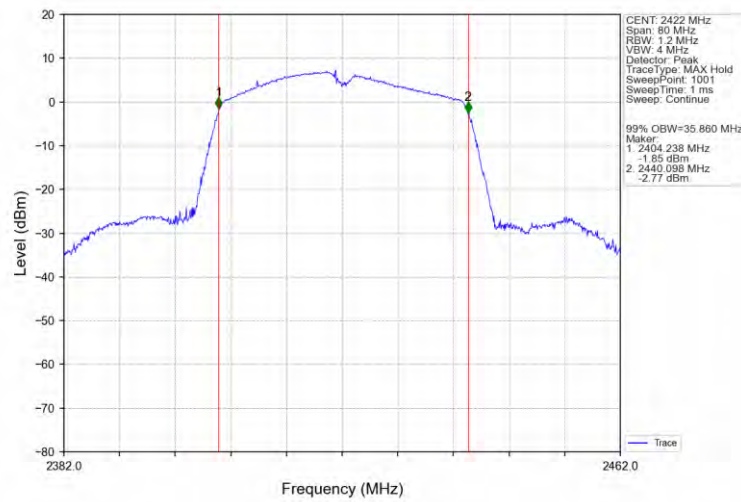
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



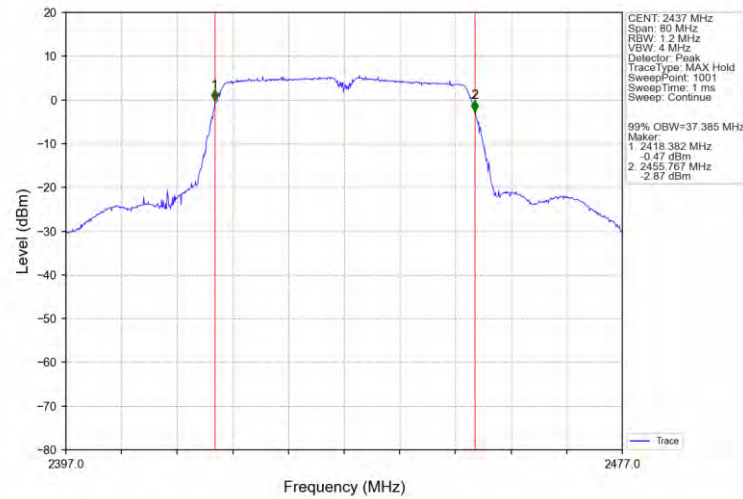
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



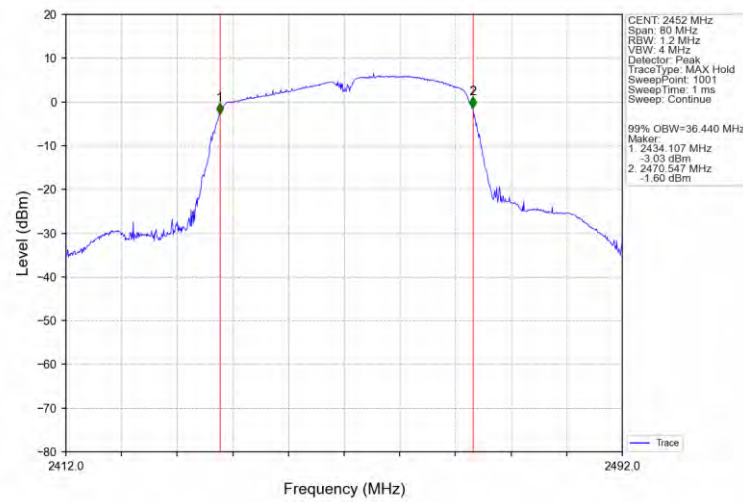
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

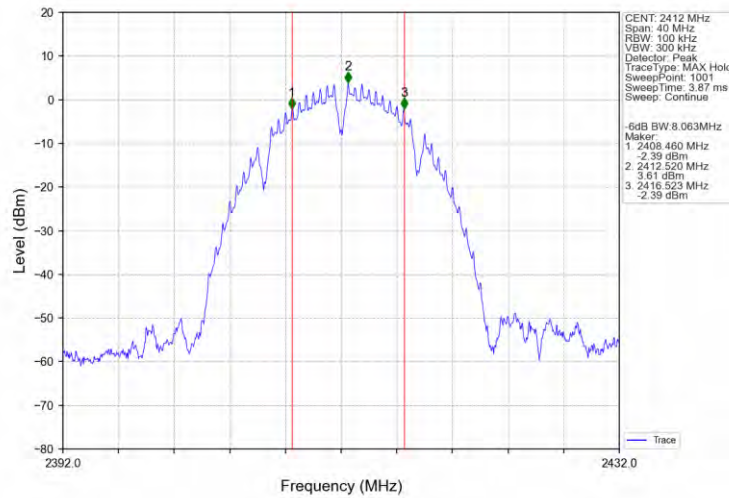


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

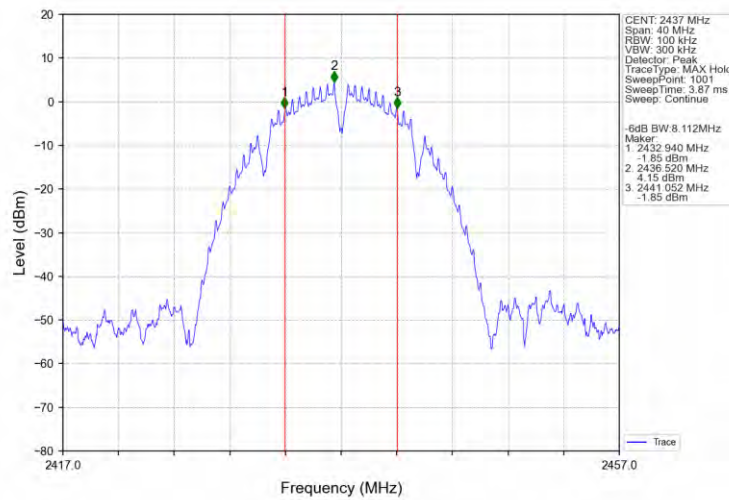


2.2.2 6dB BW

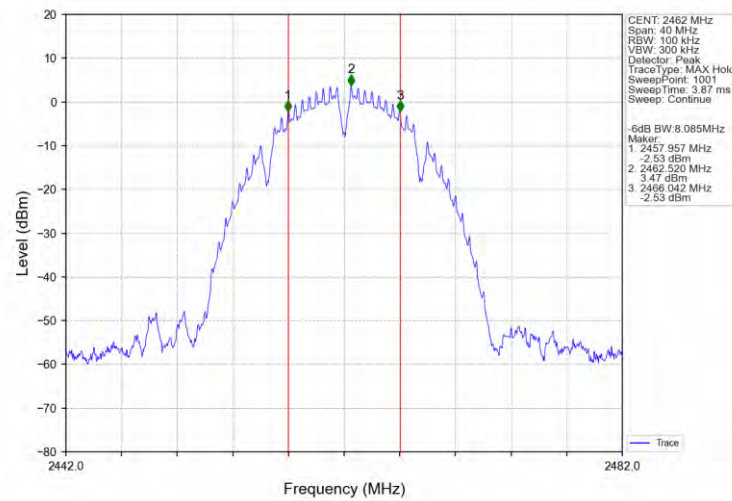
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



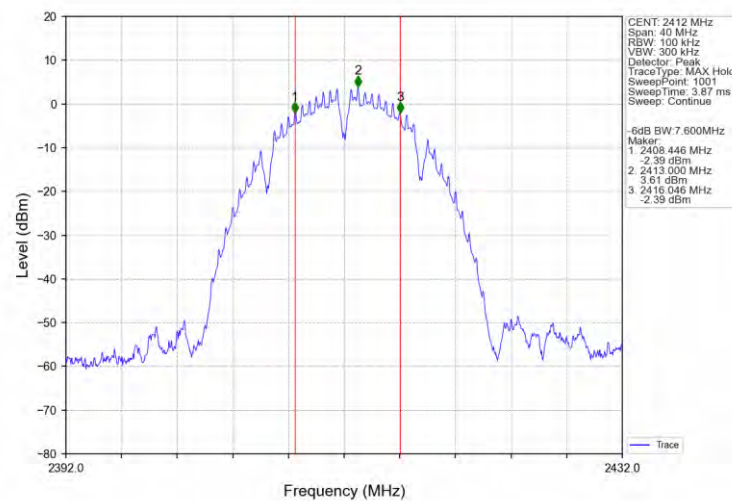
802.11b MCH 2437MHz_Ant1 (SISO)_NTNV



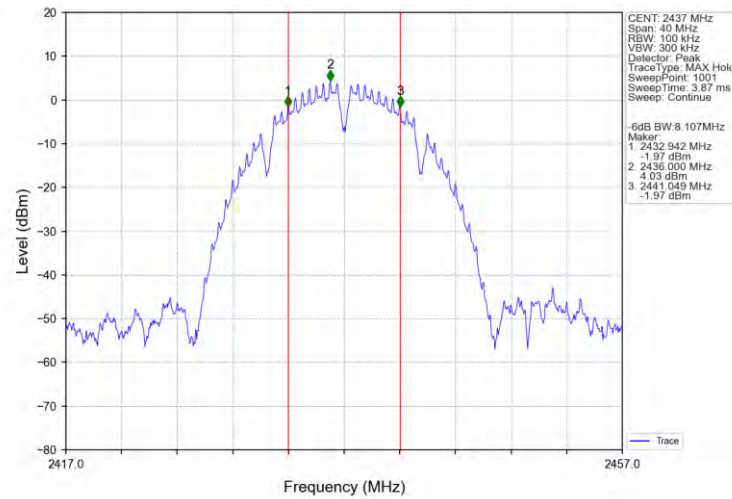
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



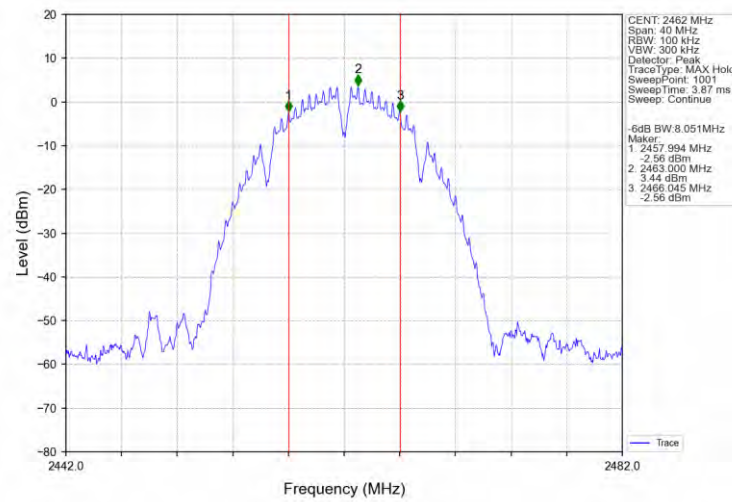
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



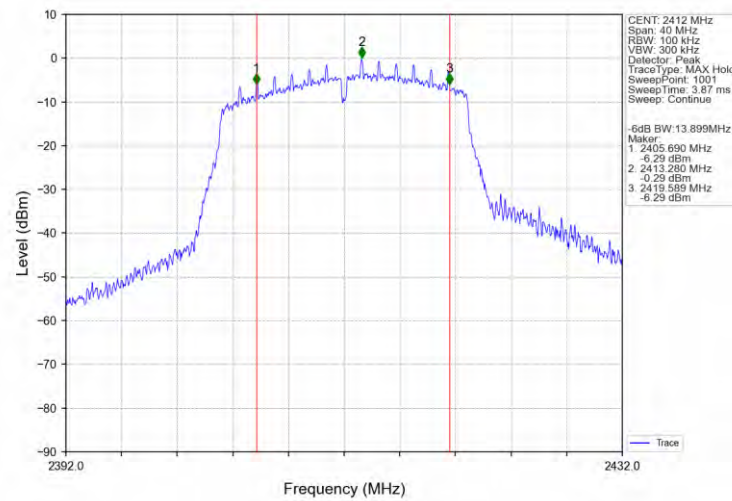
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



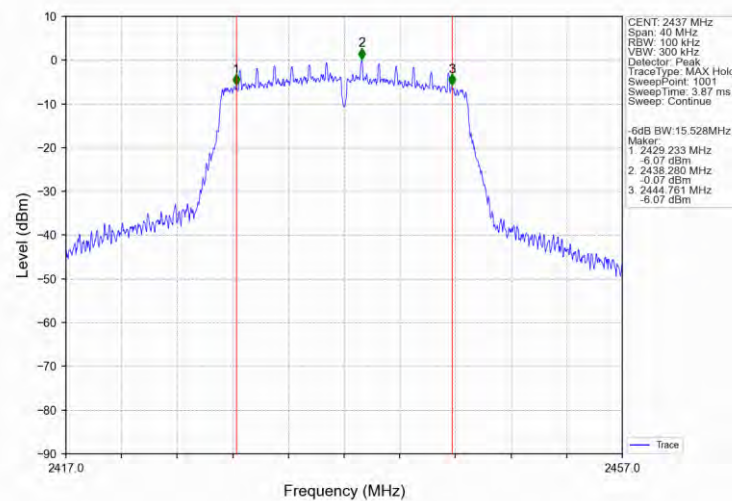
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



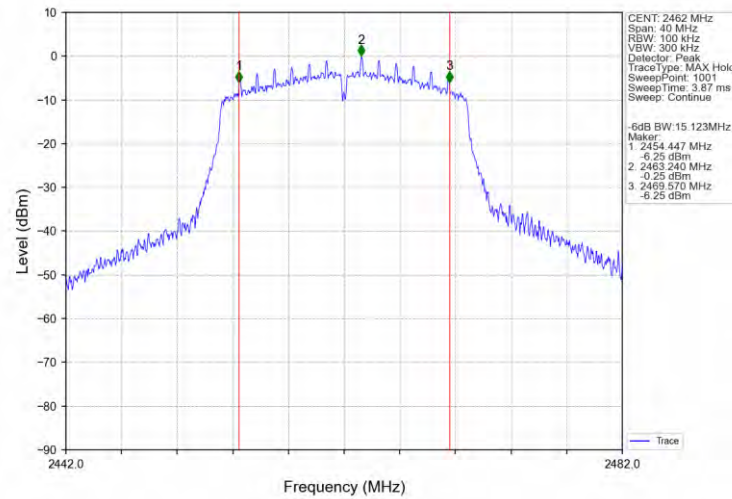
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



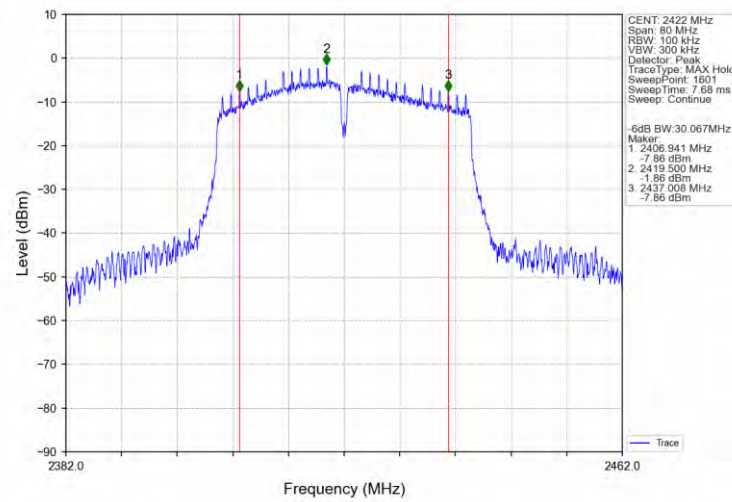
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



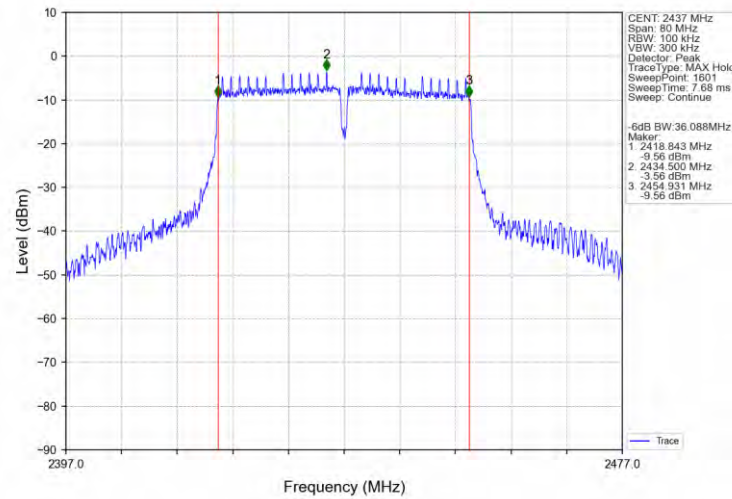
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



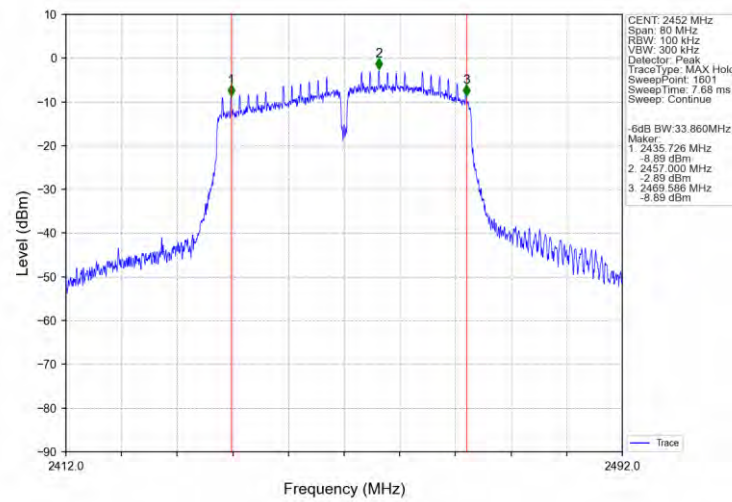
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	Limit	
802.11b	SISO	2412	13.75	<=30	Pass
		2437	14.50	<=30	Pass
		2462	13.75	<=30	Pass
802.11g	SISO	2412	16.40	<=30	Pass
		2437	14.46	<=30	Pass
		2462	13.72	<=30	Pass
802.11n (HT20)	SISO	2412	16.21	<=30	Pass
		2437	17.47	<=30	Pass
		2462	16.75	<=30	Pass
802.11n (HT40)	SISO	2422	17.56	<=30	Pass
		2437	18.06	<=30	Pass
		2452	17.42	<=30	Pass

4. Maximum Power Spectral Density

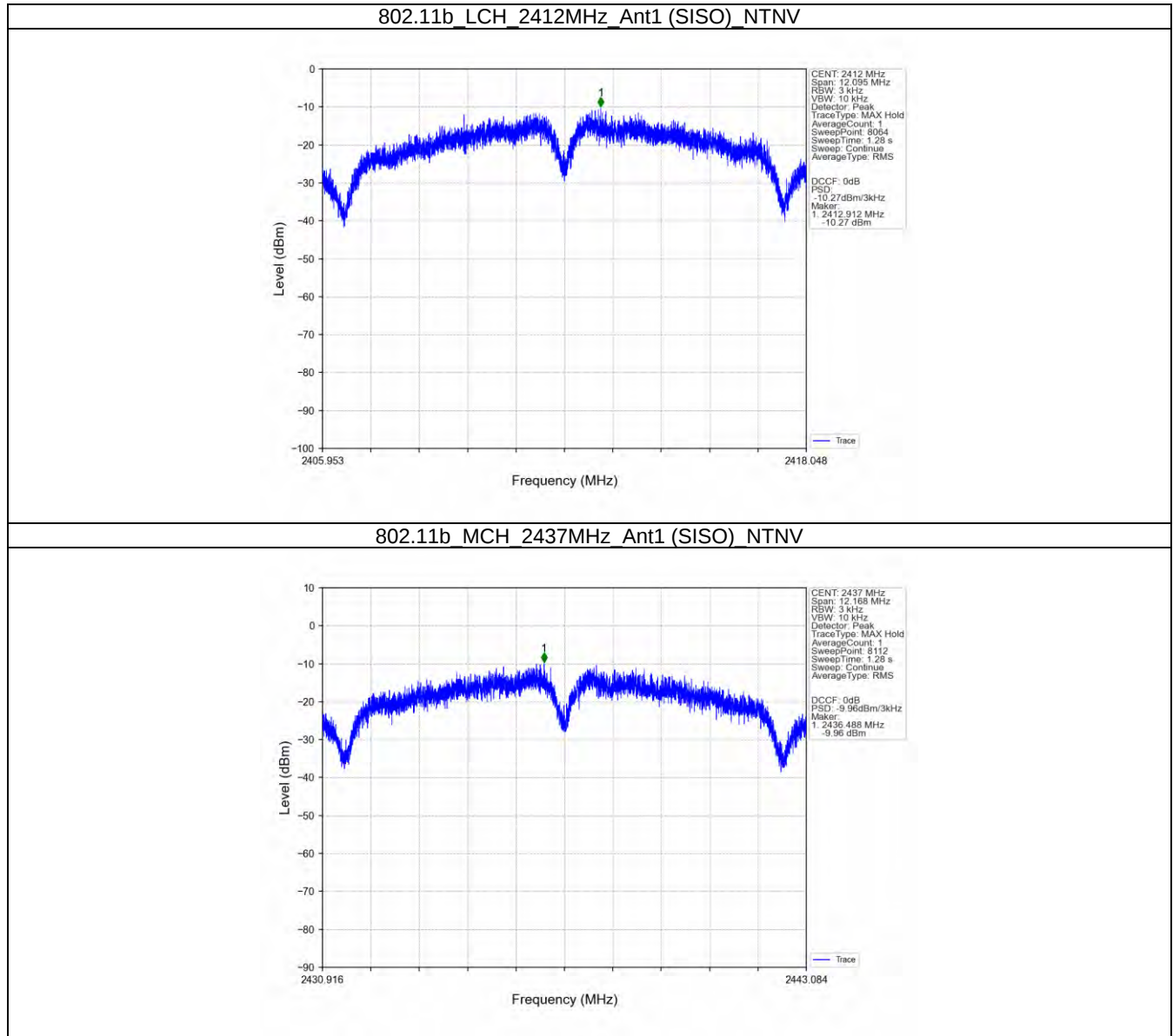
4.1 Test Result

4.1.1 PSD

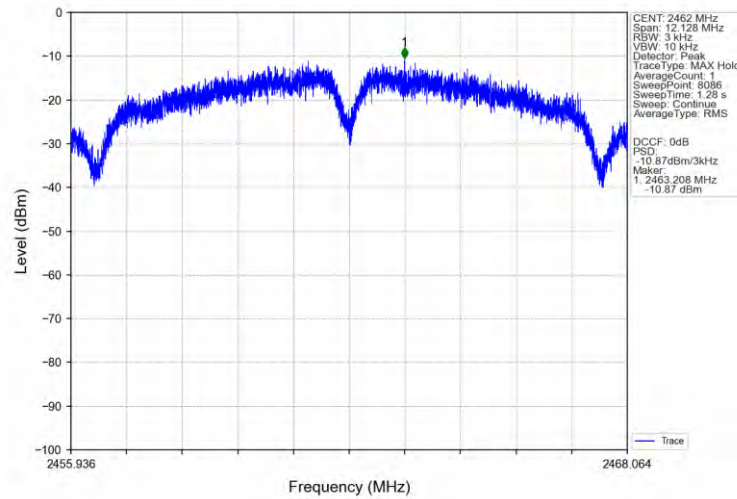
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-10.27	<=8	Pass
		2437	-9.96	<=8	Pass
		2462	-10.87	<=8	Pass
802.11g	SISO	2412	-11.16	<=8	Pass
		2437	-9.83	<=8	Pass
		2462	-11.22	<=8	Pass
802.11n (HT20)	SISO	2412	-14.68	<=8	Pass
		2437	-13.90	<=8	Pass
		2462	-13.98	<=8	Pass
802.11n (HT40)	SISO	2422	-15.57	<=8	Pass
		2437	-17.58	<=8	Pass
		2452	-16.59	<=8	Pass

4.2 Test Graph

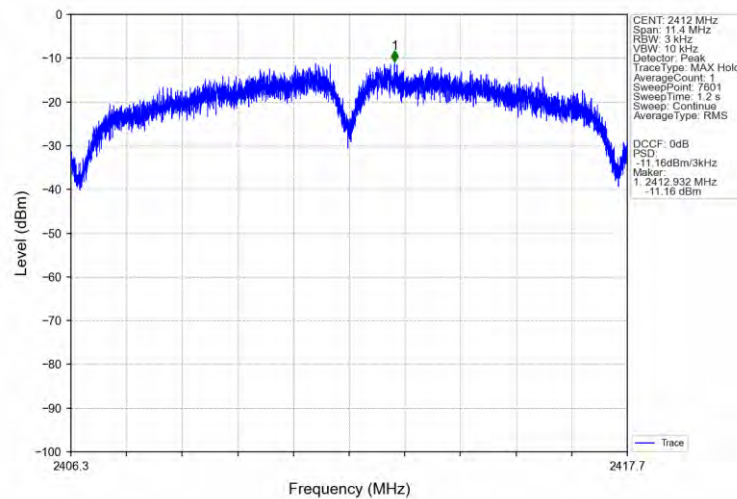
4.2.1 PSD



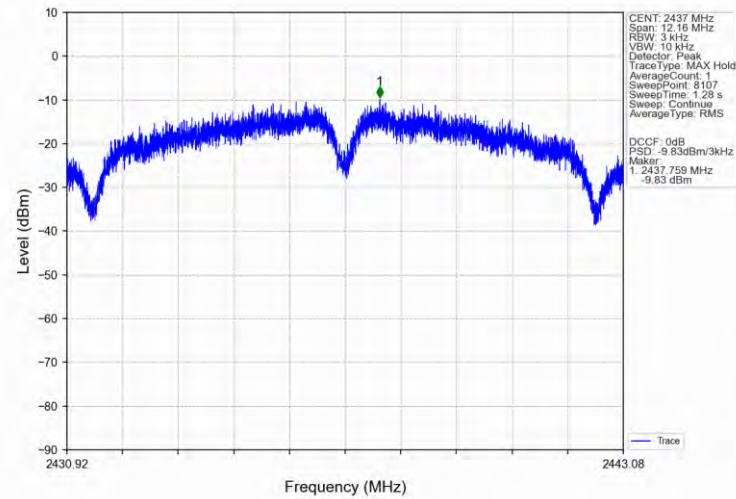
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



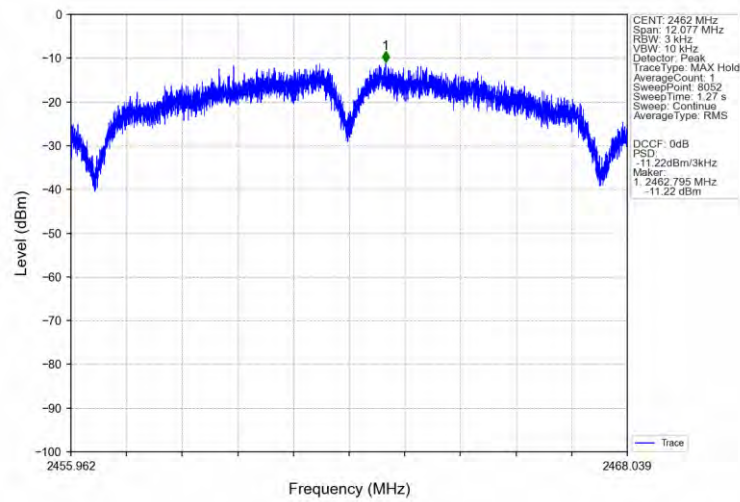
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



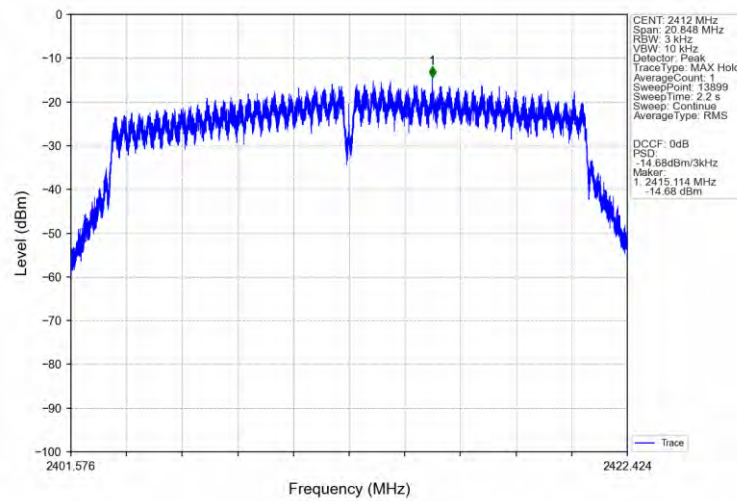
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



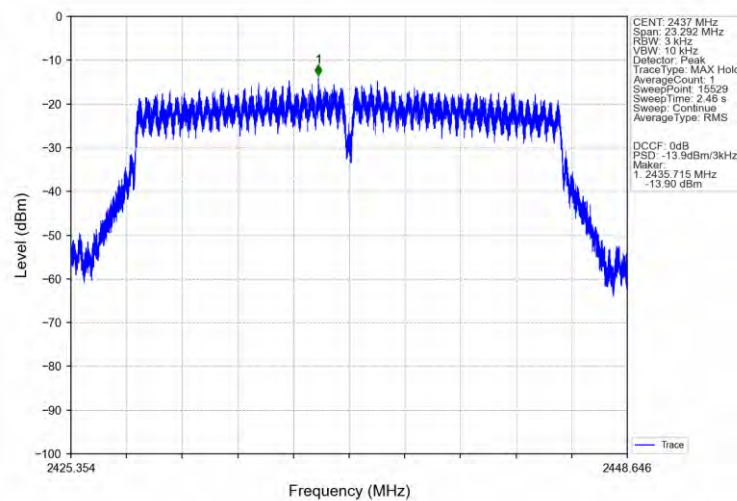
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



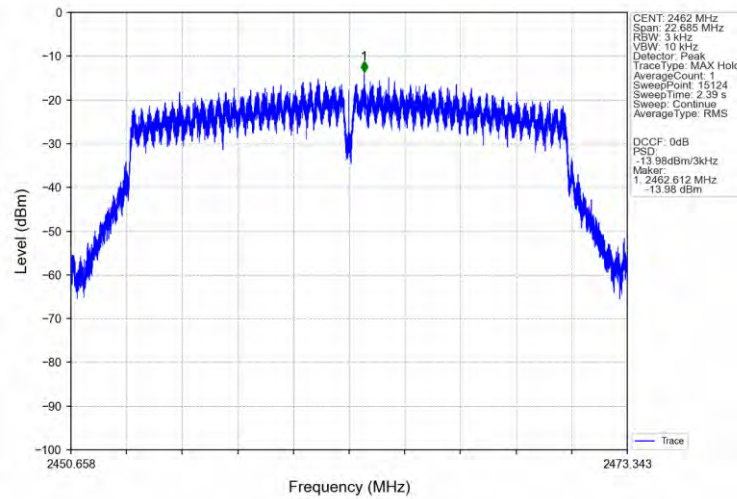
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



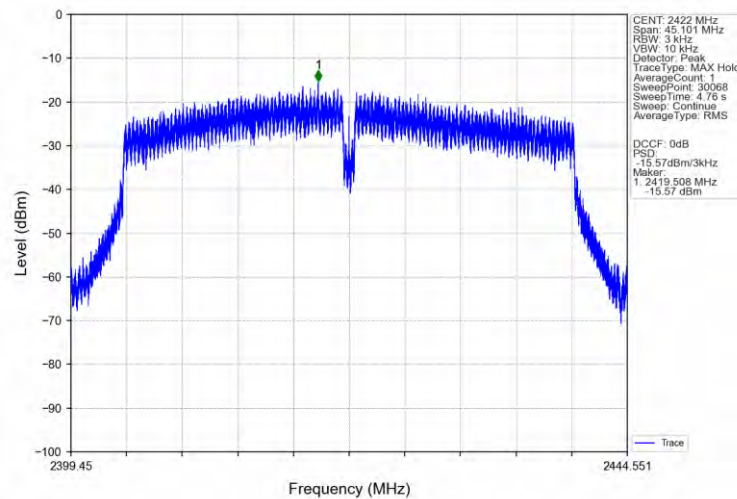
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



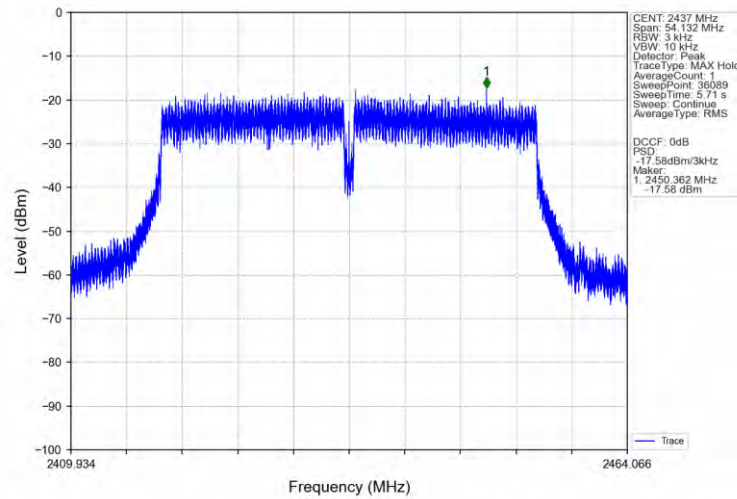
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



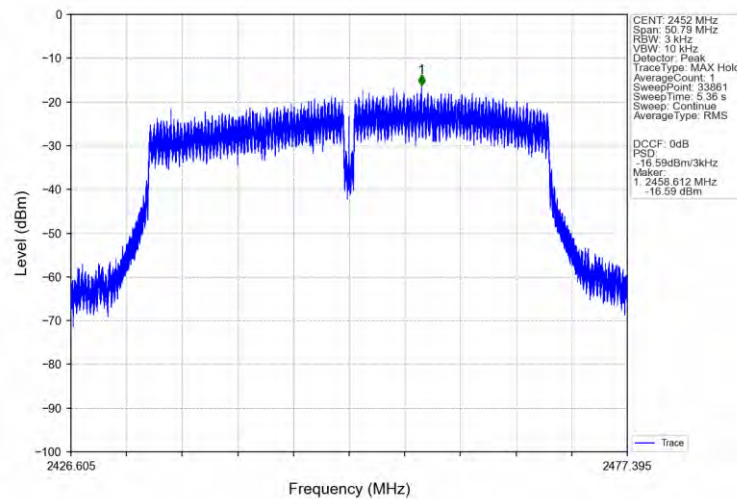
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	3.43
		2437	1	4.26
		2462	1	3.64
802.11g	SISO	2412	1	3.45
		2437	1	4.25
		2462	1	3.32
802.11n (HT20)	SISO	2412	1	-0.30
		2437	1	-0.81
		2462	1	-0.24
802.11n (HT40)	SISO	2422	1	-1.94
		2437	1	-3.65
		2452	1	-3.09

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

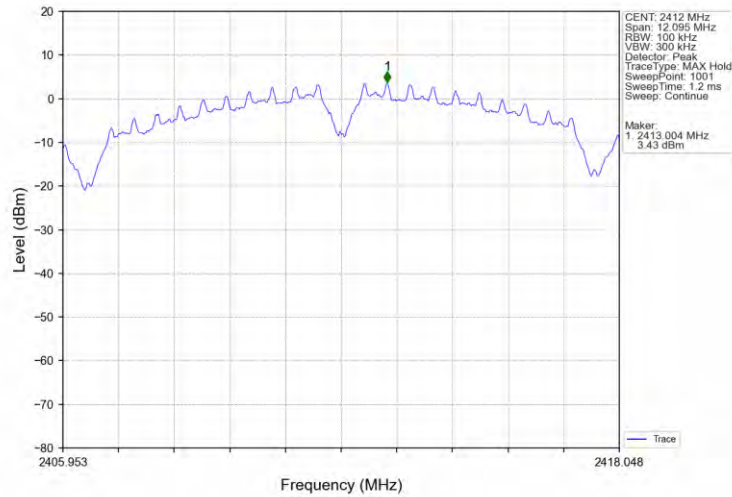
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	3.43	-16.57	Pass
		2437	1	4.26	-15.74	Pass
		2462	1	3.64	-16.36	Pass
802.11g	SISO	2412	1	3.45	-16.55	Pass
		2437	1	4.25	-15.75	Pass
		2462	1	3.32	-16.68	Pass
802.11n (HT20)	SISO	2412	1	-0.30	-20.30	Pass
		2437	1	-0.81	-20.81	Pass
		2462	1	-0.24	-20.24	Pass
802.11n (HT40)	SISO	2422	1	-1.94	-21.94	Pass
		2437	1	-3.65	-23.65	Pass
		2452	1	-3.09	-23.09	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.

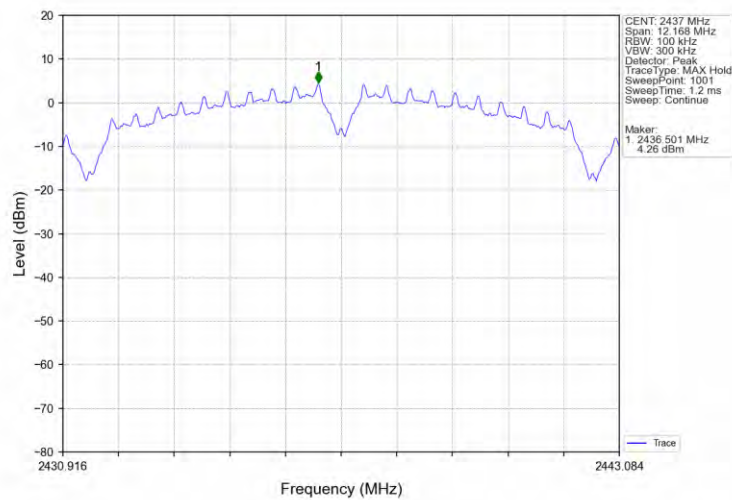
5.2 Test Graph

5.2.1 Ref

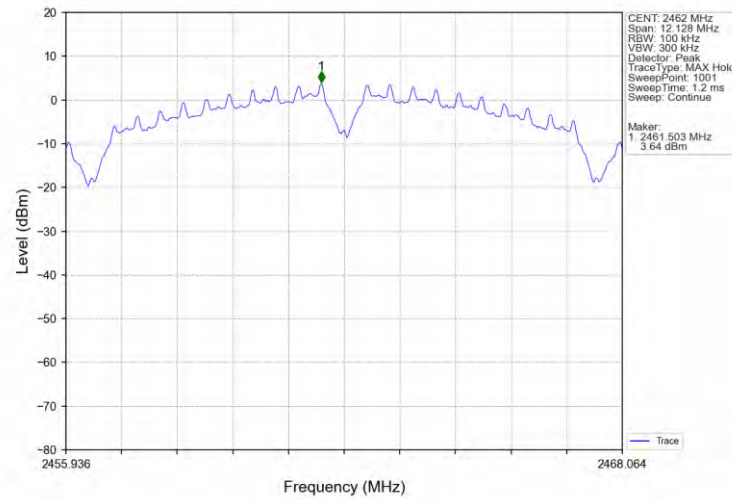
802.11b LCH 2412MHz_Ant1 (SISO) NTN



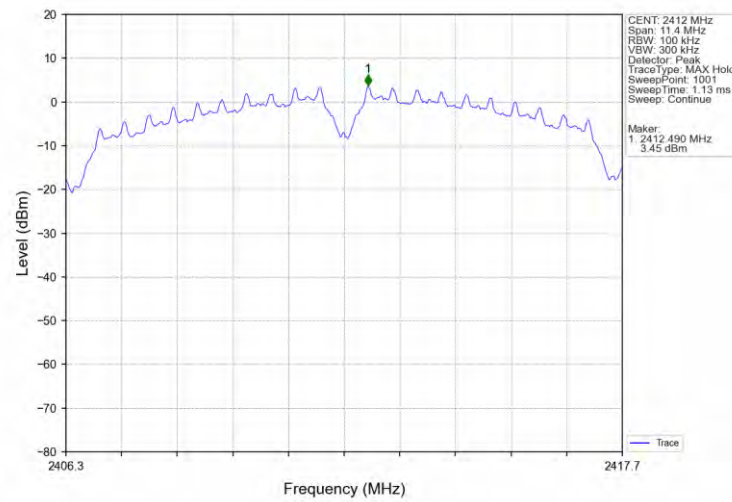
802.11b MCH 2437MHz_Ant1 (SISO) NTN



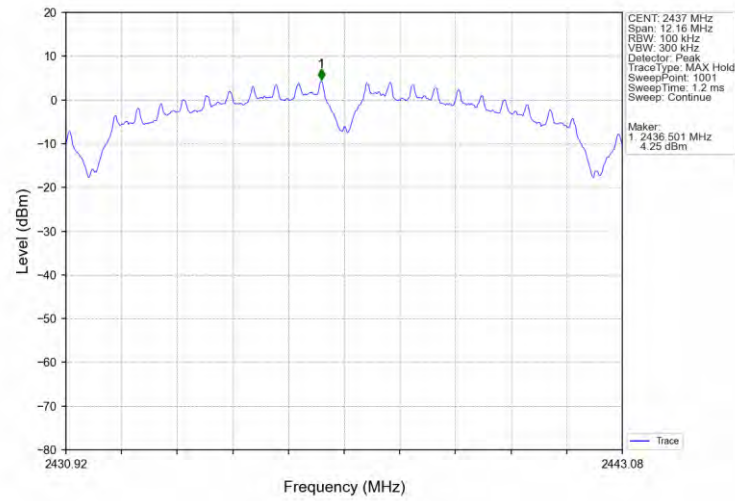
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



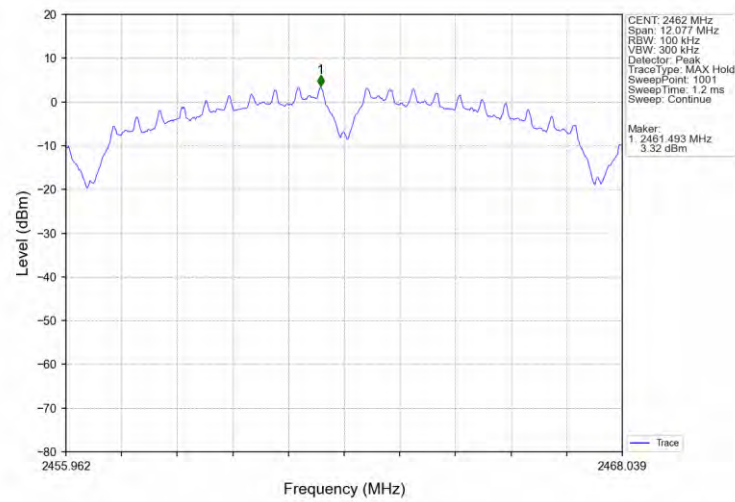
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



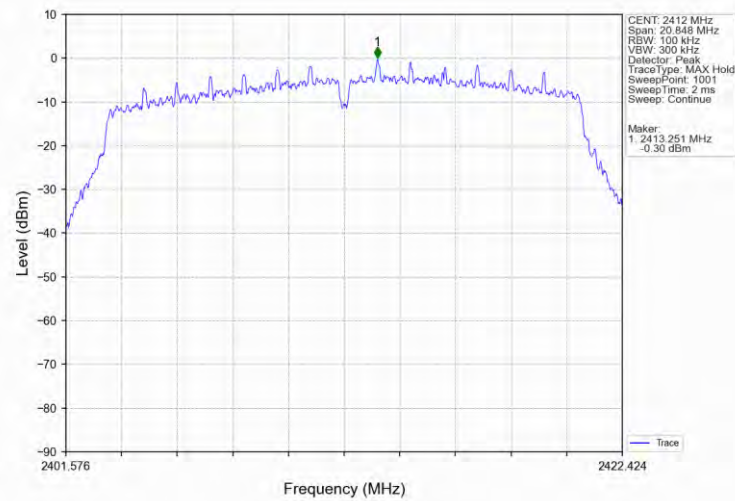
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



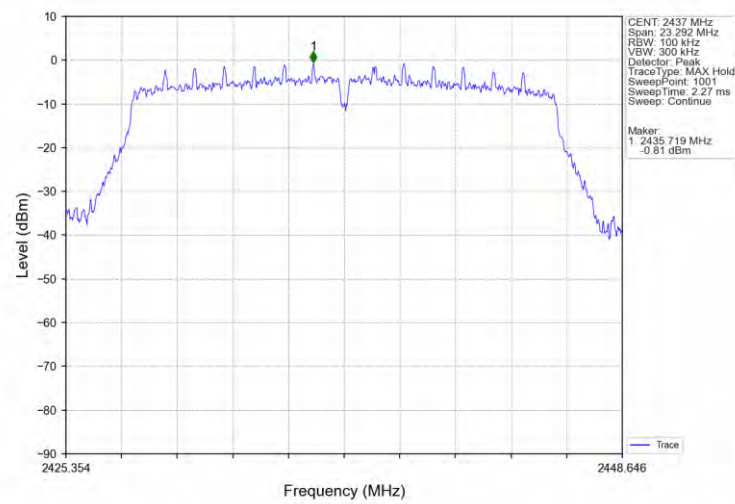
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



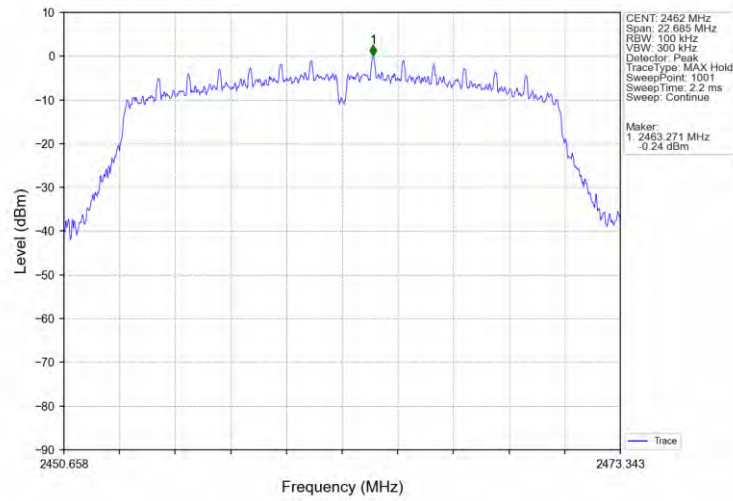
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



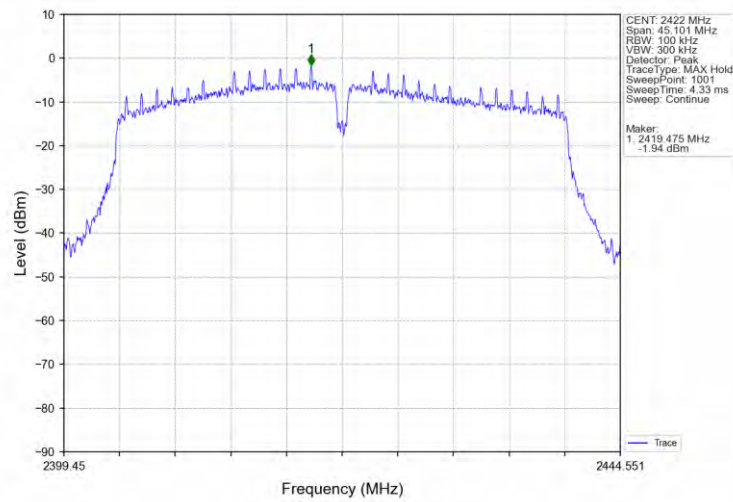
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



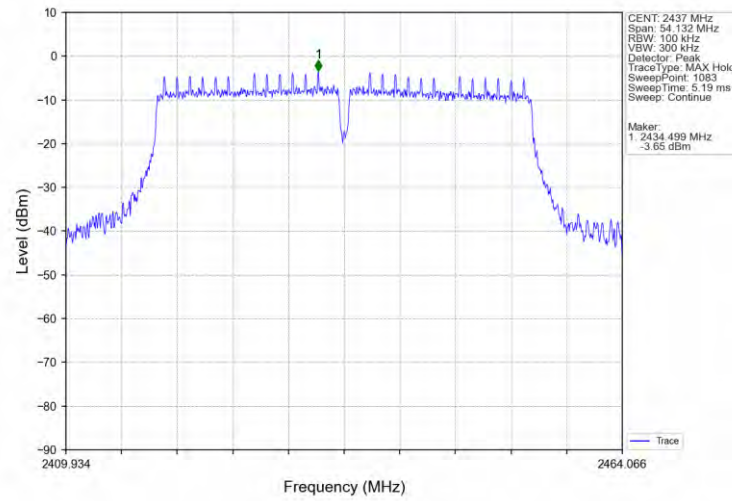
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



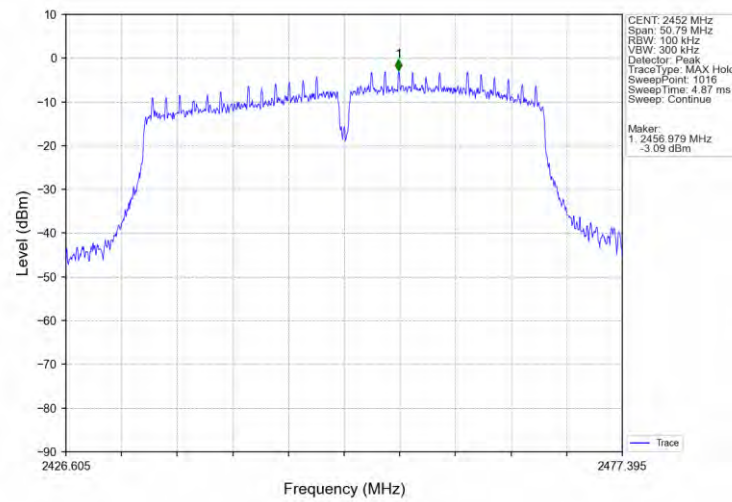
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

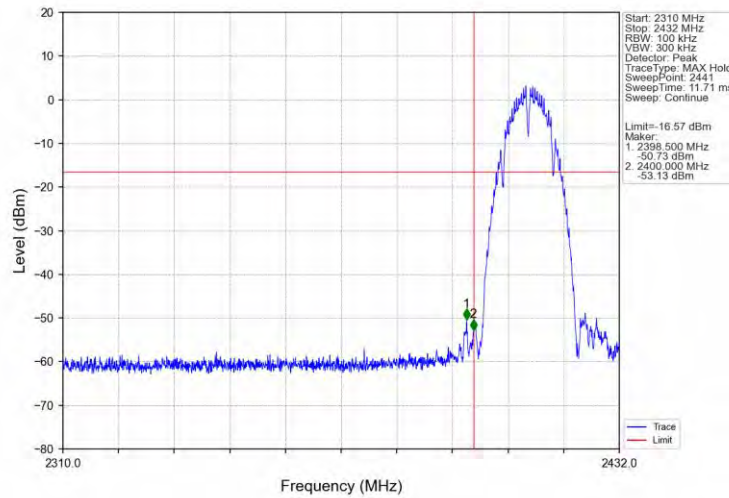


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

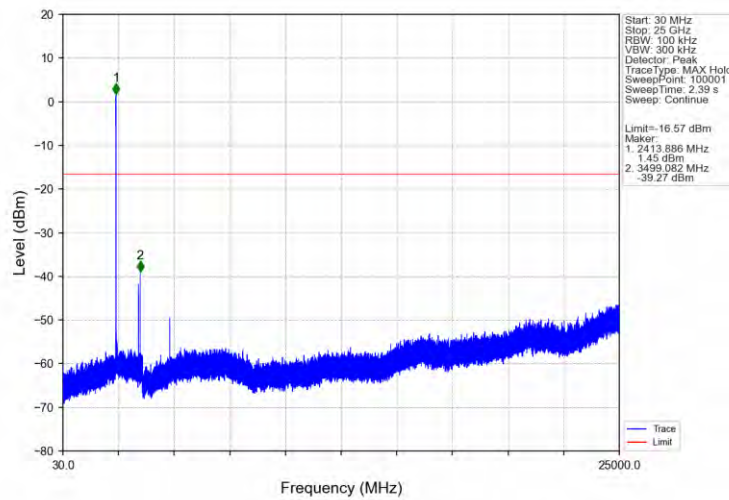


5.2.2 CSE

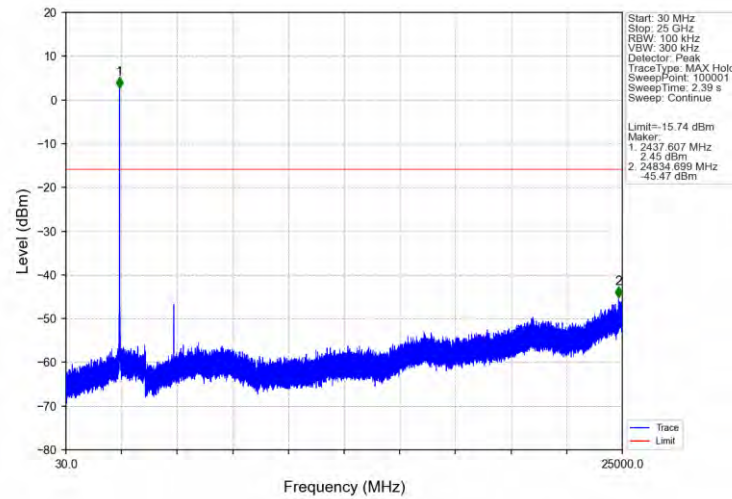
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



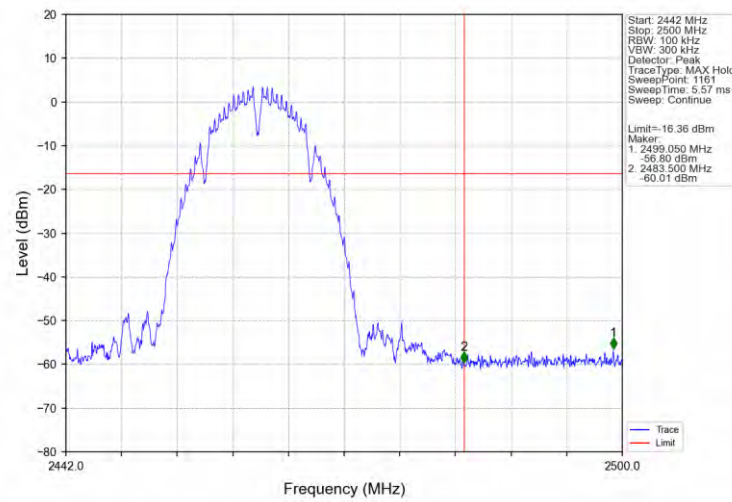
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



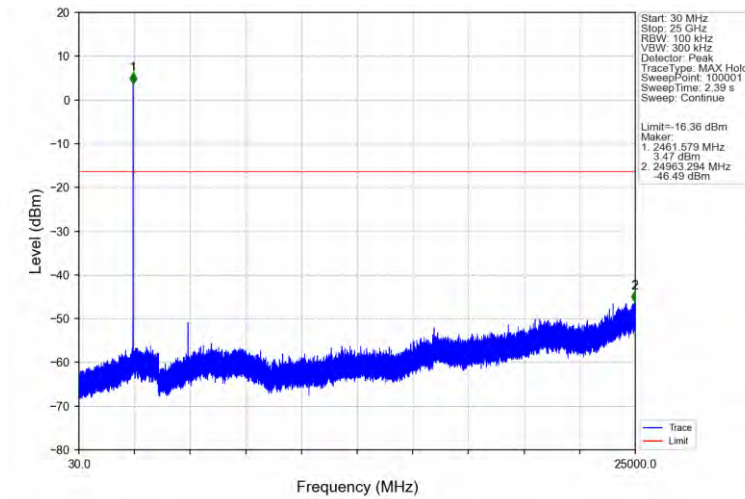
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



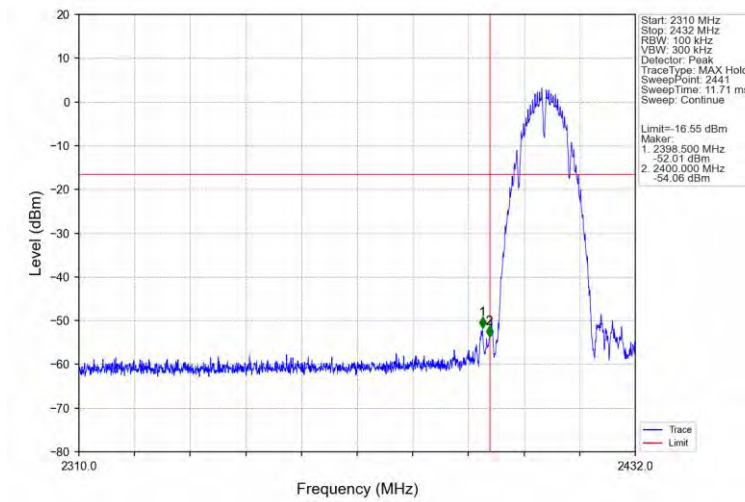
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



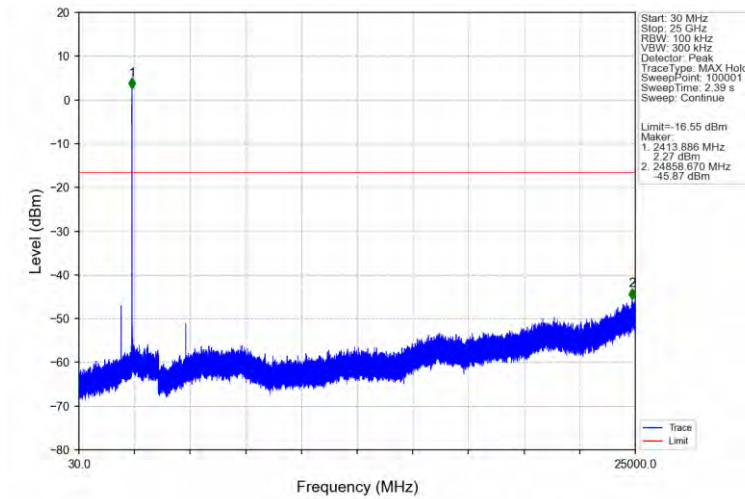
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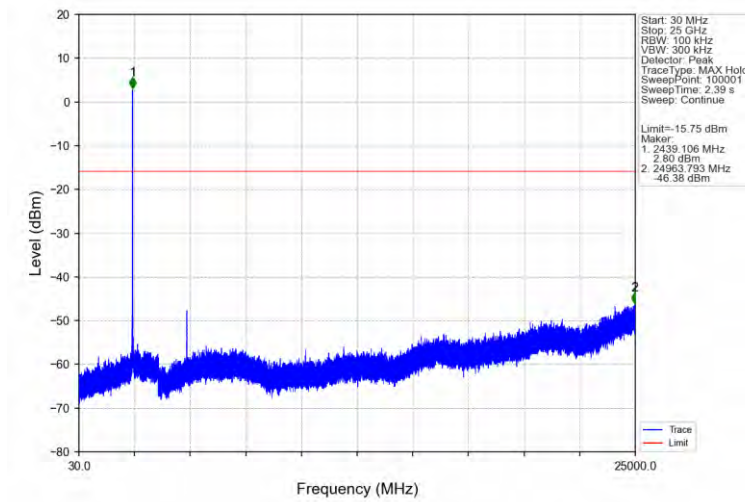
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



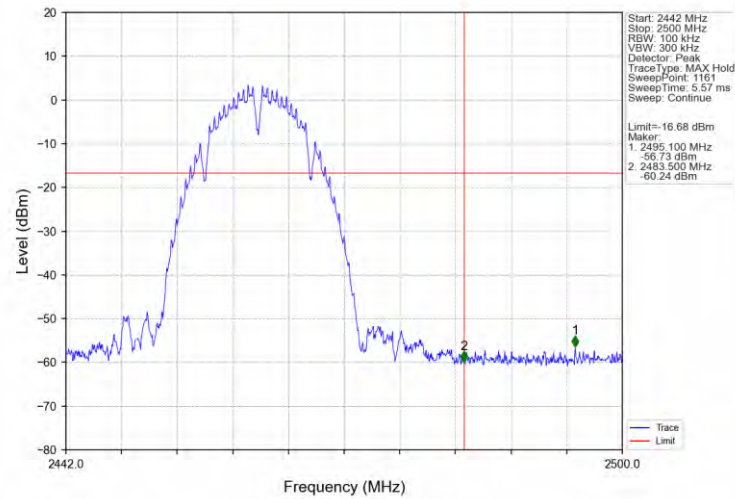
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



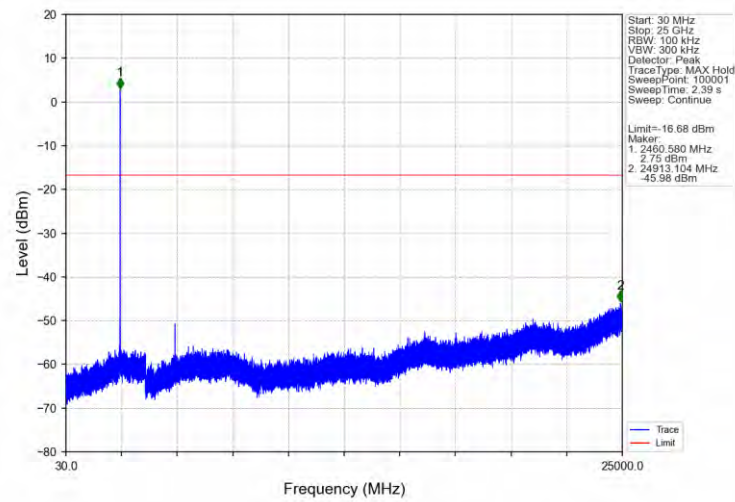
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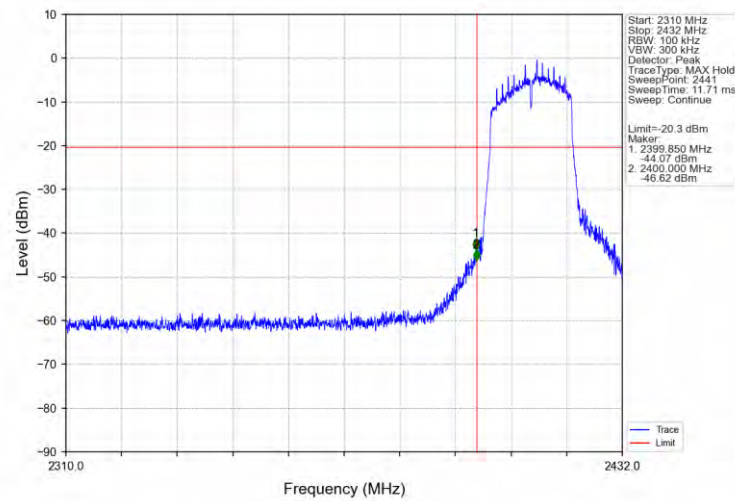
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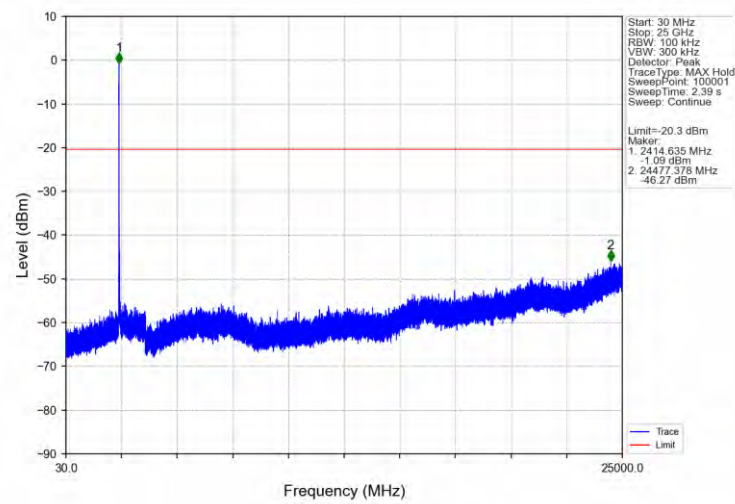
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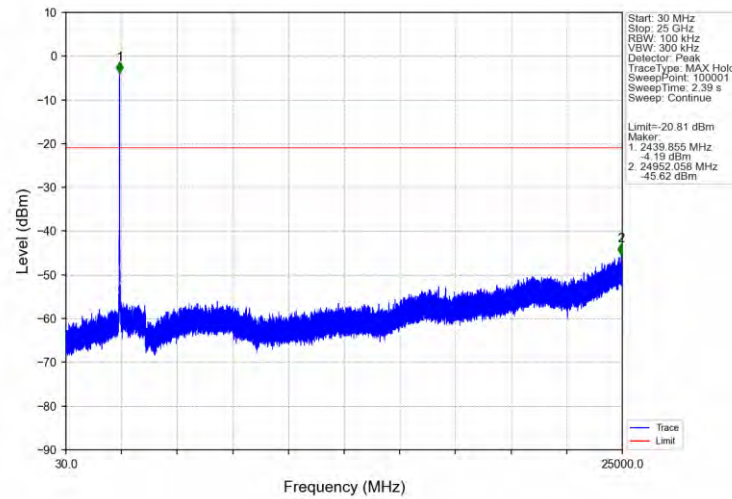
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



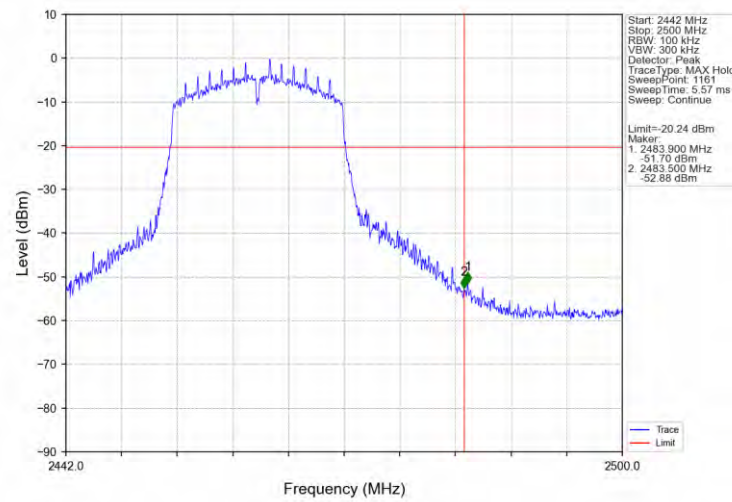
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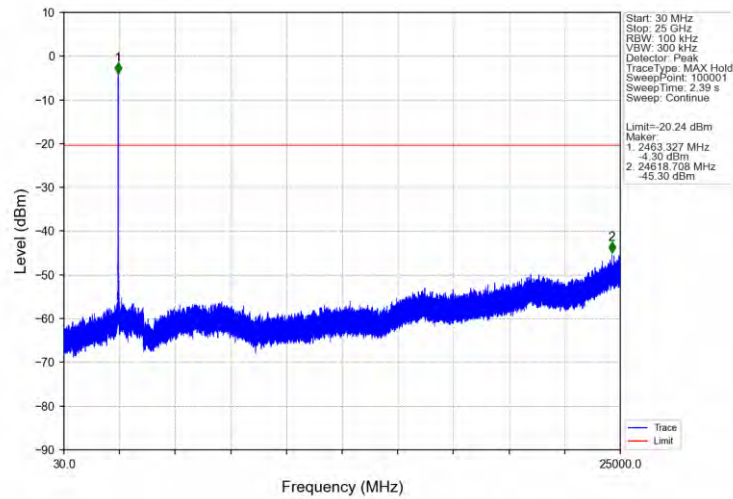
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



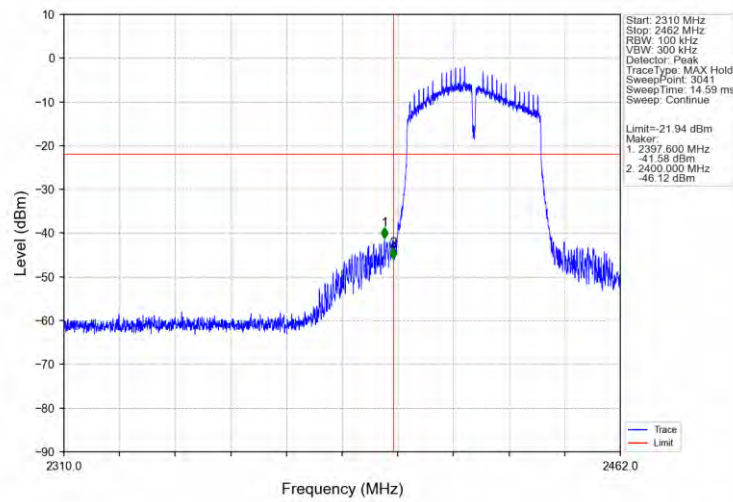
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



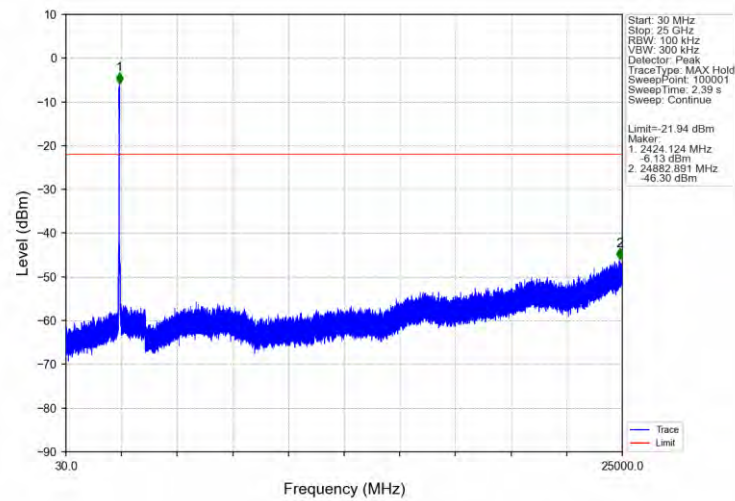
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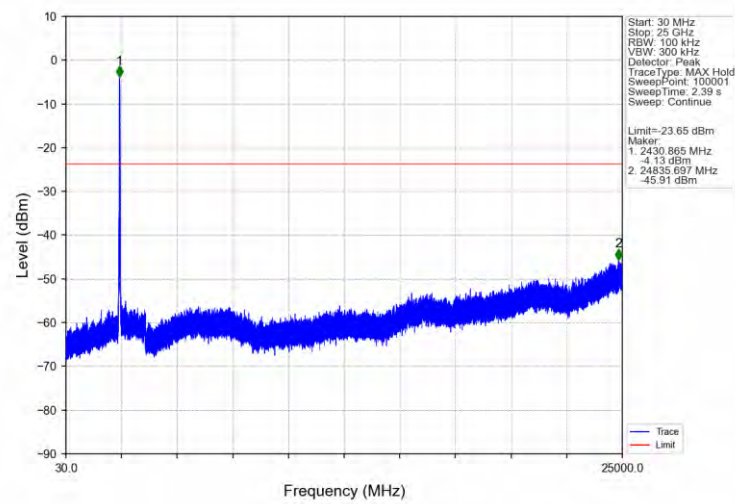
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



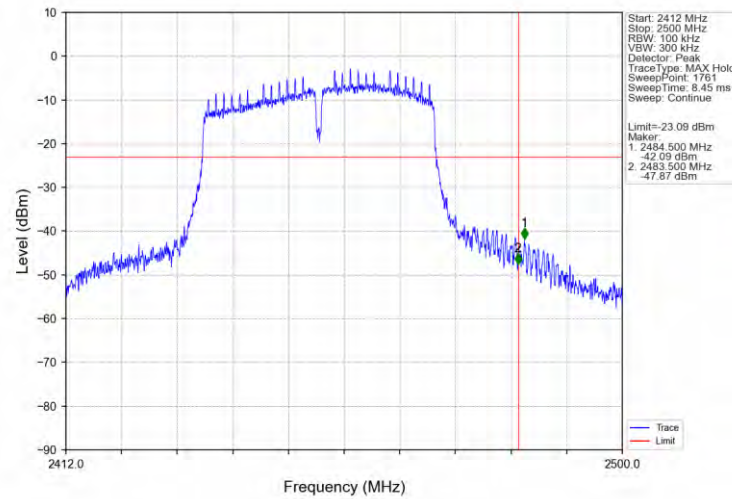
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



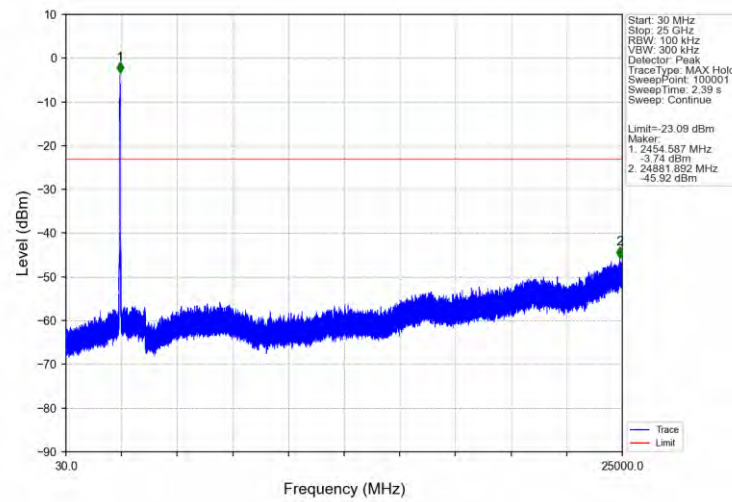
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



6. Form731

6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2412	2462	0.0558	17.47
2422	2452	0.0640	18.06