



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK250806024A01E03

RF Test Report

For BTEK250806024A01-T01

Project No.:	BTEK250806024A01E03
Product Description:	24.1°C, 58%, 100.8kPa
Test Engineer:	Zora
Test Date:	2025-08-13~2025-09-04



Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass



1. Duty Cycle

1.1 Test Result

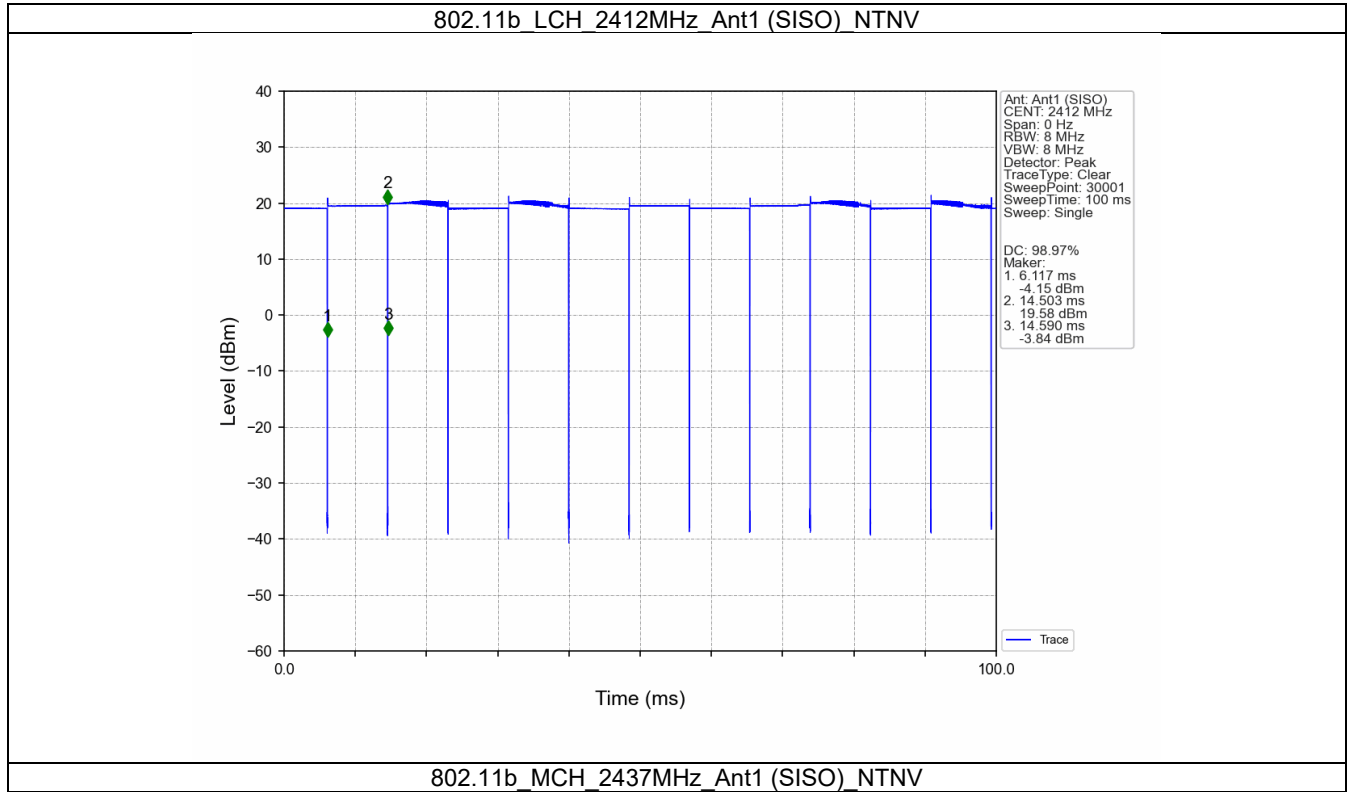
1.1.1 Ant1

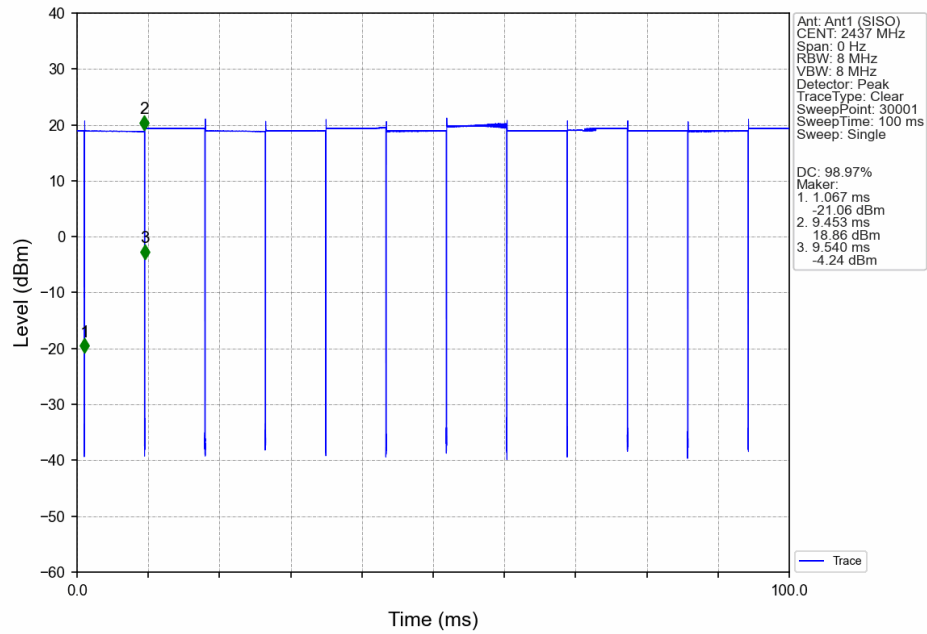
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.386	8.473	98.97	0.04	0.00
		2437	8.386	8.473	98.97	0.04	0.00
		2462	8.387	8.473	98.99	0.04	0.04
802.11g	SISO	2412	5.486	5.544	98.95	0.05	0.04
		2437	5.484	5.542	98.95	0.05	0.04
		2462	5.486	5.544	98.95	0.05	0.04
802.11n (HT20)	SISO	2412	5.087	5.139	98.99	0.04	0.00
		2437	5.085	5.139	98.95	0.05	0.00
		2462	5.087	5.139	98.99	0.04	0.00



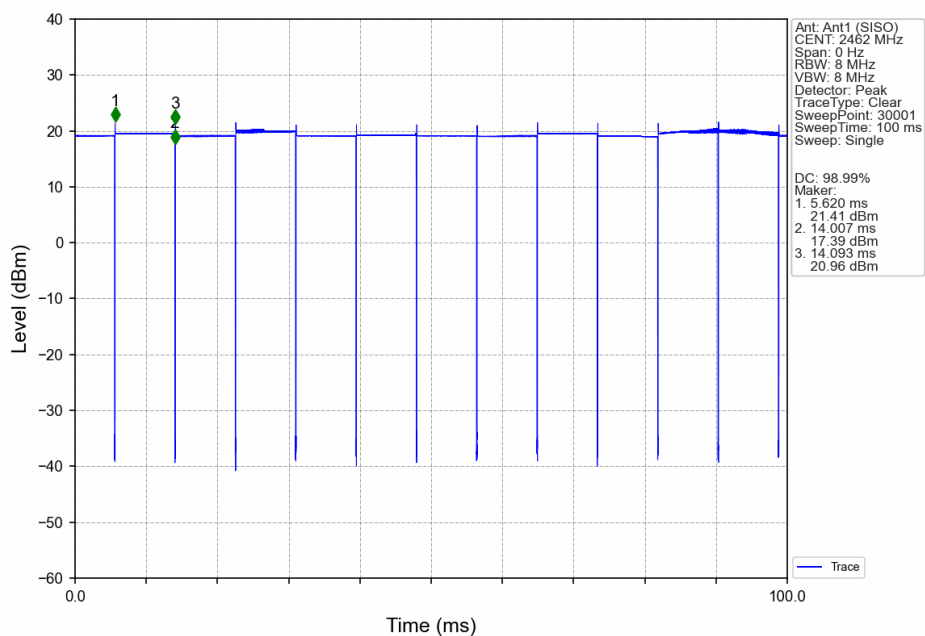
1.2 Test Graph

1.2.1 Ant1

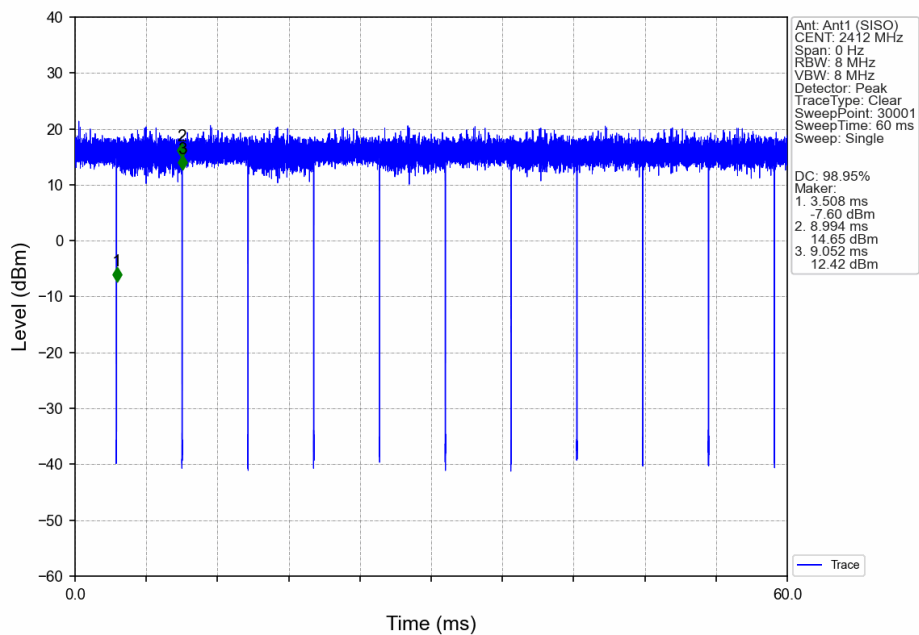




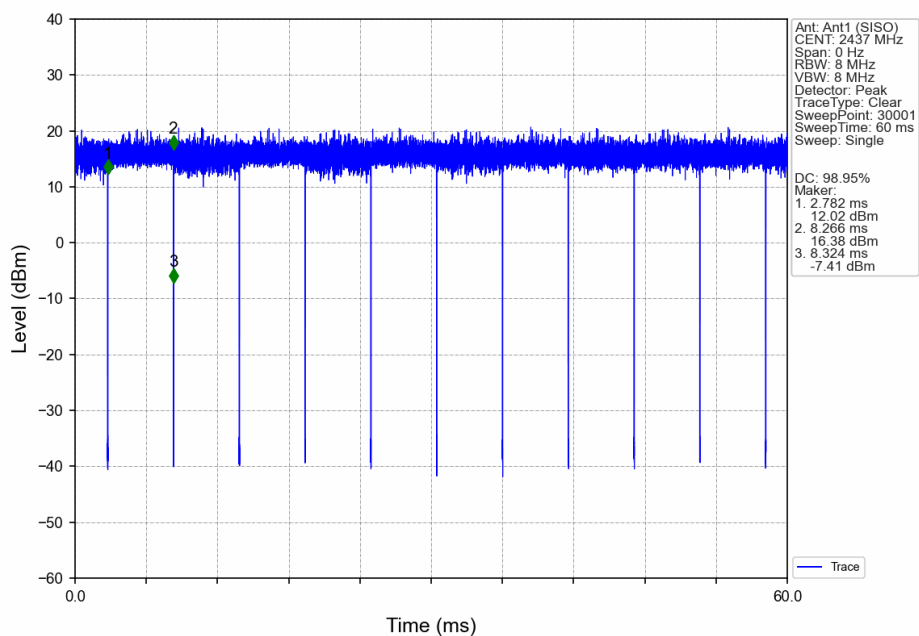
802.11b HCH 2462MHz_Ant1 (SISO)_NTNV



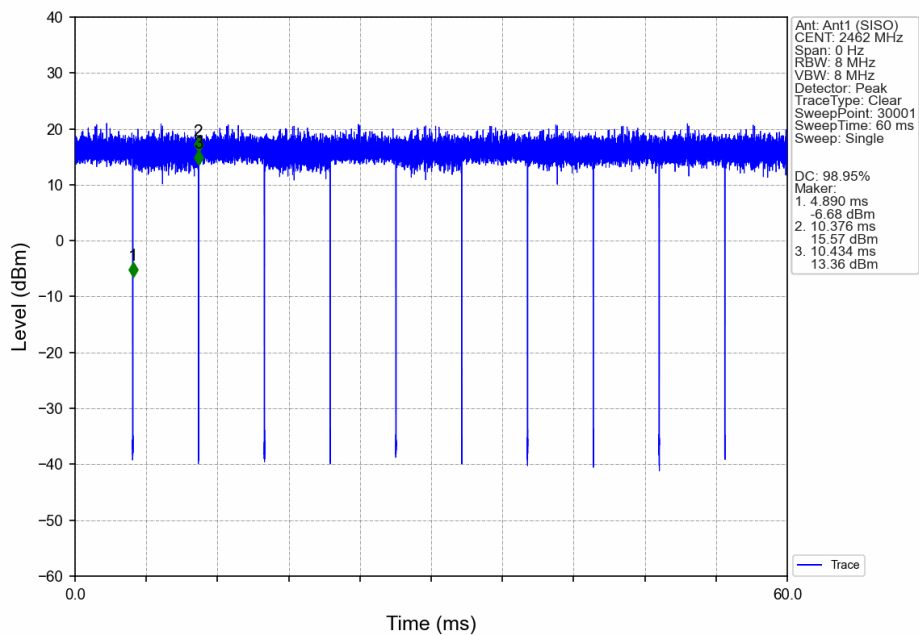
802.11g LCH 2412MHz_Ant1 (SISO)_NTNV



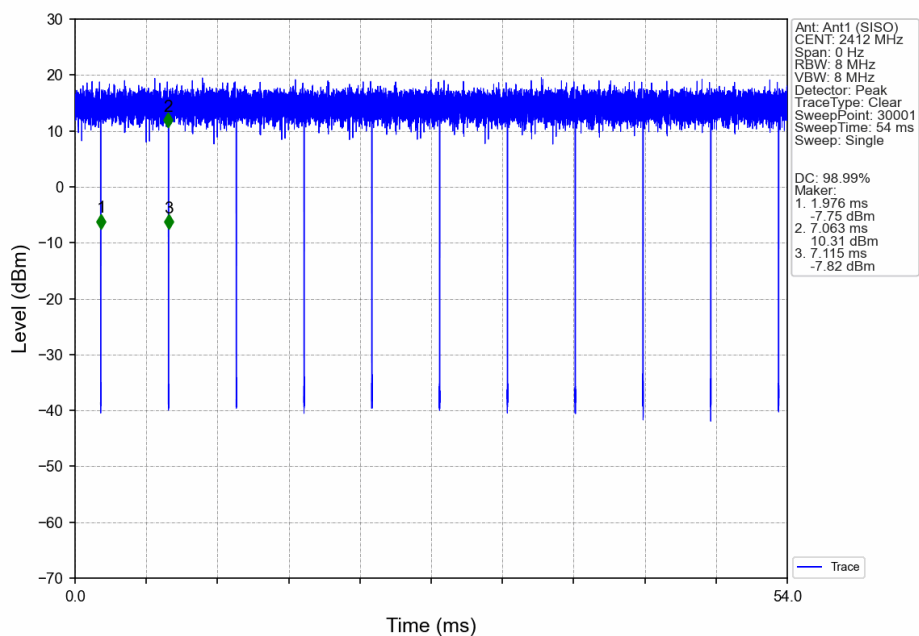
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



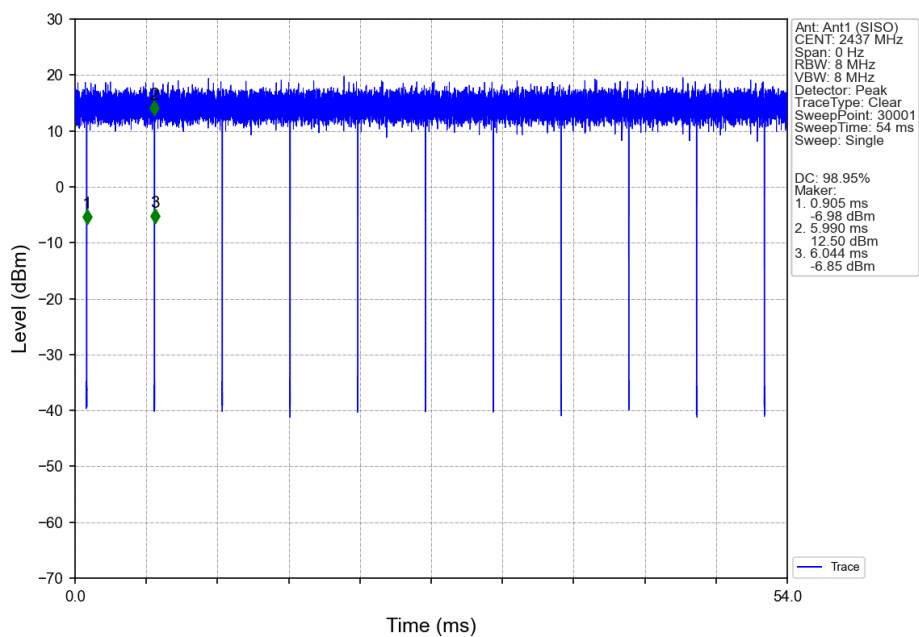
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

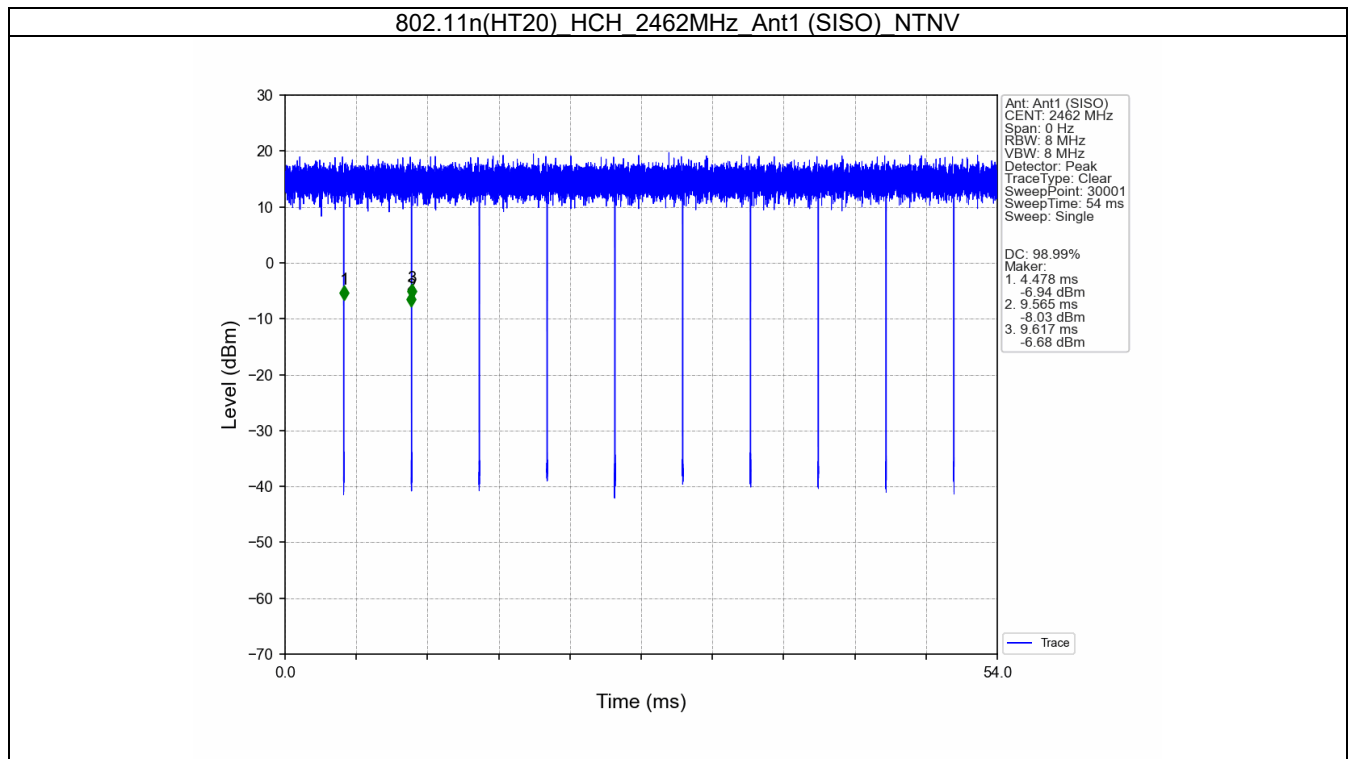


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







2. Bandwidth

2.1 Test Result

2.1.1 OBW

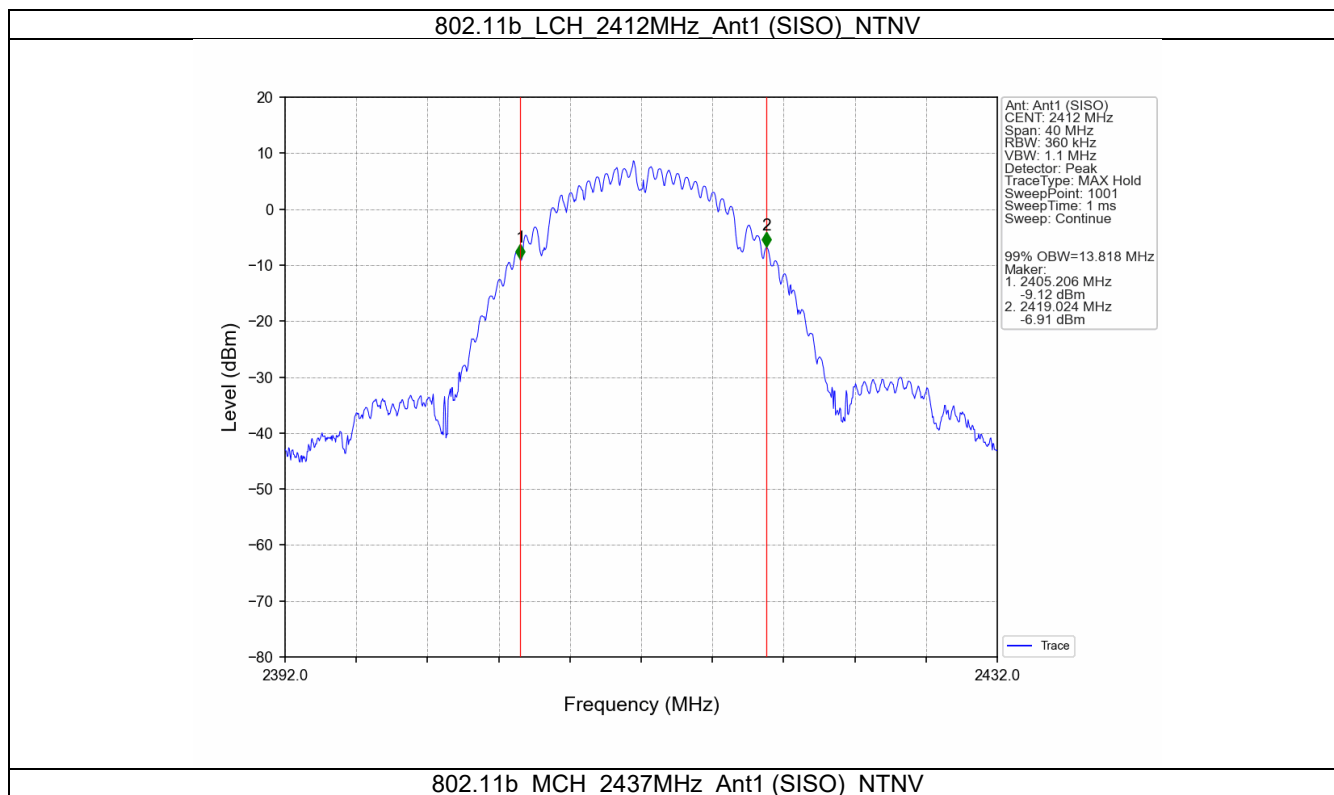
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	13.818	/	Pass
		2437	1	13.800	/	Pass
		2462	1	13.747	/	Pass
802.11g	SISO	2412	1	17.757	/	Pass
		2437	1	17.626	/	Pass
		2462	1	17.633	/	Pass
802.11n (HT20)	SISO	2412	1	17.732	/	Pass
		2437	1	17.735	/	Pass
		2462	1	17.692	/	Pass

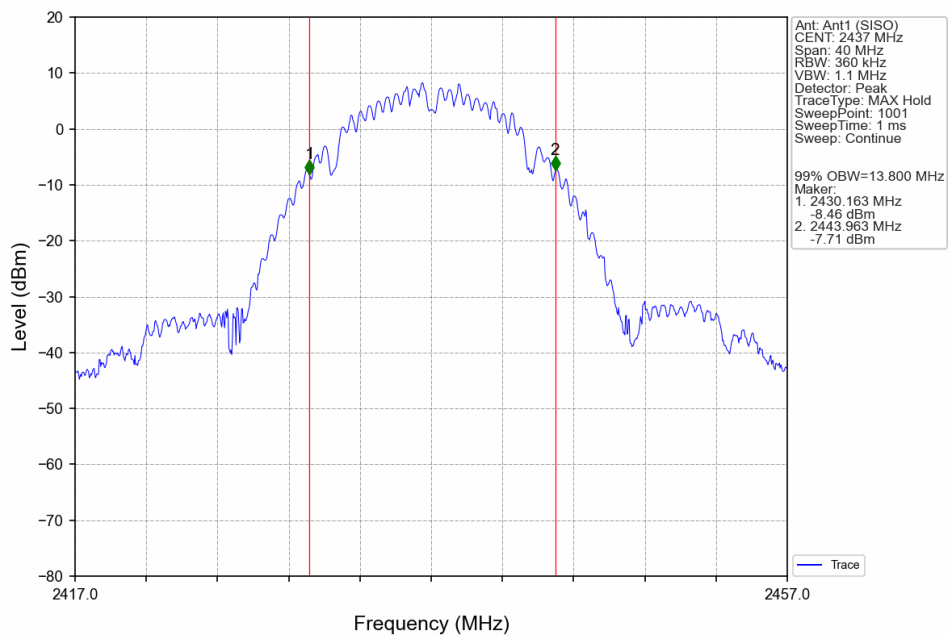
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.105	≥ 0.5	Pass
		2437	1	8.554	≥ 0.5	Pass
		2462	1	8.594	≥ 0.5	Pass
802.11g	SISO	2412	1	12.624	≥ 0.5	Pass
		2437	1	12.592	≥ 0.5	Pass
		2462	1	13.867	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.177	≥ 0.5	Pass
		2437	1	15.181	≥ 0.5	Pass
		2462	1	15.176	≥ 0.5	Pass

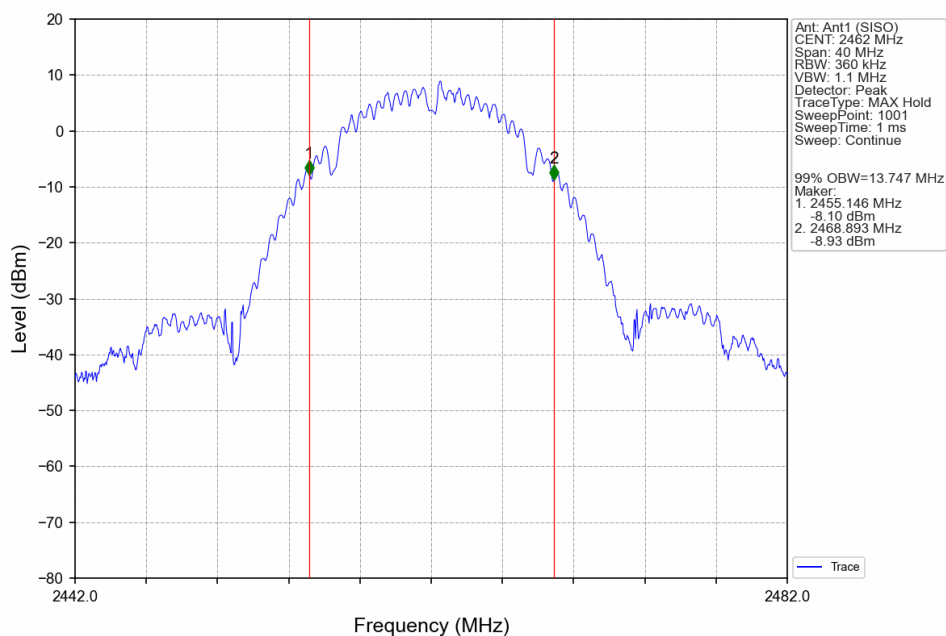
2.2 Test Graph

2.2.1 OBW

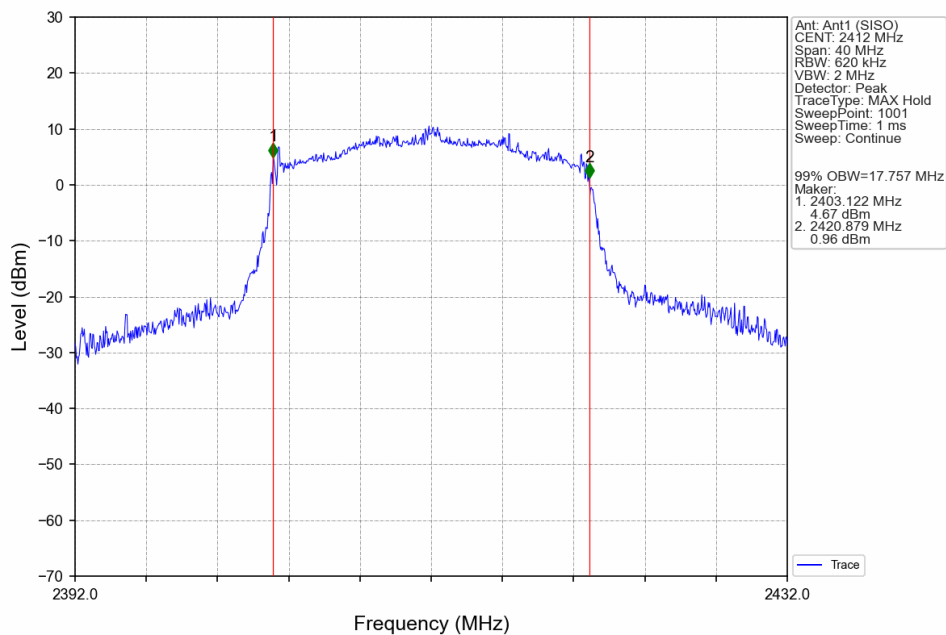




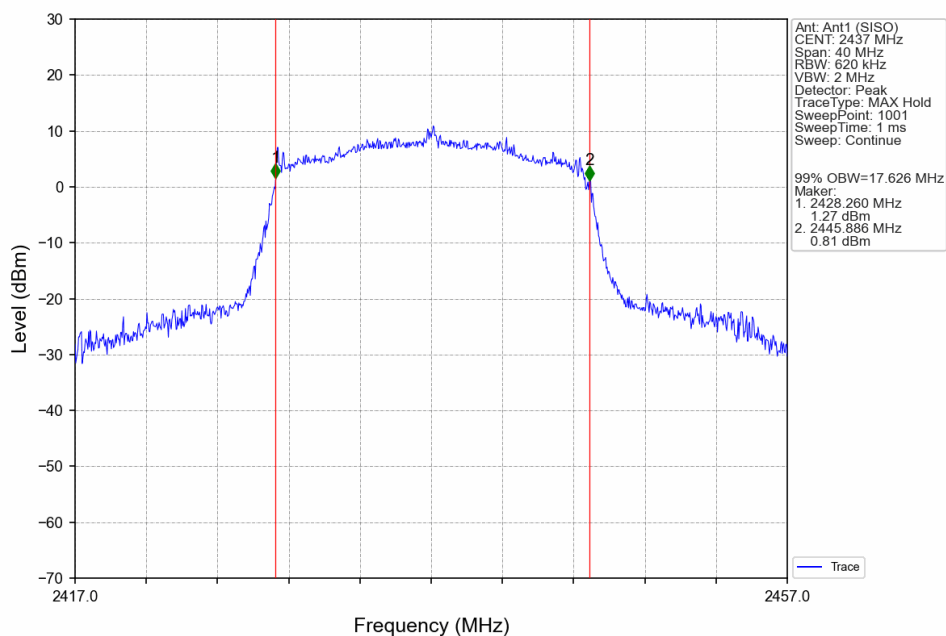
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



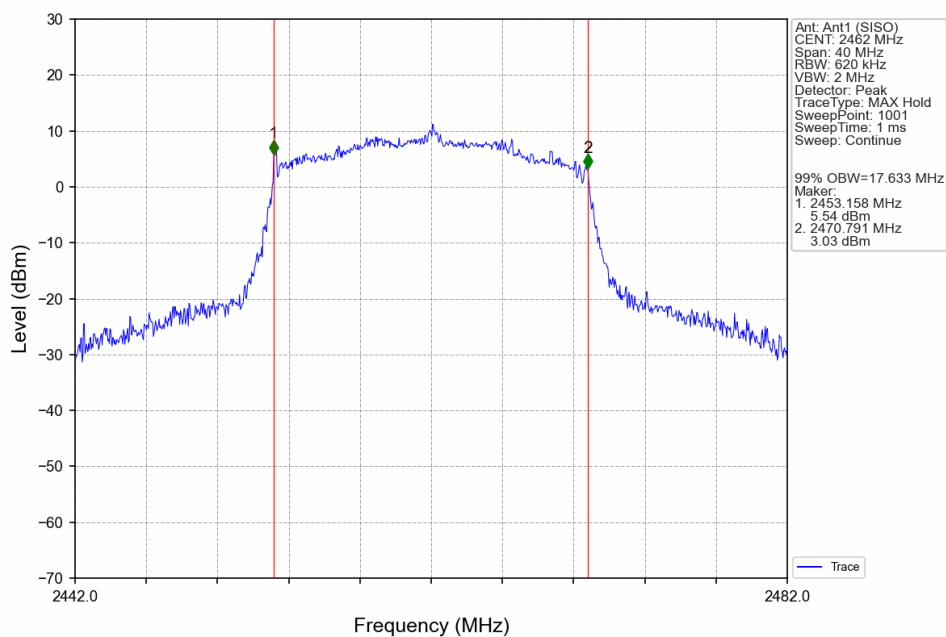
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



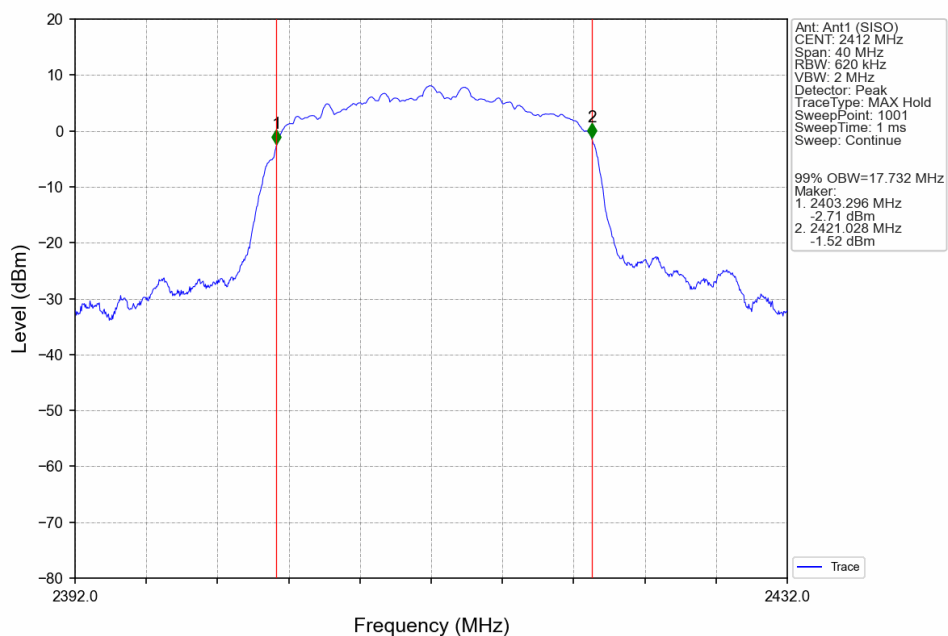
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



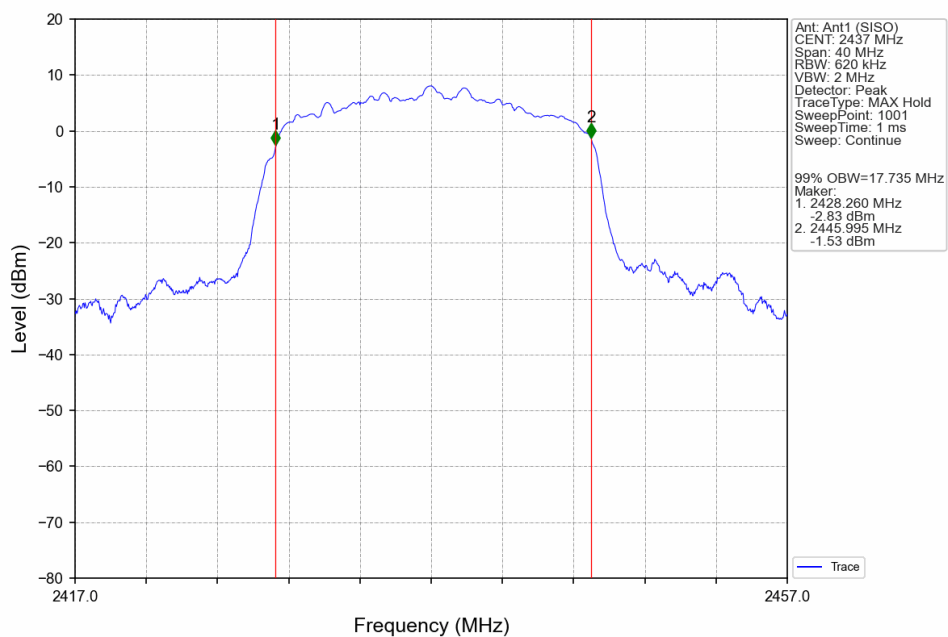
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

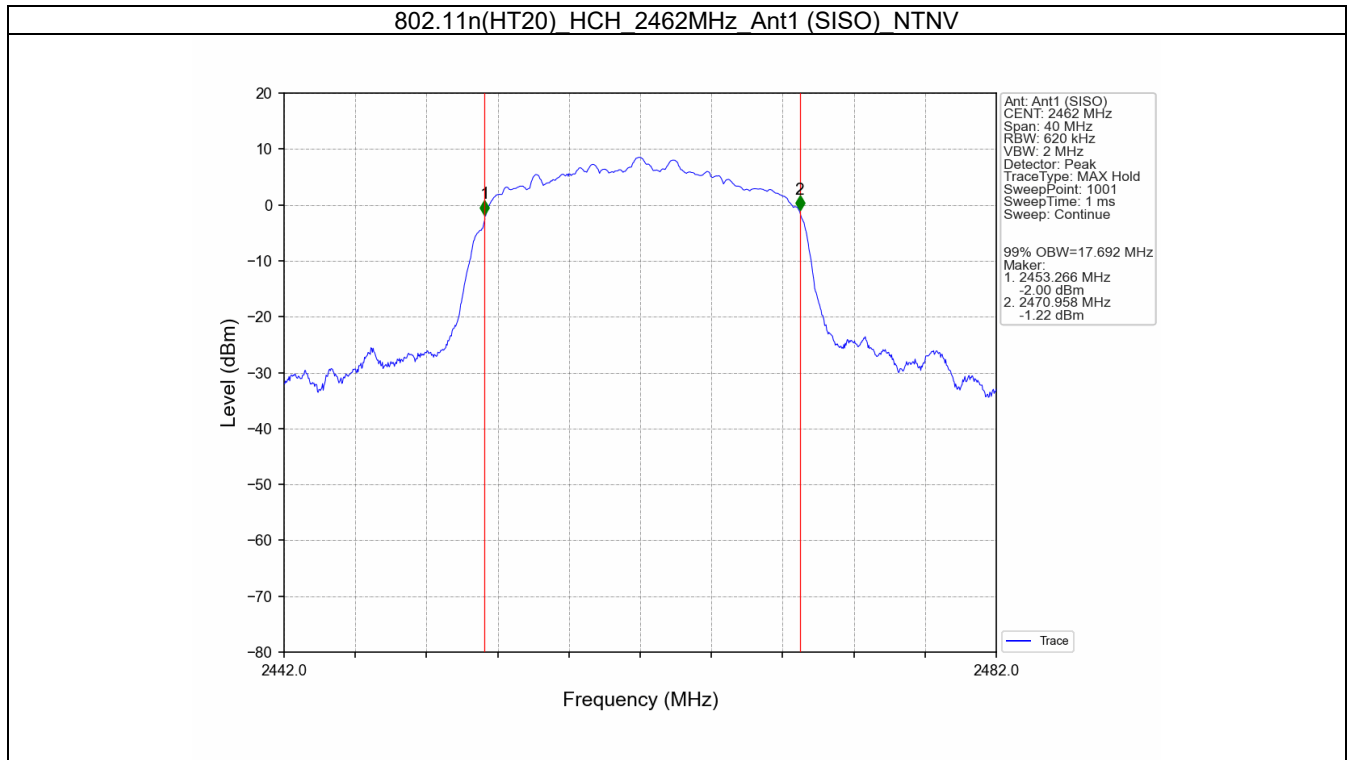


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

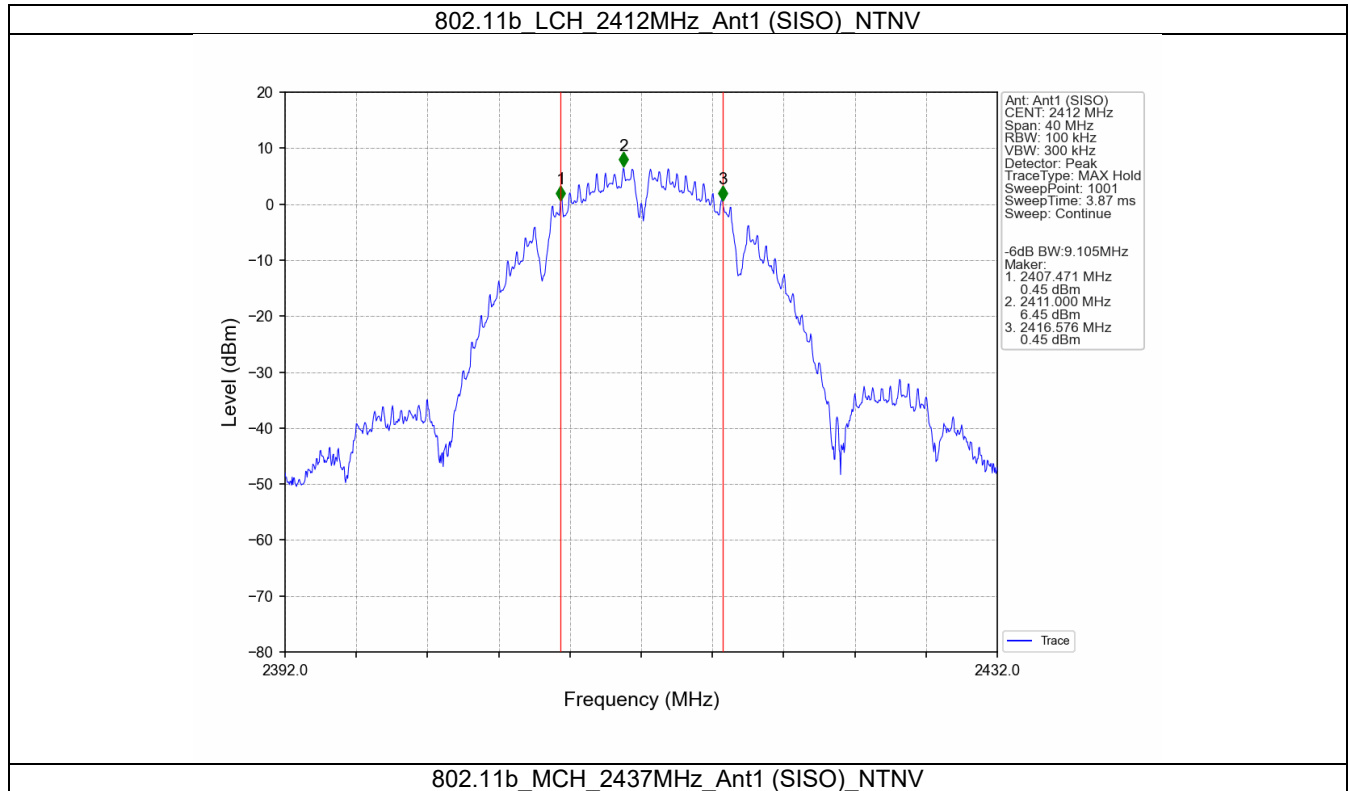


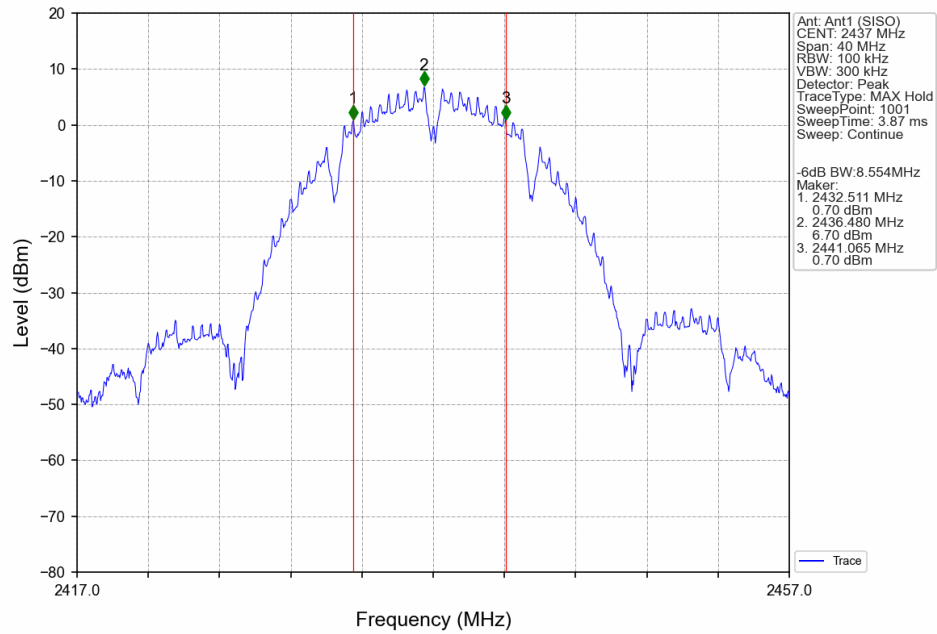
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



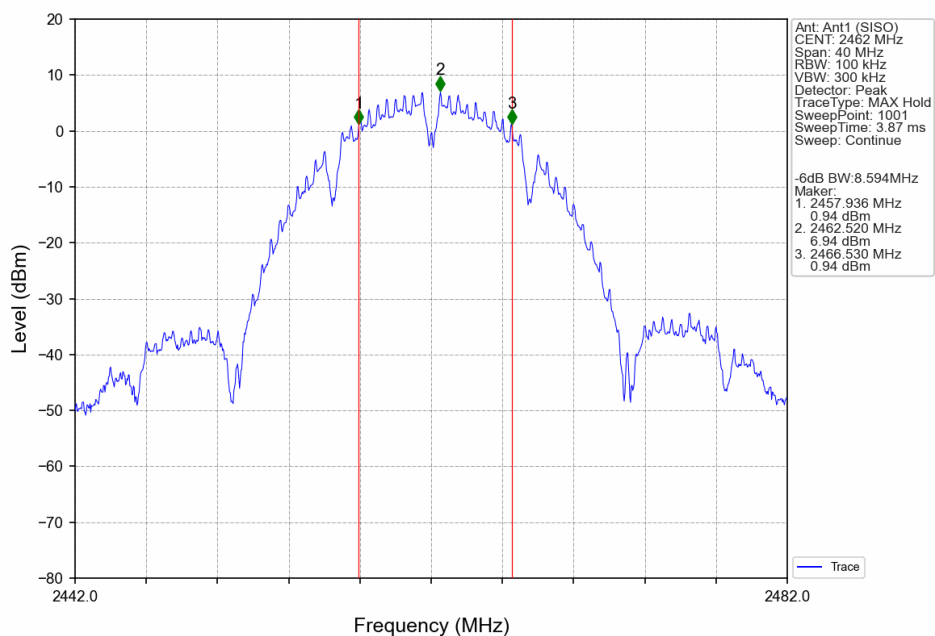


2.2.2 6dB BW

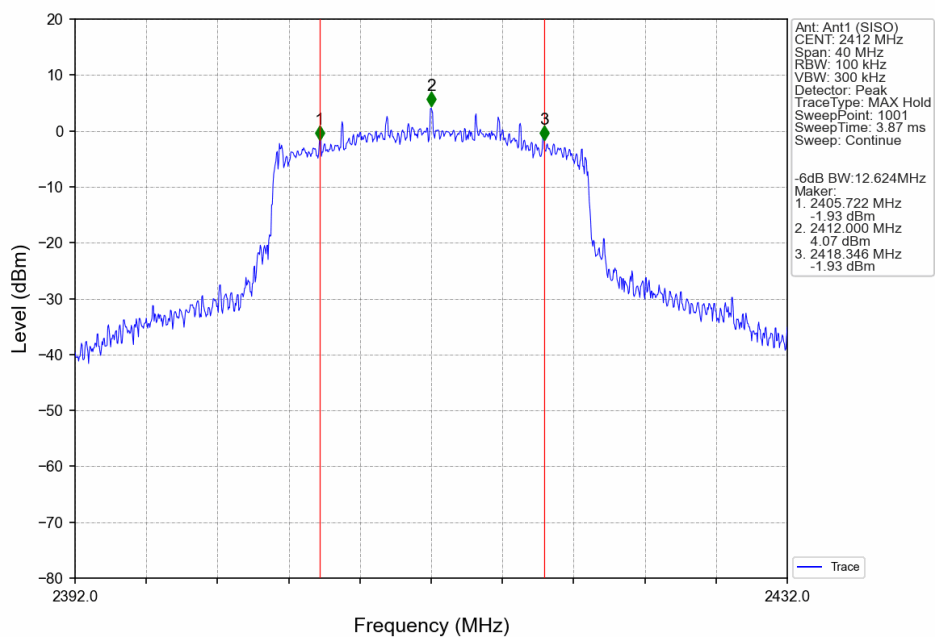




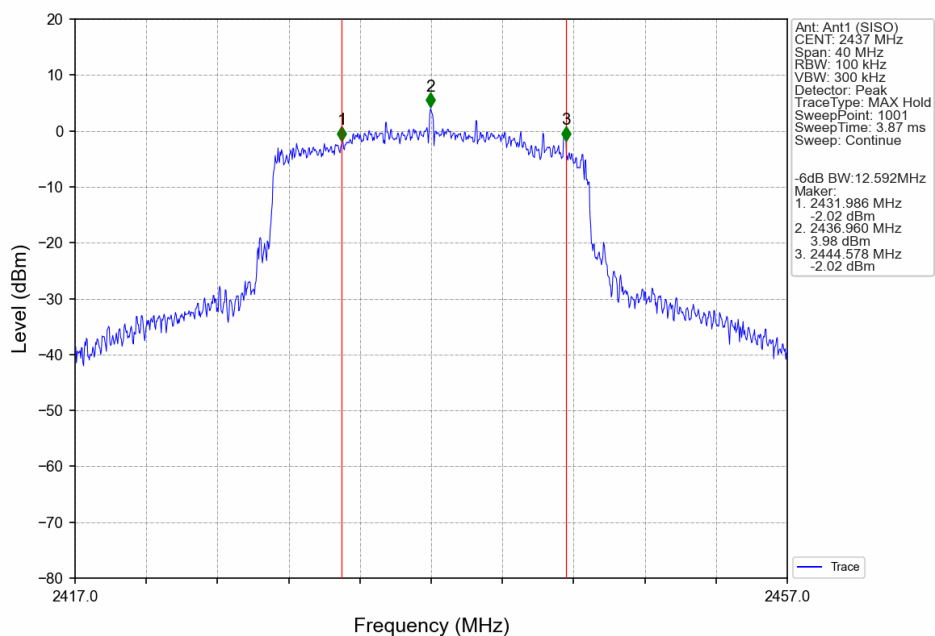
802.11b HCH 2462MHz_Ant1 (SISO)_NTNV



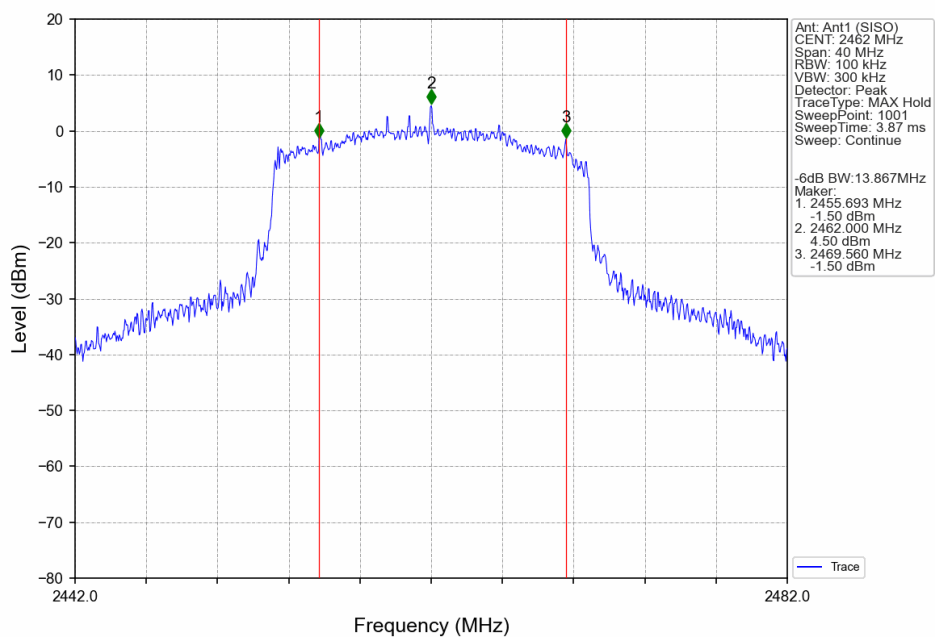
802.11g LCH 2412MHz_Ant1 (SISO)_NTNV



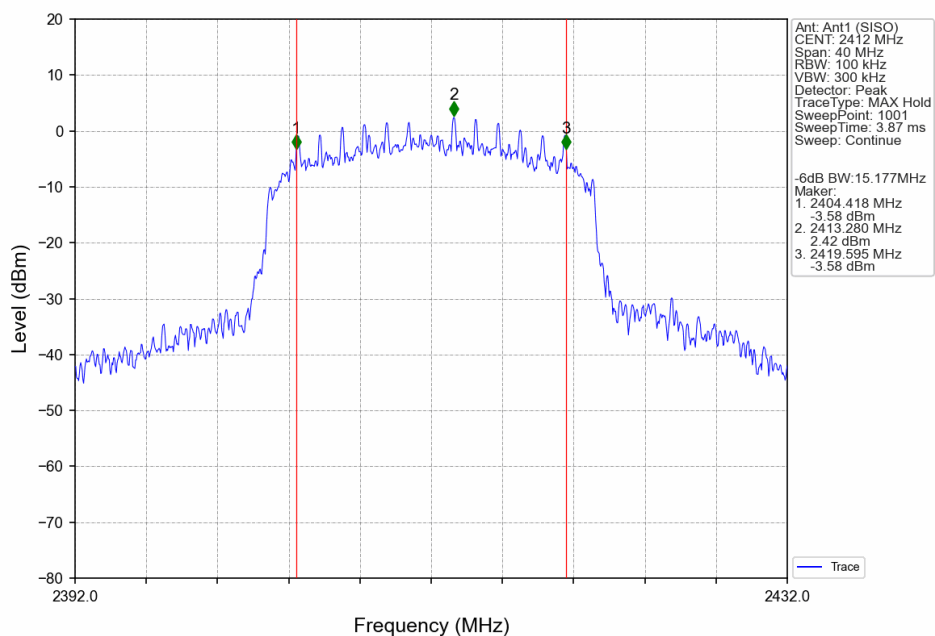
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



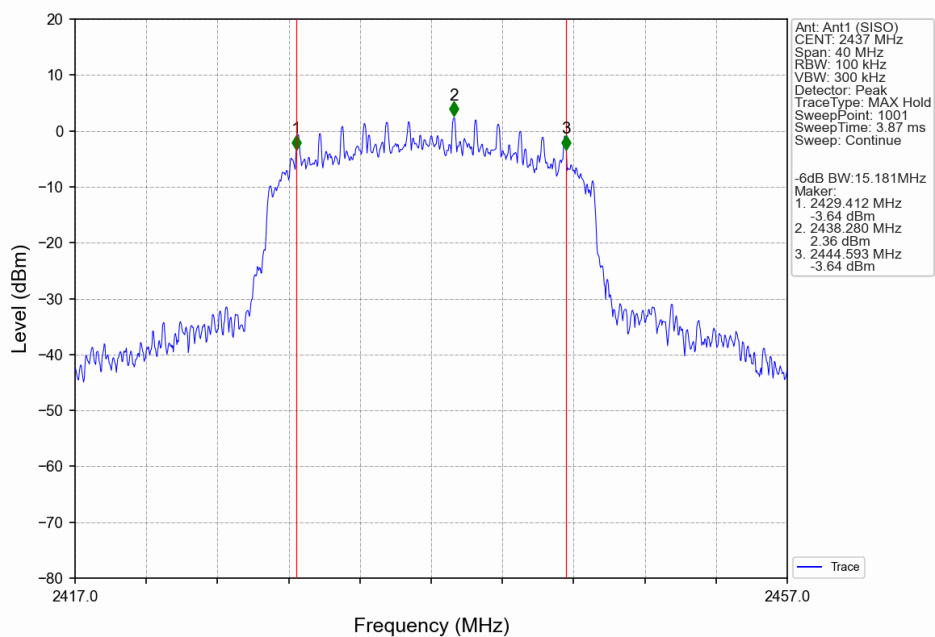
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

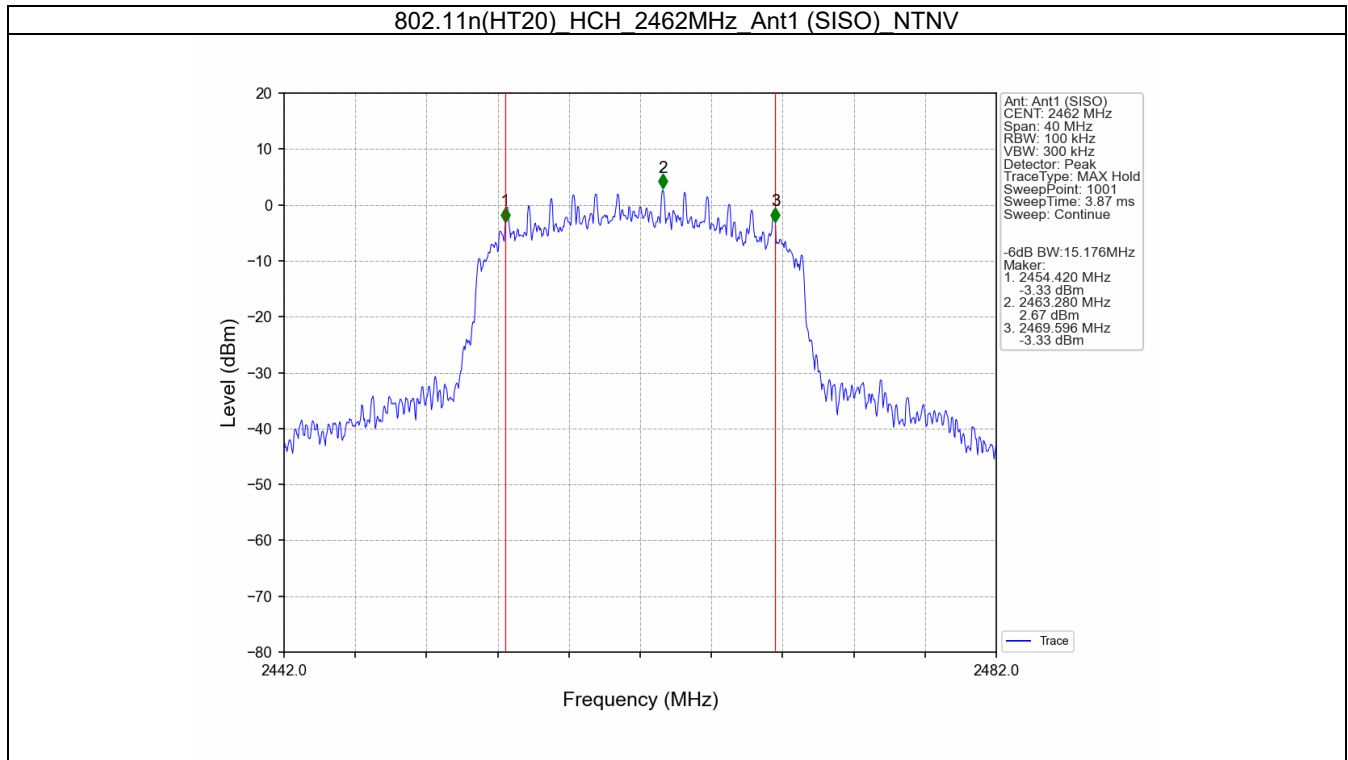


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

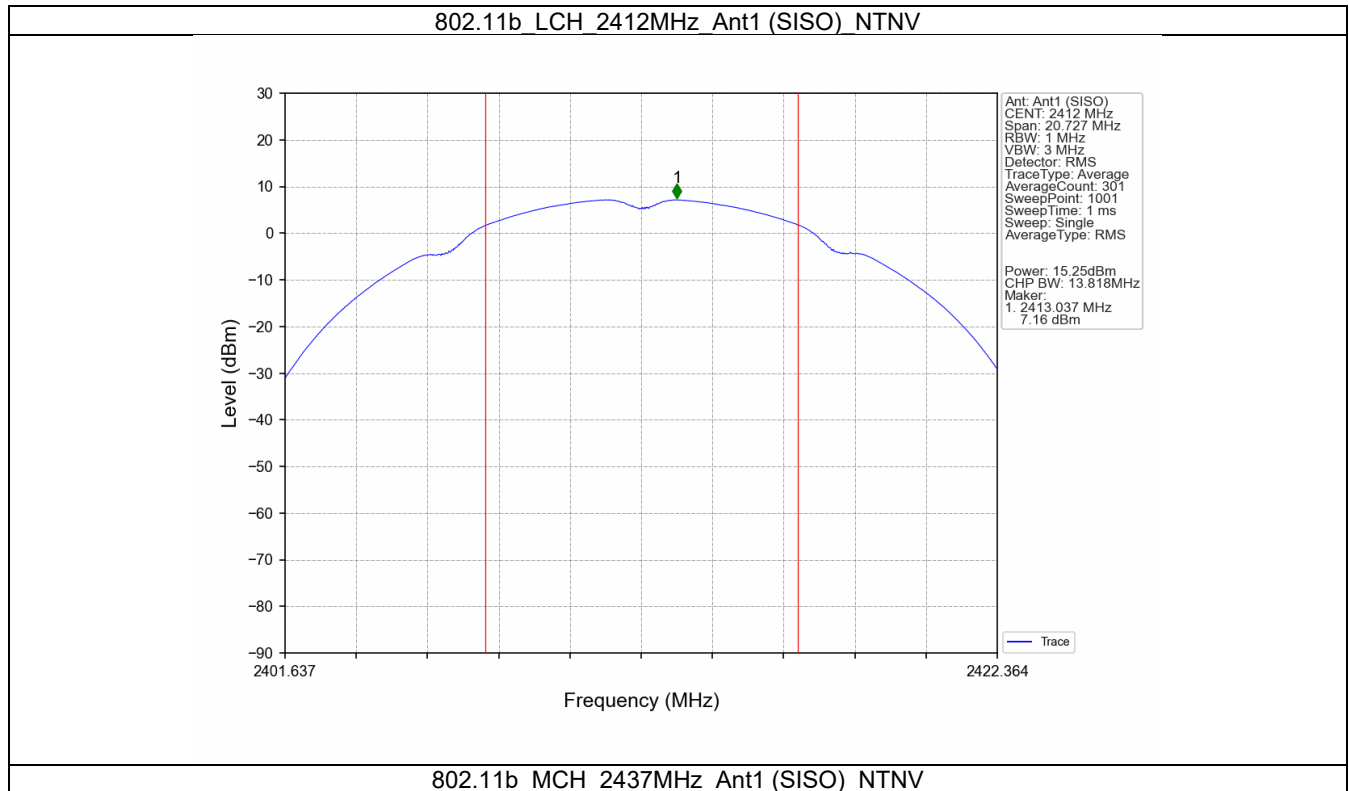
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	15.25	<=30	Pass
		2437	15.14	<=30	Pass
		2462	15.35	<=30	Pass
802.11g	SISO	2412	13.52	<=30	Pass
		2437	13.46	<=30	Pass
		2462	13.66	<=30	Pass
802.11n (HT20)	SISO	2412	12.16	<=30	Pass
		2437	12.13	<=30	Pass
		2462	12.51	<=30	Pass

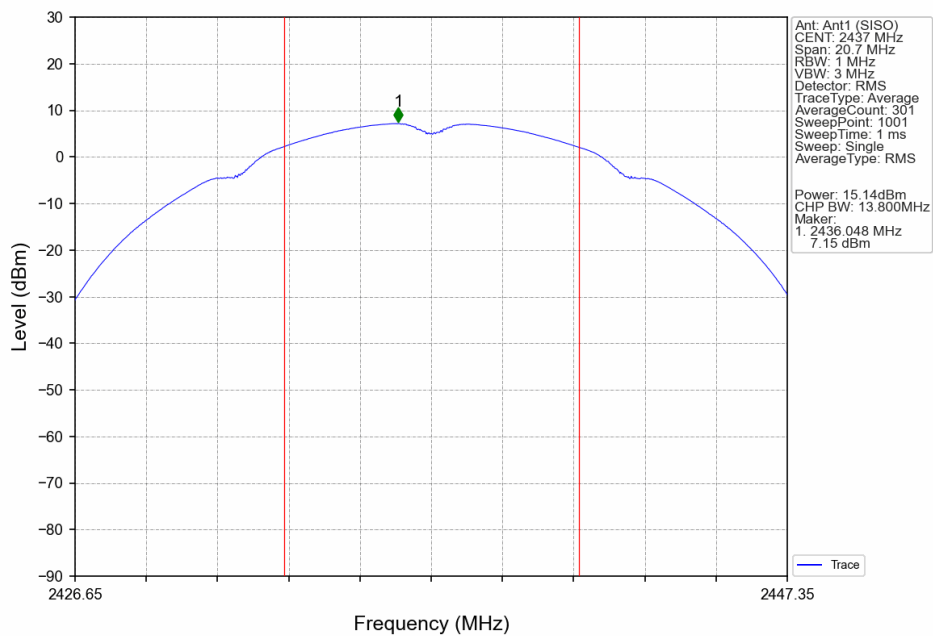
Note1: Antenna Gain: Ant1: -0.17dBi;



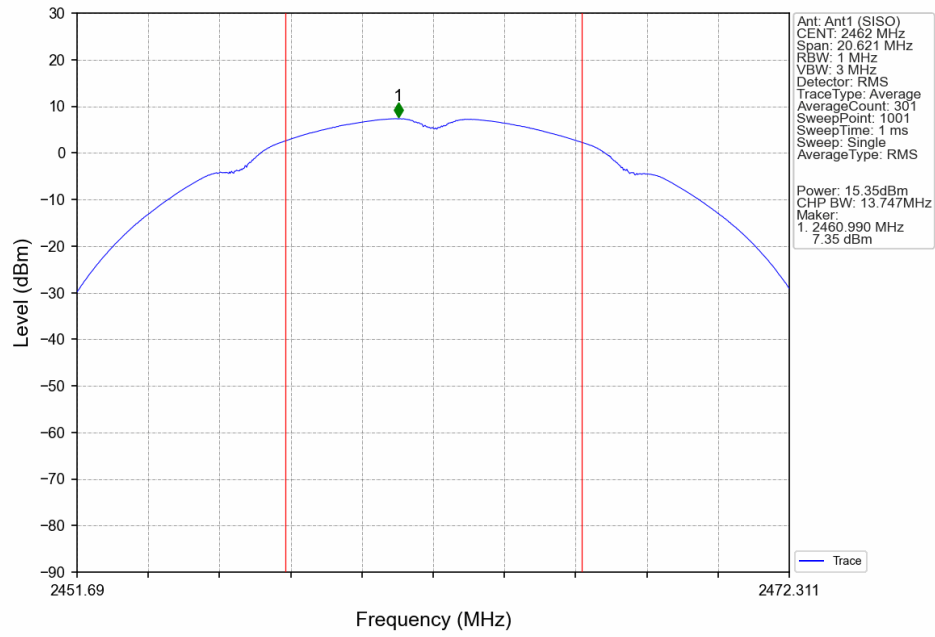
3.2 Test Graph

3.2.1 Power

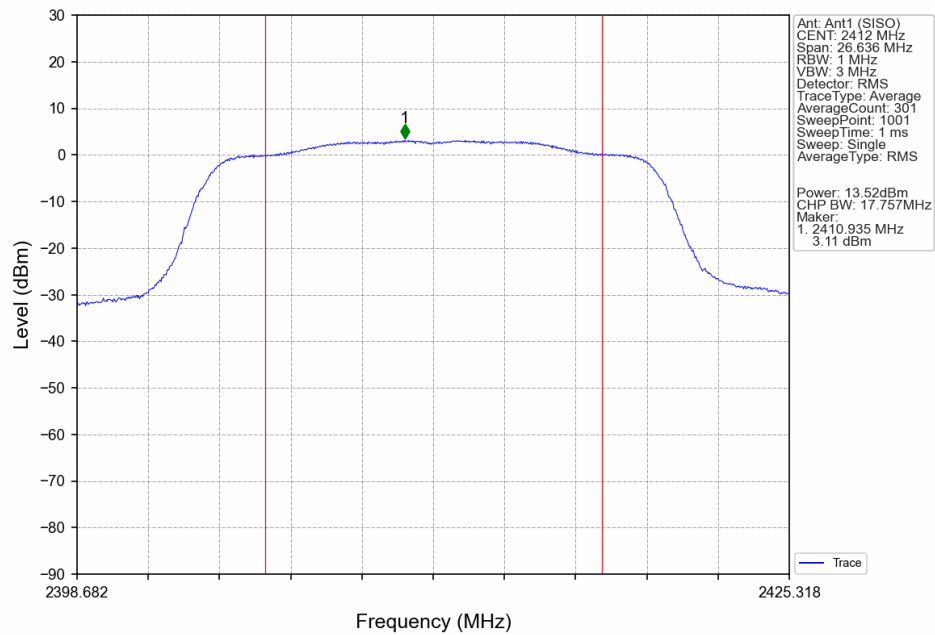




802.11b HCH 2462MHz_Ant1 (SISO)_NTNV

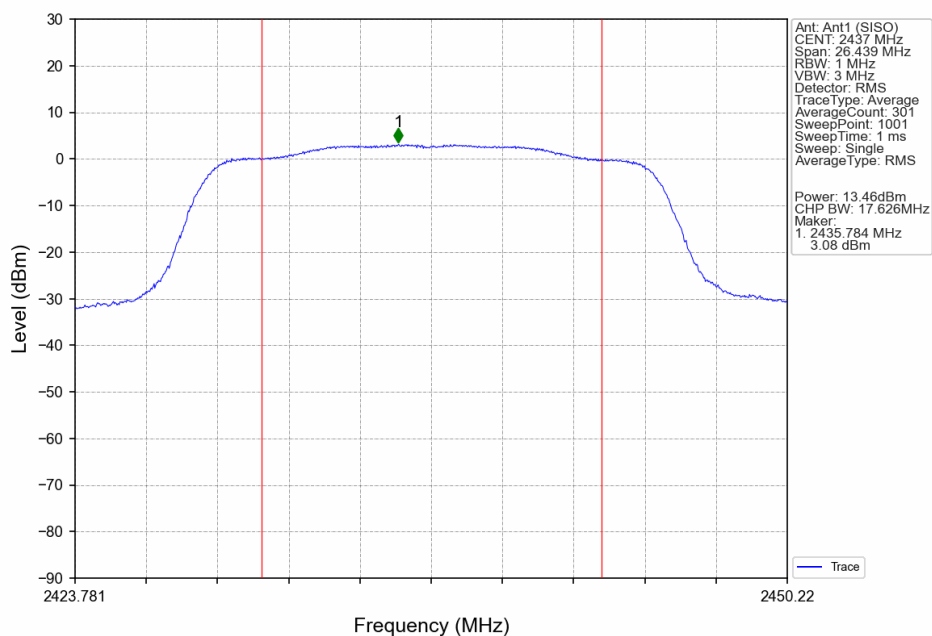


802.11g LCH 2412MHz_Ant1 (SISO)_NTNV

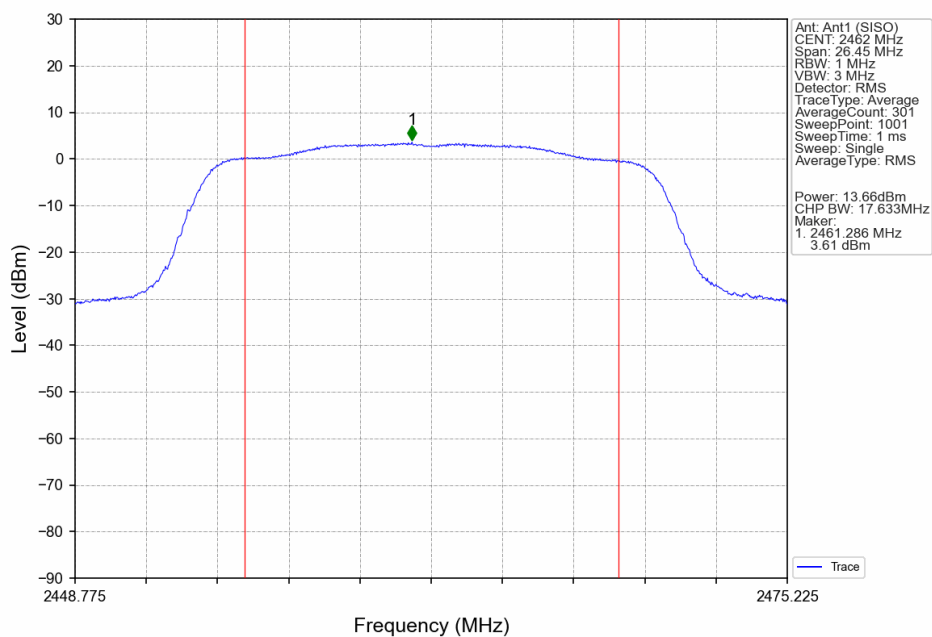




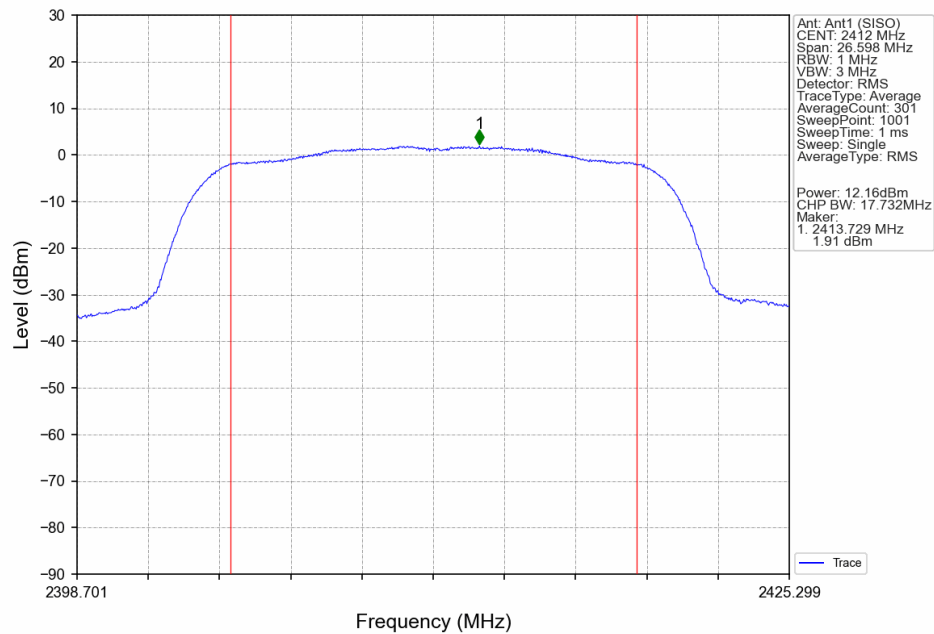
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



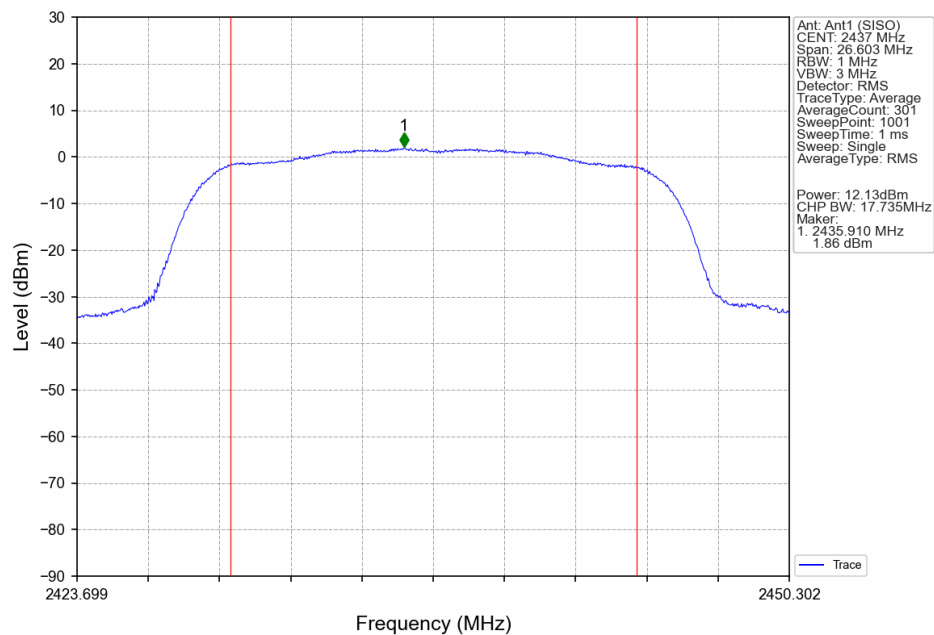
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

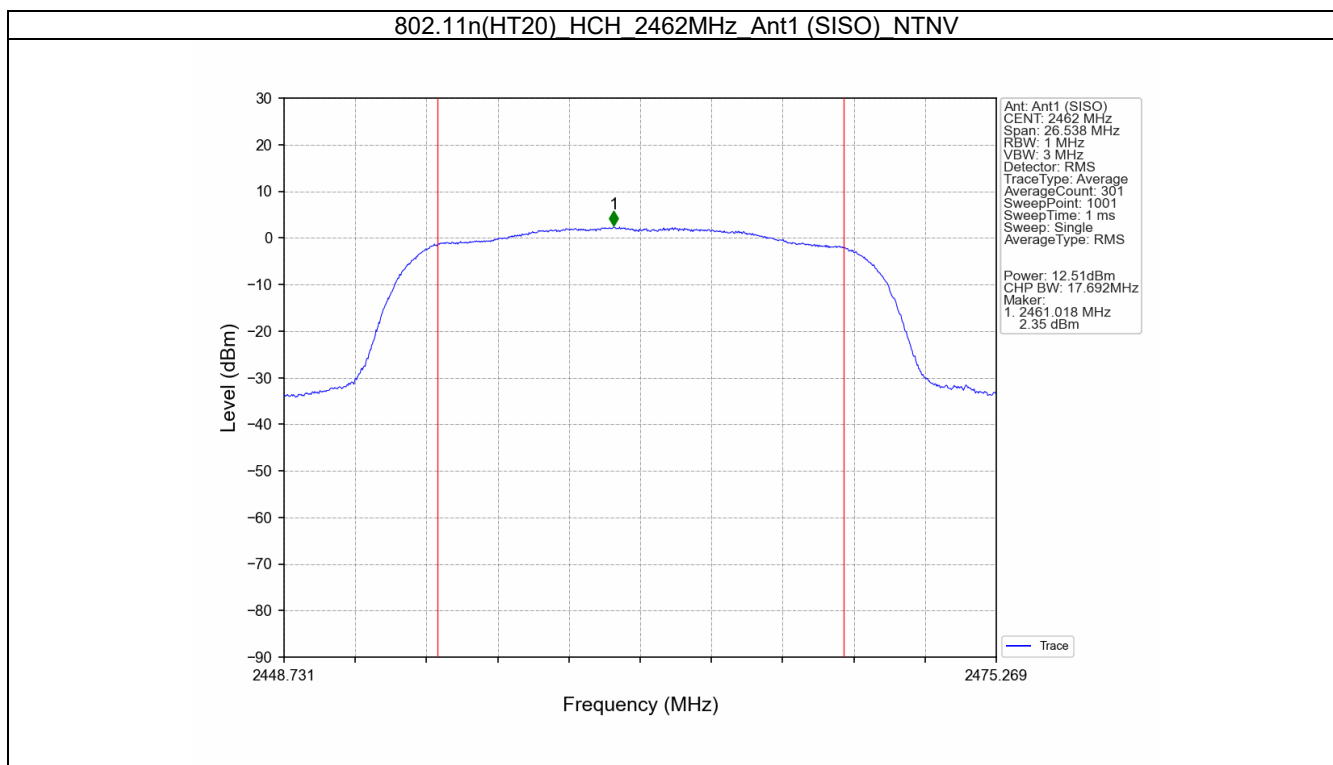


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







4. Maximum Power Spectral Density

4.1 Test Result

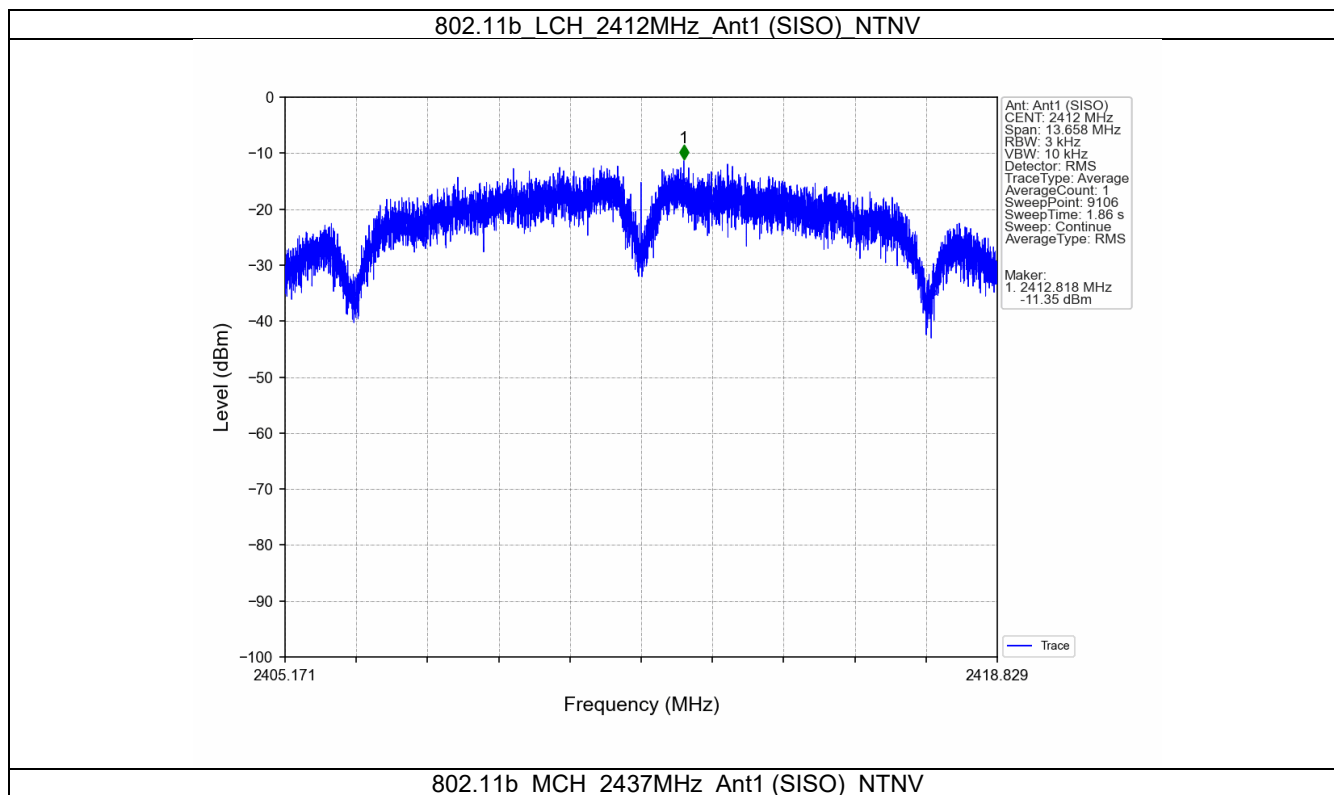
4.1.1 PSD

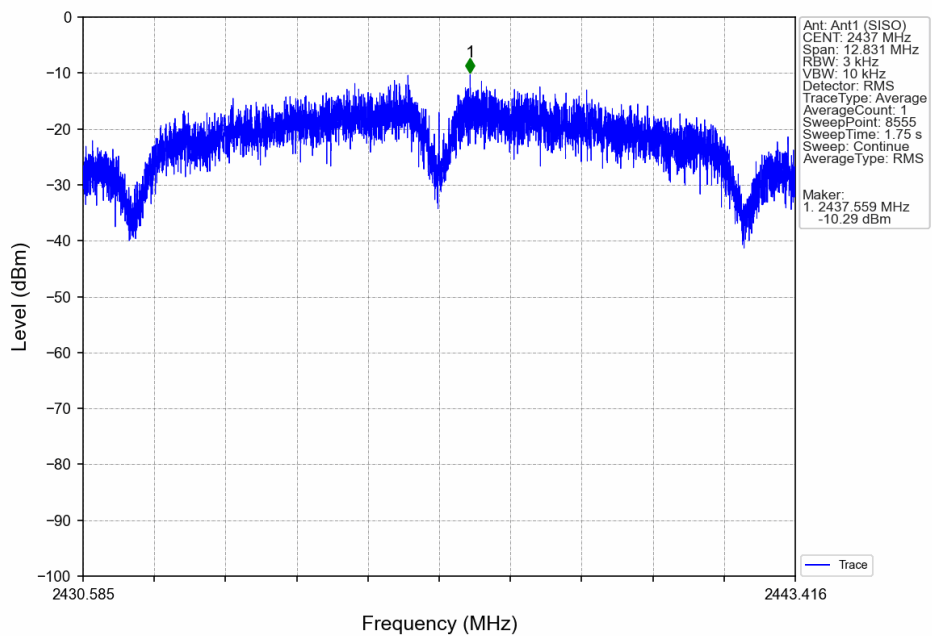
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-11.35	<=8	Pass
		2437	-10.29	<=8	Pass
		2462	-10.51	<=8	Pass
802.11g	SISO	2412	-9.79	<=8	Pass
		2437	-11.39	<=8	Pass
		2462	-9.58	<=8	Pass
802.11n (HT20)	SISO	2412	-10.53	<=8	Pass
		2437	-10.01	<=8	Pass
		2462	-10.06	<=8	Pass

Note1: Antenna Gain: Ant1: 0.00dBi;

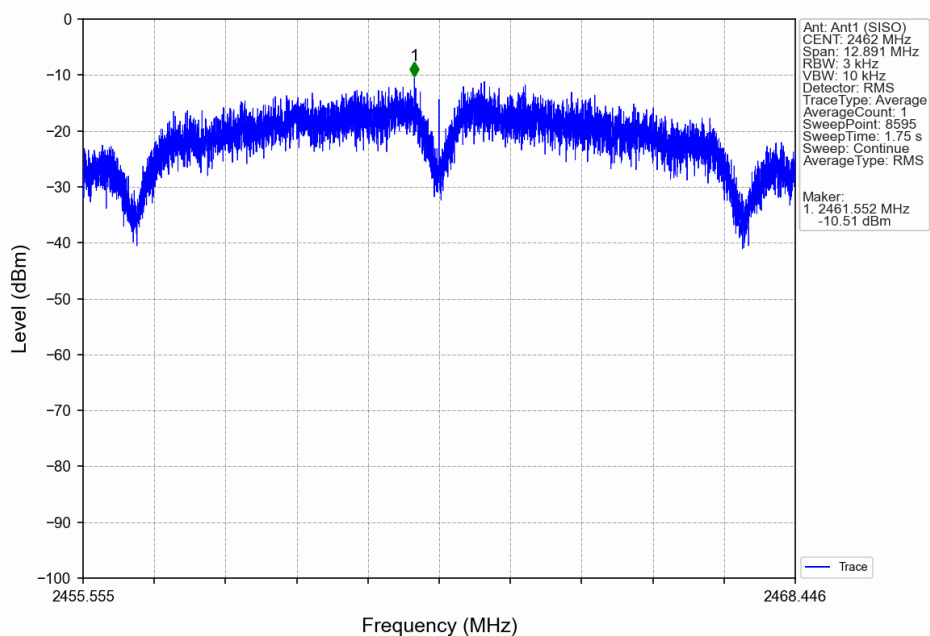
4.2 Test Graph

4.2.1 PSD

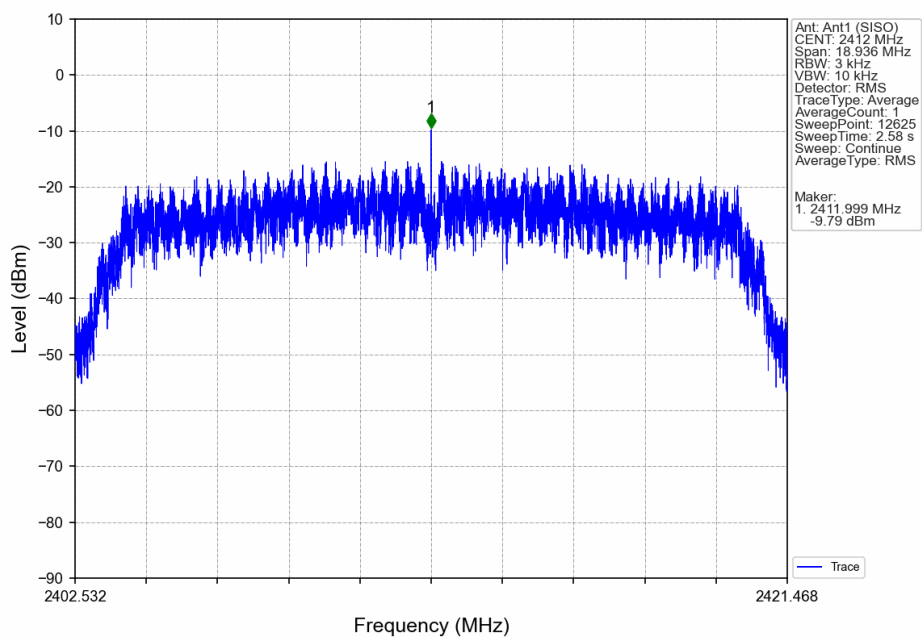




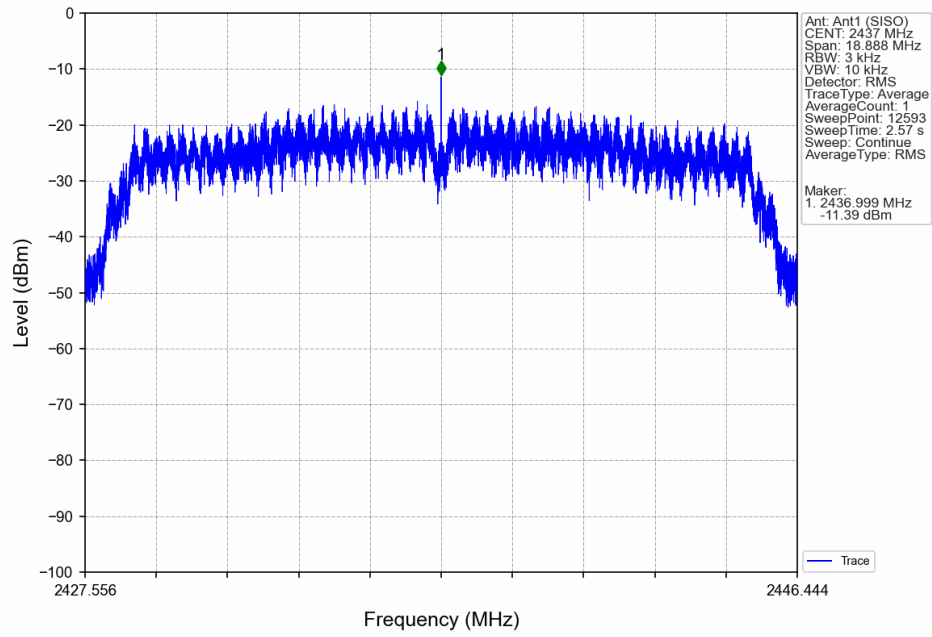
802.11b HCH 2462MHz_Ant1 (SISO)_NTNV



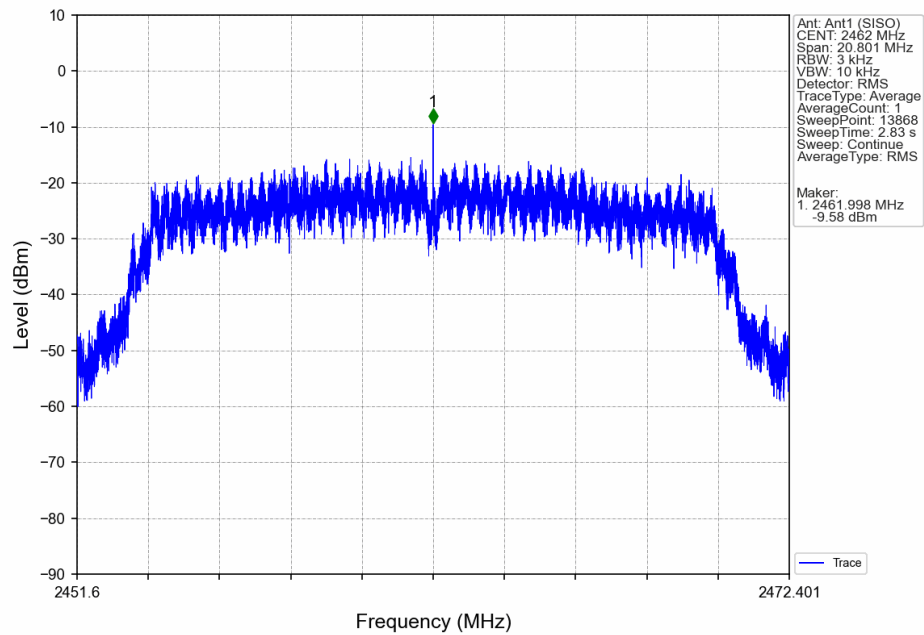
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



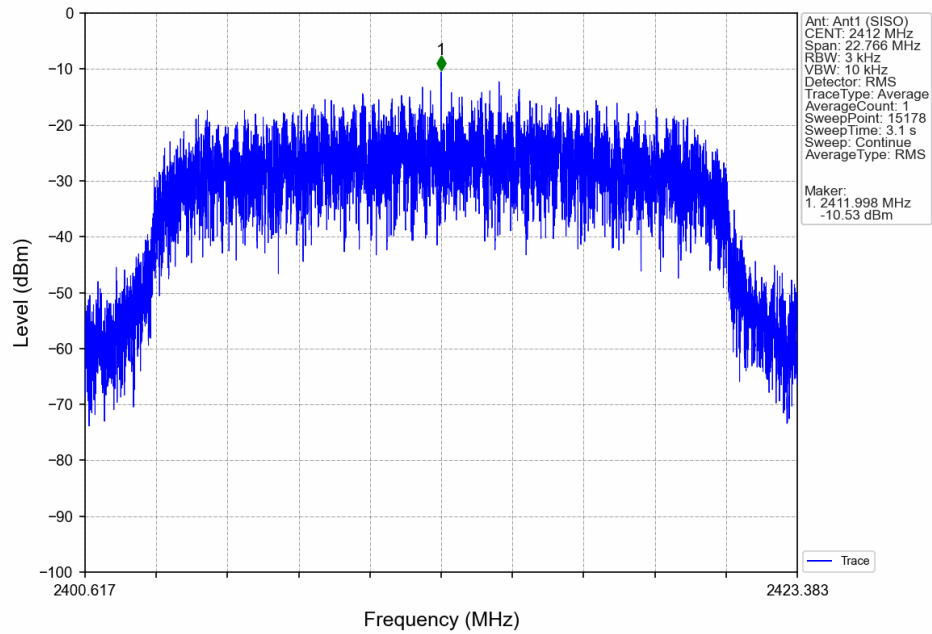
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



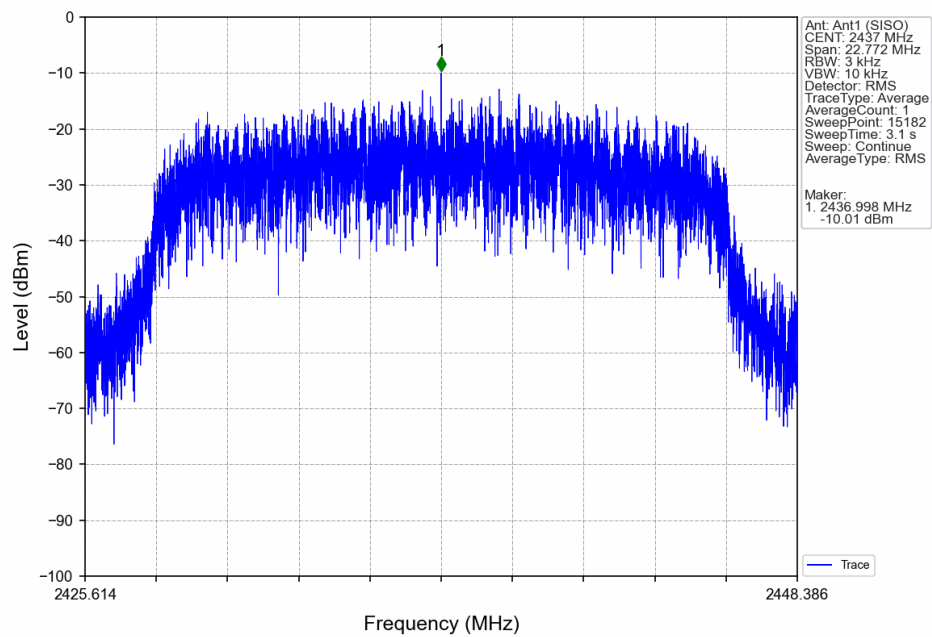
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

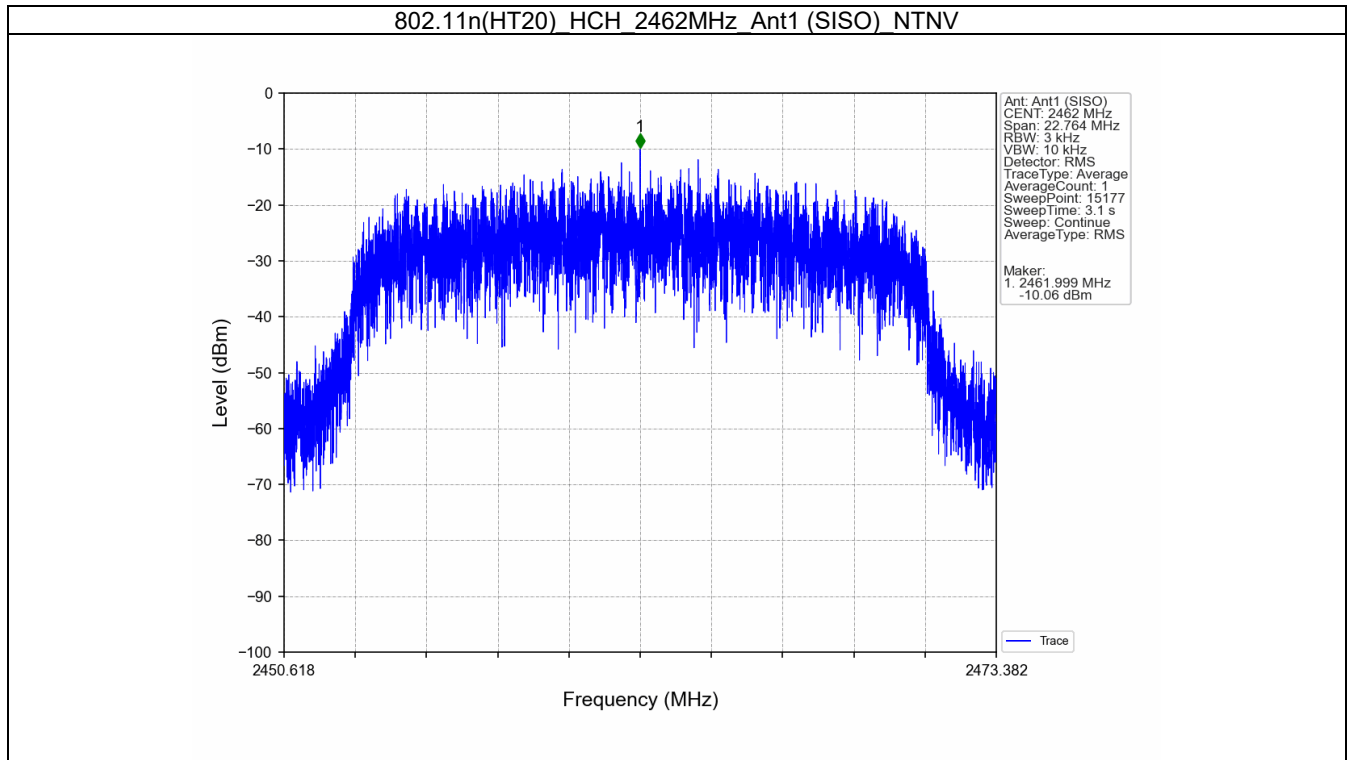


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







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	6.87
		2437	1	6.41
		2462	1	6.77
802.11g	SISO	2412	1	4.00
		2437	1	3.79
		2462	1	3.67
802.11n (HT20)	SISO	2412	1	2.38
		2437	1	2.33
		2462	1	2.72

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

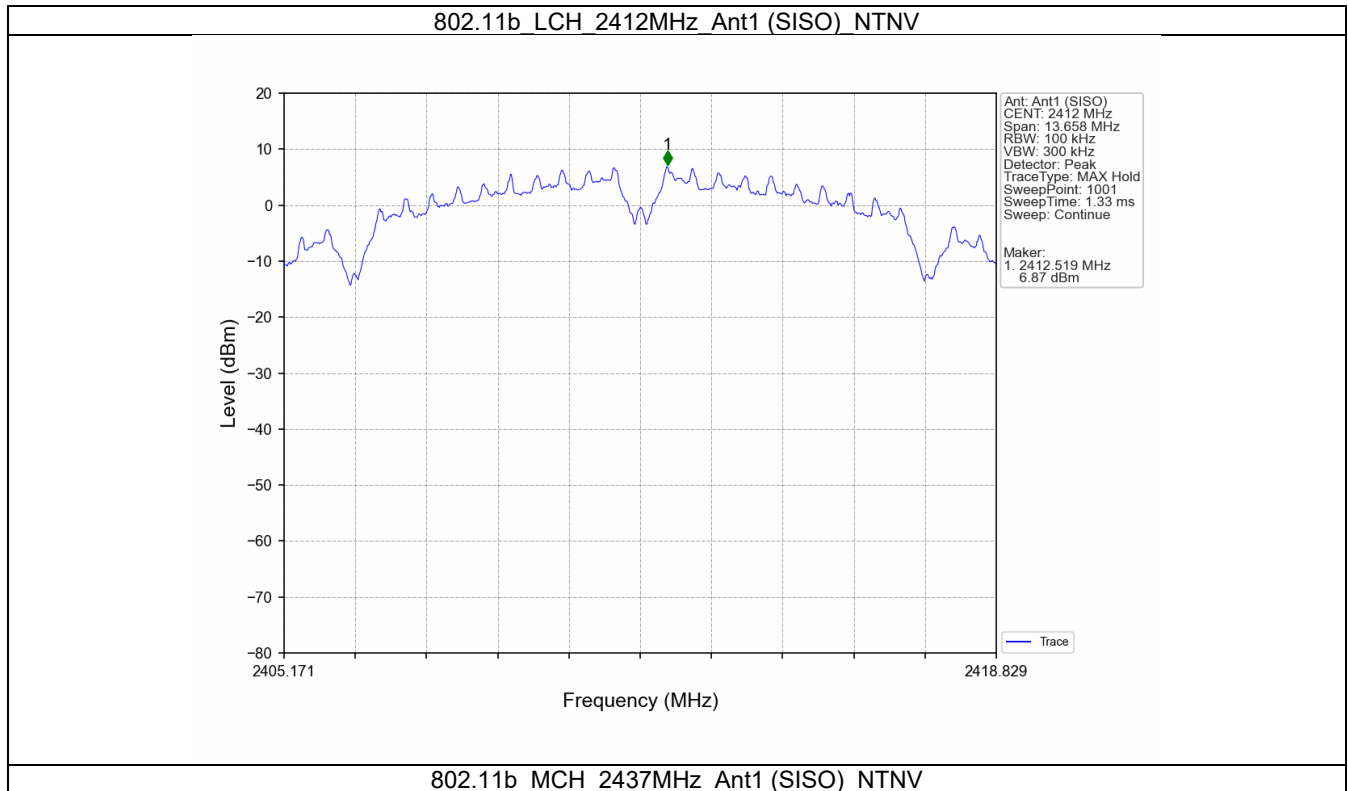
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	6.87	-23.13	Pass
		2437	1	6.87	-23.13	Pass
		2462	1	6.87	-23.13	Pass
802.11g	SISO	2412	1	4.00	-26.00	Pass
		2437	1	4.00	-26.00	Pass
		2462	1	4.00	-26.00	Pass
802.11n (HT20)	SISO	2412	1	2.72	-27.28	Pass
		2437	1	2.72	-27.28	Pass
		2462	1	2.72	-27.28	Pass

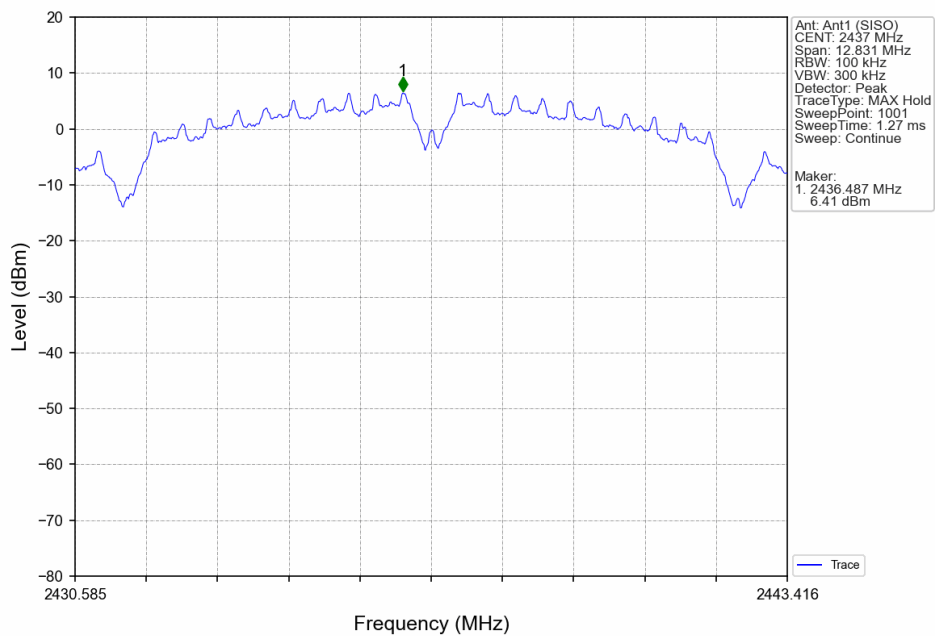
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



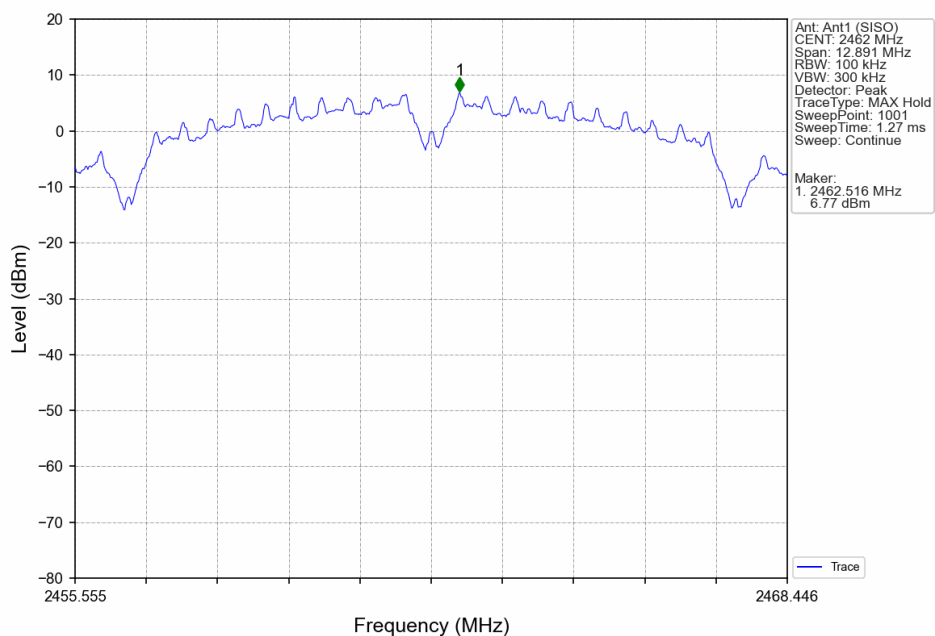
5.2 Test Graph

5.2.1 Ref

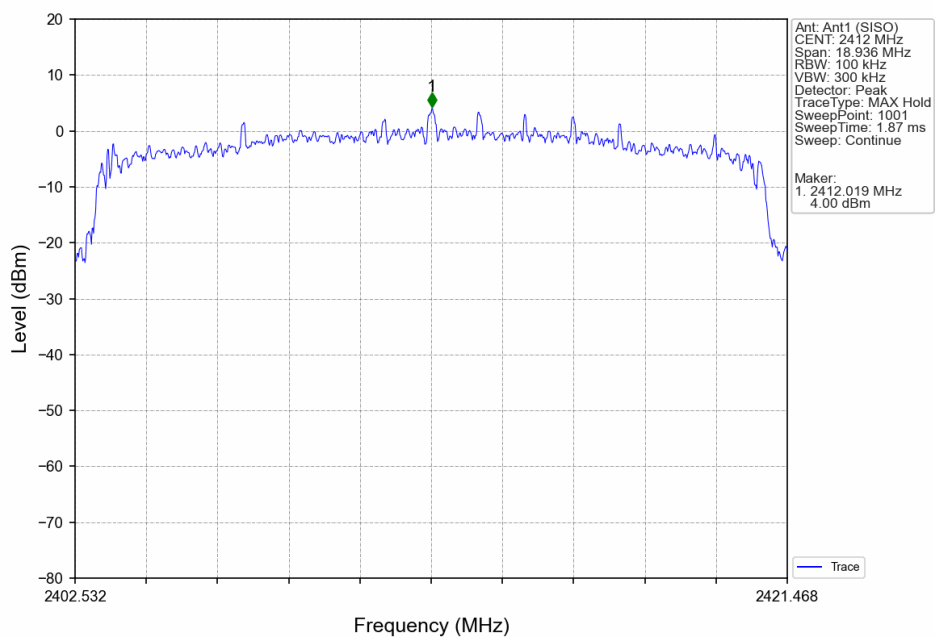




802.11b HCH 2462MHz Ant1 (SISO) NTN

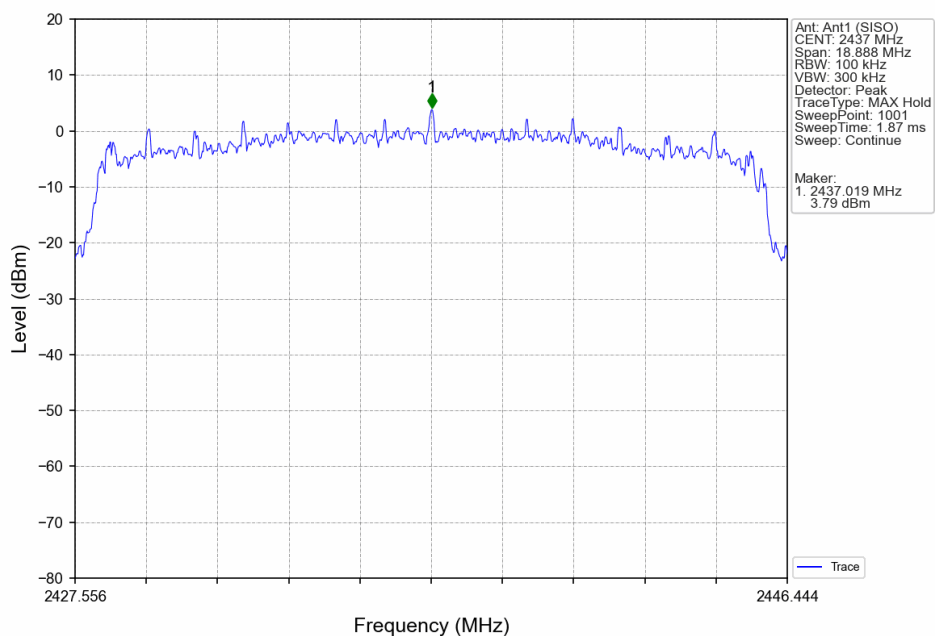


802.11g LCH 2412MHz Ant1 (SISO) NTN

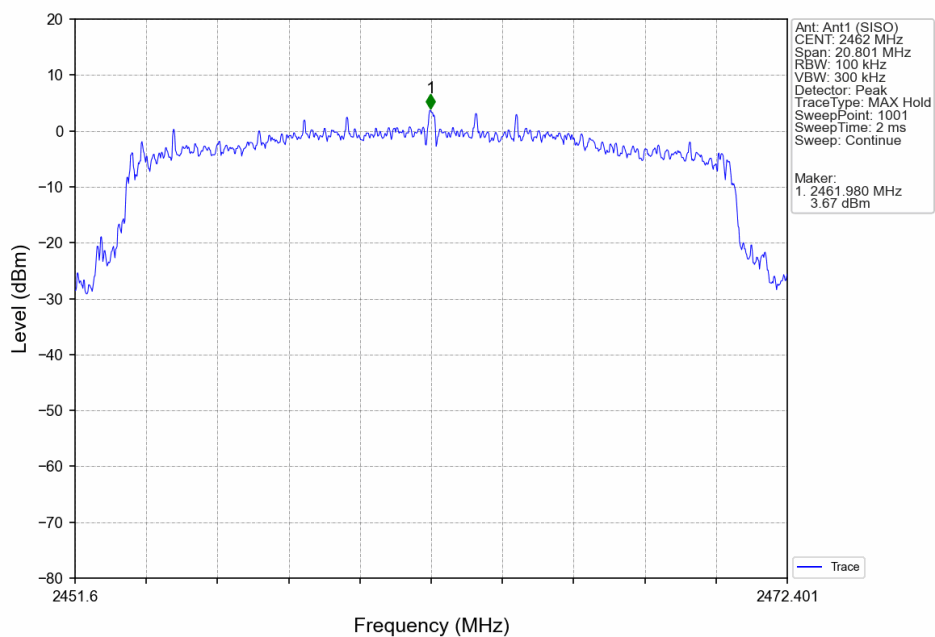




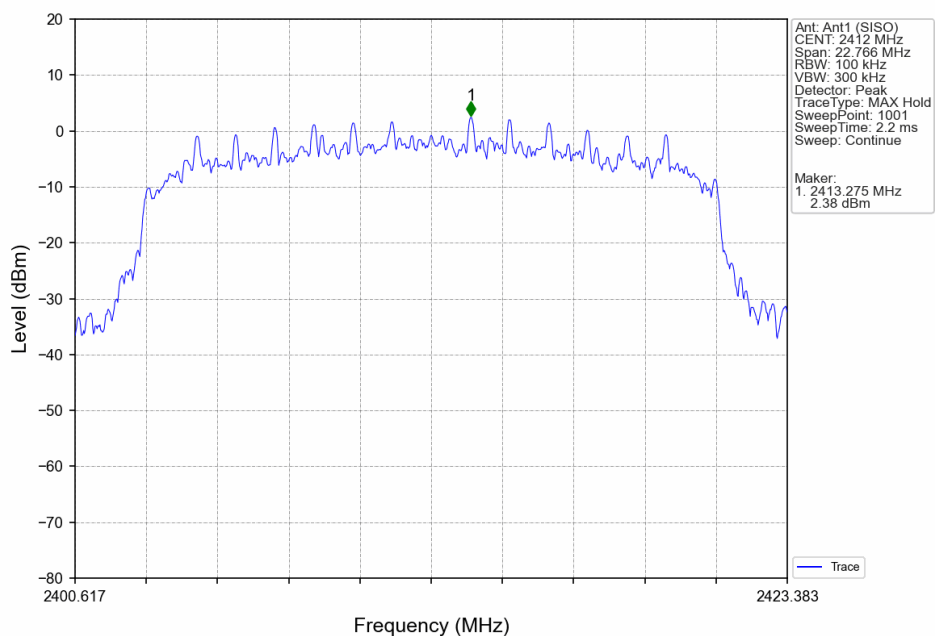
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



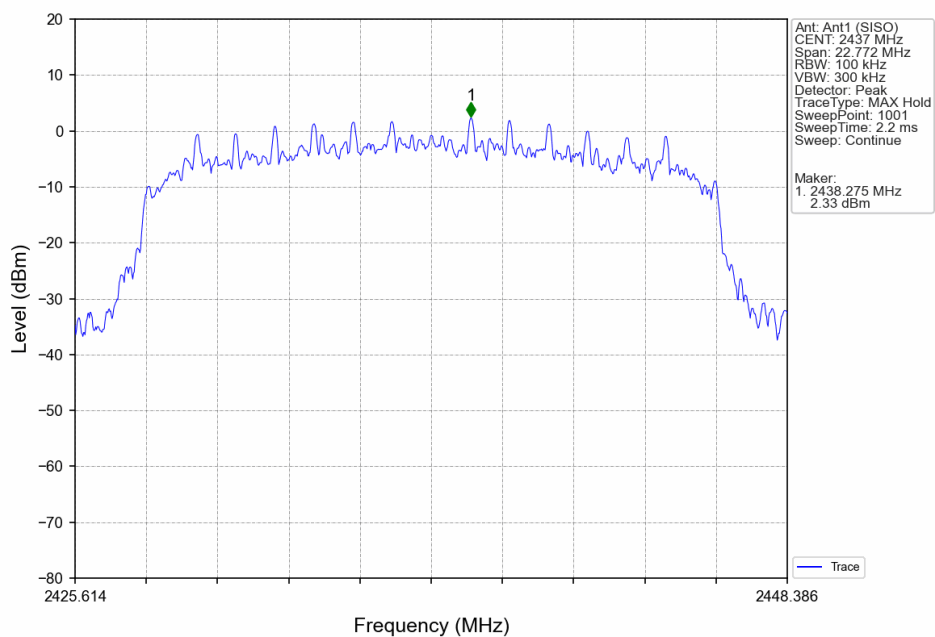
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

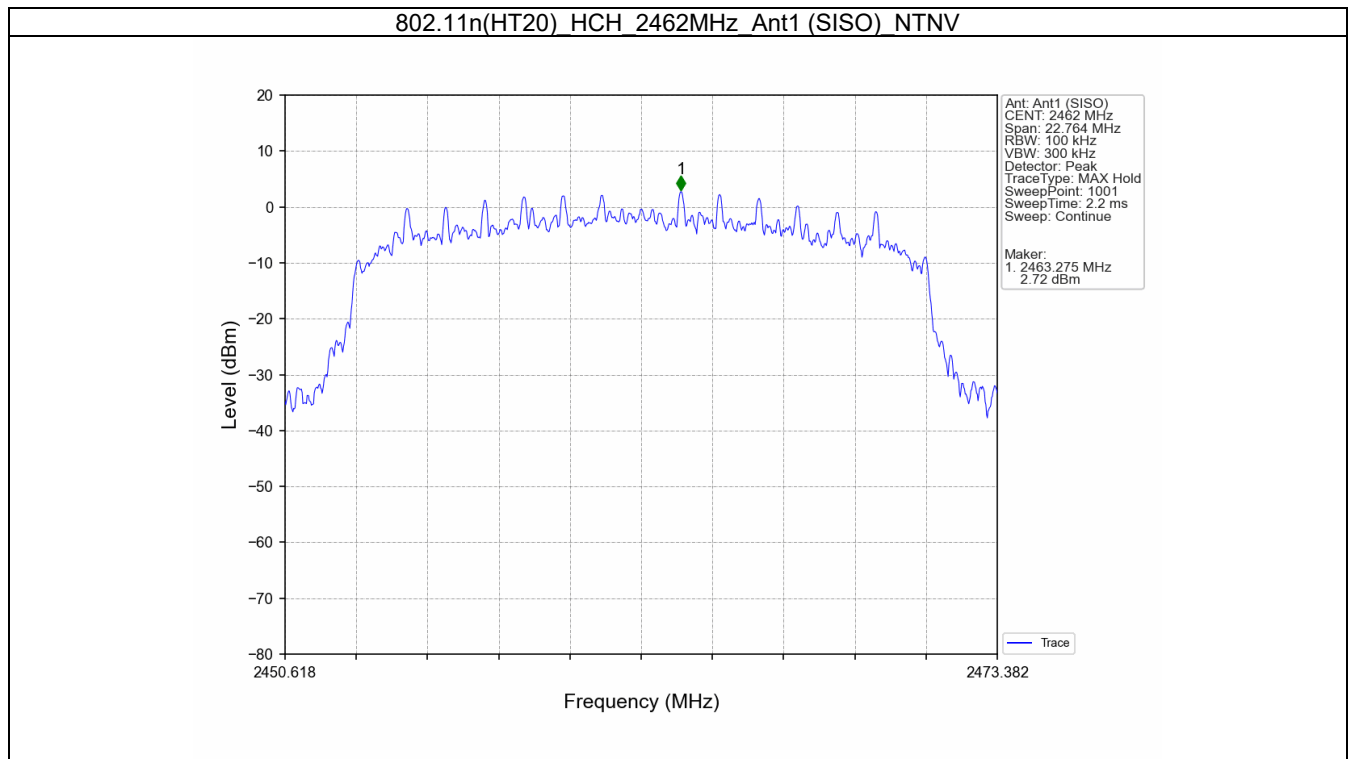


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

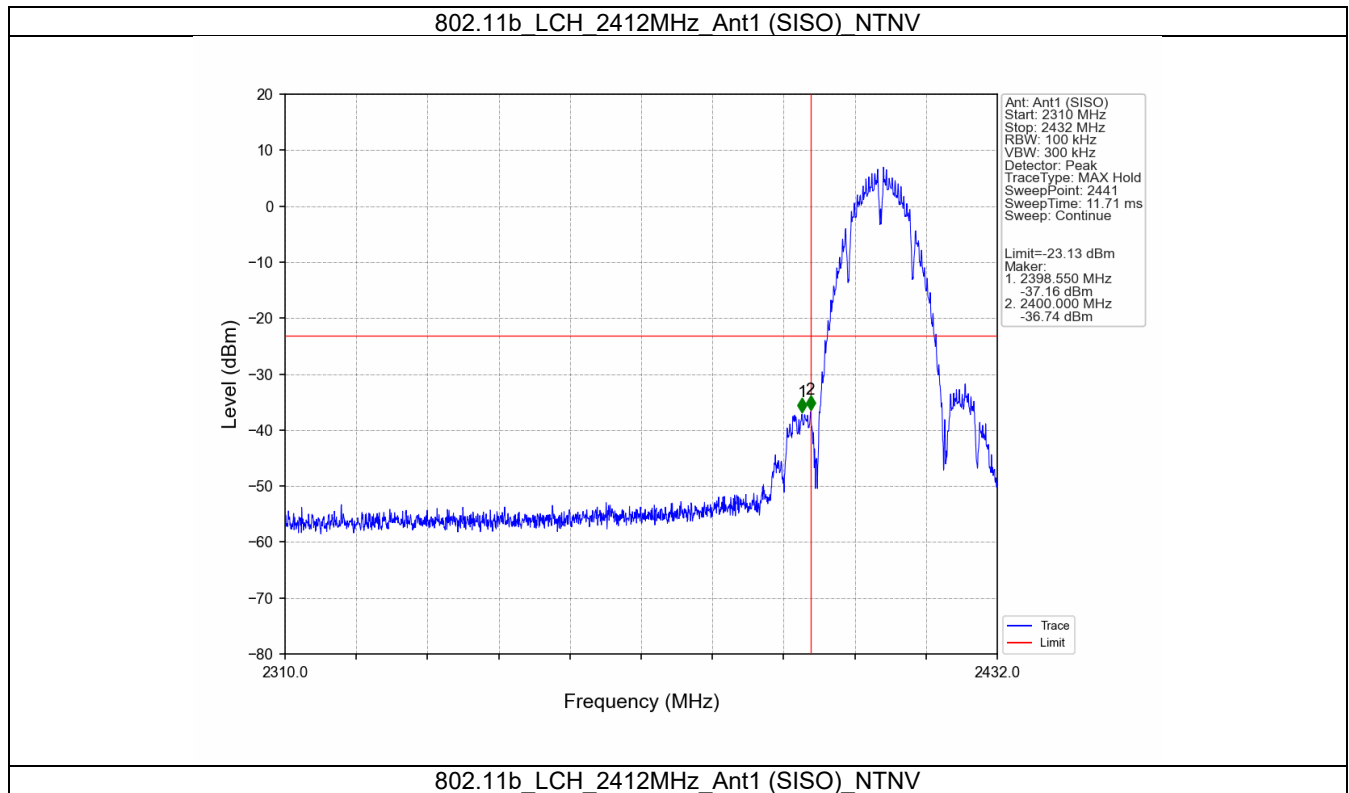


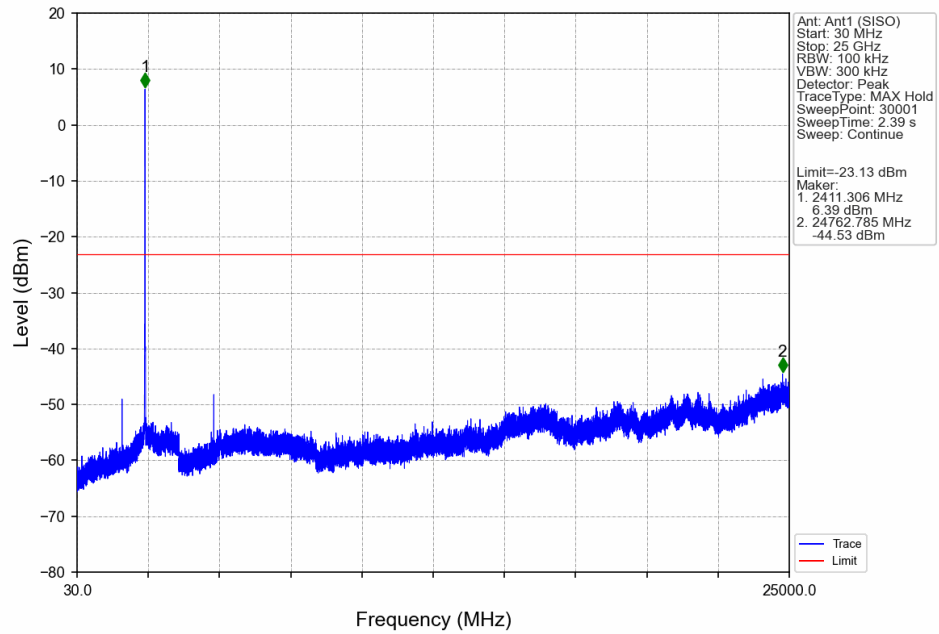
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



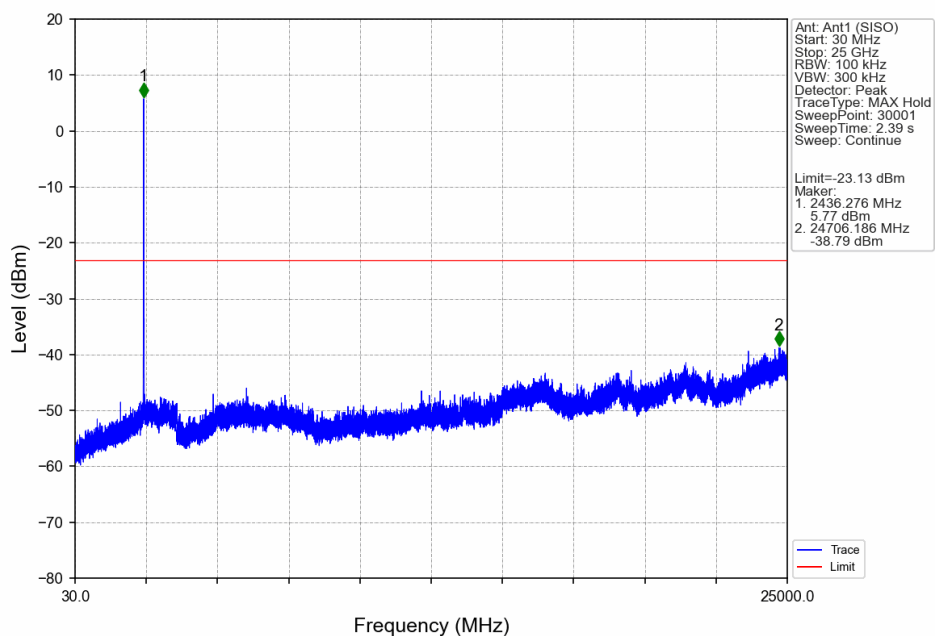


5.2.2 CSE

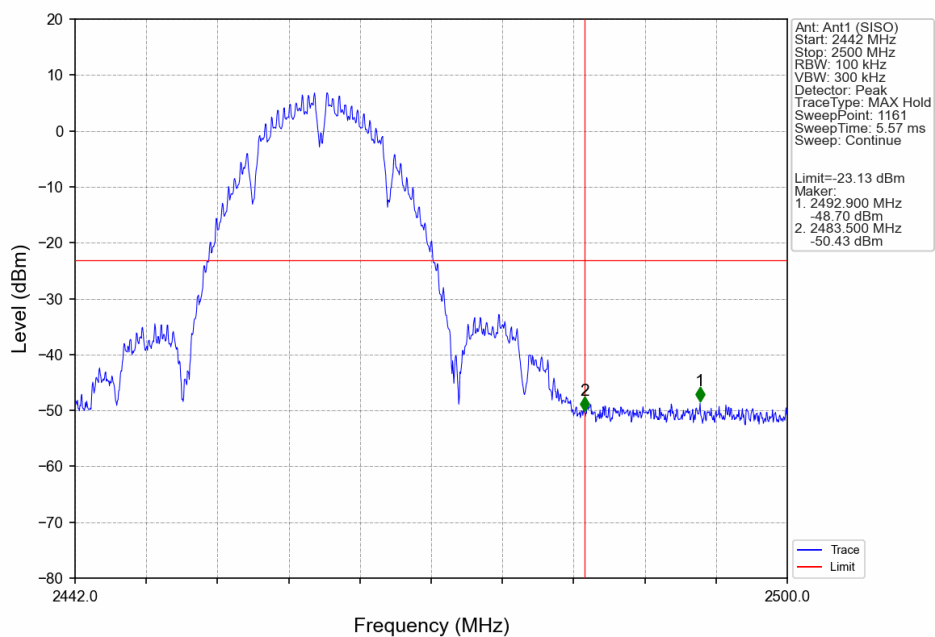




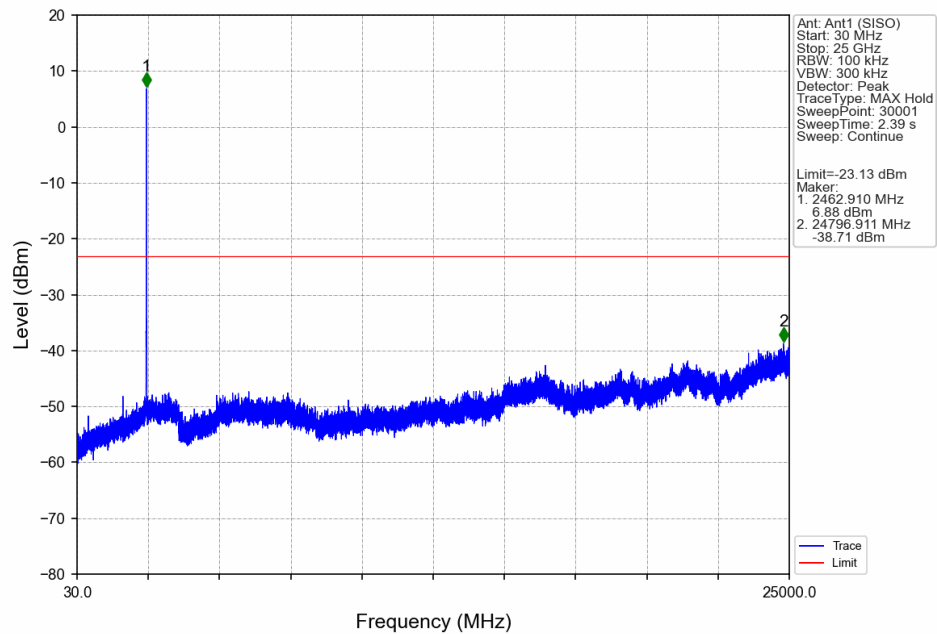
802.11b MCH_2437MHz_Ant1 (SISO)_NTNV



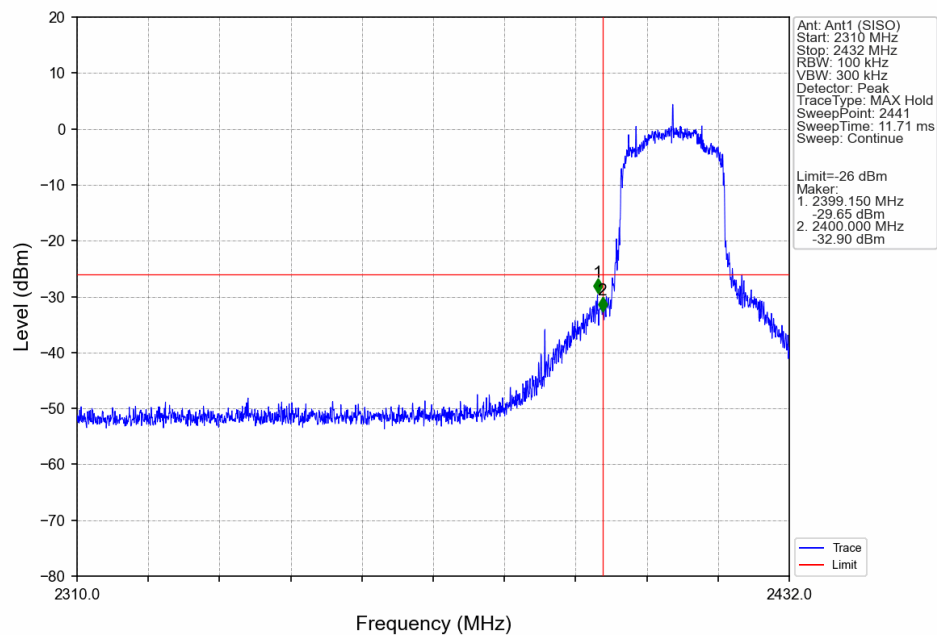
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



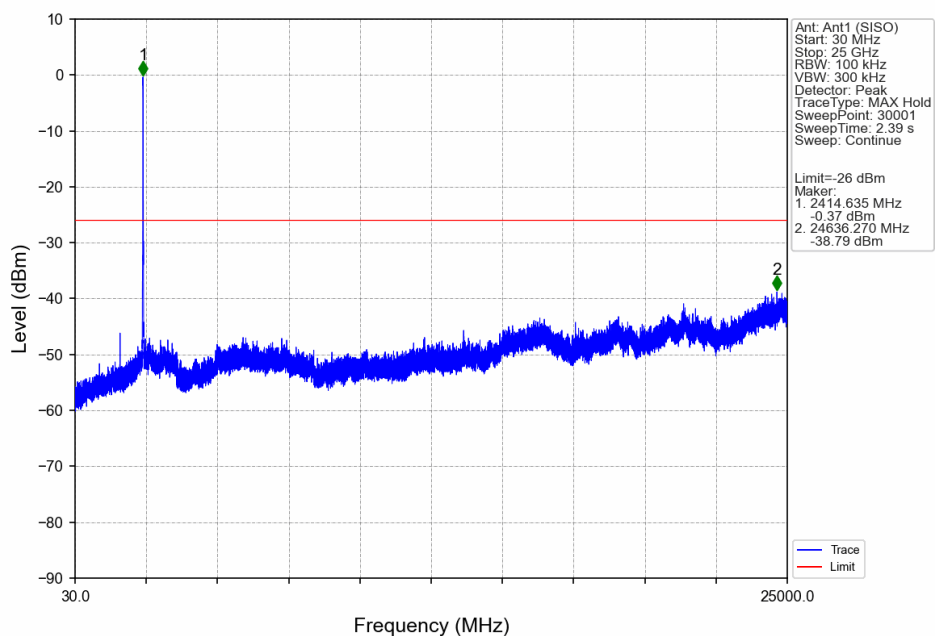
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



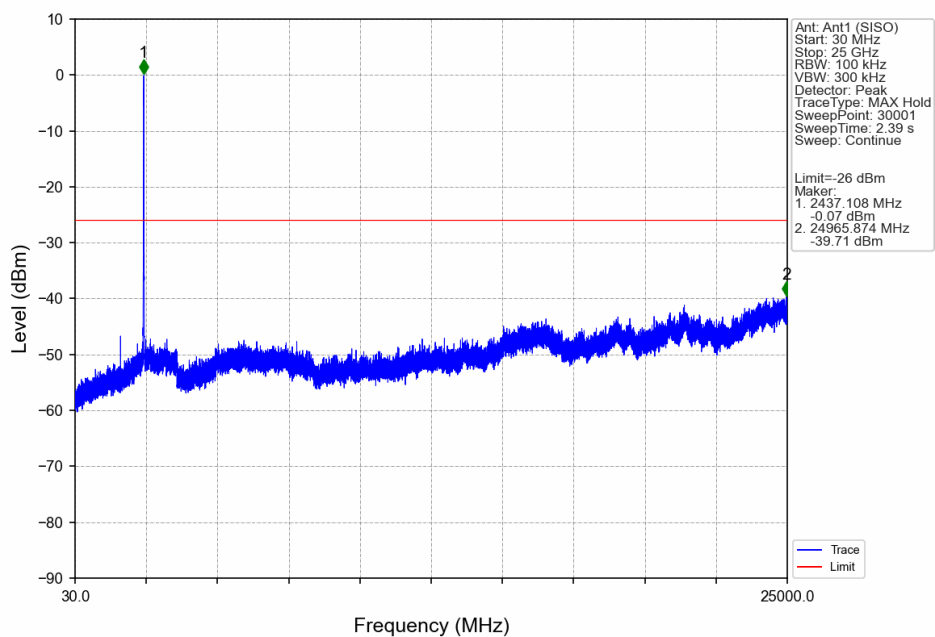
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



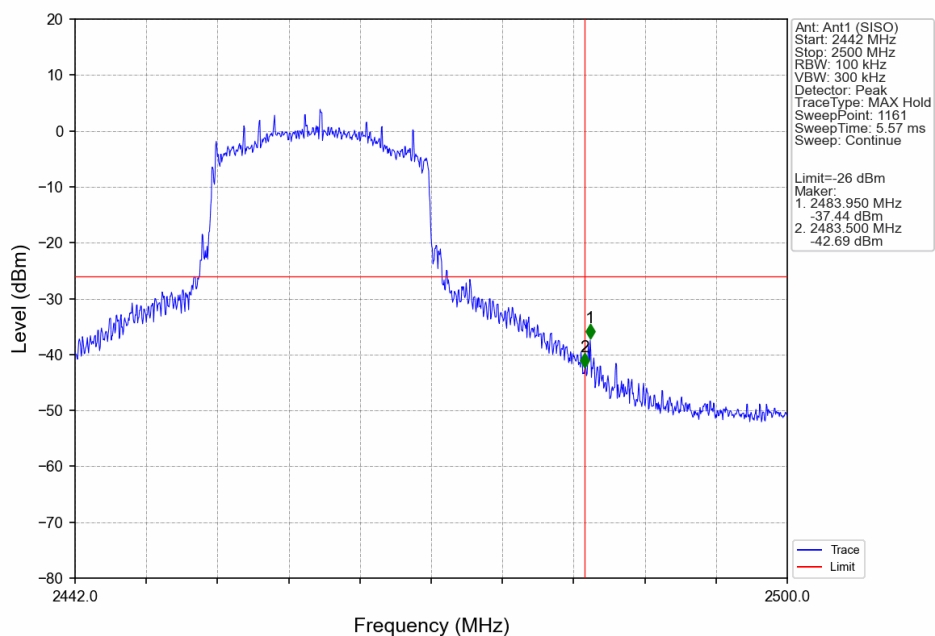
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



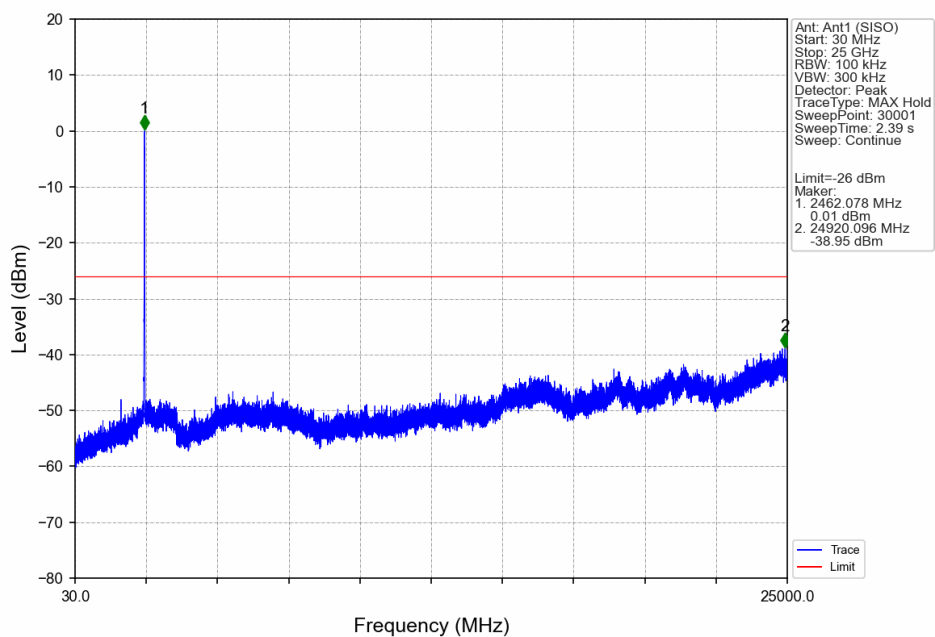
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



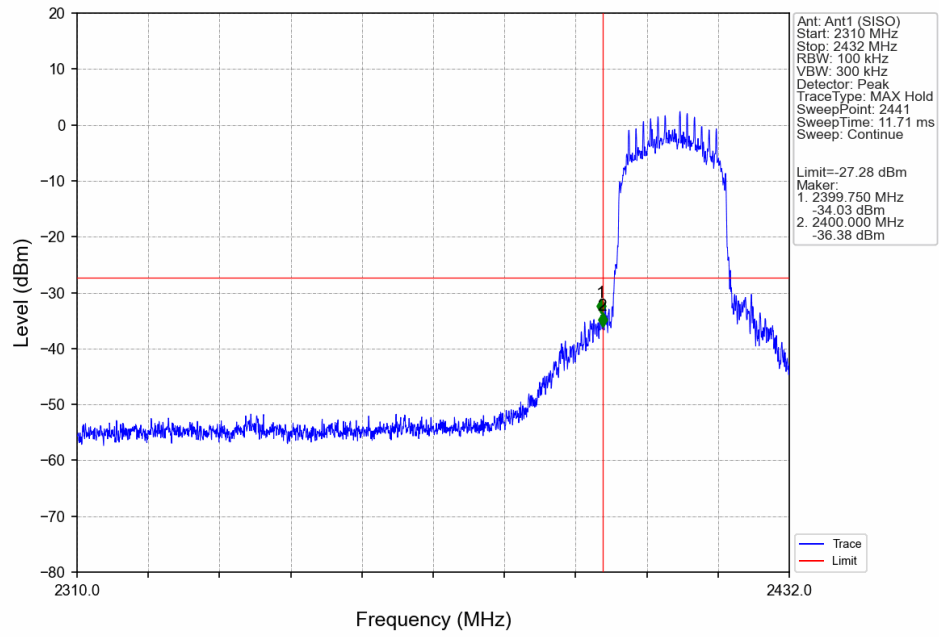
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



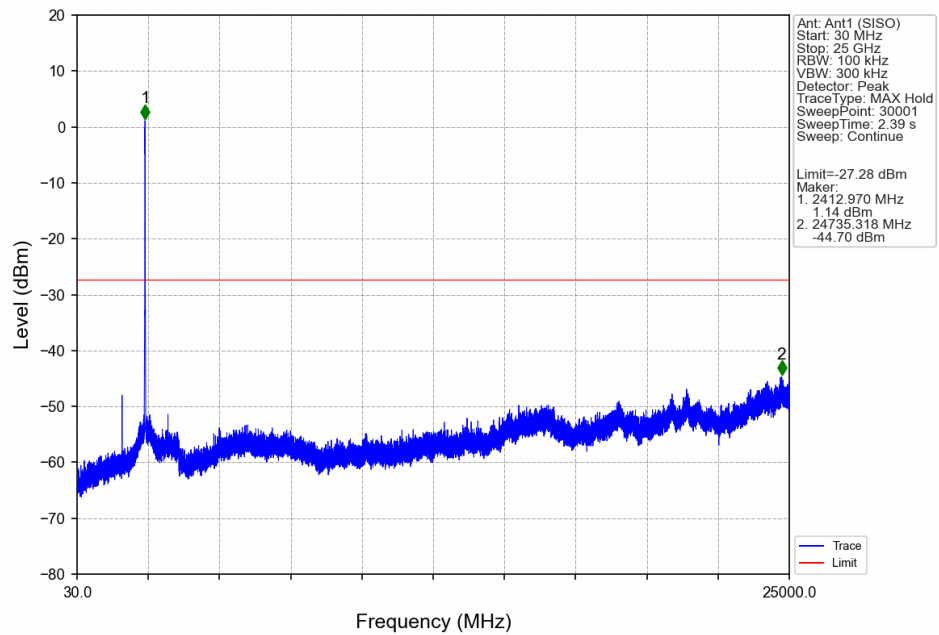
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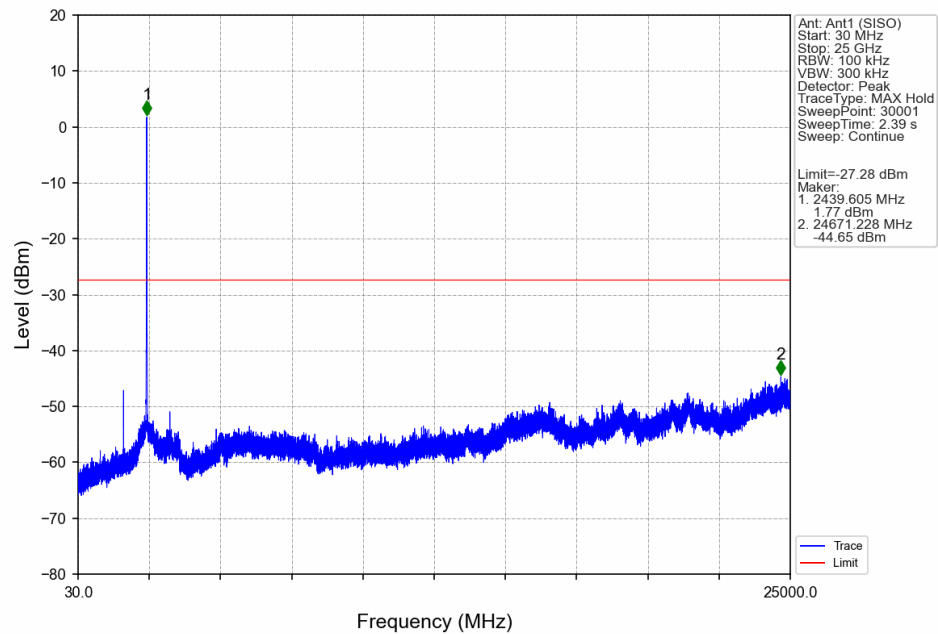
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

