

Appendix RF test data for WIFI2.4G

1. Duty Cycle

1.1 Test Result

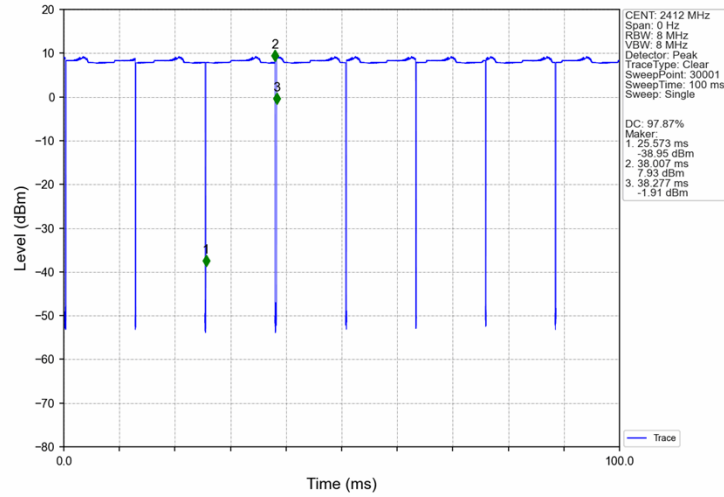
1.1.1 Ant1

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	12.434	12.704	97.87	0.09	1.33
		2437	12.430	12.603	98.63	0.06	0.52
		2462	12.456	13.116	94.97	0.22	4.42
802.11g	SISO	2412	2.064	2.233	92.43	0.34	3.56
		2437	2.065	2.252	91.70	0.38	3.06
		2462	2.066	2.504	82.51	0.84	12.65
802.11n (HT20)	SISO	2412	0.248	0.426	58.22	2.35	11.89
		2437	0.249	0.426	58.45	2.33	11.92
		2462	0.248	0.417	59.47	2.26	10.55
802.11n (HT40)	SISO	2422	0.248	0.408	60.78	2.16	9.28
		2437	0.248	0.426	58.22	2.35	11.89
		2452	0.249	0.417	59.71	2.24	10.58

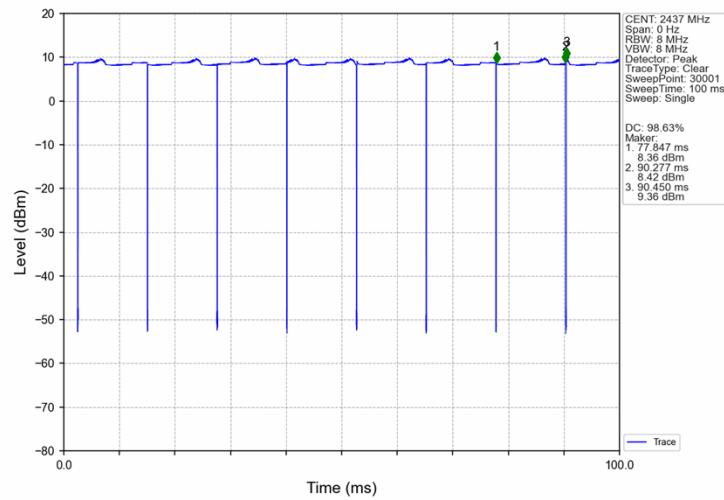
1.2 Test Graph

1.2.1 Ant1

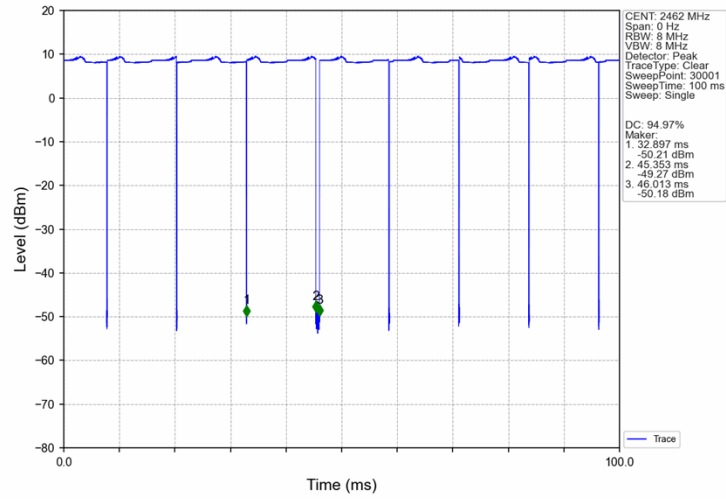
802.11b_LCH_2412MHz_Ant1 (SISO) NTN



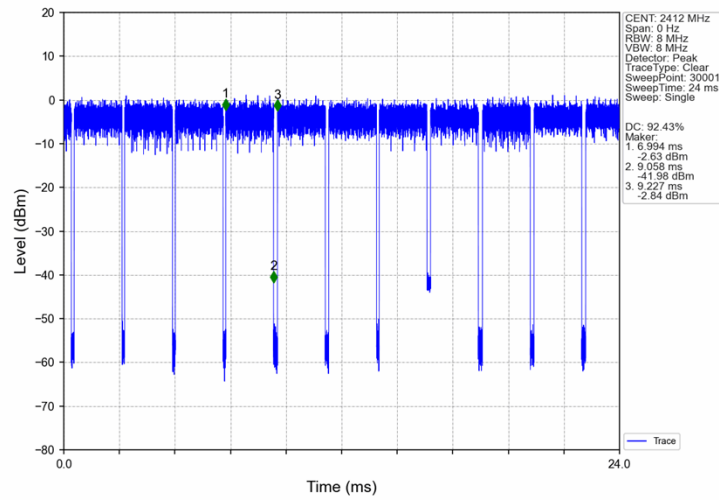
802.11b_MCH_2437MHz_Ant1 (SISO) NTN



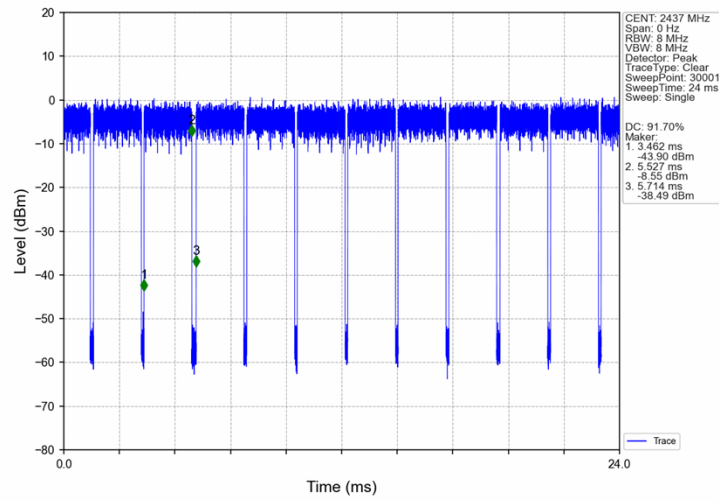
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



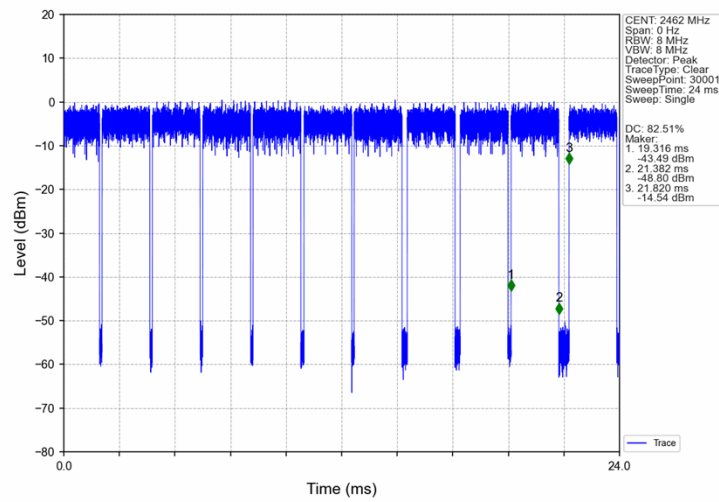
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



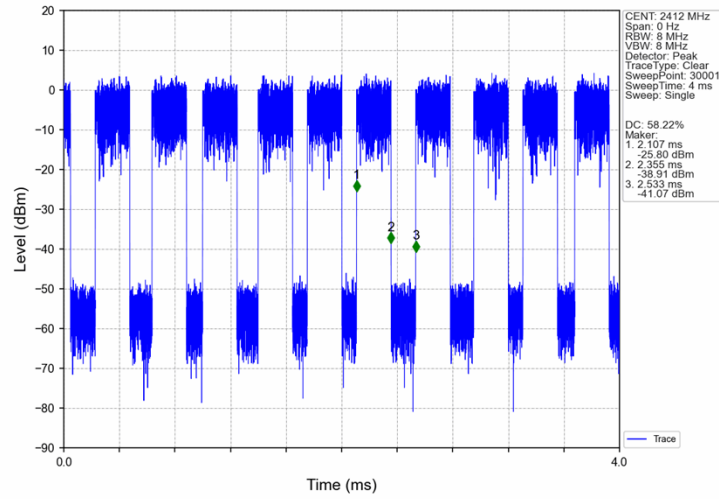
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



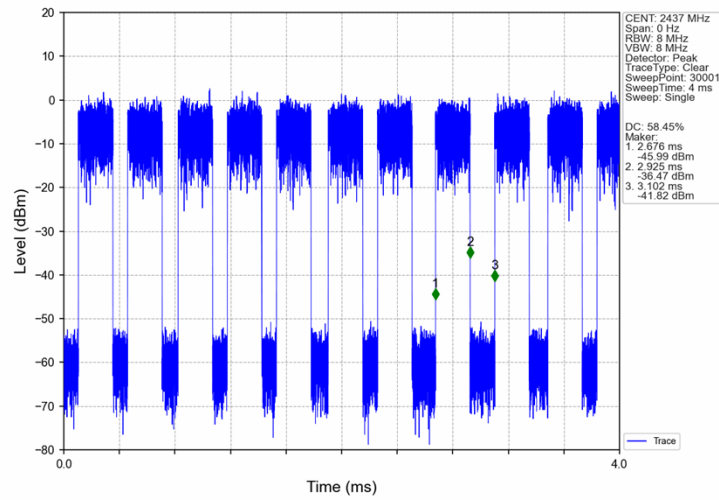
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



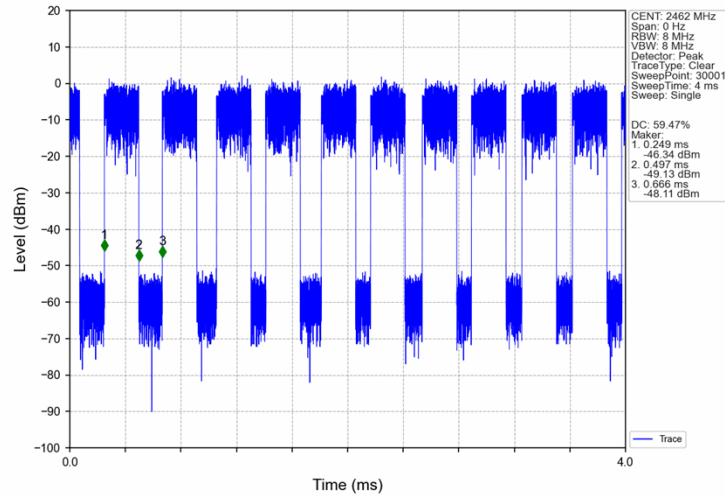
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



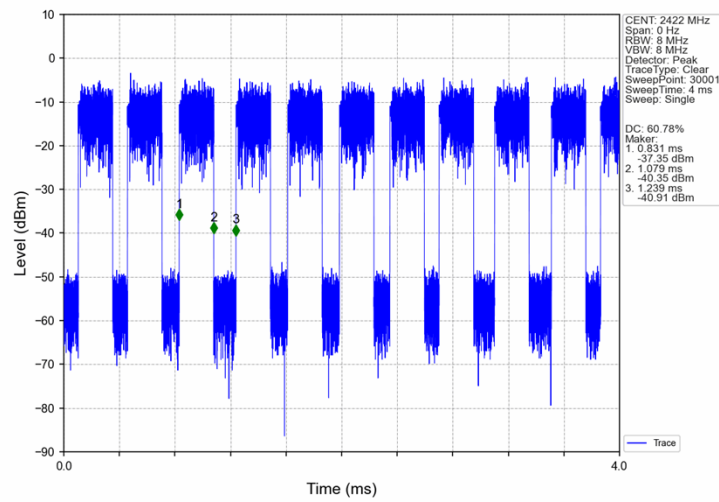
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



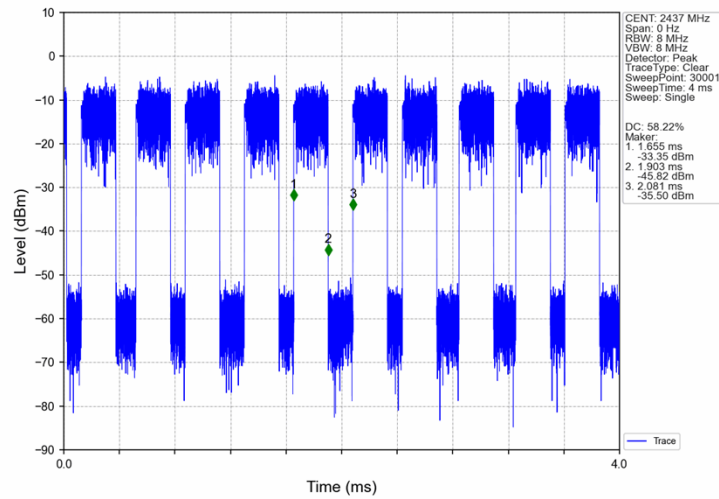
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



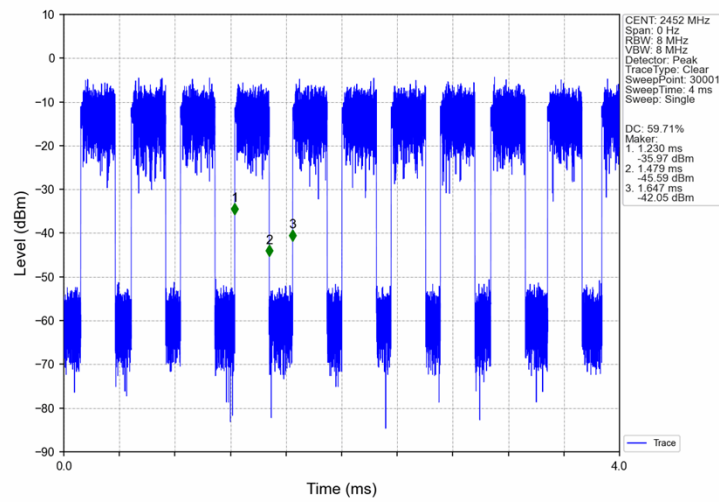
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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	13.072	/	Pass
		2437	1	13.080	/	Pass
		2462	1	13.105	/	Pass
802.11g	SISO	2412	1	16.560	/	Pass
		2437	1	16.569	/	Pass
		2462	1	16.589	/	Pass
802.11n (HT20)	SISO	2412	1	17.298	/	Pass
		2437	1	17.313	/	Pass
		2462	1	17.290	/	Pass
802.11n (HT40)	SISO	2422	1	37.156	/	Pass
		2437	1	37.201	/	Pass
		2452	1	37.194	/	Pass

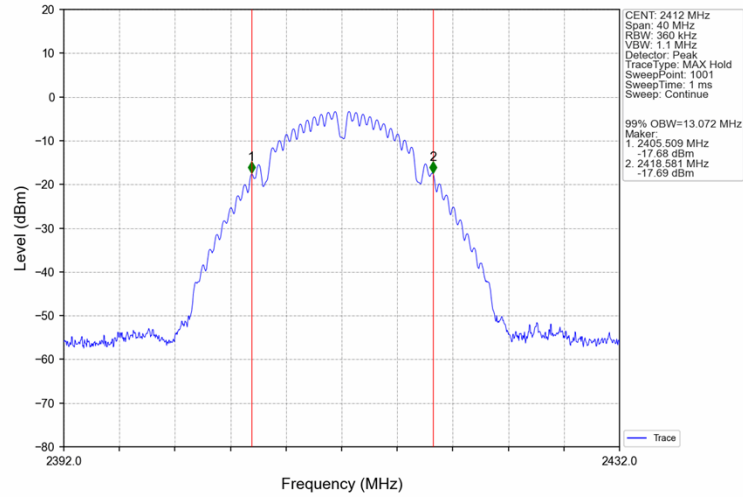
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.223	≥ 0.5	Pass
		2437	1	8.225	≥ 0.5	Pass
		2462	1	8.230	≥ 0.5	Pass
802.11g	SISO	2412	1	15.961	≥ 0.5	Pass
		2437	1	16.047	≥ 0.5	Pass
		2462	1	16.143	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	16.716	≥ 0.5	Pass
		2437	1	16.752	≥ 0.5	Pass
		2462	1	16.727	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	36.650	≥ 0.5	Pass
		2437	1	36.736	≥ 0.5	Pass
		2452	1	36.651	≥ 0.5	Pass

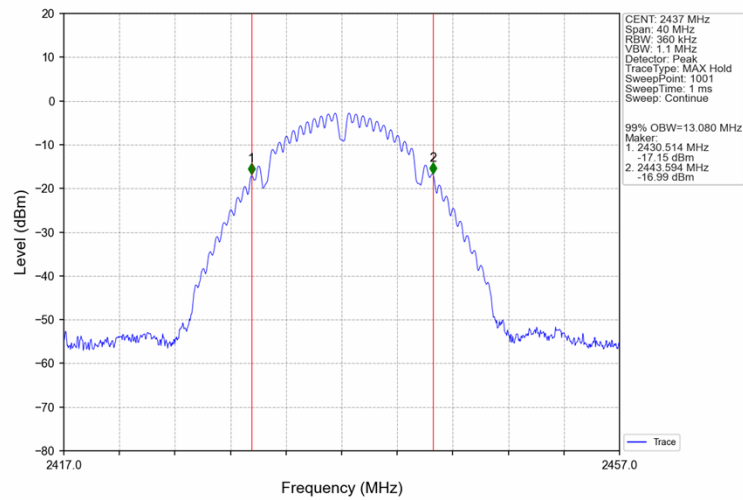
2.2 Test Graph

2.2.1 OBW

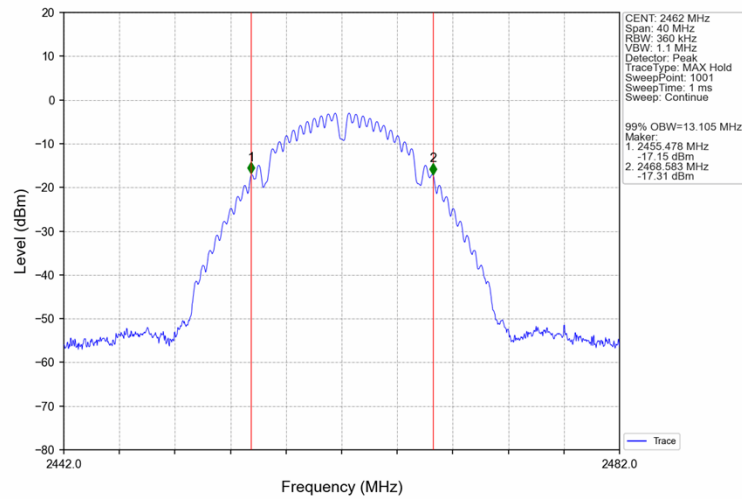
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



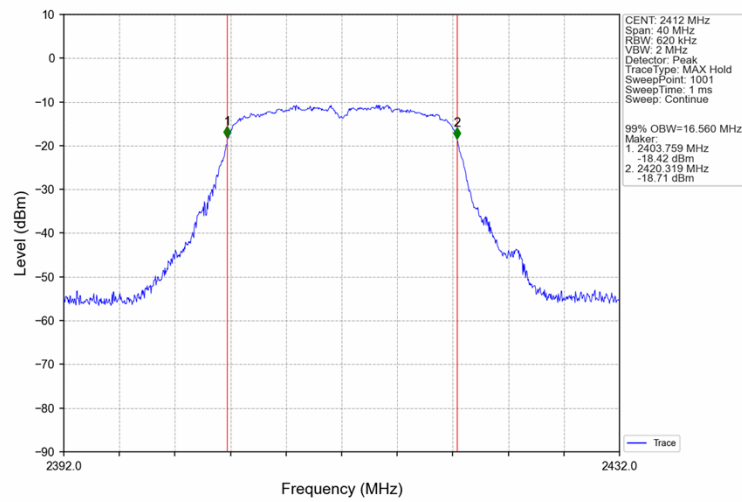
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



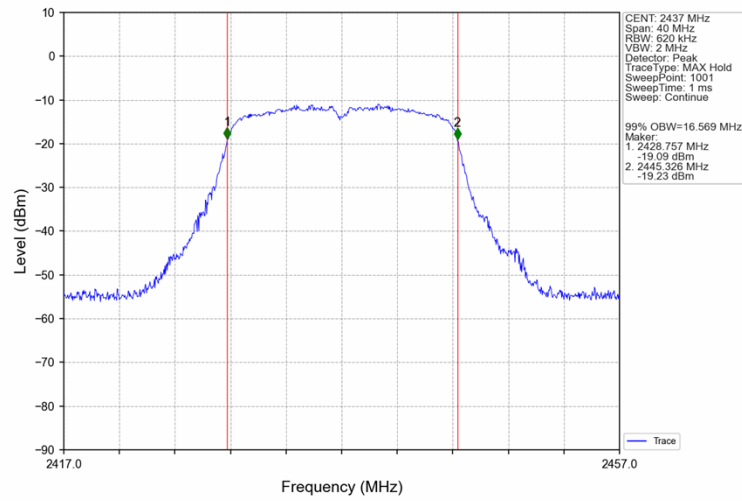
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



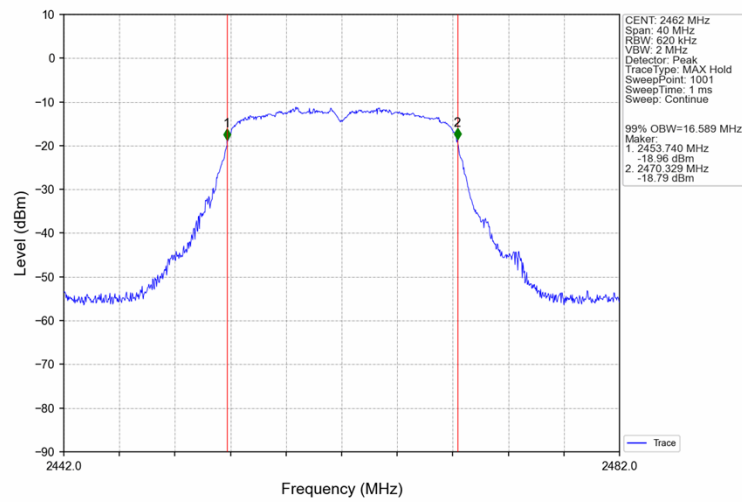
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



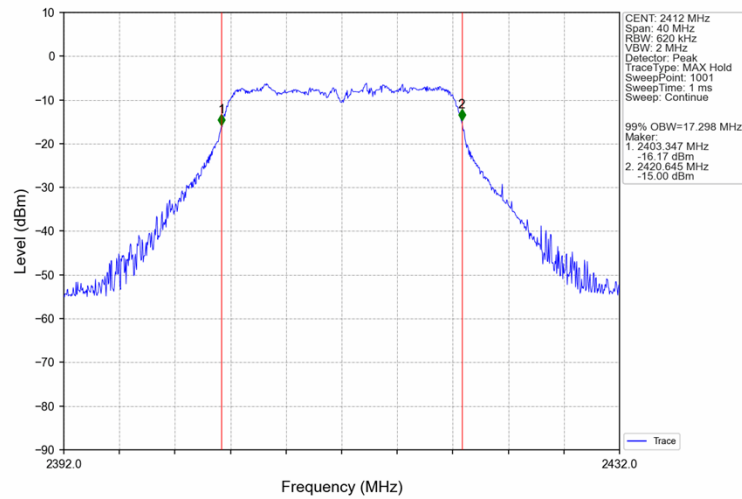
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



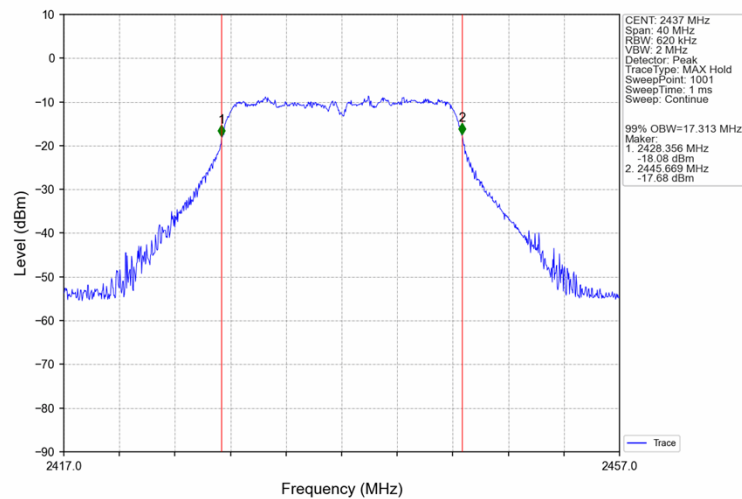
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



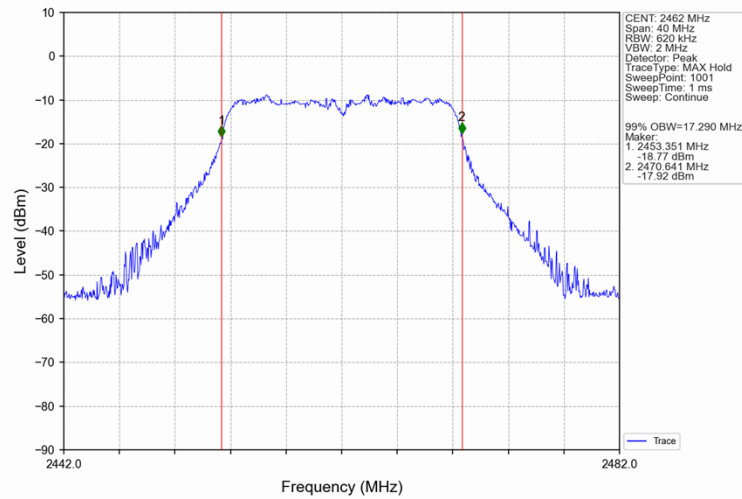
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



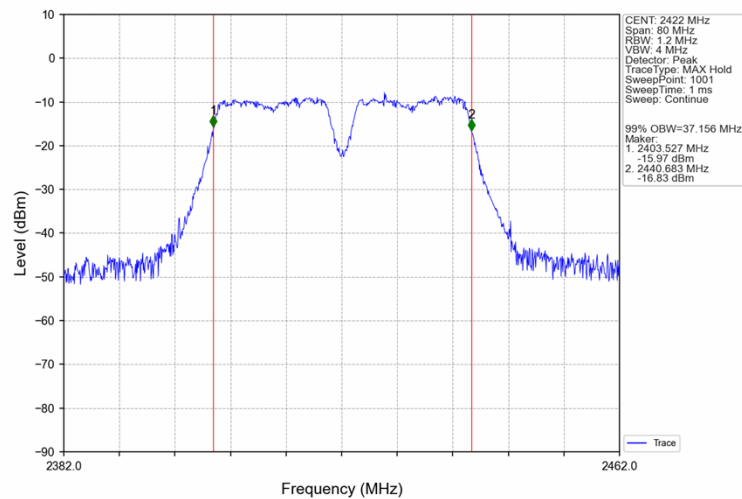
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



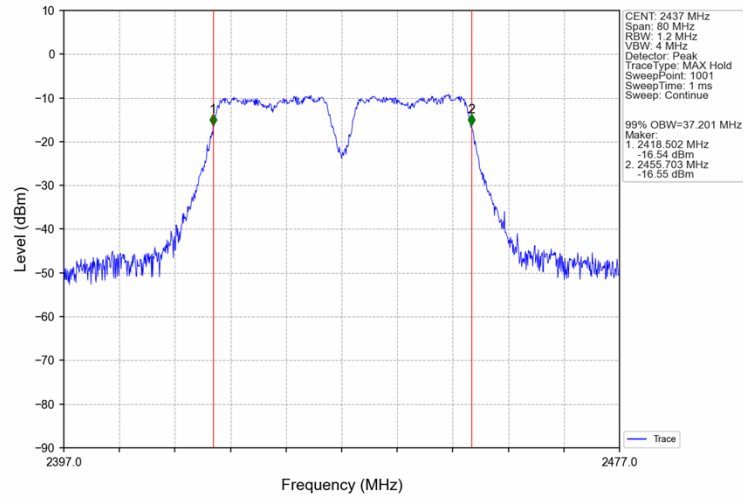
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



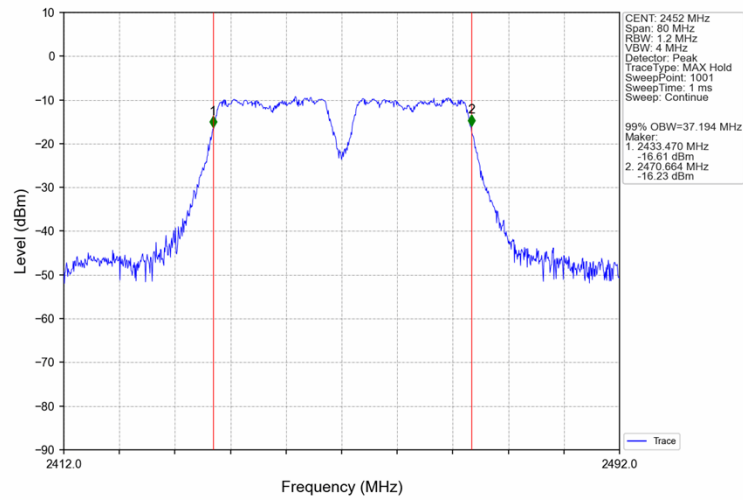
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

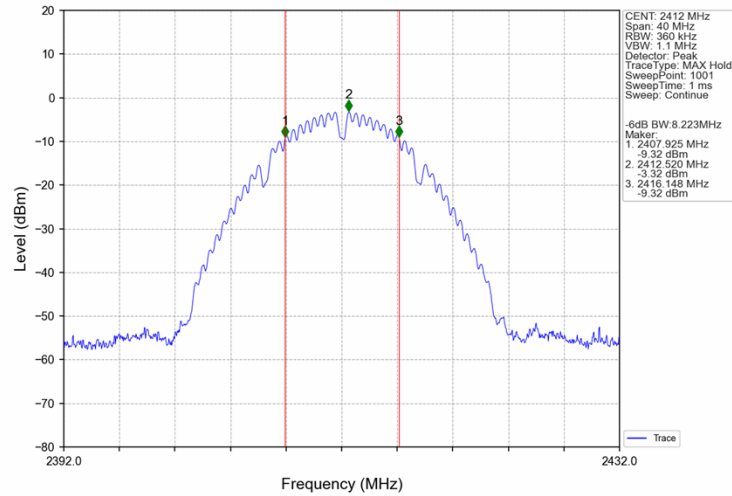


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

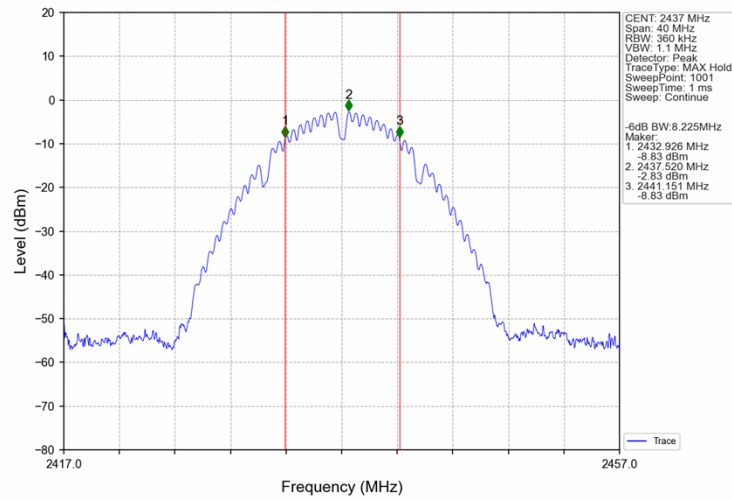


2.2.2 6dB BW

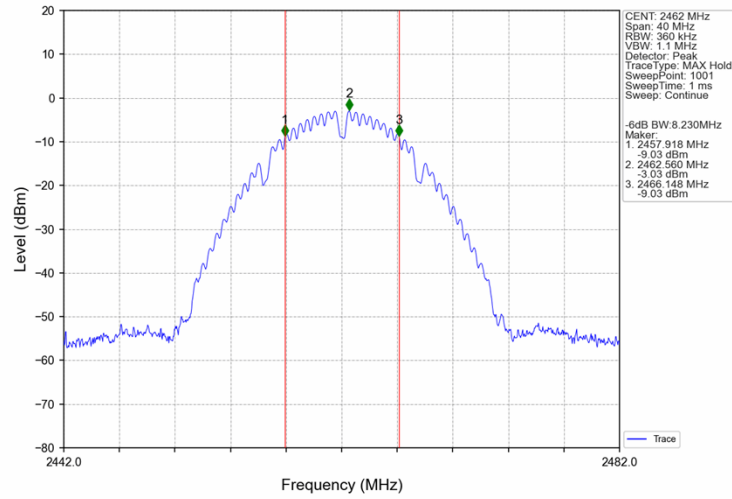
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



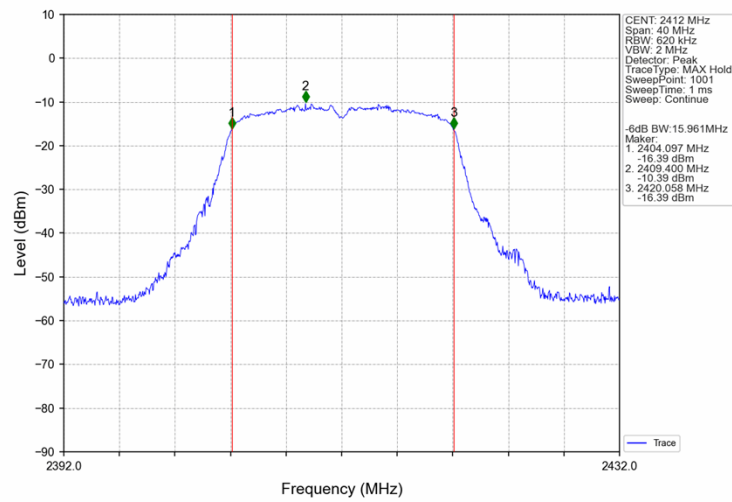
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



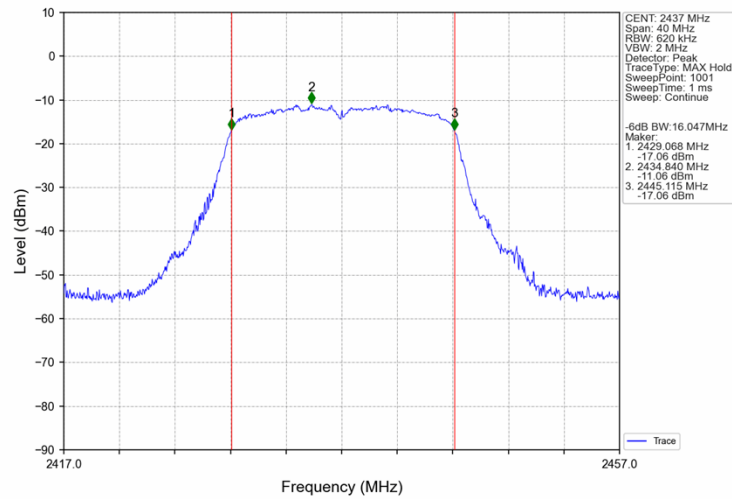
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



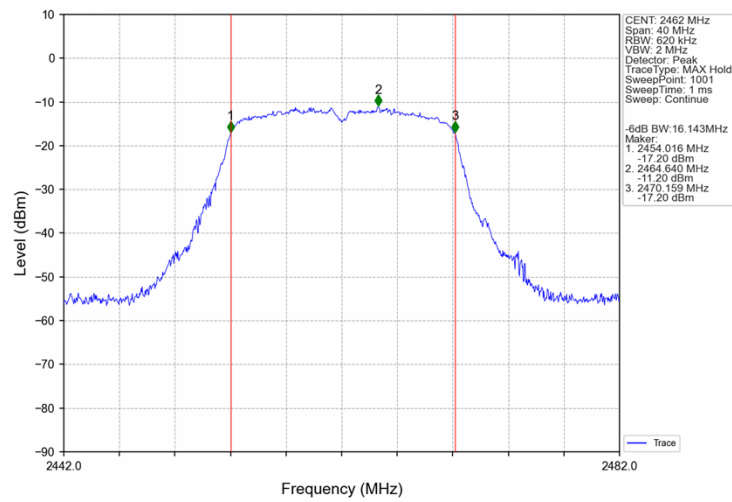
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



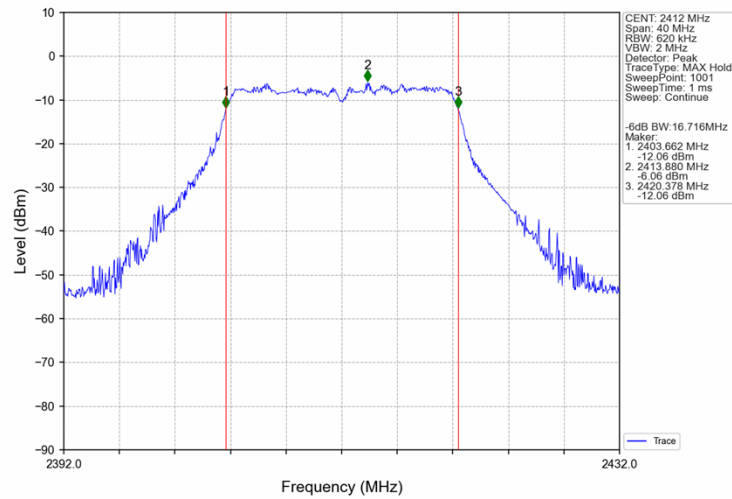
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



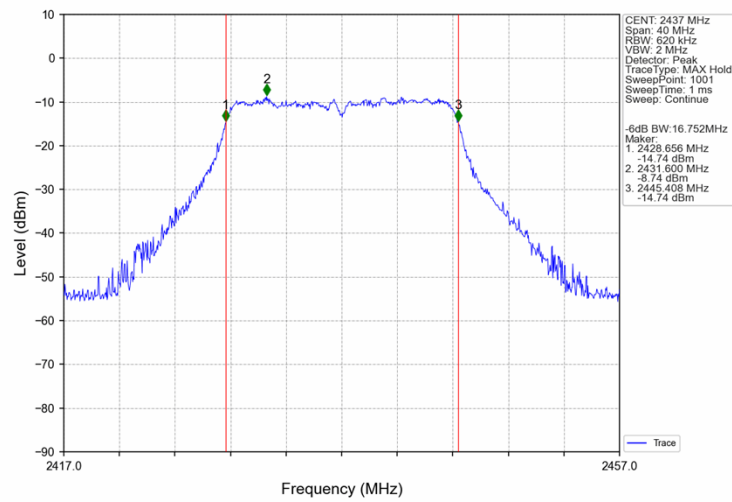
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



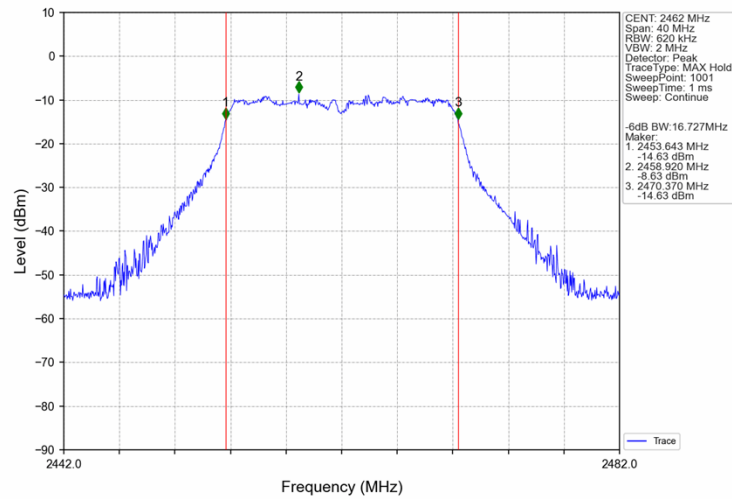
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



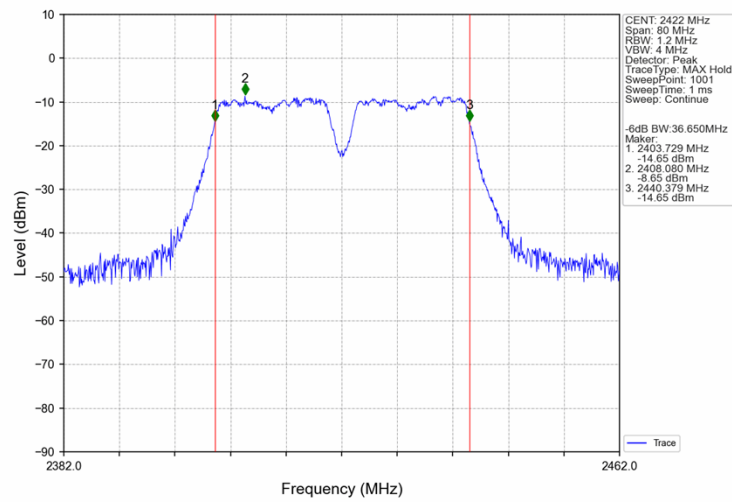
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



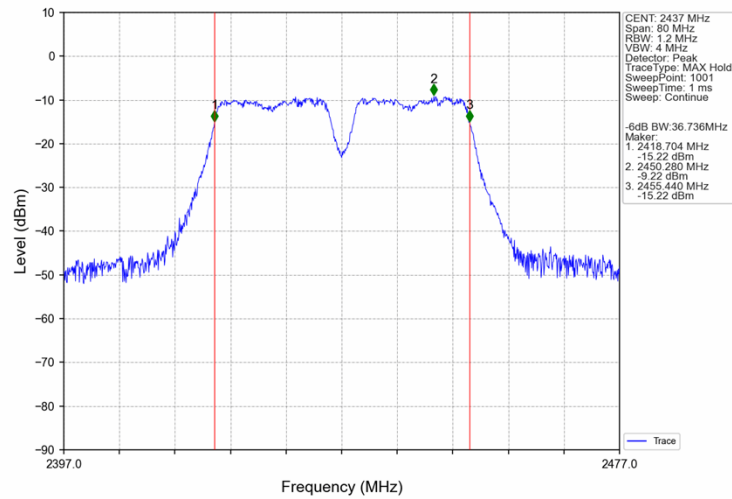
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



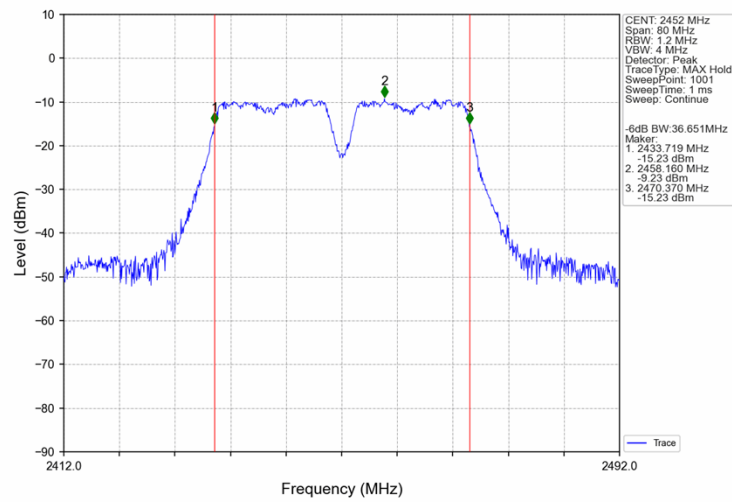
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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	6.70	<=30	Pass
		2437	7.21	<=30	Pass
		2462	7.00	<=30	Pass
802.11g	SISO	2412	2.42	<=30	Pass
		2437	2.01	<=30	Pass
		2462	1.83	<=30	Pass
802.11n (HT20)	SISO	2412	6.74	<=30	Pass
		2437	4.27	<=30	Pass
		2462	4.08	<=30	Pass
802.11n (HT40)	SISO	2422	3.50	<=30	Pass
		2437	3.21	<=30	Pass
		2452	3.13	<=30	Pass

Note1: Antenna Gain: Ant1: 2.99dBi;

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

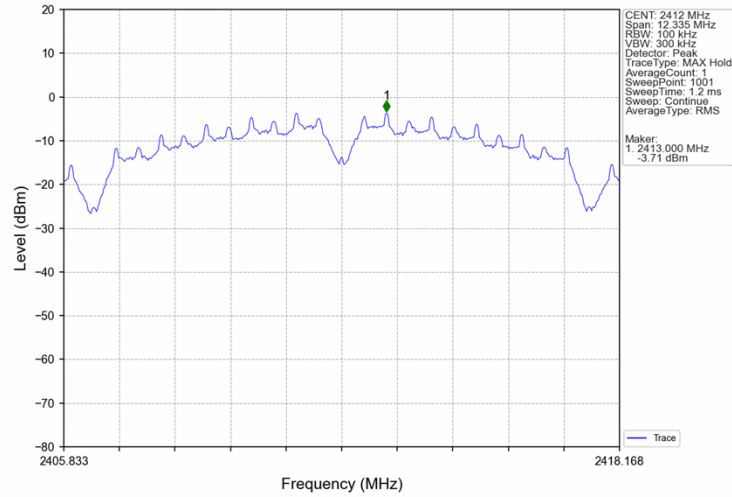
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	-3.71dBm/100kHz	<=8	Pass
		2437	-3.29dBm/100kHz	<=8	Pass
		2462	-3.43dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-15.22dBm/100kHz	<=8	Pass
		2437	-15.77dBm/100kHz	<=8	Pass
		2462	-15.86dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-12.65dBm/100kHz	<=8	Pass
		2437	-15.06dBm/100kHz	<=8	Pass
		2462	-15.28dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-18.70dBm/100kHz	<=8	Pass
		2437	-18.93dBm/100kHz	<=8	Pass
		2452	-19.16dBm/100kHz	<=8	Pass

Note1: Antenna Gain: Ant1: 2.99dBi;

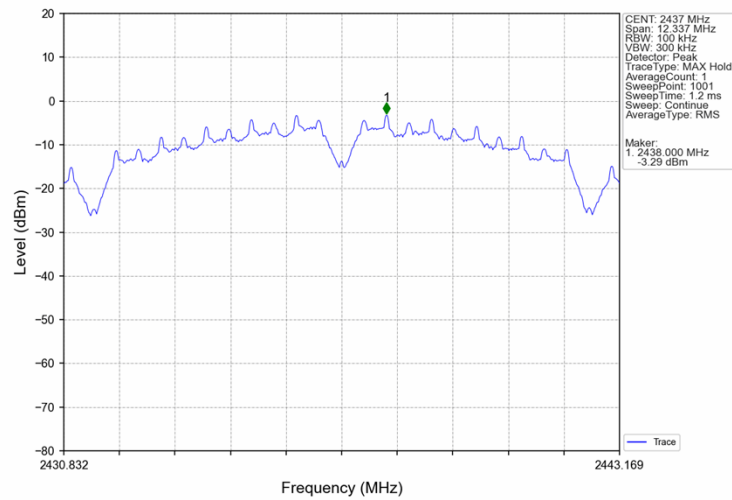
4.2 Test Graph

4.2.1 PSD

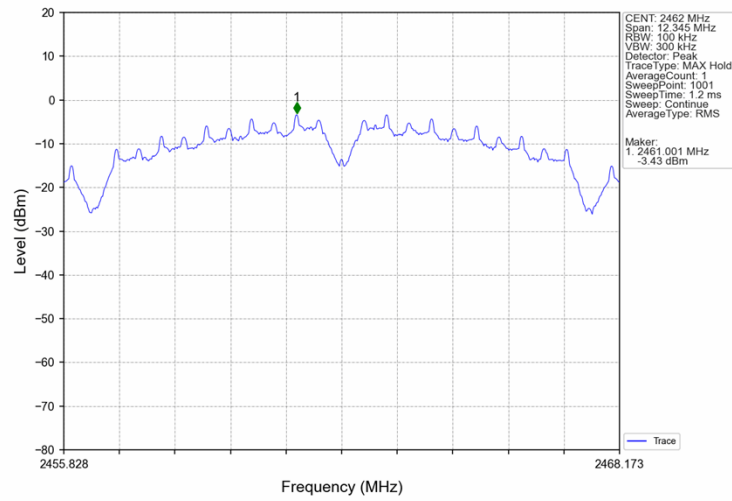
802.11b_LCH_2412MHz_Ant1 (SISO) NTN



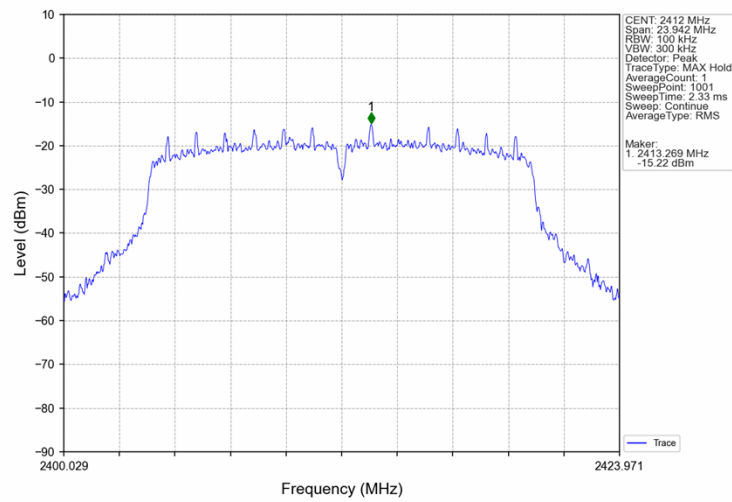
802.11b_MCH_2437MHz_Ant1 (SISO) NTN



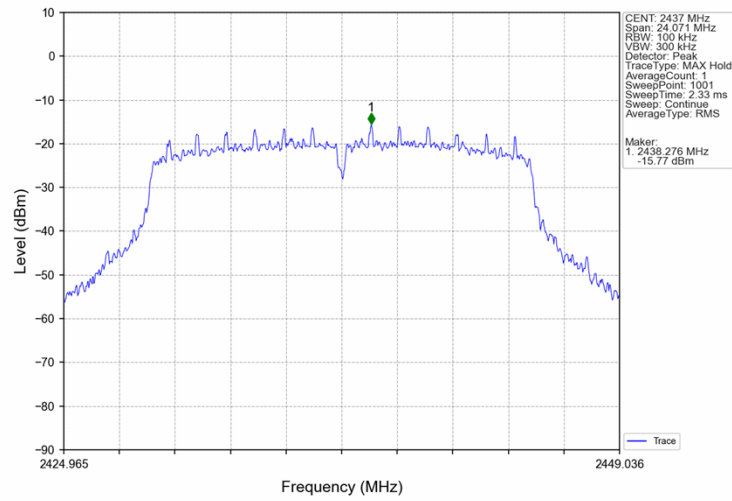
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



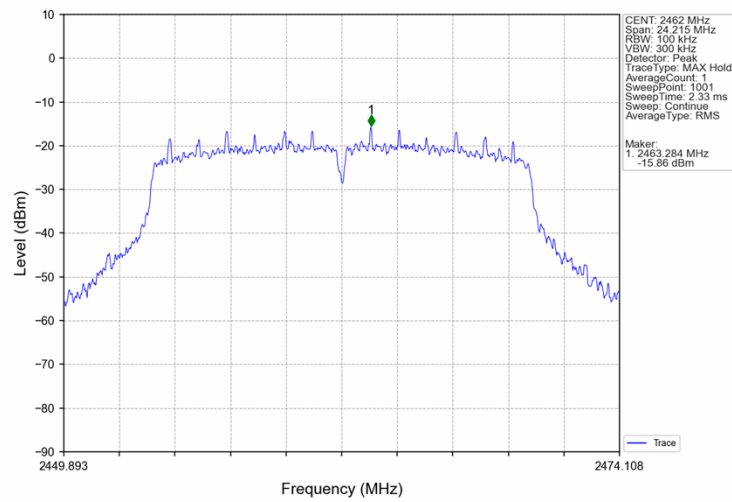
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



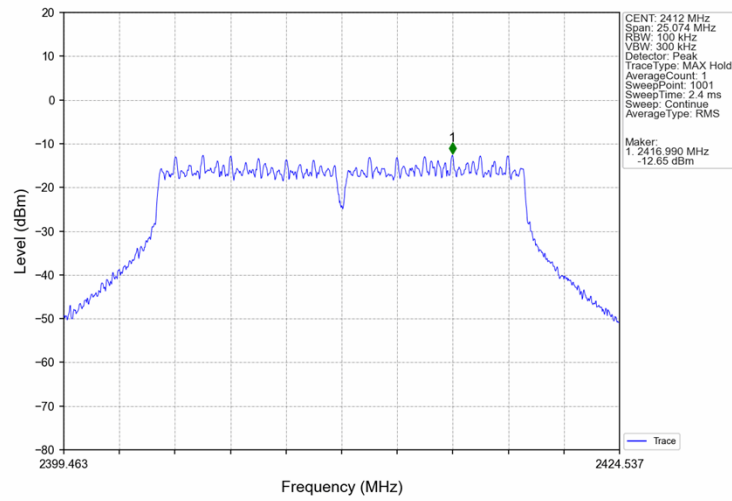
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



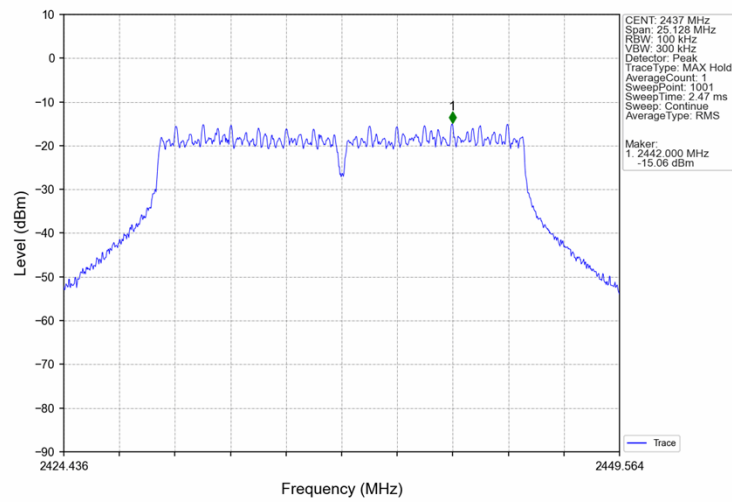
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



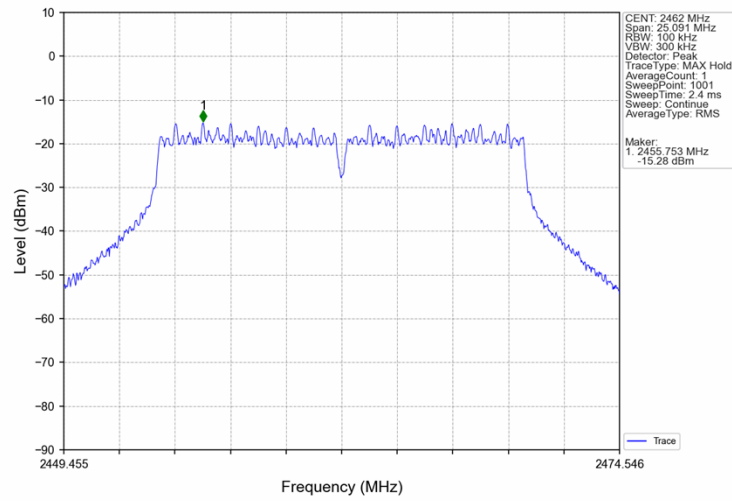
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



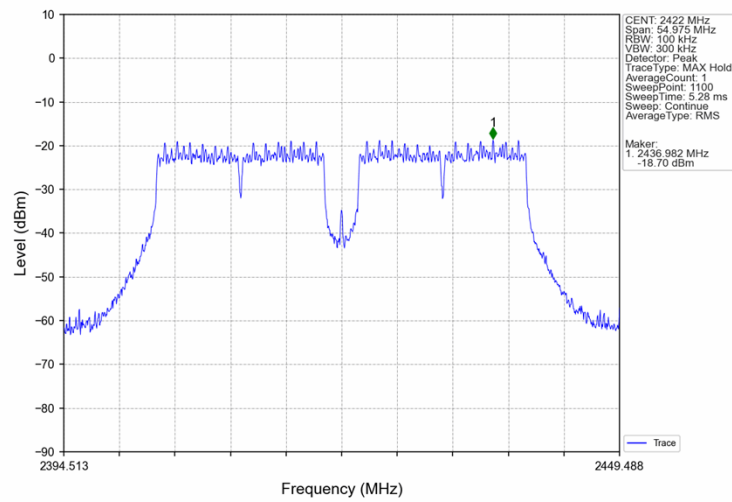
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



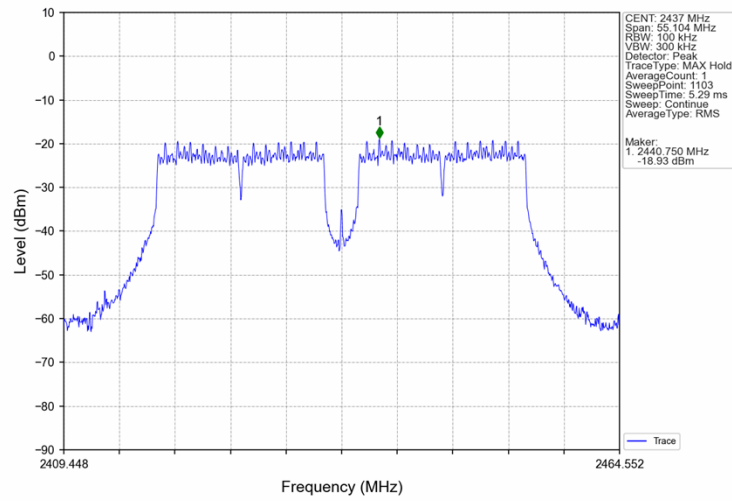
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



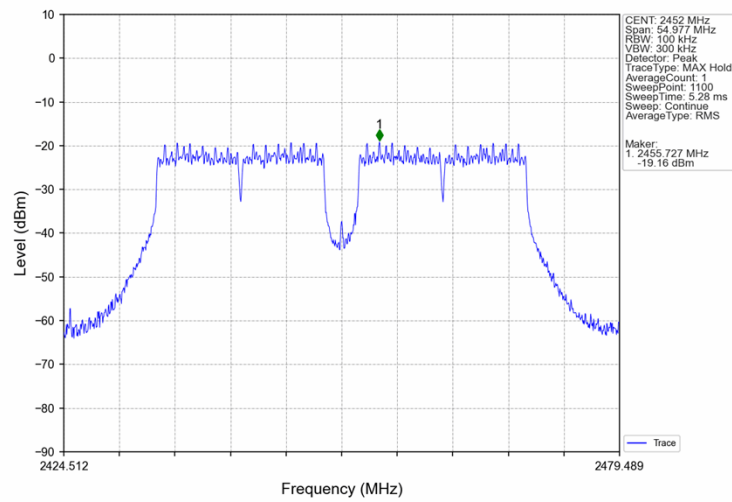
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. 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	-3.72
		2437	1	-3.17
		2462	1	-3.40
802.11g	SISO	2412	1	-15.19
		2437	1	-15.60
		2462	1	-16.29
802.11n (HT20)	SISO	2412	1	-12.67
		2437	1	-15.05
		2462	1	-15.30
802.11n (HT40)	SISO	2422	1	-18.70
		2437	1	-19.15
		2452	1	-19.19

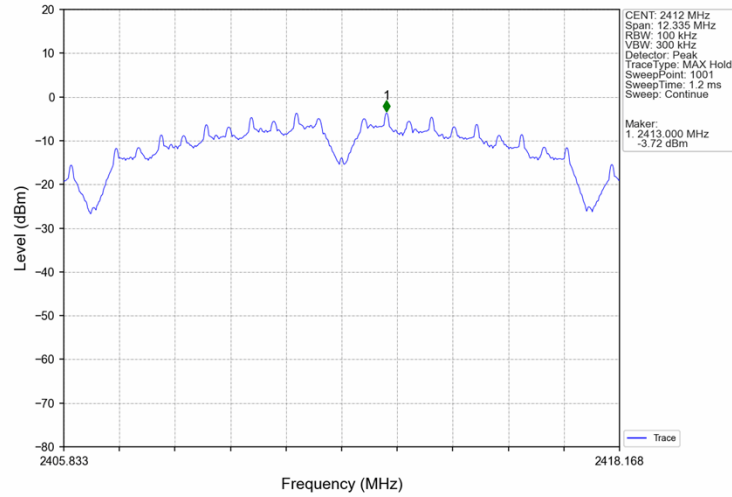
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-3.72	-23.72	Pass
		2437	1	-3.17	-23.17	Pass
		2462	1	-3.40	-23.40	Pass
802.11g	SISO	2412	1	-15.19	-35.19	Pass
		2437	1	-15.60	-35.60	Pass
		2462	1	-16.29	-36.29	Pass
802.11n (HT20)	SISO	2412	1	-12.67	-32.67	Pass
		2437	1	-15.05	-35.05	Pass
		2462	1	-15.30	-35.30	Pass
802.11n (HT40)	SISO	2422	1	-18.70	-38.70	Pass
		2437	1	-19.15	-39.15	Pass
		2452	1	-19.19	-39.19	Pass

5.2 Test Graph

5.2.1 Ref

802.11b_LCH_2412MHz_Ant1 (SISO) NTN



802.11b_MCH_2437MHz_Ant1 (SISO) NTN

