



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK250613054A02E02-01

RF Test Report

For BTEK250613054A02E02

Project No.:	BTEK250613054A02E02-01
Product Description:	22.1℃, 53%, 102.3kPa
Test Engineer:	Zora
Test Date:	2025-10-22~2025-12-11



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK250613054A02E02-01

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

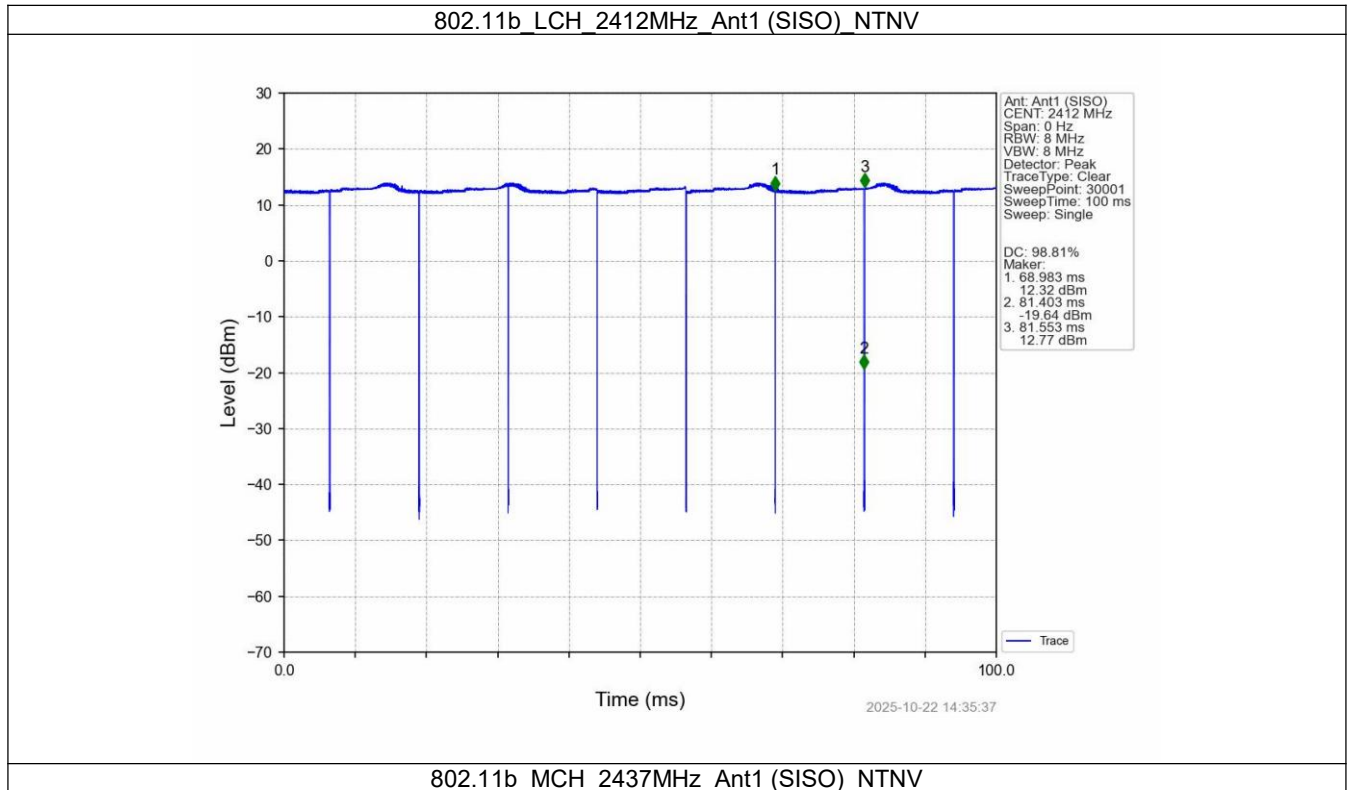
1.1.1 Ant1

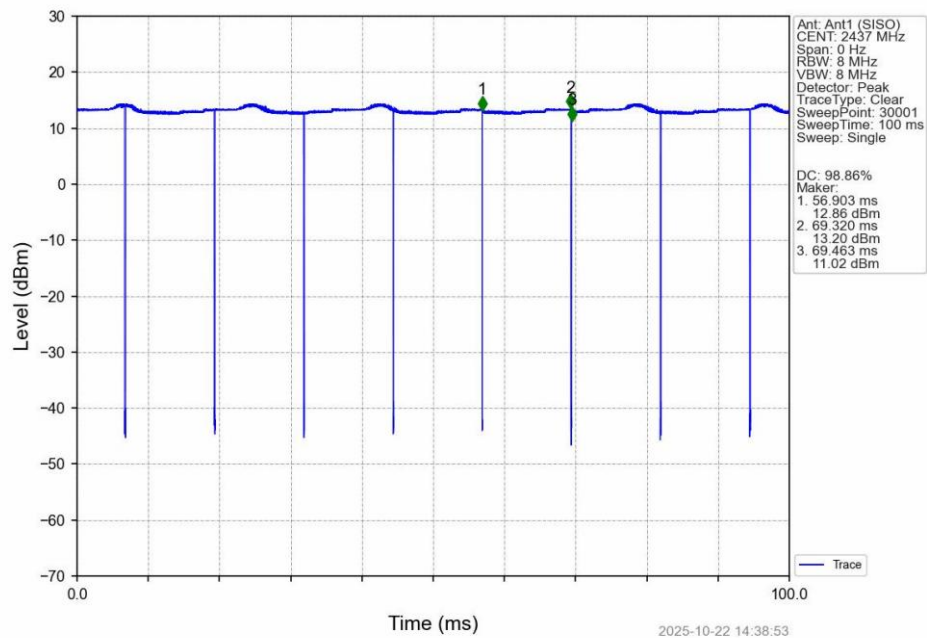
Ant1							
Mode	Tx Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.420	12.570	98.81	0.05	0.90
		2437	12.417	12.560	98.86	0.05	0.85
		2462	12.440	12.580	98.89	0.05	0.50
802.11g	SISO	2412	2.071	2.191	94.52	0.24	3.68
		2437	2.071	2.234	92.70	0.33	5.93
		2462	2.065	2.235	92.39	0.34	5.12
802.11n (HT20)	SISO	2412	1.921	2.091	91.87	0.37	5.93
		2437	1.922	2.082	92.32	0.35	5.04
		2462	1.926	2.091	92.11	0.36	6.39
802.11n (HT40)	SISO	2422	0.945	1.184	79.81	0.98	13.21
		2437	0.944	1.184	79.73	0.98	16.64
		2452	0.944	1.106	85.35	0.69	8.42



1.2 Test Graph

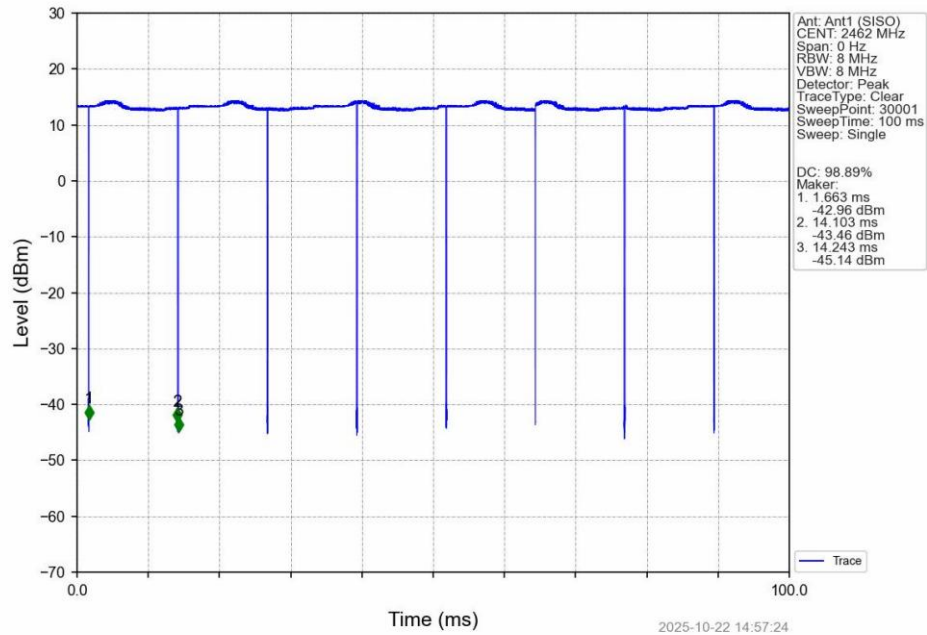
1.2.1 Ant1



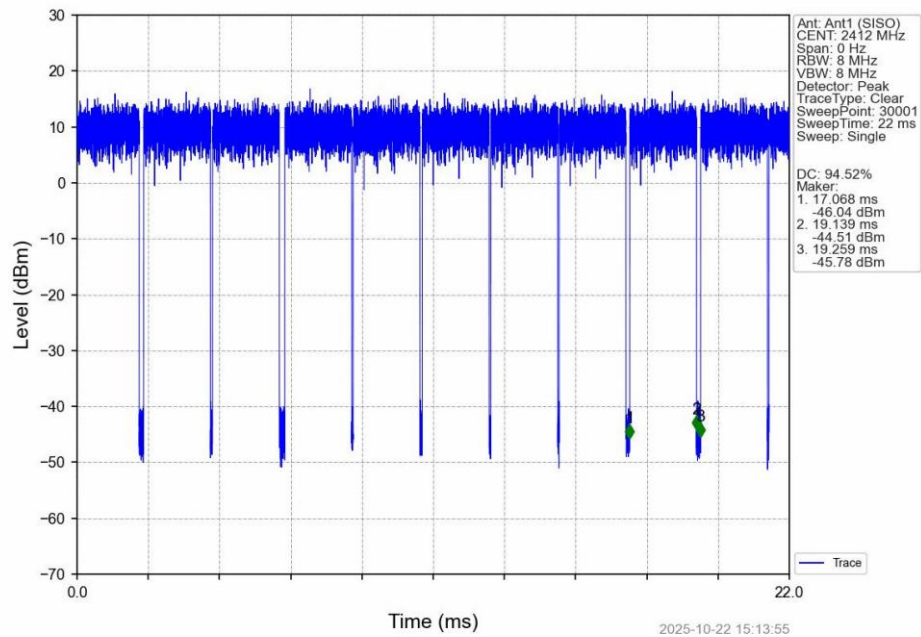




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

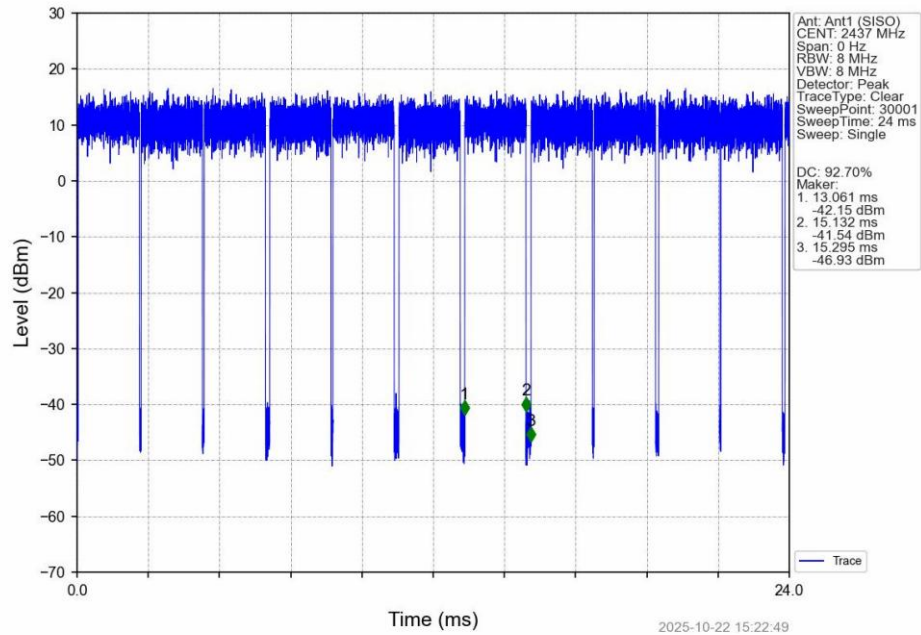


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

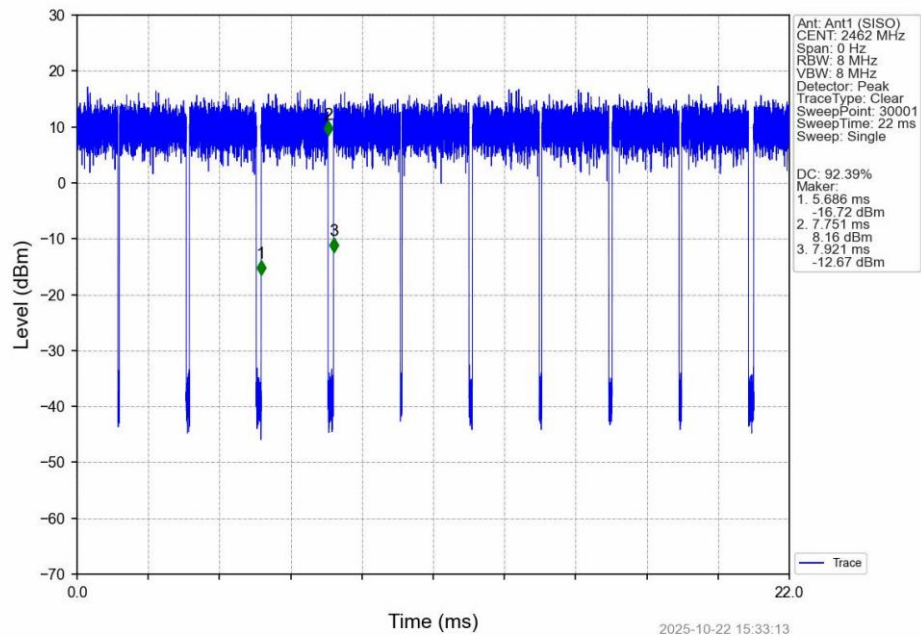




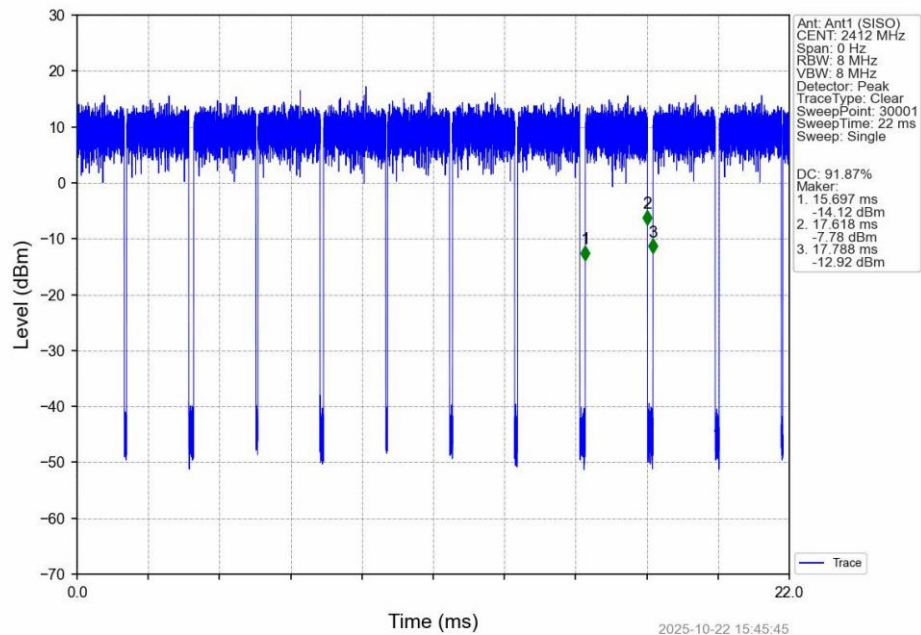
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



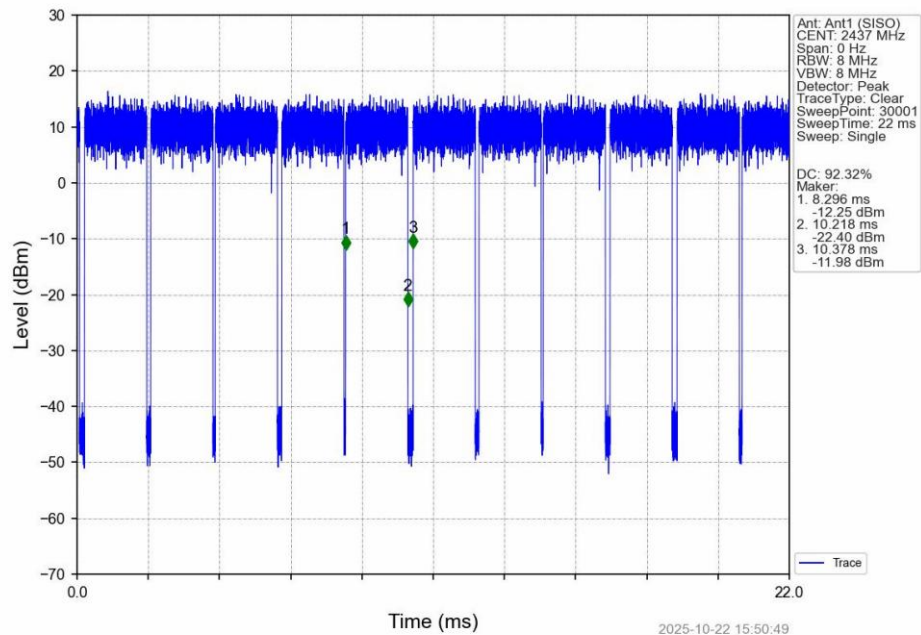
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



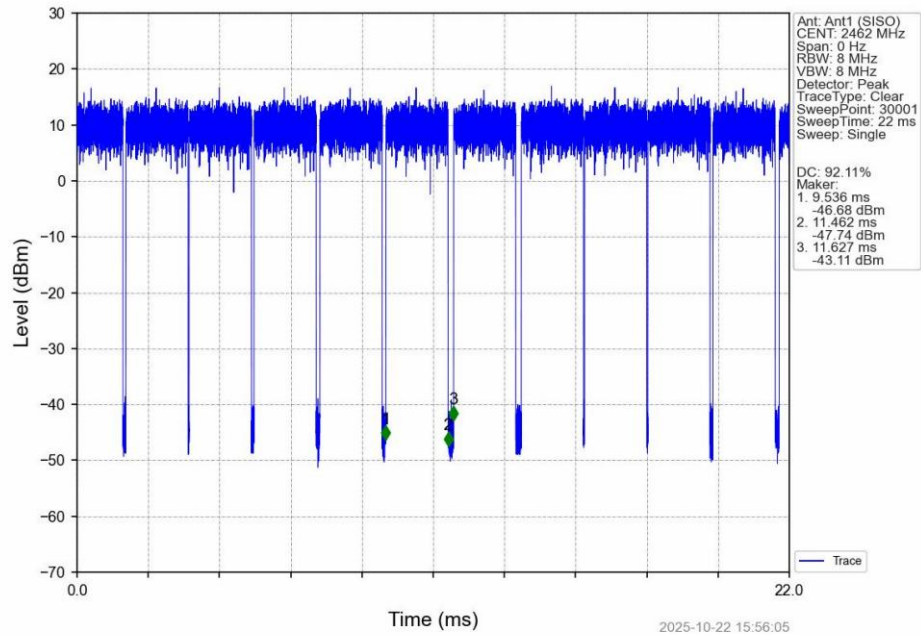
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



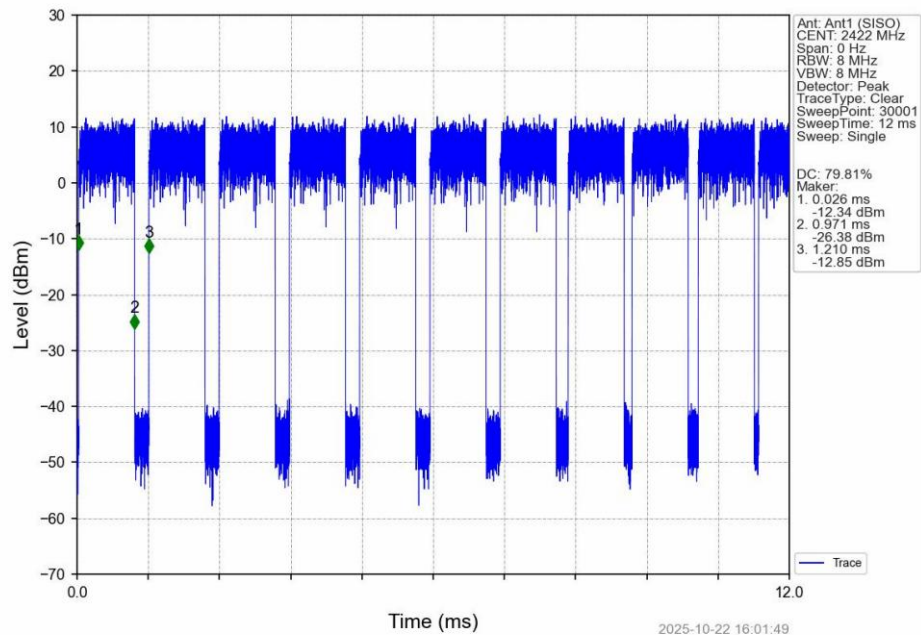
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

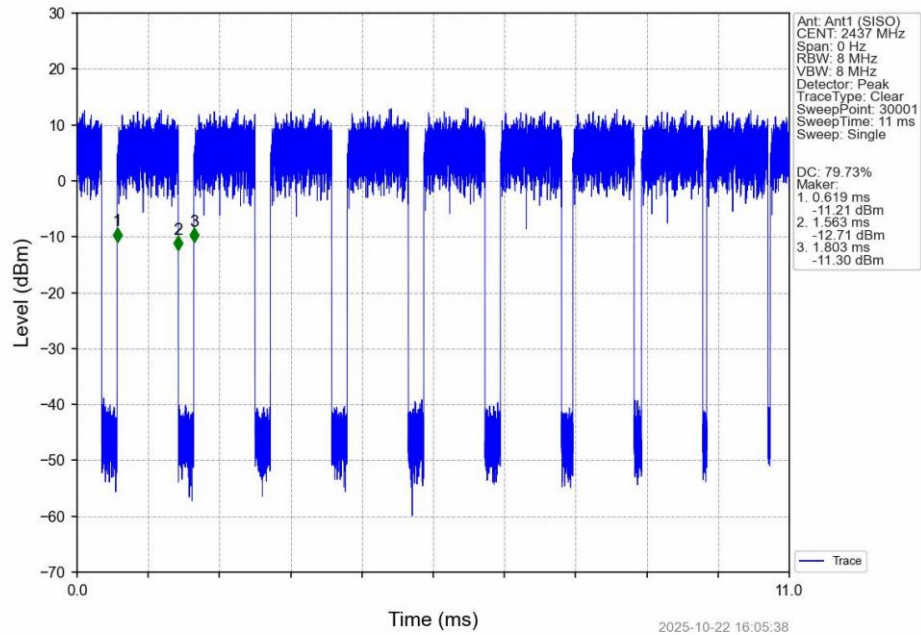


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

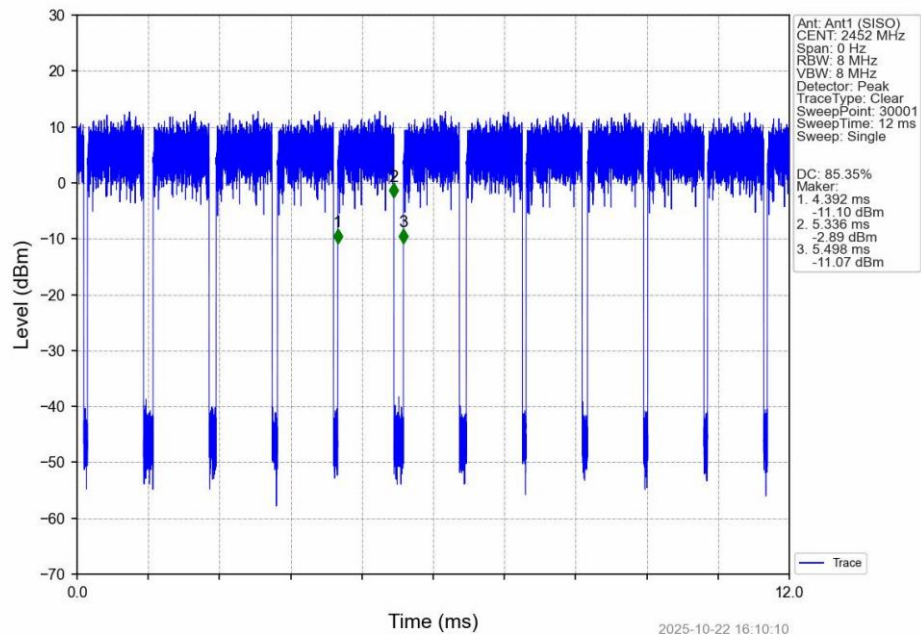




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





2. Bandwidth

2.1 Test Result

2.1.1 OBW

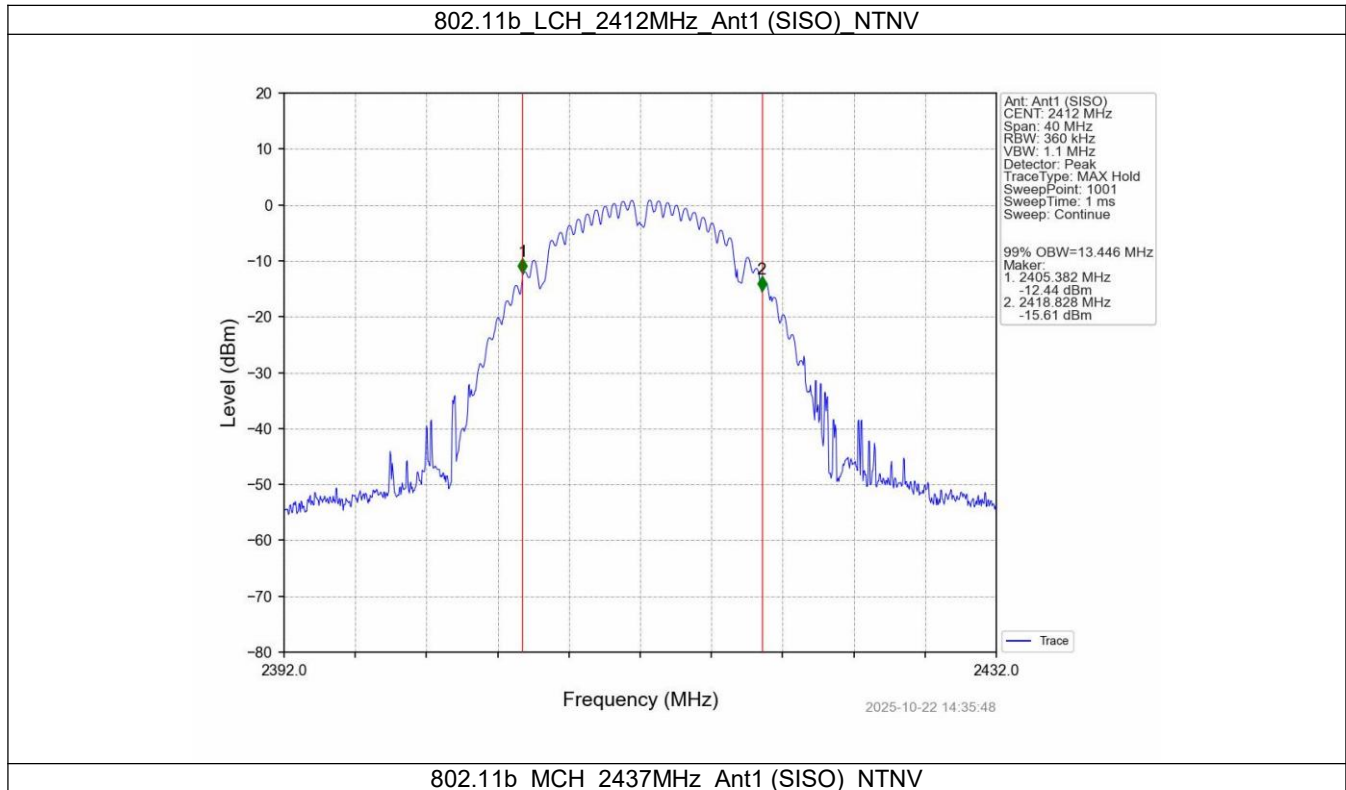
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	13.446	/	Pass
		2437	1	13.431	/	Pass
		2462	1	13.379	/	Pass
802.11g	SISO	2412	1	17.387	/	Pass
		2437	1	17.450	/	Pass
		2462	1	17.627	/	Pass
802.11n (HT20)	SISO	2412	1	18.347	/	Pass
		2437	1	18.598	/	Pass
		2462	1	18.398	/	Pass
802.11n (HT40)	SISO	2422	1	36.568	/	Pass
		2437	1	36.679	/	Pass
		2452	1	36.527	/	Pass

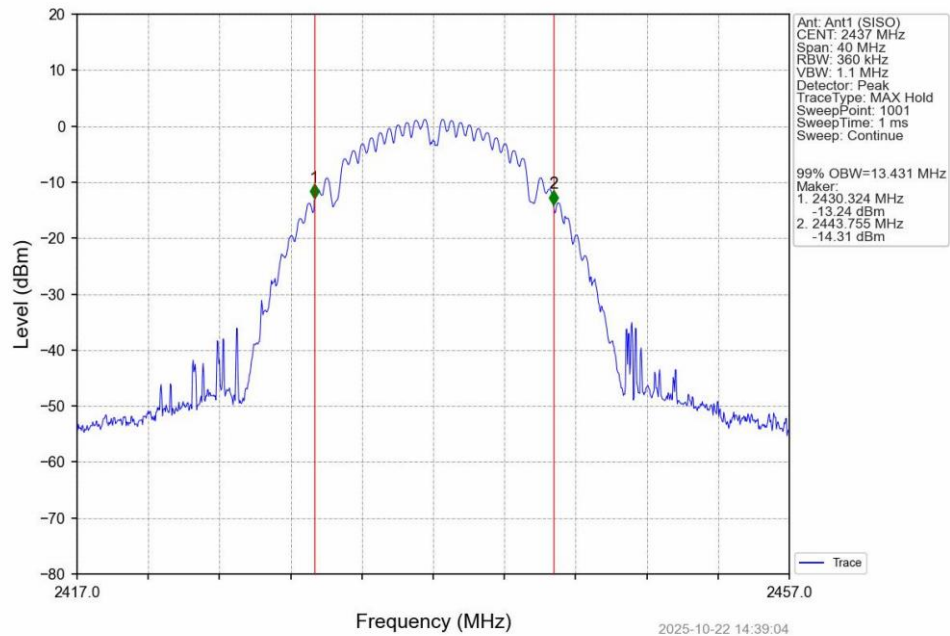
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.070	≥ 0.5	Pass
		2437	1	9.065	≥ 0.5	Pass
		2462	1	8.609	≥ 0.5	Pass
802.11g	SISO	2412	1	16.367	≥ 0.5	Pass
		2437	1	16.394	≥ 0.5	Pass
		2462	1	16.348	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.246	≥ 0.5	Pass
		2437	1	17.562	≥ 0.5	Pass
		2462	1	17.349	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.498	≥ 0.5	Pass
		2437	1	35.747	≥ 0.5	Pass
		2452	1	35.586	≥ 0.5	Pass

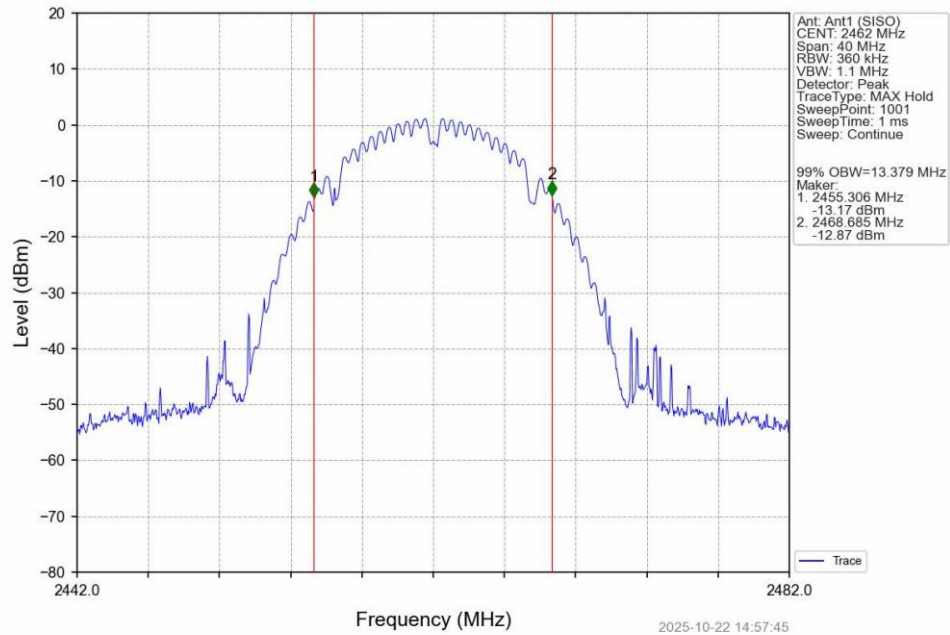
2.2 Test Graph

2.2.1 OBW

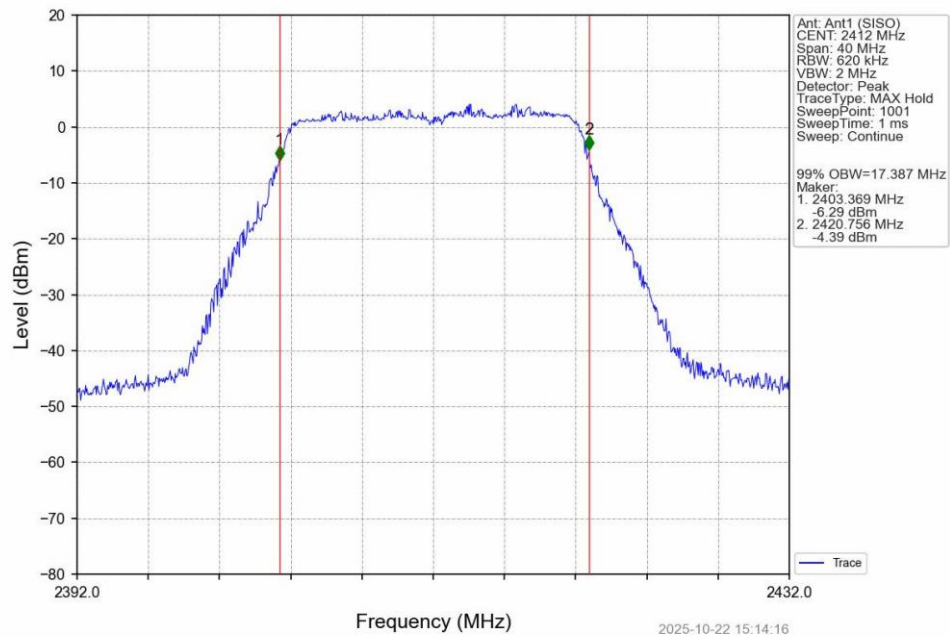




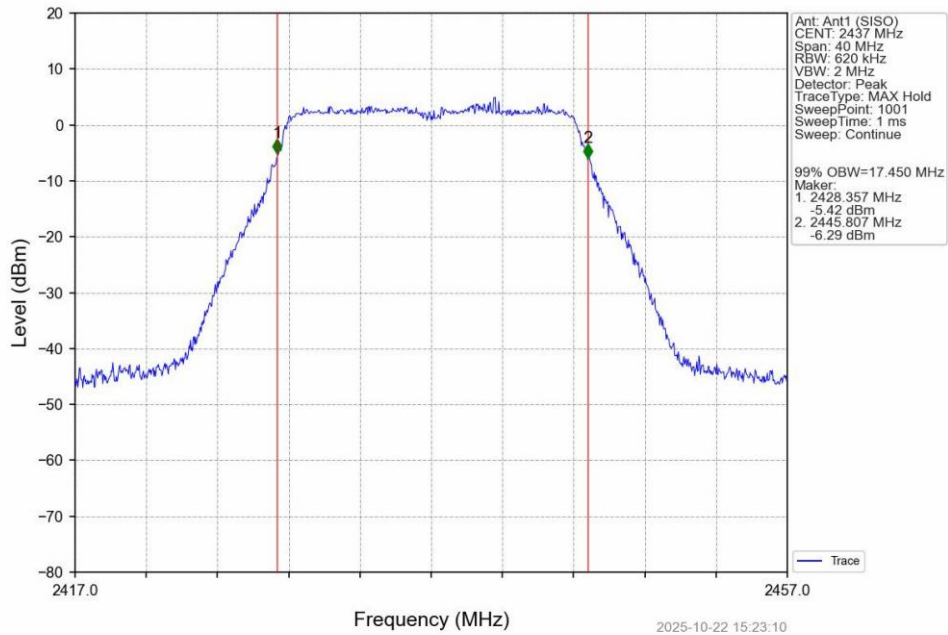
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



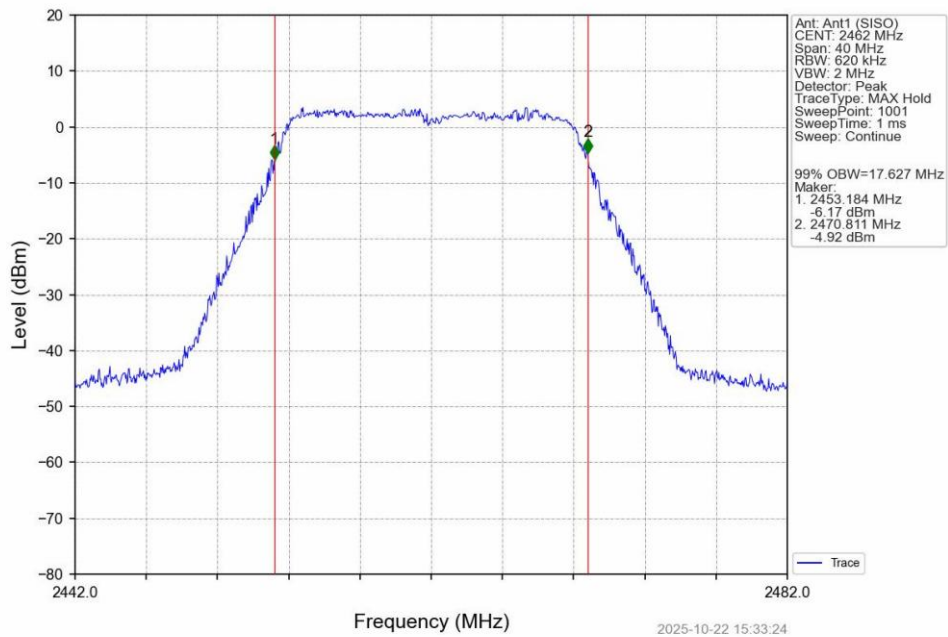
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



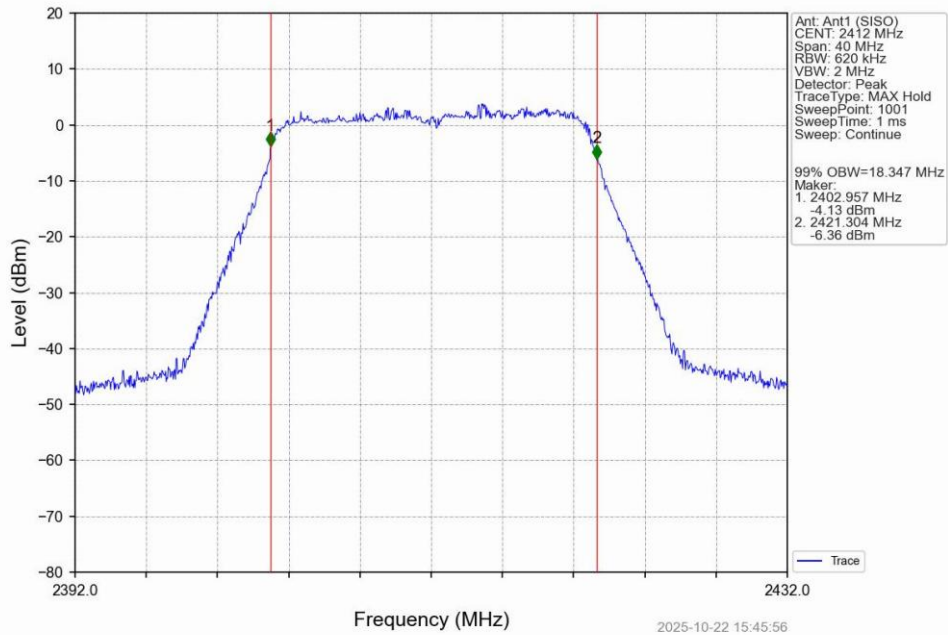
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



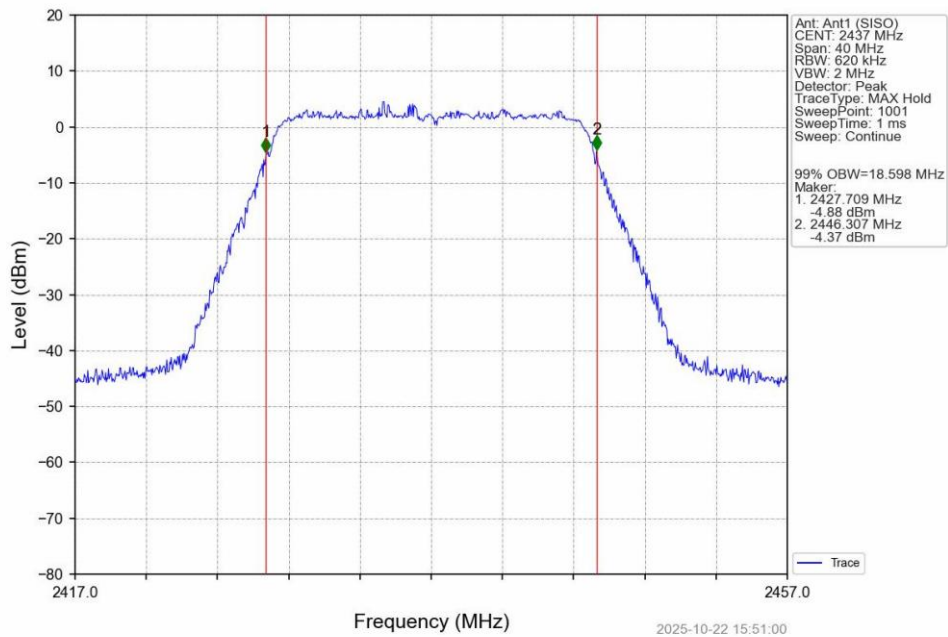
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

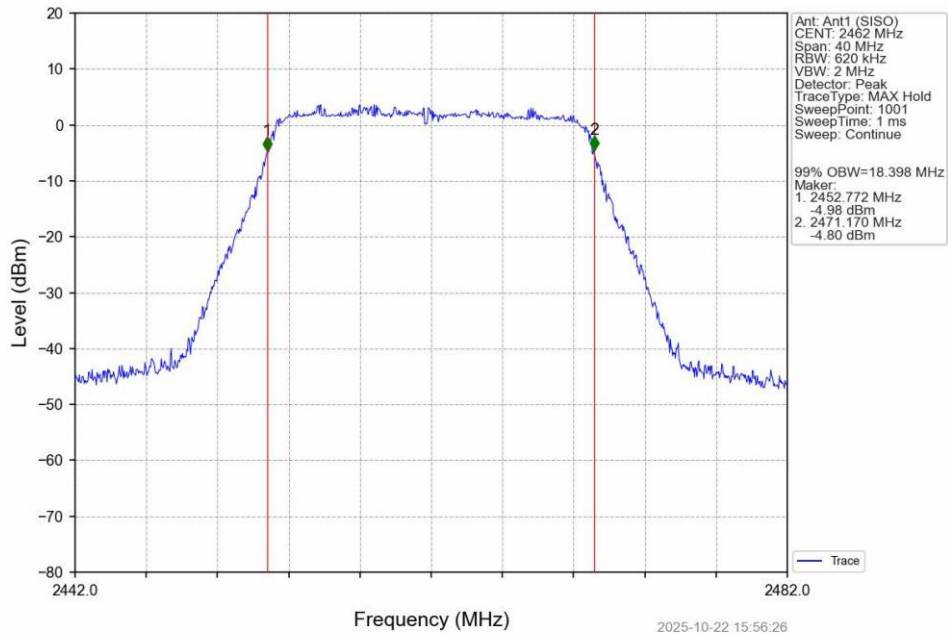


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

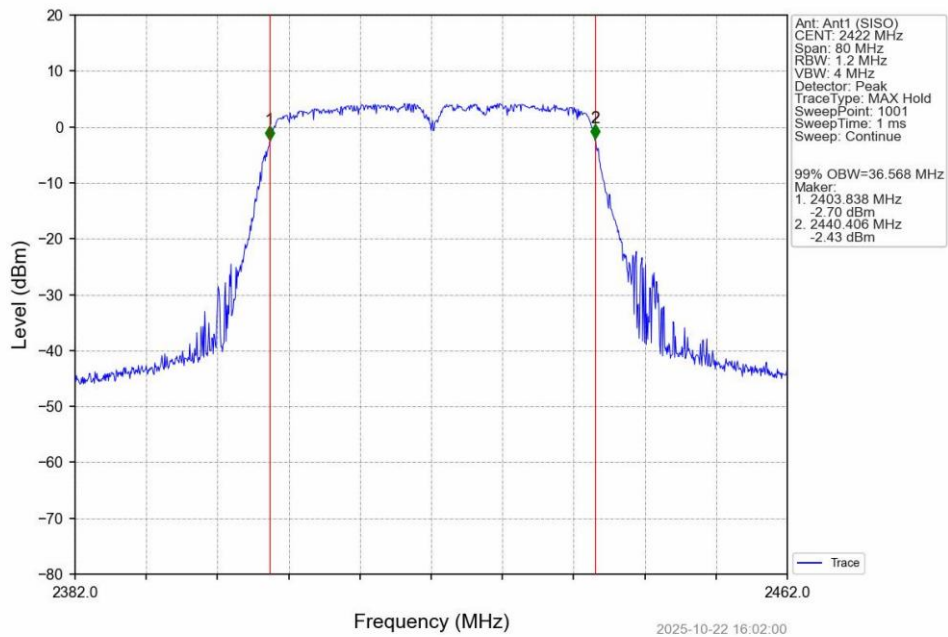




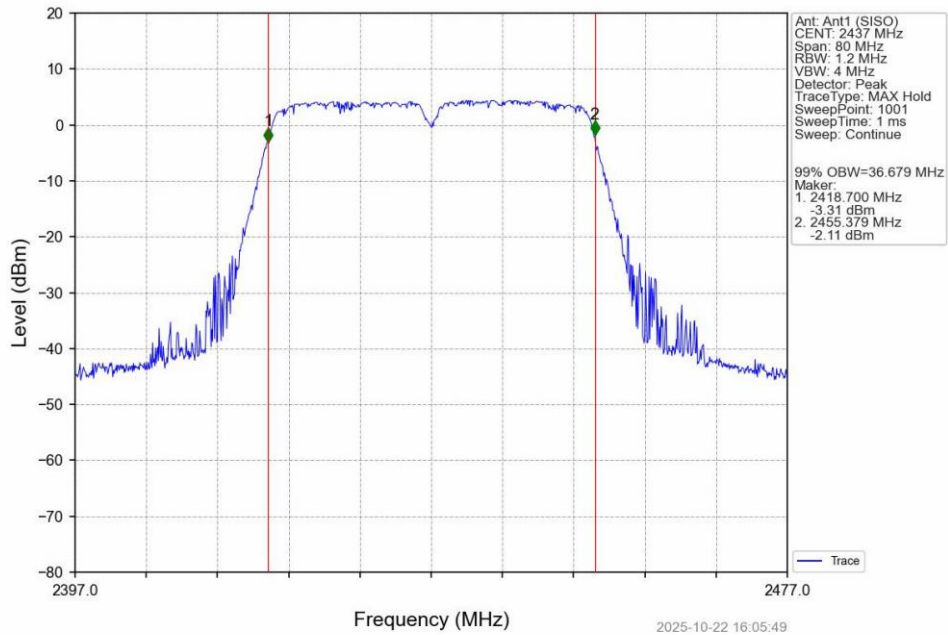
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



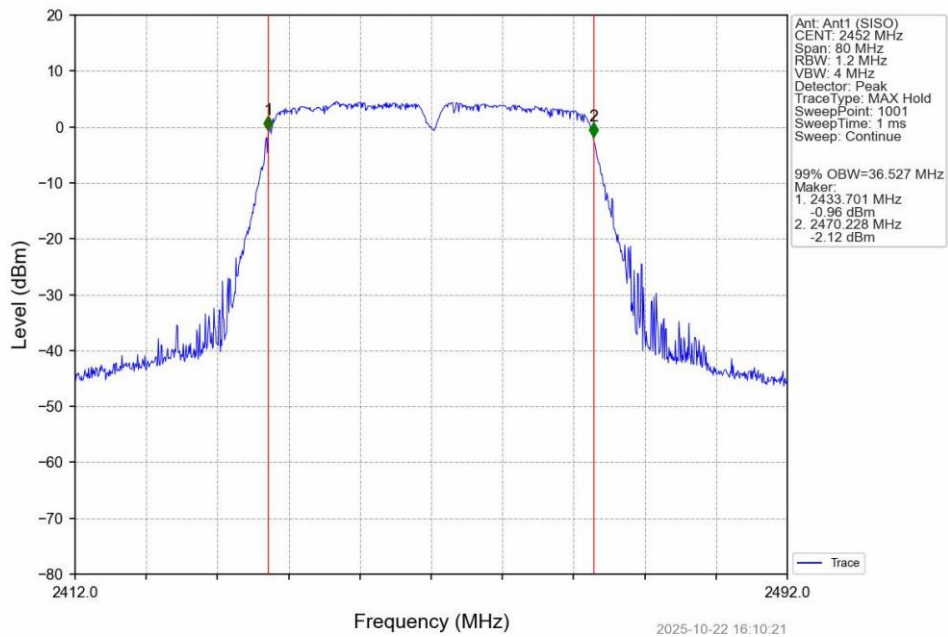
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



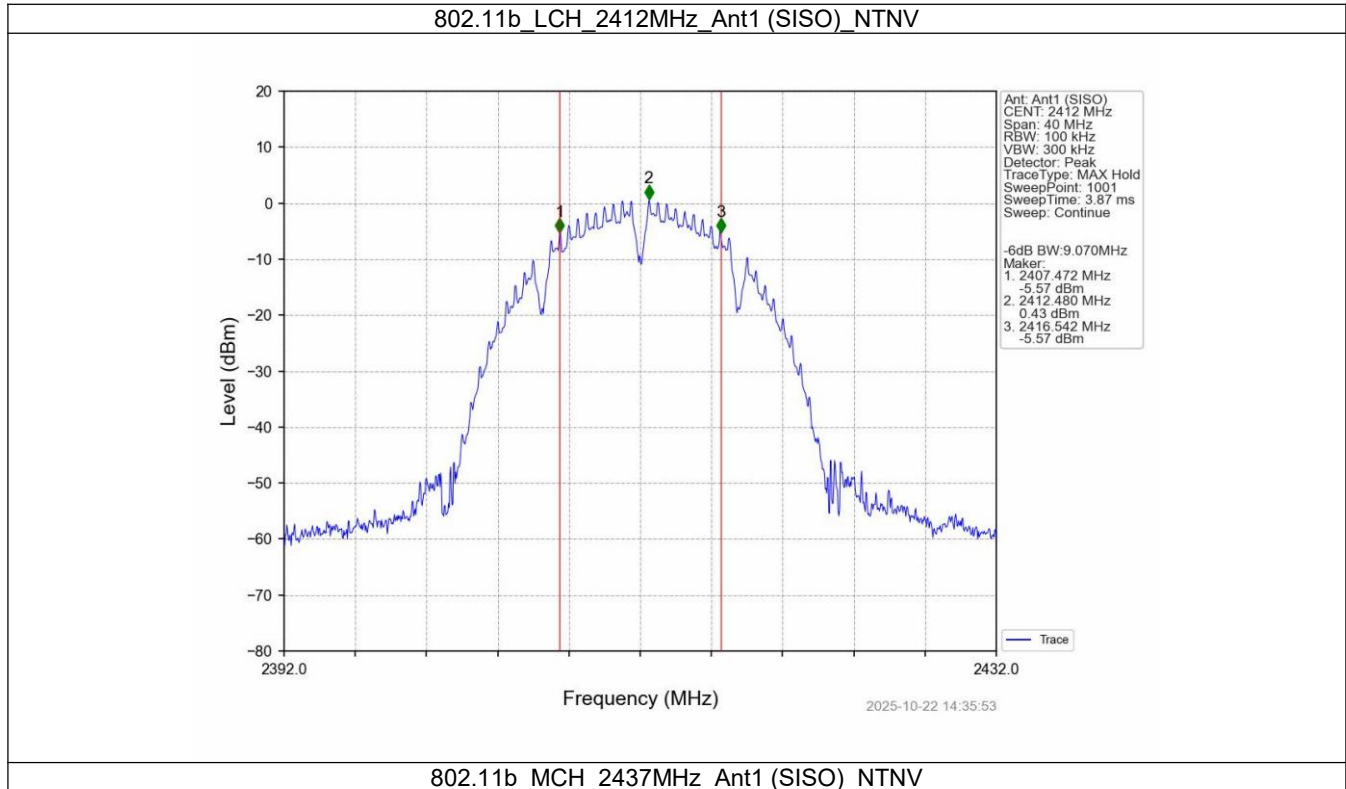
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

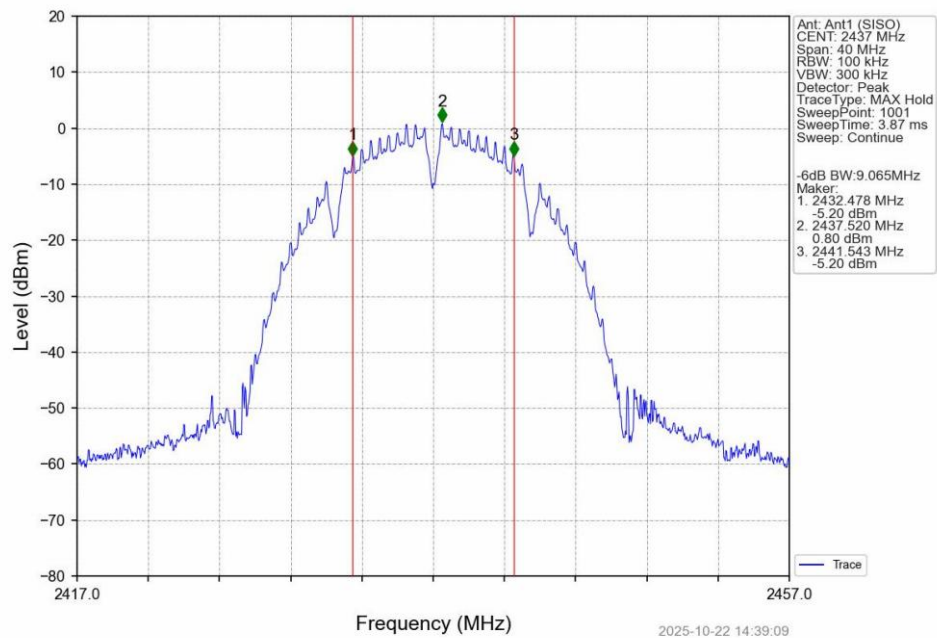


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



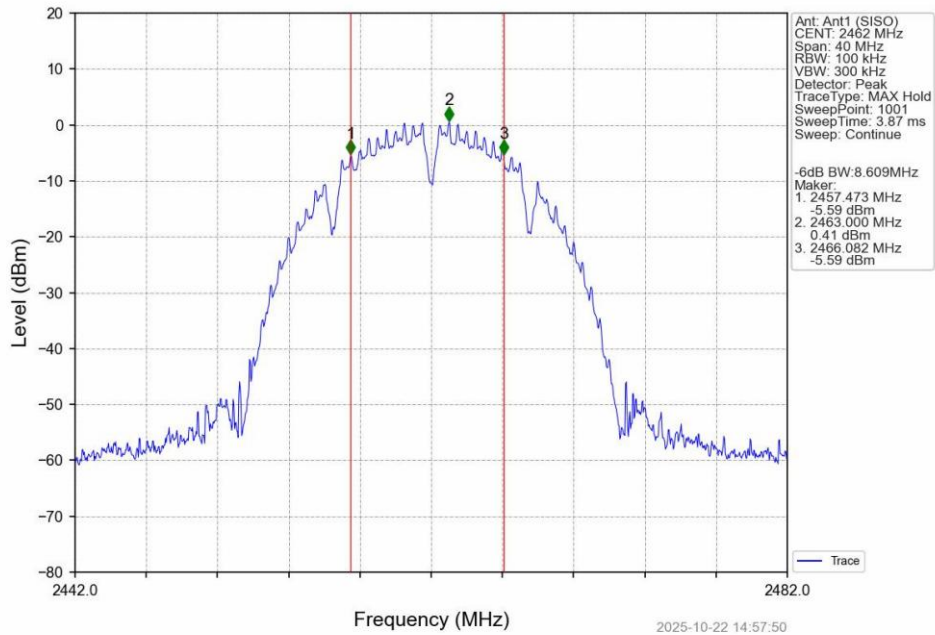
2.2.2 6dB BW



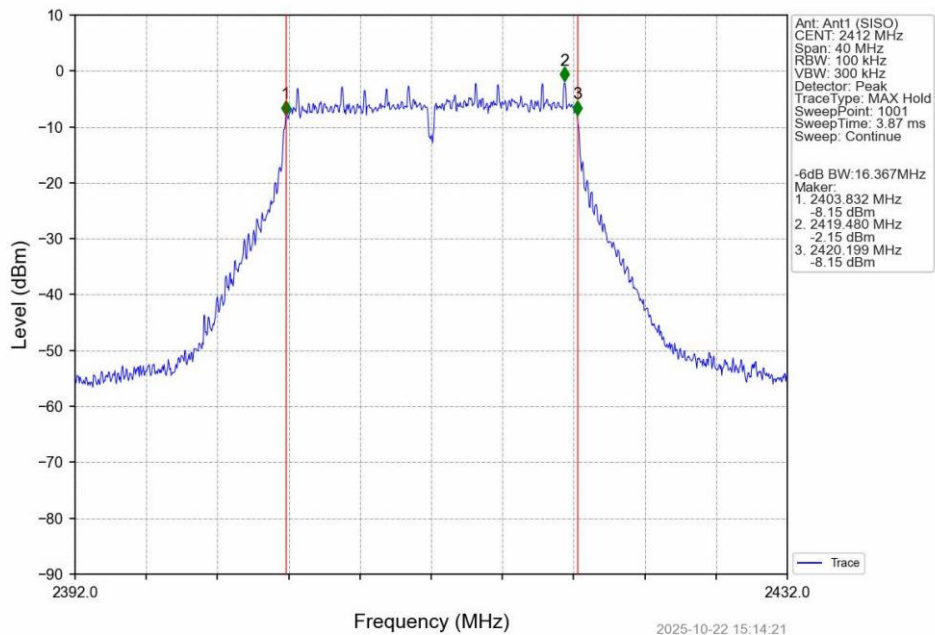


2025-10-22 14:39:09

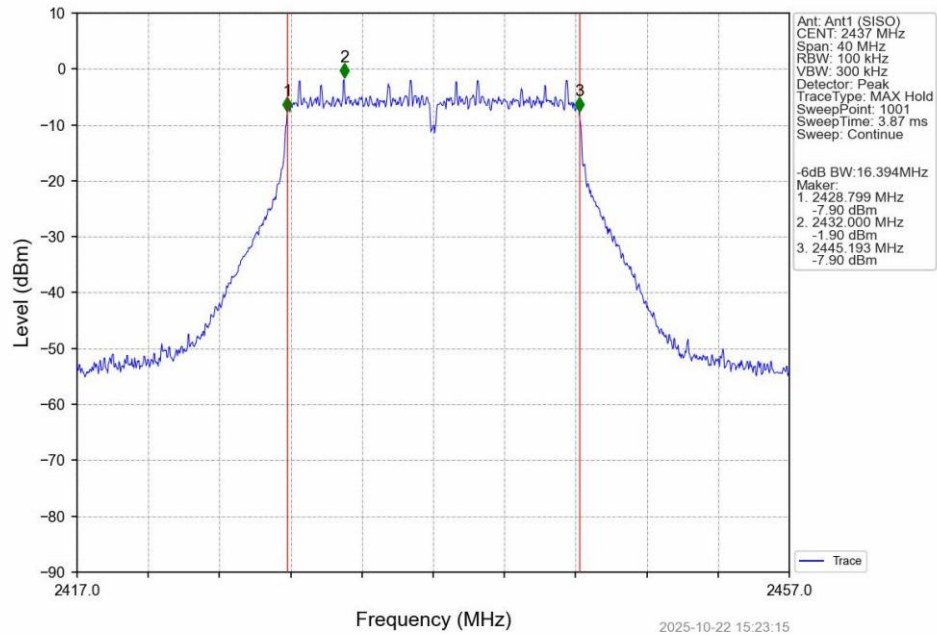
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



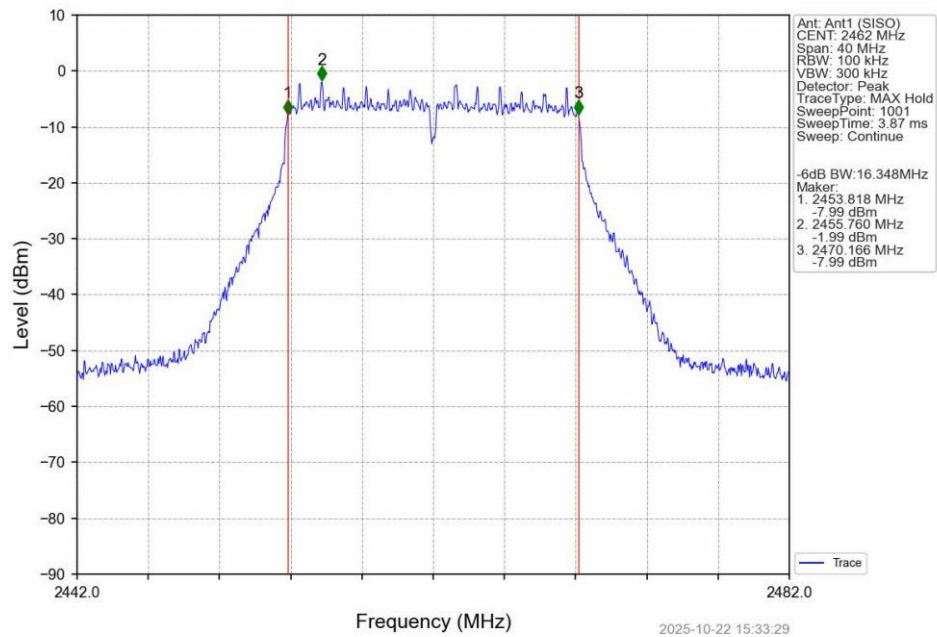
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



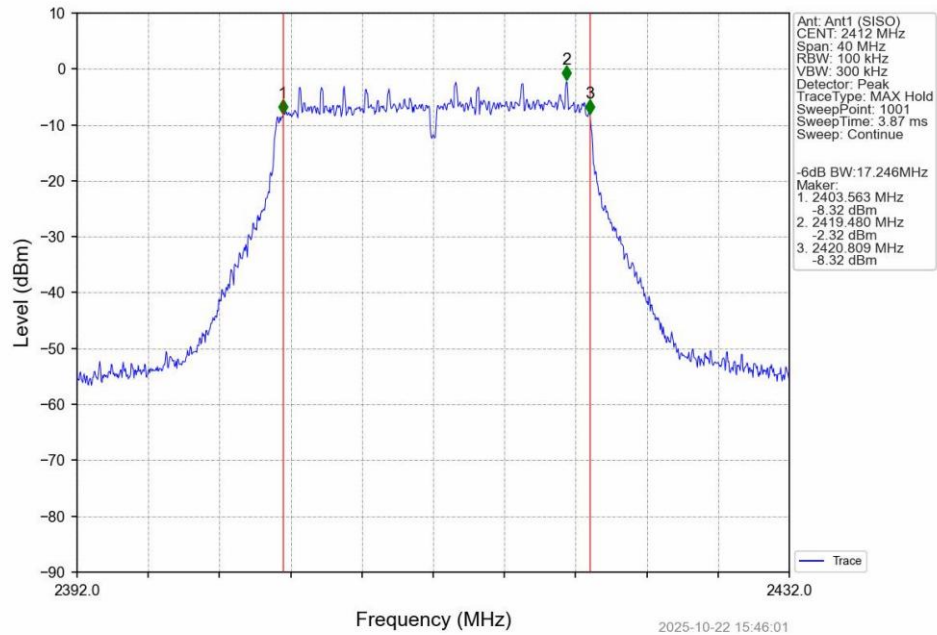
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



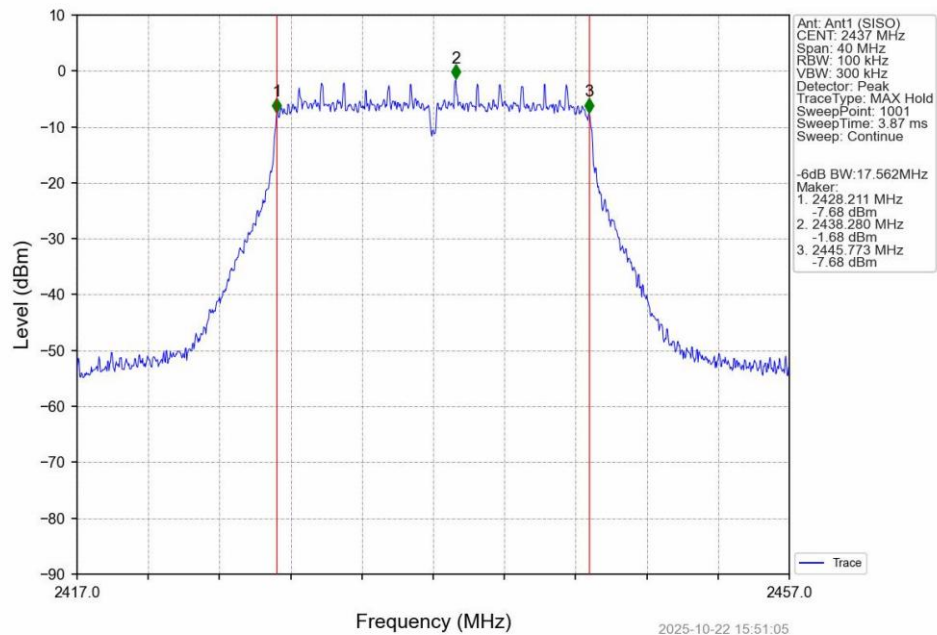
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



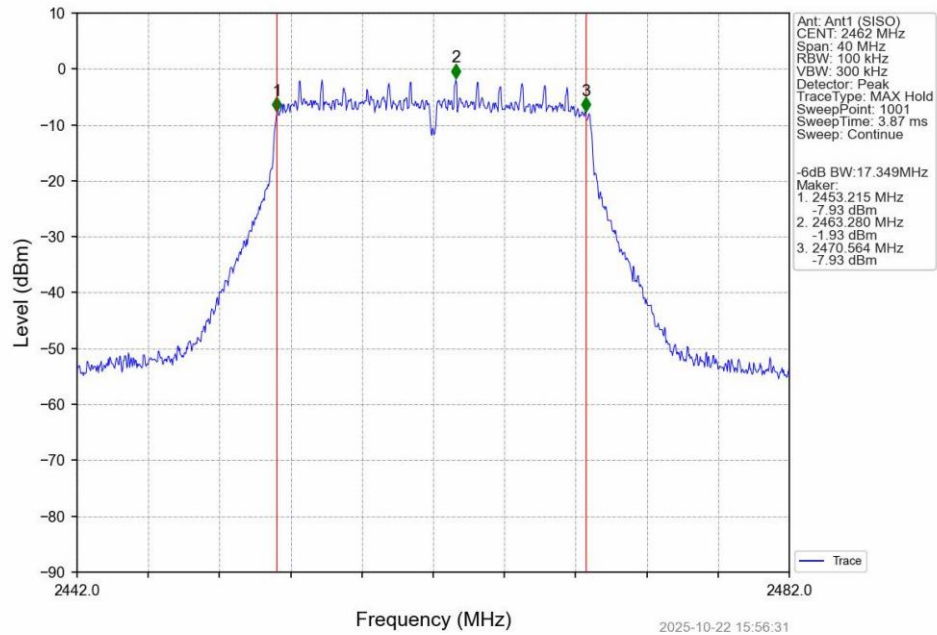
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



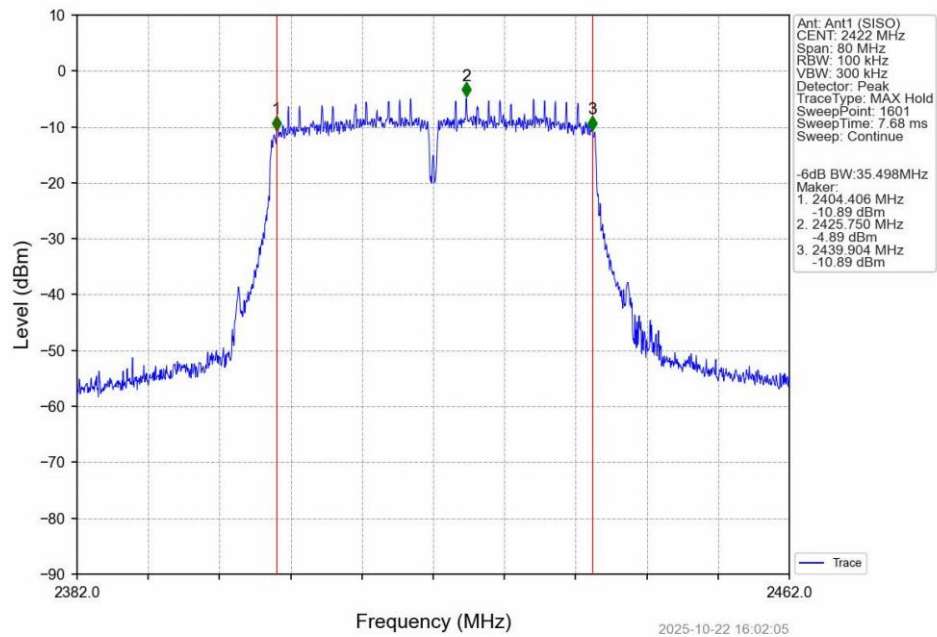
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



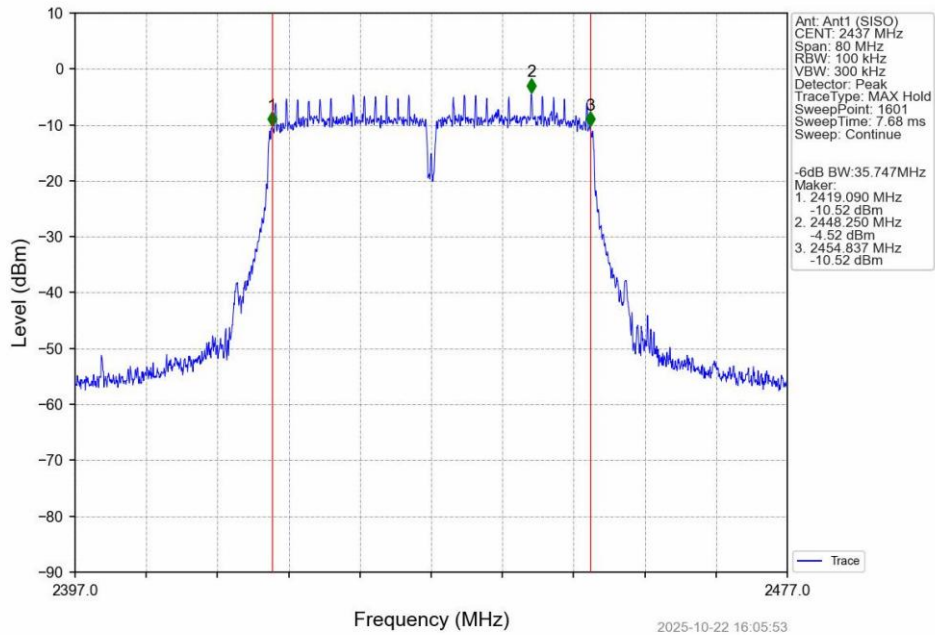
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



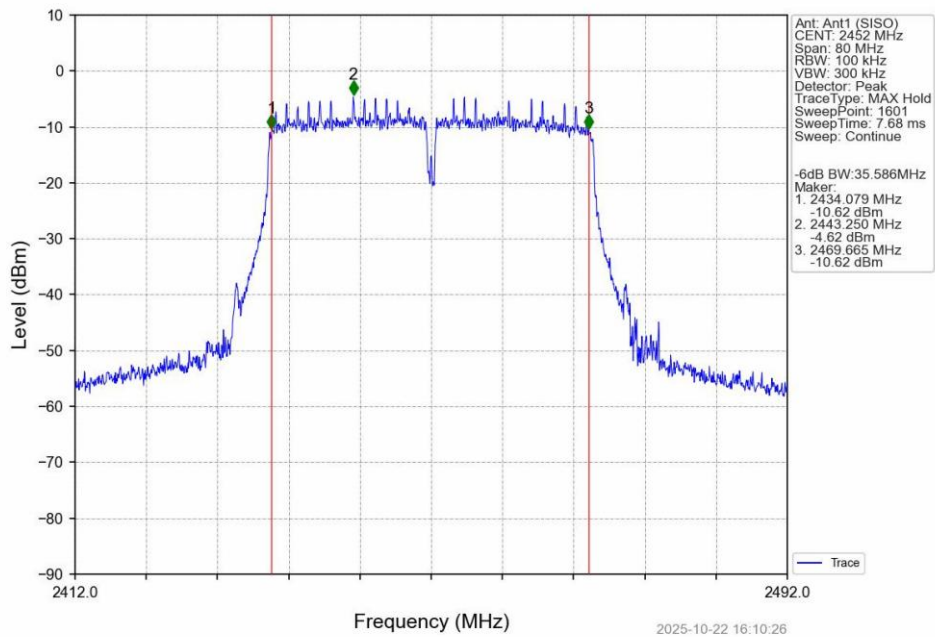
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

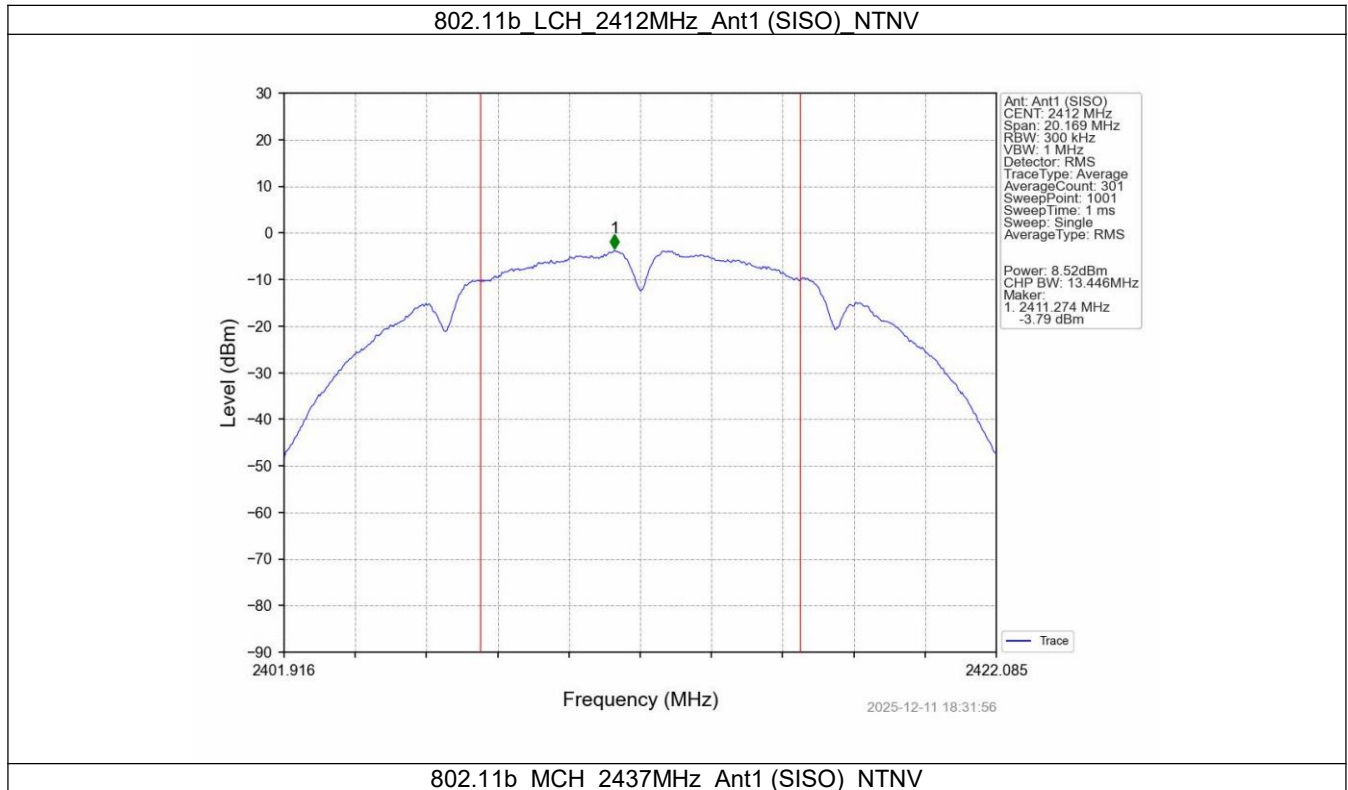
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)				Verdict
			ANT1	Duty Cycle Correction Factor (dB)	Result (dBm)	Limit	
802.11b	SISO	2412	8.52	0.05	8.57	<=30	Pass
		2437	8.73	0.05	8.78	<=30	Pass
		2462	8.63	0.05	8.68	<=30	Pass
802.11g	SISO	2412	8.00	0.24	8.24	<=30	Pass
		2437	8.26	0.33	8.59	<=30	Pass
		2462	7.96	0.34	8.30	<=30	Pass
802.11n (HT20)	SISO	2412	7.89	0.37	8.26	<=30	Pass
		2437	8.19	0.35	8.54	<=30	Pass
		2462	7.89	0.36	8.25	<=30	Pass
802.11n (HT40)	SISO	2422	7.66	0.98	8.64	<=30	Pass
		2437	8.40	0.98	9.38	<=30	Pass
		2452	8.76	0.69	9.45	<=30	Pass

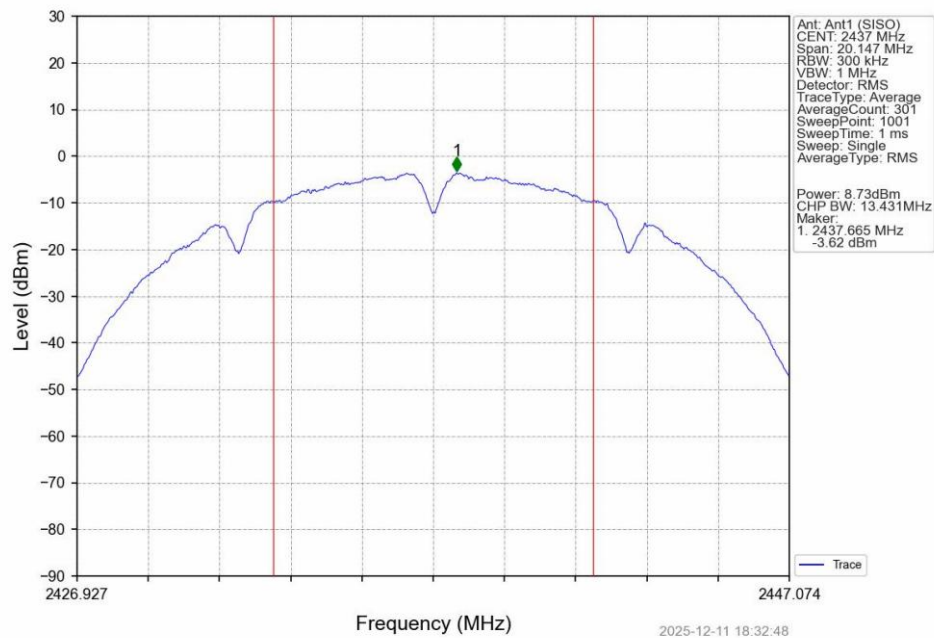
Note1: Antenna Gain: Ant1: 0.2dBi;
Note2: The final test value has included the Duty Cycle Correction Factor.



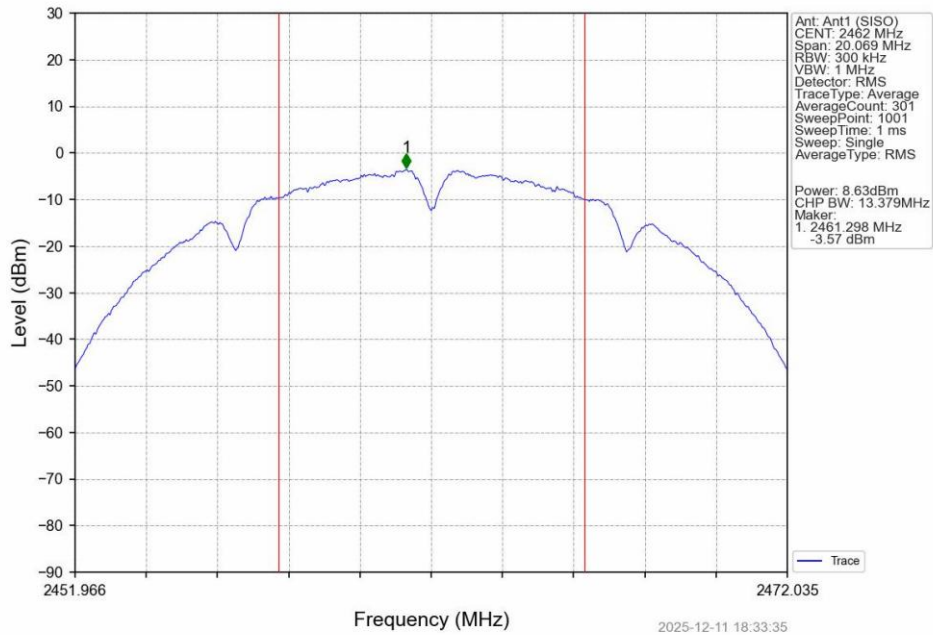
3.2 Test Graph

3.2.1 Power

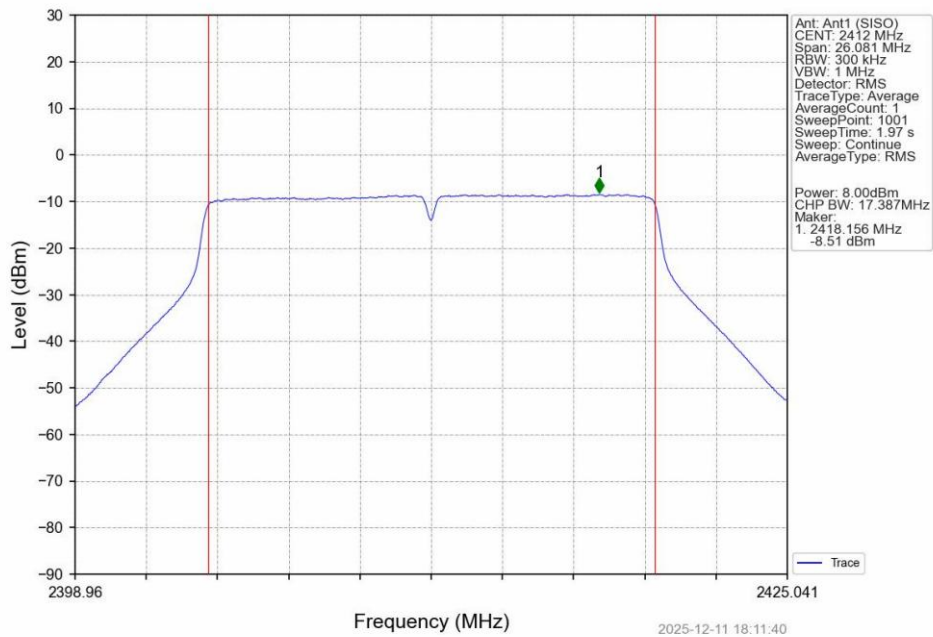




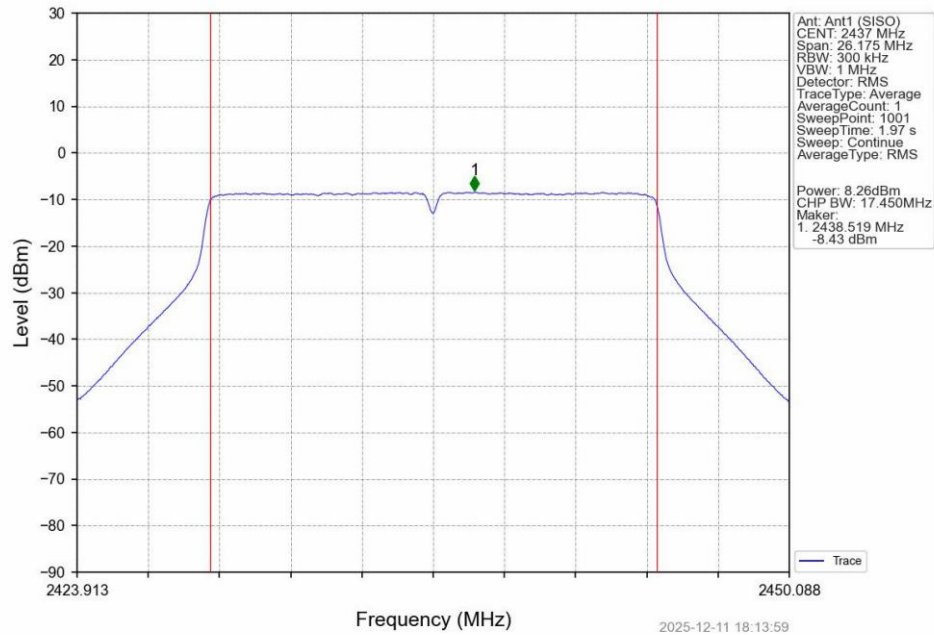
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



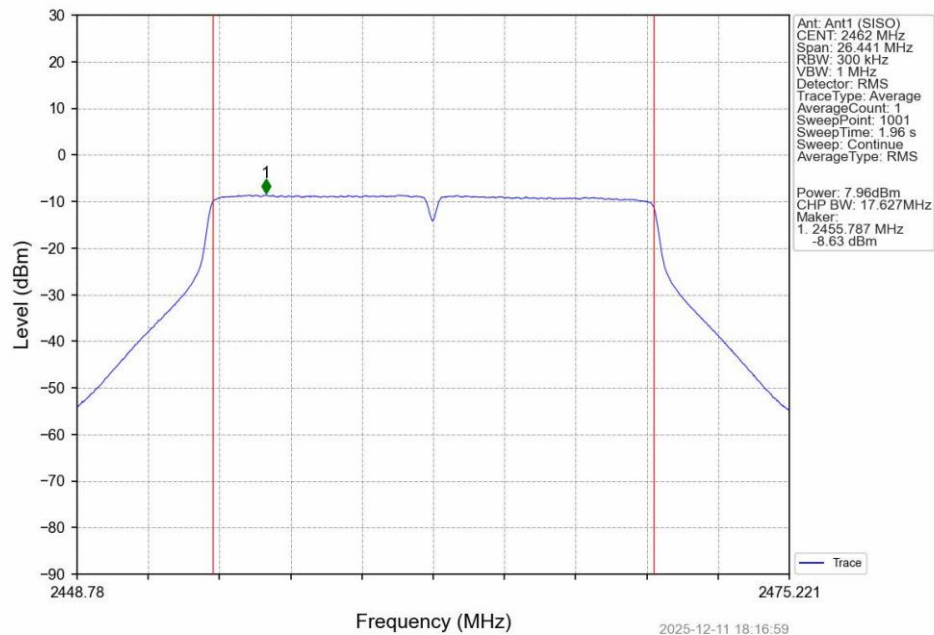
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



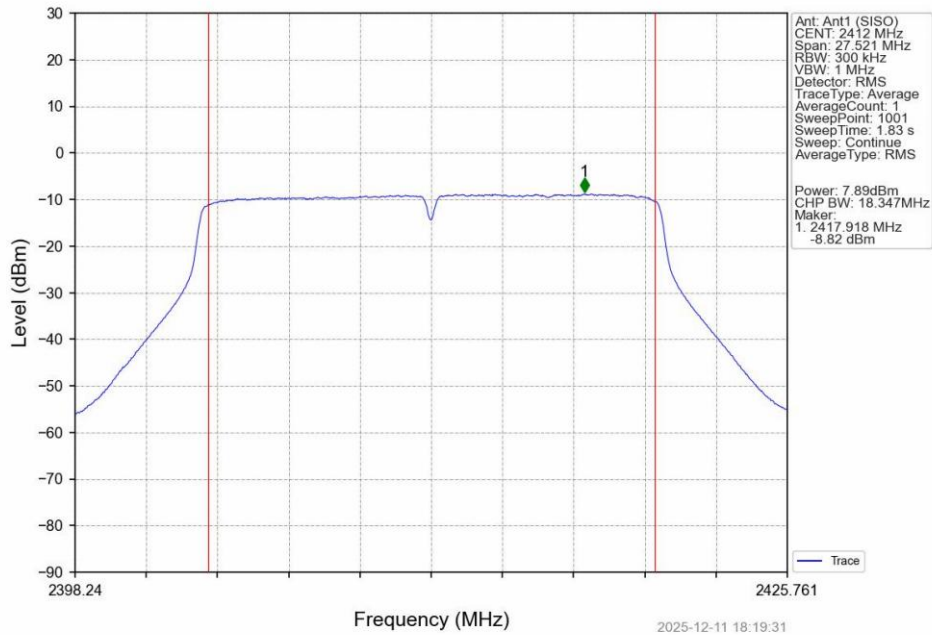
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



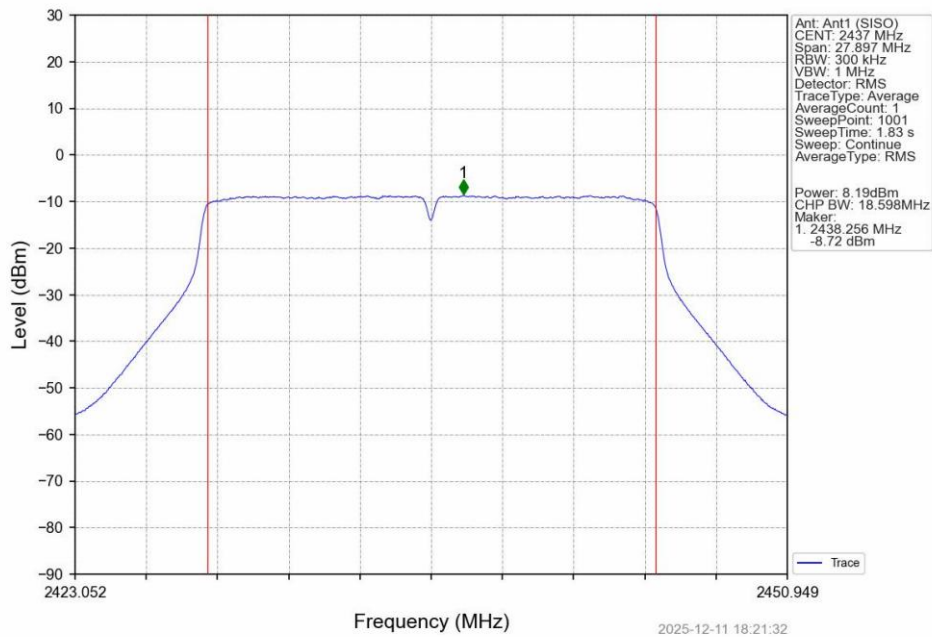
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



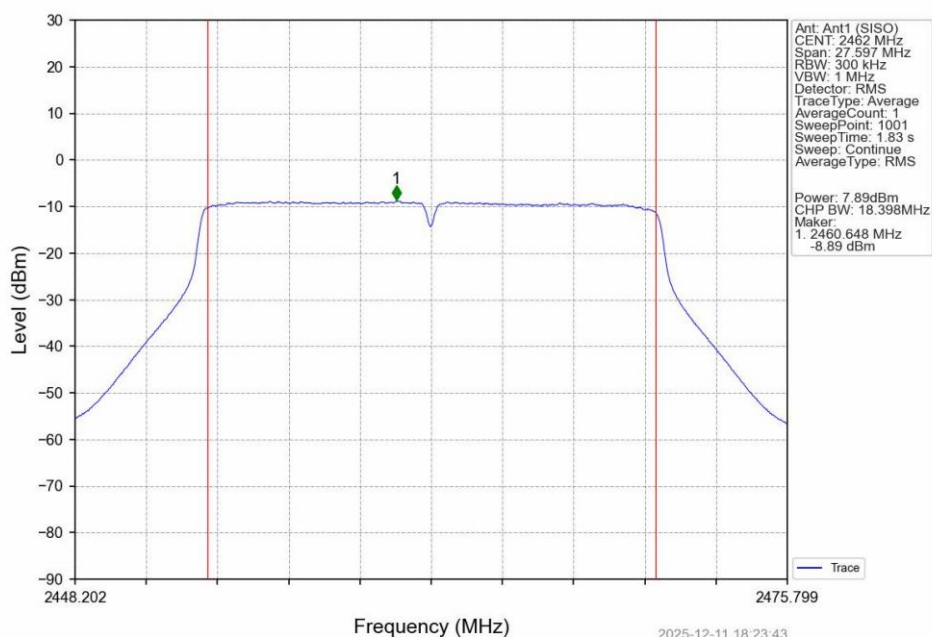
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



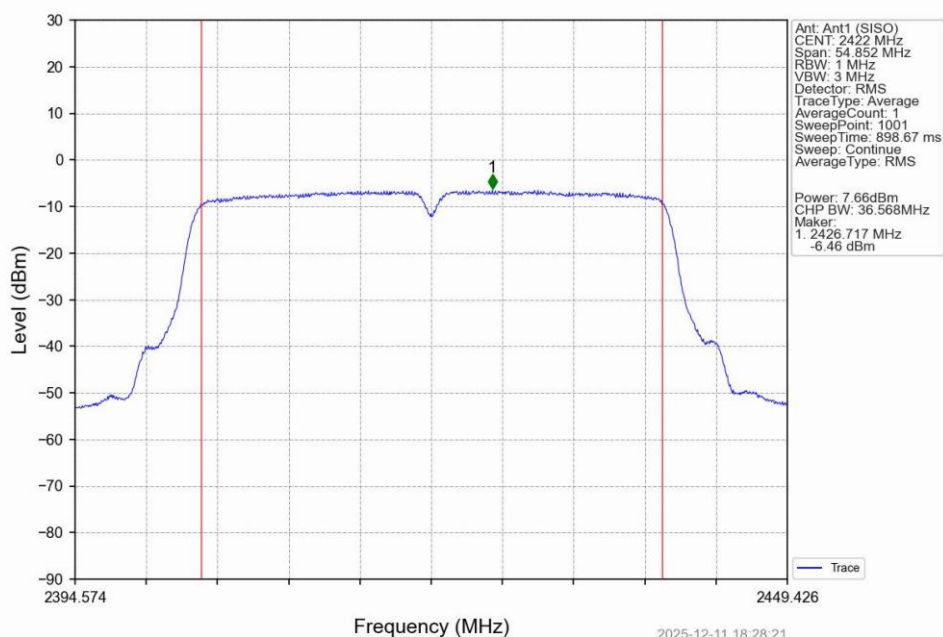
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



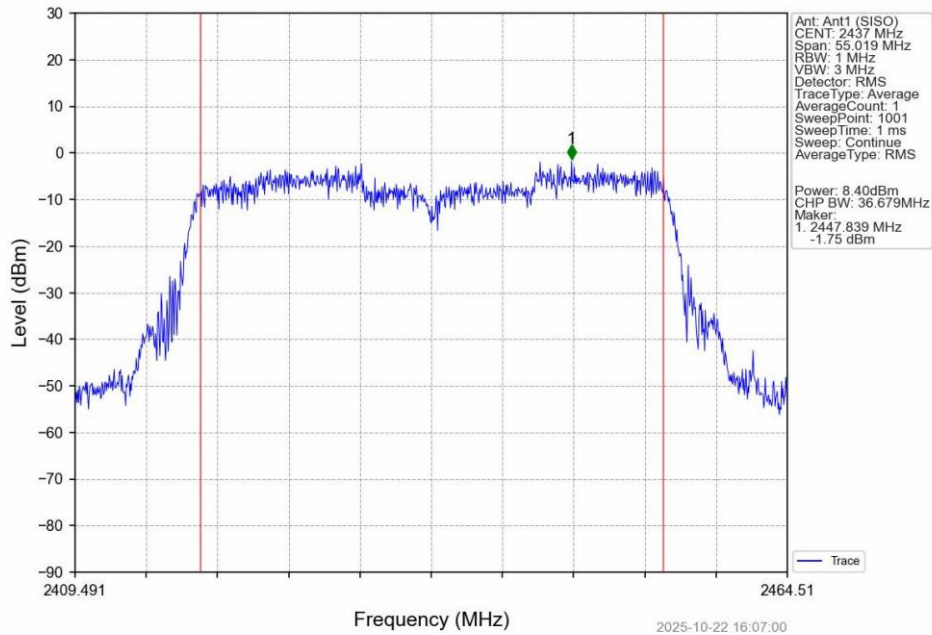
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



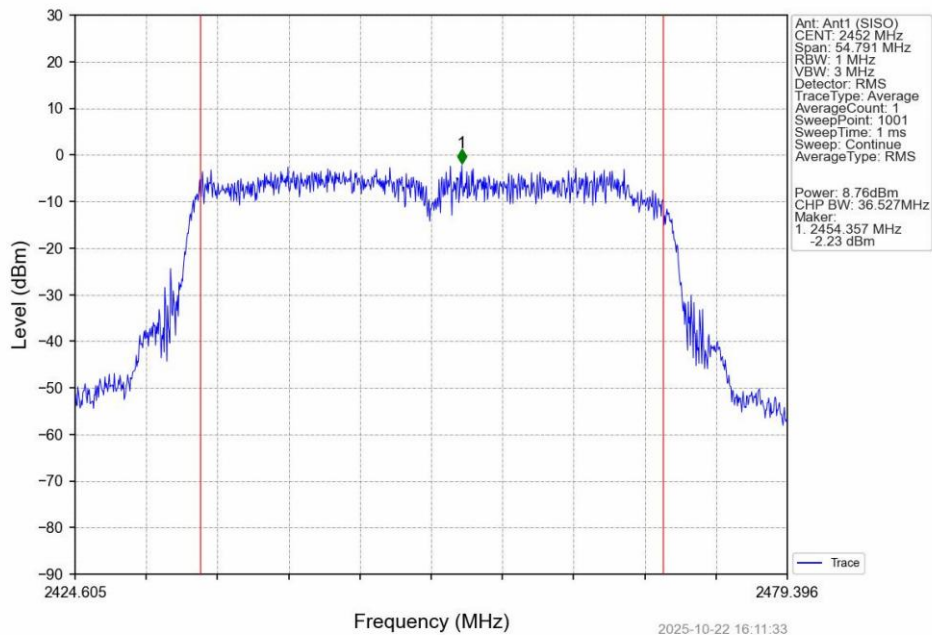
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





4. Maximum Power Spectral Density

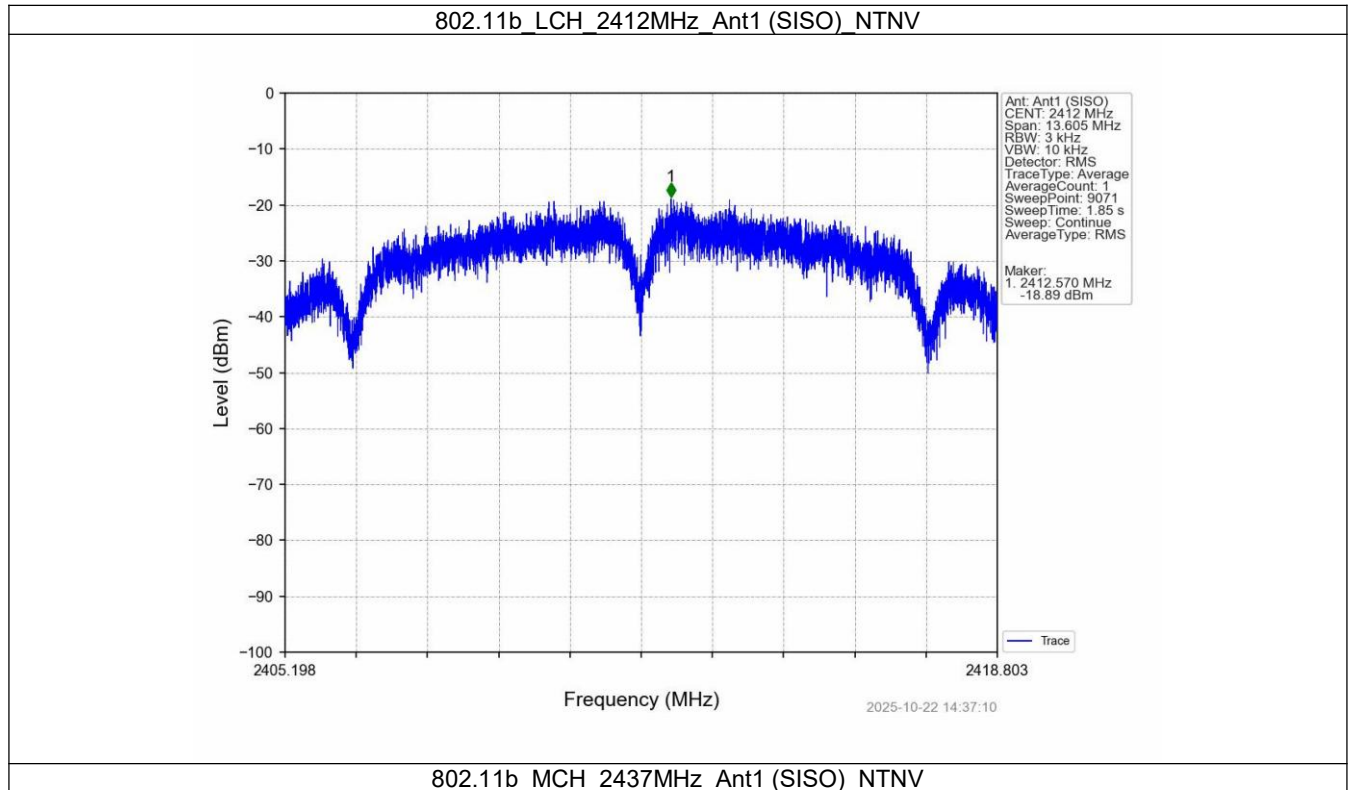
4.1 Test Result

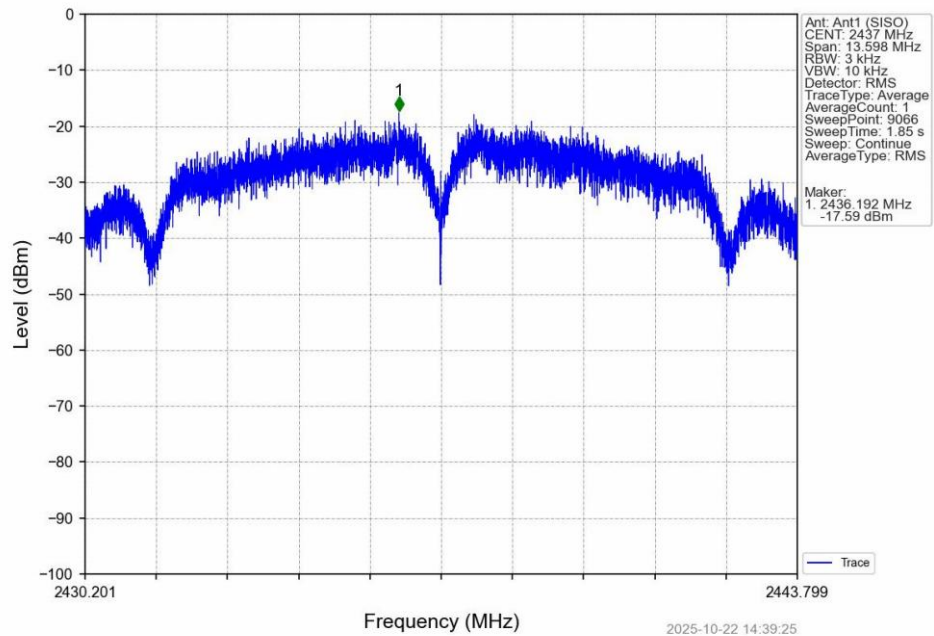
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)				Verdict
			ANT1	Duty Cycle Correction Factor (dB)	Result (dBm)	Limit	
802.11b	SISO	2412	-18.89	0.05	-18.84	<=8	Pass
		2437	-17.59	0.05	-17.54	<=8	Pass
		2462	-18.55	0.05	-18.50	<=8	Pass
802.11g	SISO	2412	-20.03	0.24	-19.79	<=8	Pass
		2437	-19.87	0.33	-19.54	<=8	Pass
		2462	-19.76	0.34	-19.42	<=8	Pass
802.11n (HT20)	SISO	2412	-20.05	0.37	-19.68	<=8	Pass
		2437	-20.73	0.35	-20.38	<=8	Pass
		2462	-19.53	0.36	-19.17	<=8	Pass
802.11n (HT40)	SISO	2422	-20.49	0.98	-19.51	<=8	Pass
		2437	-21.68	0.98	-20.70	<=8	Pass
		2452	-21.39	0.69	-20.70	<=8	Pass
Note1: Antenna Gain: Ant1: 0.2dBi; Note2: The final test value has included the Duty Cycle Correction Factor.							

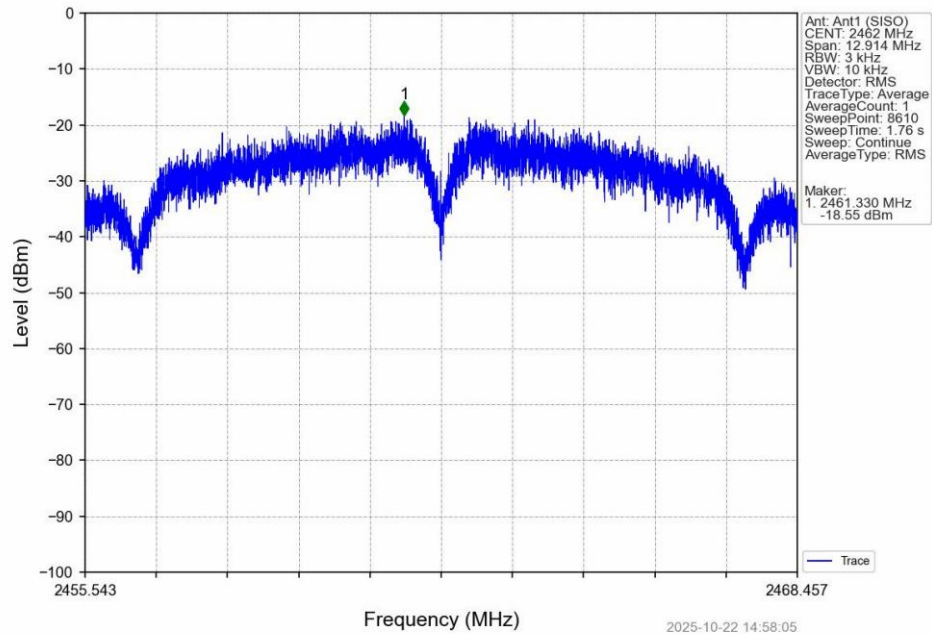
4.2 Test Graph

4.2.1 PSD

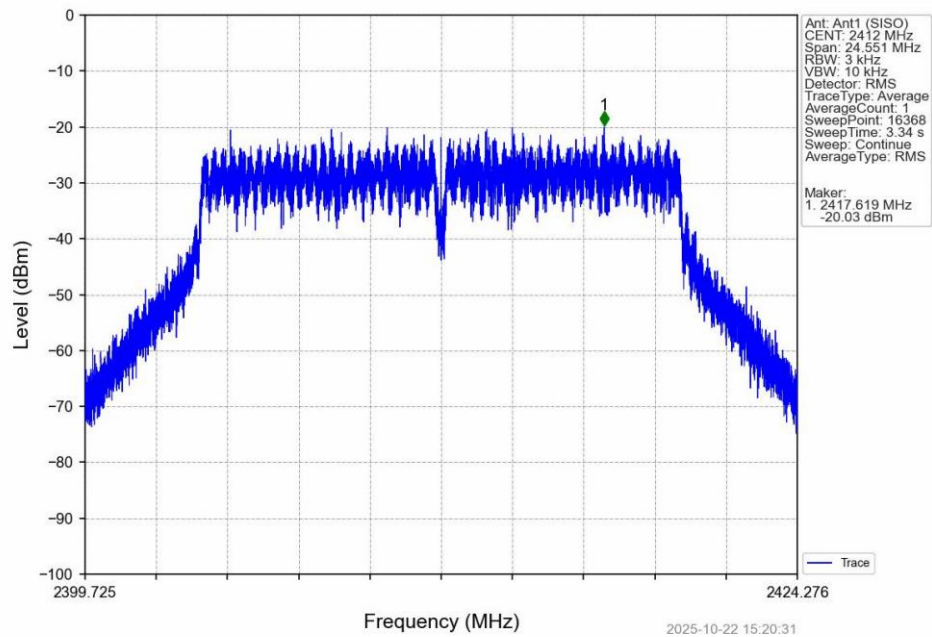




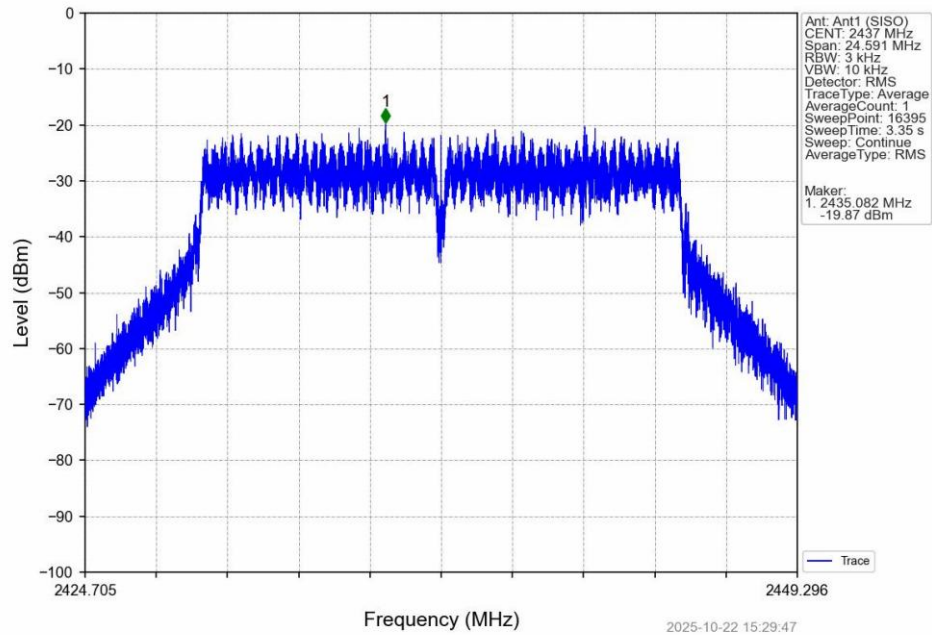
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



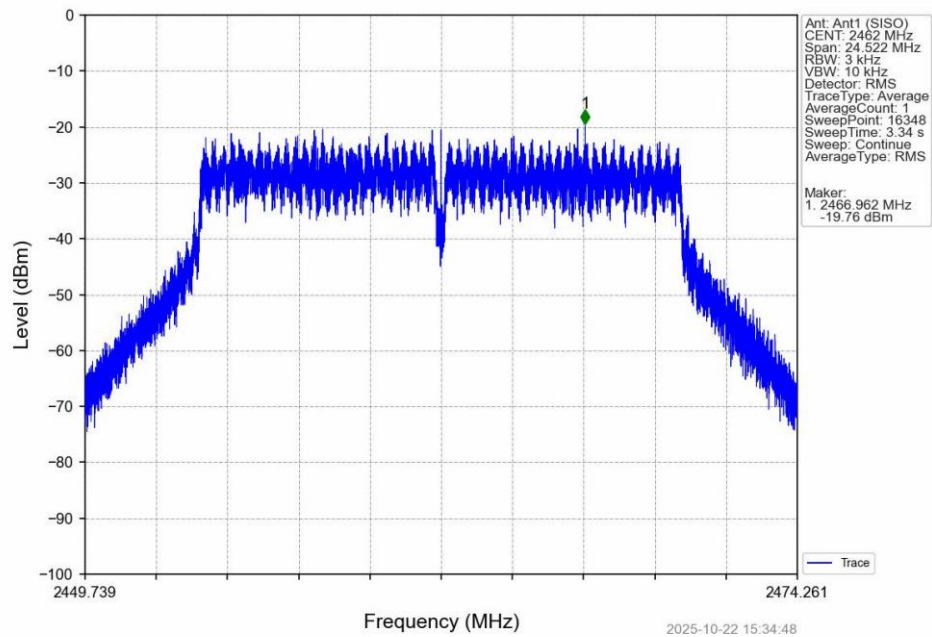
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

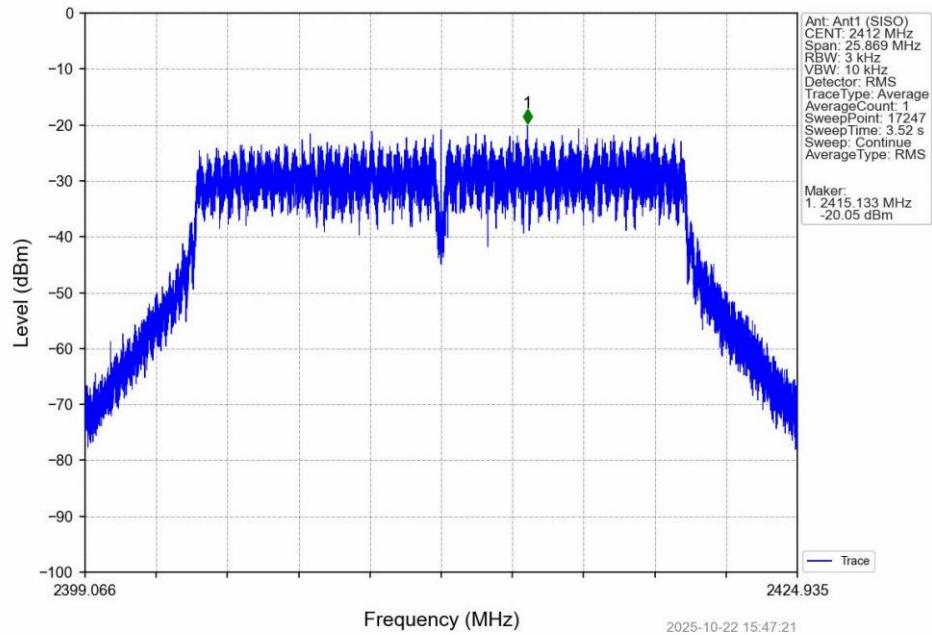


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

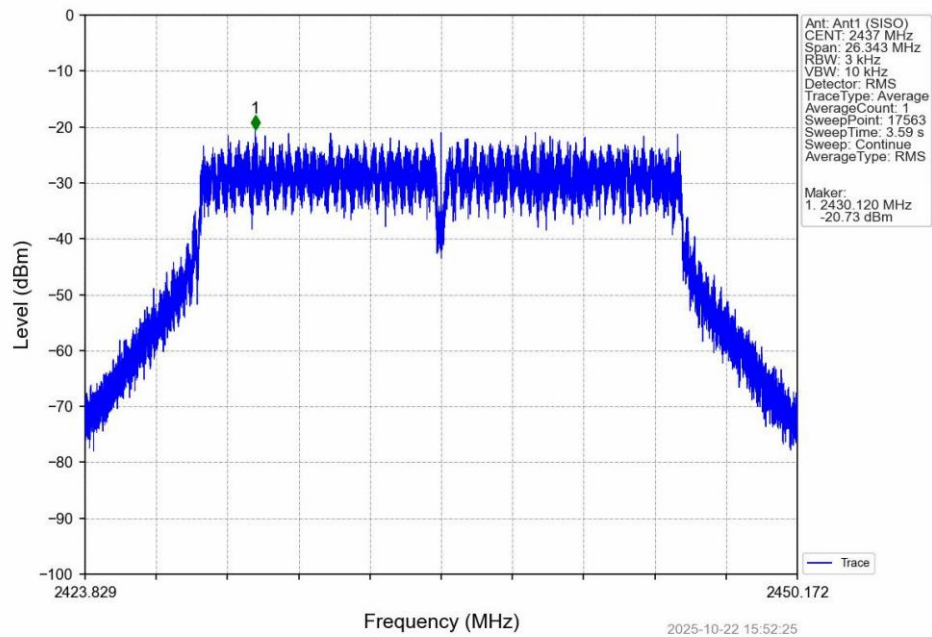




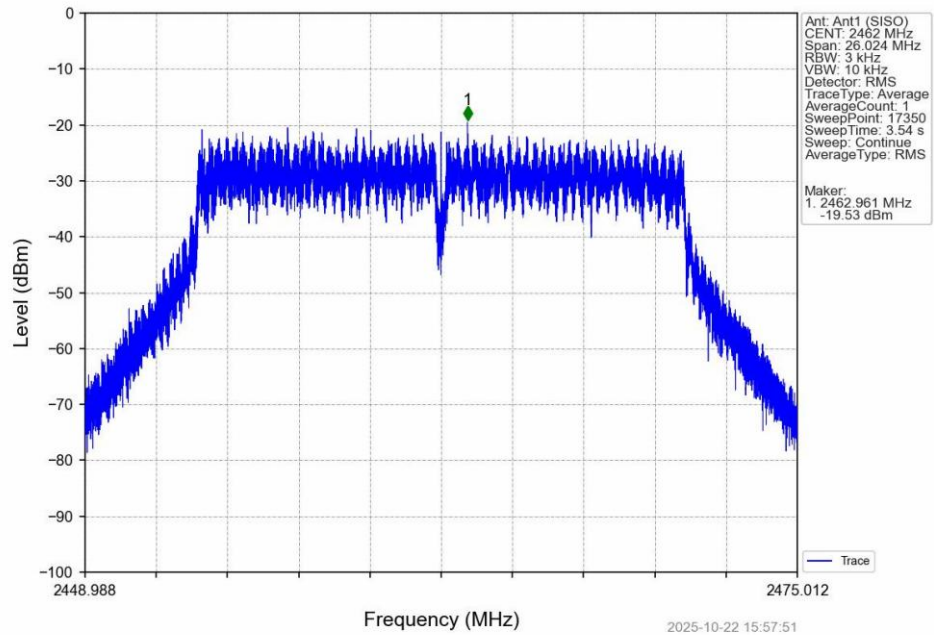
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



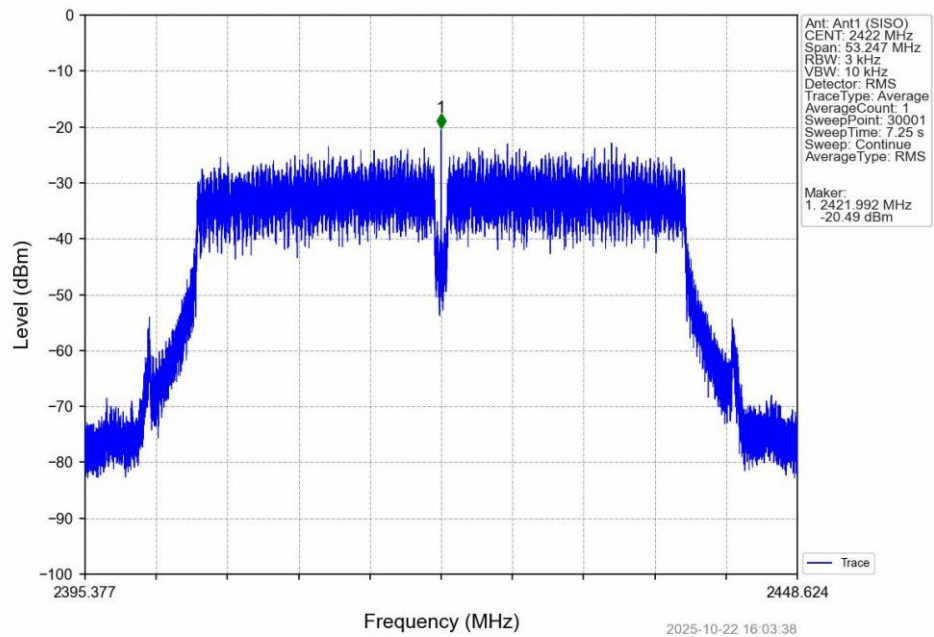
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



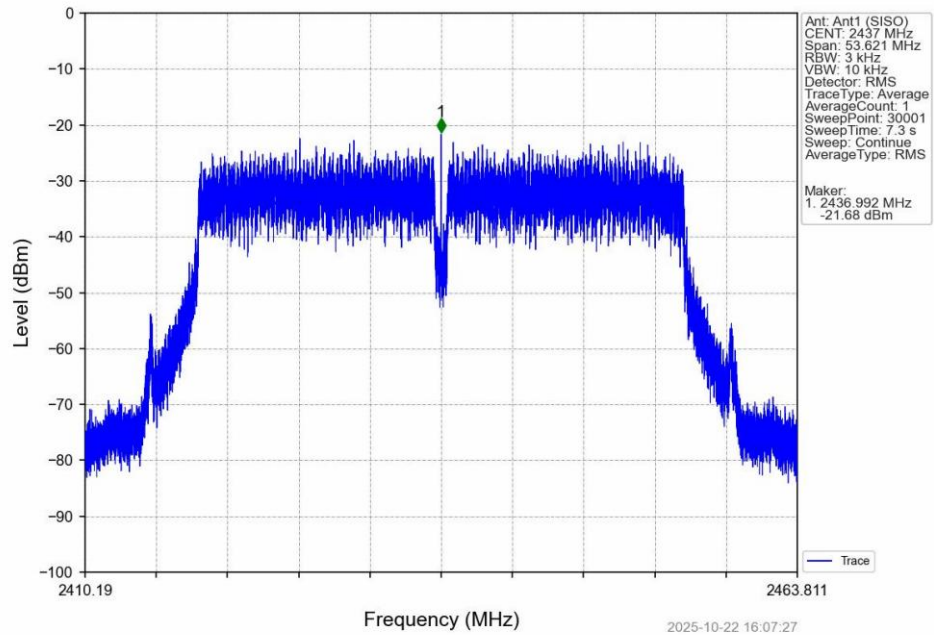
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



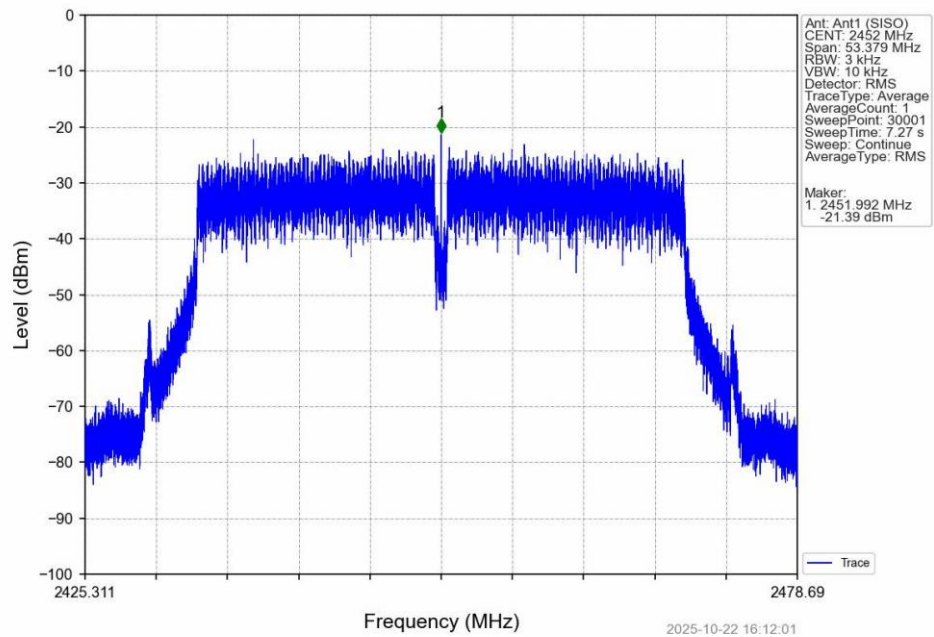
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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	0.36
		2437	1	0.67
		2462	1	0.61
802.11g	SISO	2412	1	-2.25
		2437	1	-2.04
		2462	1	-1.97
802.11n (HT20)	SISO	2412	1	-2.07
		2437	1	-1.83
		2462	1	-1.89
802.11n (HT40)	SISO	2422	1	-4.71
		2437	1	-4.46
		2452	1	-4.47

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.1.2 CSE

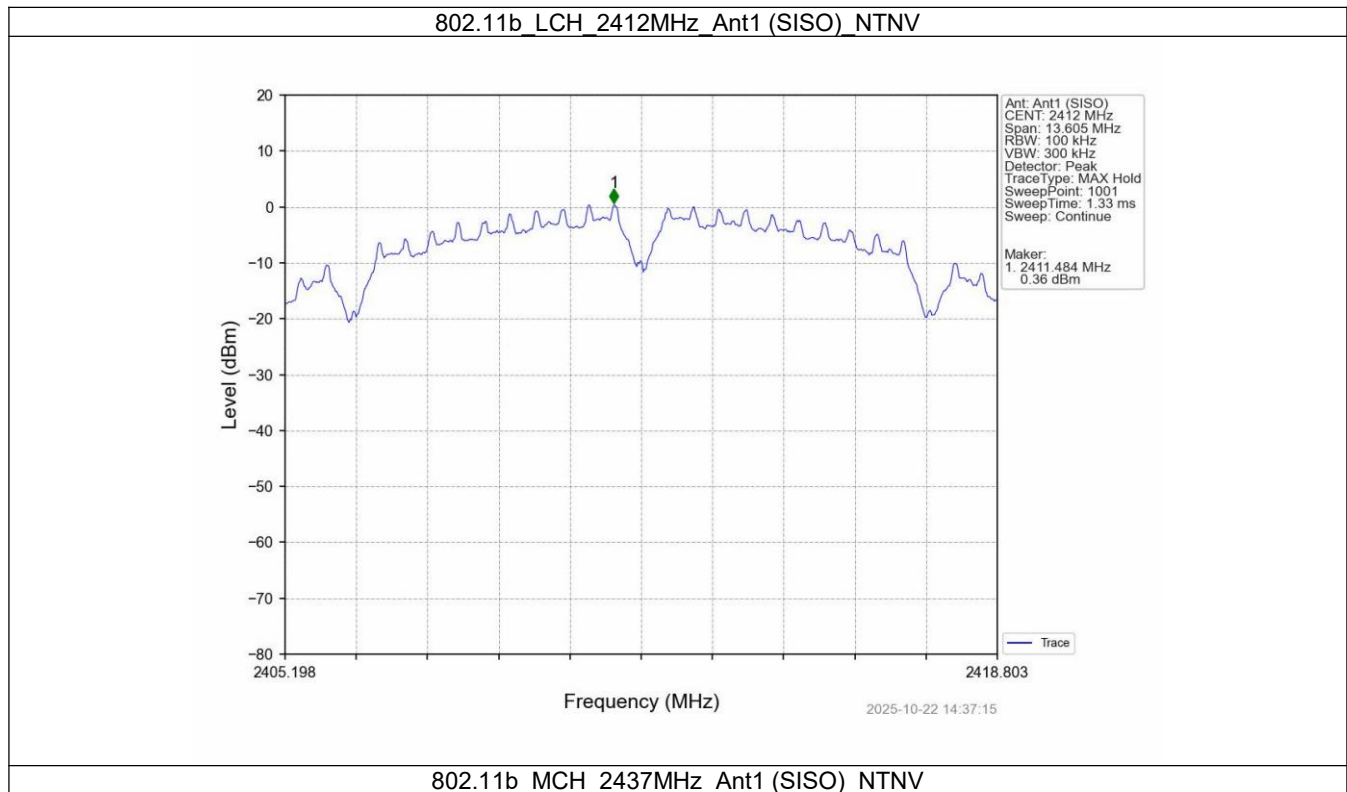
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	0.67	-29.33	Pass
		2437	1	0.67	-29.33	Pass
		2462	1	0.67	-29.33	Pass
802.11g	SISO	2412	1	-1.97	-31.97	Pass
		2437	1	-1.97	-31.97	Pass
		2462	1	-1.97	-31.97	Pass
802.11n (HT20)	SISO	2412	1	-1.83	-31.83	Pass
		2437	1	-1.83	-31.83	Pass
		2462	1	-1.83	-31.83	Pass
802.11n (HT40)	SISO	2422	1	-4.46	-34.46	Pass
		2437	1	-4.46	-34.46	Pass
		2452	1	-4.46	-34.46	Pass

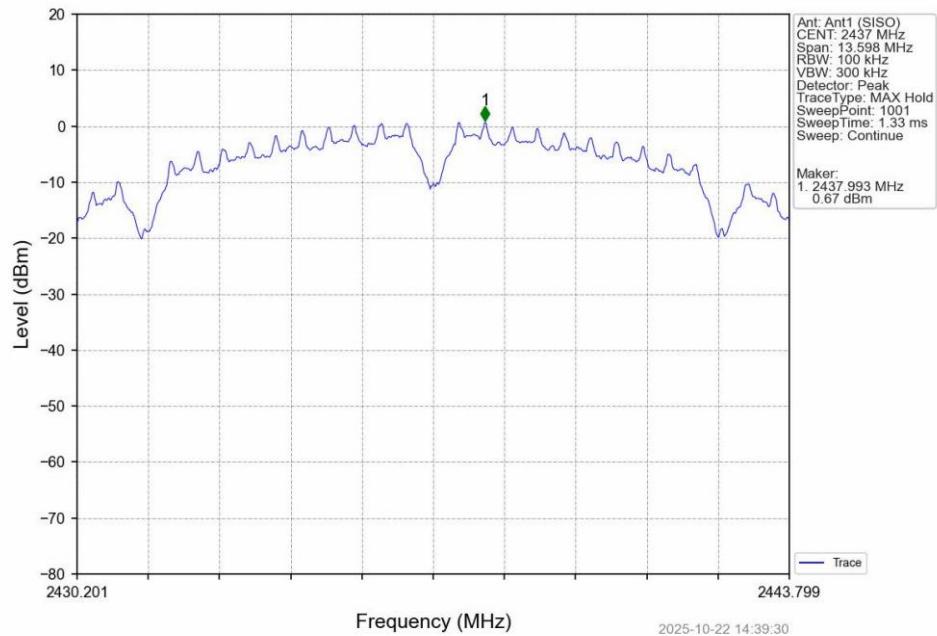
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.



5.2 Test Graph

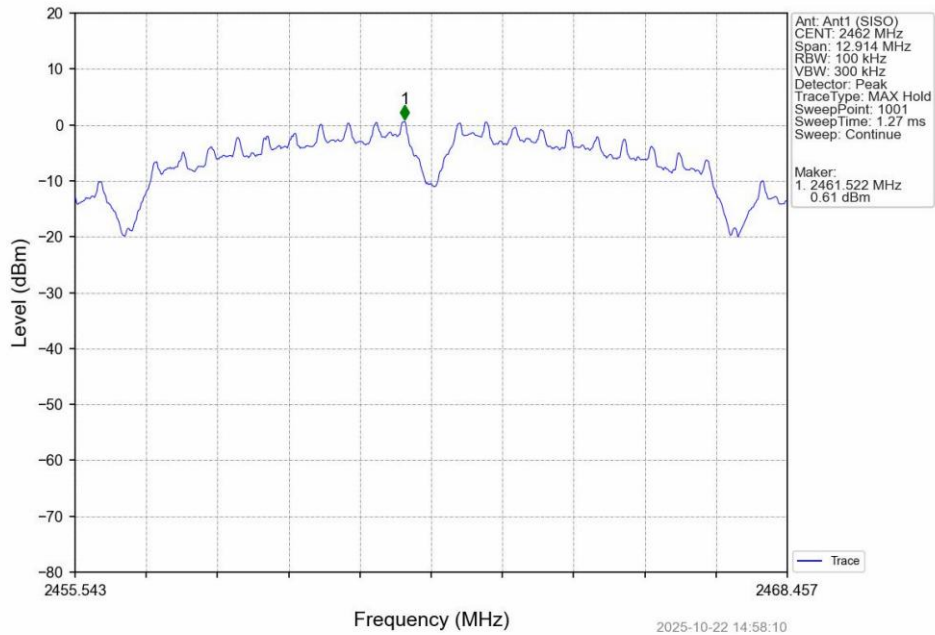
5.2.1 Ref



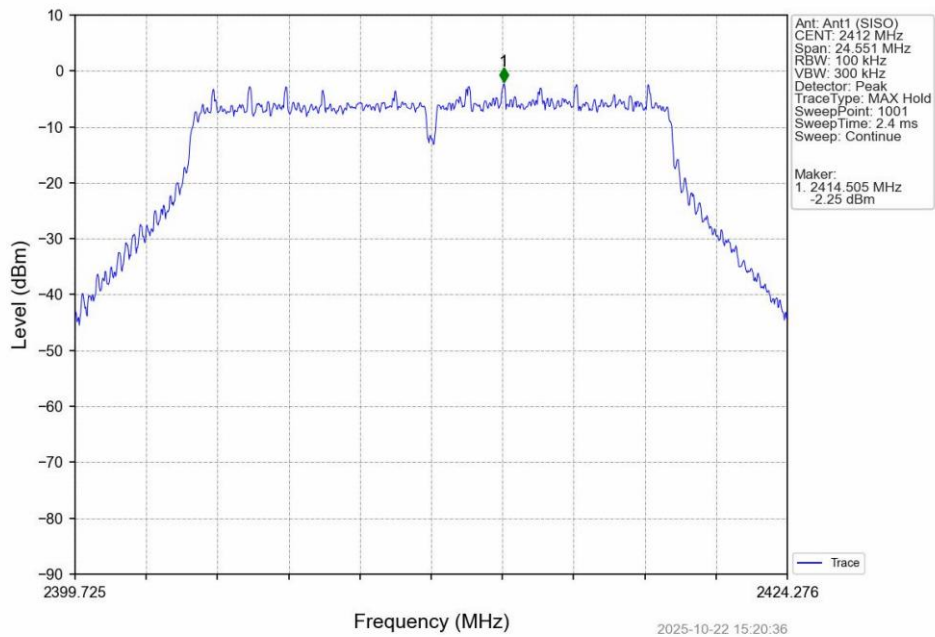




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

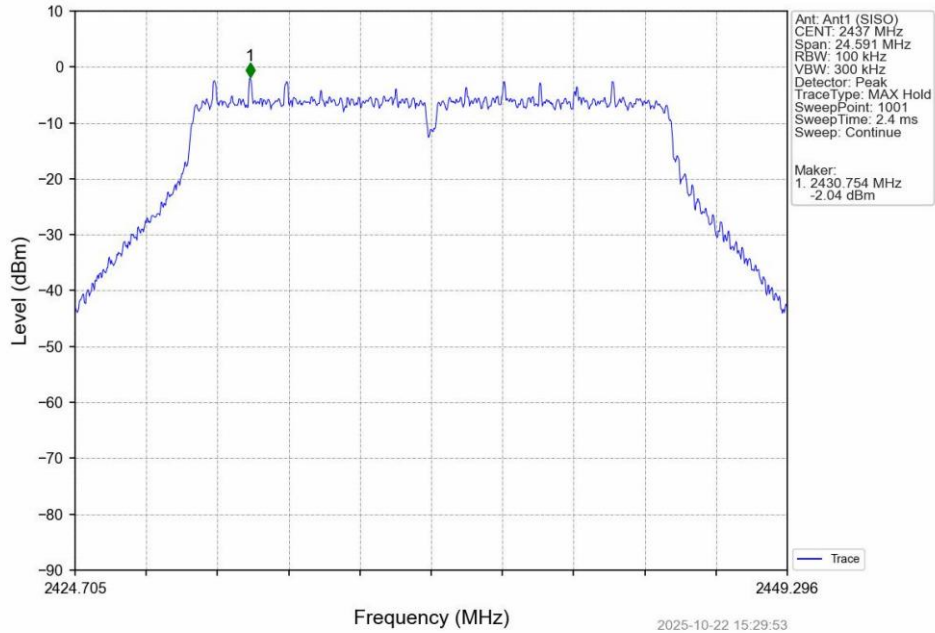


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

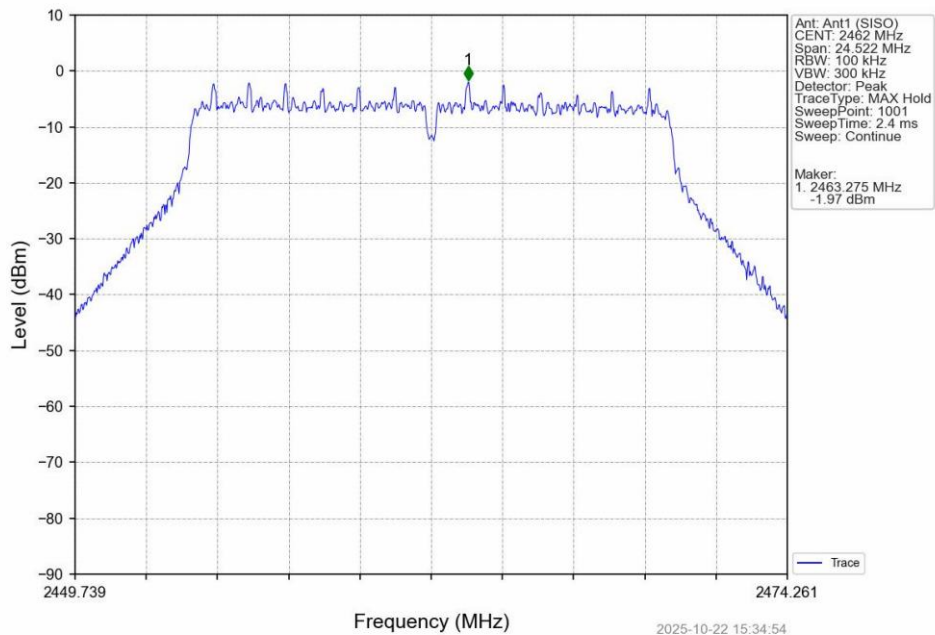




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

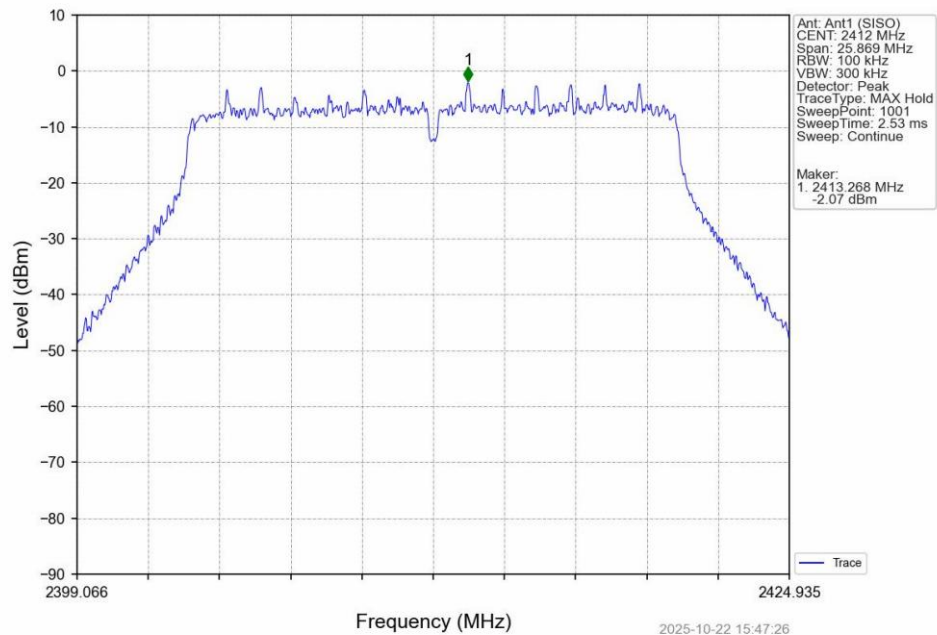


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

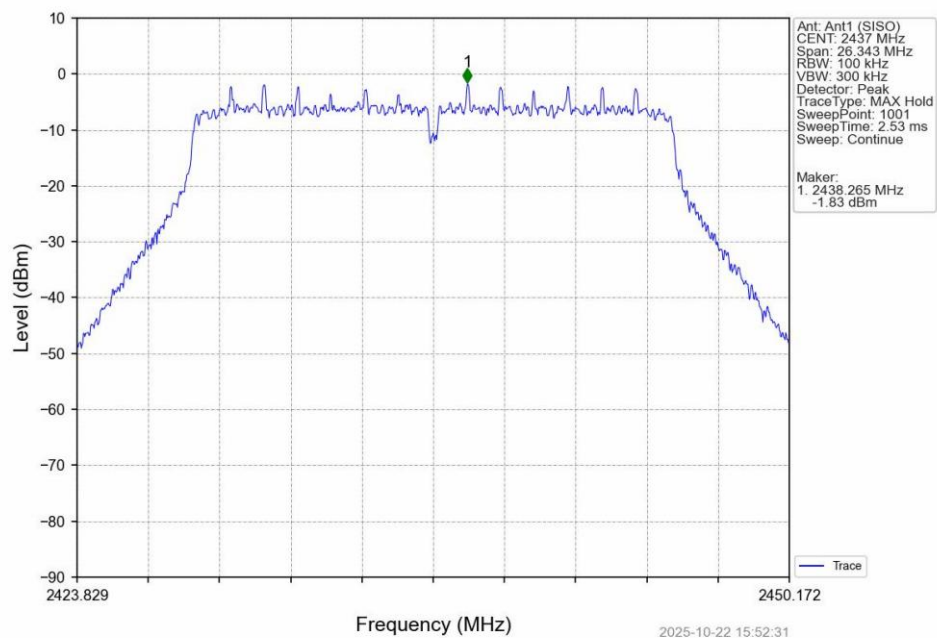




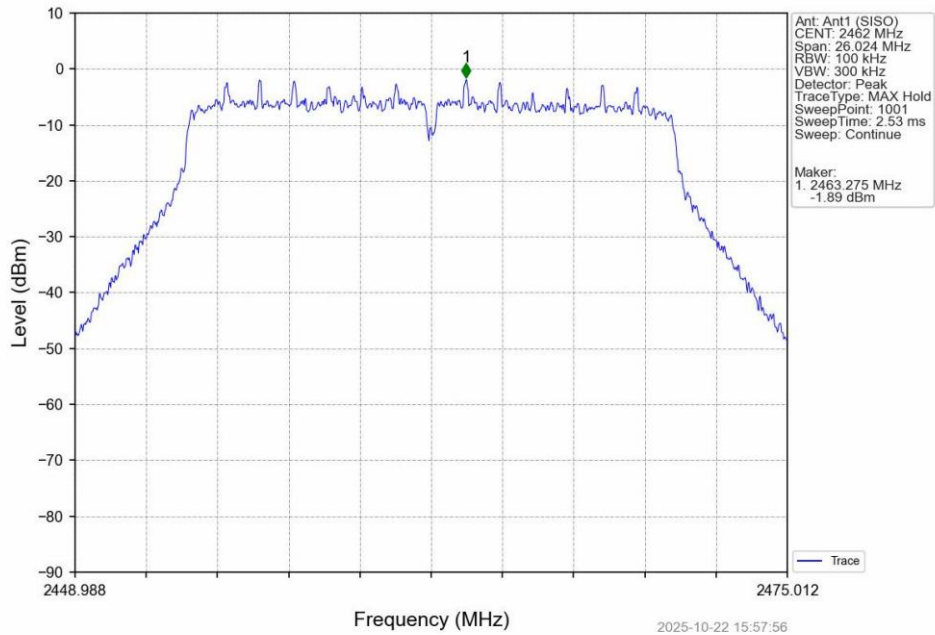
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



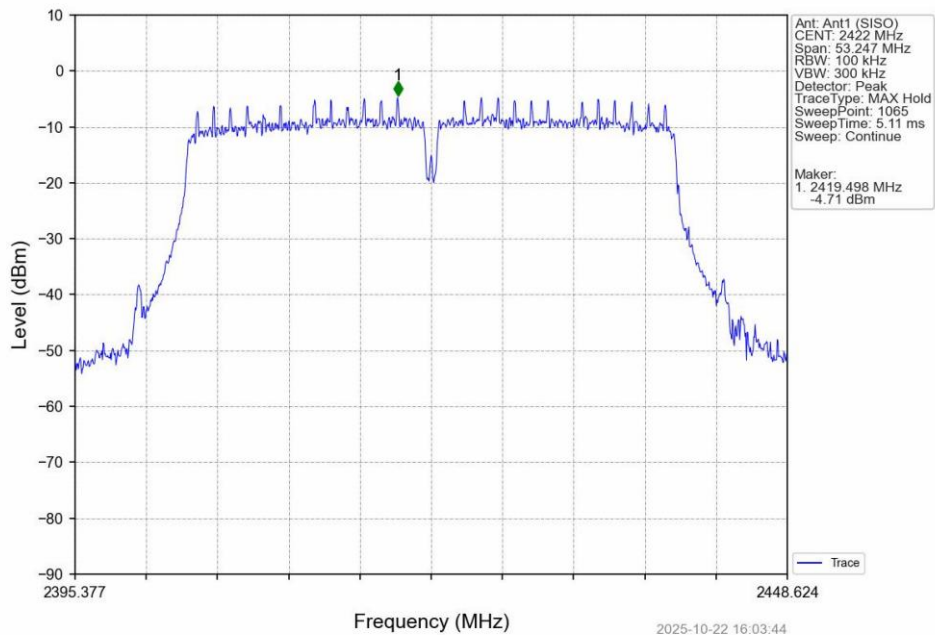
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



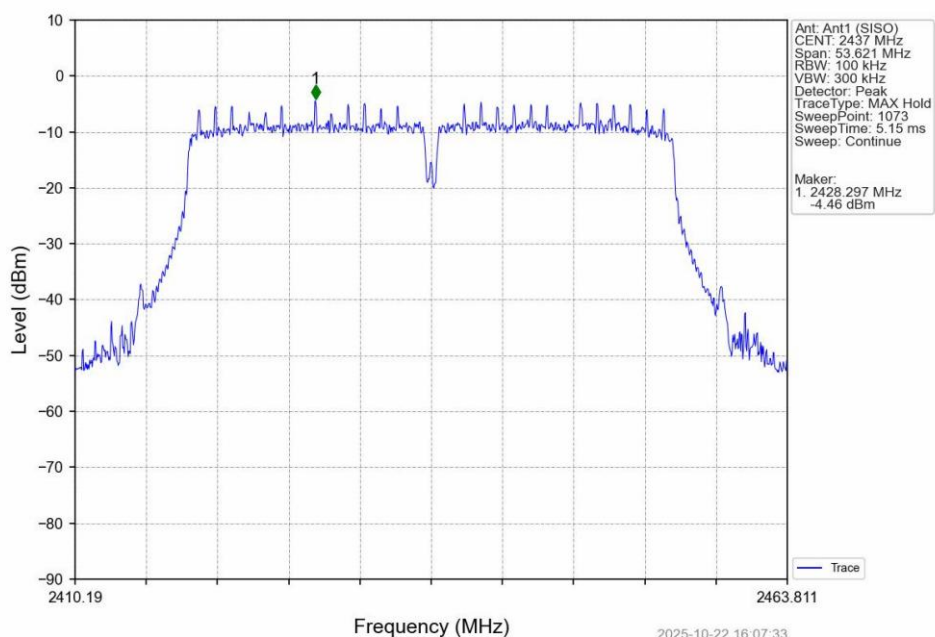
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



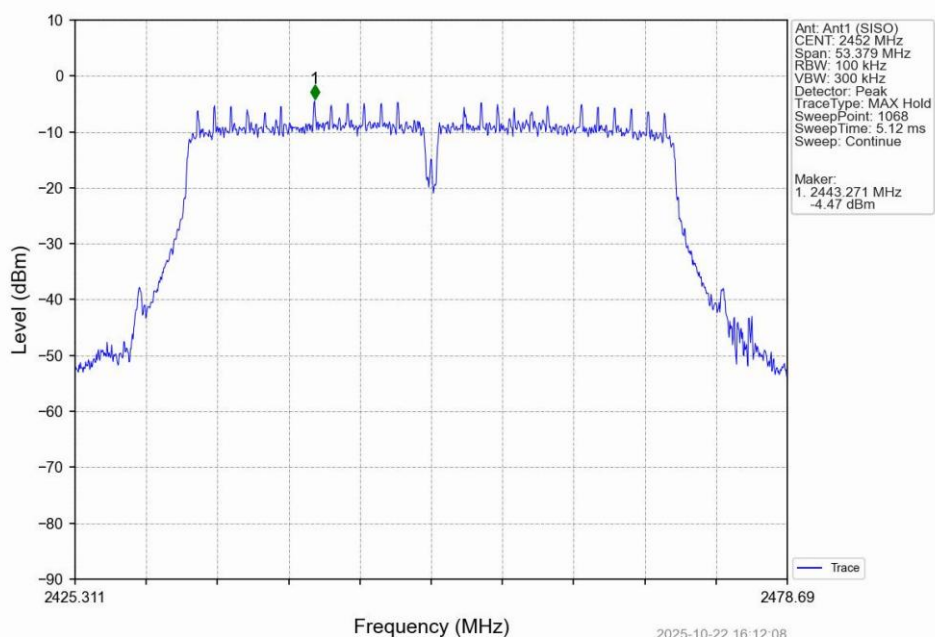
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



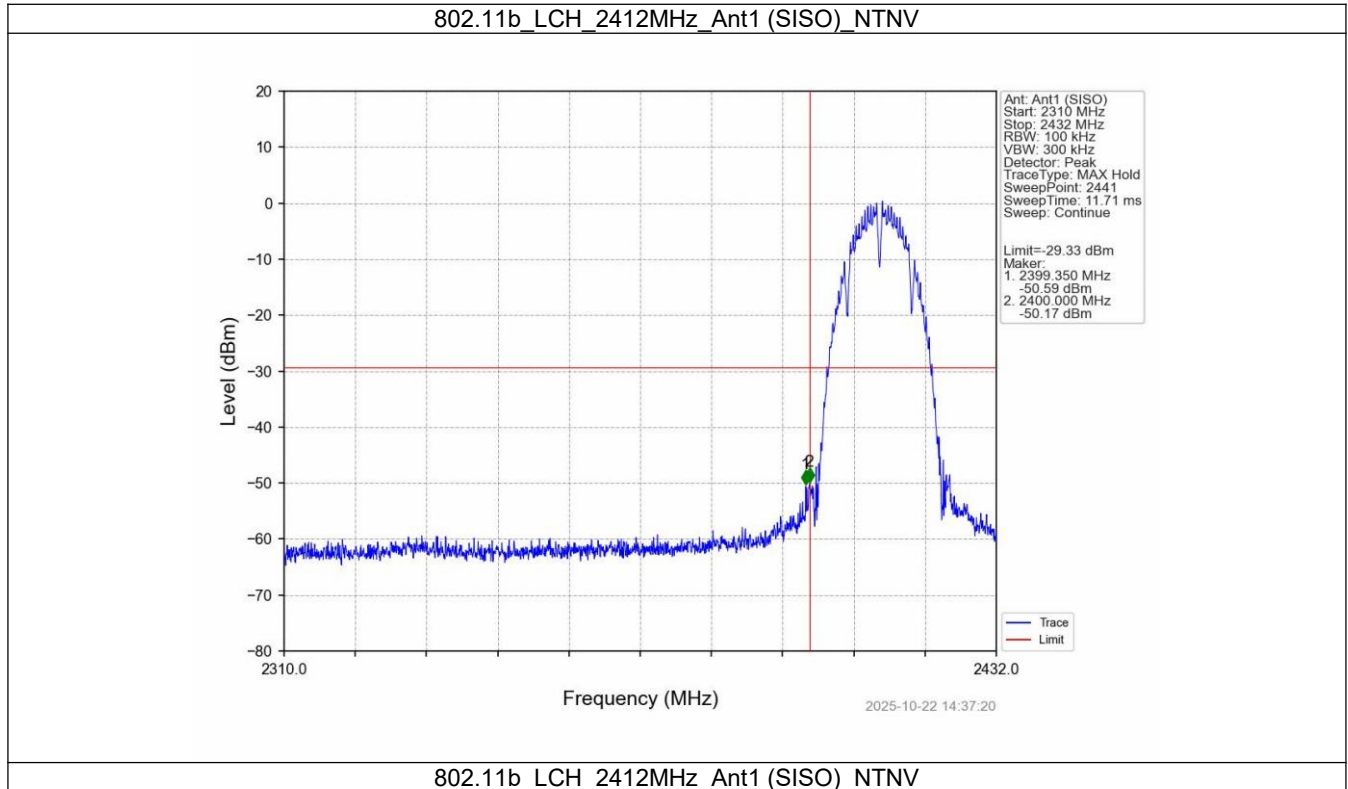
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

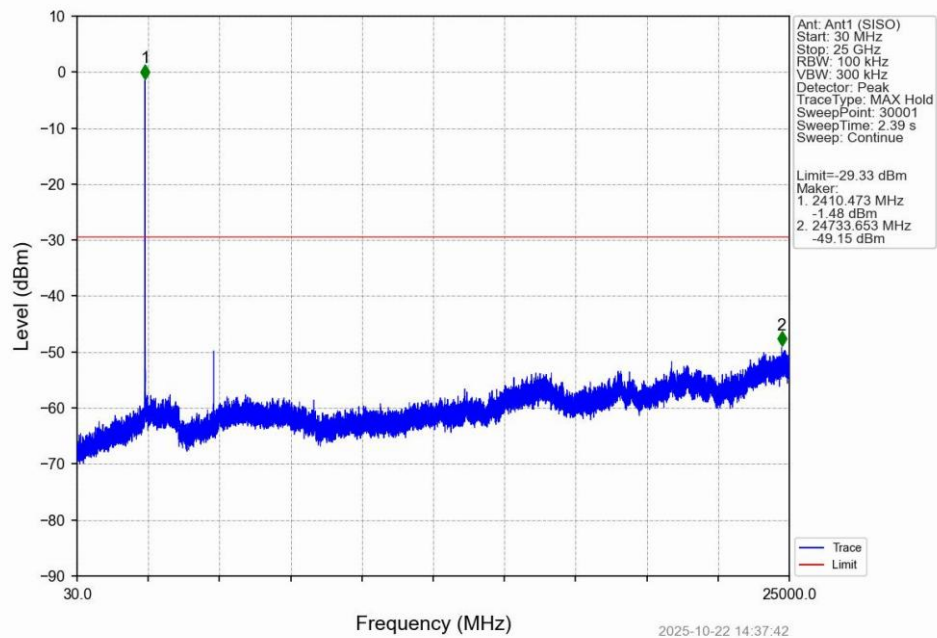


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

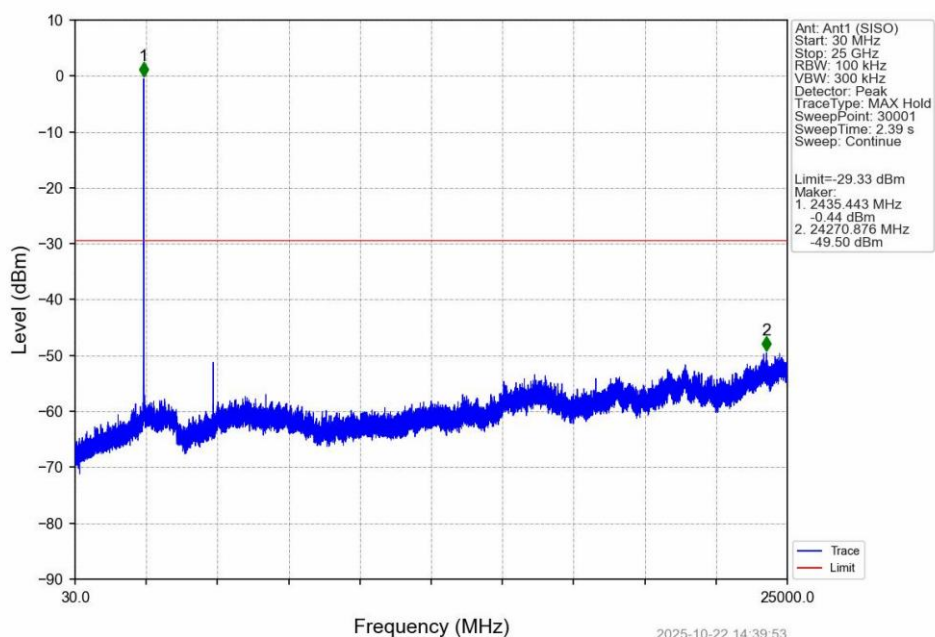


5.2.2 CSE

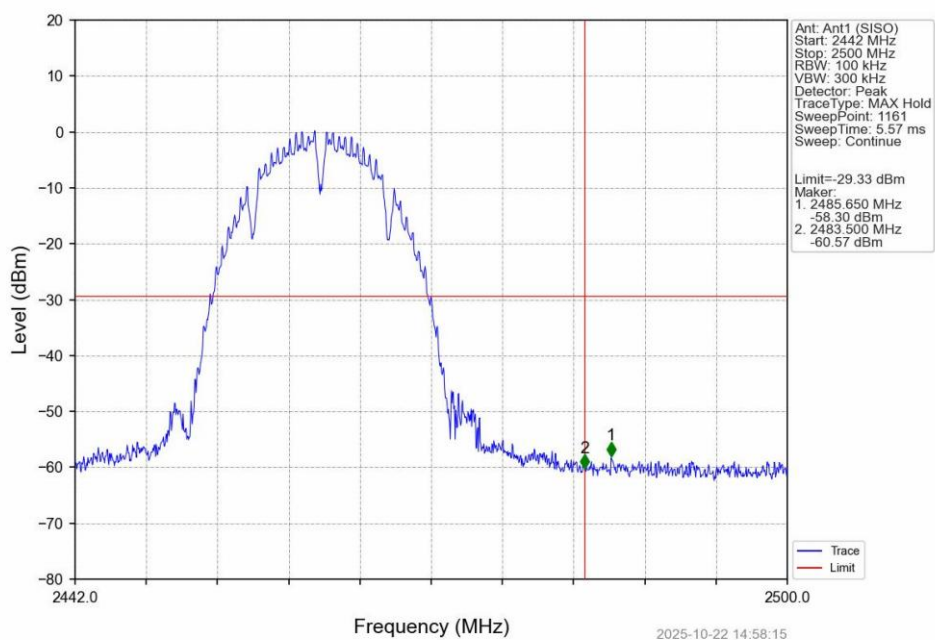




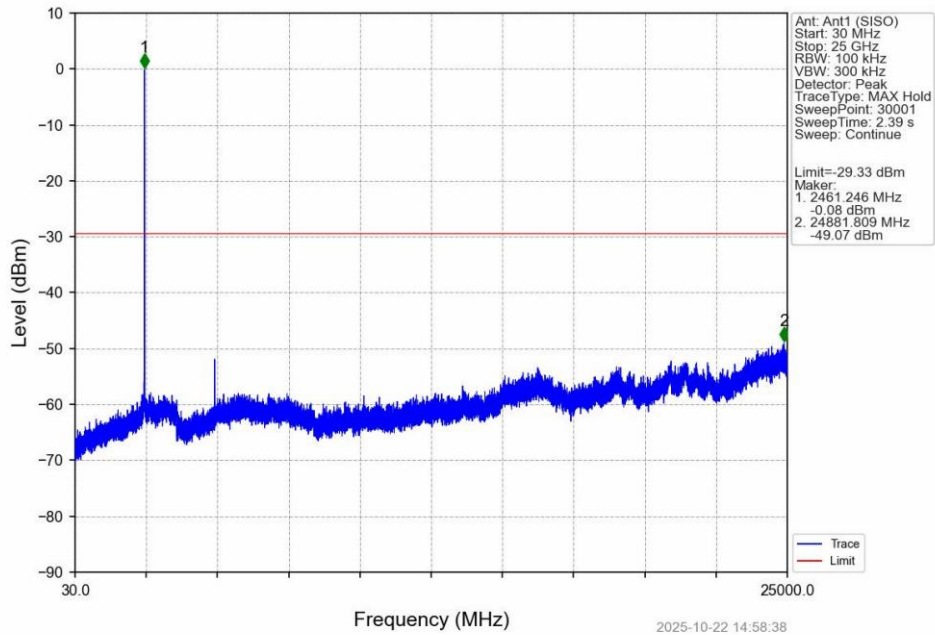
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



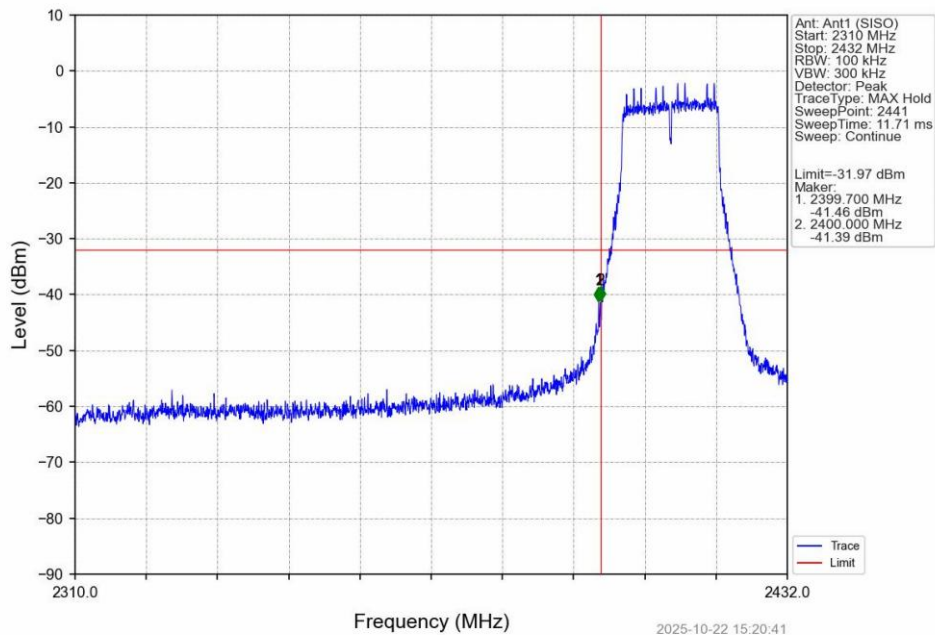
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



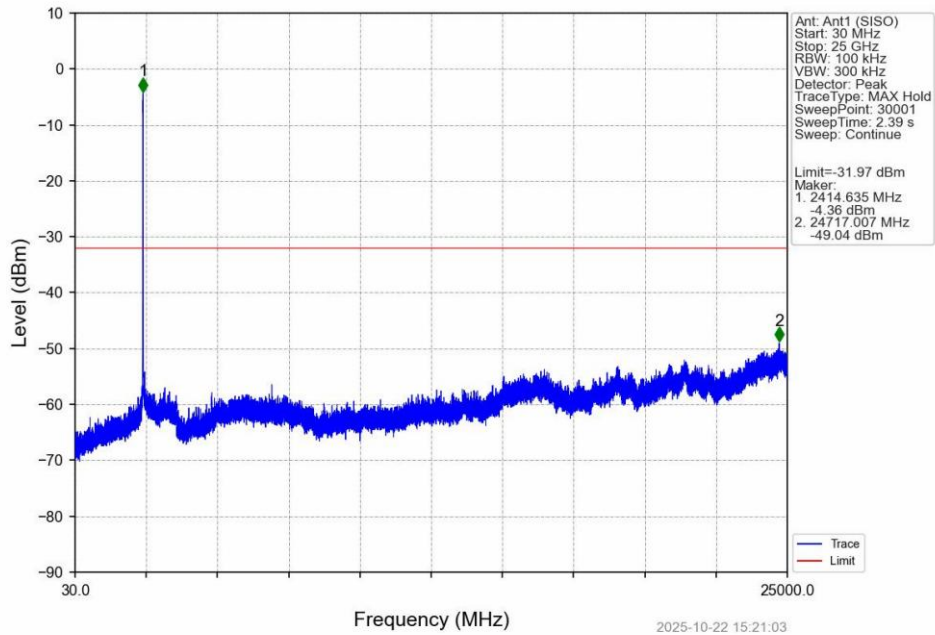
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



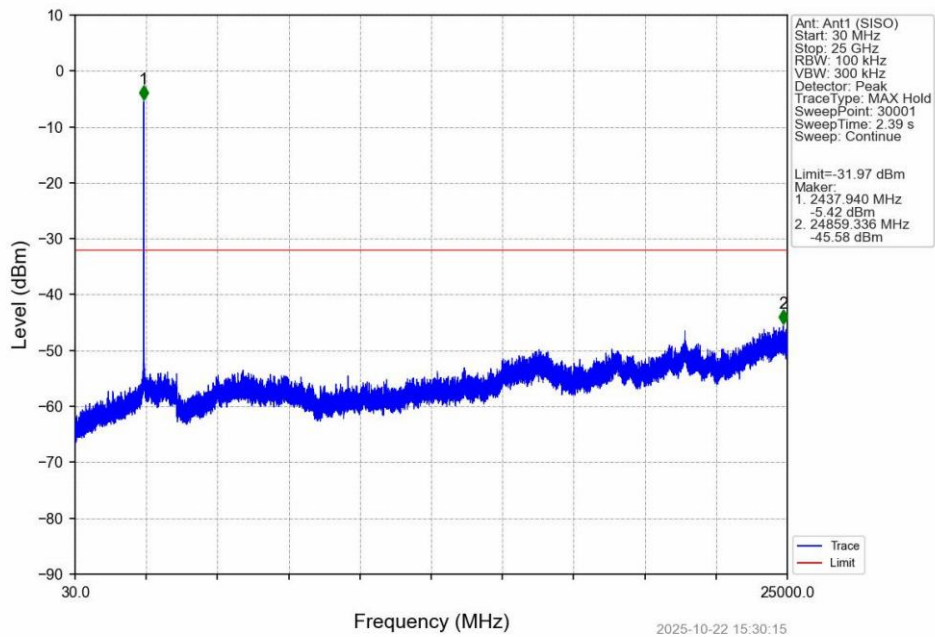
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



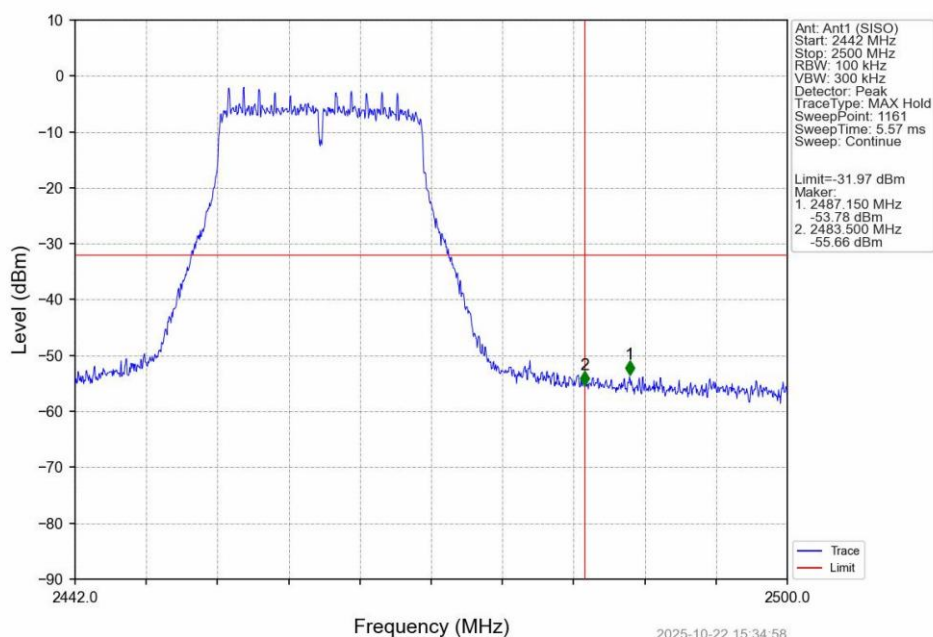
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



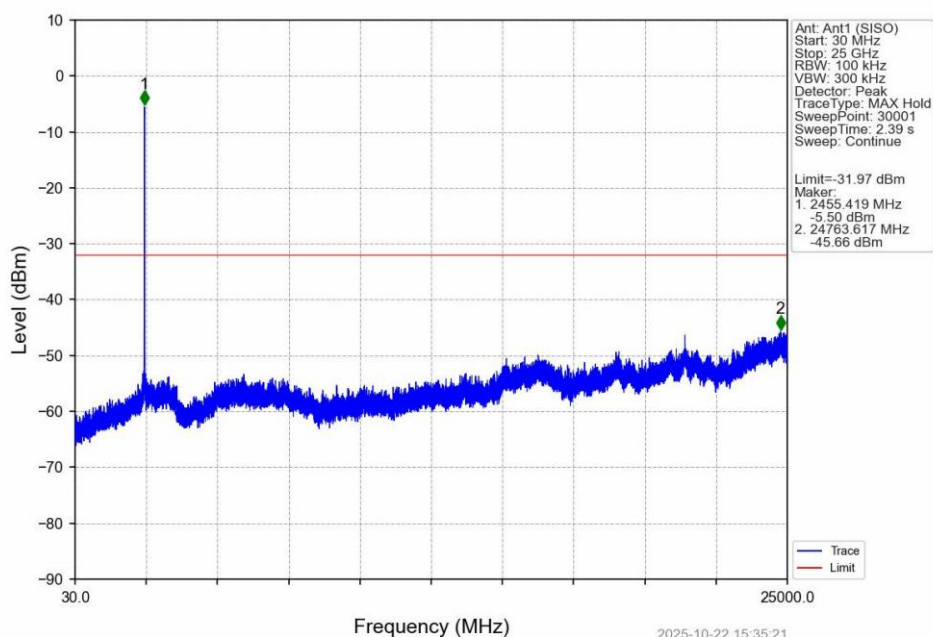
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



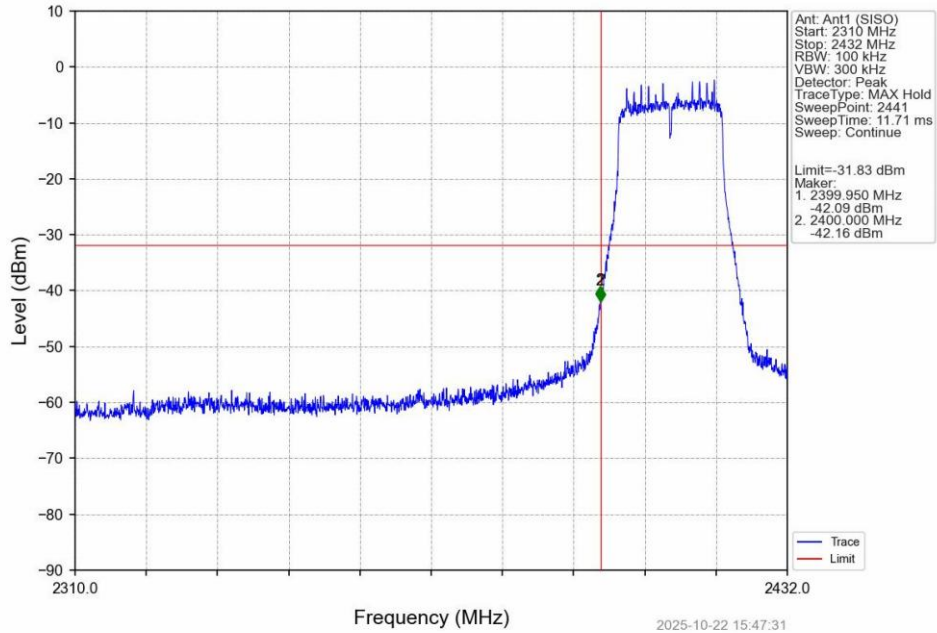
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



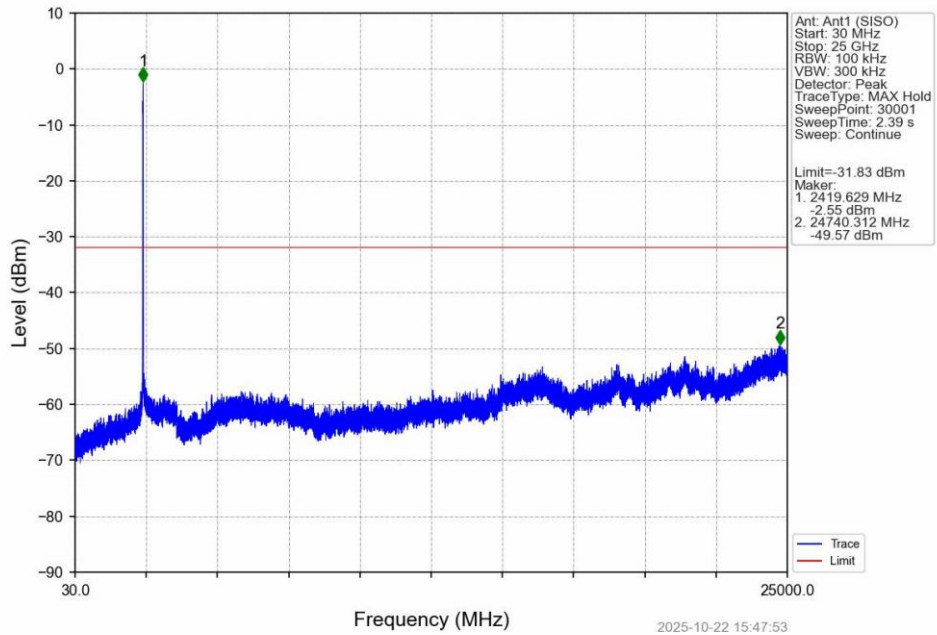
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



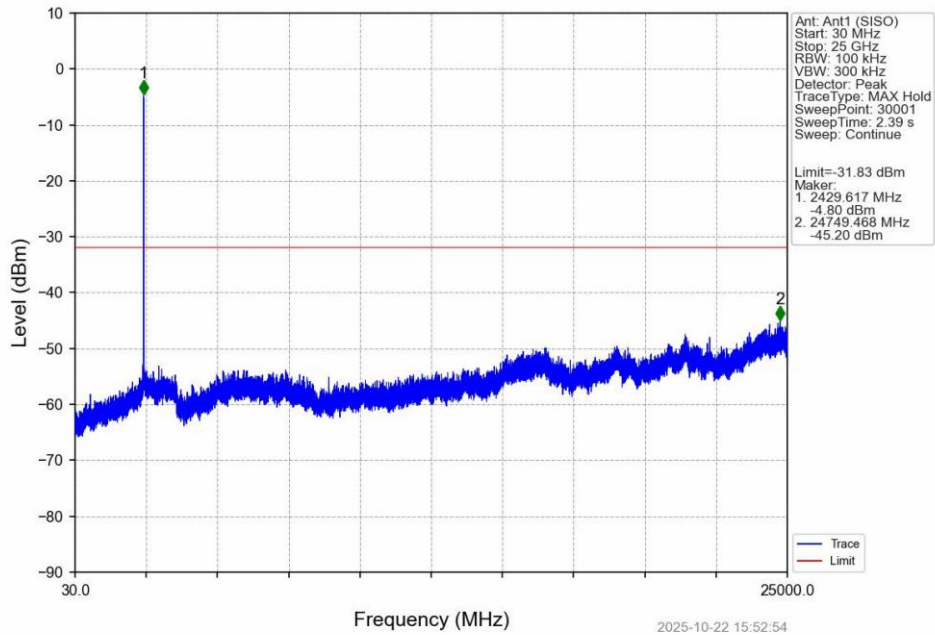
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



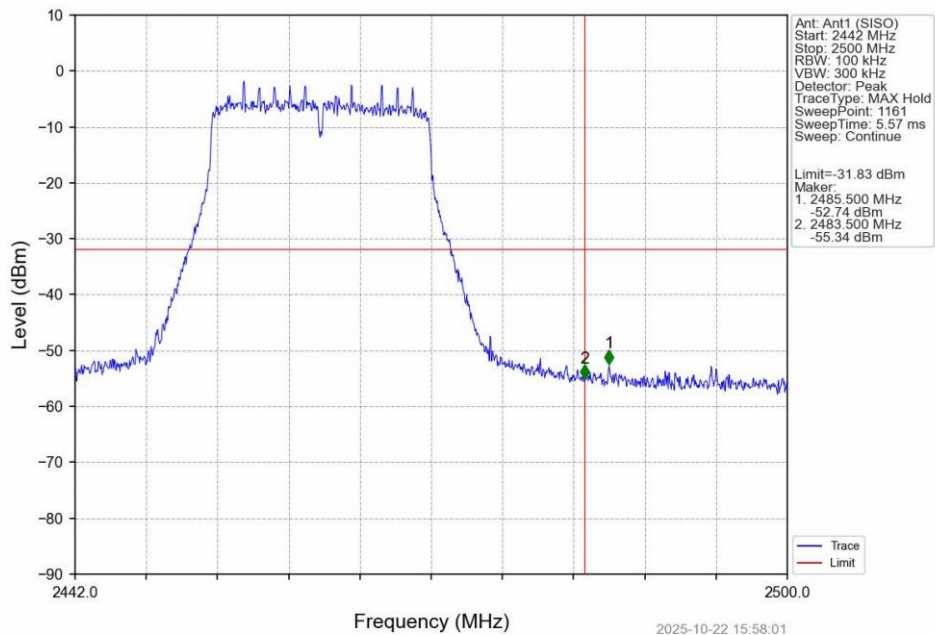
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



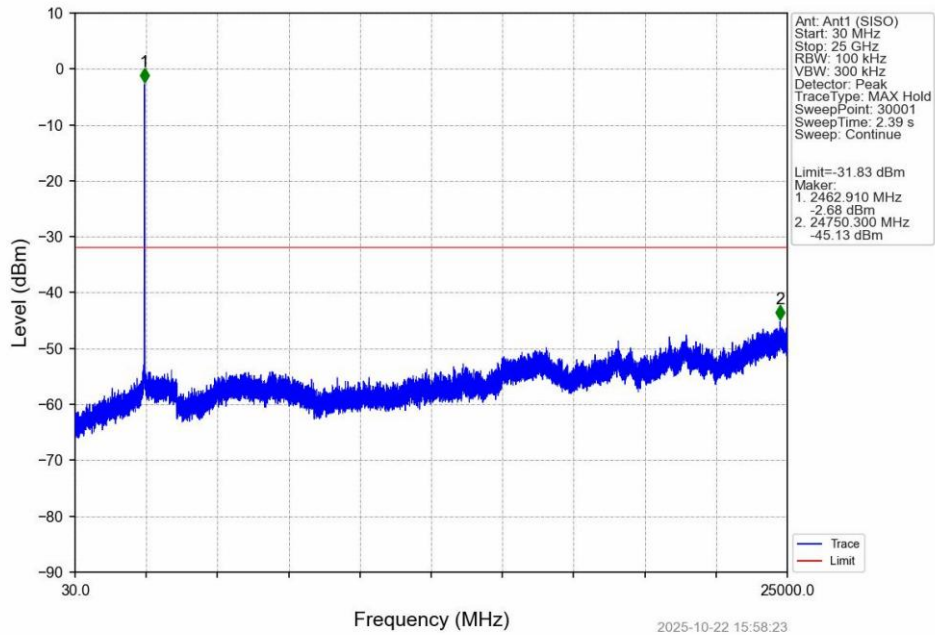
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



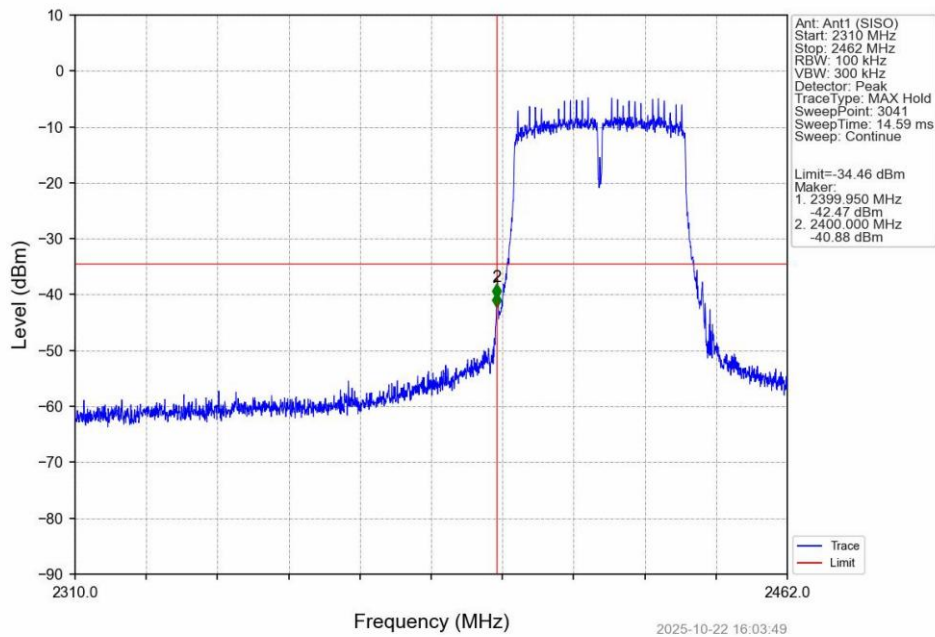
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



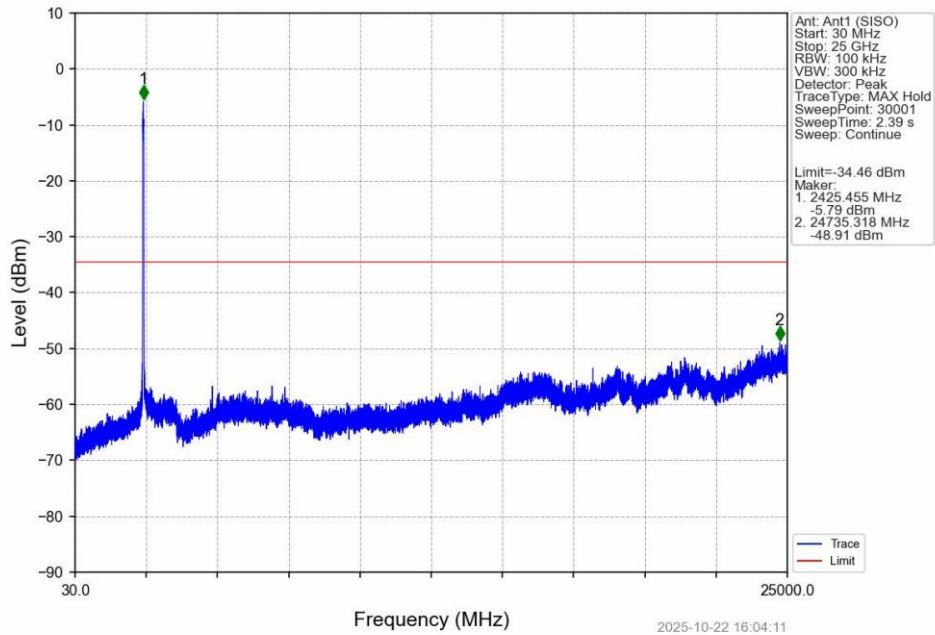
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



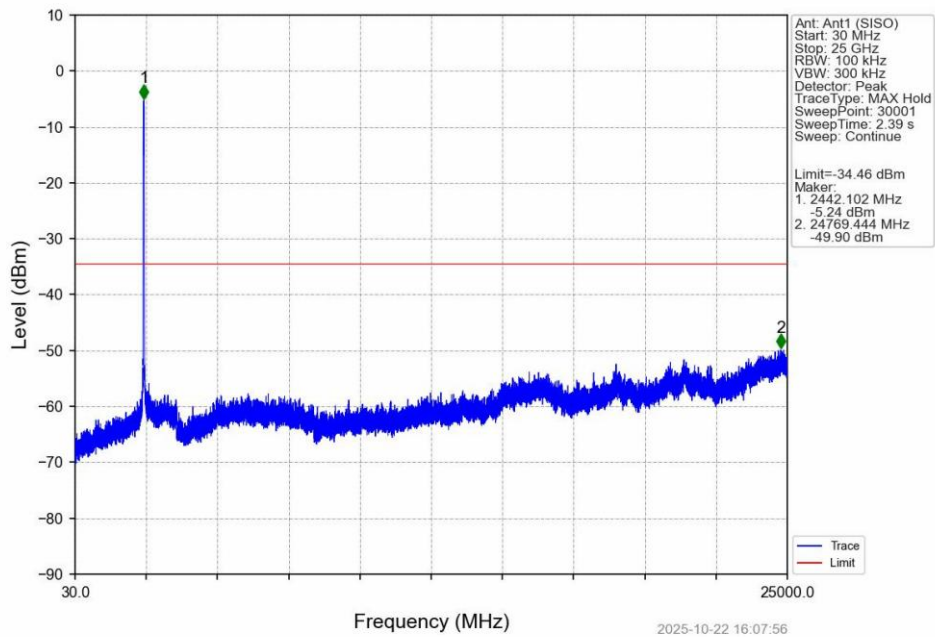
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



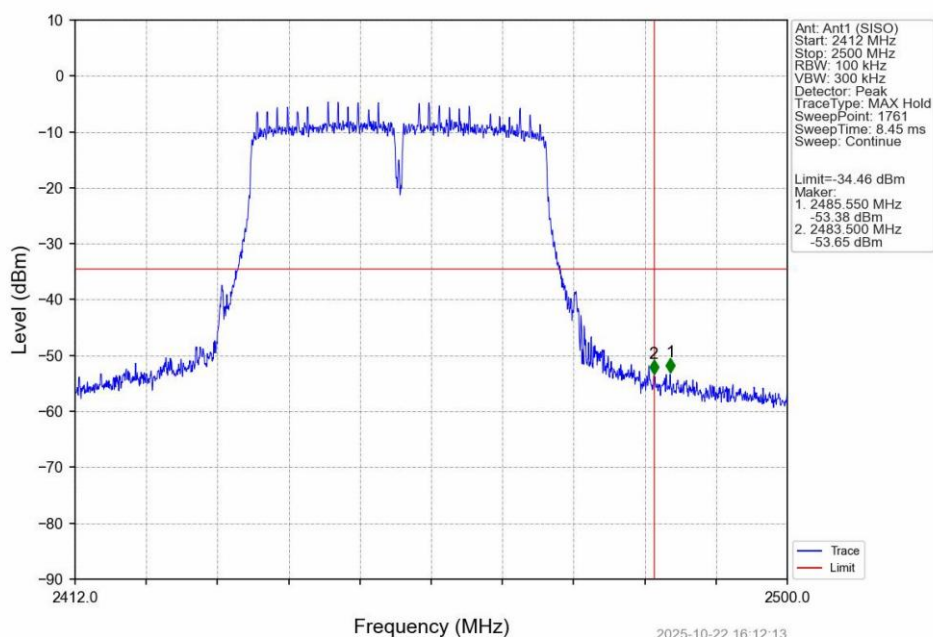
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

