

1. Duty Cycle

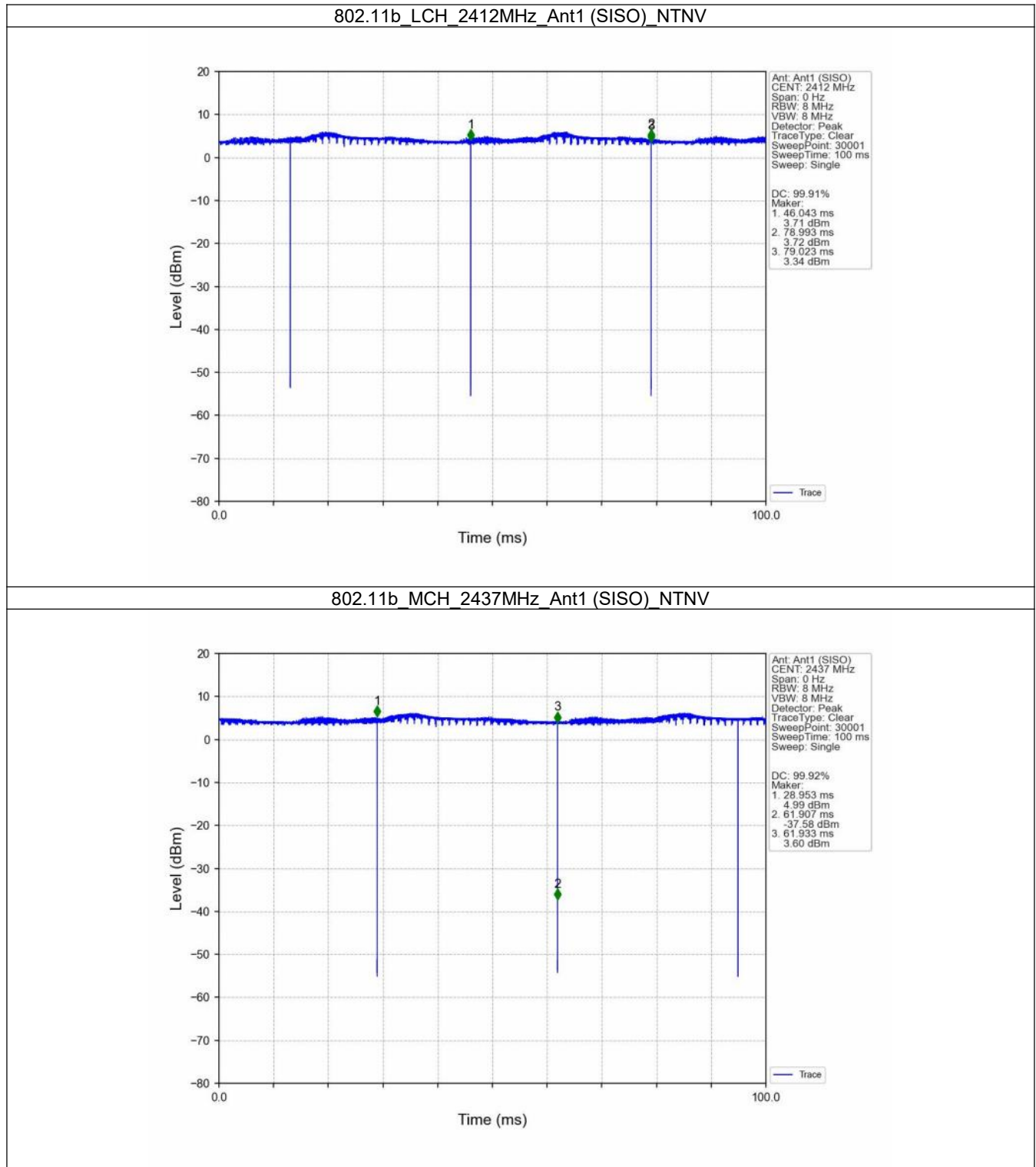
1.1 Test Result

1.1.1 Ant1

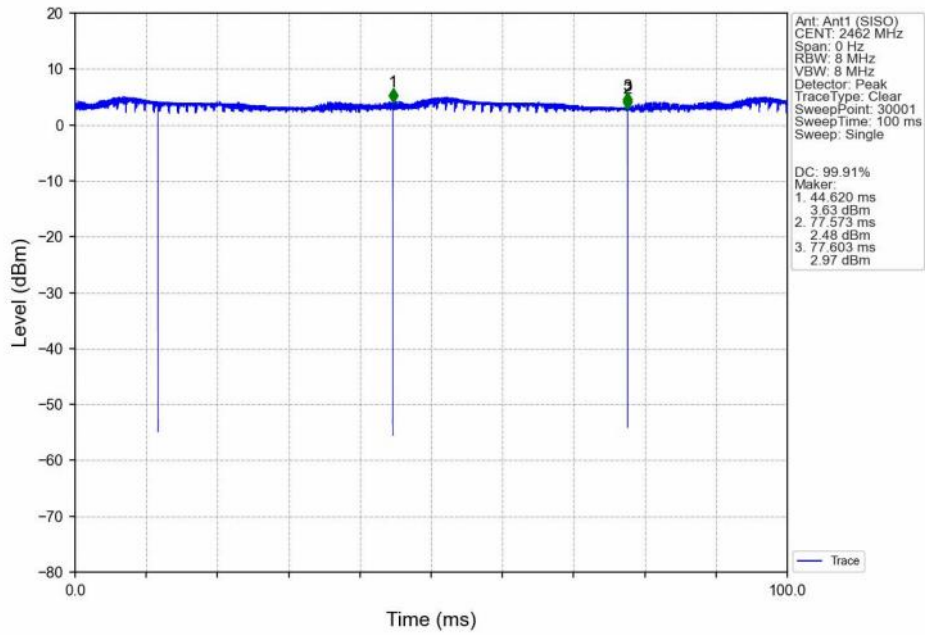
Ant1							
Mode	Tx Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	32.950	32.980	99.91	0.00	0.00
		2437	32.954	32.980	99.92	0.00	0.00
		2462	32.953	32.983	99.91	0.00	0.01
802.11g	SISO	2412	5.484	5.518	99.38	0.03	0.00
		2437	5.484	5.518	99.38	0.03	0.00
		2462	5.484	5.518	99.38	0.03	0.00
802.11n (HT20)	SISO	2412	5.079	5.115	99.30	0.03	0.04
		2437	5.080	5.115	99.32	0.03	0.04
		2462	5.079	5.114	99.32	0.03	0.04
802.11n (HT40)	SISO	2422	2.469	2.503	98.64	0.06	0.03
		2437	2.469	2.503	98.64	0.06	0.00
		2452	2.469	2.503	98.64	0.06	0.03

1.2 Test Graph

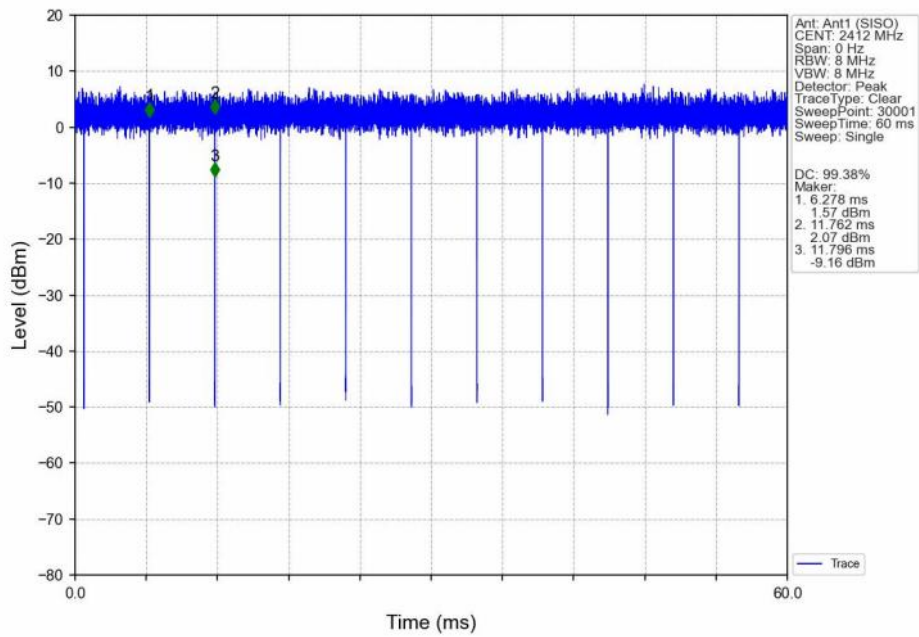
1.2.1 Ant1



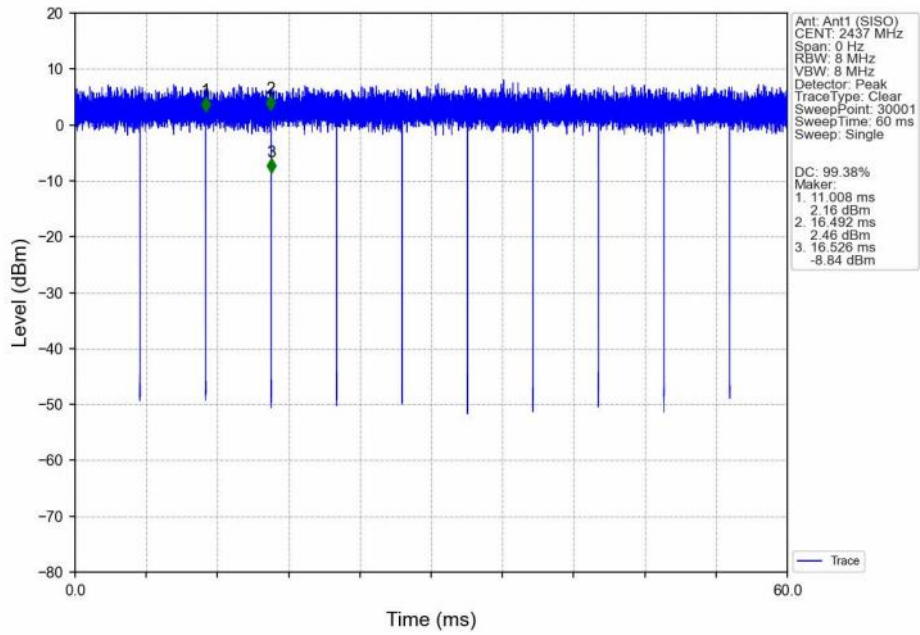
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



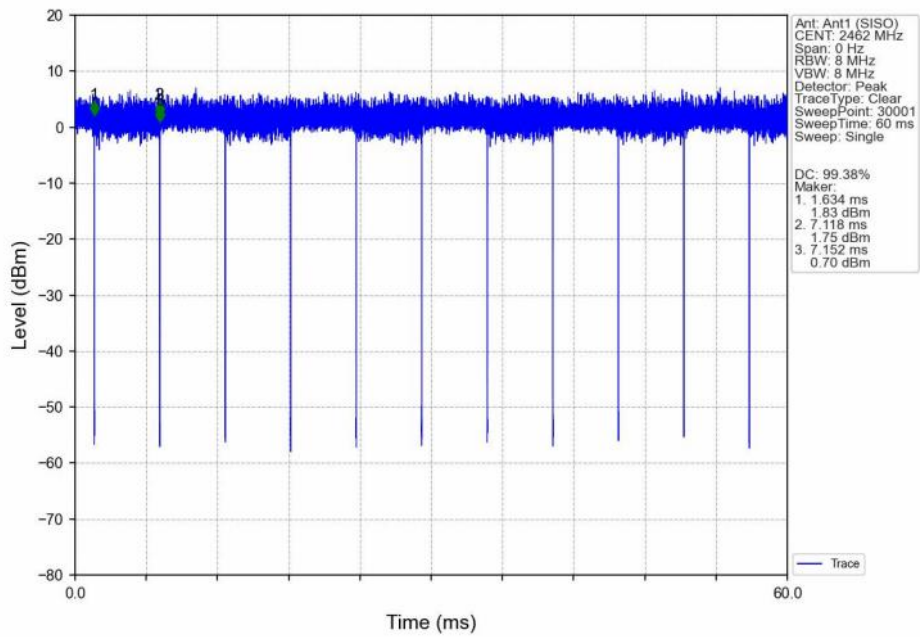
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



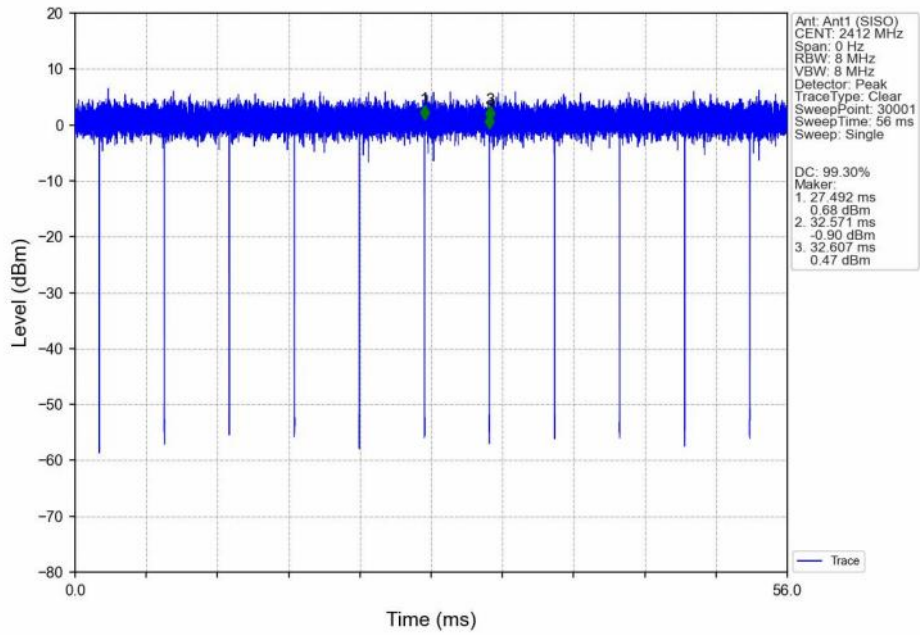
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



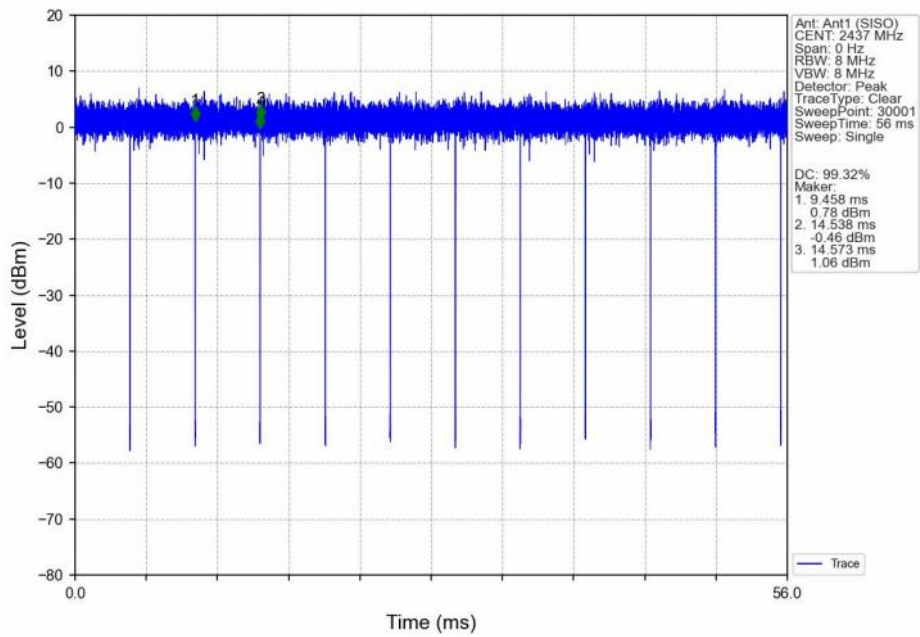
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



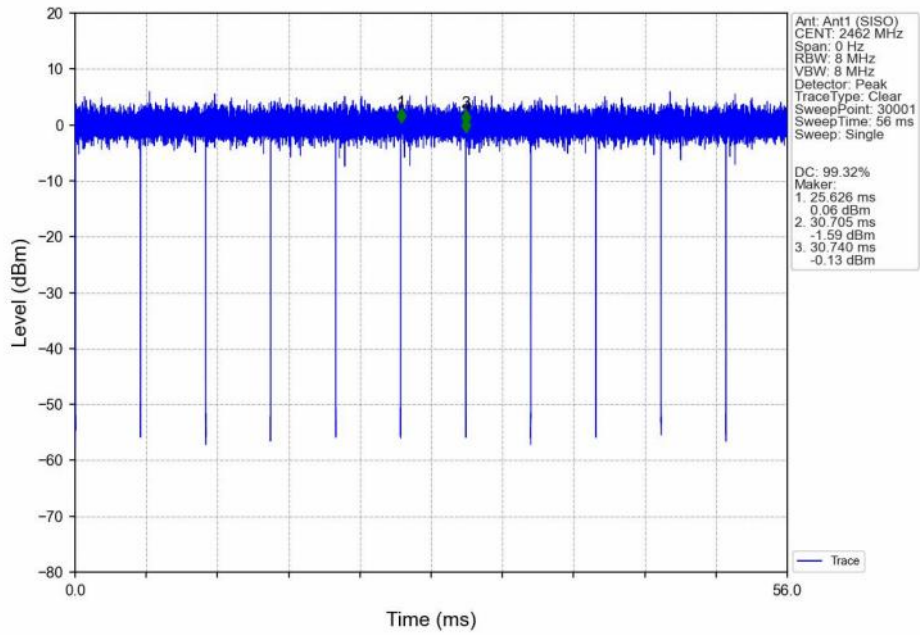
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



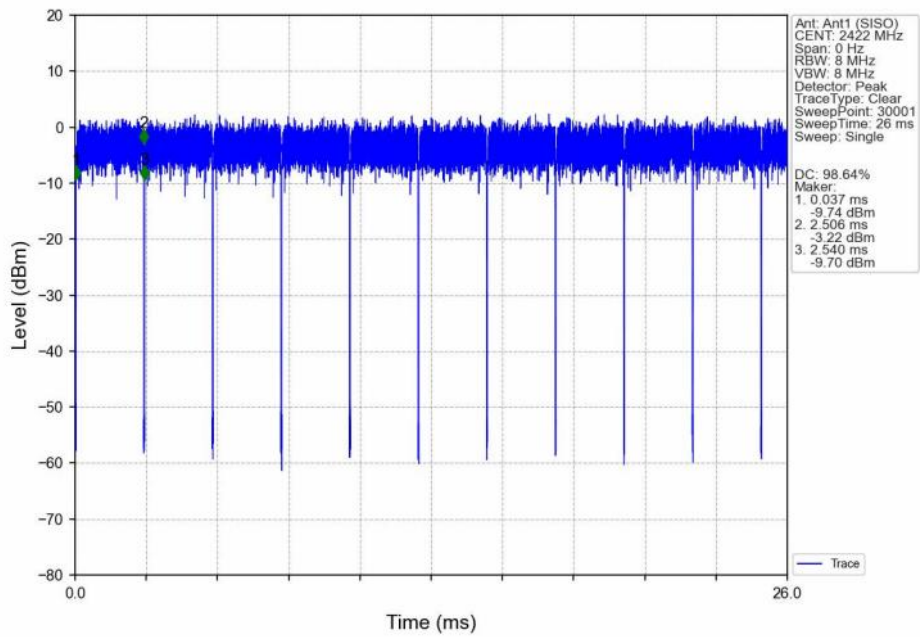
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



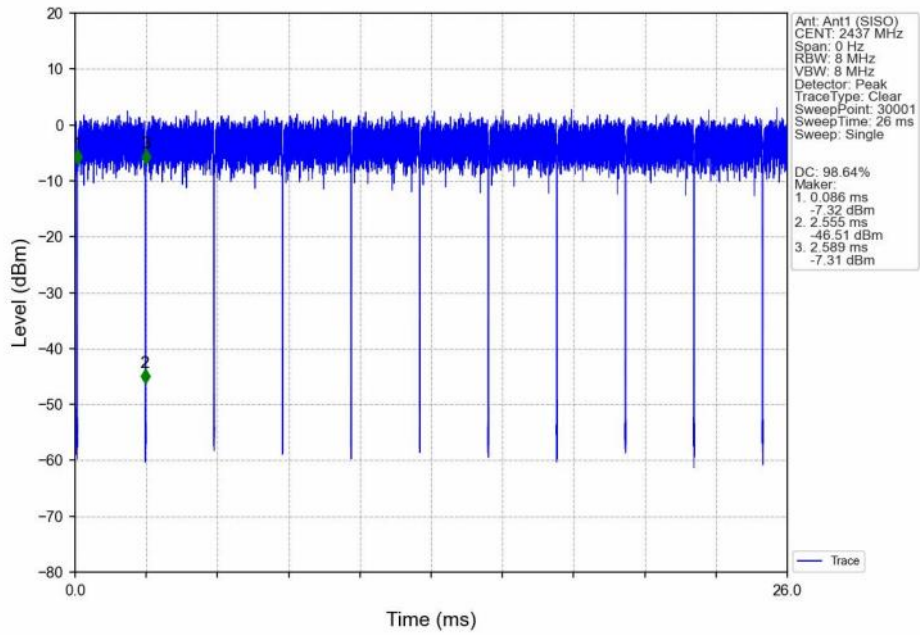
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



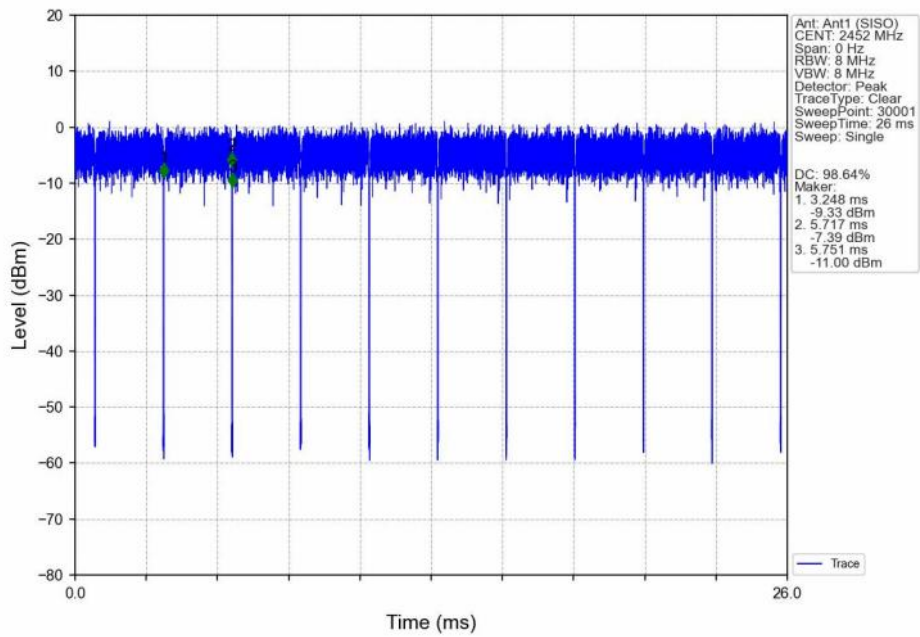
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

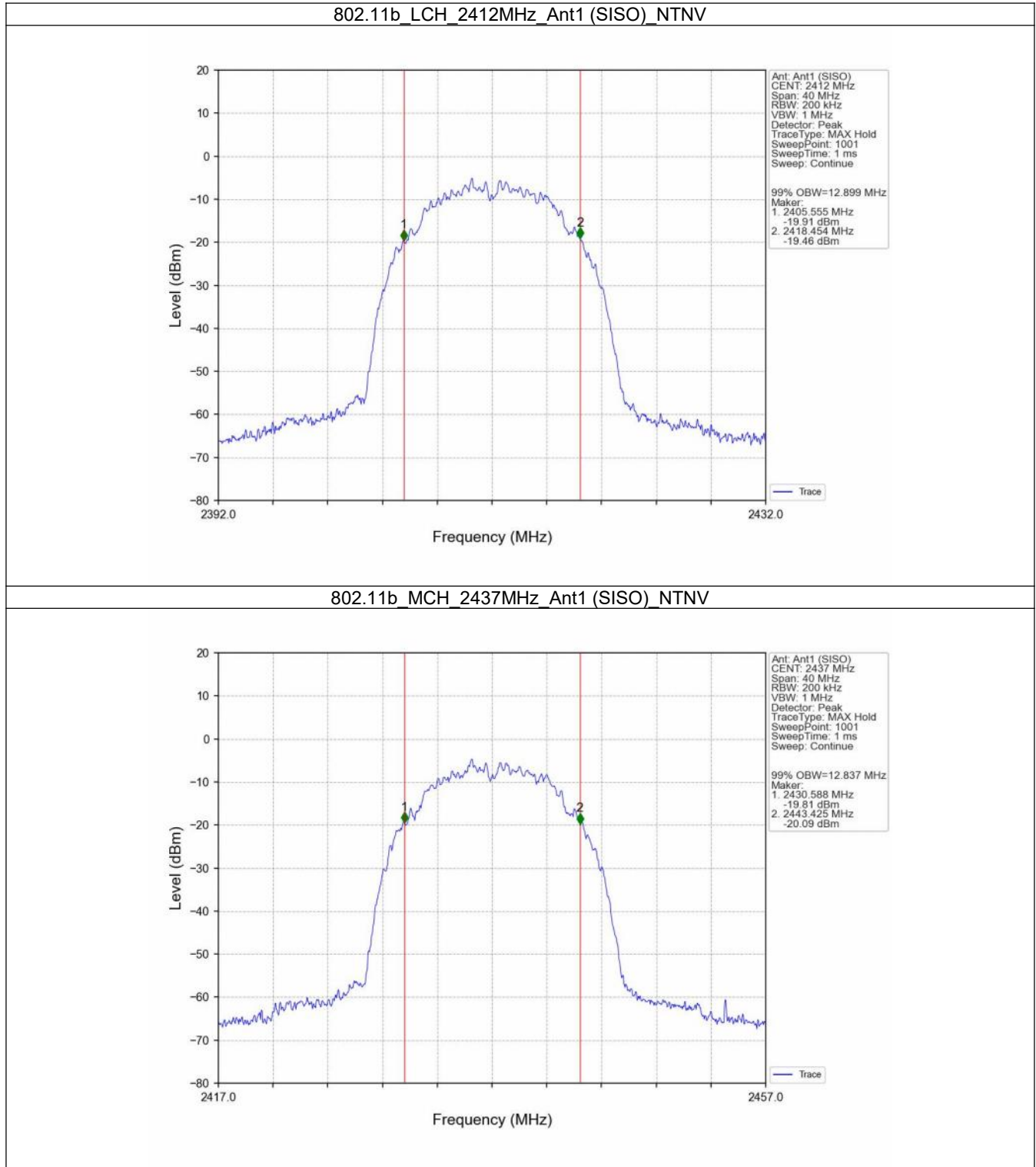
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	12.899	/	Pass
		2437	1	12.837	/	Pass
		2462	1	12.866	/	Pass
802.11g	SISO	2412	1	16.424	/	Pass
		2437	1	16.397	/	Pass
		2462	1	16.413	/	Pass
802.11n (HT20)	SISO	2412	1	17.320	/	Pass
		2437	1	17.318	/	Pass
		2462	1	17.337	/	Pass
802.11n (HT40)	SISO	2422	1	36.065	/	Pass
		2437	1	35.976	/	Pass
		2452	1	36.078	/	Pass

2.1.2 6dB BW

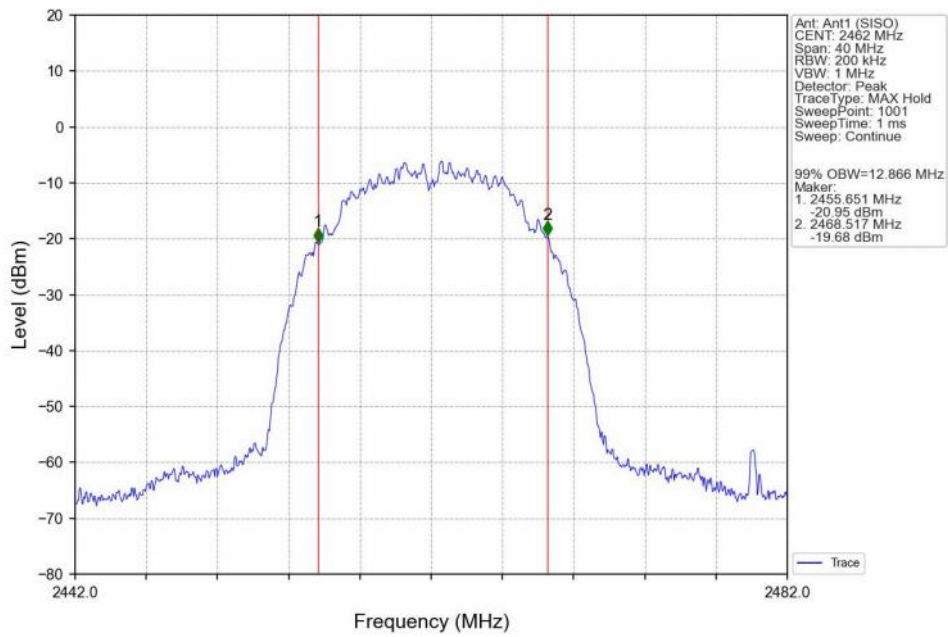
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.233	≥ 0.5	Pass
		2437	1	8.899	≥ 0.5	Pass
		2462	1	9.098	≥ 0.5	Pass
802.11g	SISO	2412	1	16.446	≥ 0.5	Pass
		2437	1	16.393	≥ 0.5	Pass
		2462	1	16.424	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.339	≥ 0.5	Pass
		2437	1	17.270	≥ 0.5	Pass
		2462	1	17.292	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.683	≥ 0.5	Pass
		2437	1	35.555	≥ 0.5	Pass
		2452	1	35.624	≥ 0.5	Pass

2.2 Test Graph

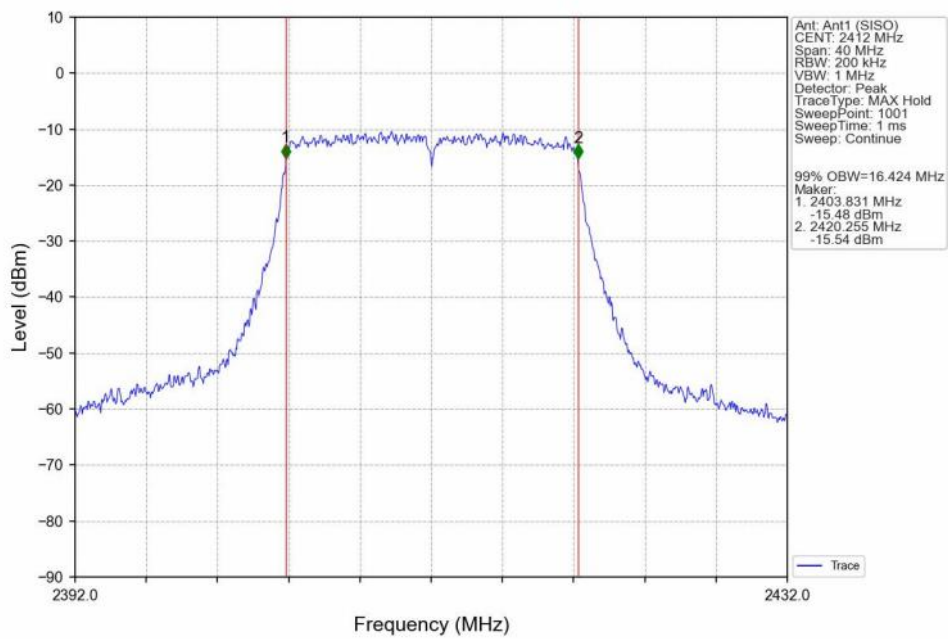
2.2.1 OBW



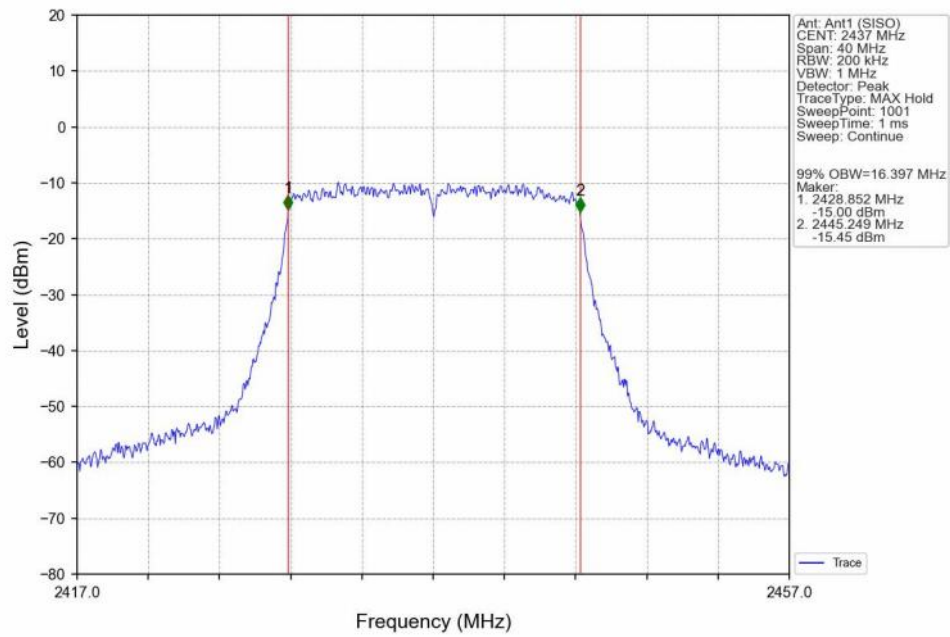
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



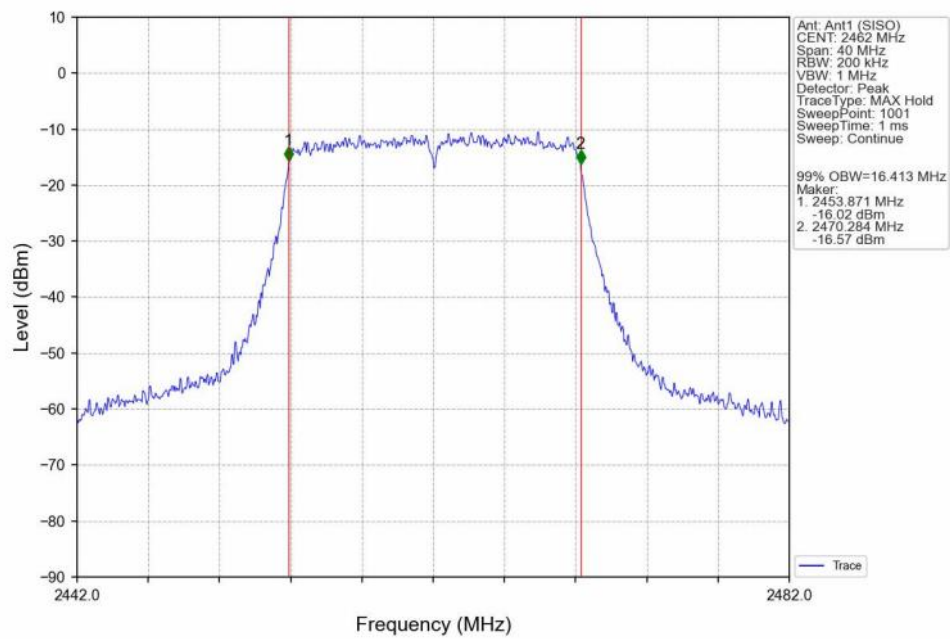
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



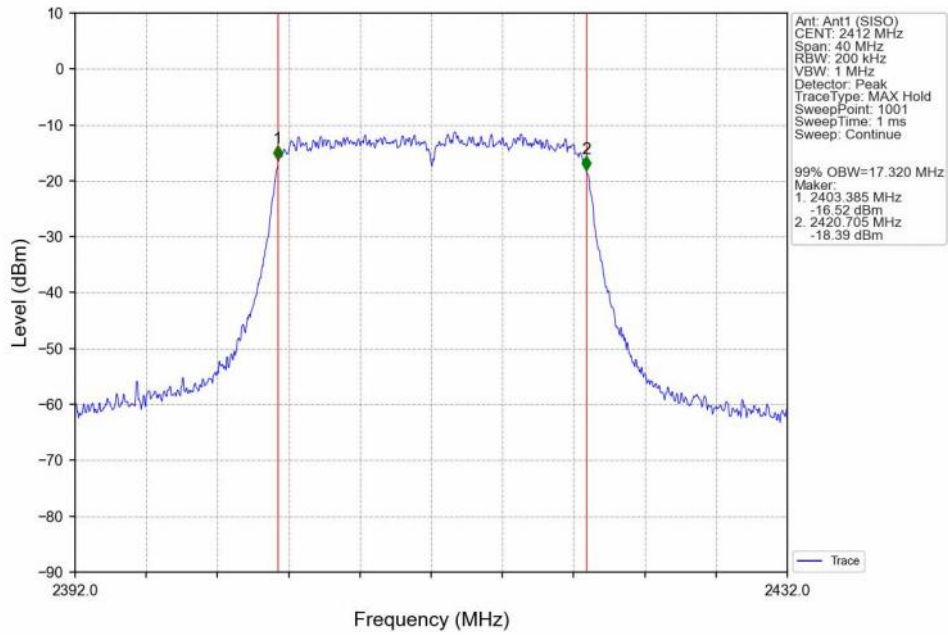
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



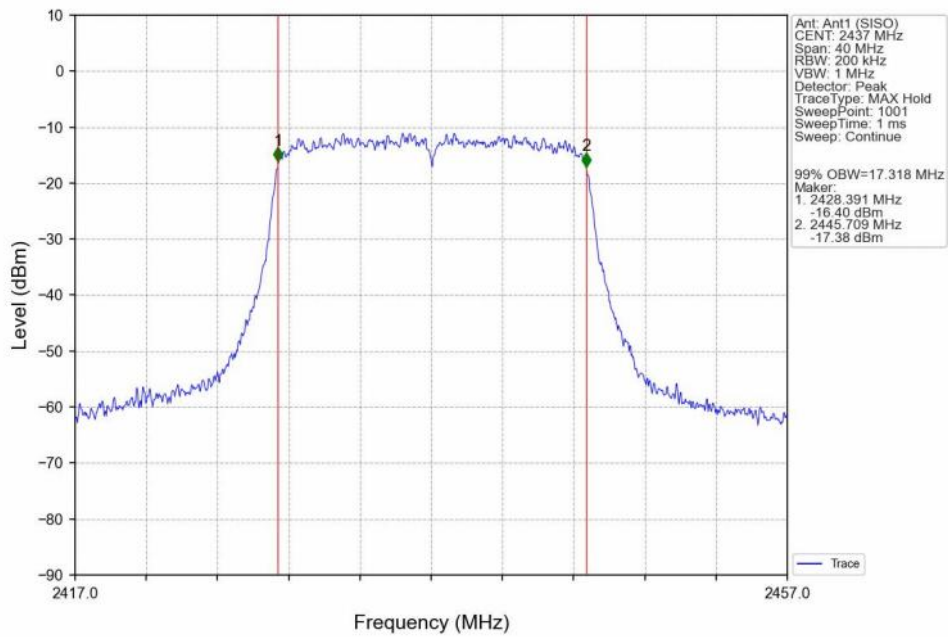
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



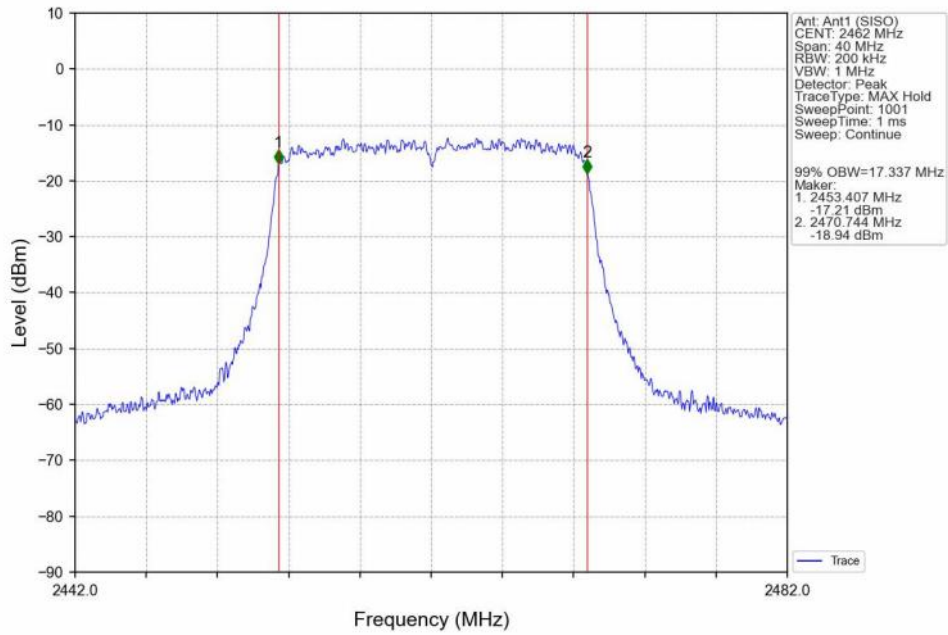
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



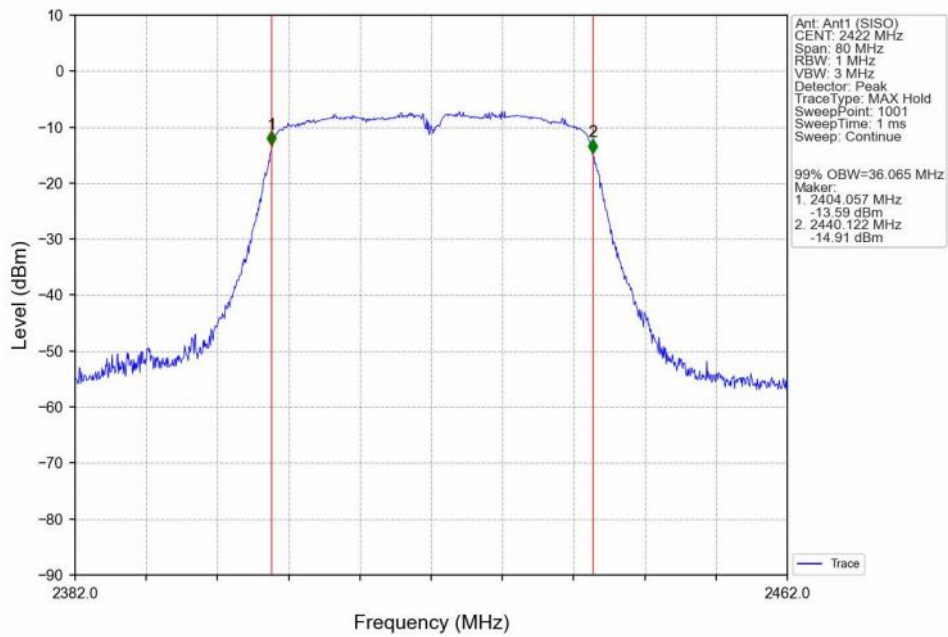
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



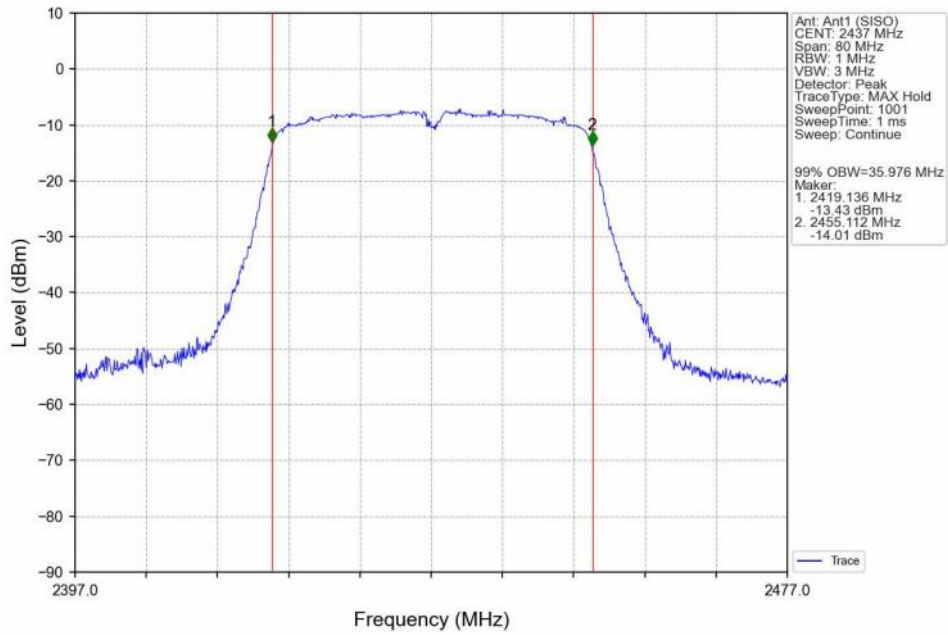
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



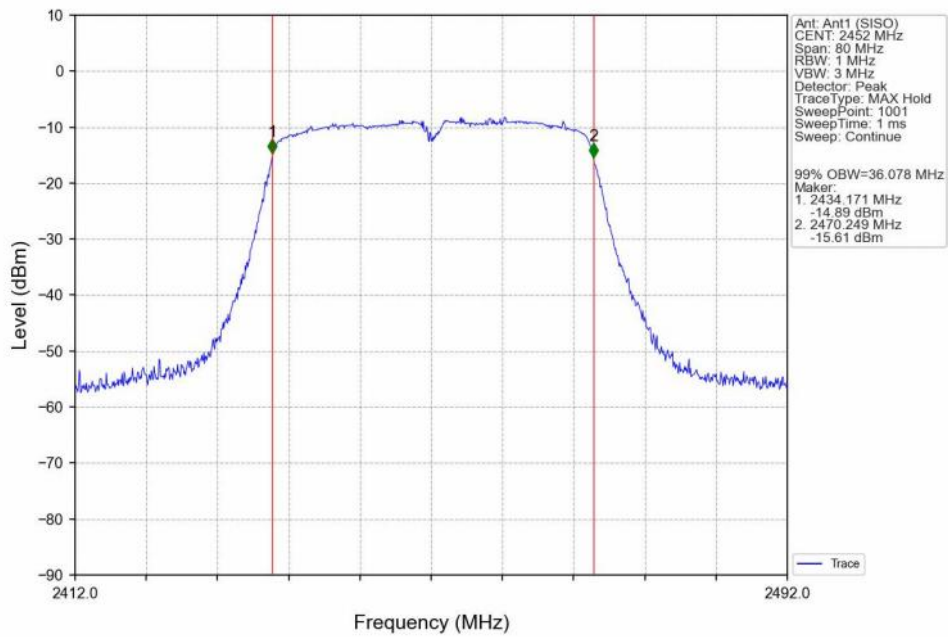
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

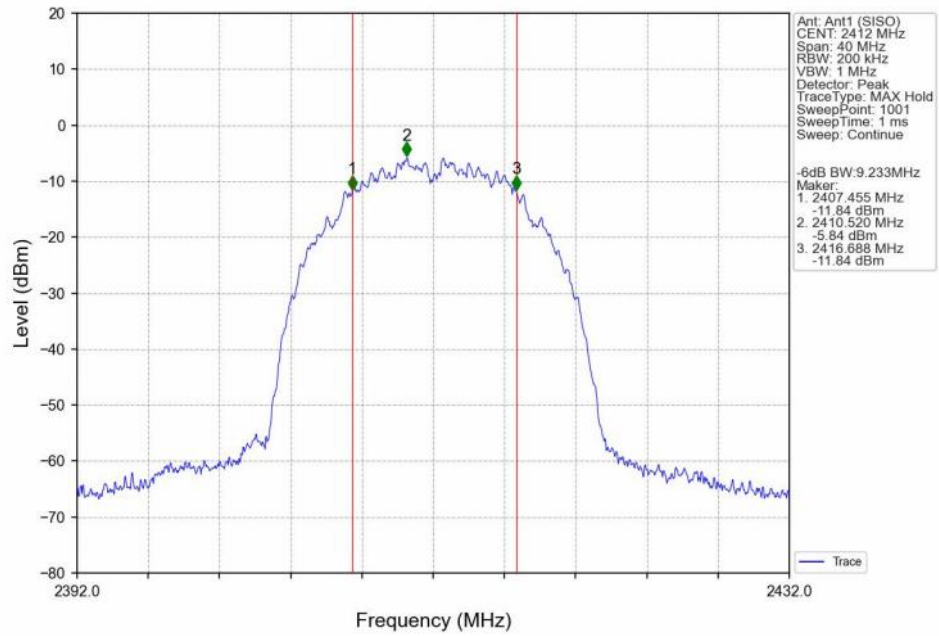


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

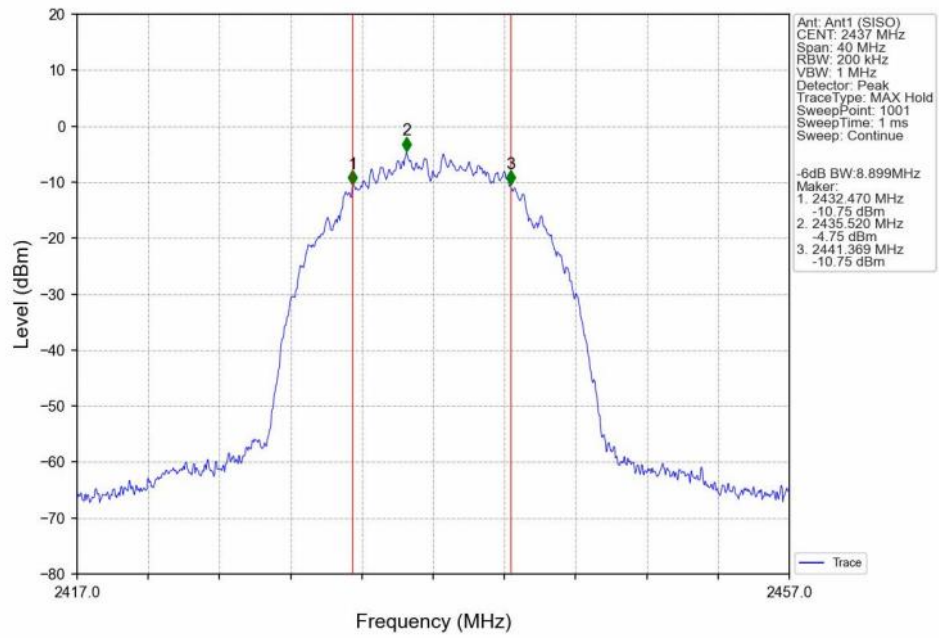


2.2.2 6dB BW

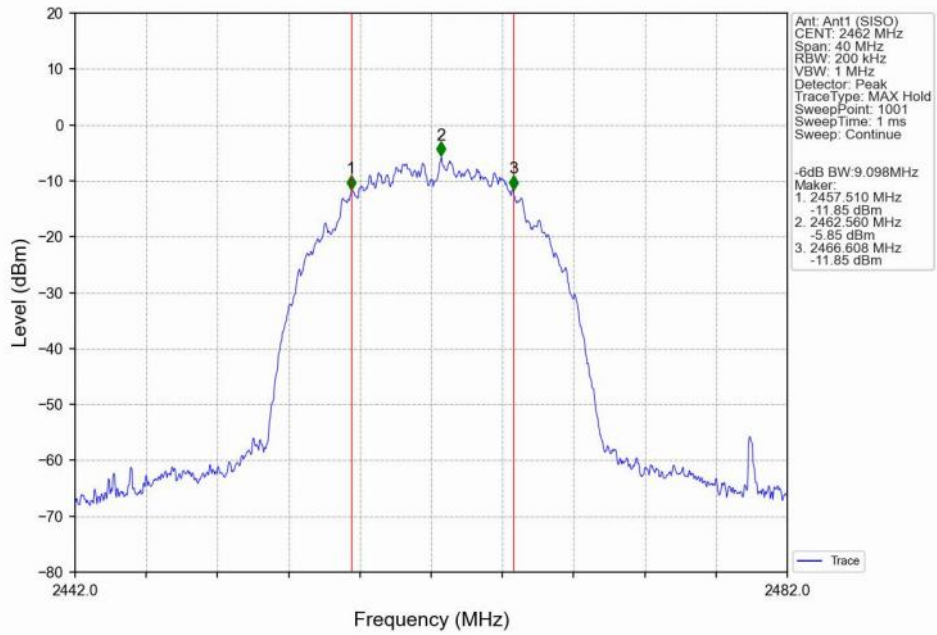
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



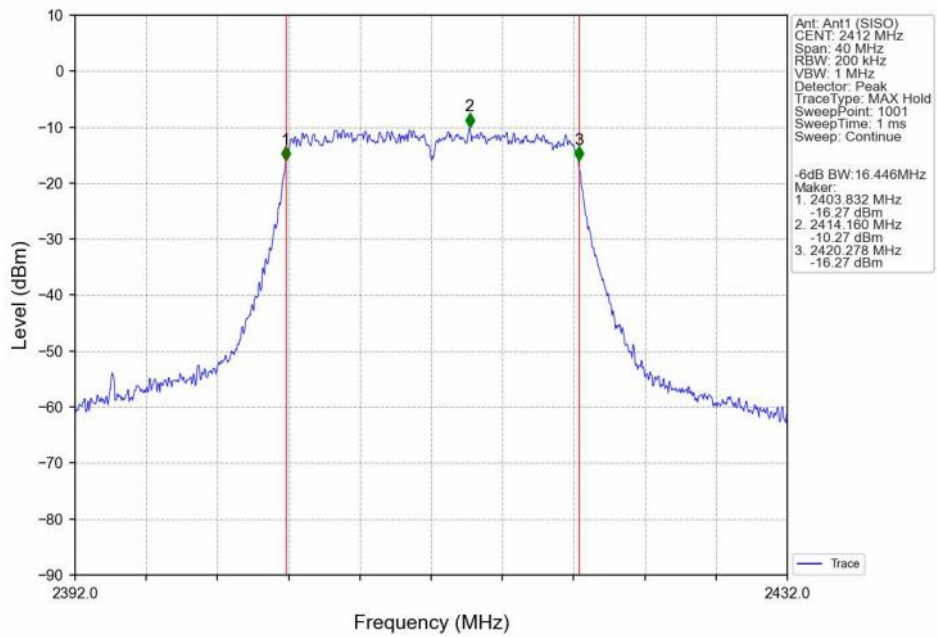
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



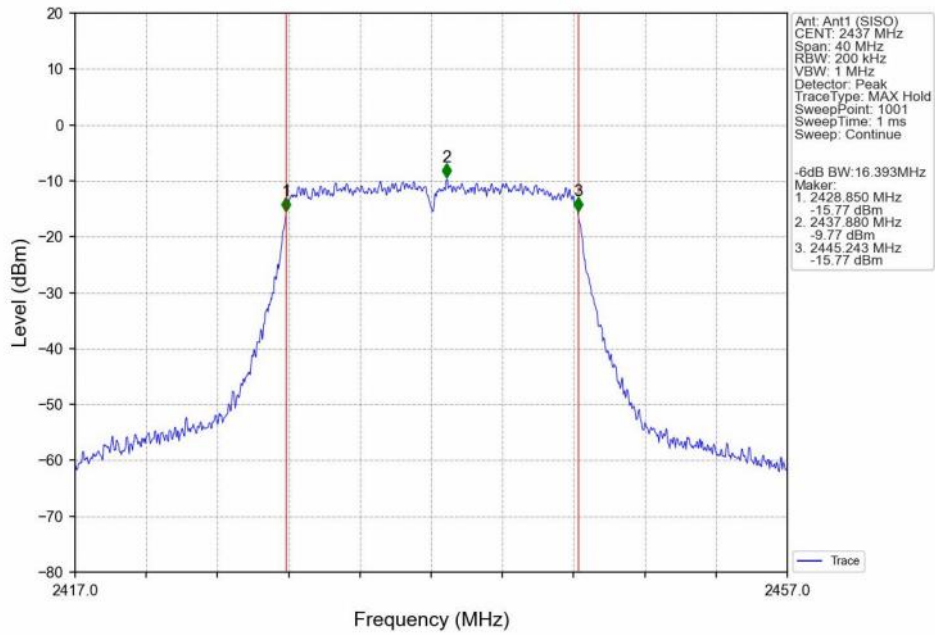
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



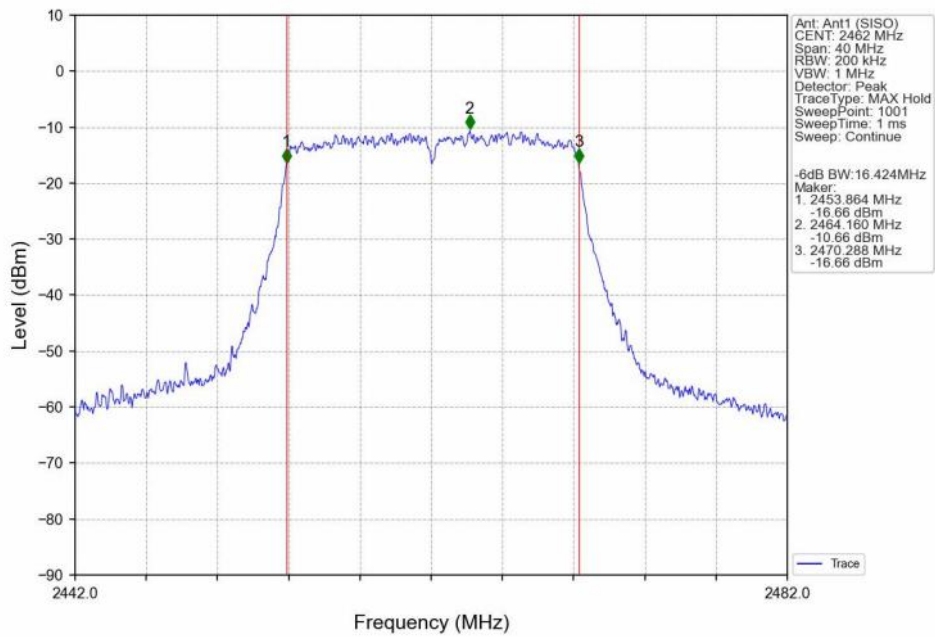
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



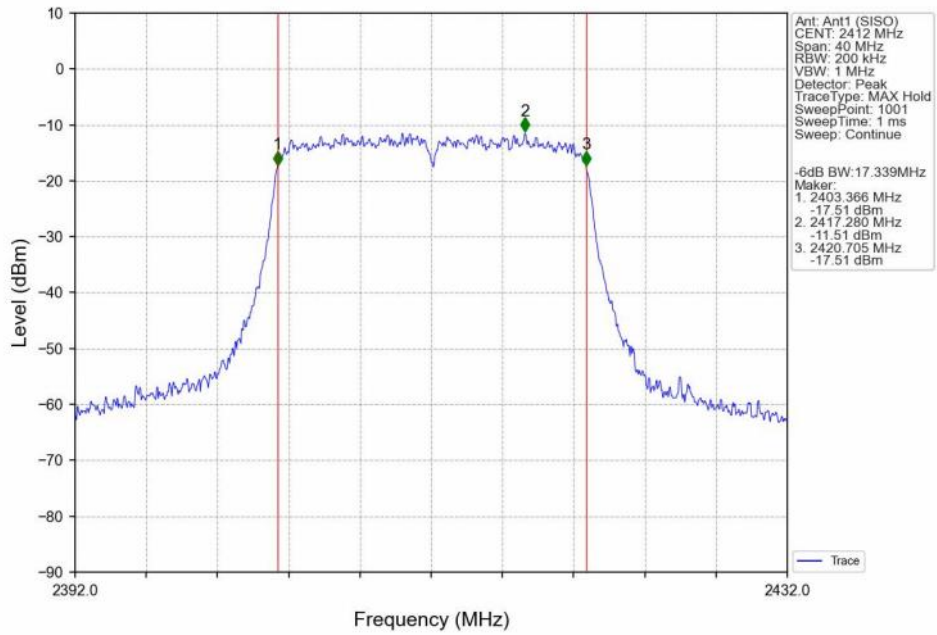
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



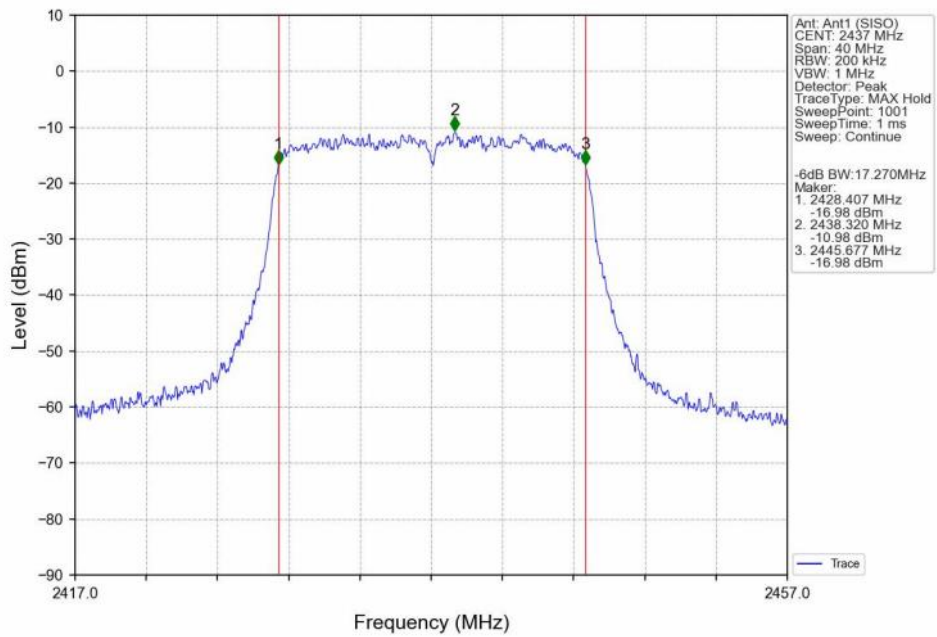
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



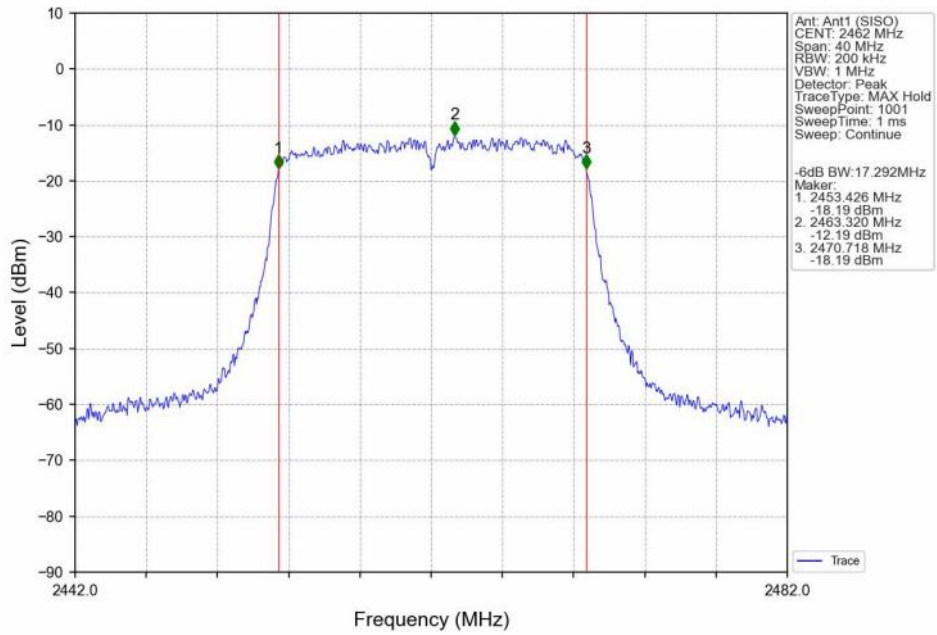
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



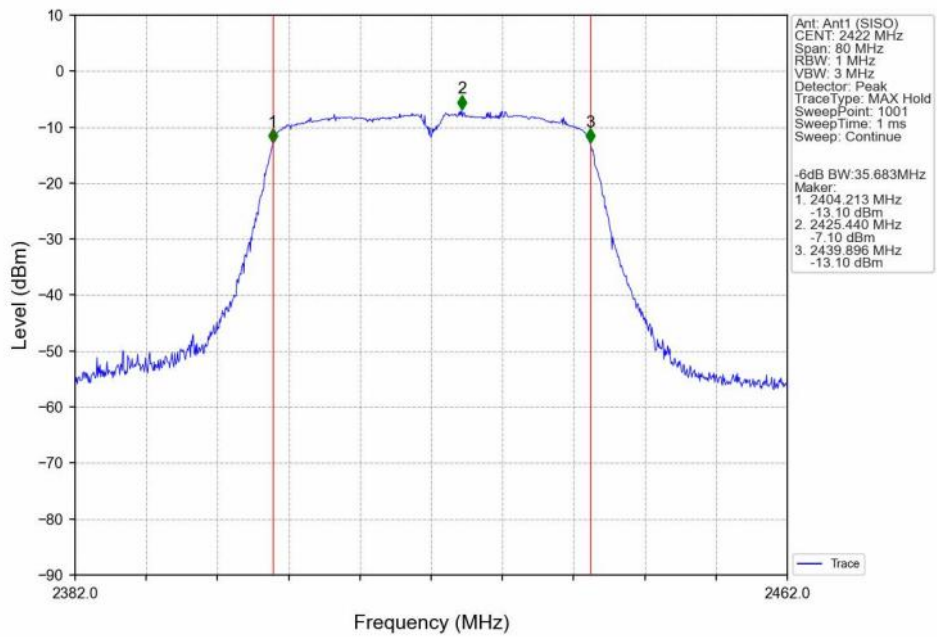
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



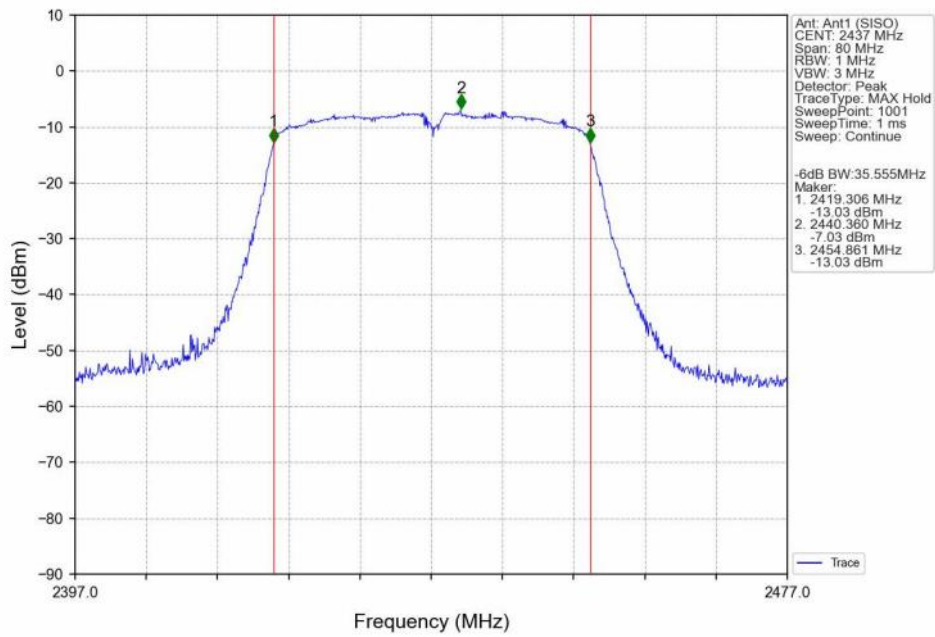
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



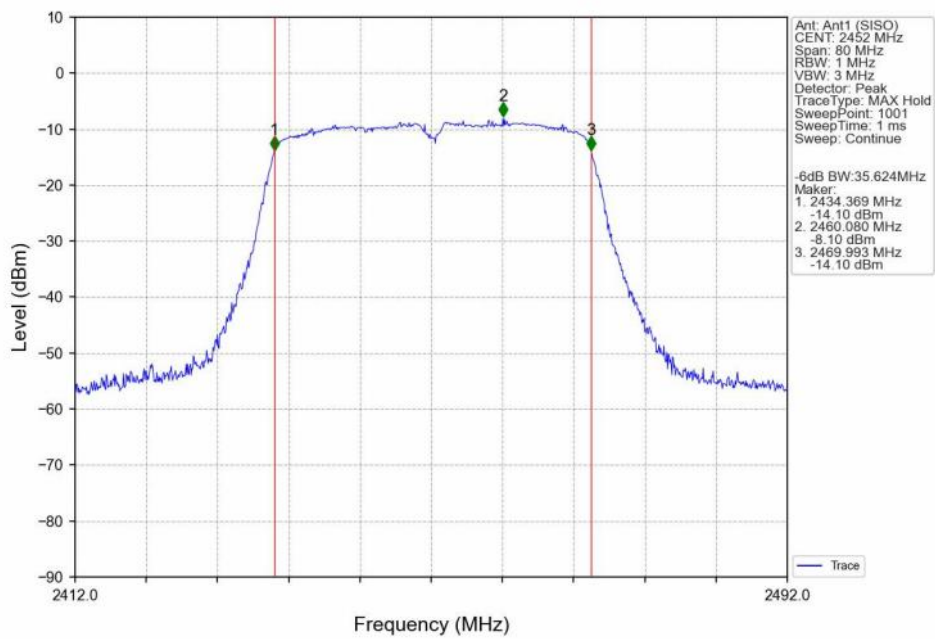
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

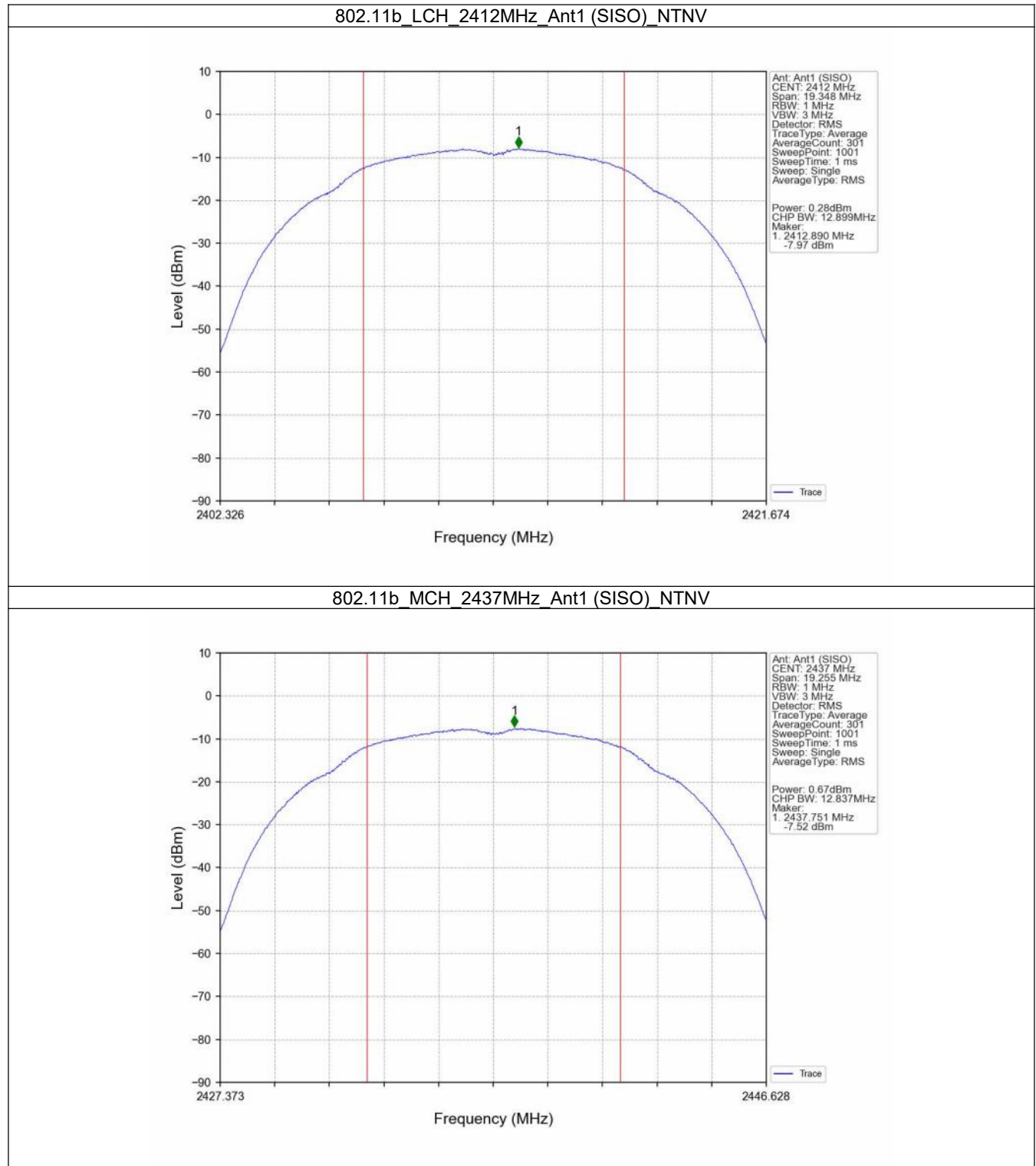
3.1 Test Result

3.1.1 Power

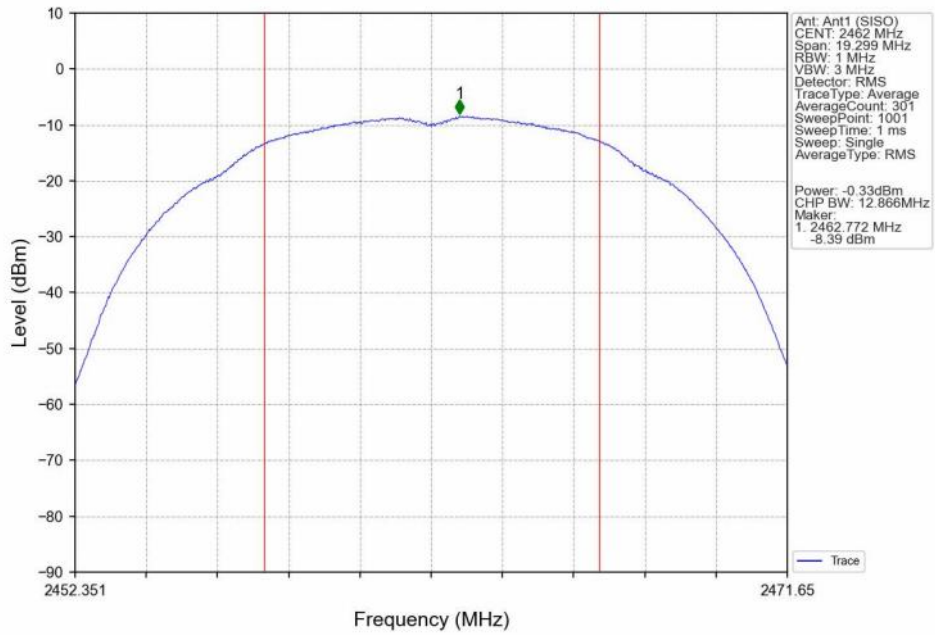
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	0.28	<=30	Pass
		2437	0.67	<=30	Pass
		2462	-0.33	<=30	Pass
802.11g	SISO	2412	-0.32	<=30	Pass
		2437	0.00	<=30	Pass
		2462	-0.83	<=30	Pass
802.11n (HT20)	SISO	2412	-1.44	<=30	Pass
		2437	-1.11	<=30	Pass
		2462	-2.20	<=30	Pass
802.11n (HT40)	SISO	2422	-1.44	<=30	Pass
		2437	-1.51	<=30	Pass
		2452	-2.65	<=30	Pass
Note1: Antenna Gain: Ant1: 2.30dBi;					

3.2 Test Graph

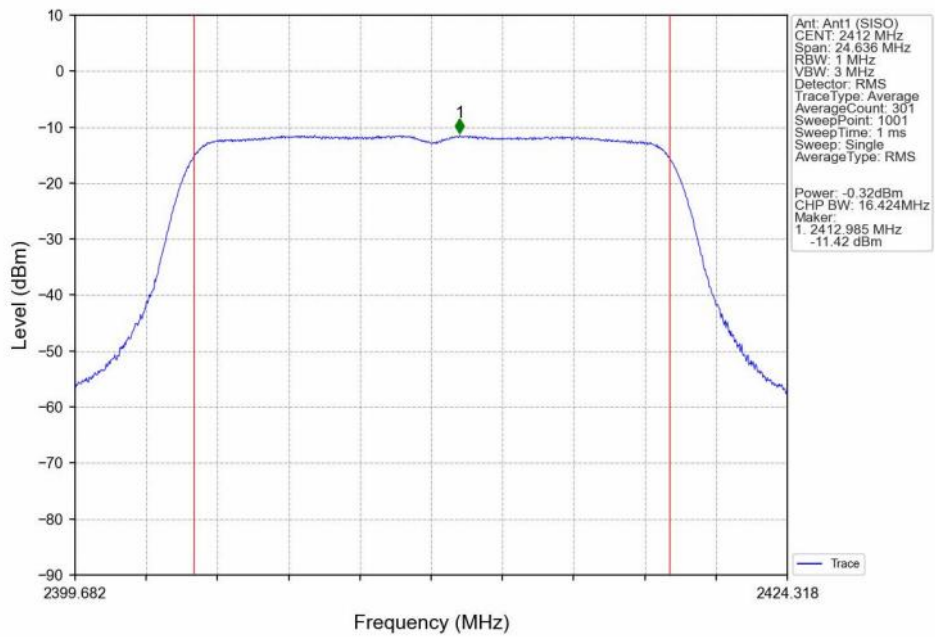
3.2.1 Power



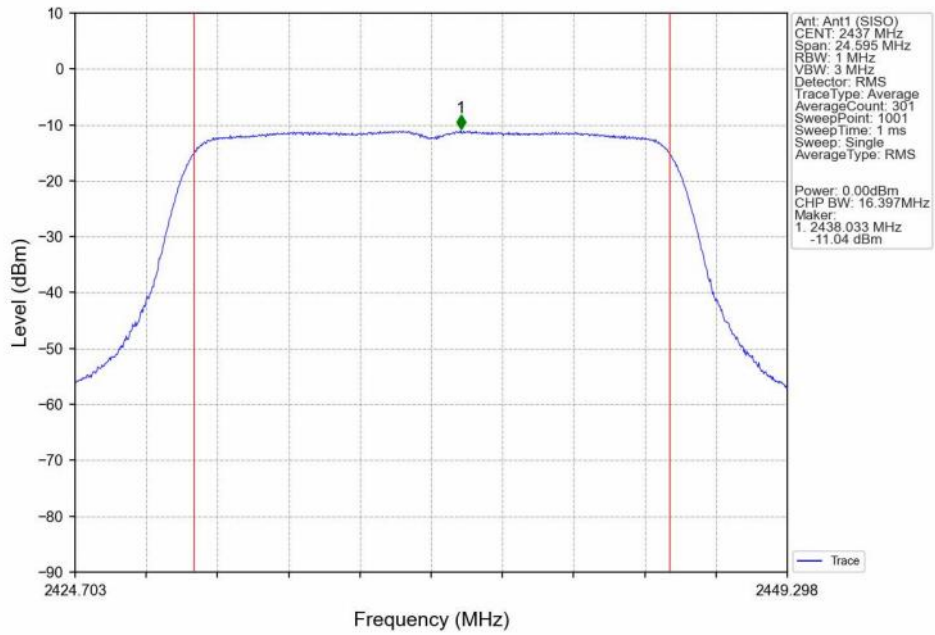
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



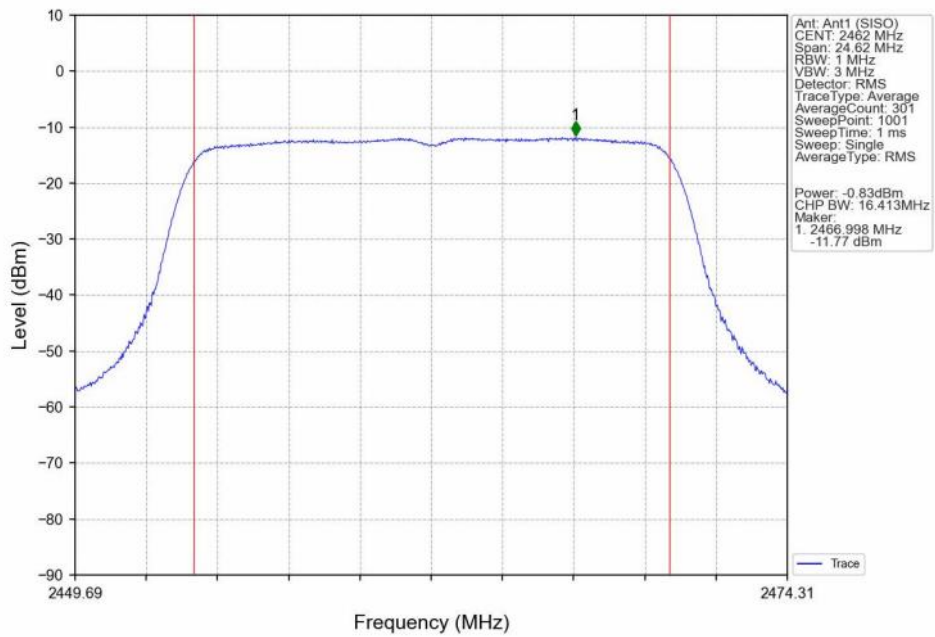
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

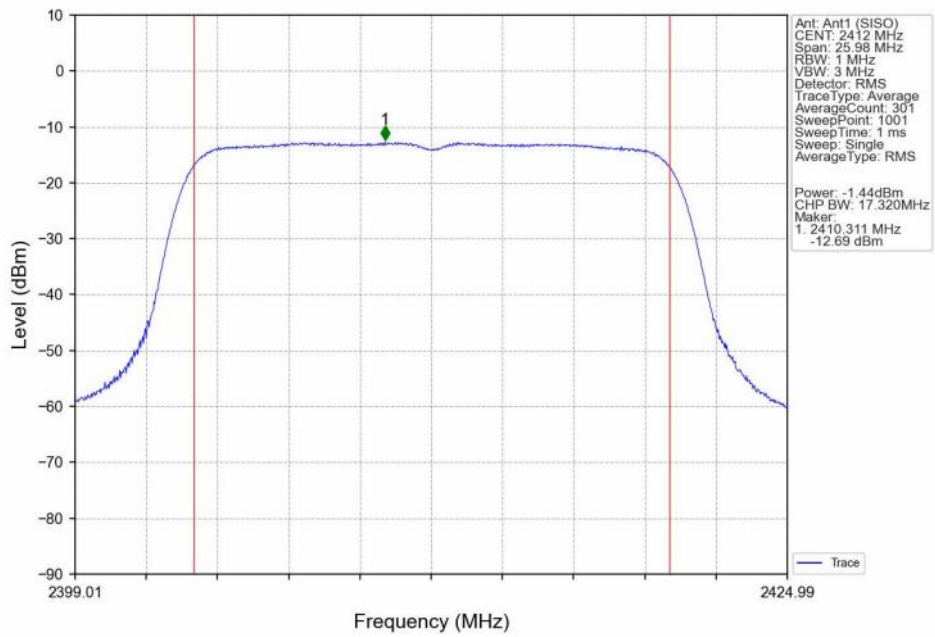


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

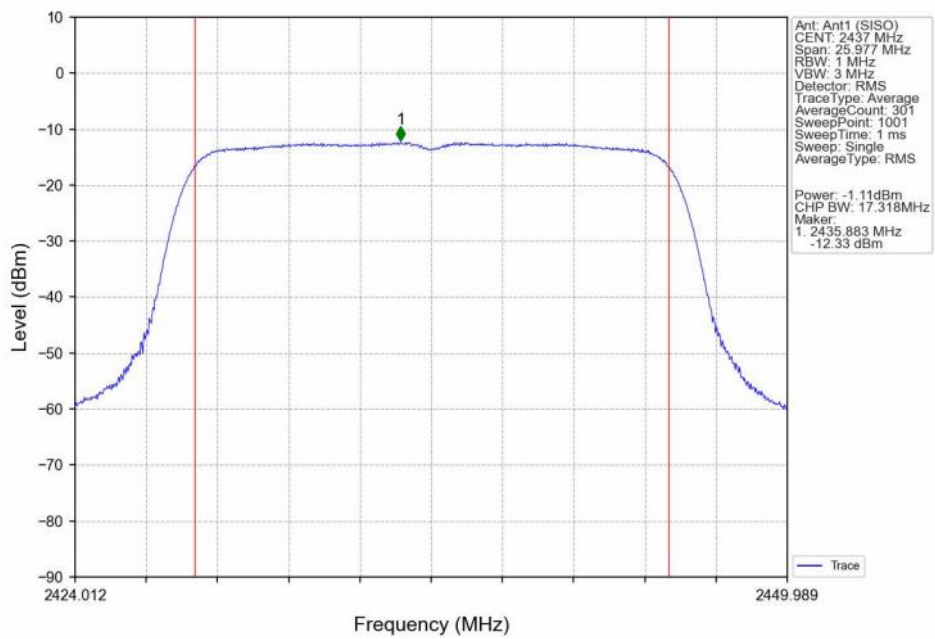


FCC ID: 2BTR9-X4PRO

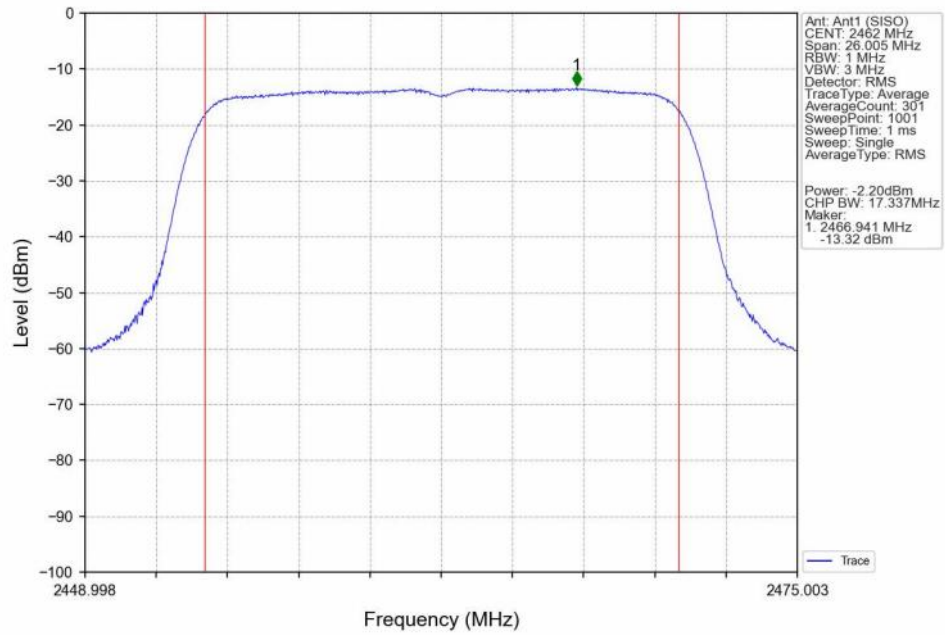
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



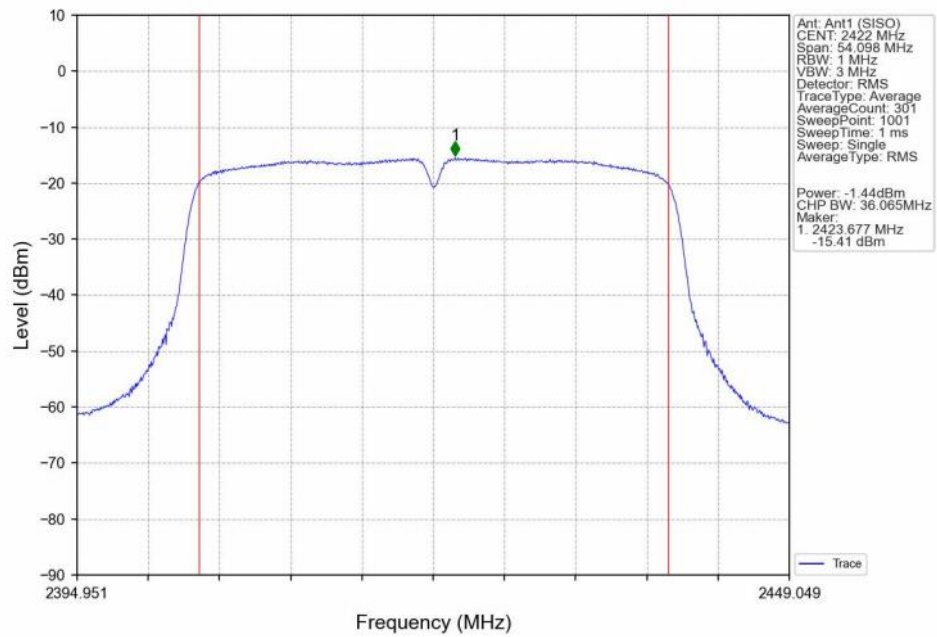
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



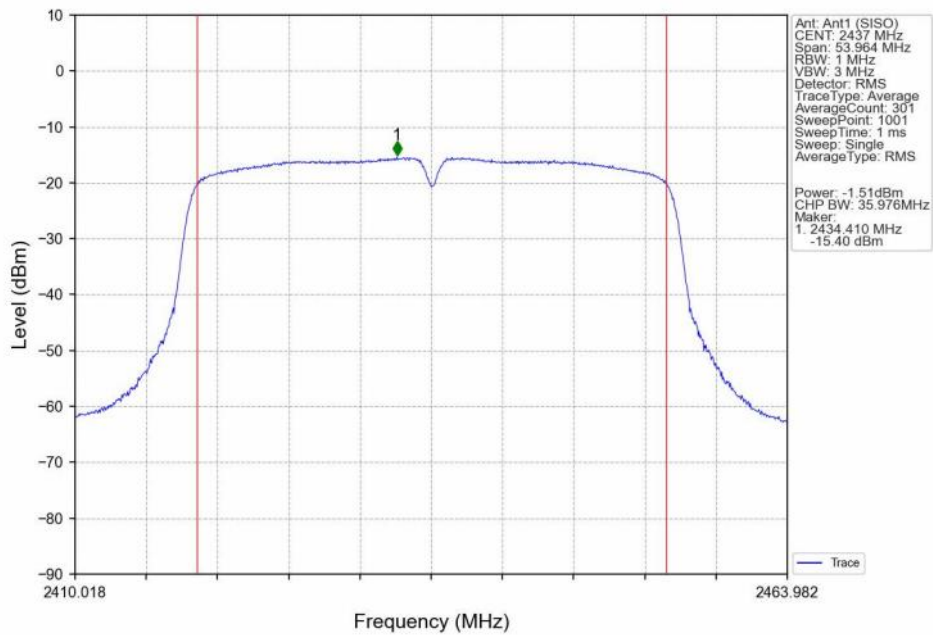
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



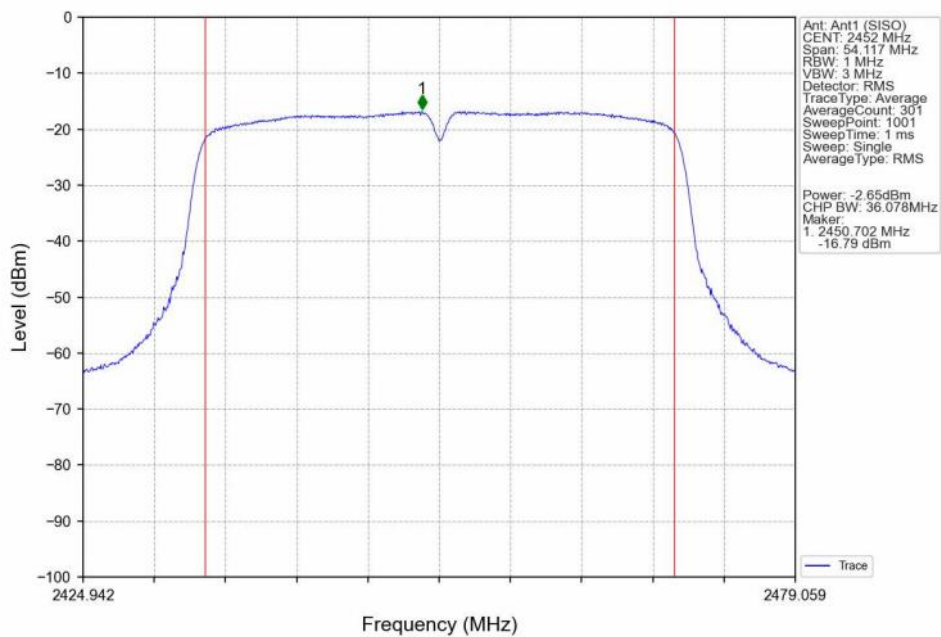
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

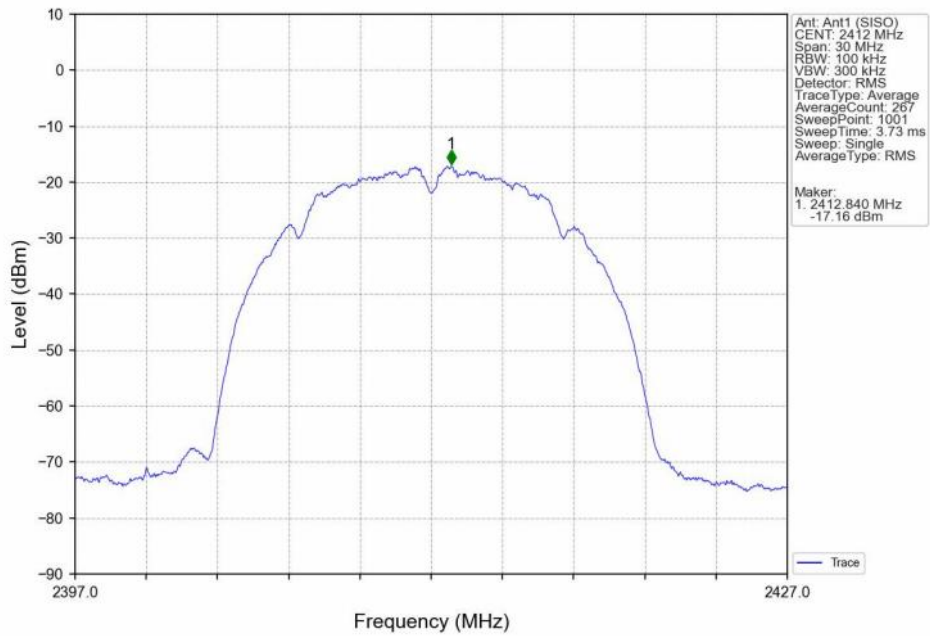
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	-17.16dBm/100kHz	<=8	Pass
		2437	-16.86dBm/100kHz	<=8	Pass
		2462	-17.73dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-20.19dBm/100kHz	<=8	Pass
		2437	-19.91dBm/100kHz	<=8	Pass
		2462	-20.80dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-21.55dBm/100kHz	<=8	Pass
		2437	-21.06dBm/100kHz	<=8	Pass
		2462	-22.18dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-24.44dBm/100kHz	<=8	Pass
		2437	-24.32dBm/100kHz	<=8	Pass
		2452	-25.52dBm/100kHz	<=8	Pass
Note1: Antenna Gain: Ant1: 2.30dBi;					

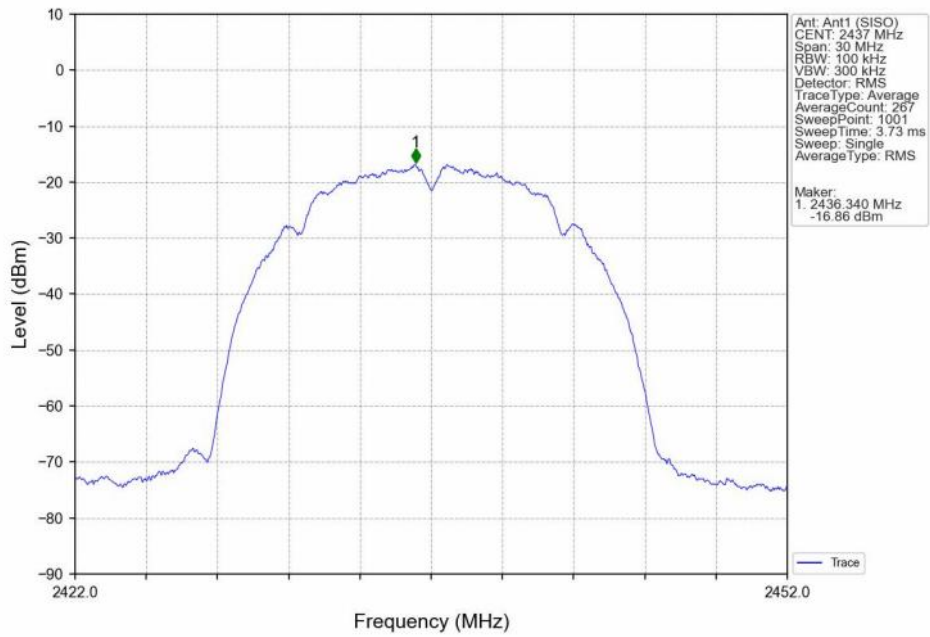
4.2 Test Graph

4.2.1 PSD

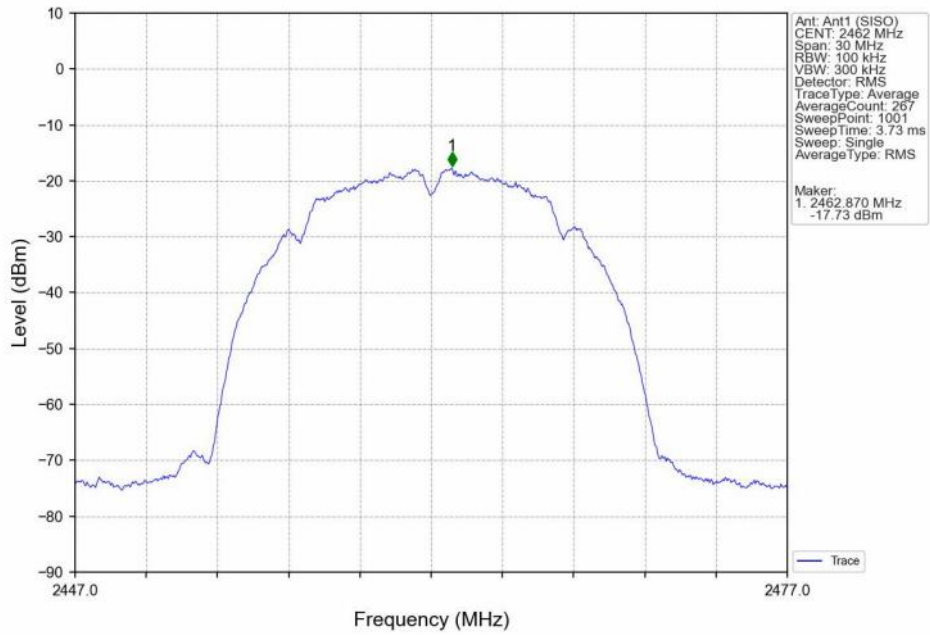
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



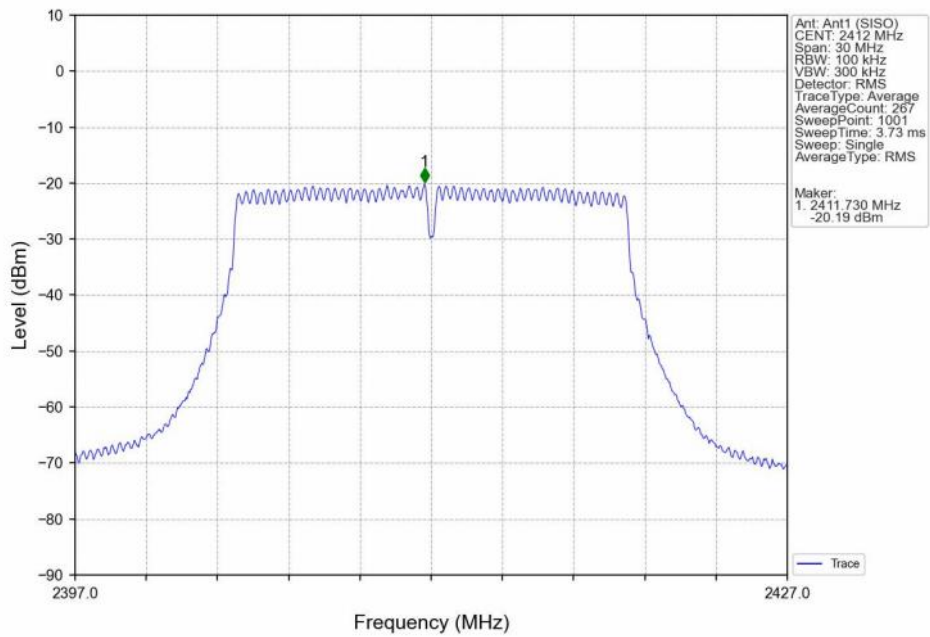
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



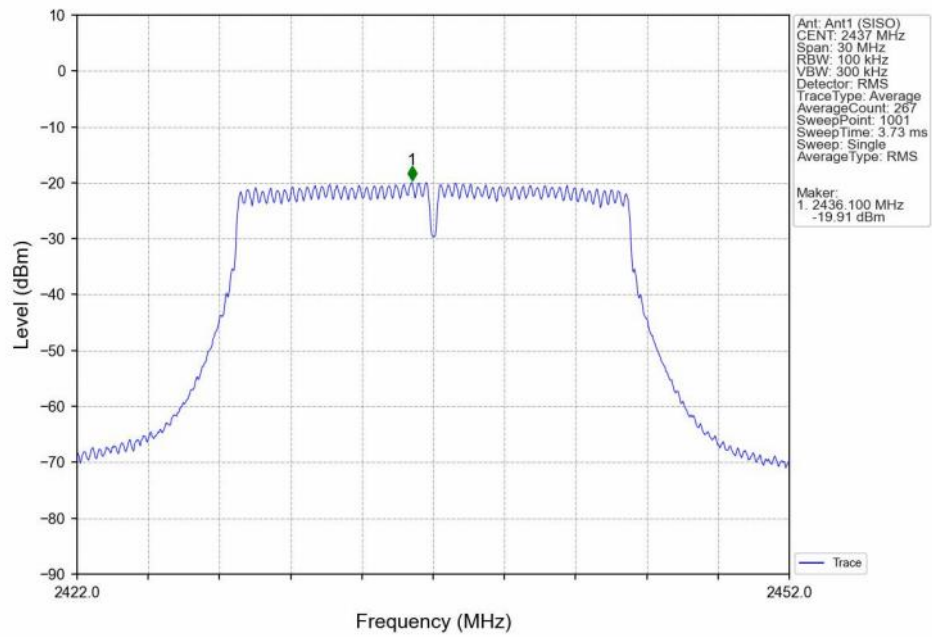
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



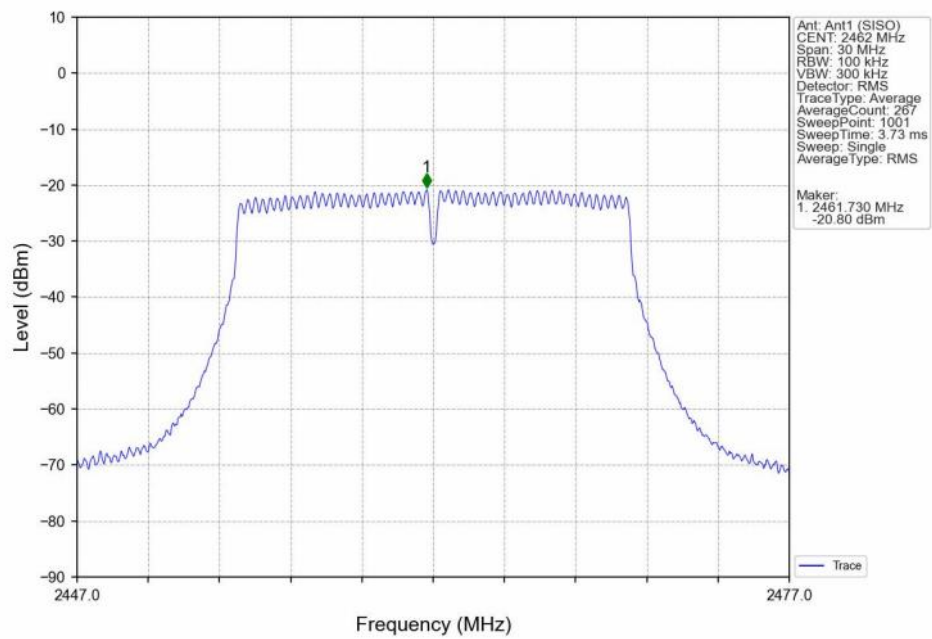
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



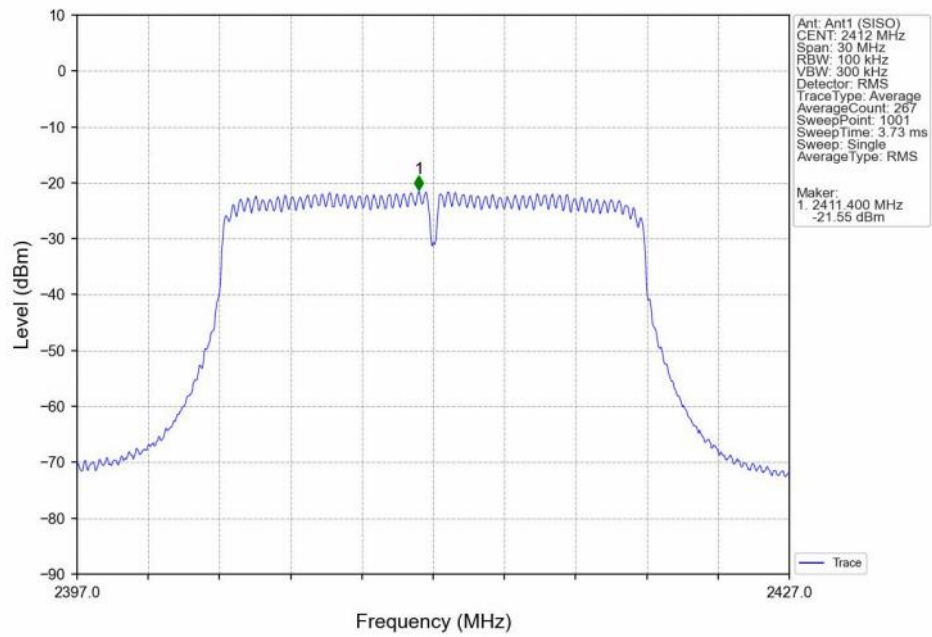
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



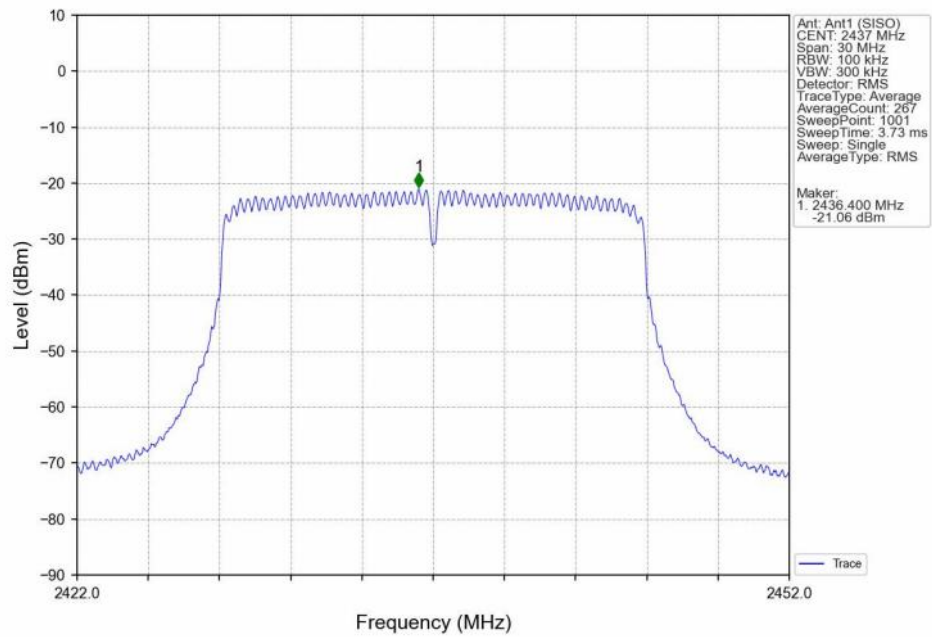
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



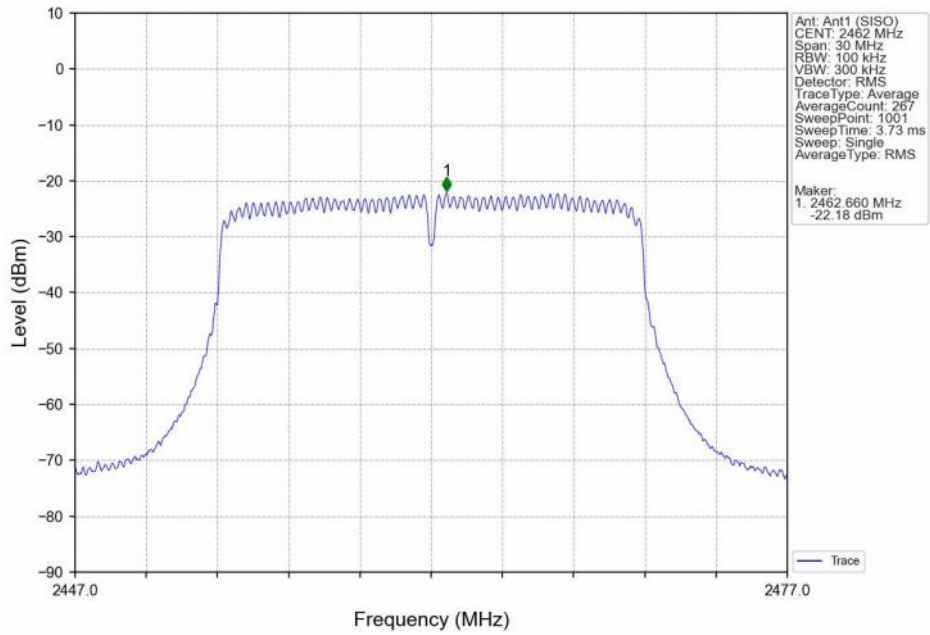
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



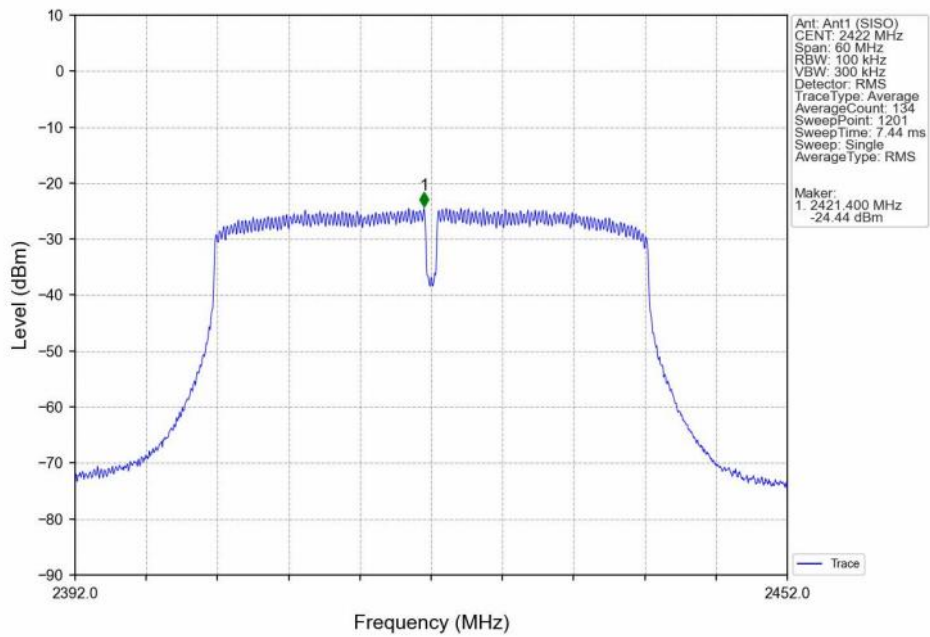
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



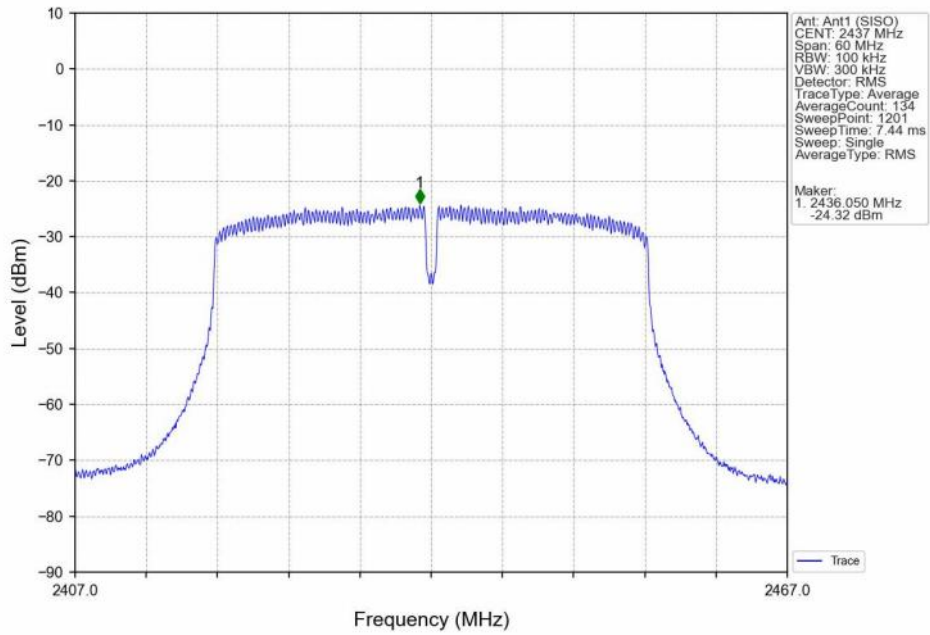
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



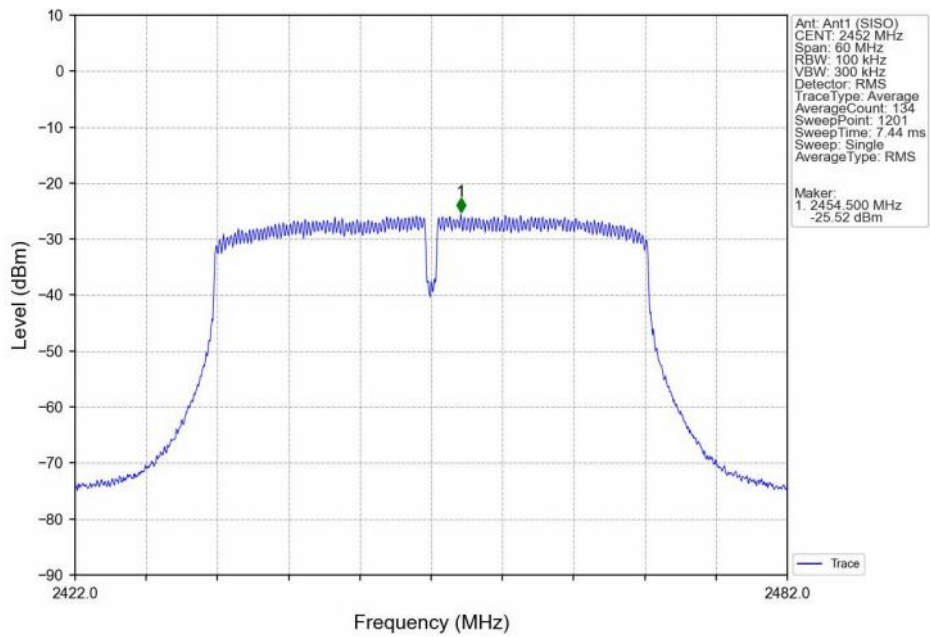
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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	-8.11
		2437	1	-7.17
		2462	1	-9.28
802.11g	SISO	2412	1	-11.37
		2437	1	-10.73
		2462	1	-11.61
802.11n (HT20)	SISO	2412	1	-12.79
		2437	1	-11.73
		2462	1	-13.91
802.11n (HT40)	SISO	2422	1	-15.10
		2437	1	-15.10
		2452	1	-16.22

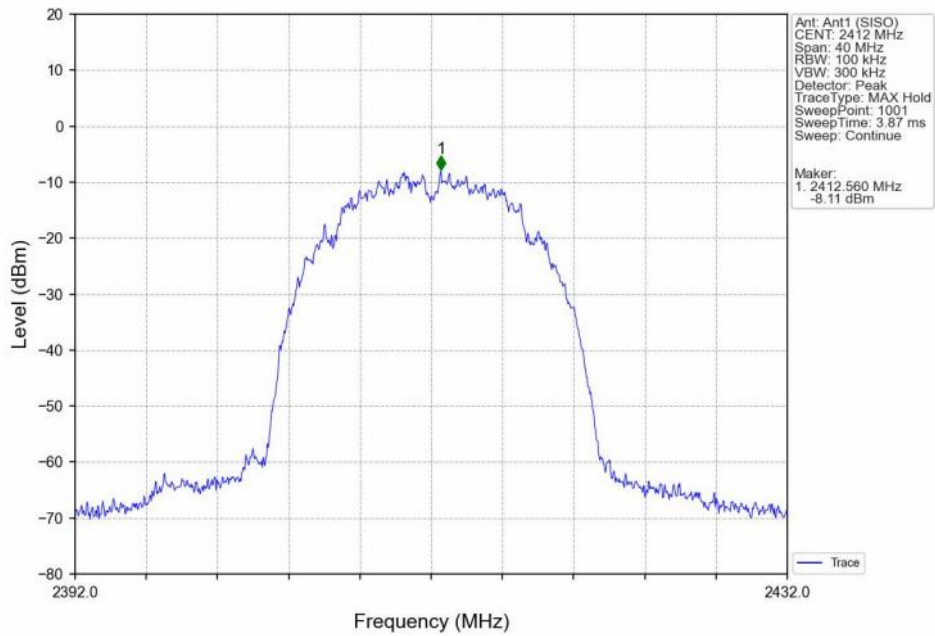
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-8.11	-38.11	Pass
		2437	1	-7.17	-37.17	Pass
		2462	1	-9.28	-39.28	Pass
802.11g	SISO	2412	1	-11.37	-41.37	Pass
		2437	1	-10.73	-40.73	Pass
		2462	1	-11.61	-41.61	Pass
802.11n (HT20)	SISO	2412	1	-12.79	-42.79	Pass
		2437	1	-11.73	-41.73	Pass
		2462	1	-13.91	-43.91	Pass
802.11n (HT40)	SISO	2422	1	-15.10	-45.10	Pass
		2437	1	-15.10	-45.10	Pass
		2452	1	-16.22	-46.22	Pass

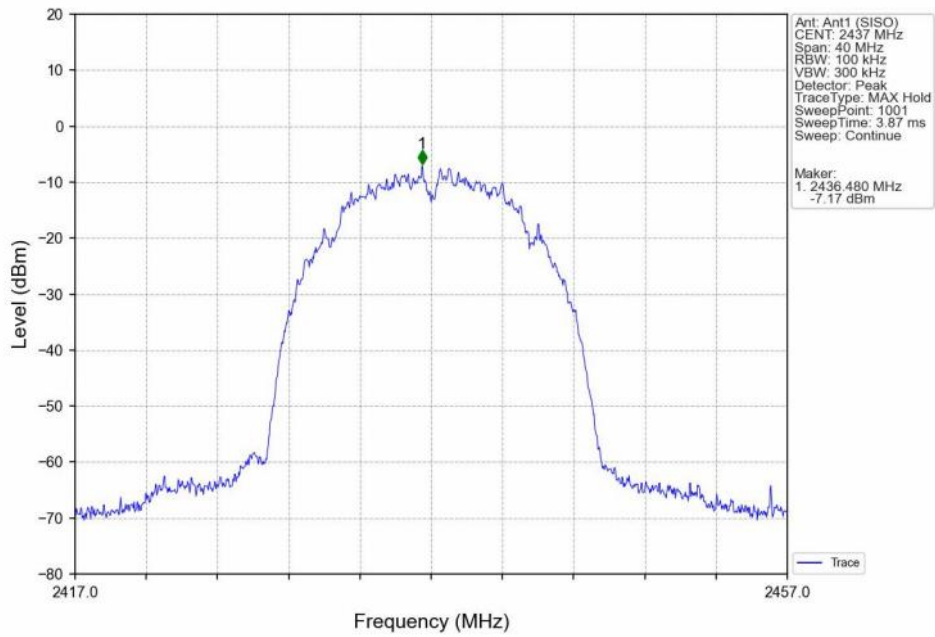
5.2 Test Graph

5.2.1 Ref

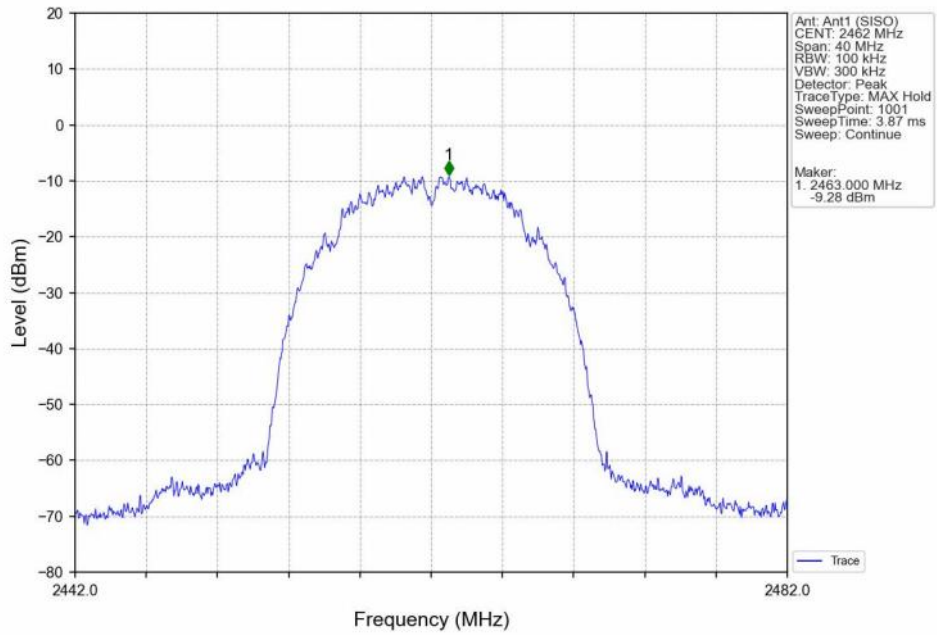
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



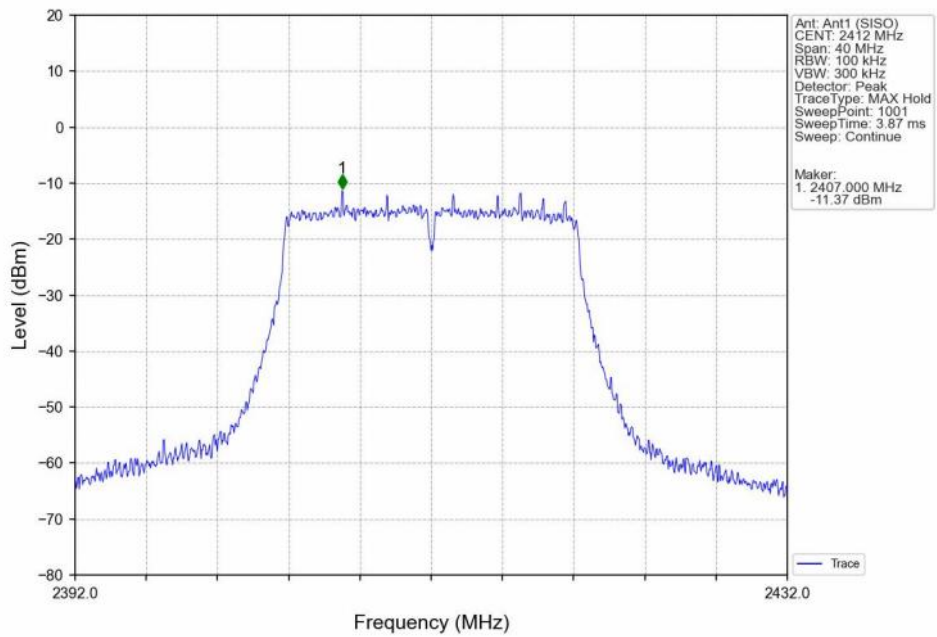
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



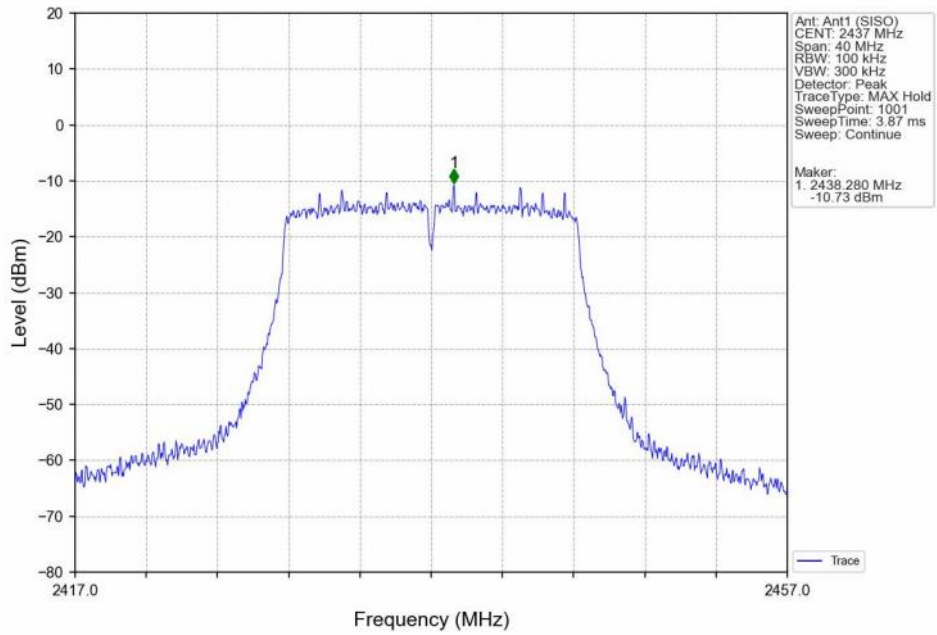
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



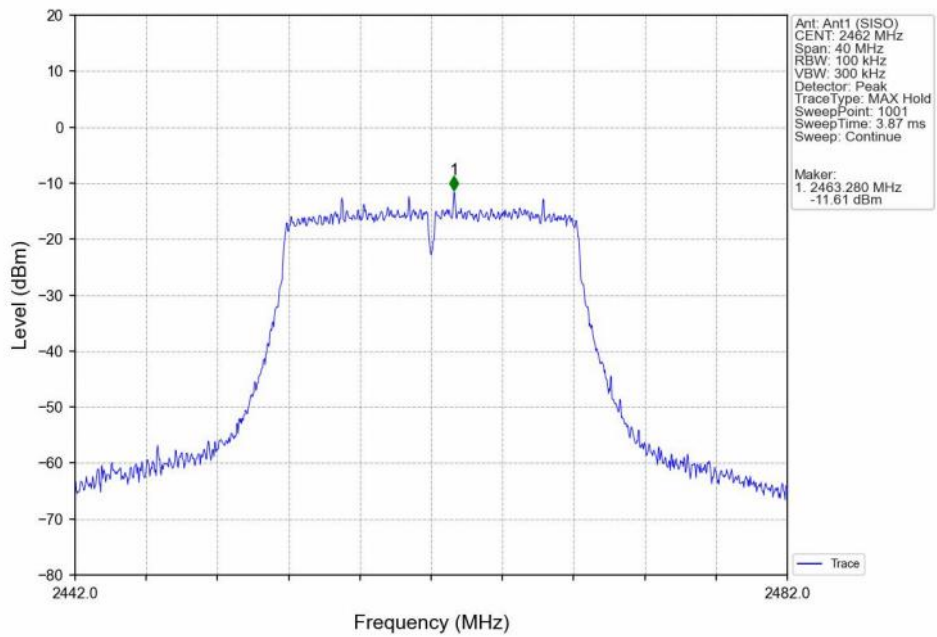
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



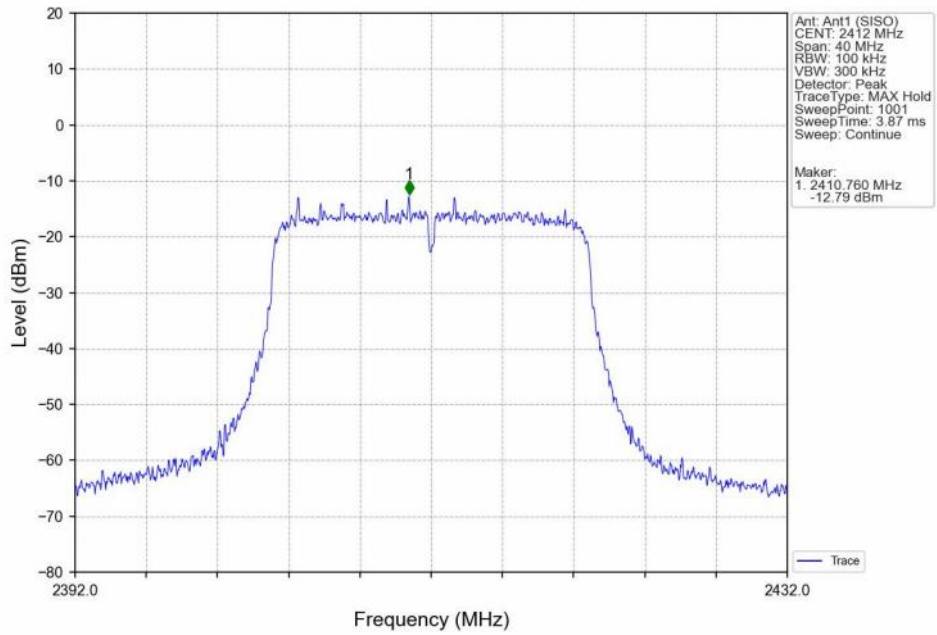
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



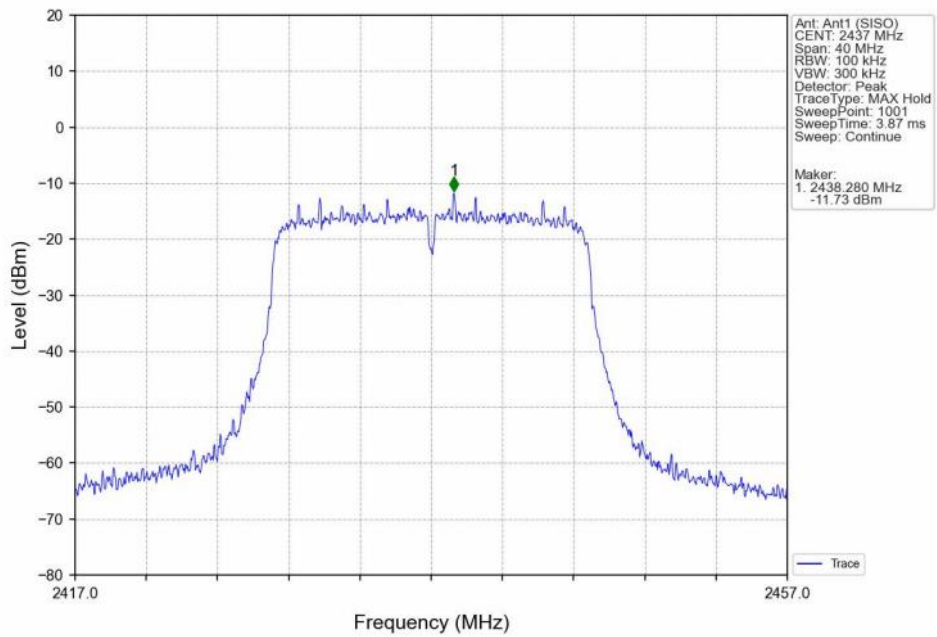
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



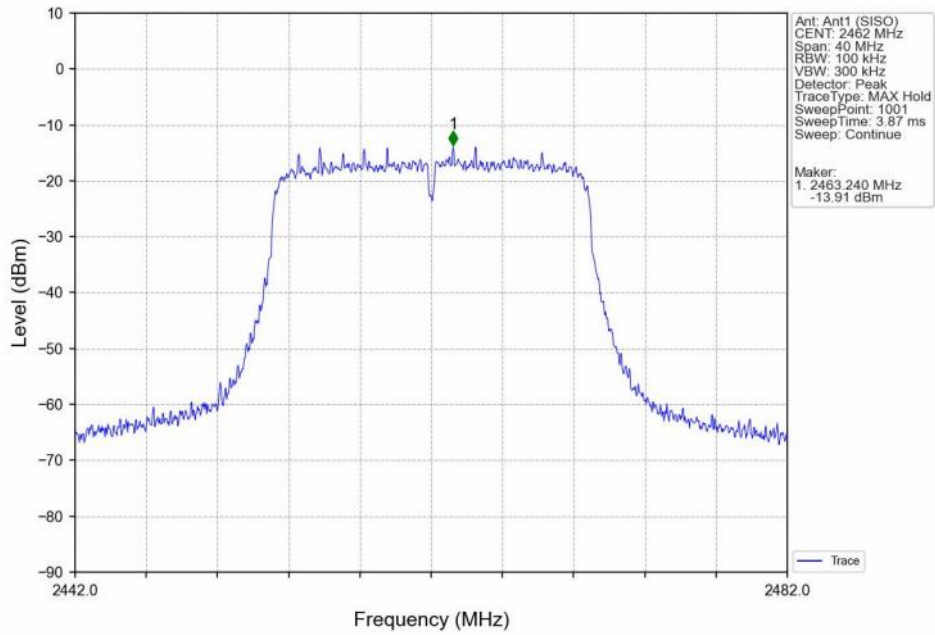
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



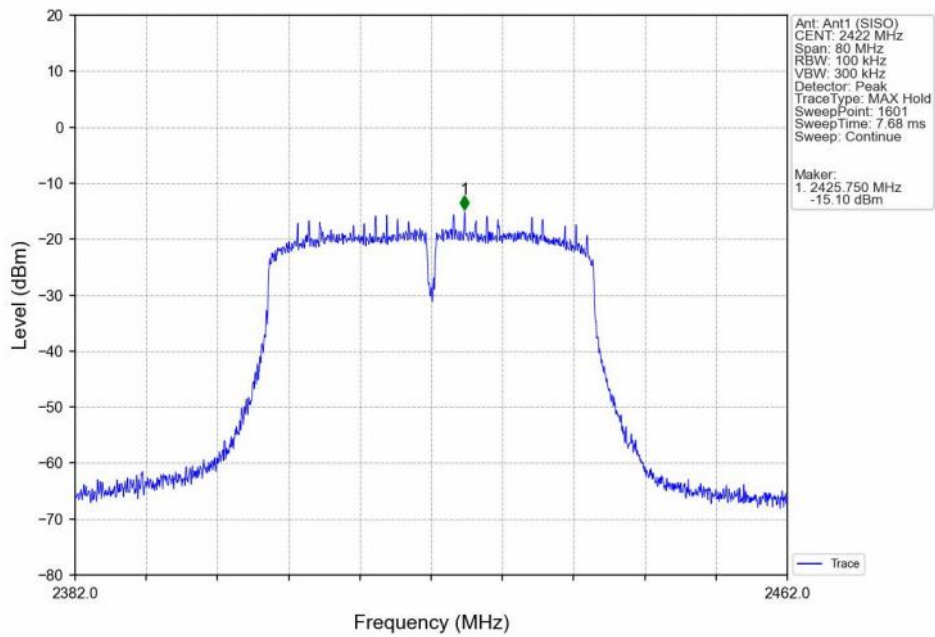
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



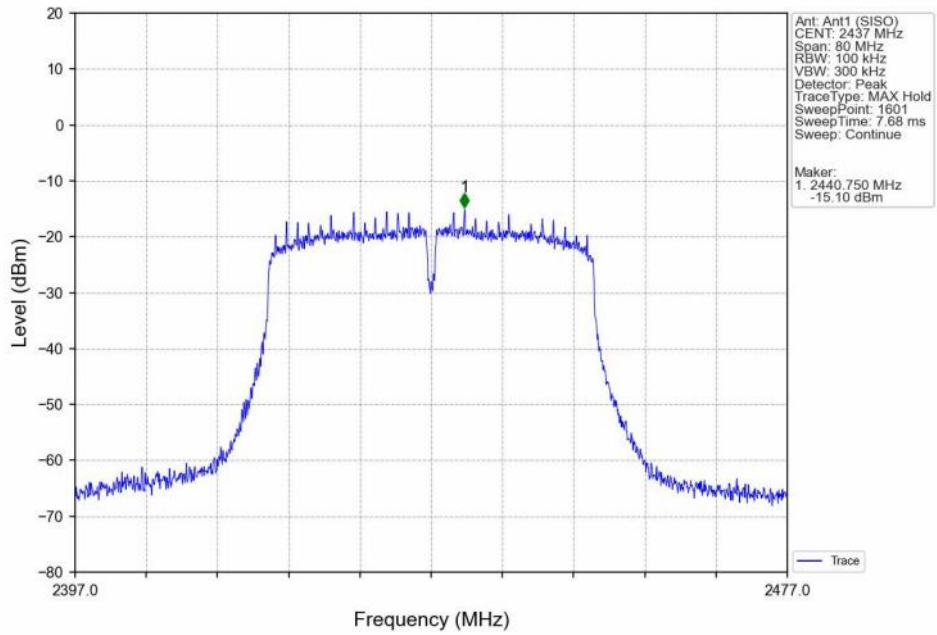
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



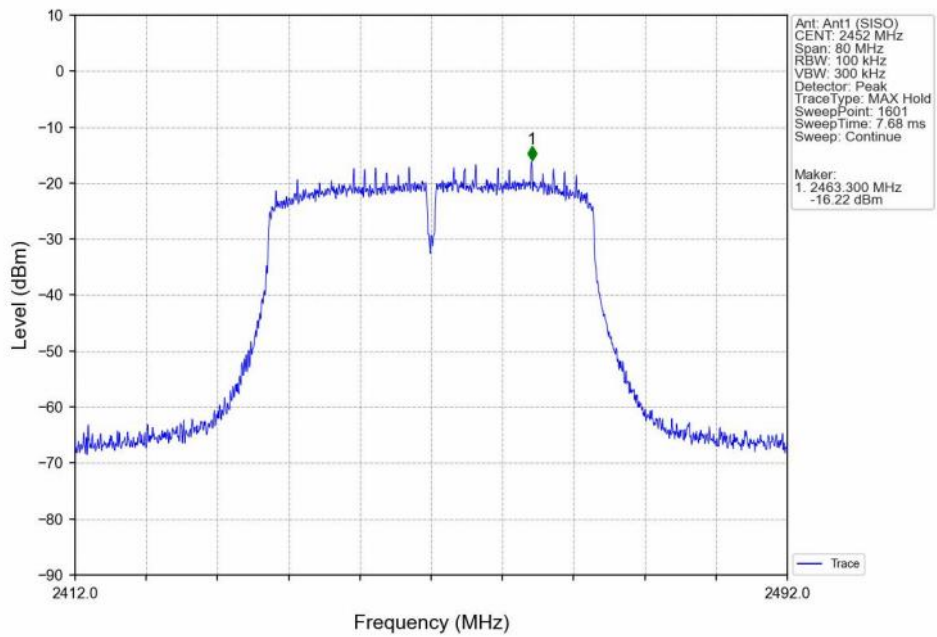
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



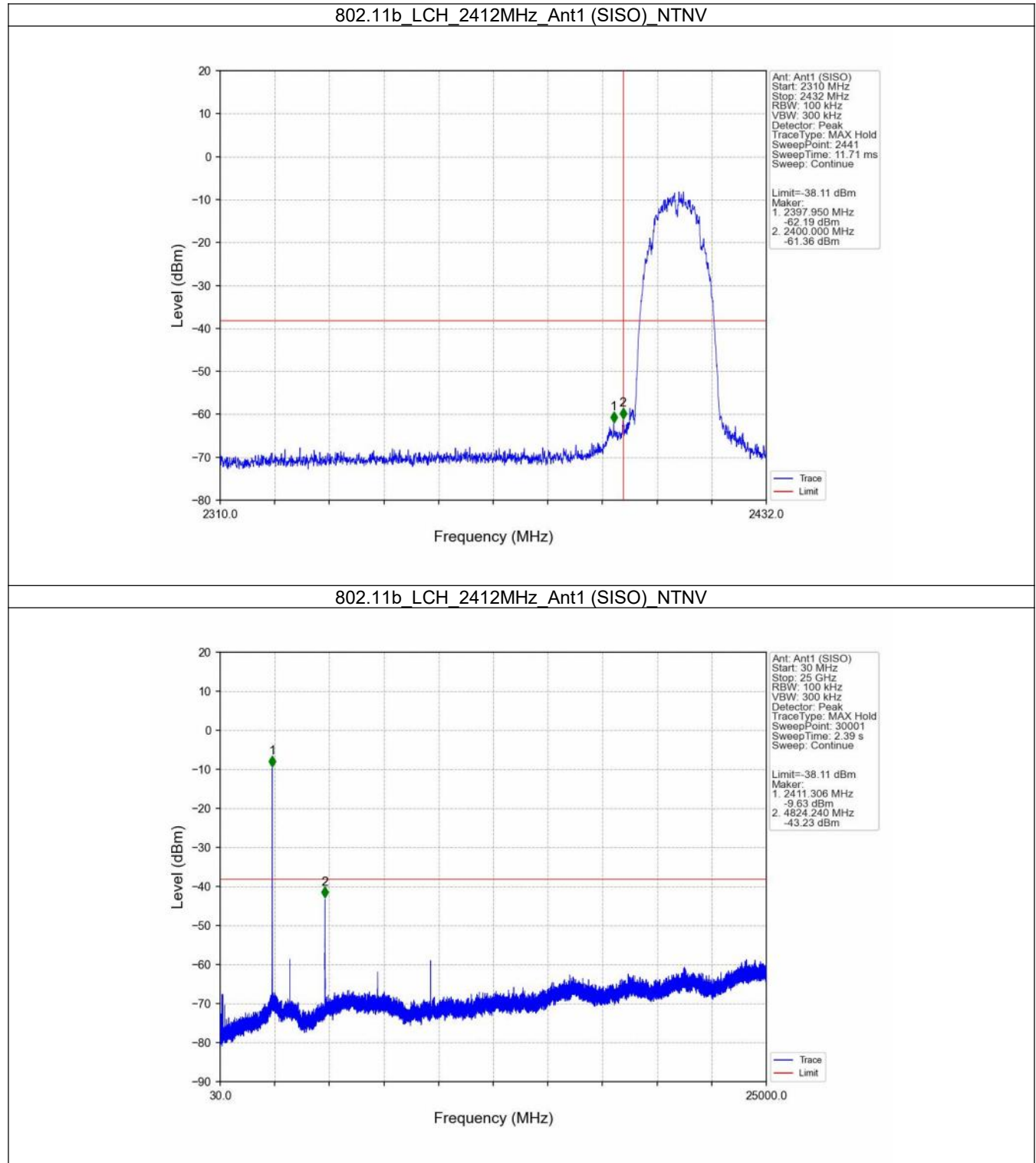
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



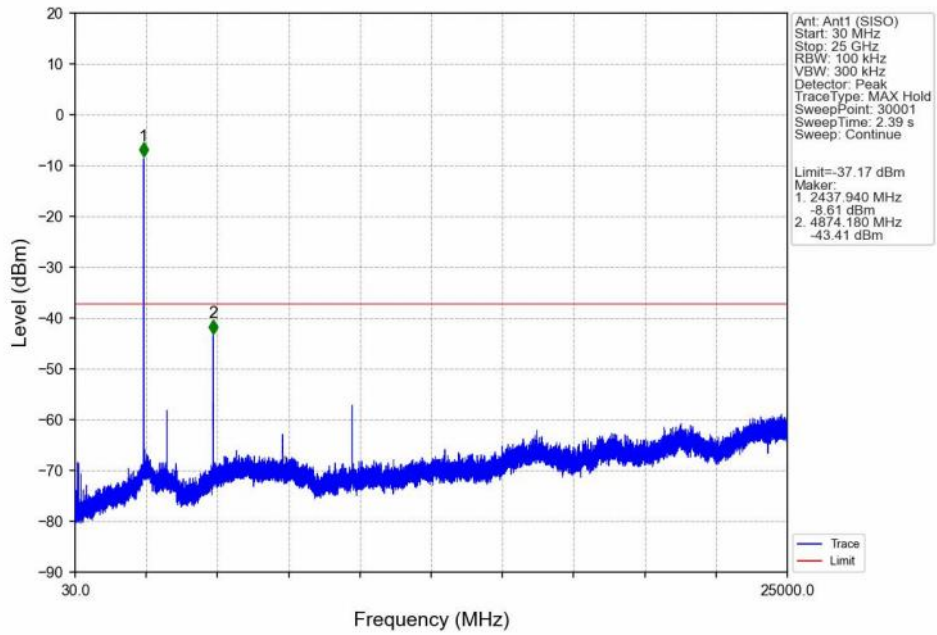
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



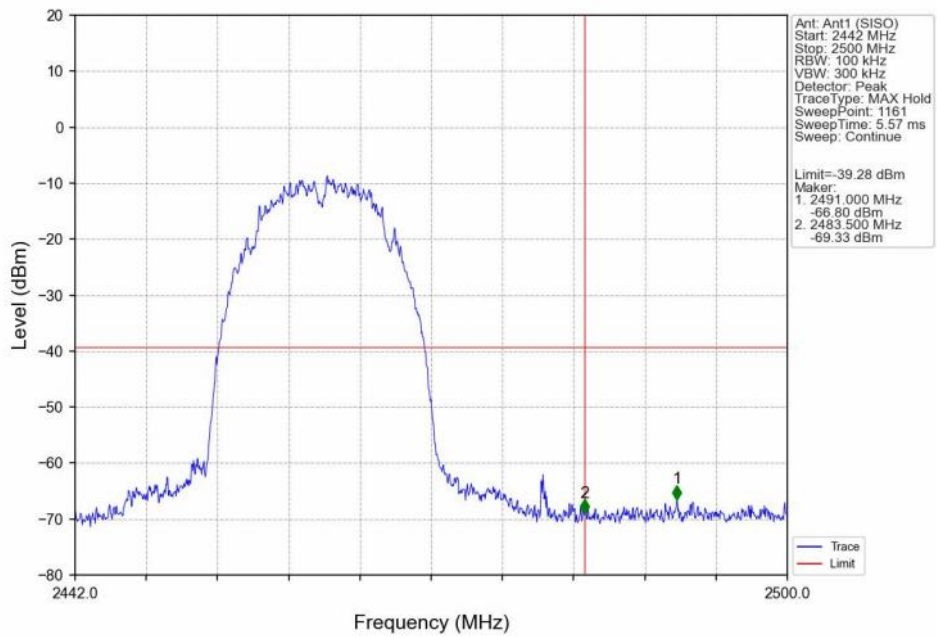
5.2.2 CSE



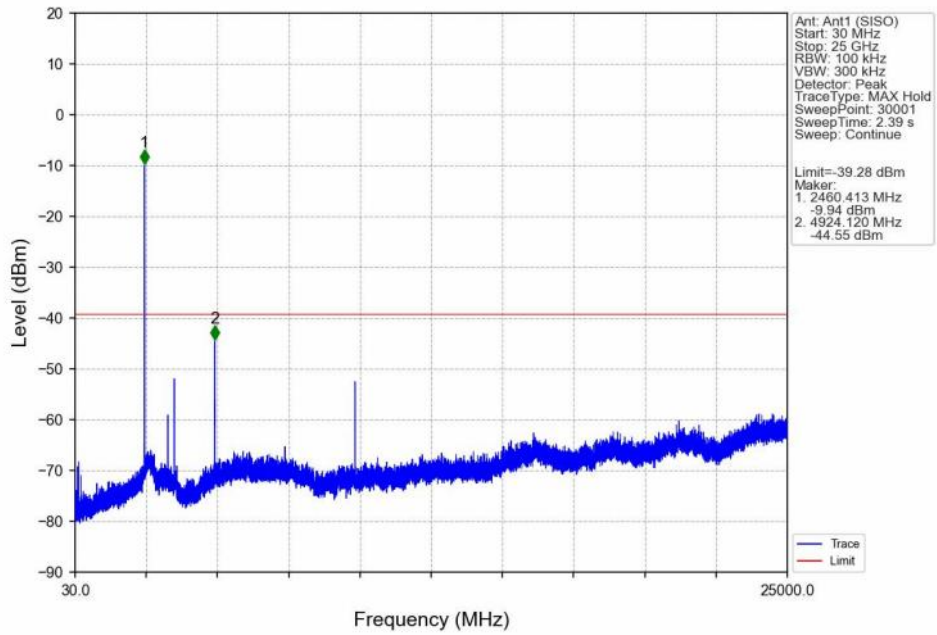
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



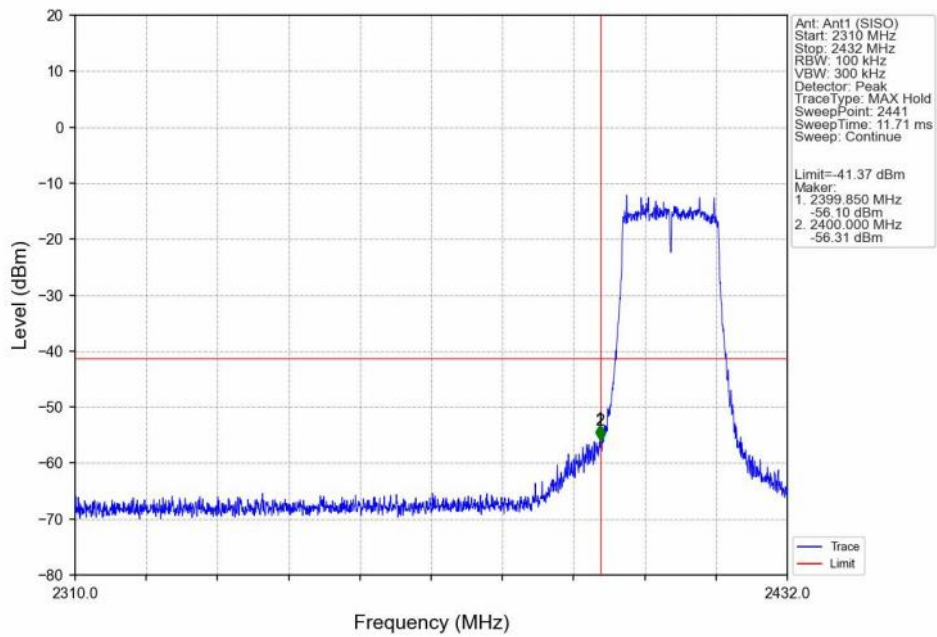
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



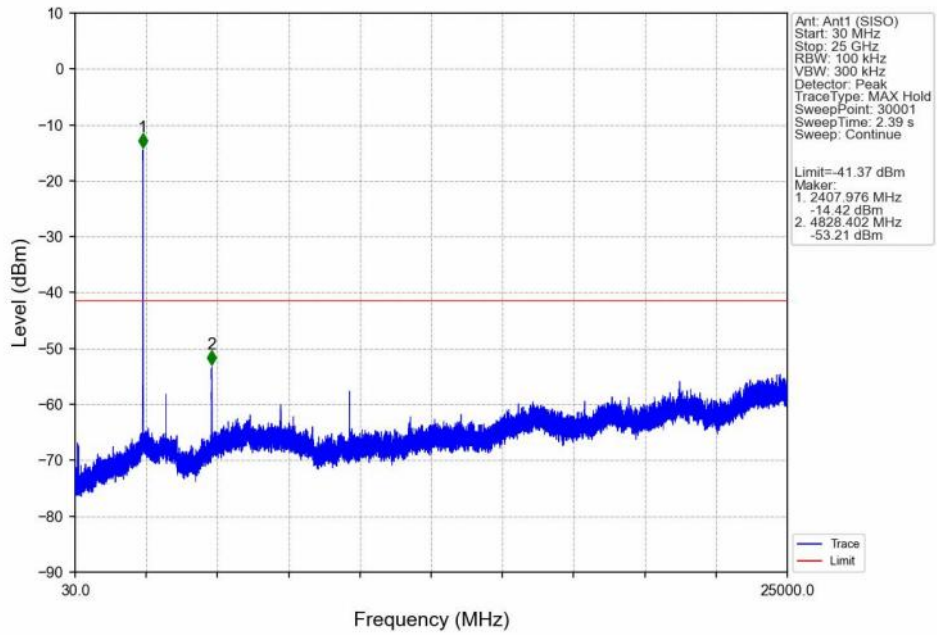
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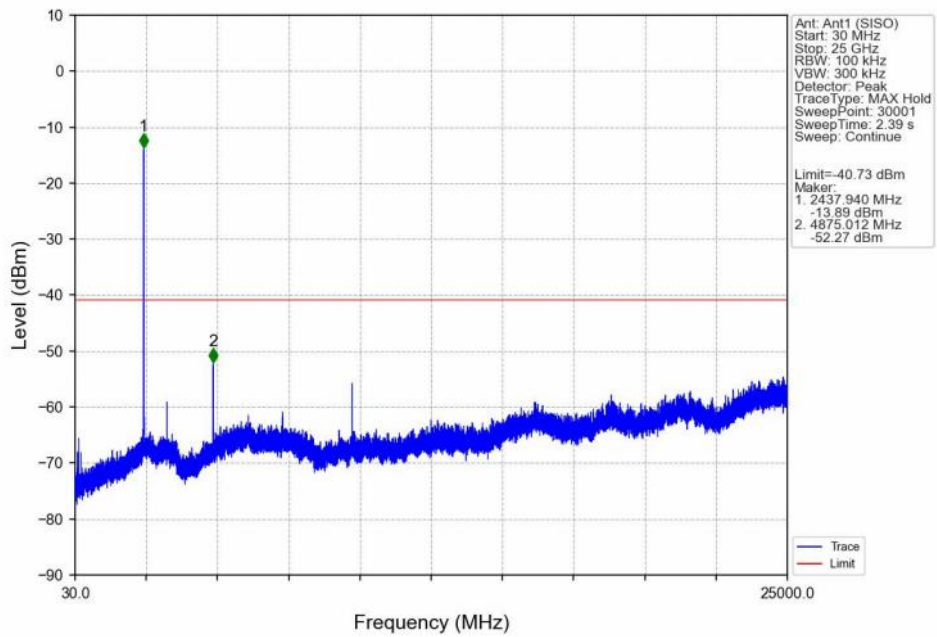
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



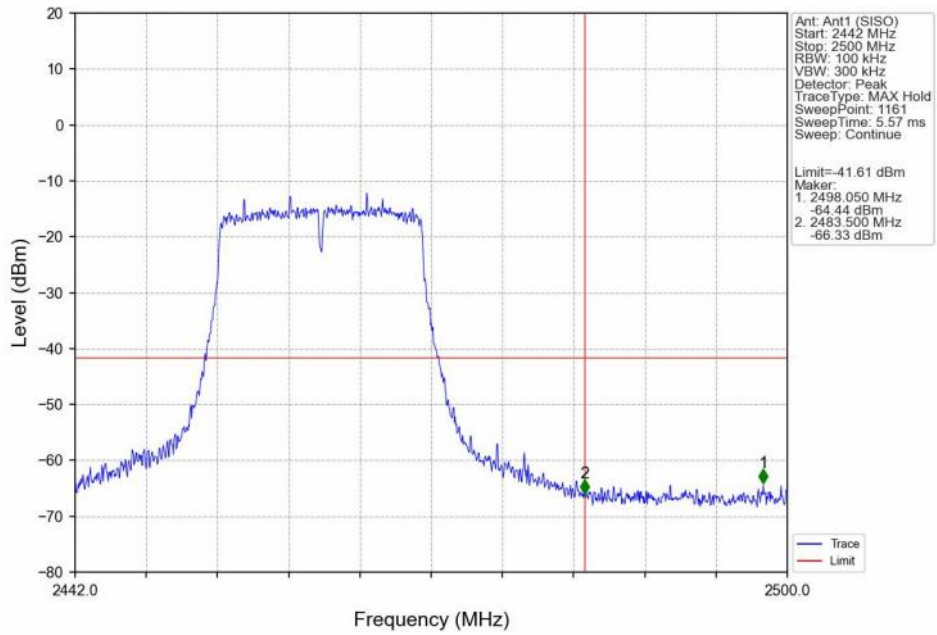
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



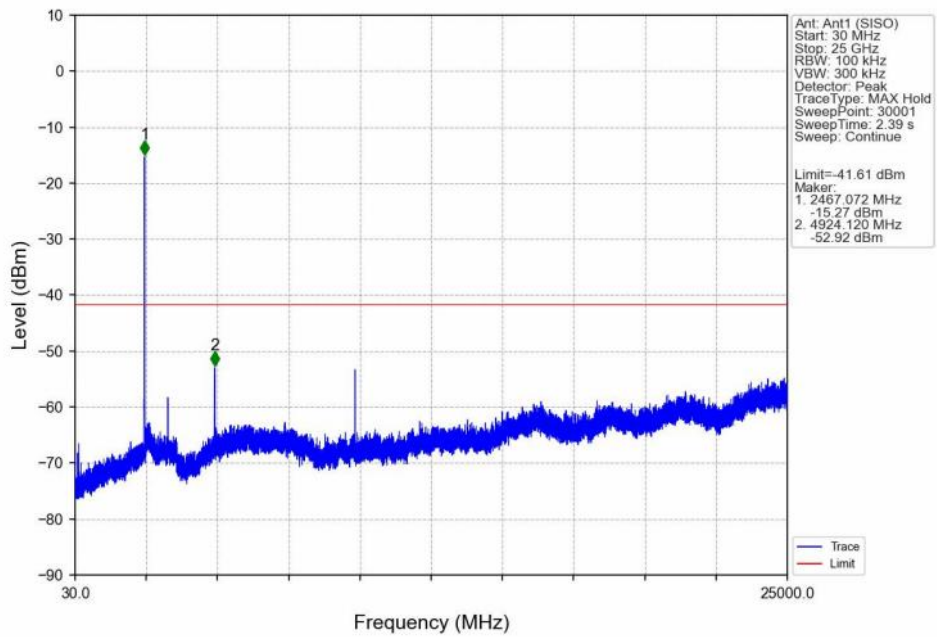
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



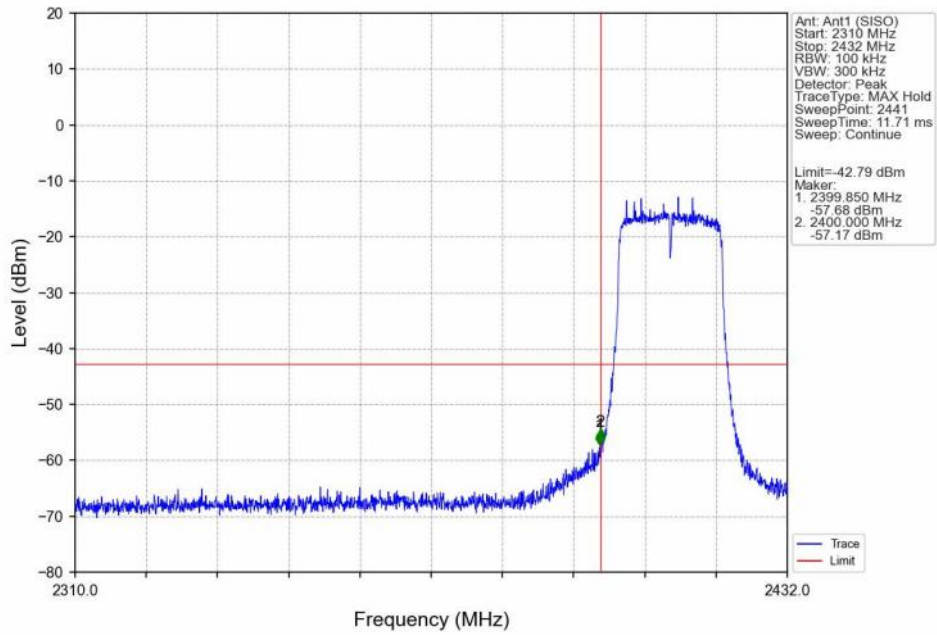
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



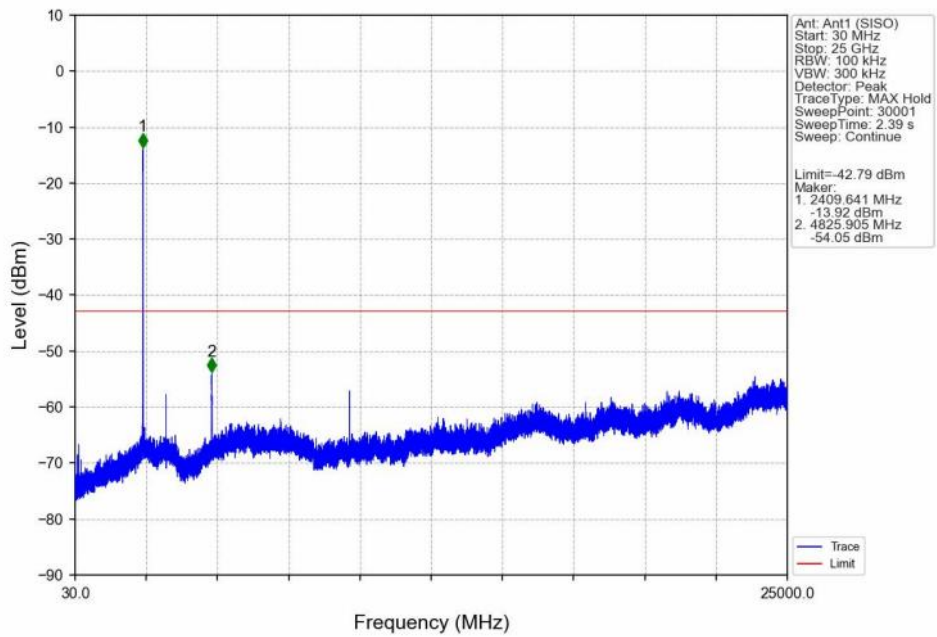
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



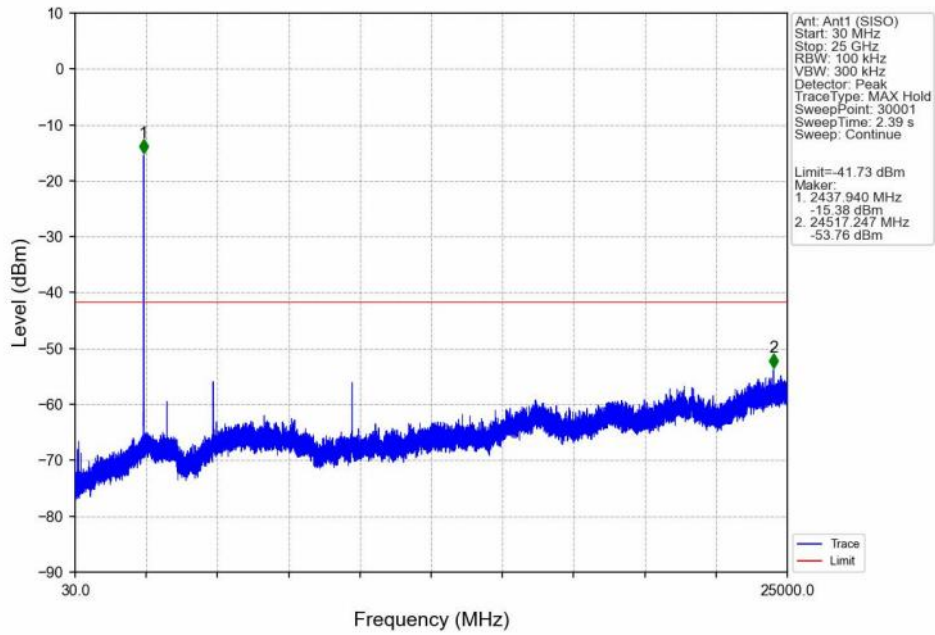
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



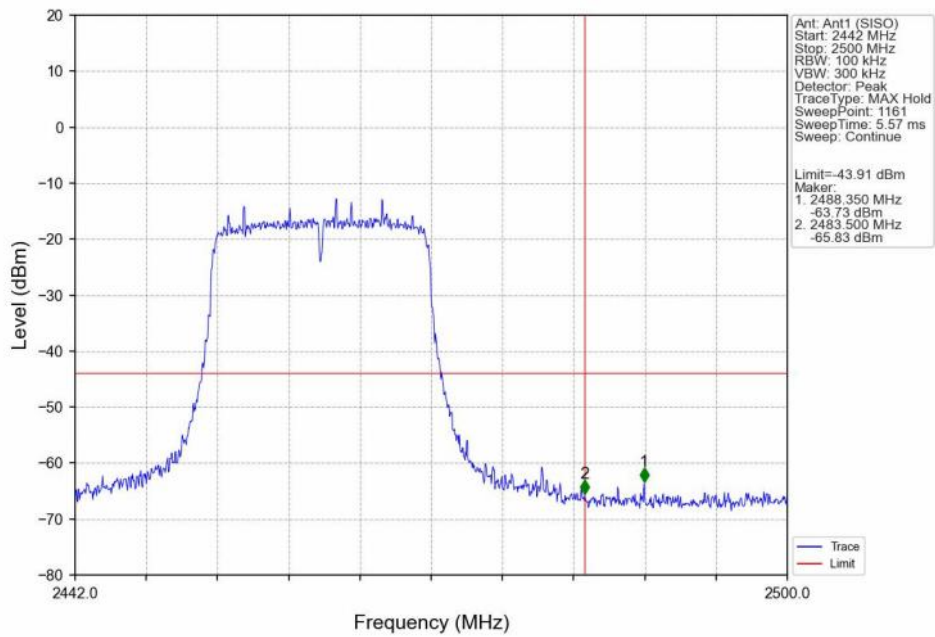
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



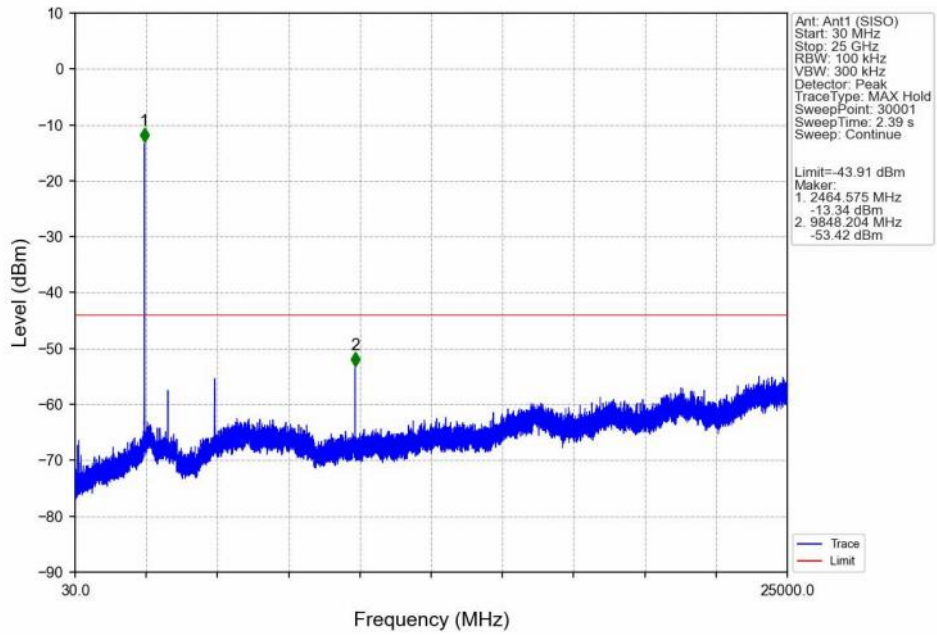
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



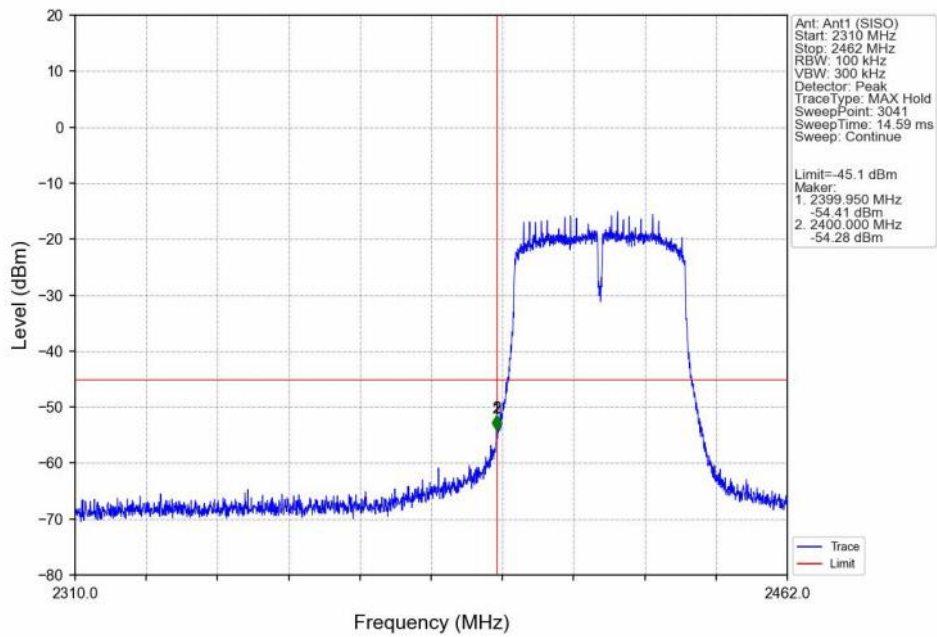
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



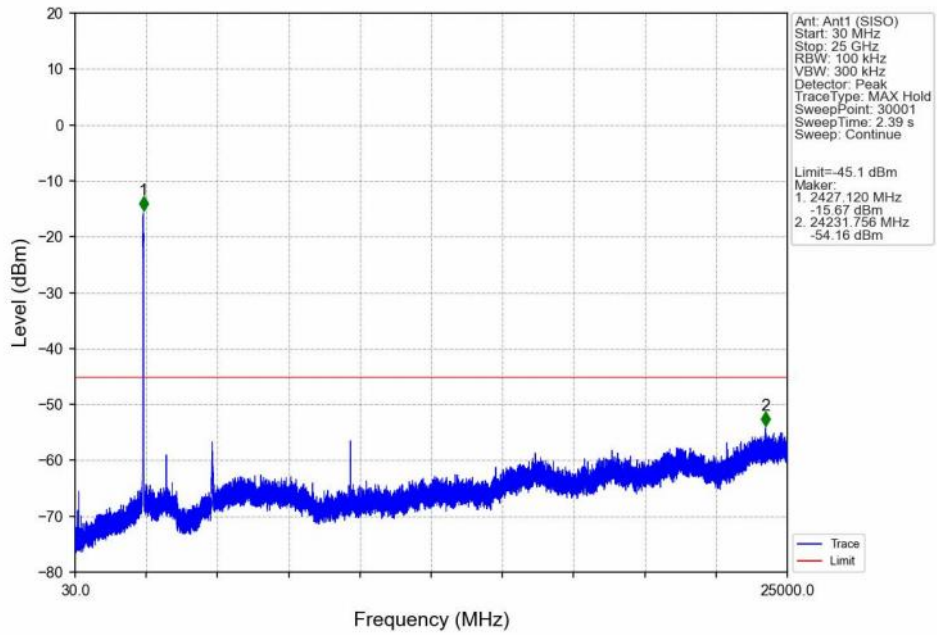
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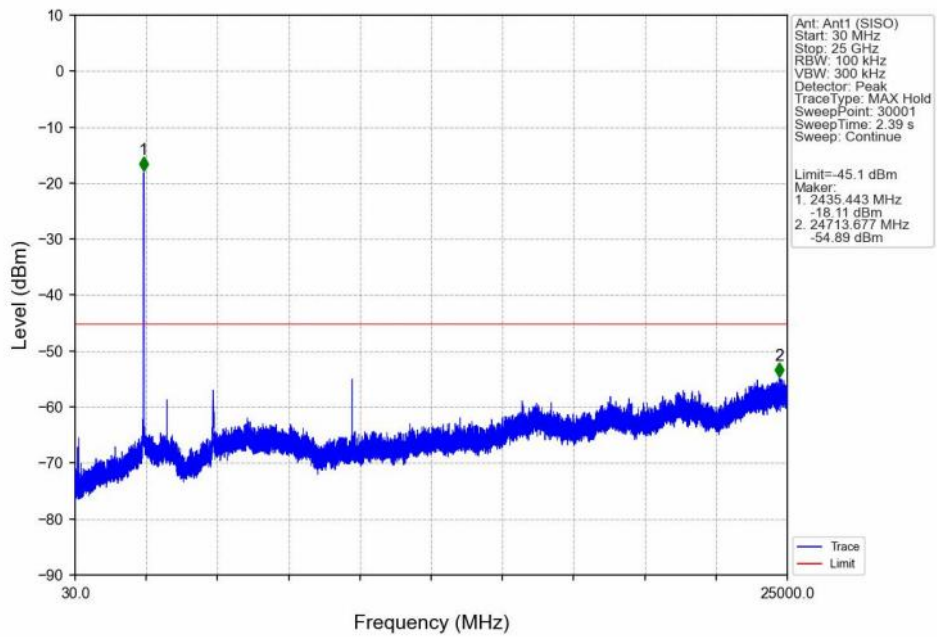
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



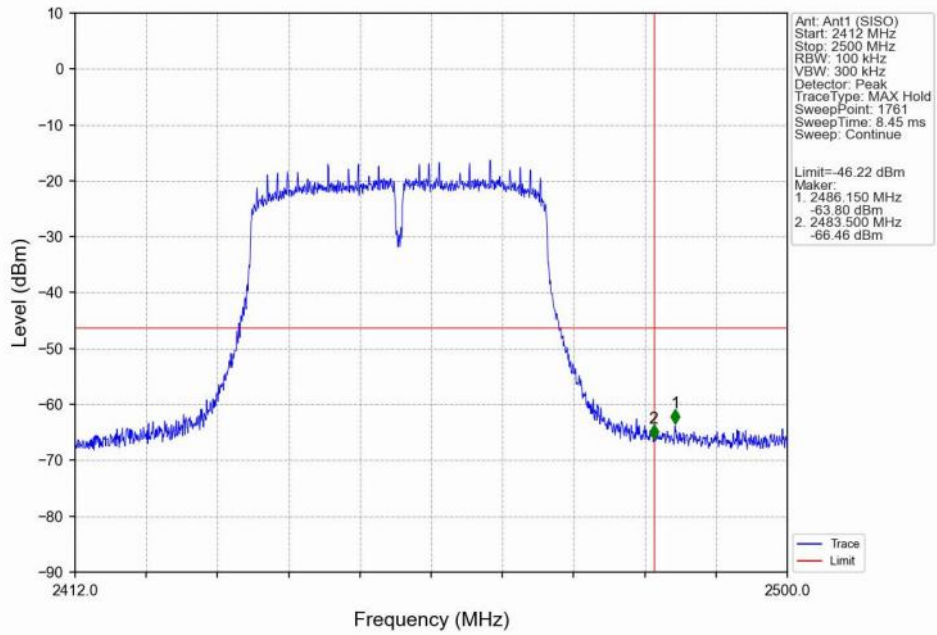
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



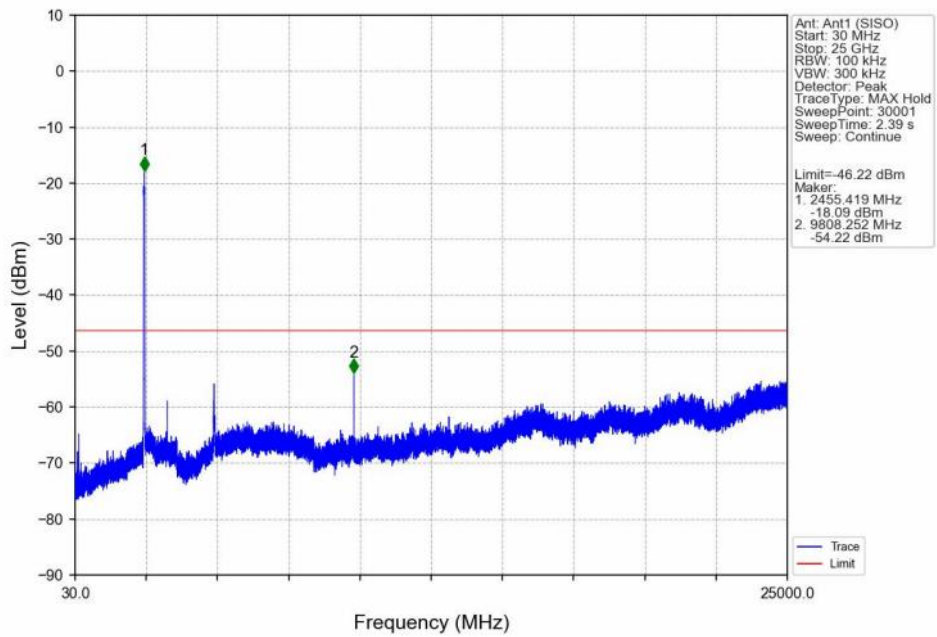
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



-THE END-