

Appendix RF test data for 2.4G WIFI

1. Duty Cycle

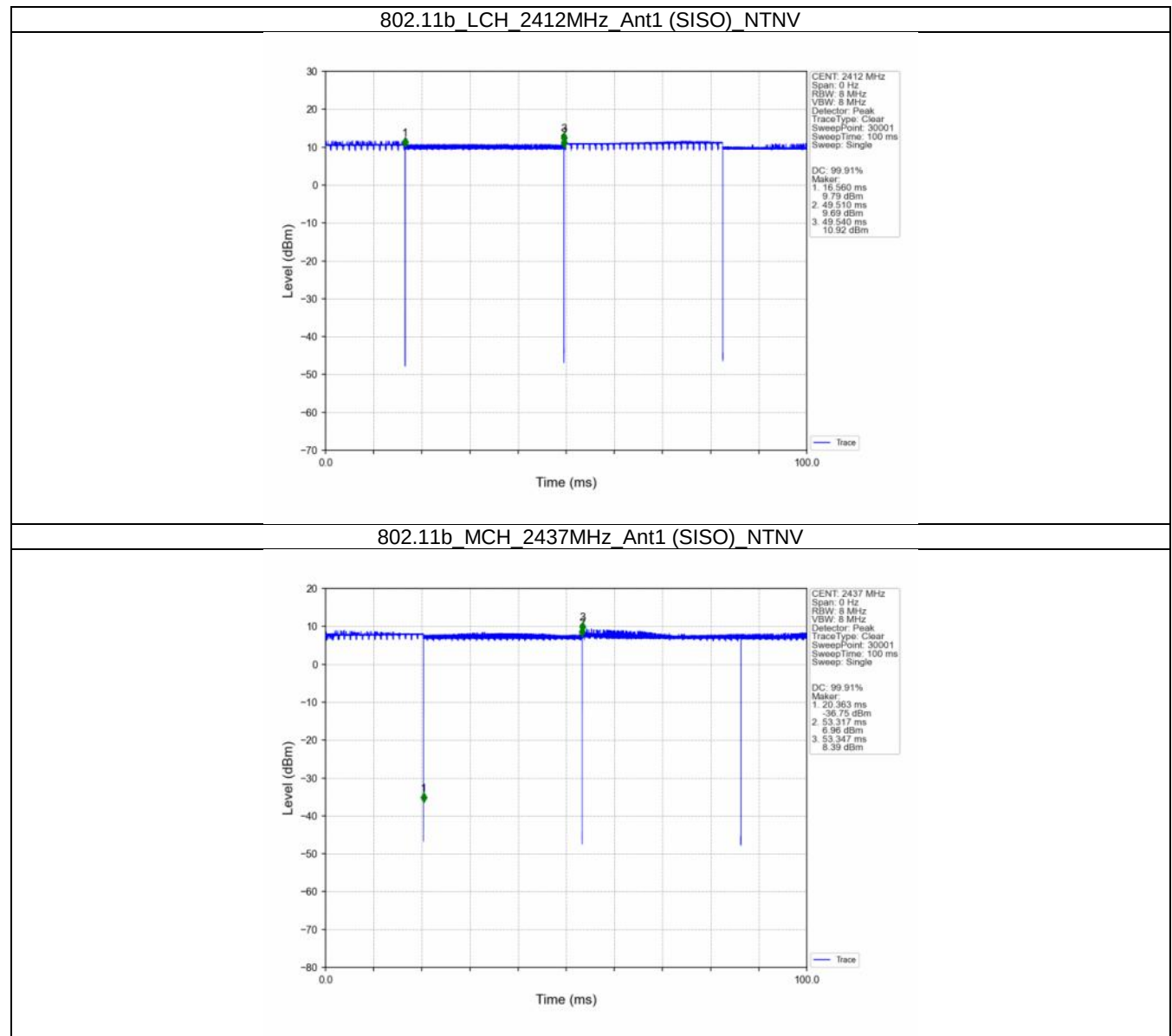
1.1 Test Result

1.1.1 Ant1

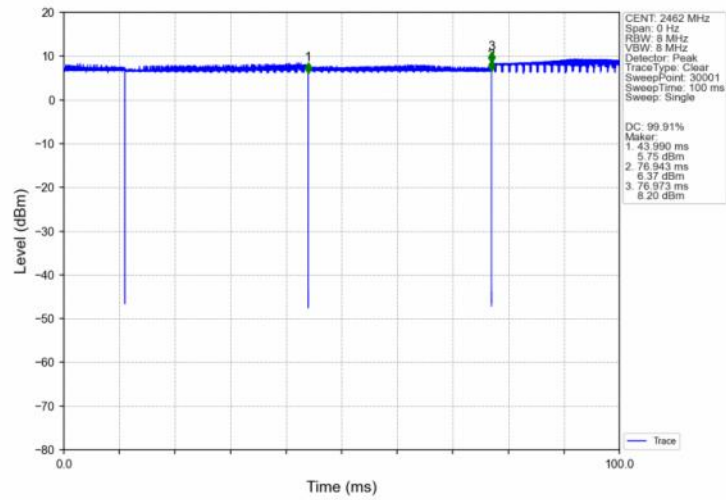
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	32.950	32.980	99.91	0.00	0.01
		2437	32.954	32.984	99.91	0.00	0.01
		2462	32.953	32.983	99.91	0.00	0.01
802.11g	SISO	2412	5.484	5.548	98.85	0.05	0.70
		2437	5.485	5.511	99.53	0.02	0.03
		2462	5.484	5.510	99.53	0.02	0.00
802.11n (HT20)	SISO	2412	5.081	5.297	95.92	0.18	3.59
		2437	5.080	5.105	99.51	0.02	0.00
		2462	5.079	5.105	99.49	0.02	0.00
802.11n (HT40)	SISO	2422	2.469	2.494	99.00	0.04	0.04
		2437	2.468	2.493	99.00	0.04	0.00
		2452	2.468	2.493	99.00	0.04	0.03

1.2 Test Graph

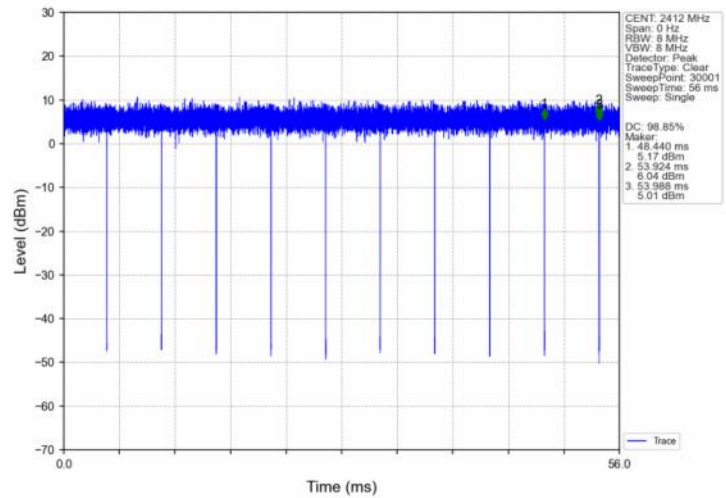
1.2.1 Ant1



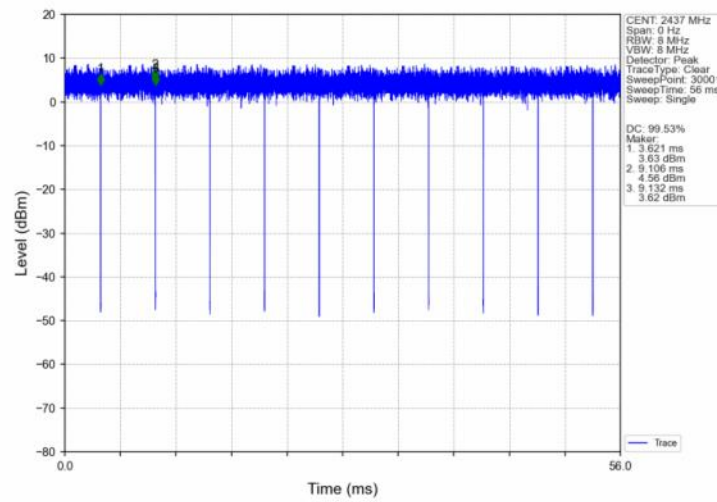
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



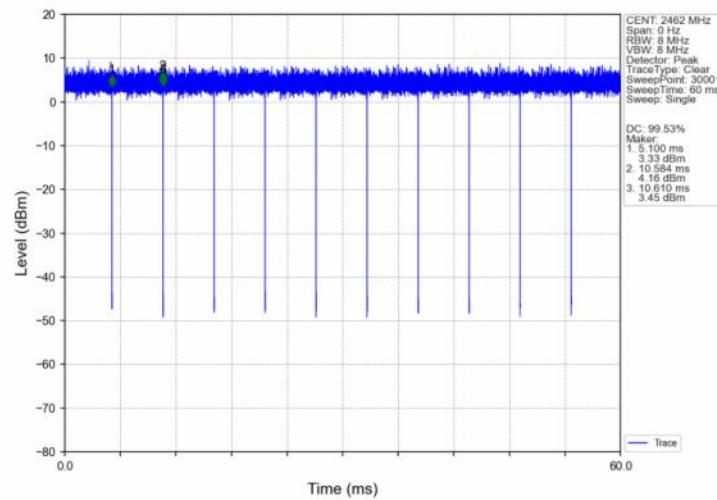
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



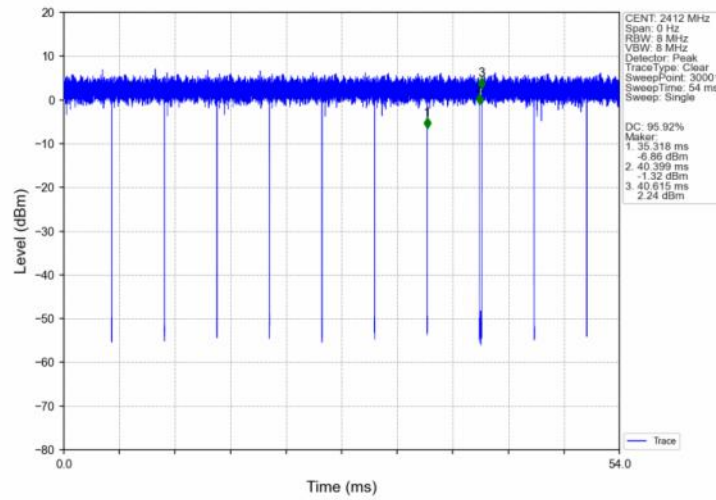
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



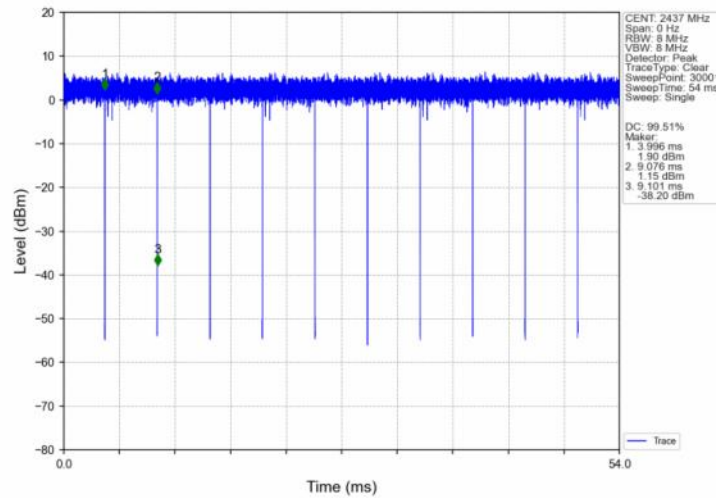
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



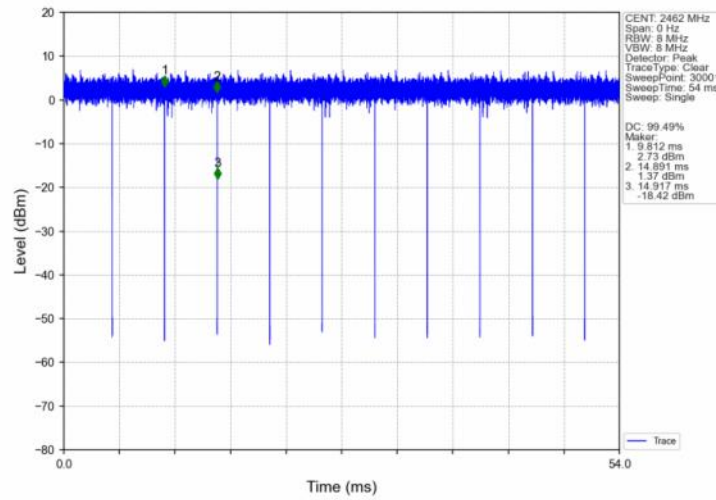
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



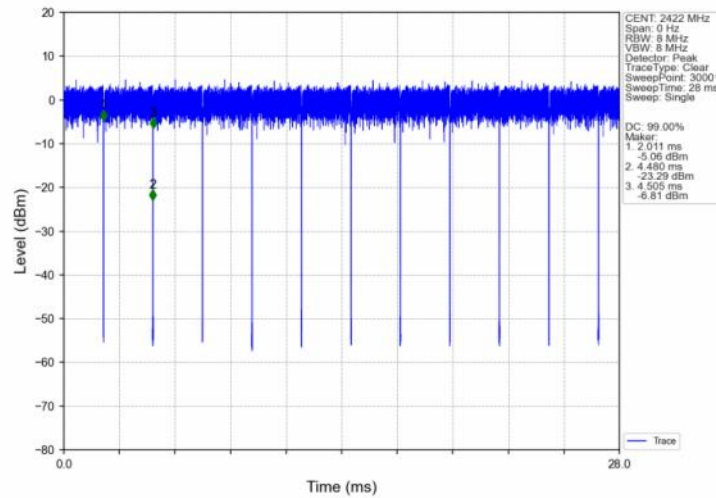
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



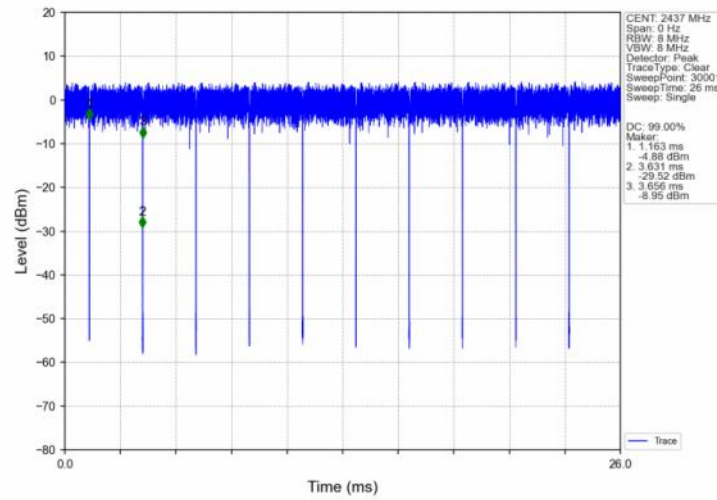
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



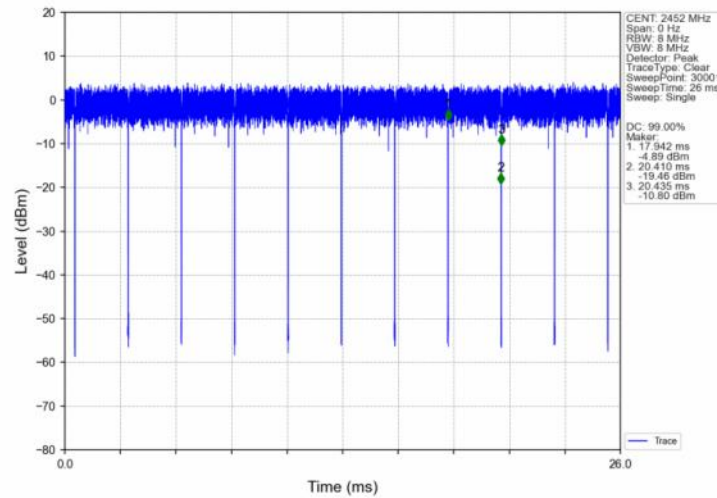
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

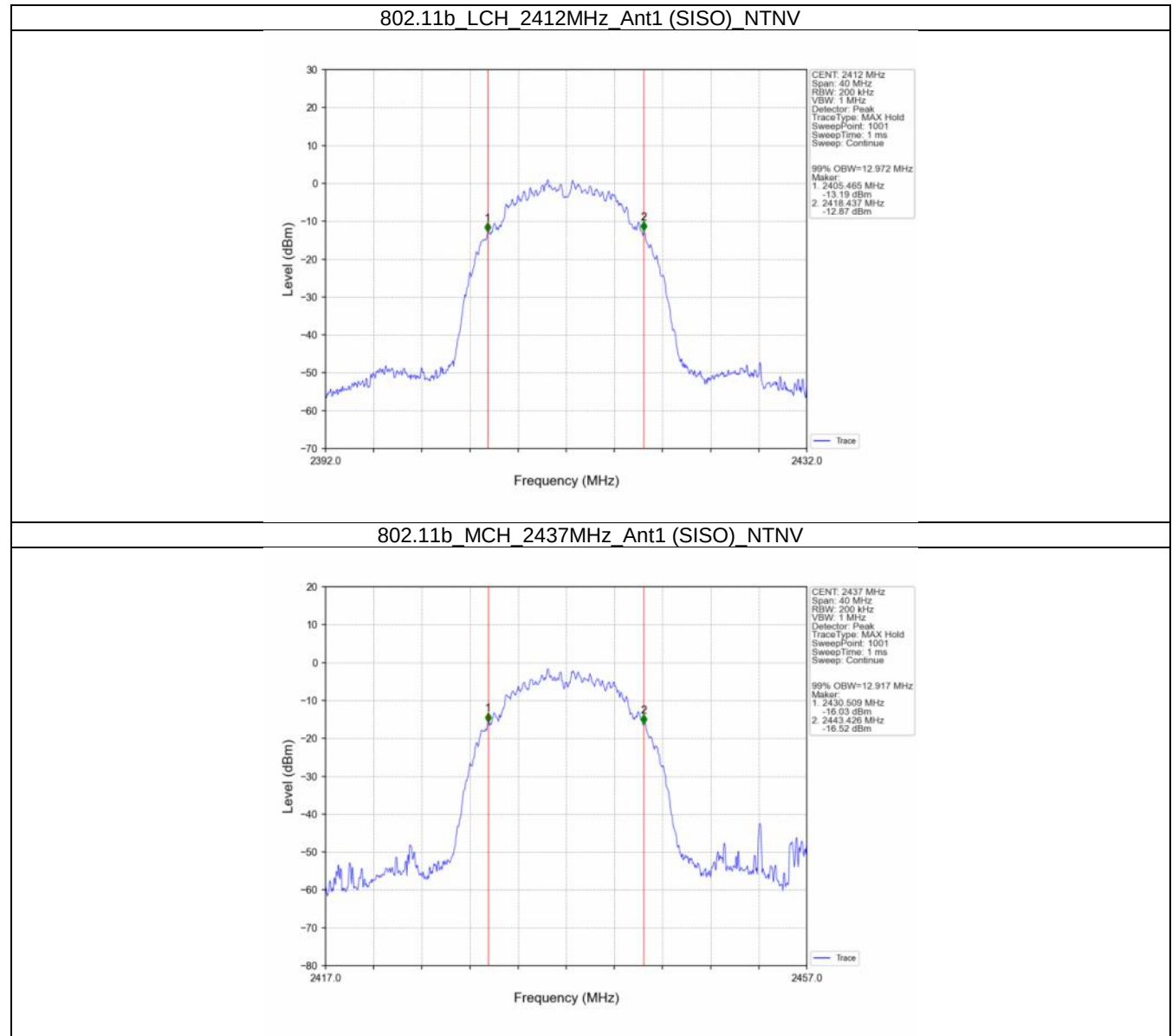
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	12.972	/	Pass
		2437	1	12.917	/	Pass
		2462	1	12.949	/	Pass
802.11g	SISO	2412	1	16.363	/	Pass
		2437	1	16.362	/	Pass
		2462	1	16.373	/	Pass
802.11n (HT20)	SISO	2412	1	17.266	/	Pass
		2437	1	17.231	/	Pass
		2462	1	17.239	/	Pass
802.11n (HT40)	SISO	2422	1	35.911	/	Pass
		2437	1	35.856	/	Pass
		2452	1	35.912	/	Pass

2.1.2 6dB BW

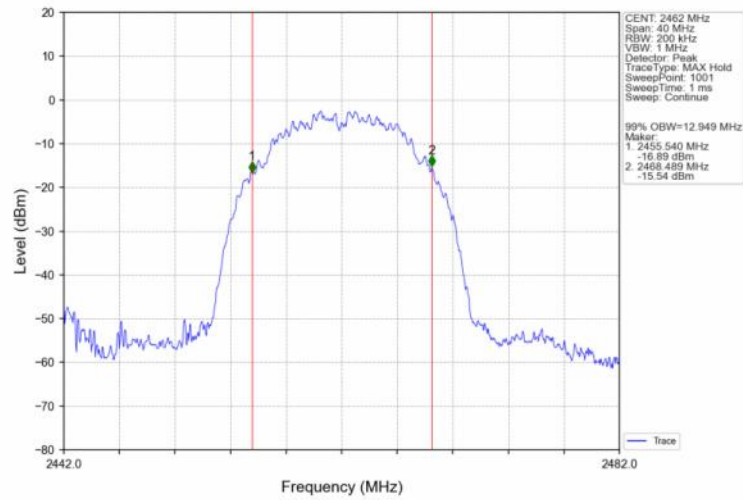
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.067	≥ 0.5	Pass
		2437	1	8.910	≥ 0.5	Pass
		2462	1	9.100	≥ 0.5	Pass
802.11g	SISO	2412	1	16.397	≥ 0.5	Pass
		2437	1	16.350	≥ 0.5	Pass
		2462	1	16.386	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.254	≥ 0.5	Pass
		2437	1	17.231	≥ 0.5	Pass
		2462	1	17.238	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.652	≥ 0.5	Pass
		2437	1	35.523	≥ 0.5	Pass
		2452	1	35.677	≥ 0.5	Pass

2.2 Test Graph

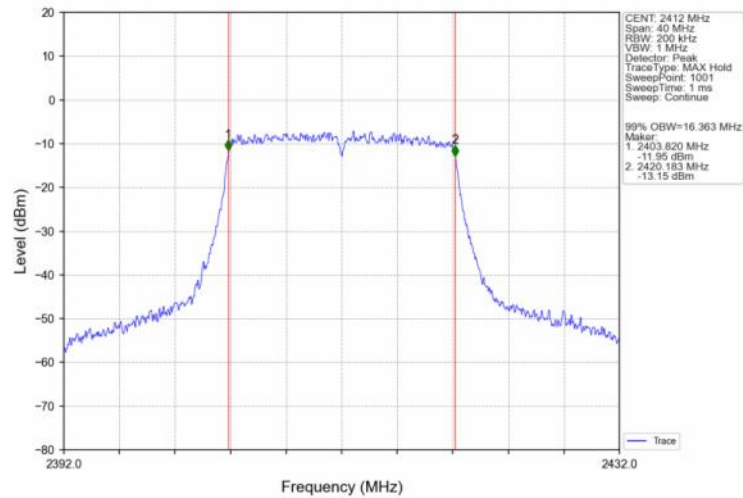
2.2.1 OBW



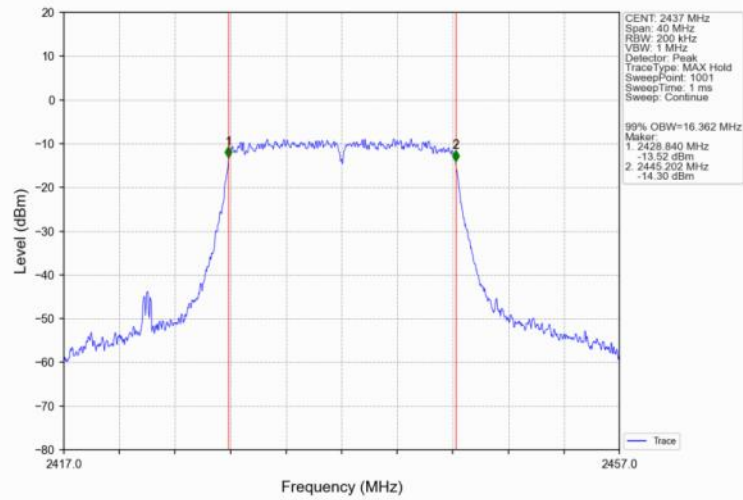
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



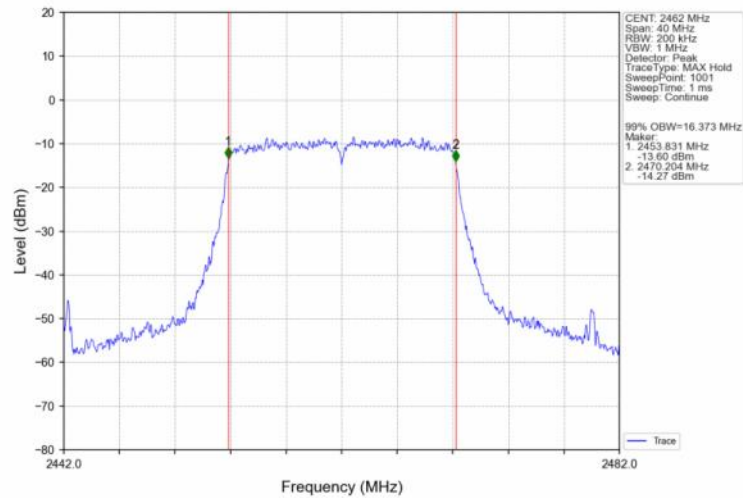
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



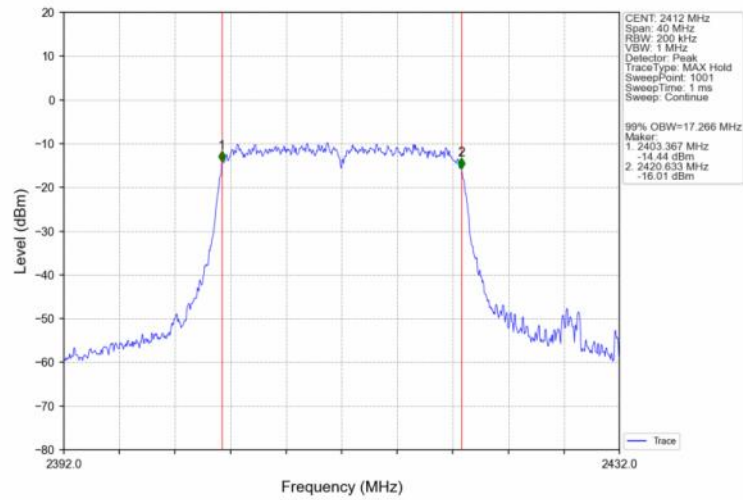
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



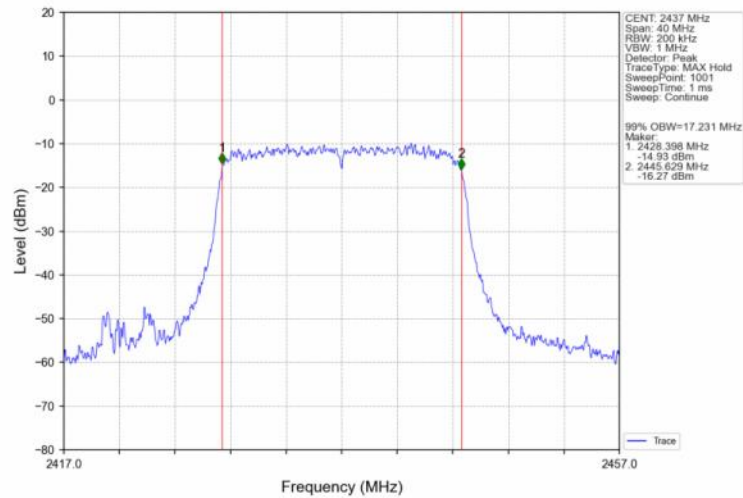
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



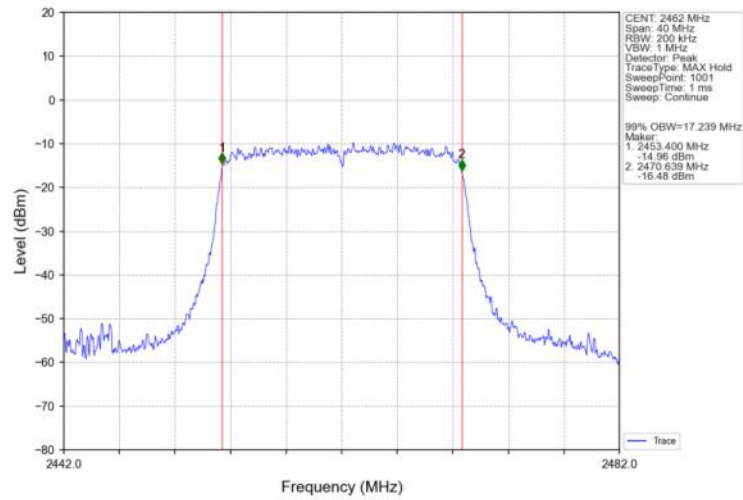
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



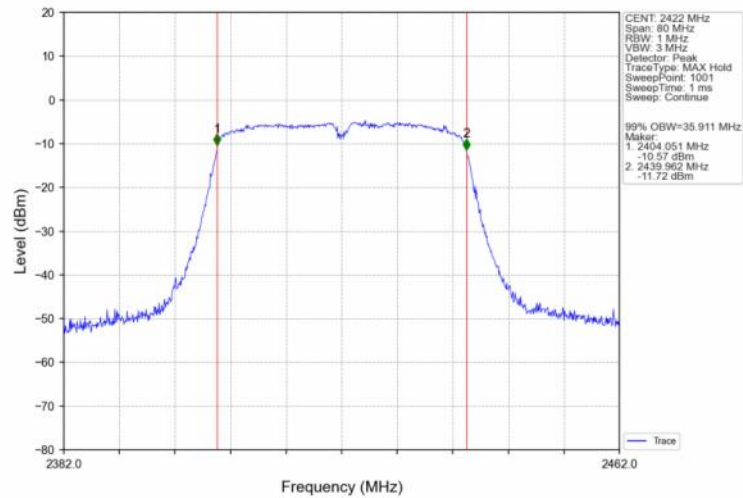
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



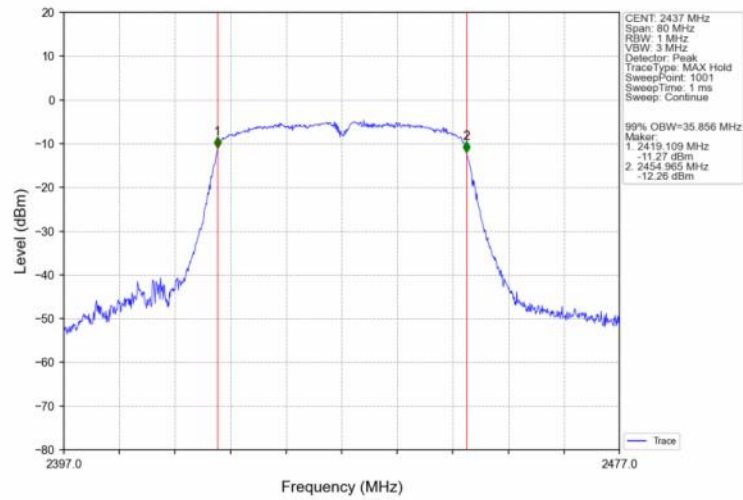
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



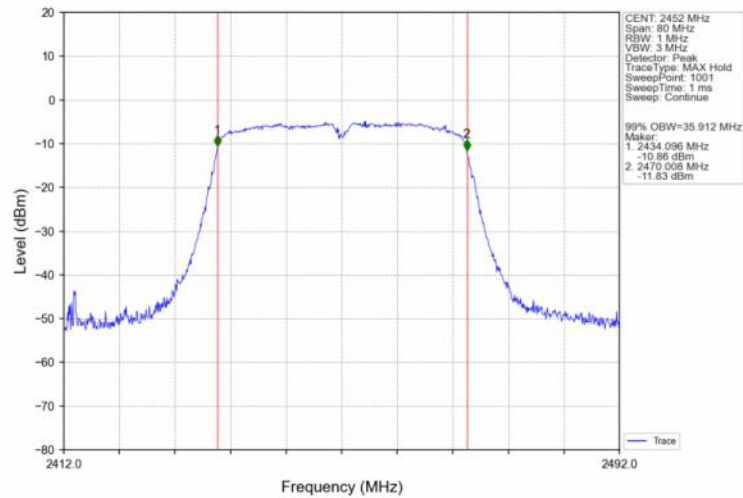
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

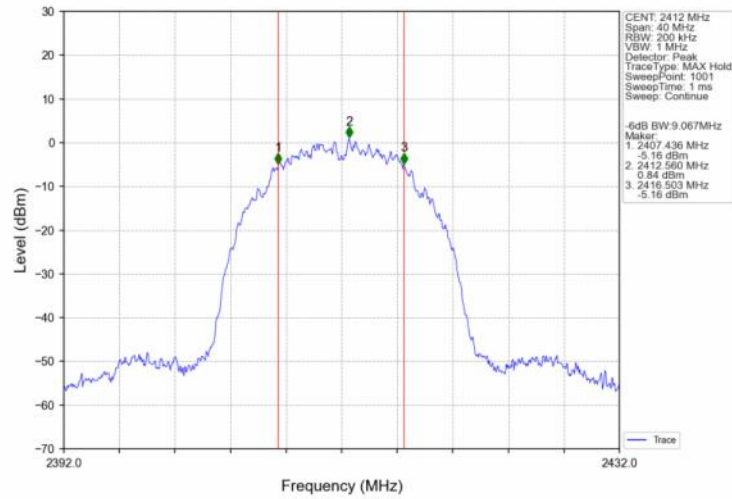


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

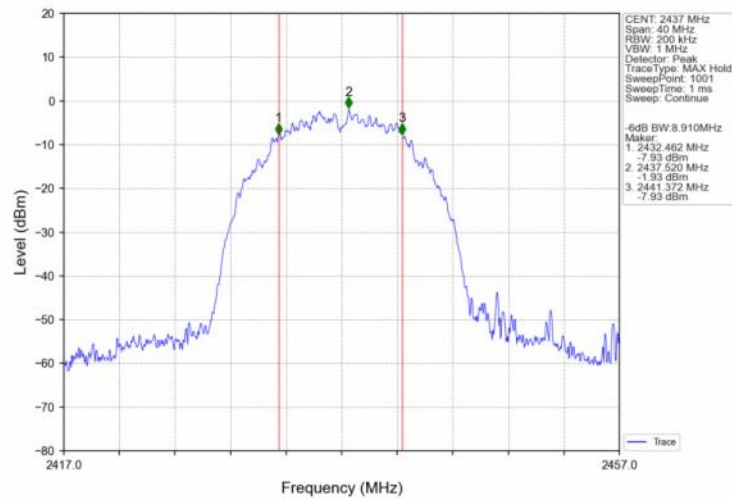


2.2.2 6dB BW

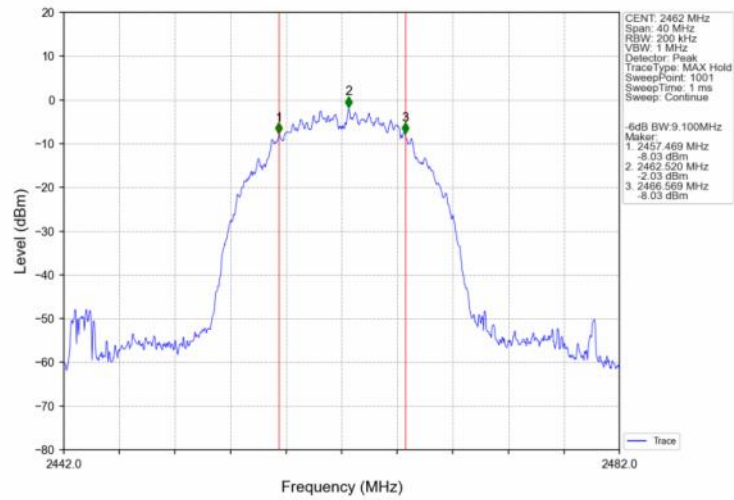
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



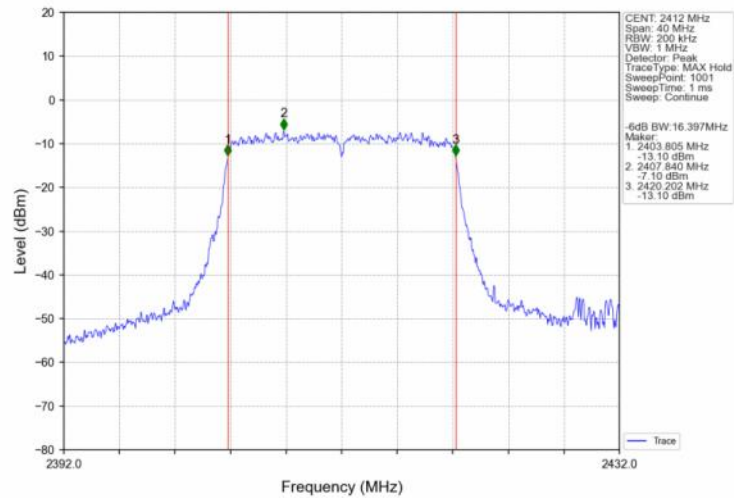
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



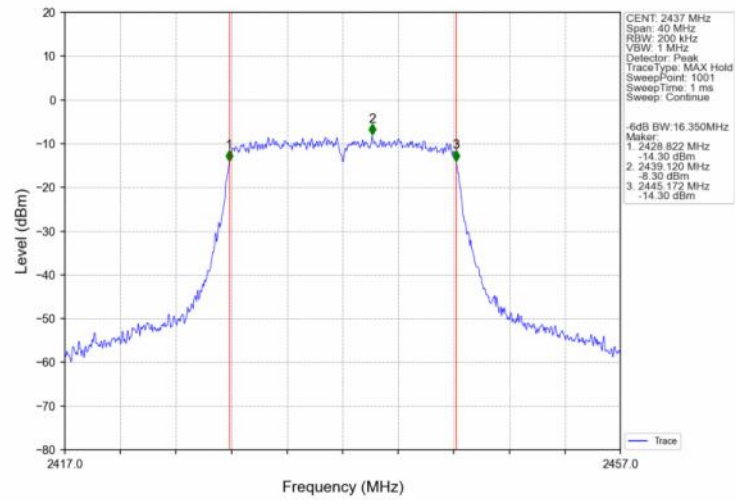
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



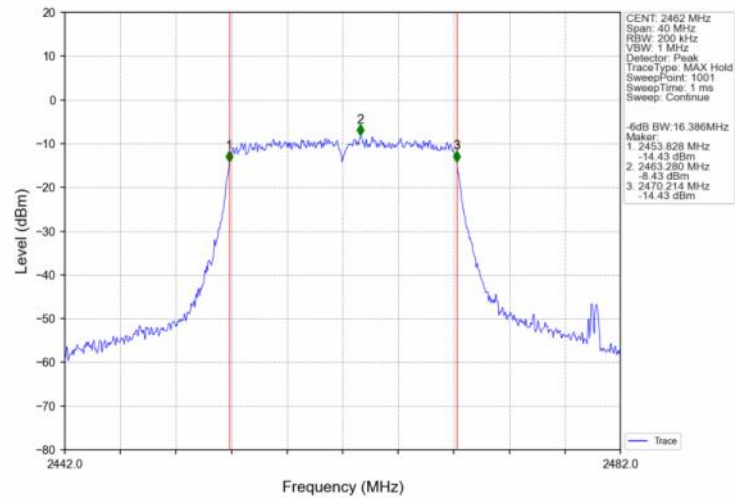
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



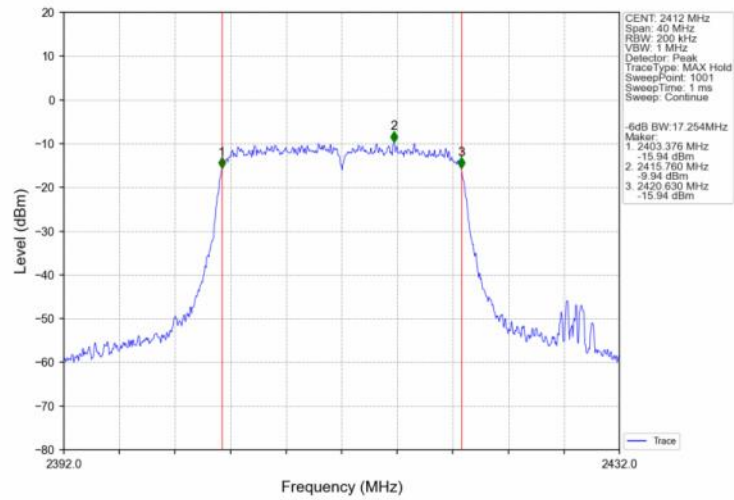
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



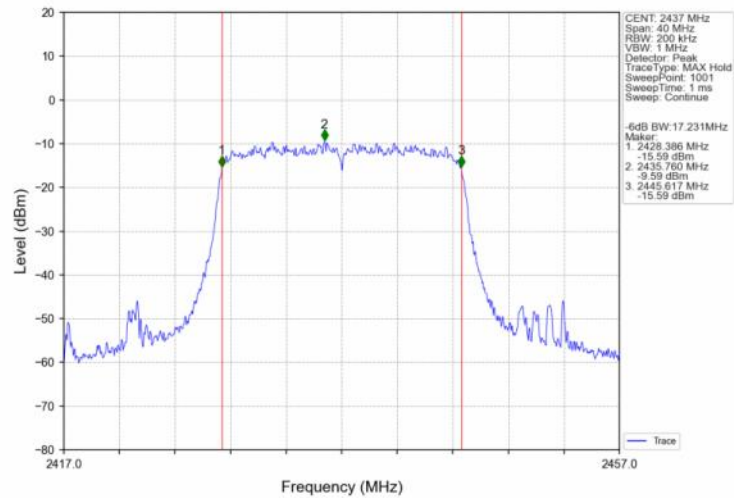
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



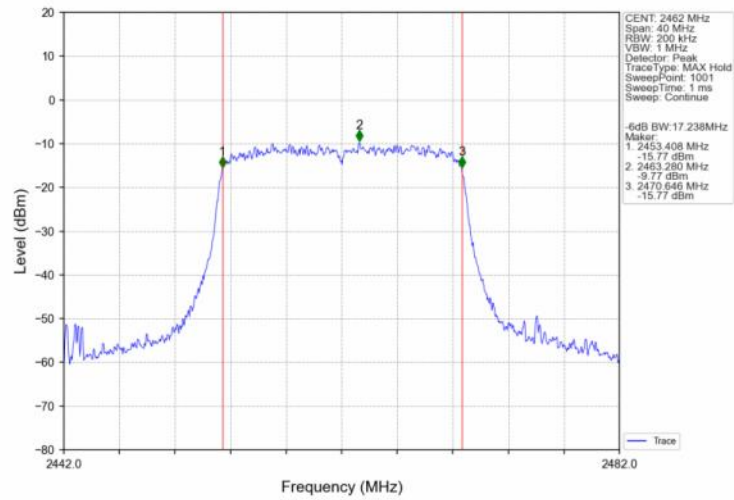
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



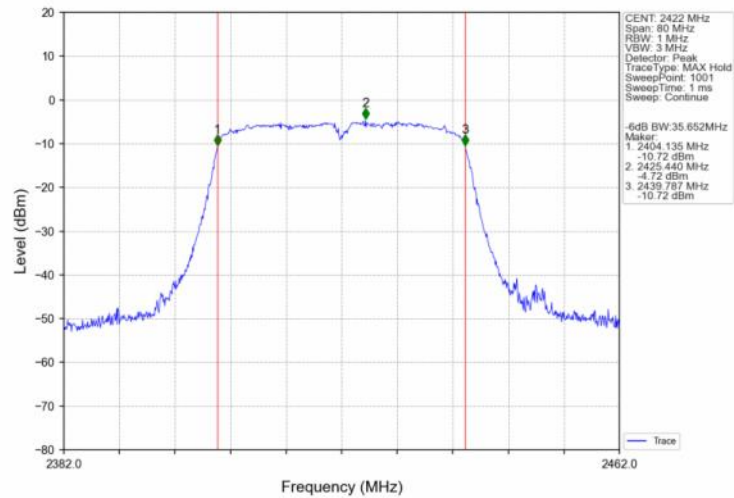
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



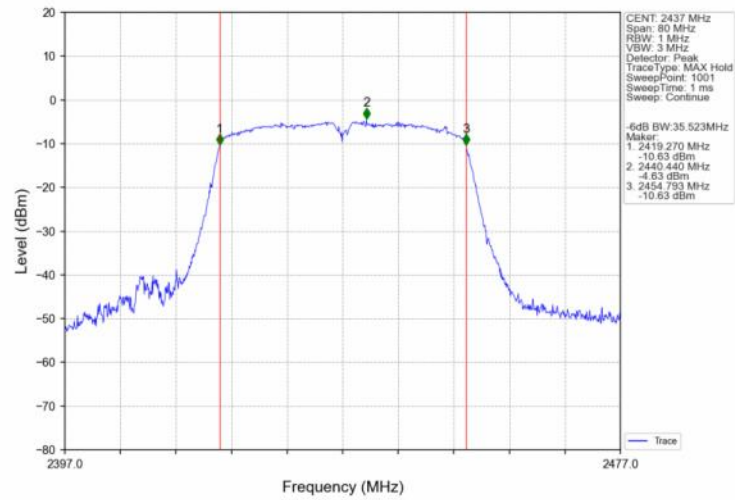
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



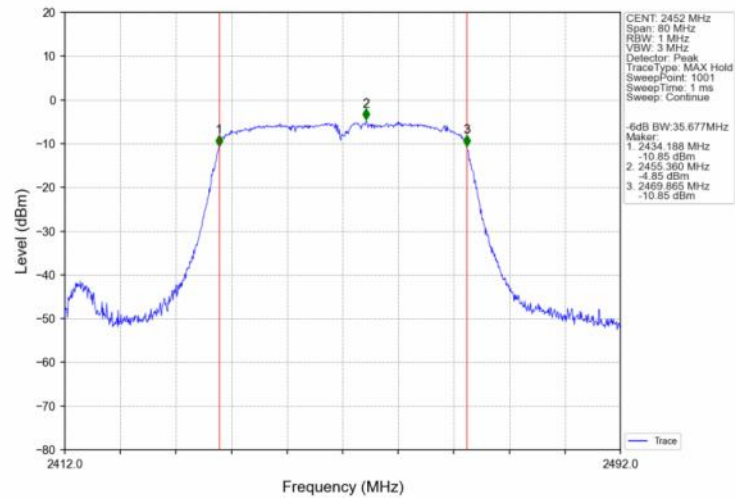
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

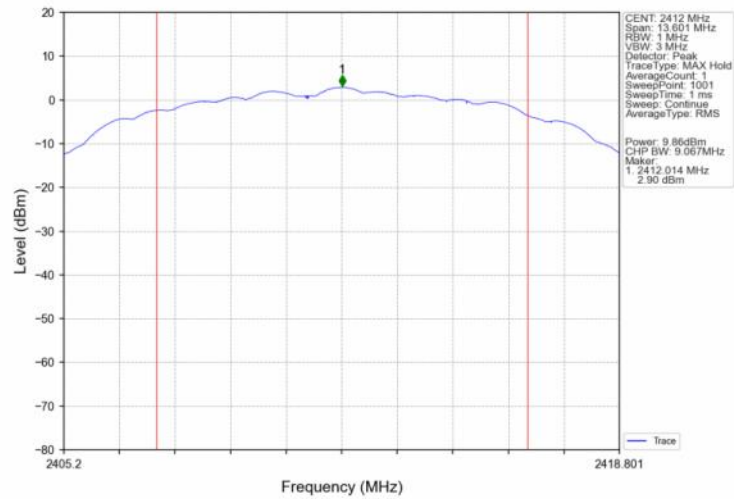
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	9.86	<=30	Pass
		2437	9.93	<=30	Pass
		2462	9.88	<=30	Pass
802.11g	SISO	2412	10.67	<=30	Pass
		2437	9.28	<=30	Pass
		2462	9.20	<=30	Pass
802.11n (HT20)	SISO	2412	8.00	<=30	Pass
		2437	7.97	<=30	Pass
		2462	7.90	<=30	Pass
802.11n (HT40)	SISO	2422	8.99	<=30	Pass
		2437	8.88	<=30	Pass
		2452	8.87	<=30	Pass

Note1: Antenna Gain: Ant1: 5.87dBi;

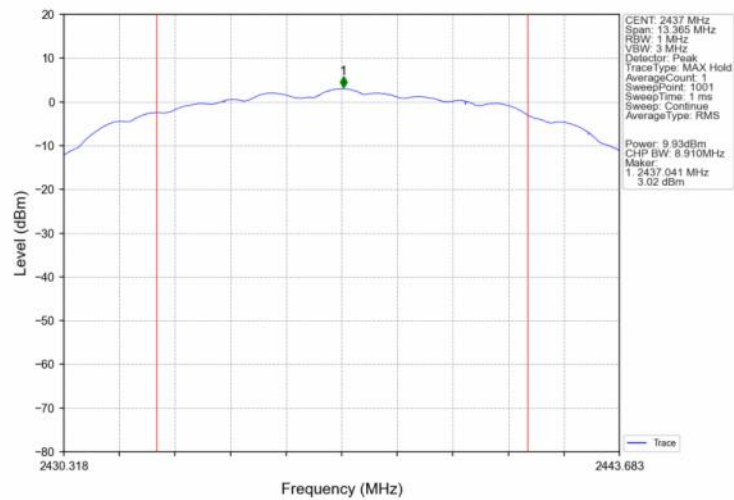
3.2 Test Graph

3.2.1 Power

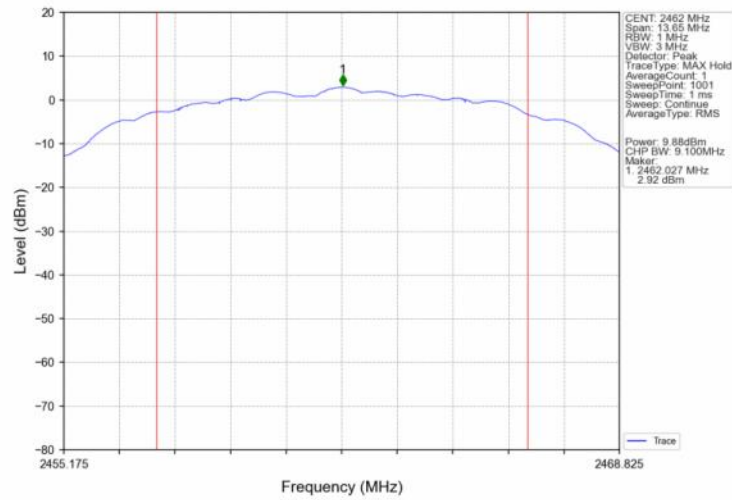
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



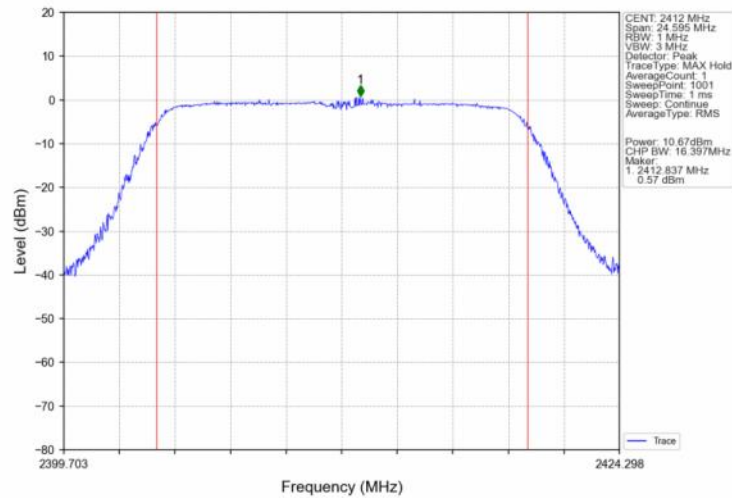
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



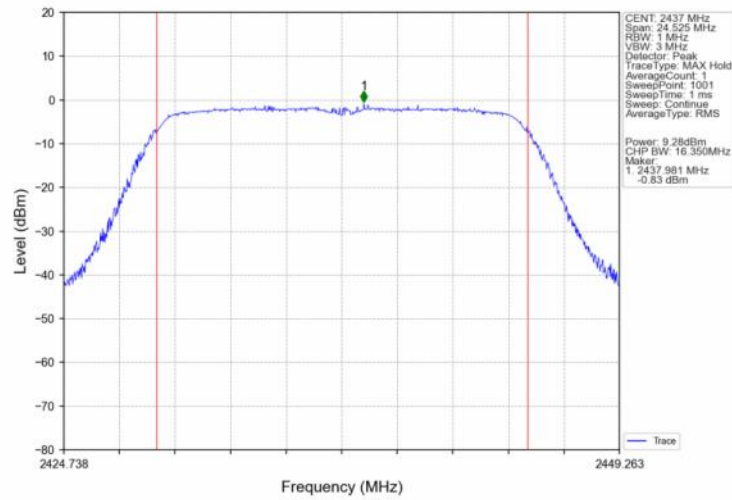
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



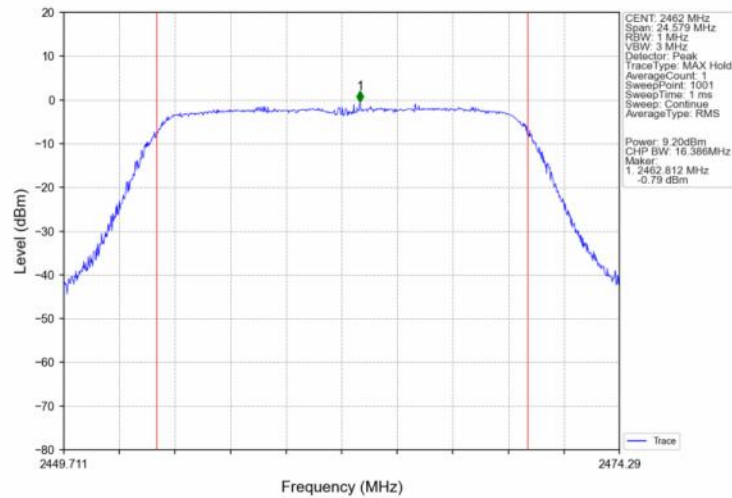
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



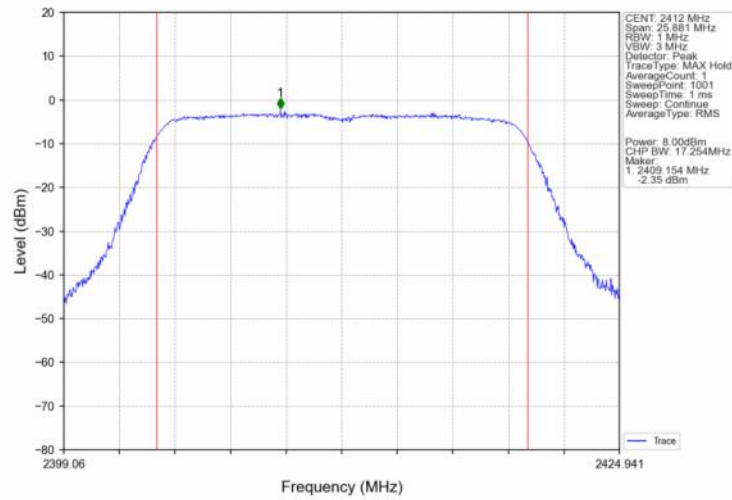
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



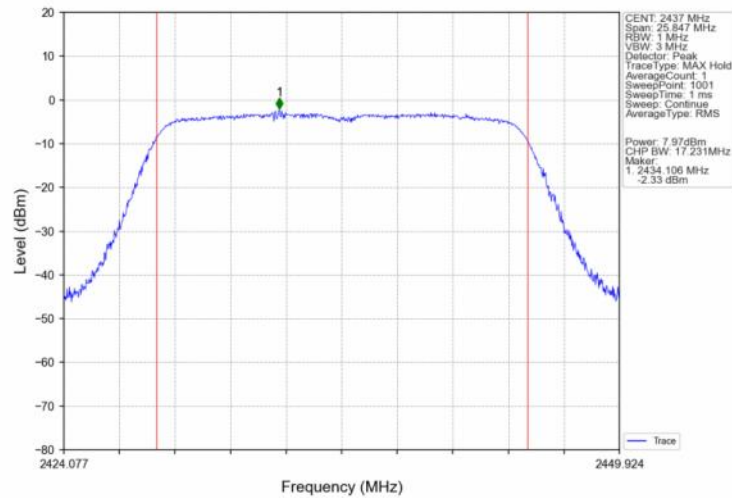
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



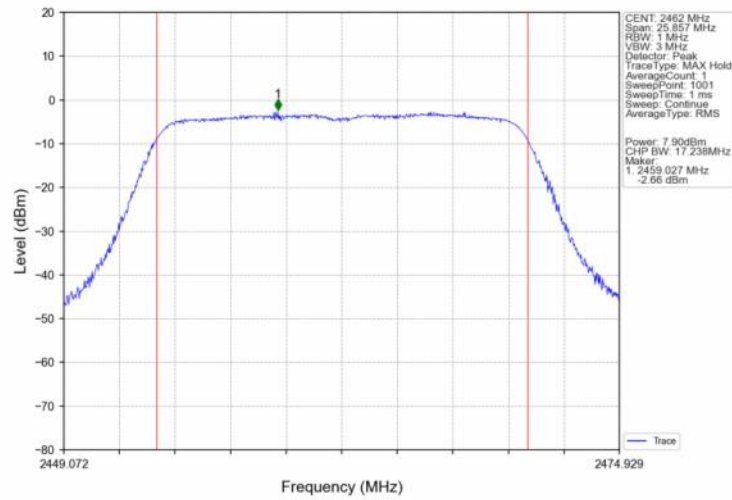
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



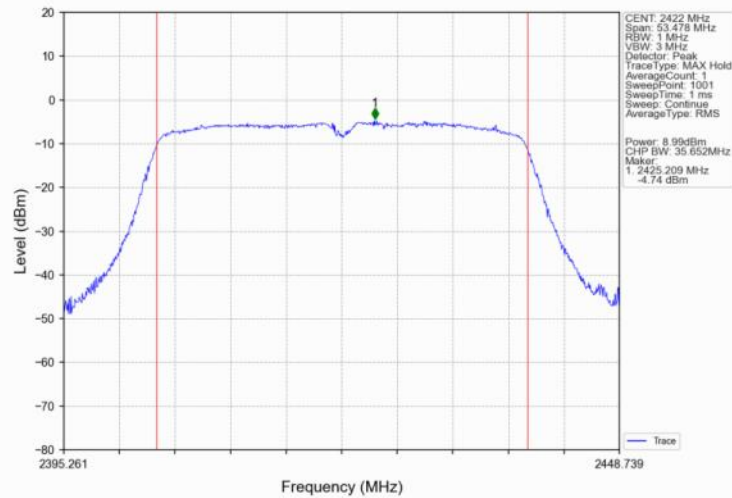
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



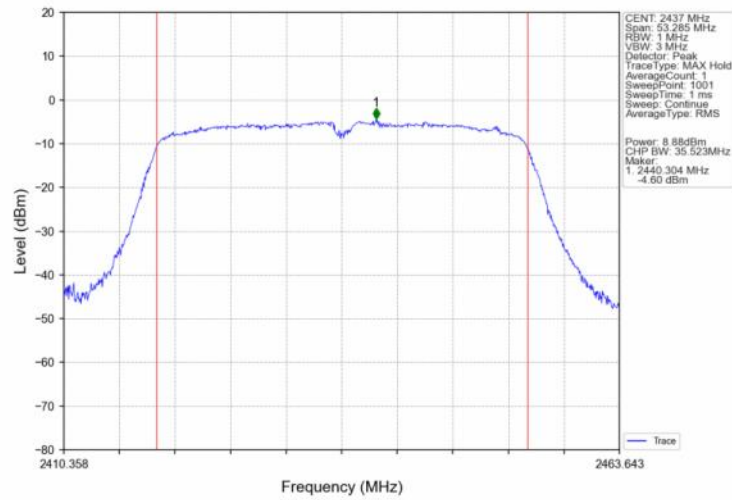
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



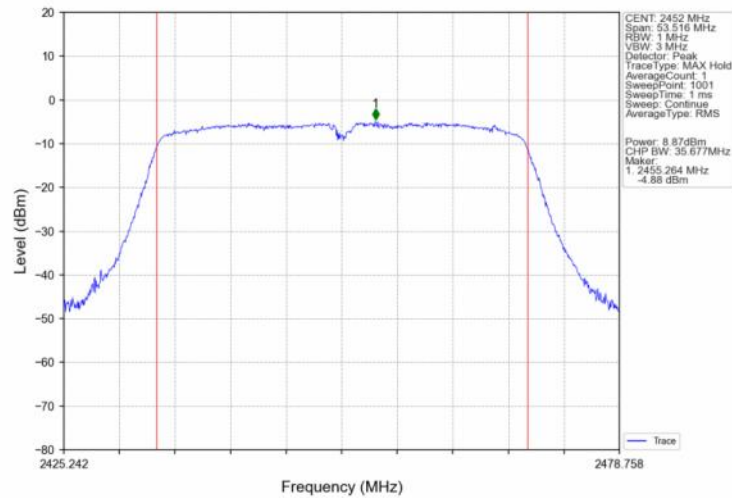
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

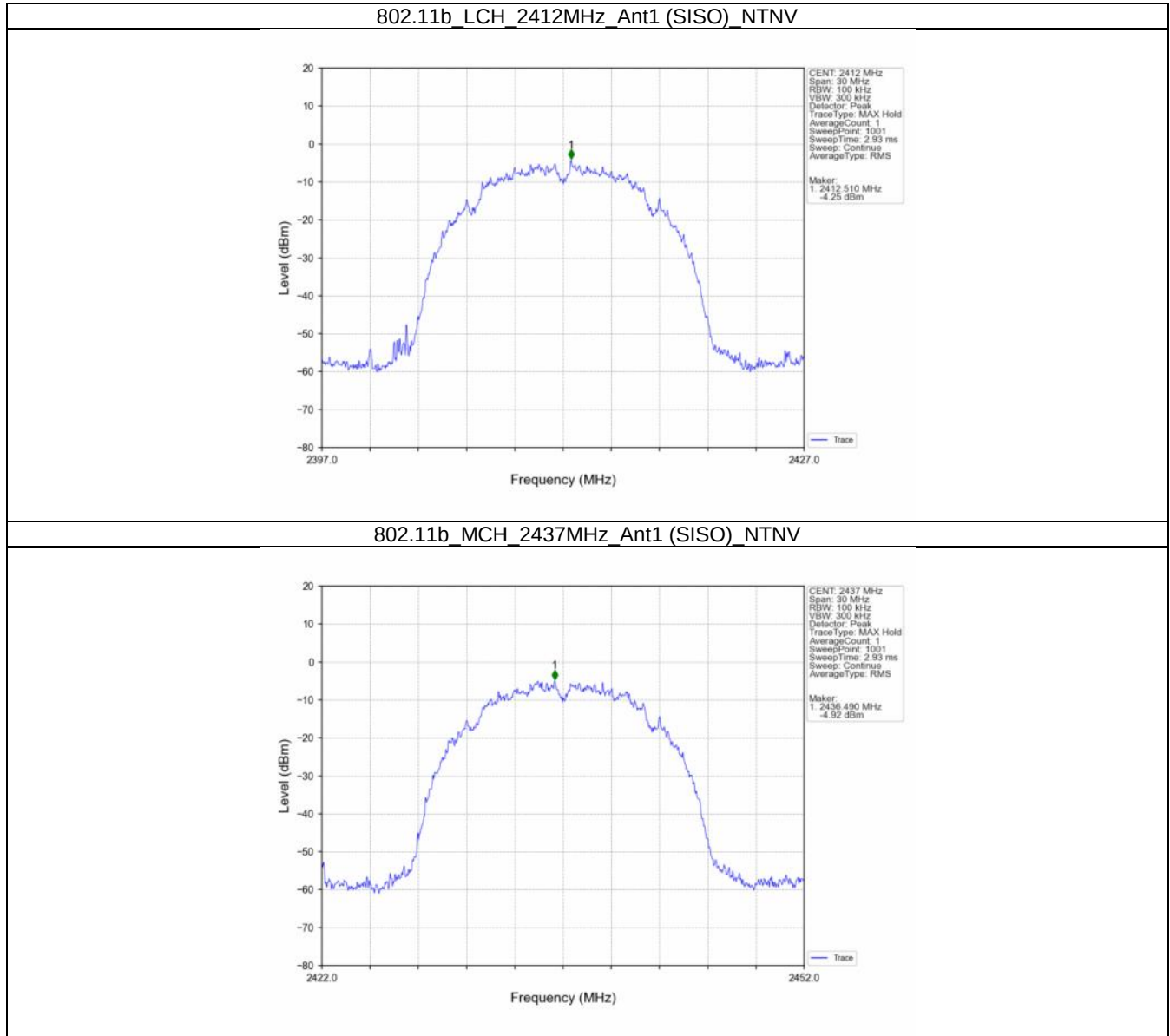
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	-4.25dBm/100kHz	<=8	Pass
		2437	-4.92dBm/100kHz	<=8	Pass
		2462	-4.44dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-8.54dBm/100kHz	<=8	Pass
		2437	-9.95dBm/100kHz	<=8	Pass
		2462	-9.62dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-10.39dBm/100kHz	<=8	Pass
		2437	-10.81dBm/100kHz	<=8	Pass
		2462	-10.96dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-12.93dBm/100kHz	<=8	Pass
		2437	-12.71dBm/100kHz	<=8	Pass
		2452	-13.07dBm/100kHz	<=8	Pass

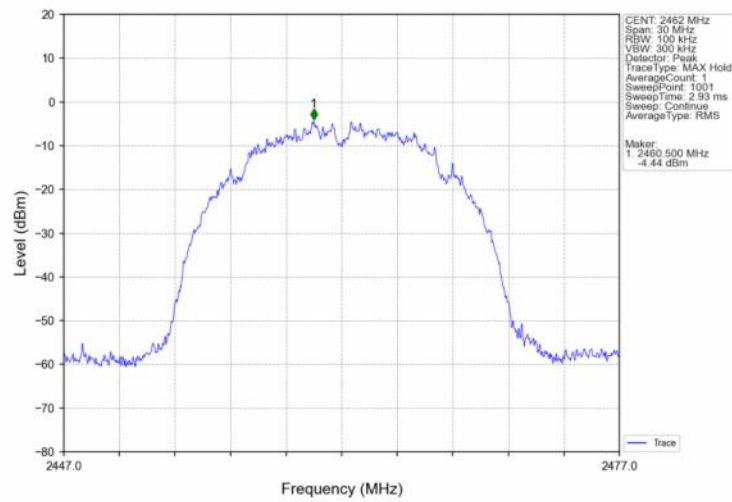
Note1: Antenna Gain: Ant1: 5.87dBi;

4.2 Test Graph

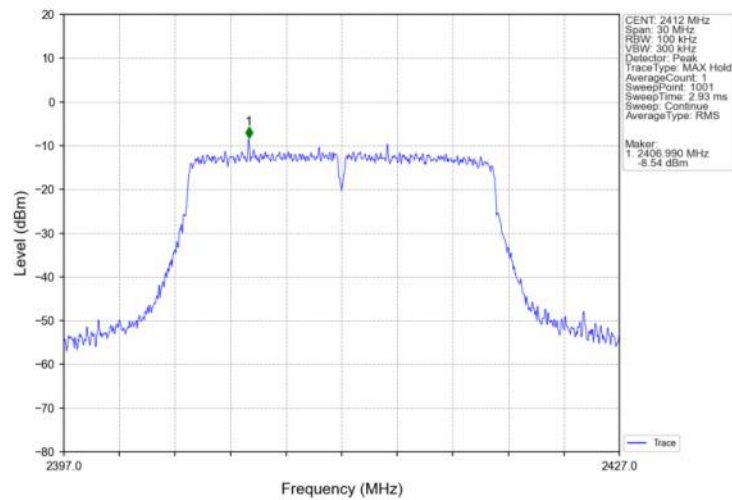
4.2.1 PSD



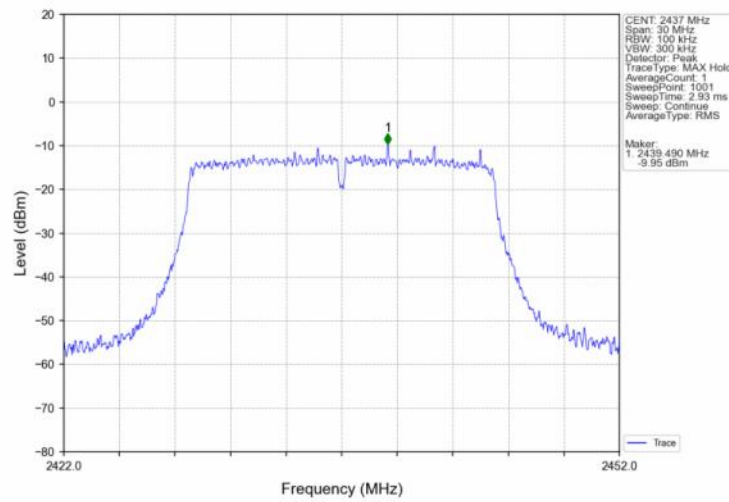
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



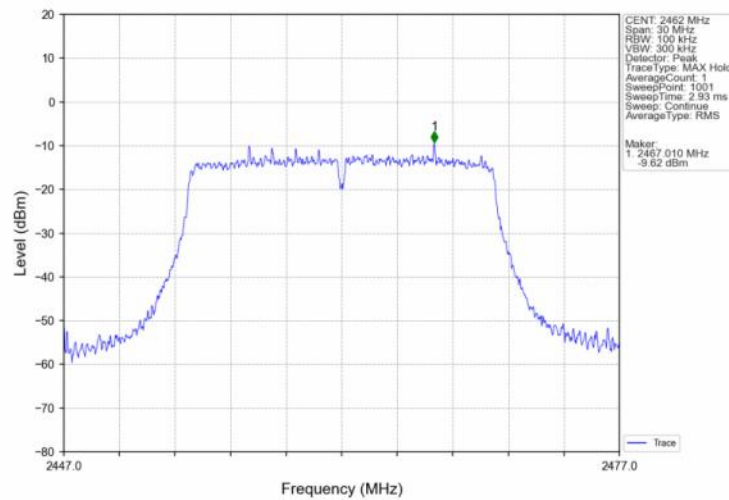
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



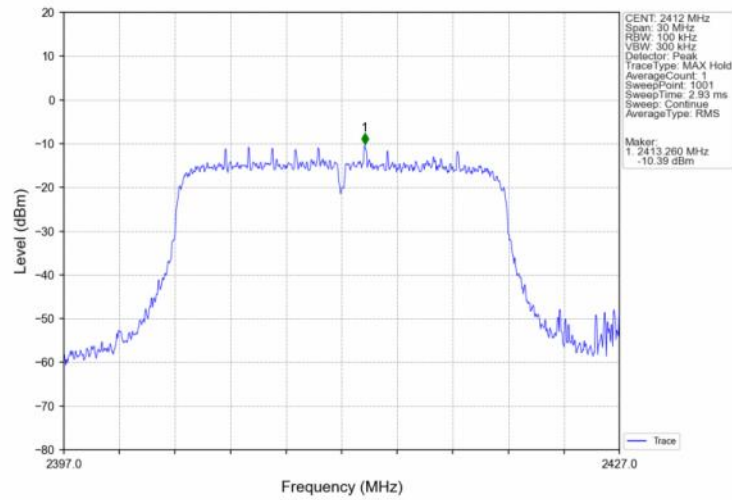
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



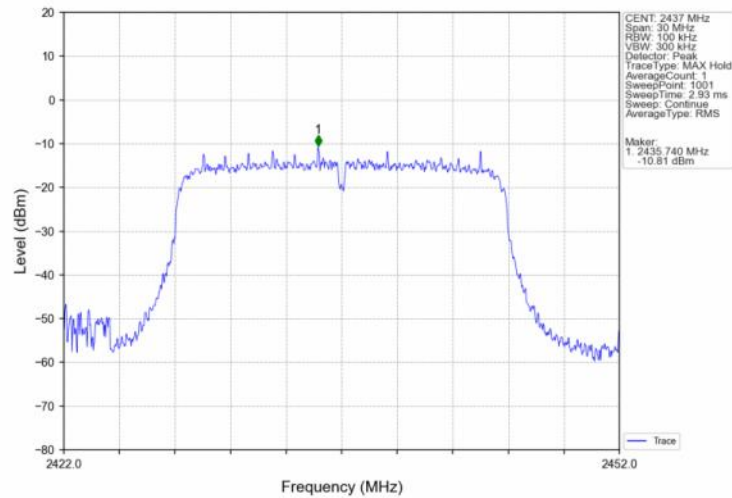
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



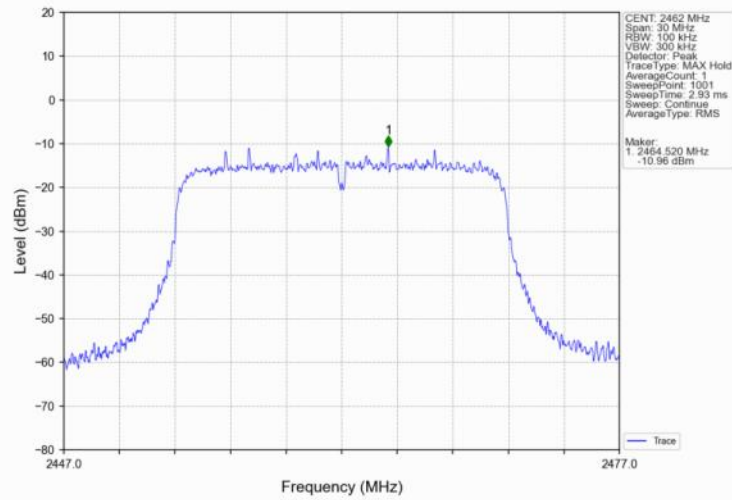
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



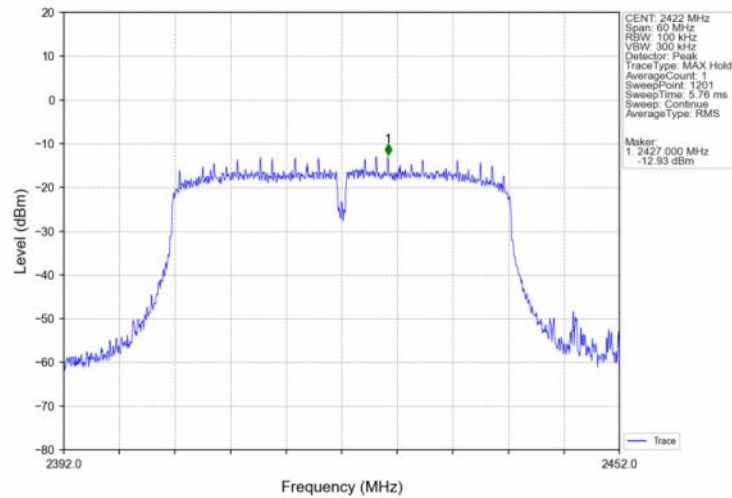
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



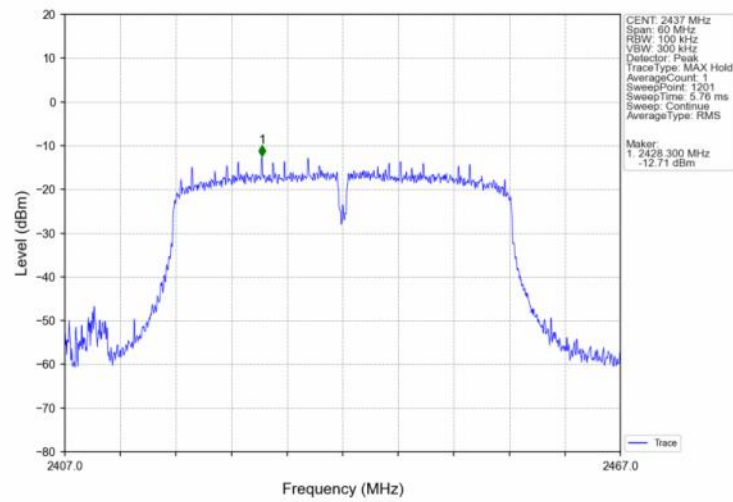
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



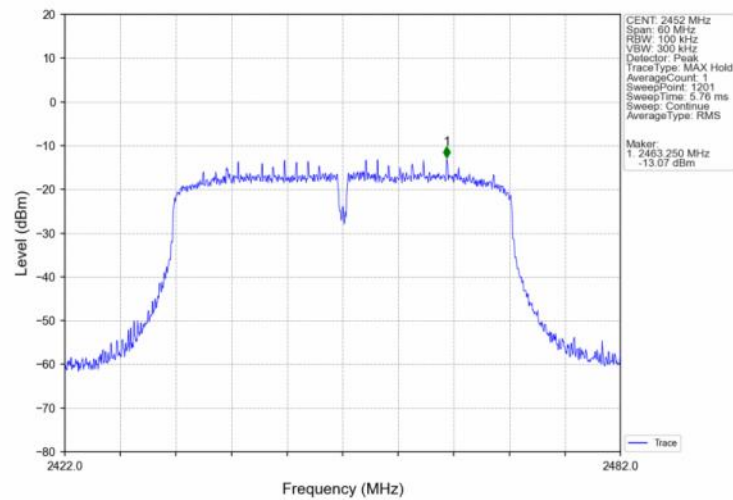
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

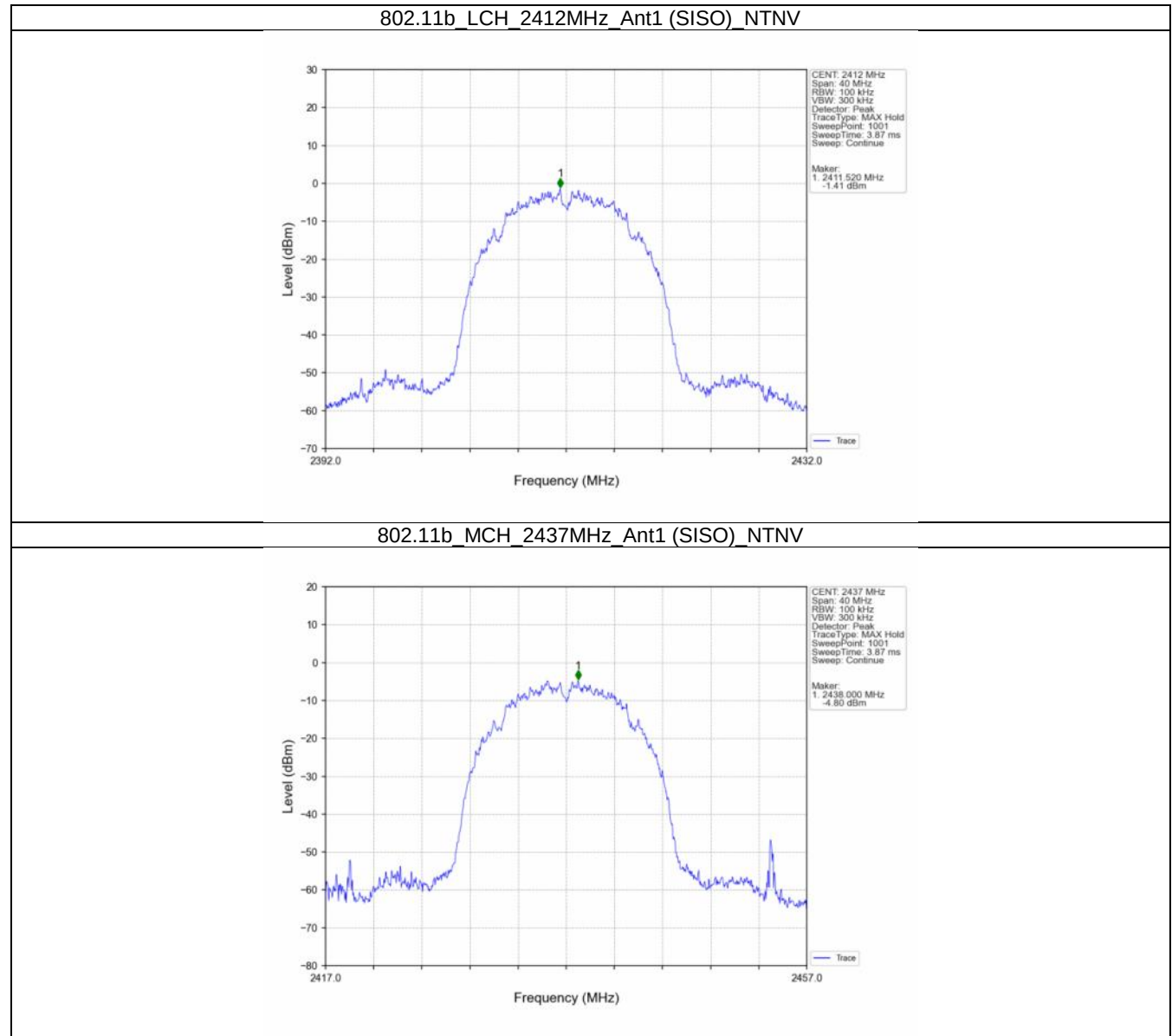
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	-1.41
		2437	1	-4.80
		2462	1	-4.45
802.11g	SISO	2412	1	-8.10
		2437	1	-10.02
		2462	1	-9.93
802.11n (HT20)	SISO	2412	1	-10.30
		2437	1	-10.82
		2462	1	-10.67
802.11n (HT40)	SISO	2422	1	-13.13
		2437	1	-13.00
		2452	1	-12.77

5.1.2 CSE

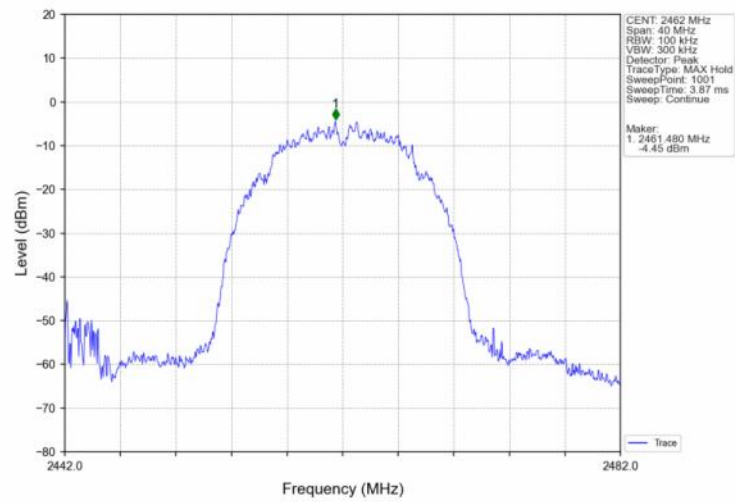
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-1.41	-21.41	Pass
		2437	1	-4.80	-24.80	Pass
		2462	1	-4.45	-24.45	Pass
802.11g	SISO	2412	1	-8.10	-28.10	Pass
		2437	1	-10.02	-30.02	Pass
		2462	1	-9.93	-29.93	Pass
802.11n (HT20)	SISO	2412	1	-10.30	-30.30	Pass
		2437	1	-10.82	-30.82	Pass
		2462	1	-10.67	-30.67	Pass
802.11n (HT40)	SISO	2422	1	-13.13	-33.13	Pass
		2437	1	-13.00	-33.00	Pass
		2452	1	-12.77	-32.77	Pass

5.2 Test Graph

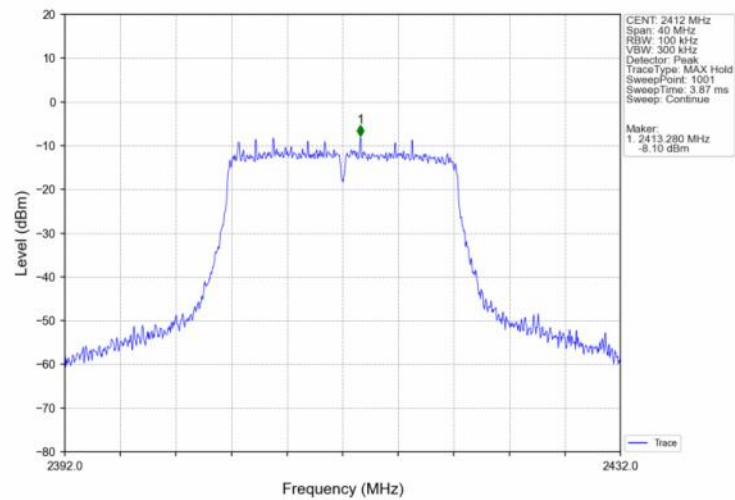
5.2.1 Ref



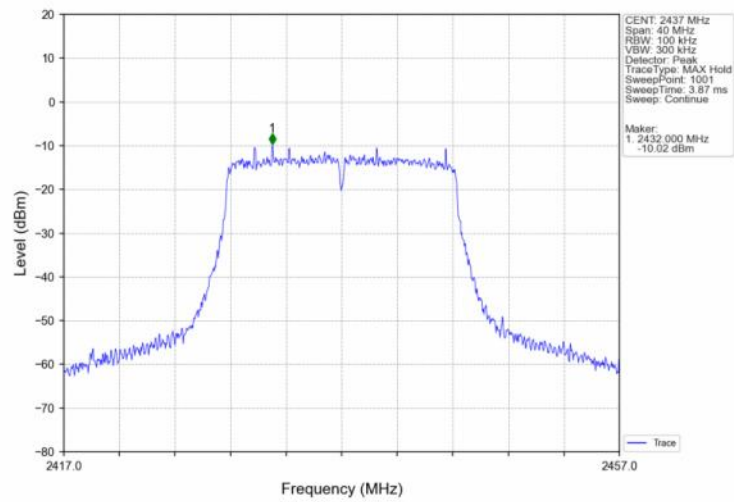
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



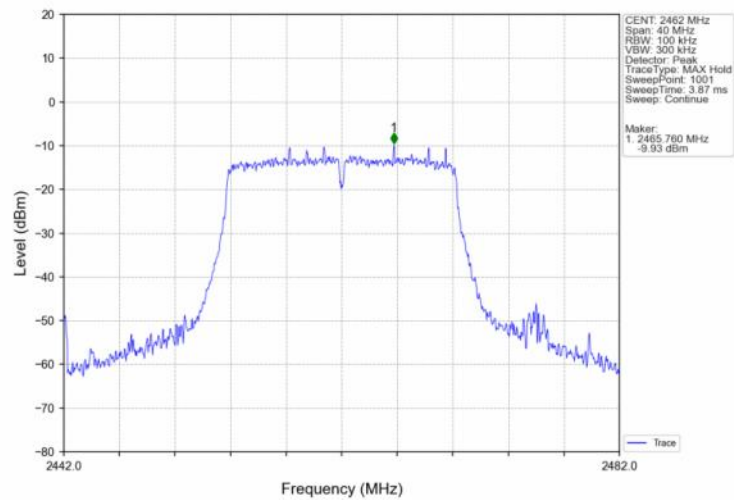
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



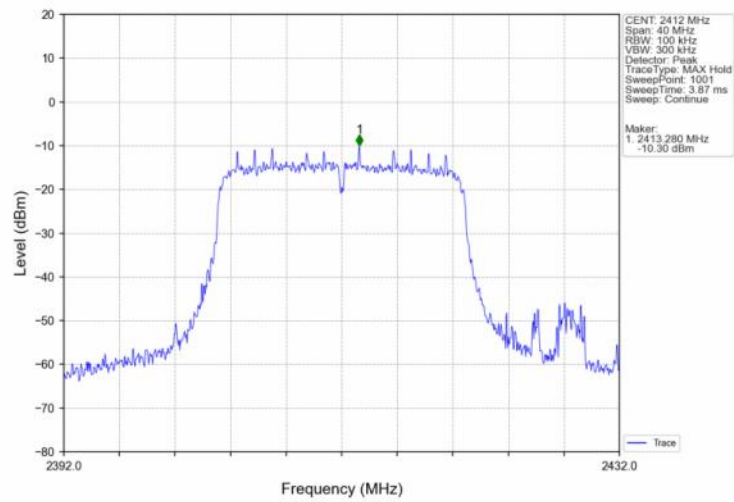
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



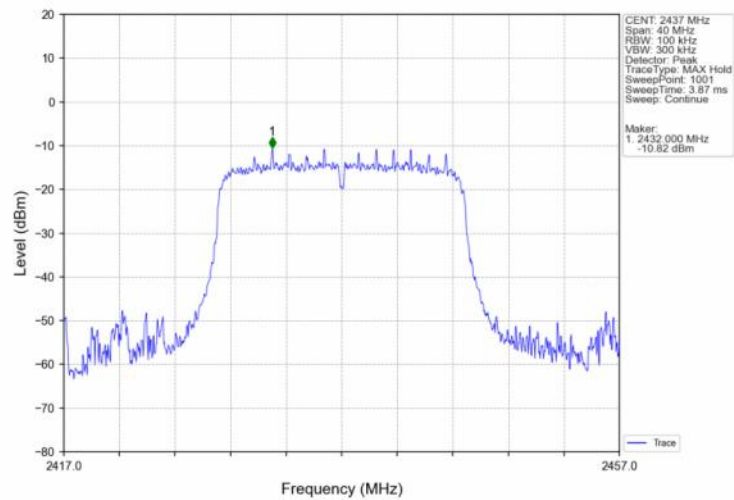
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



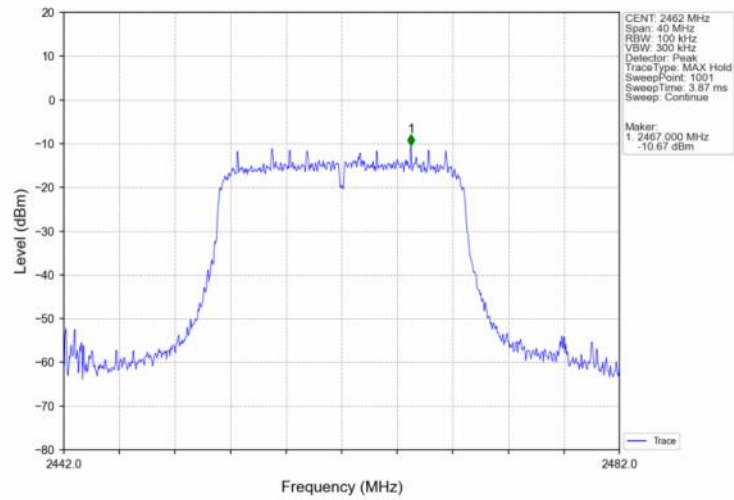
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



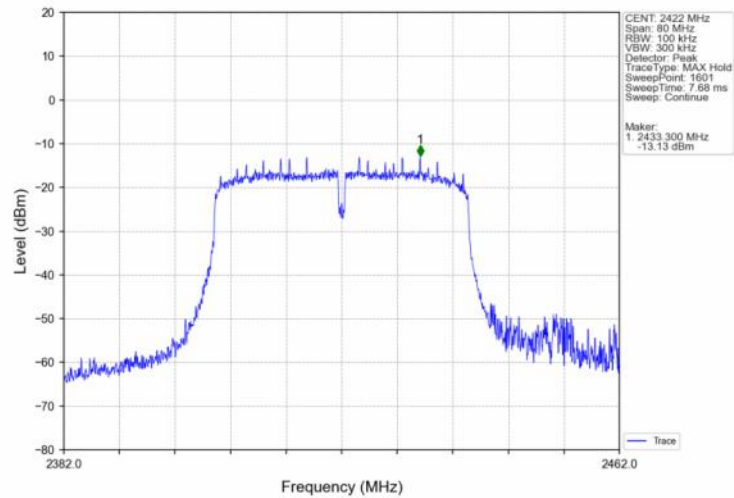
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



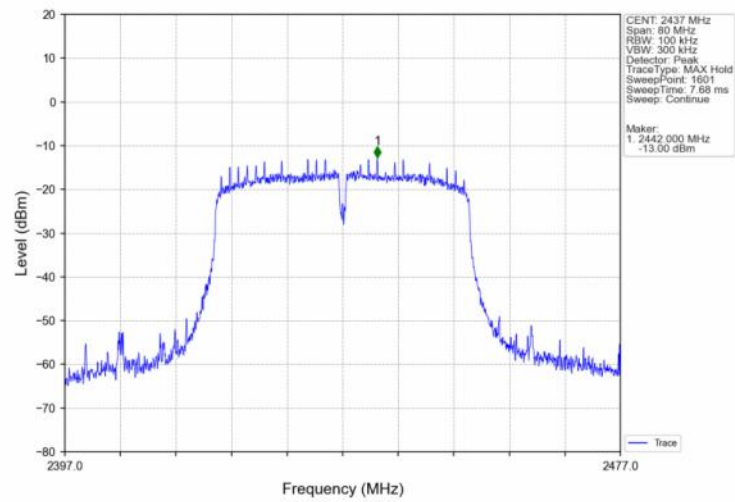
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



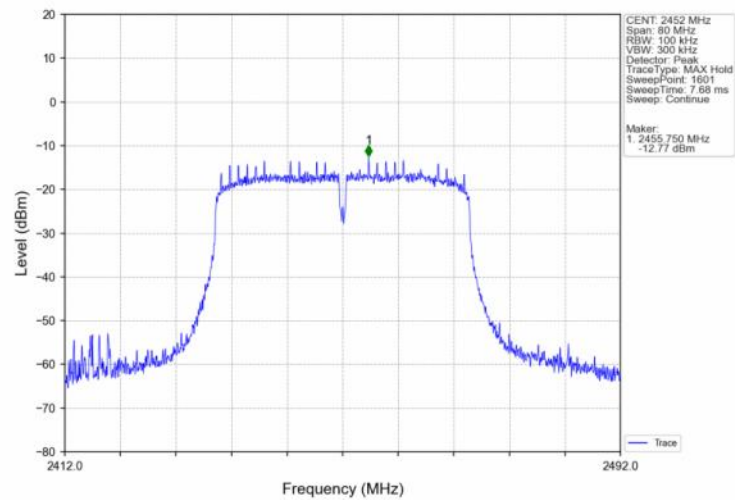
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

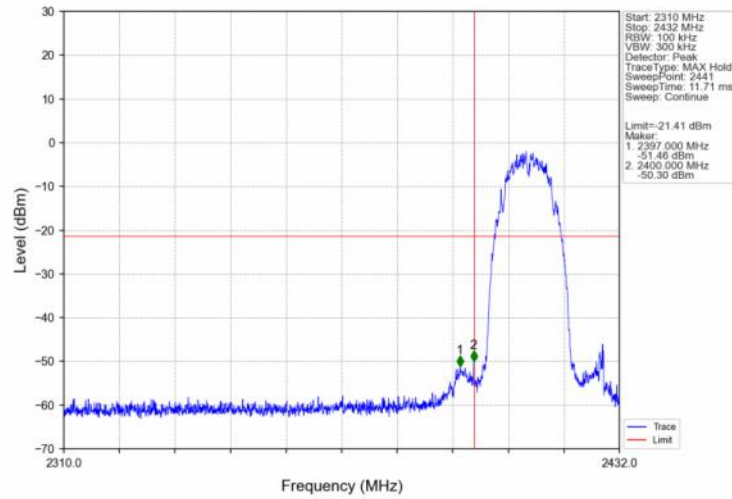


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

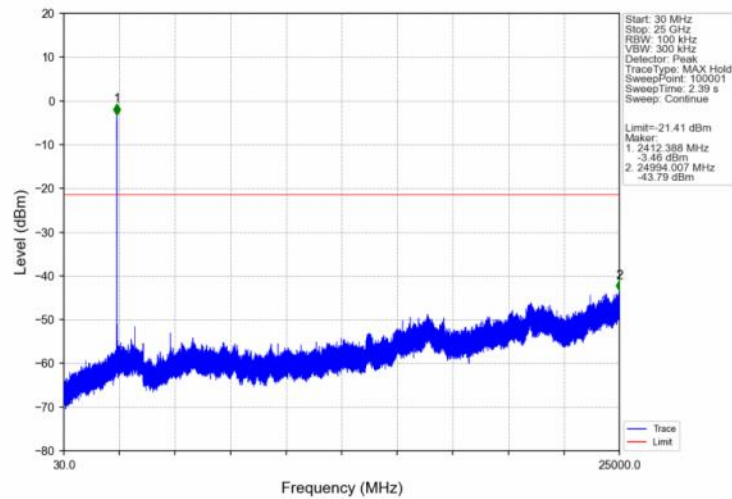


5.2.2 CSE

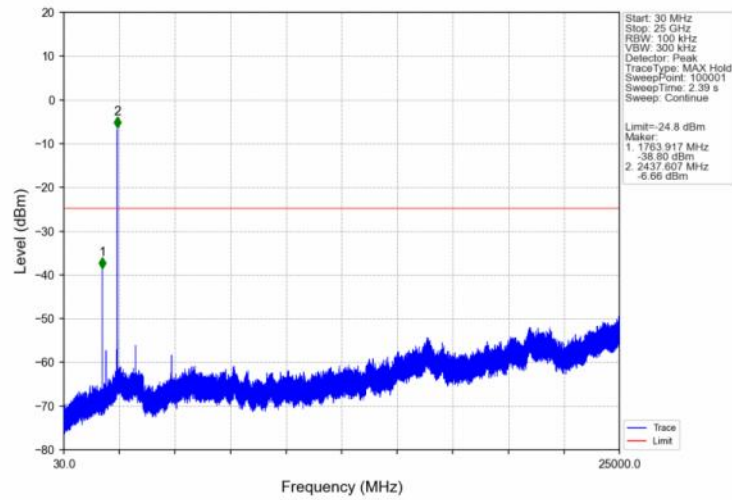
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



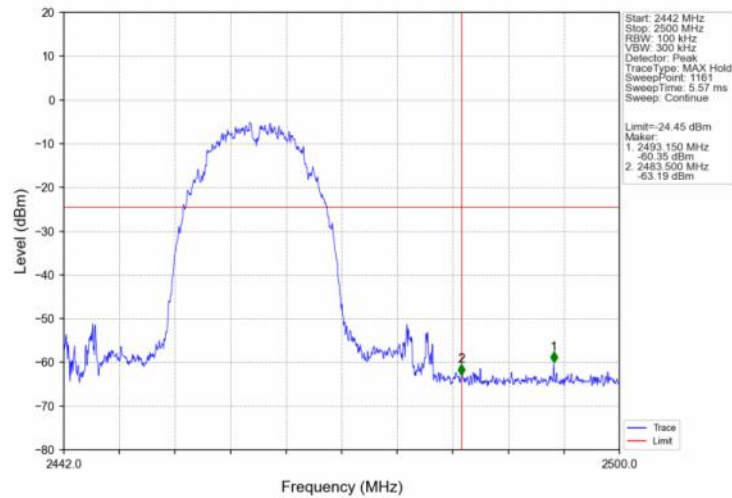
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



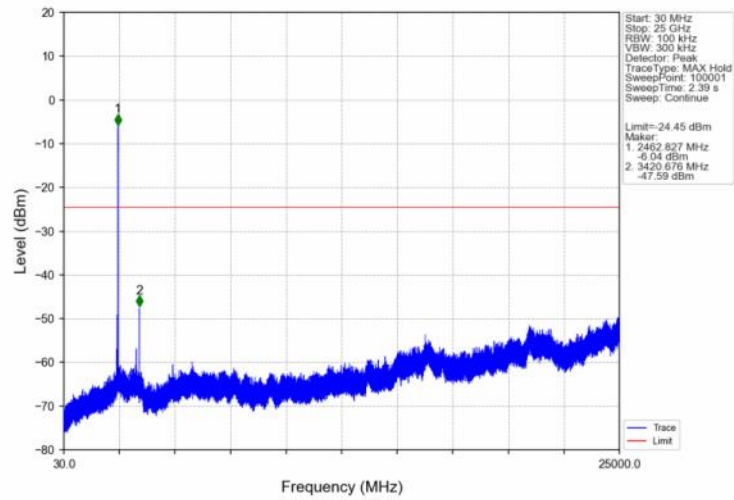
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



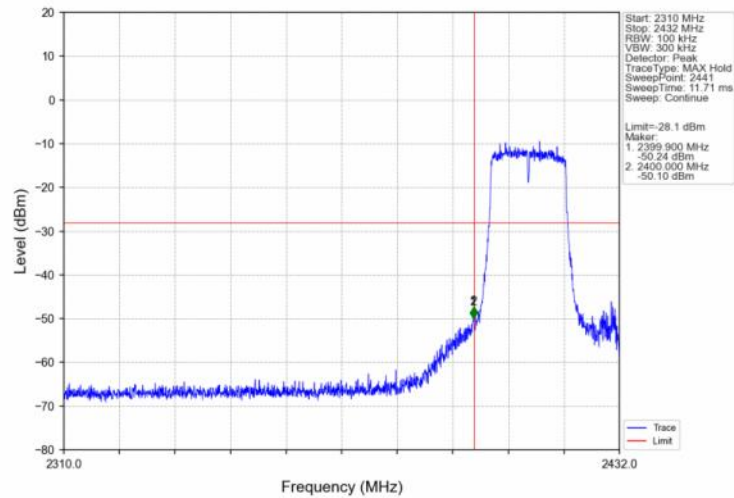
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



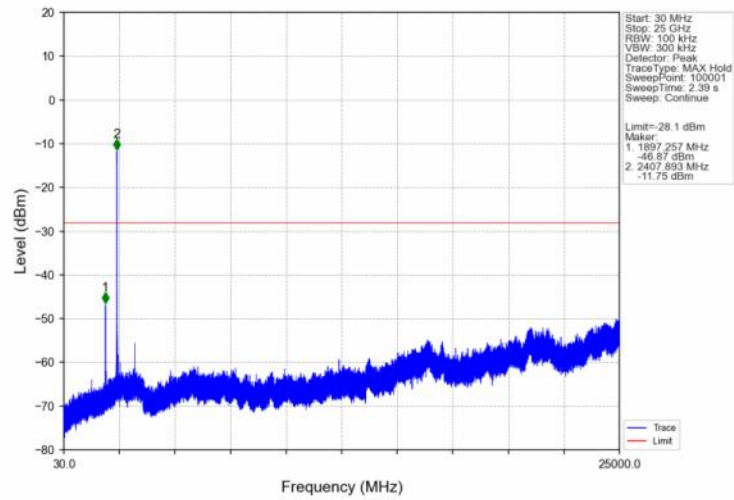
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



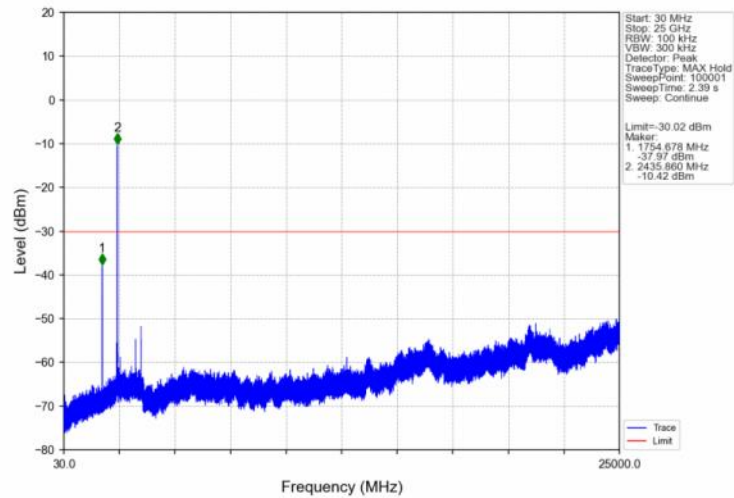
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



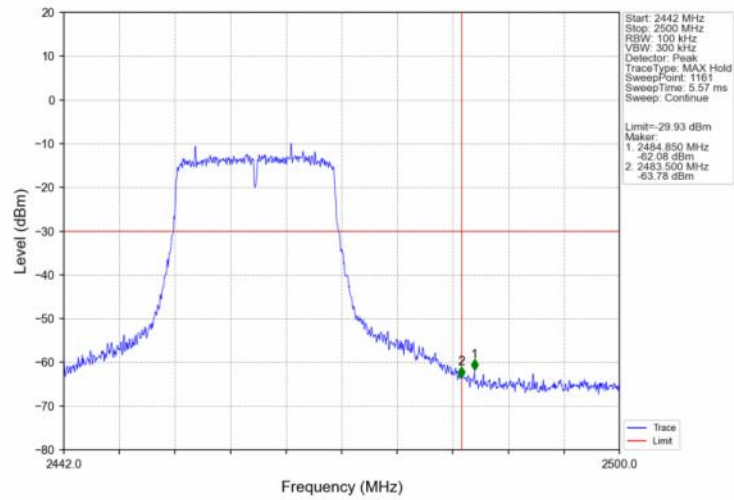
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



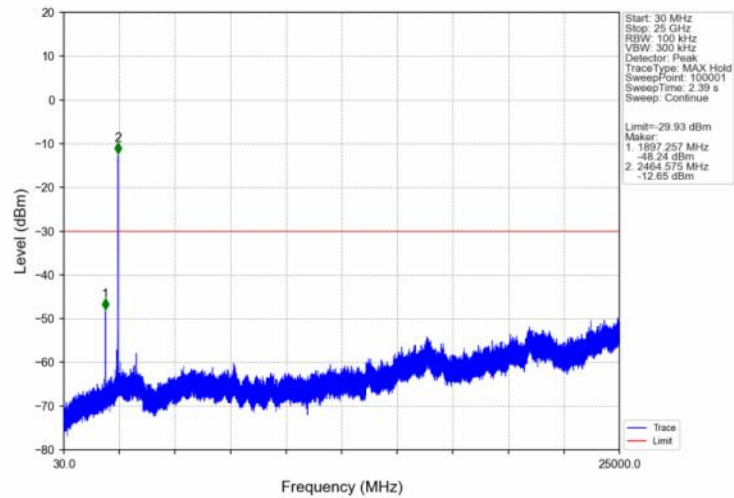
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



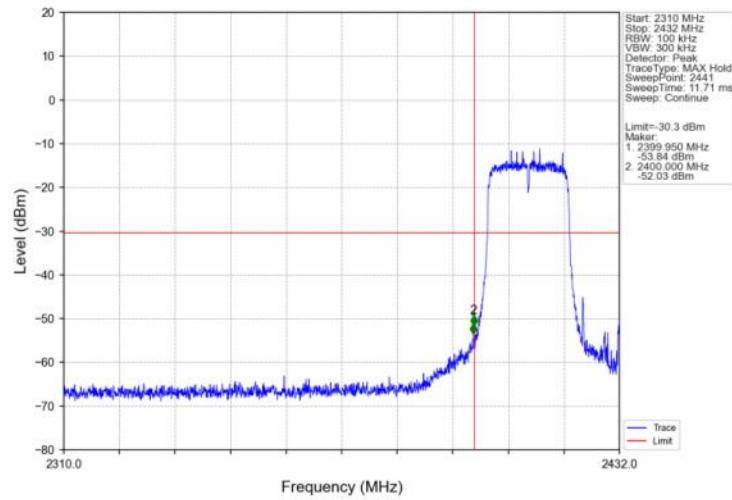
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



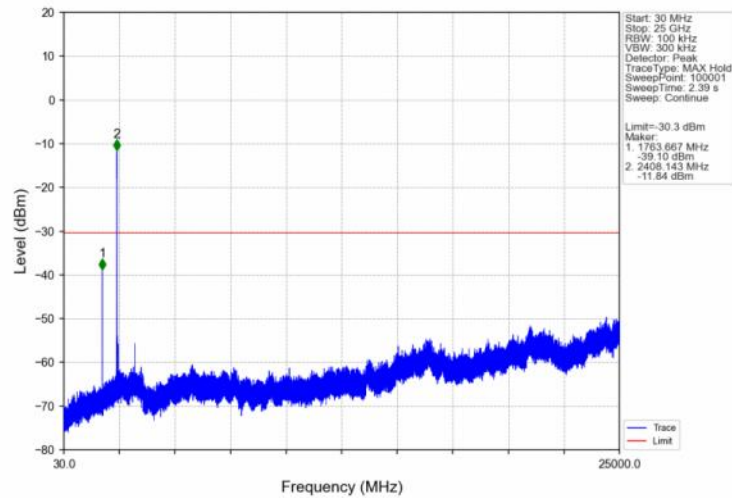
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



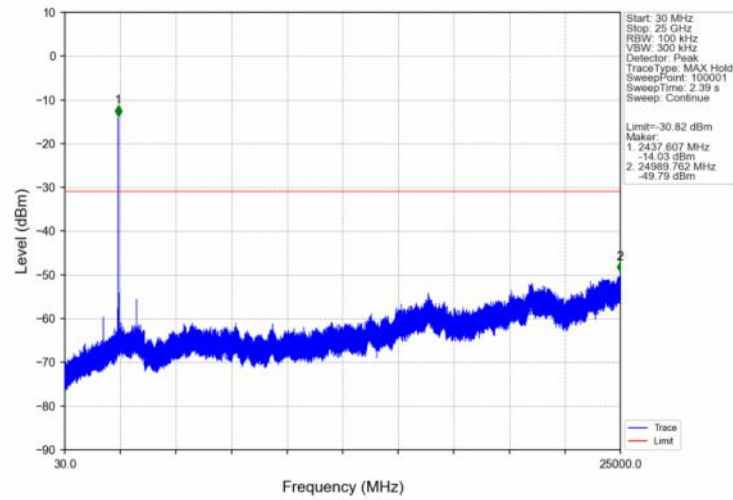
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



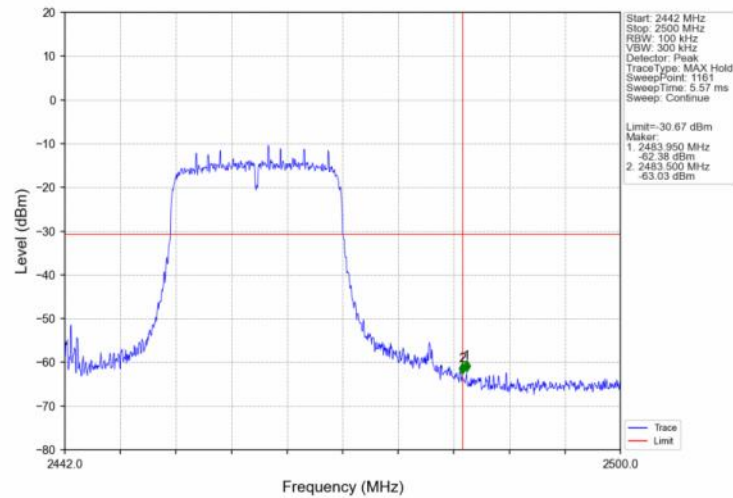
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



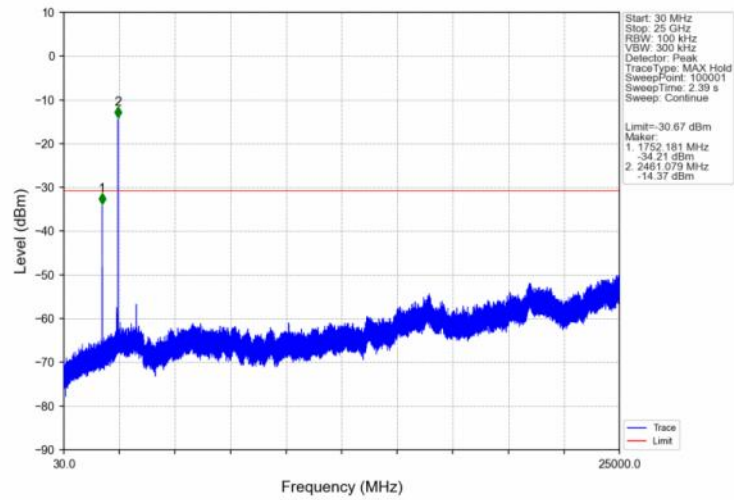
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



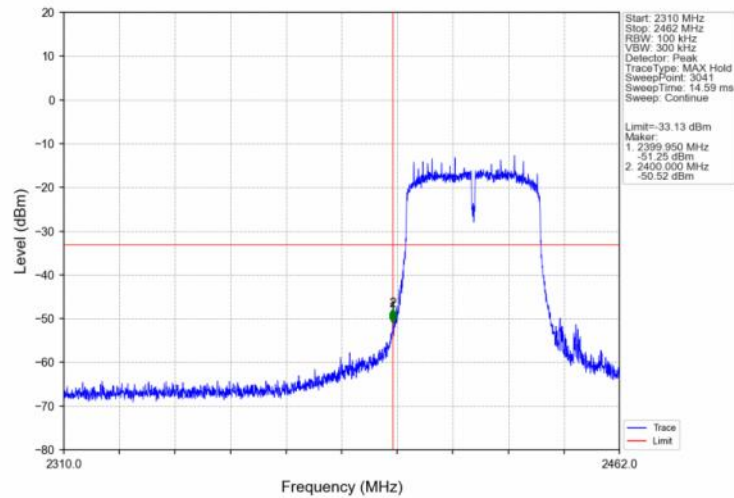
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



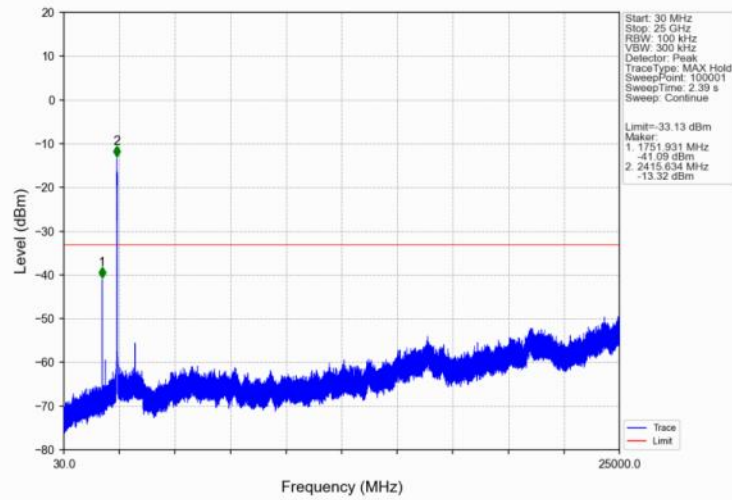
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



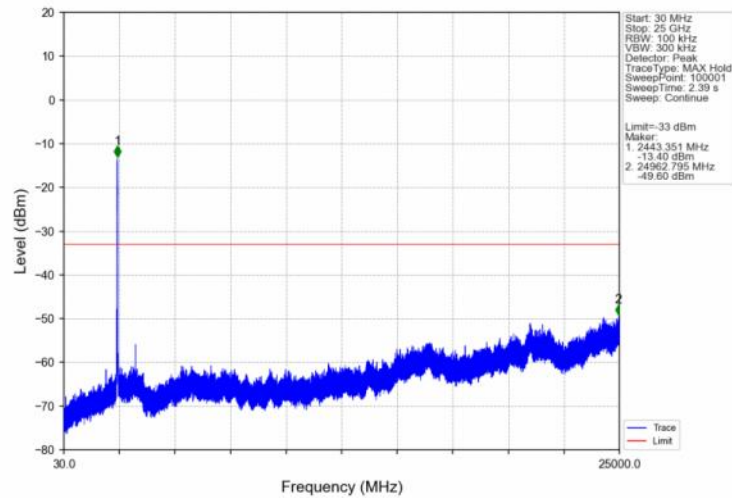
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



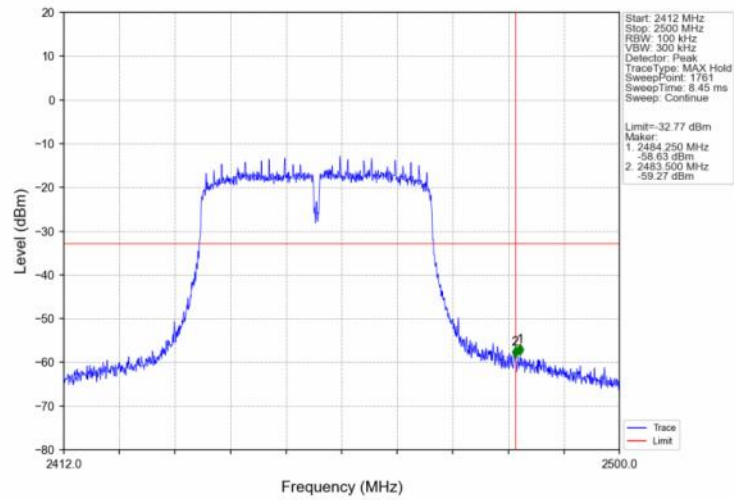
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



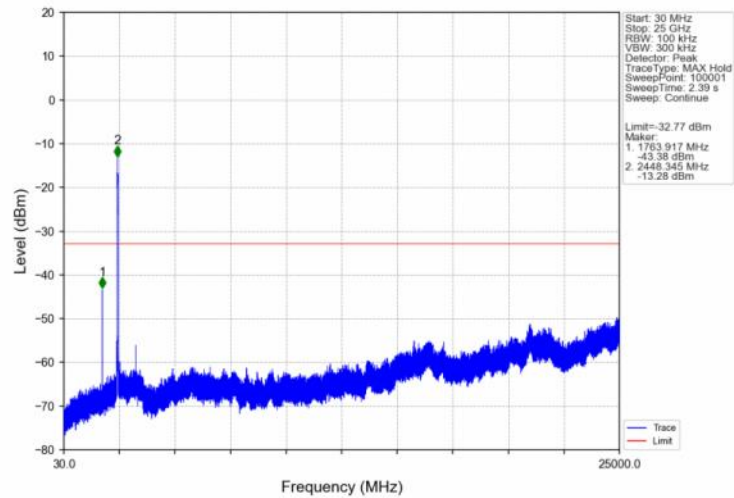
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



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	0.0117	10.67
2422	2452	0.0079	8.99

***** End of Report *****