



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Portable Power Station

Test Model: AF-P110-E

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





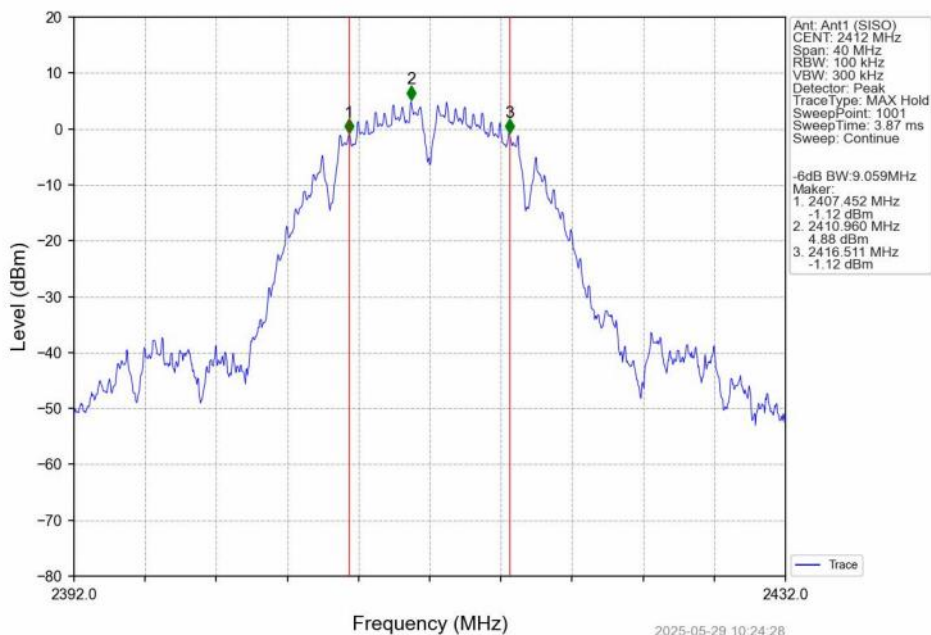
B.1 -6dB Bandwidth

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.059	≥ 0.5	Pass
		2437	1	9.540	≥ 0.5	Pass
		2462	1	9.562	≥ 0.5	Pass
802.11g	SISO	2412	1	16.351	≥ 0.5	Pass
		2437	1	16.356	≥ 0.5	Pass
		2462	1	16.367	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.572	≥ 0.5	Pass
		2437	1	17.606	≥ 0.5	Pass
		2462	1	17.609	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.786	≥ 0.5	Pass
		2437	1	35.761	≥ 0.5	Pass
		2452	1	35.785	≥ 0.5	Pass

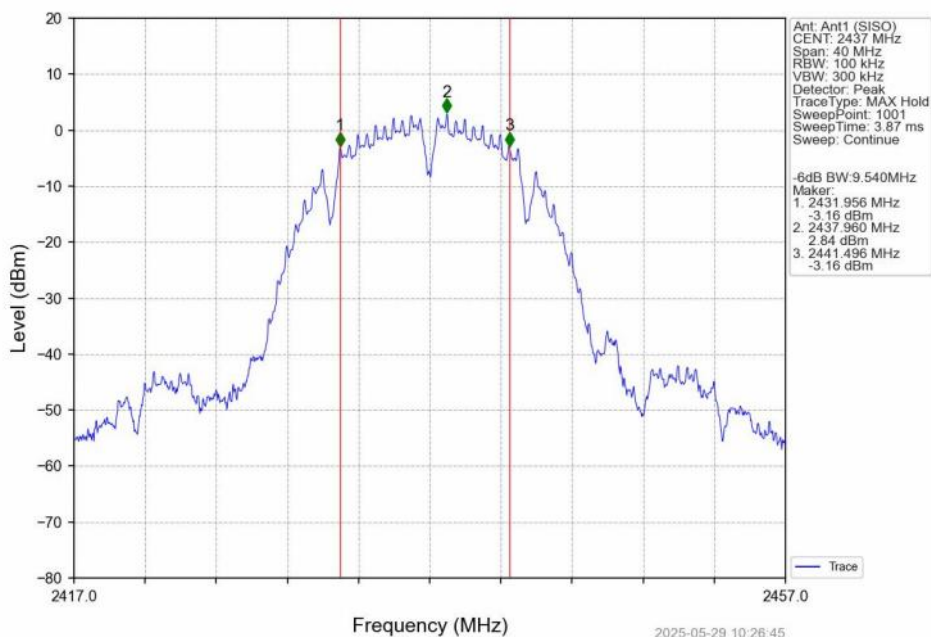




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

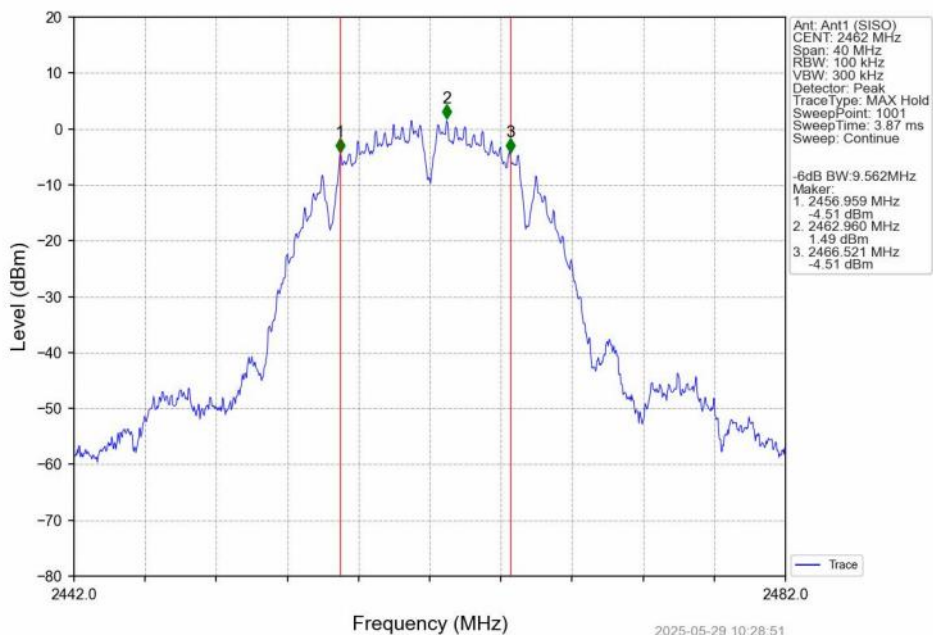


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

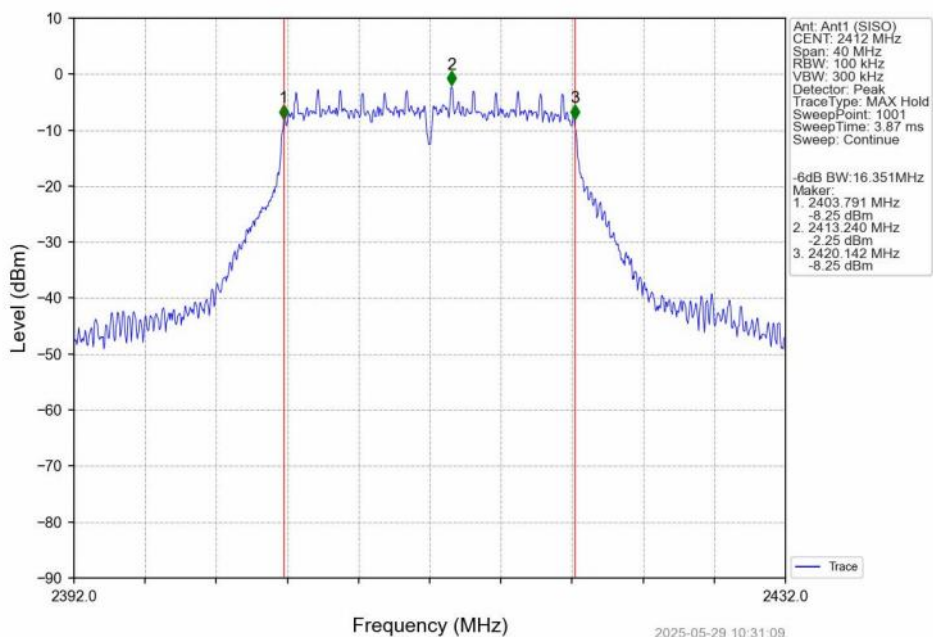




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

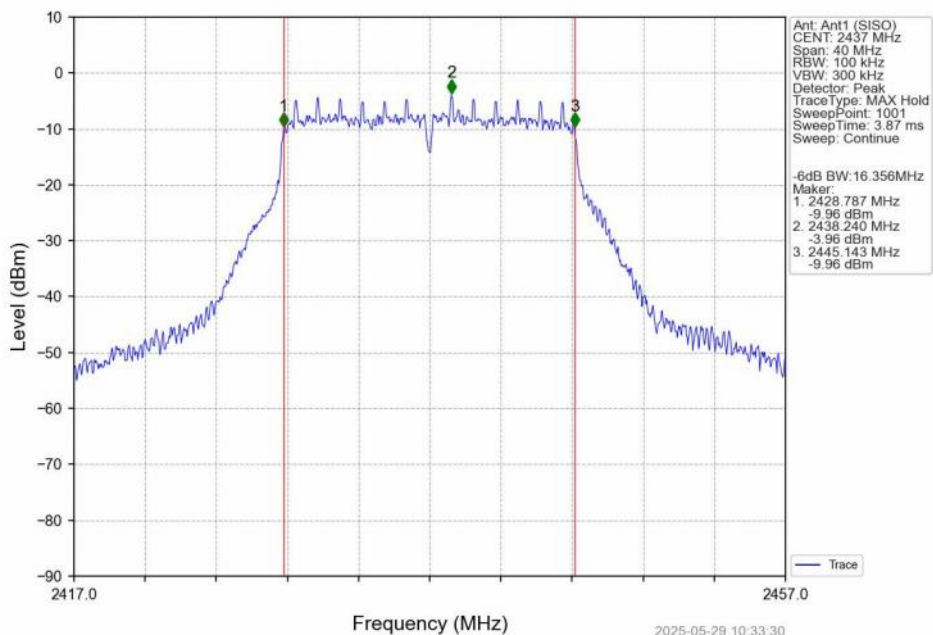


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

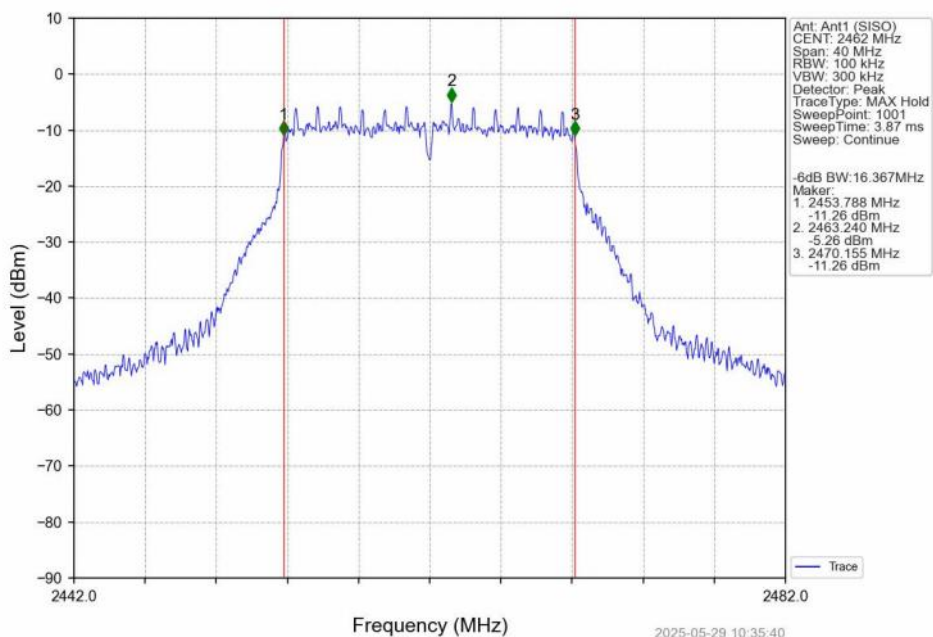




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

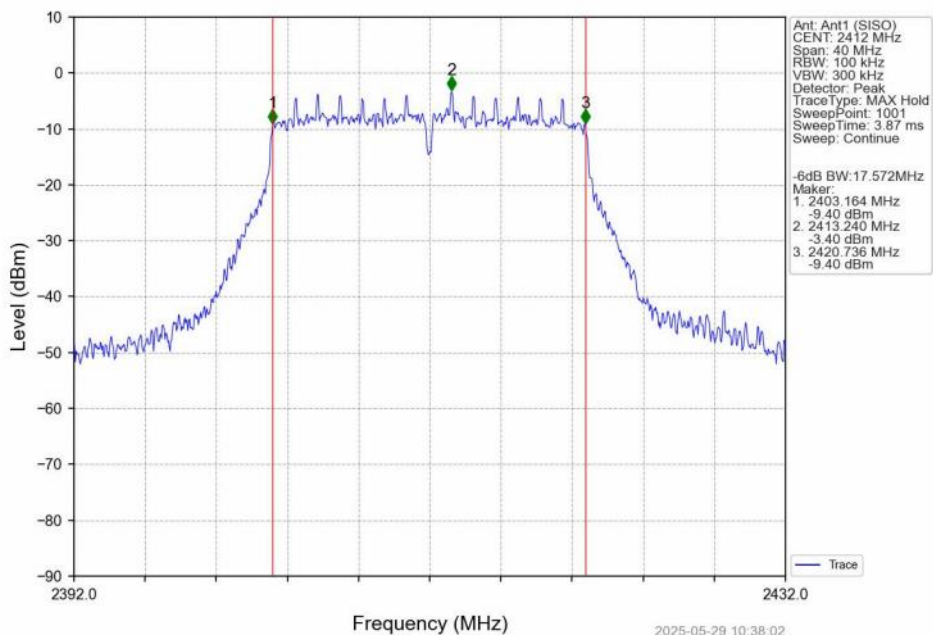


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

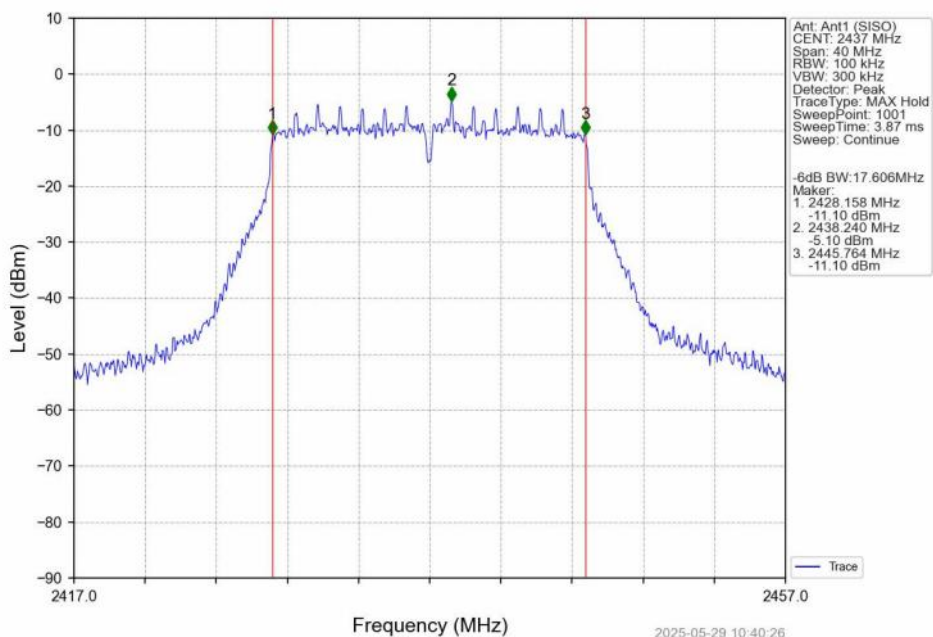




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

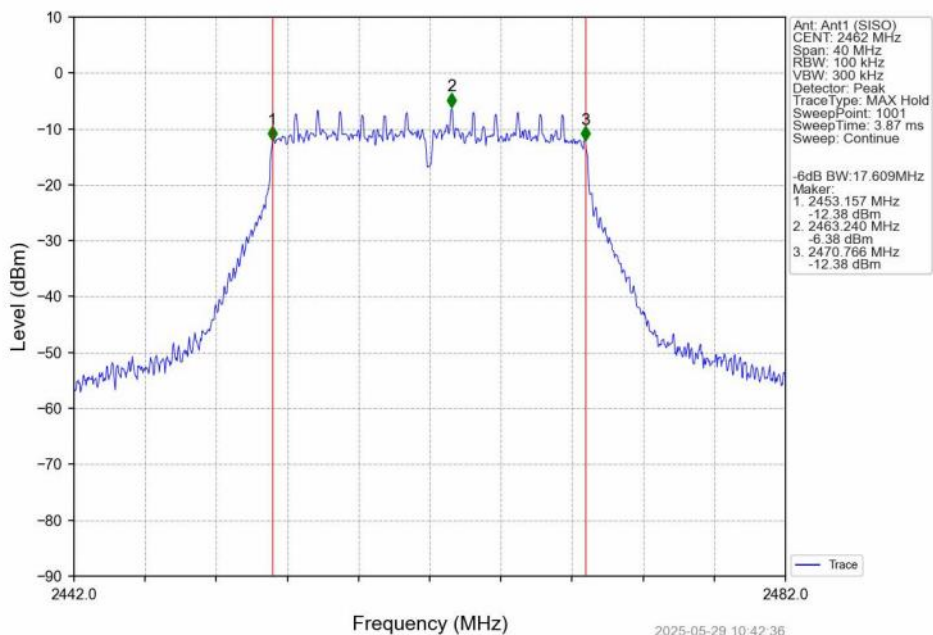


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

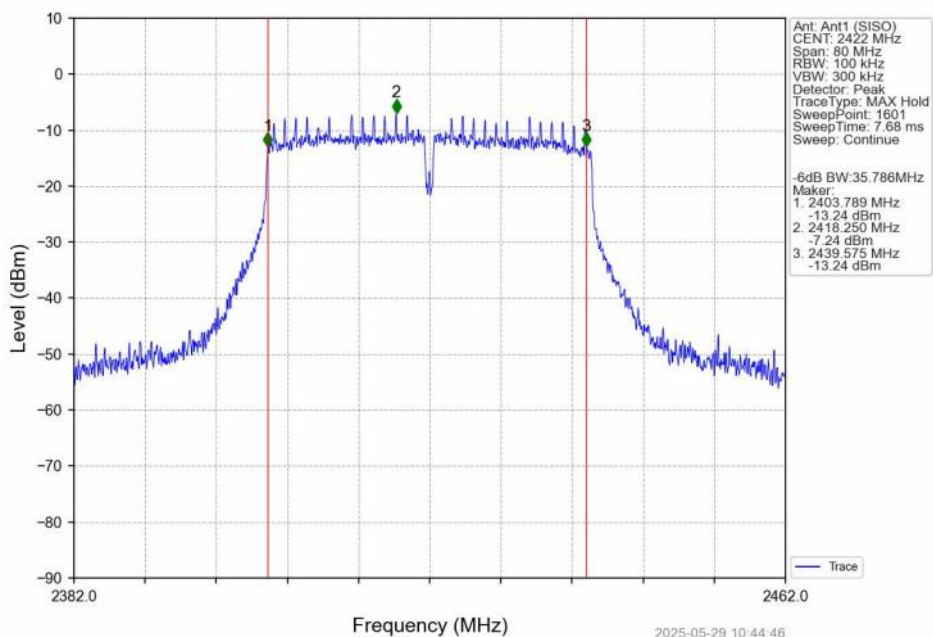




802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

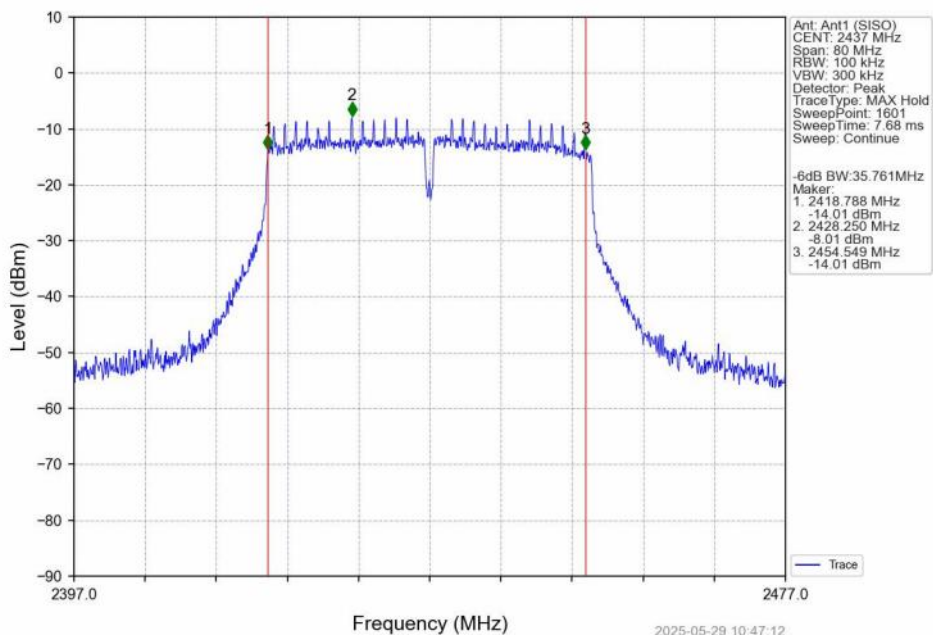


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

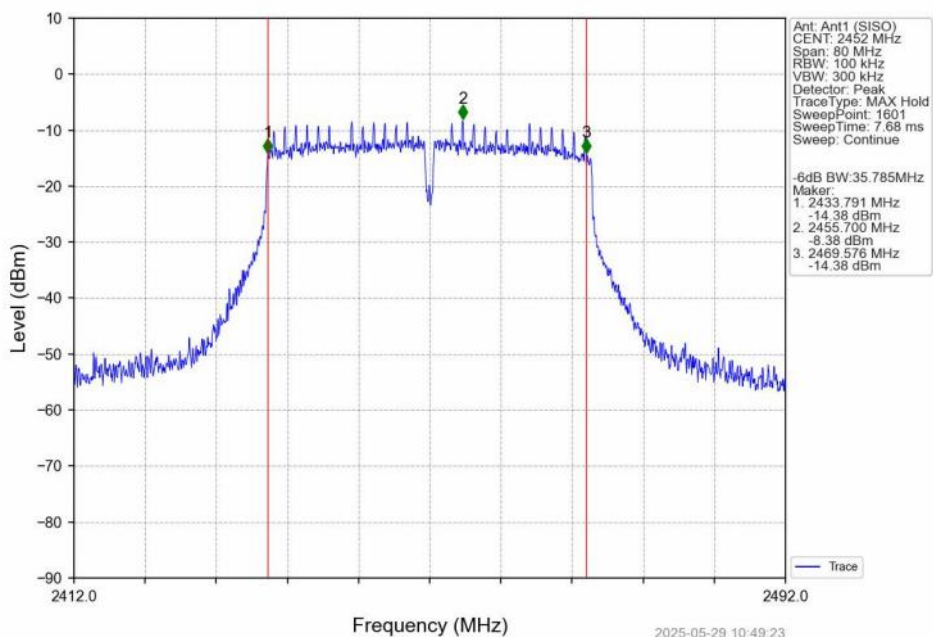




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





B.2 Maximum Peak Conducted Output Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	16.26	<=30	Pass
		2437	14.35	<=30	Pass
		2462	12.99	<=30	Pass
802.11g	SISO	2412	16.43	<=30	Pass
		2437	14.76	<=30	Pass
		2462	13.53	<=30	Pass
802.11n (HT20)	SISO	2412	15.32	<=30	Pass
		2437	13.73	<=30	Pass
		2462	12.41	<=30	Pass
802.11n (HT40)	SISO	2422	14.69	<=30	Pass
		2437	13.91	<=30	Pass
		2452	13.47	<=30	Pass





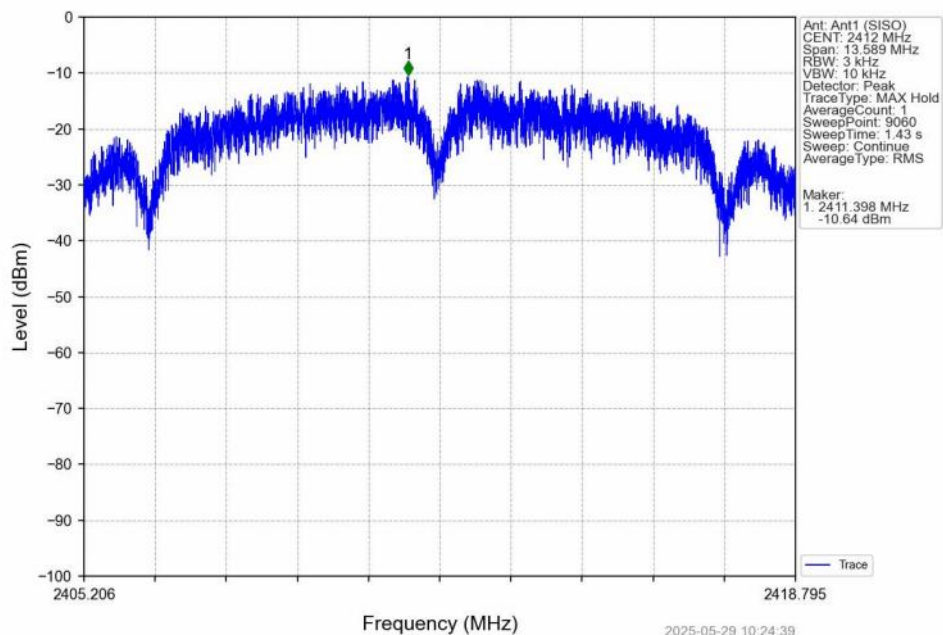
B.3 Maximum Power Spectral Density Level

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-10.64	<=8	Pass
		2437	-12.52	<=8	Pass
		2462	-13.71	<=8	Pass
802.11g	SISO	2412	-17.35	<=8	Pass
		2437	-19.01	<=8	Pass
		2462	-20.23	<=8	Pass
802.11n (HT20)	SISO	2412	-17.94	<=8	Pass
		2437	-19.83	<=8	Pass
		2462	-20.78	<=8	Pass
802.11n (HT40)	SISO	2422	-20.70	<=8	Pass
		2437	-21.74	<=8	Pass
		2452	-21.51	<=8	Pass

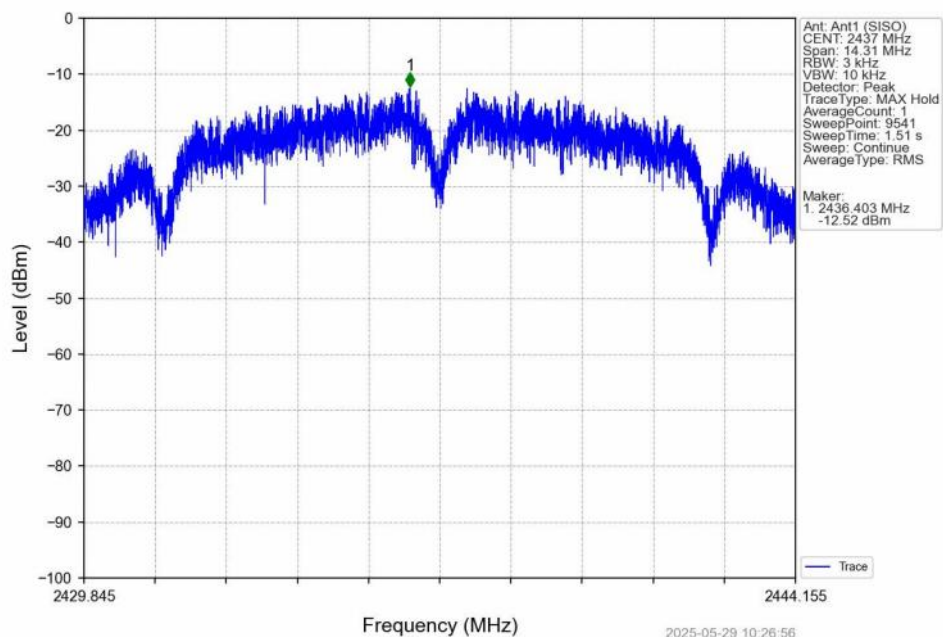




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

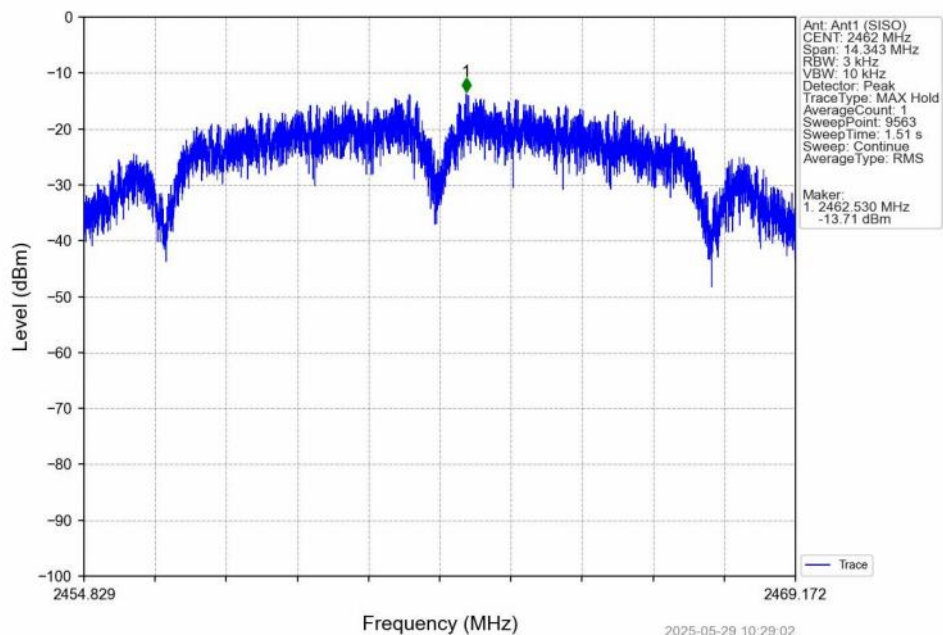


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

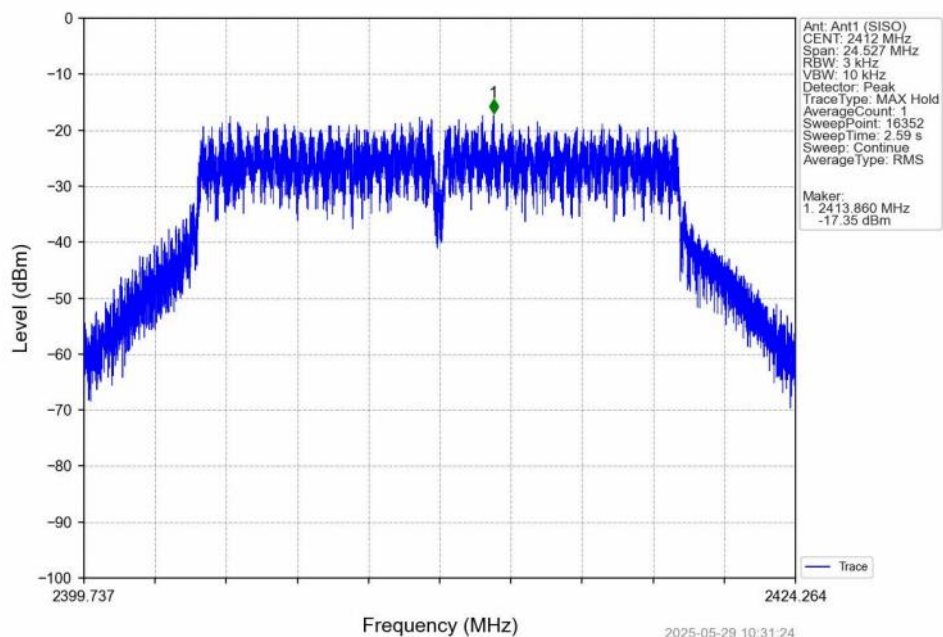




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

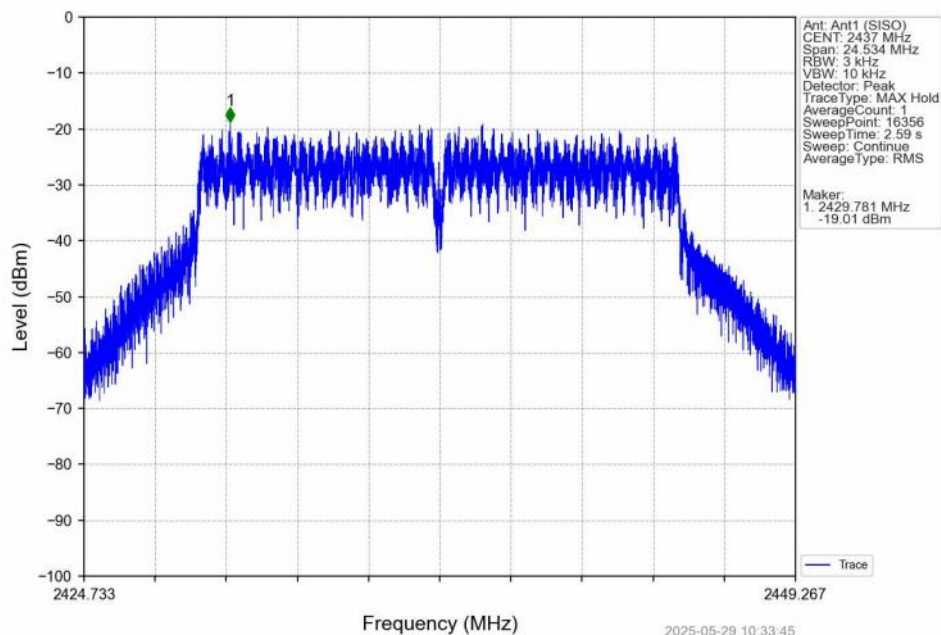


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

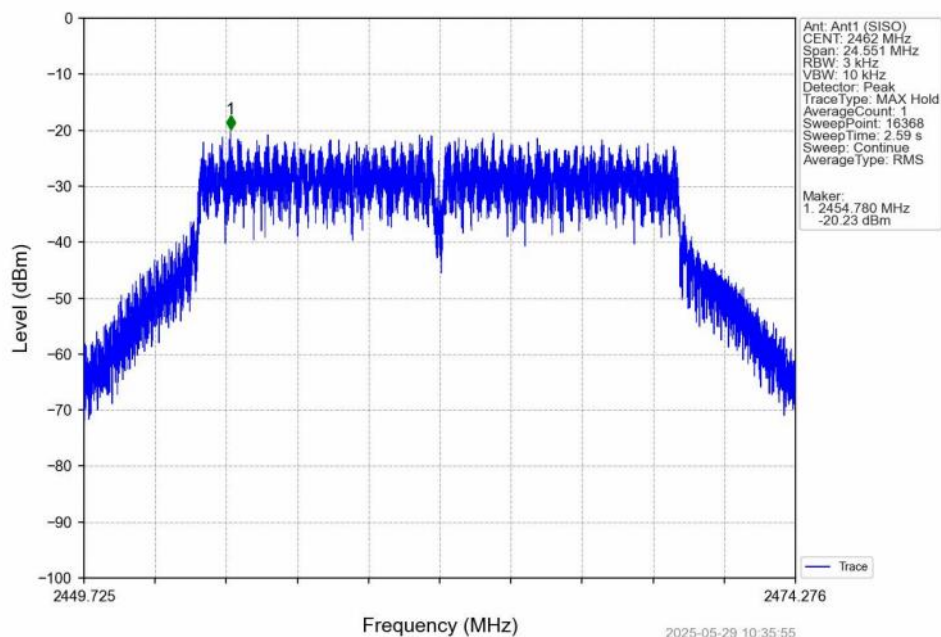




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

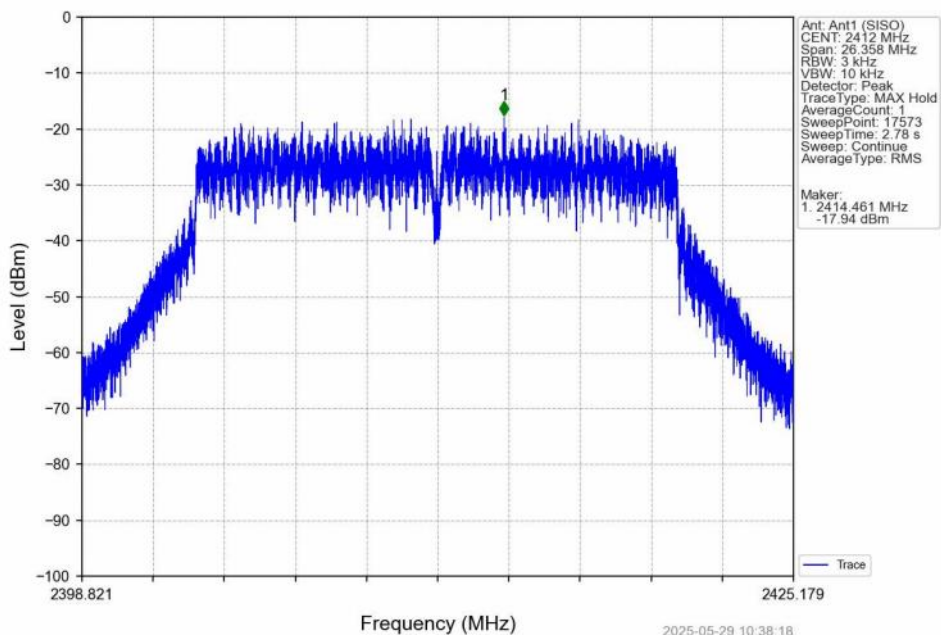


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

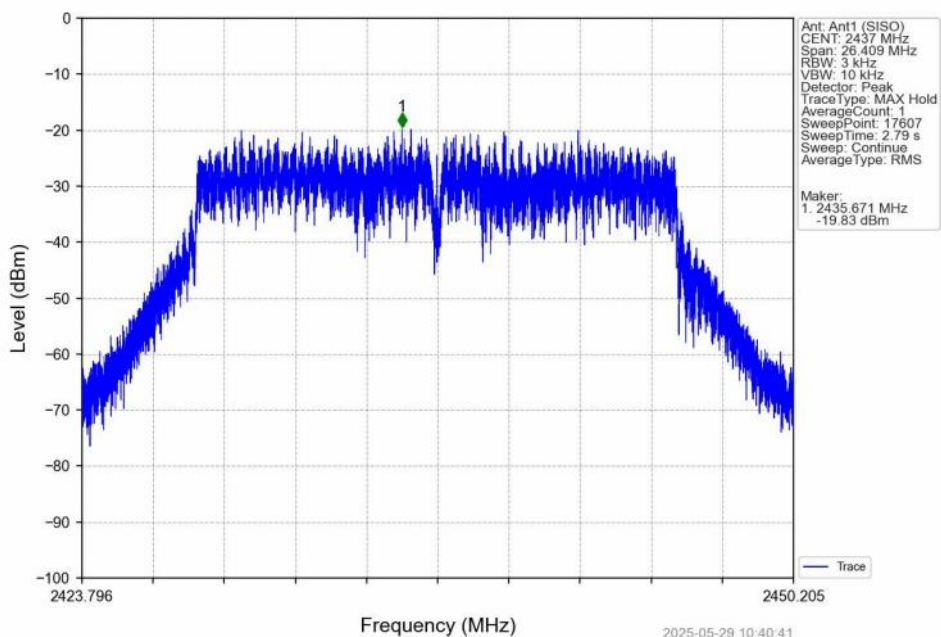




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

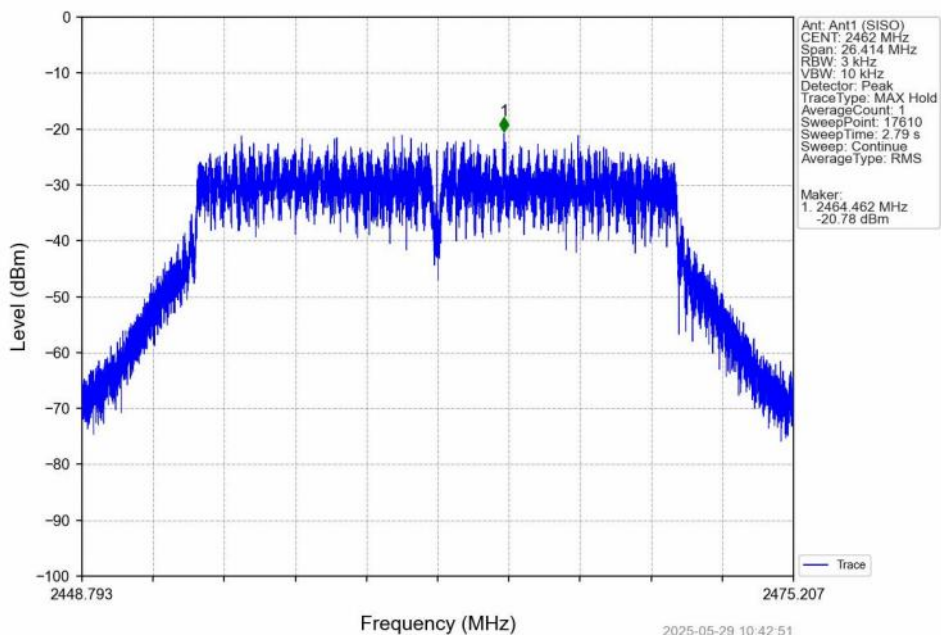


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

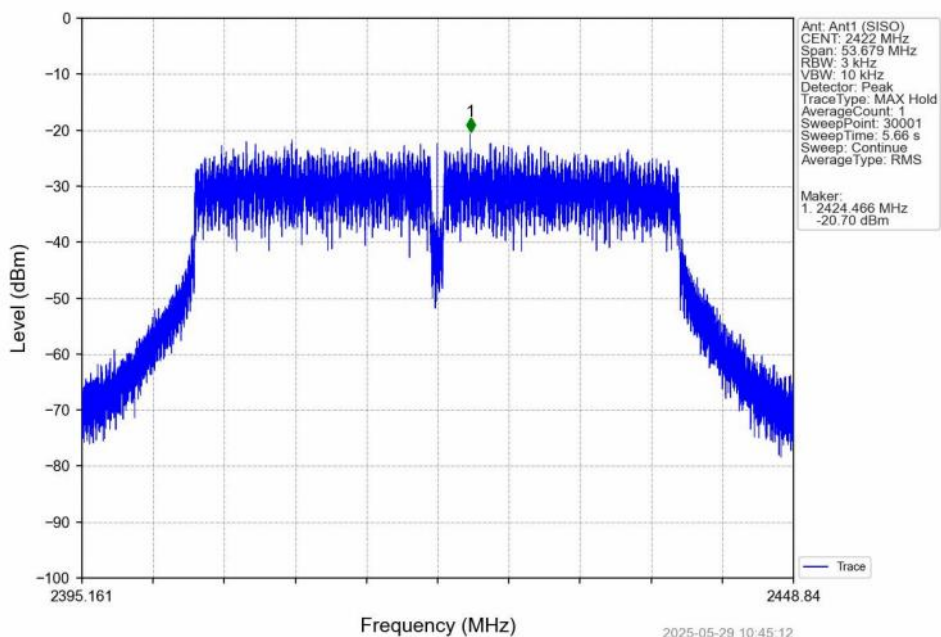




802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

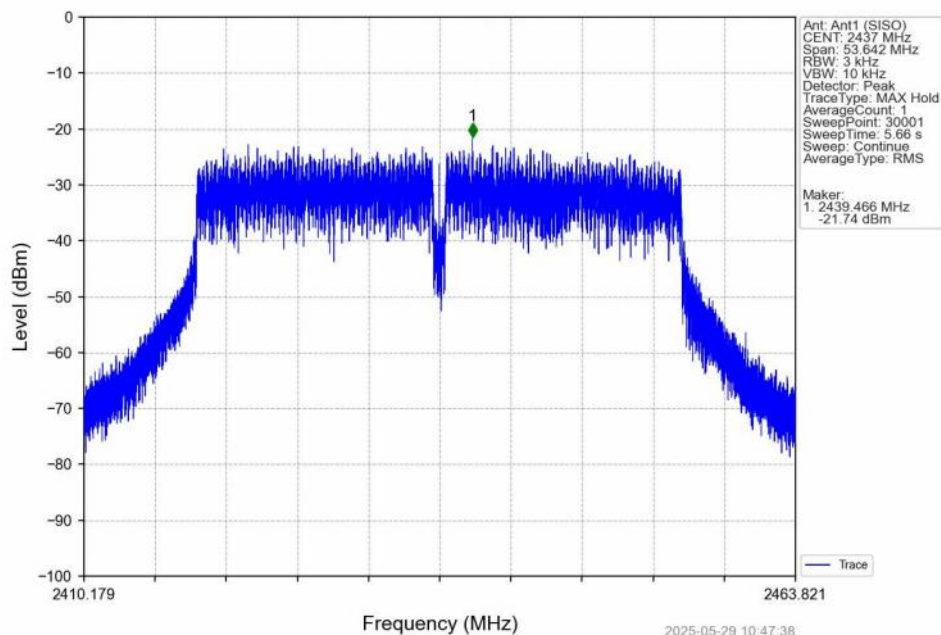


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

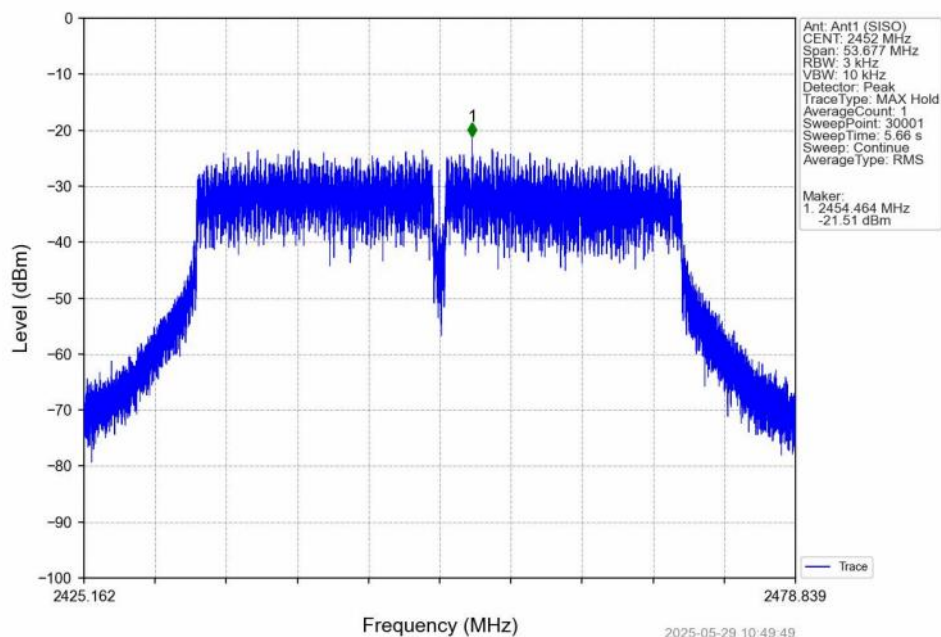




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





B.4 Band Edge

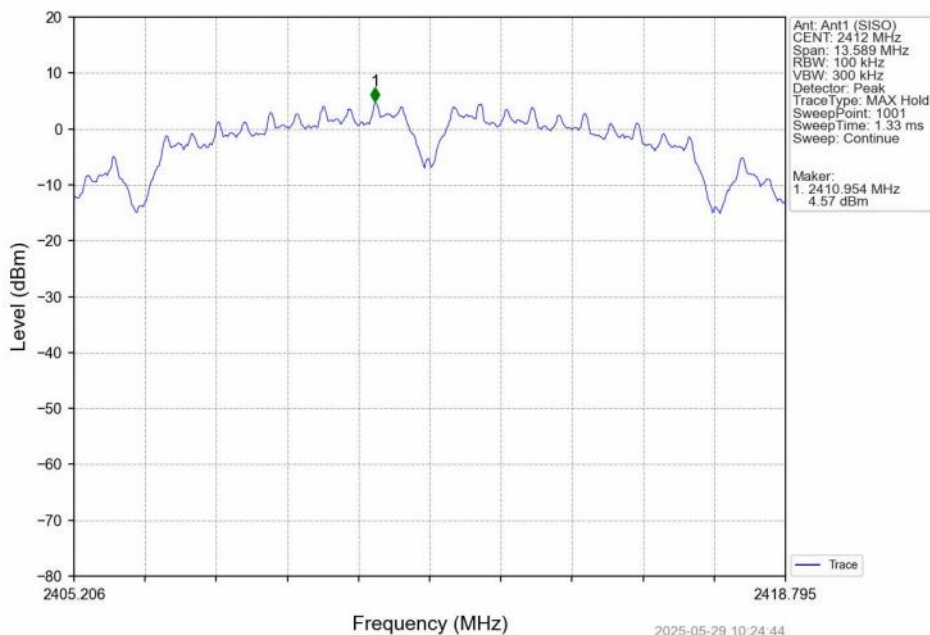
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	4.57	-15.43	Pass
		2437	1	2.83	-17.17	Pass
		2462	1	1.52	-18.48	Pass
802.11g	SISO	2412	1	-2.26	-22.26	Pass
		2437	1	-4.02	-24.02	Pass
		2462	1	-5.25	-25.25	Pass
802.11n (HT20)	SISO	2412	1	-3.40	-23.40	Pass
		2437	1	-5.01	-25.01	Pass
		2462	1	-6.29	-26.29	Pass
802.11n (HT40)	SISO	2422	1	-7.18	-27.18	Pass
		2437	1	-7.94	-27.94	Pass
		2452	1	-8.39	-28.39	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.

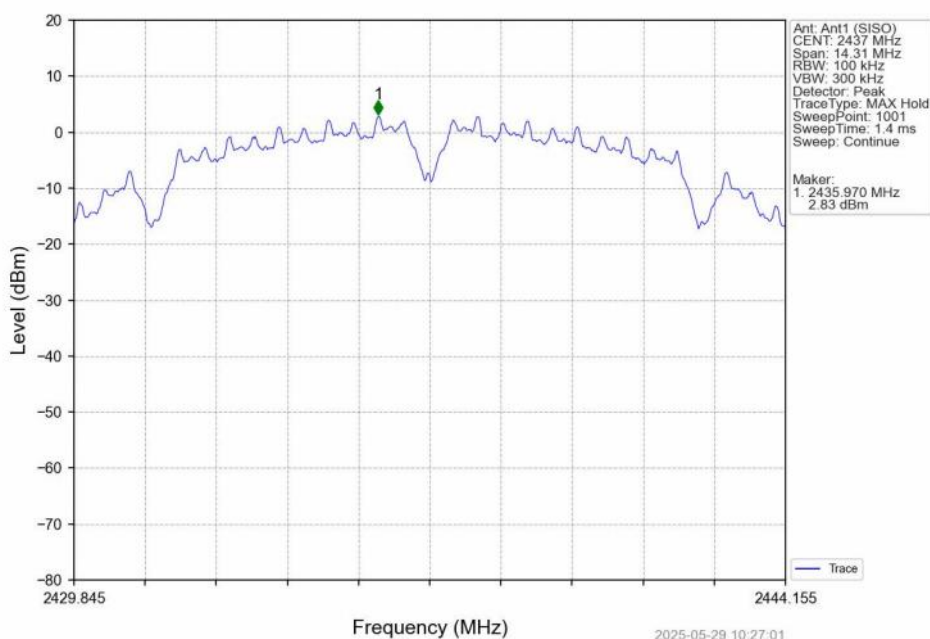




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

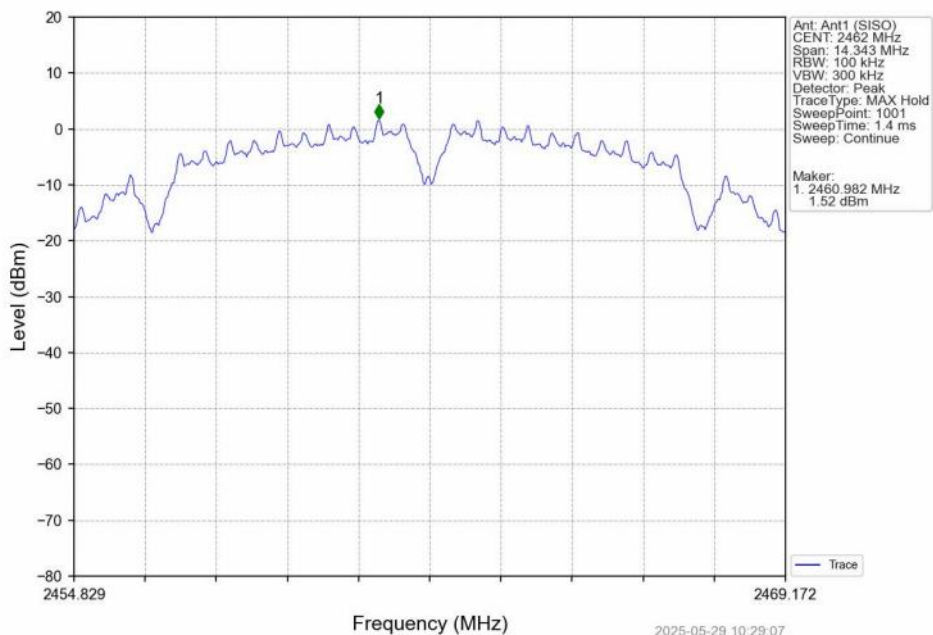


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

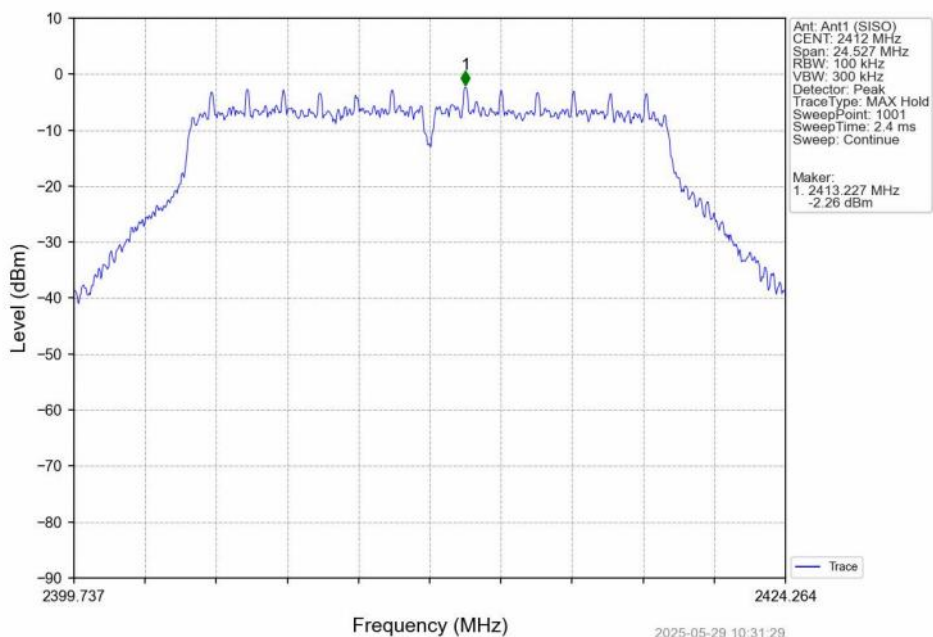




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

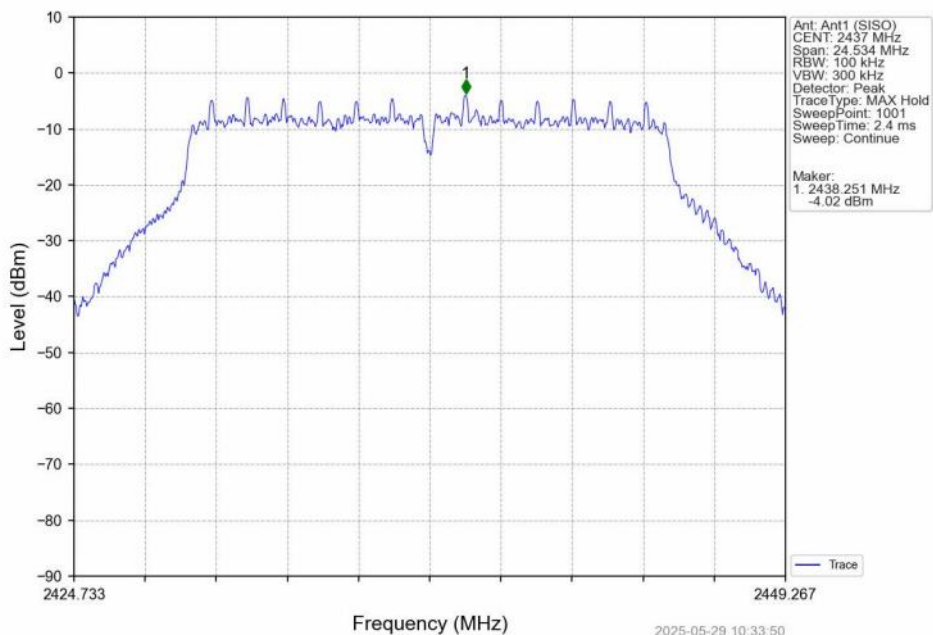


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

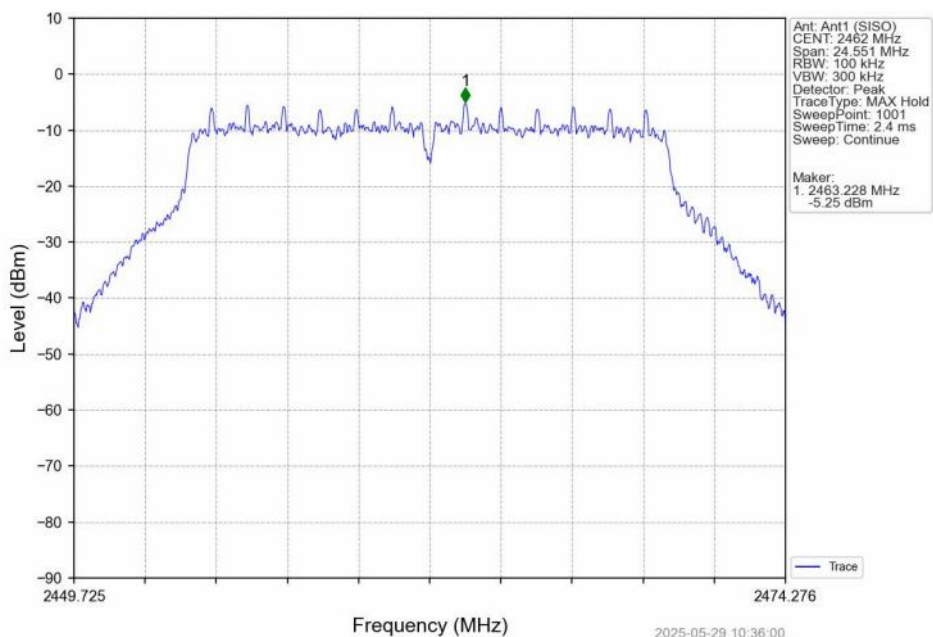




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

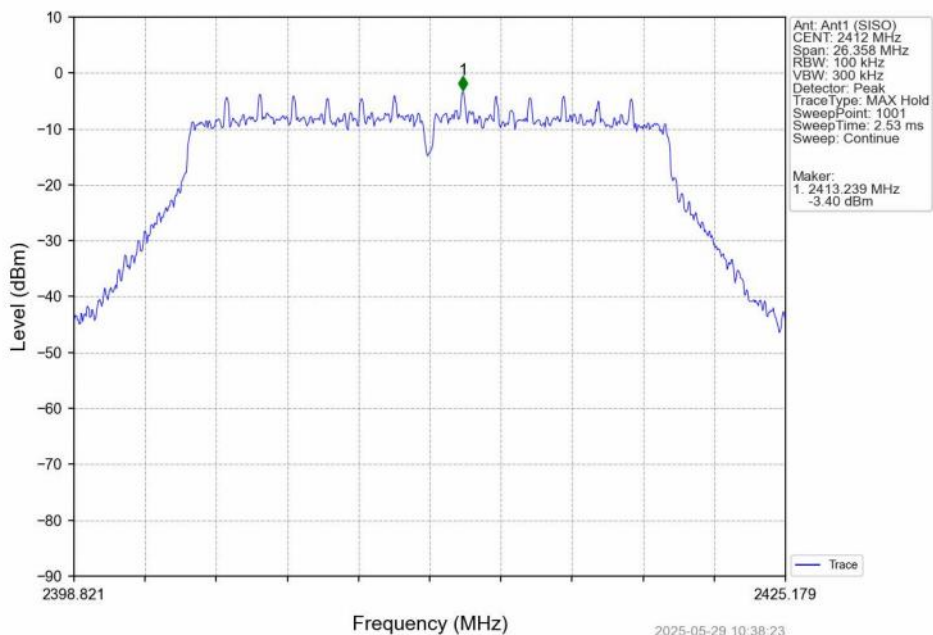


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

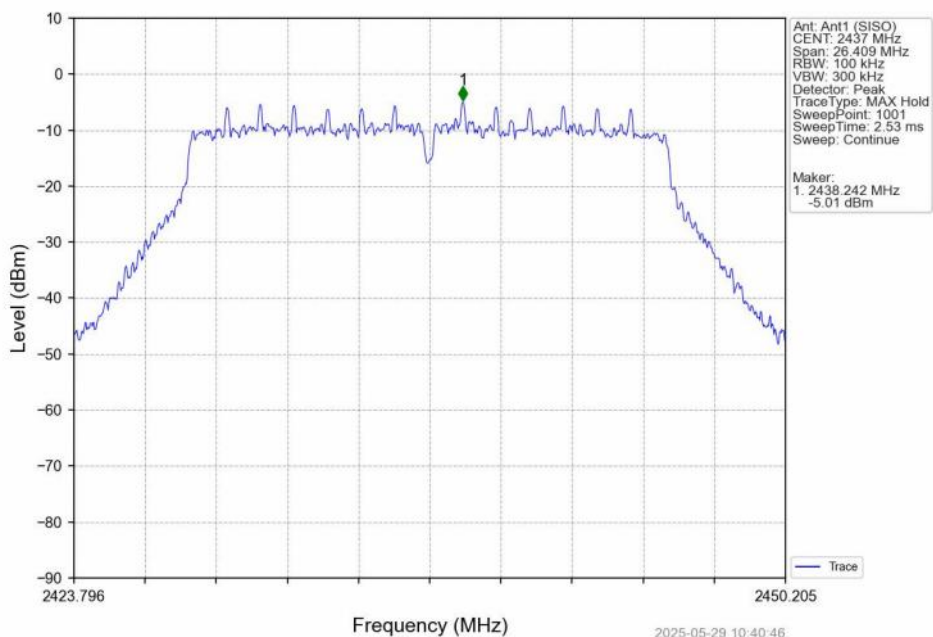




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

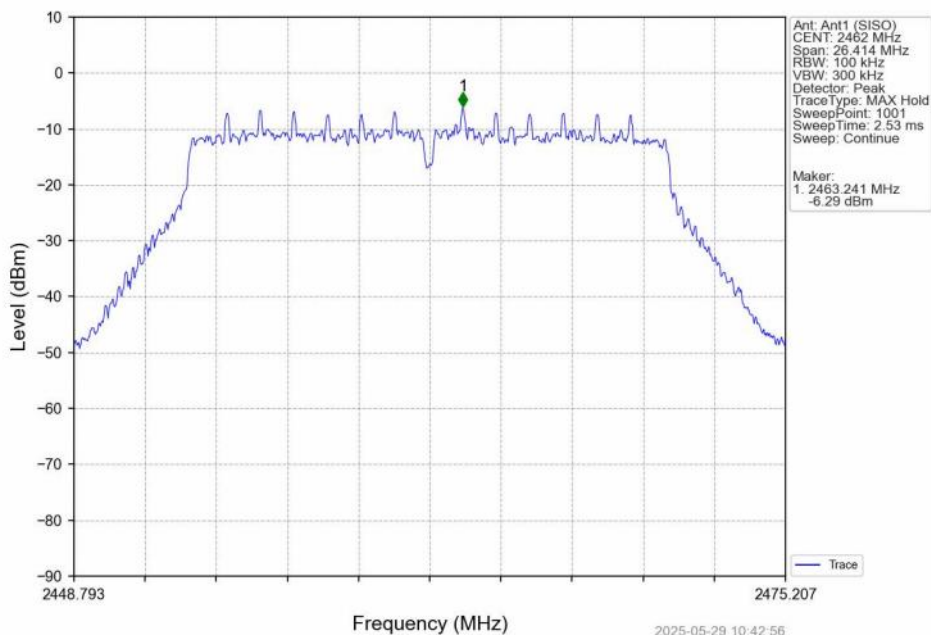


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

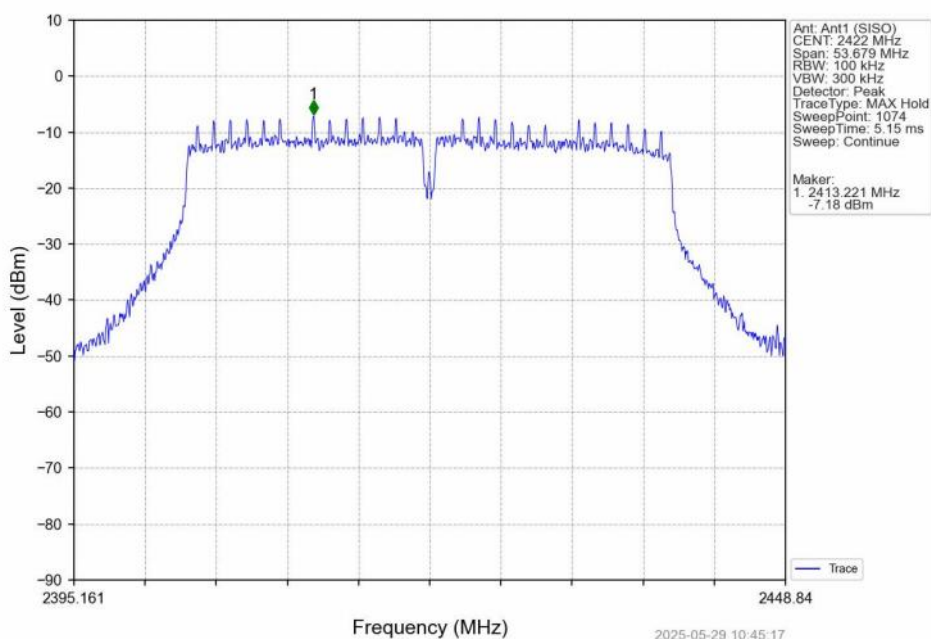




802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

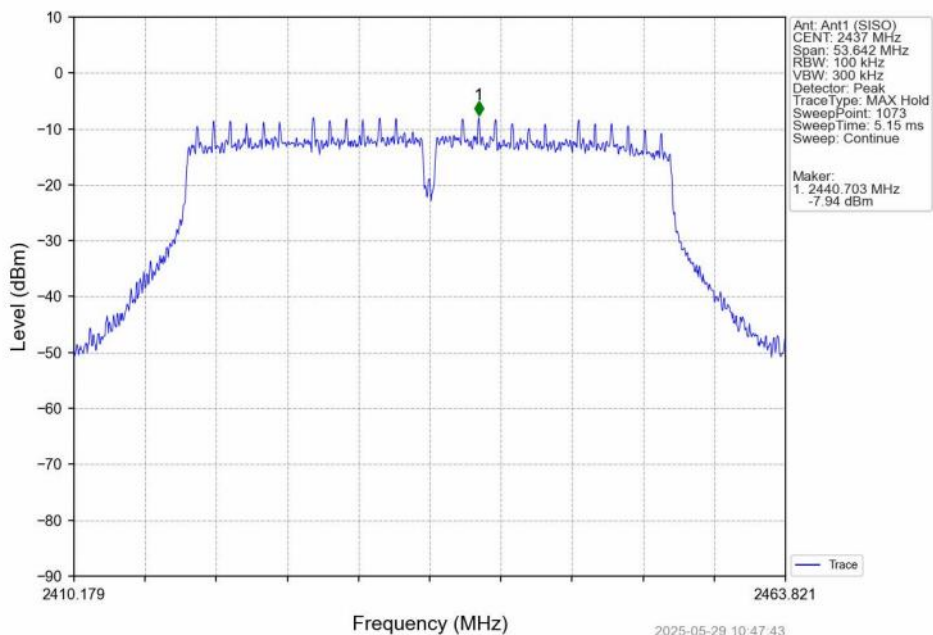


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

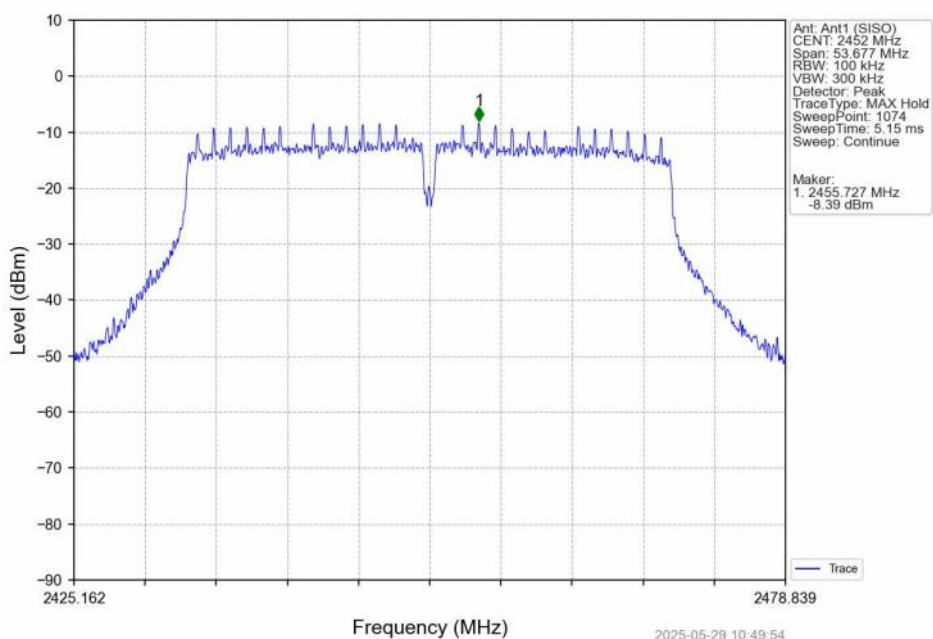




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

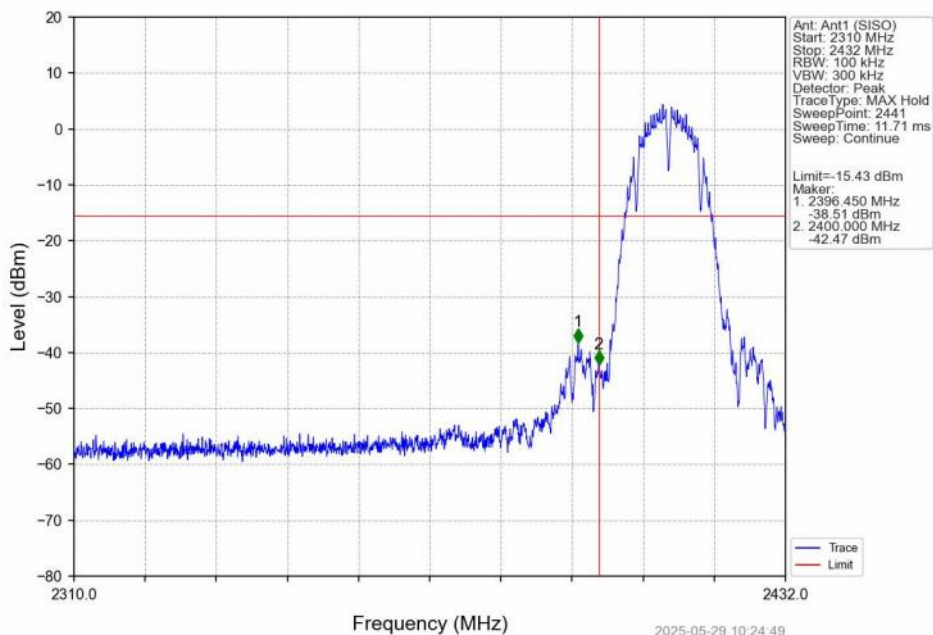


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

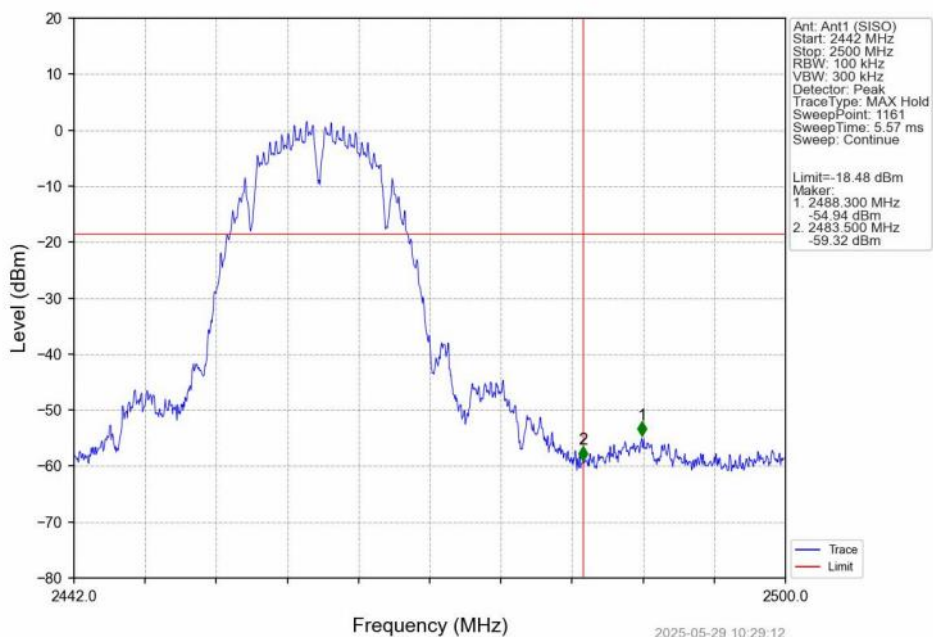




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

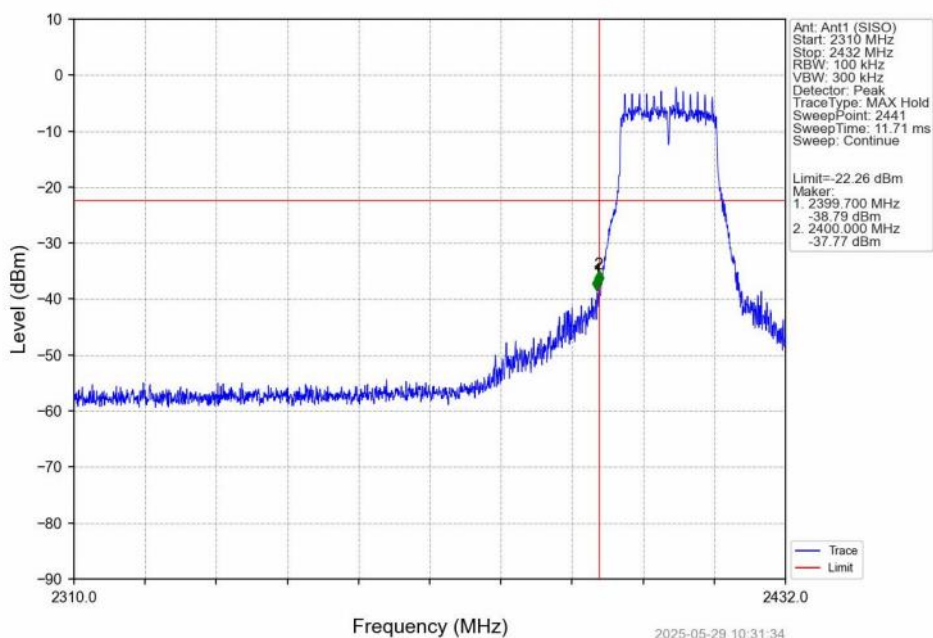


802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

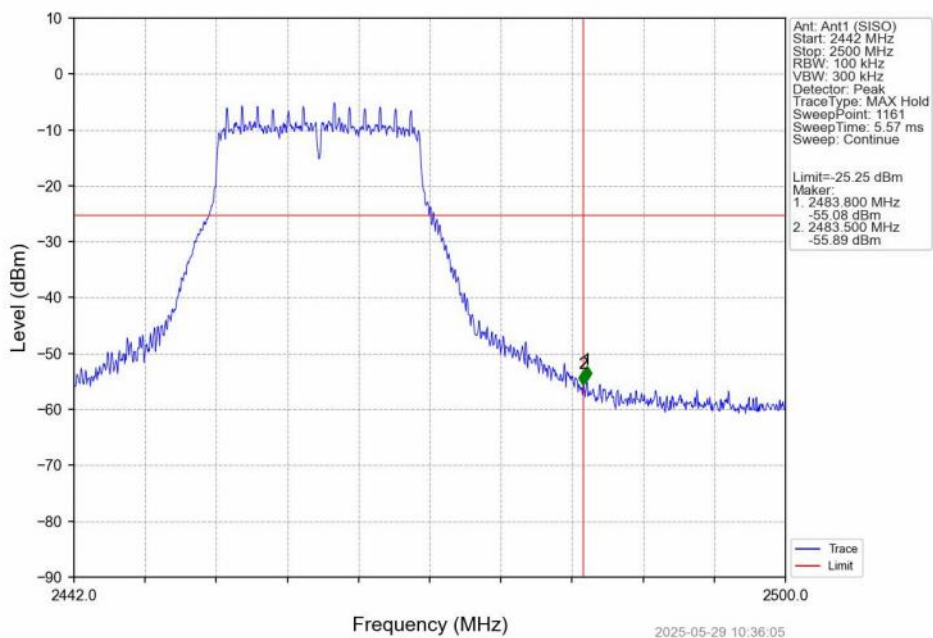


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



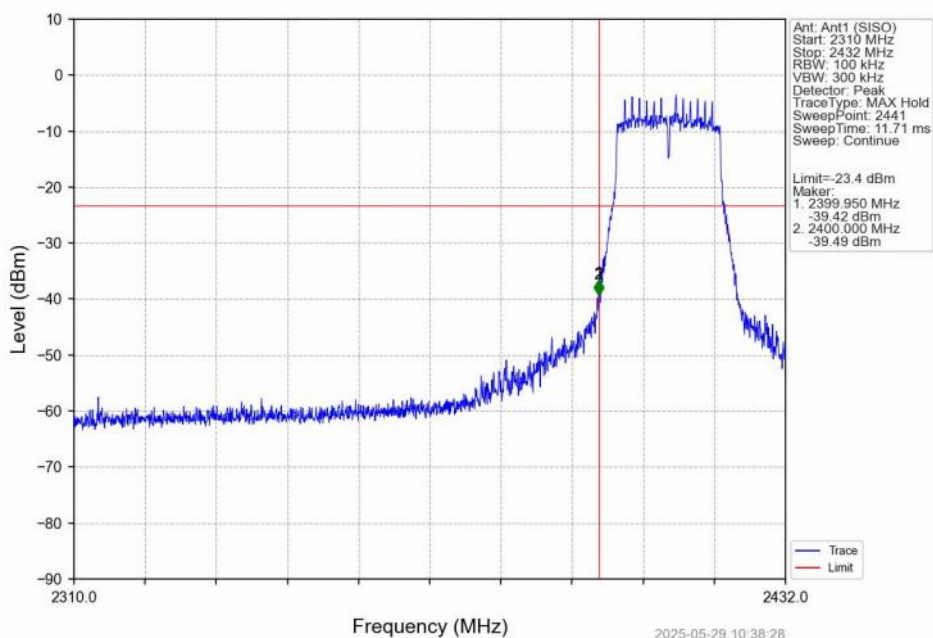


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

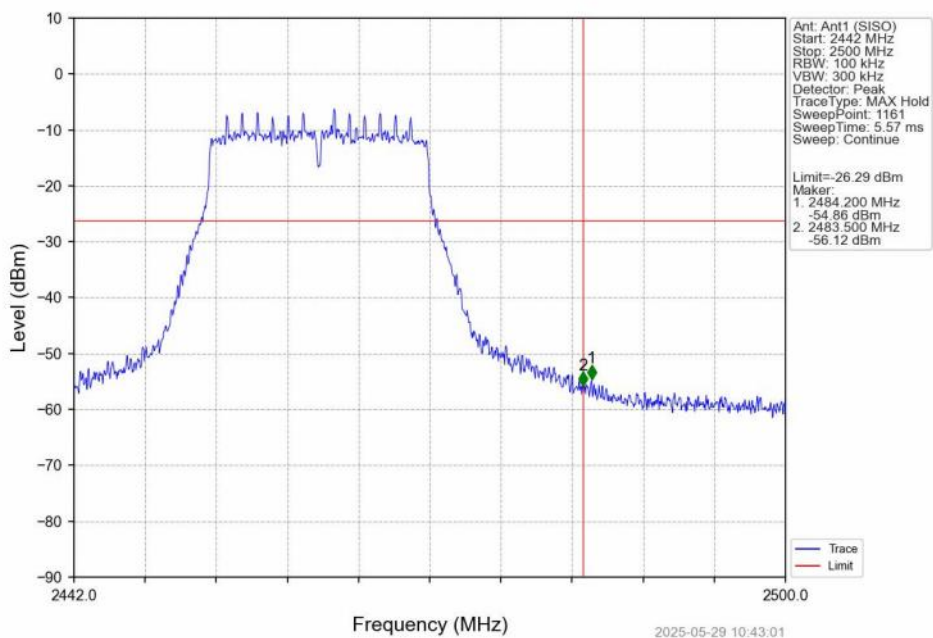


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



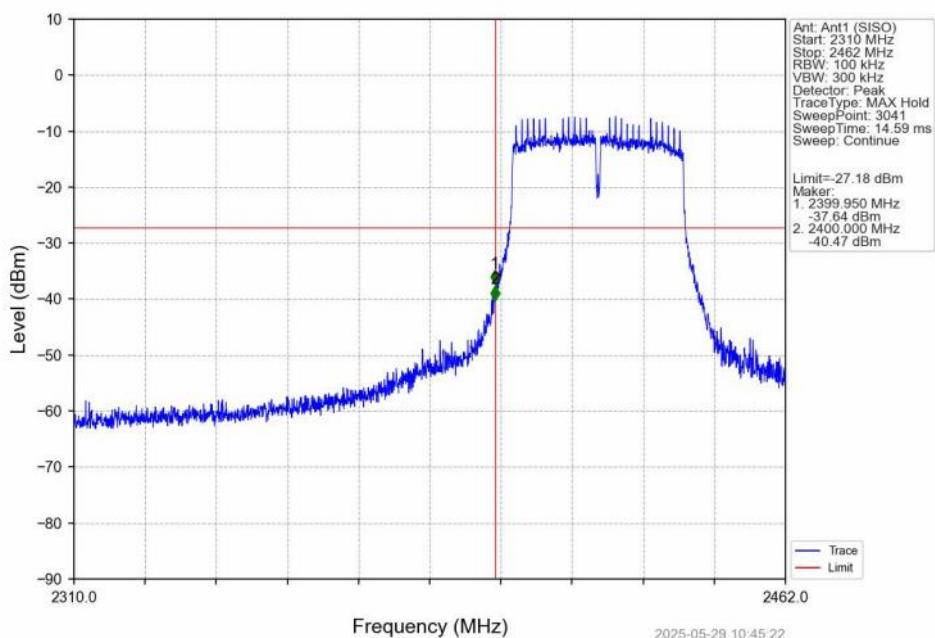


802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

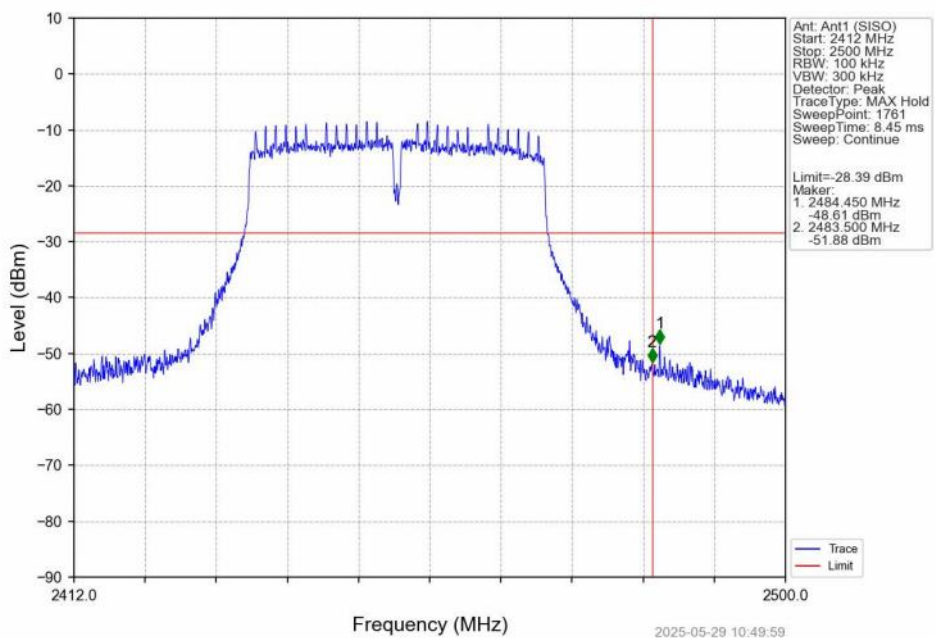


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV





802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





B.5 Conducted RF Spurious Emission

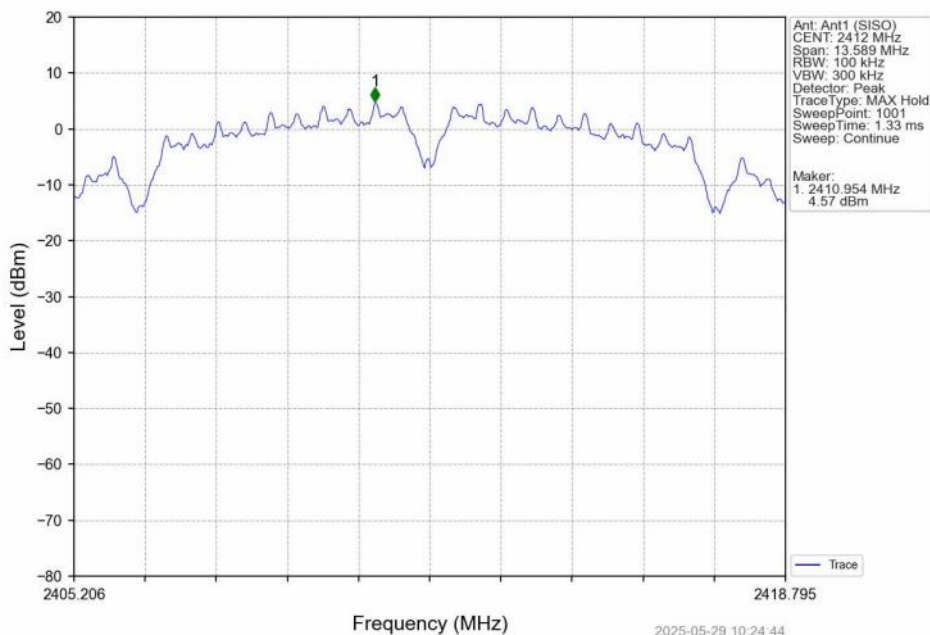
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	4.57
		2437	1	2.83
		2462	1	1.52
802.11g	SISO	2412	1	-2.26
		2437	1	-4.02
		2462	1	-5.25
802.11n (HT20)	SISO	2412	1	-3.40
		2437	1	-5.01
		2462	1	-6.29
802.11n (HT40)	SISO	2422	1	-7.18
		2437	1	-7.94
		2452	1	-8.39

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.

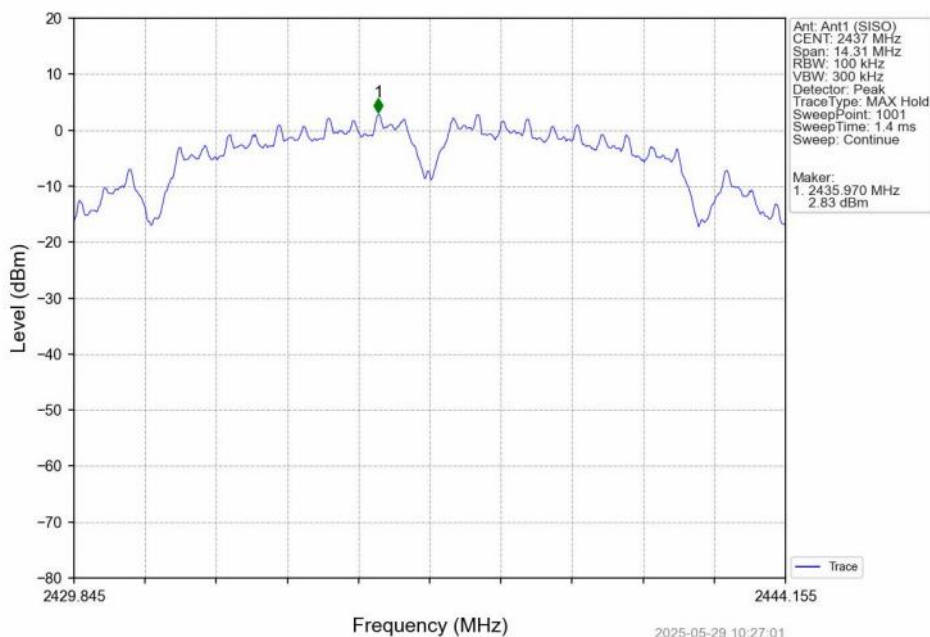




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

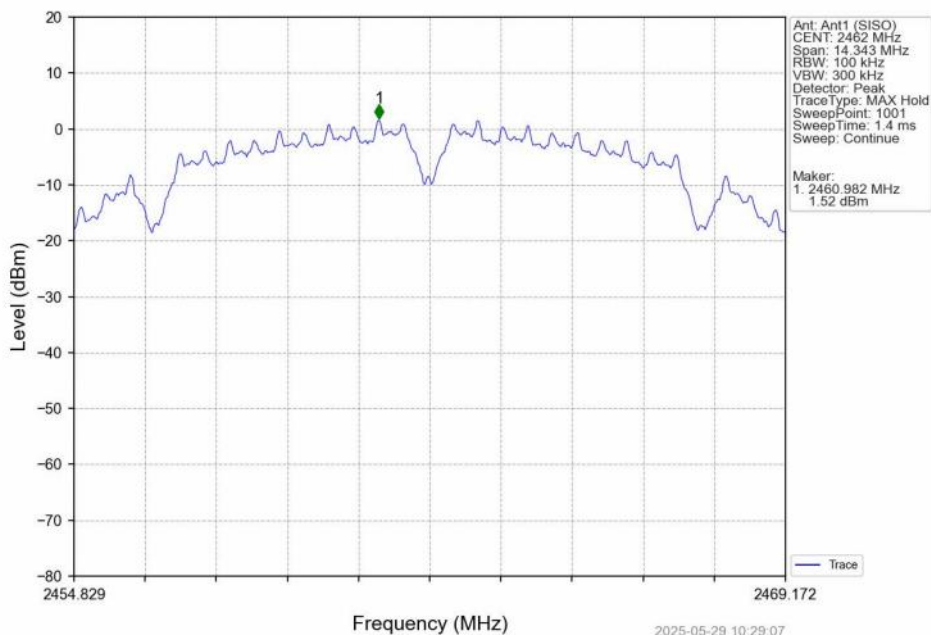


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

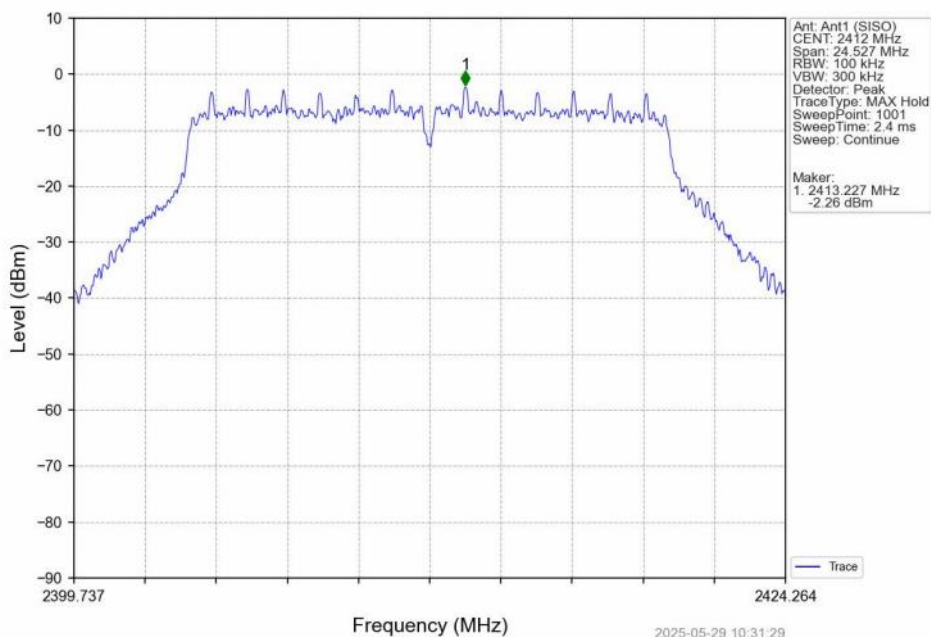




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

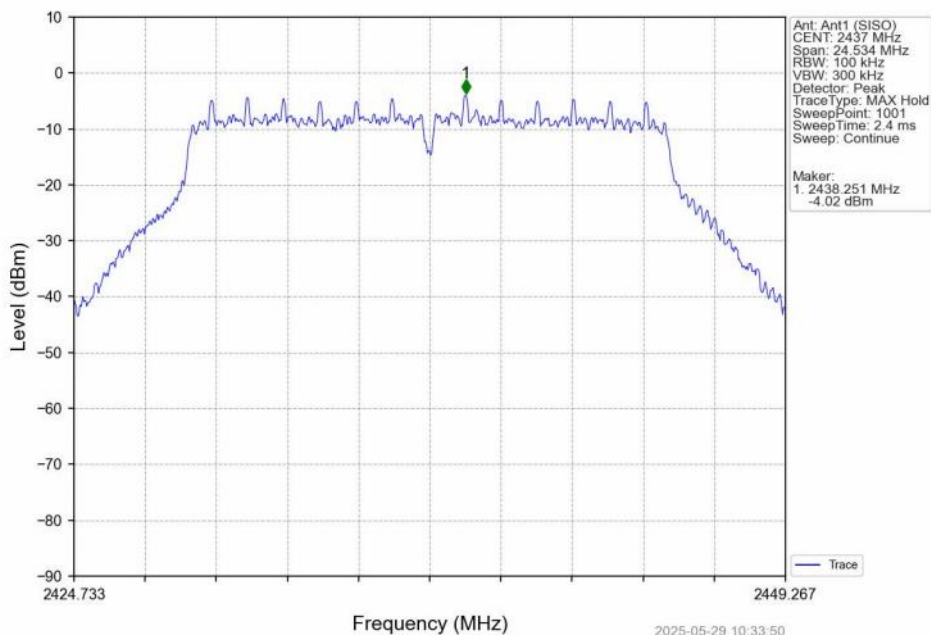


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

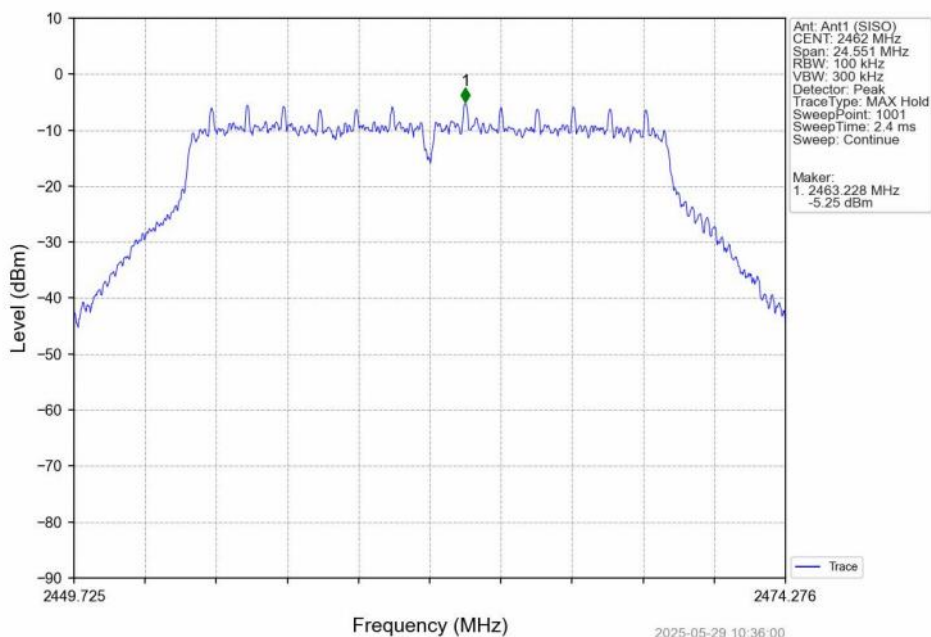




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

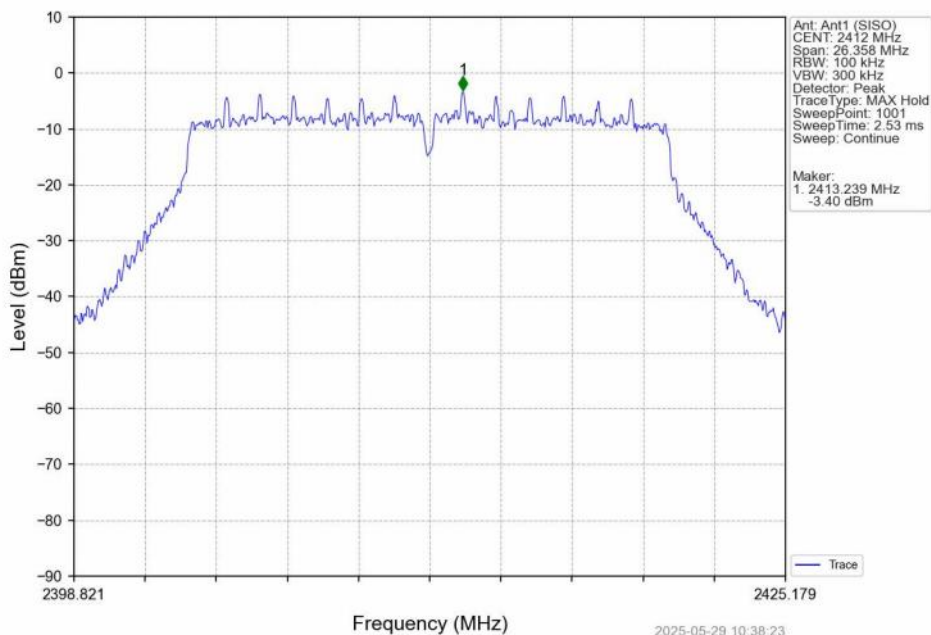


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

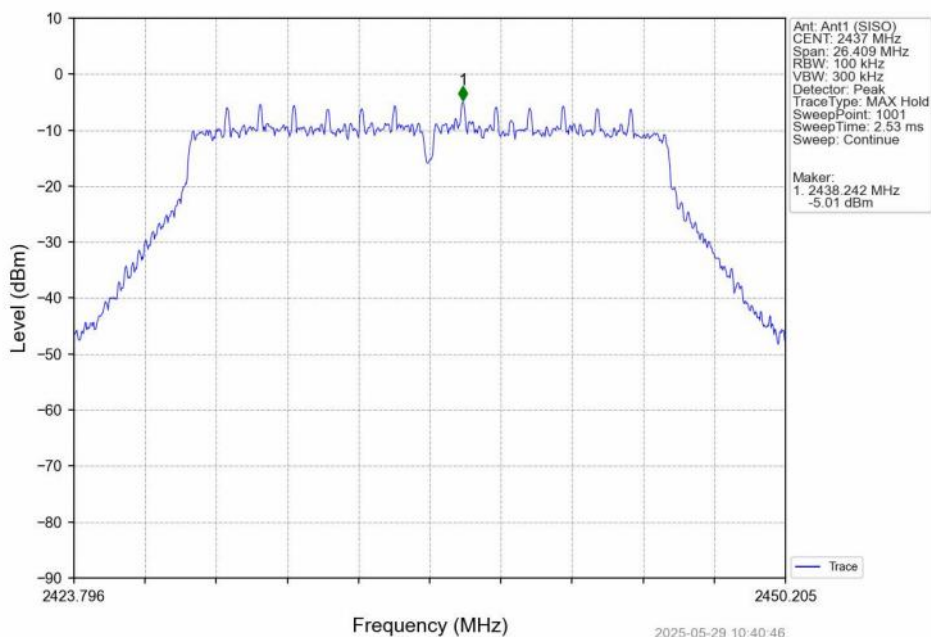




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

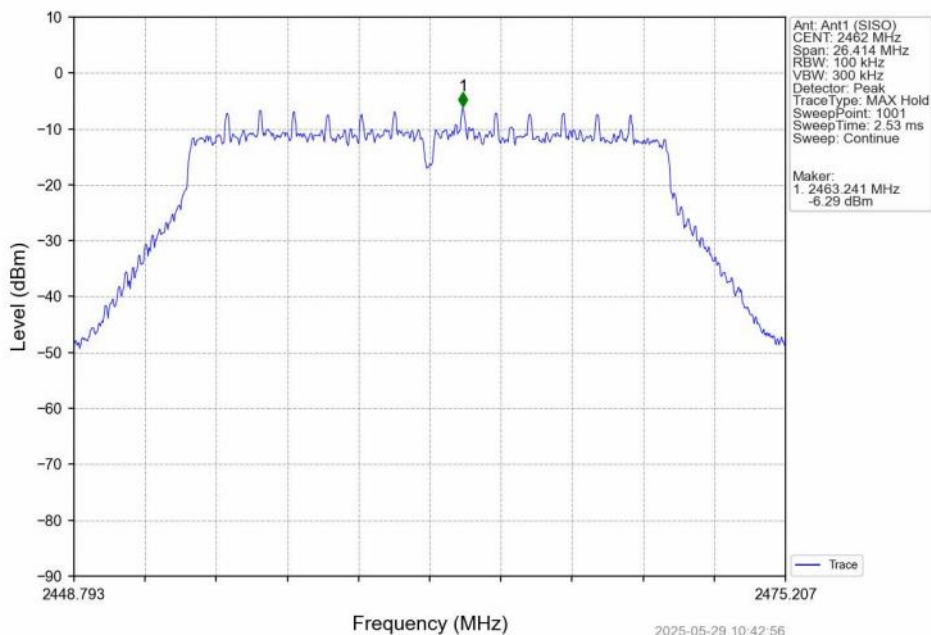


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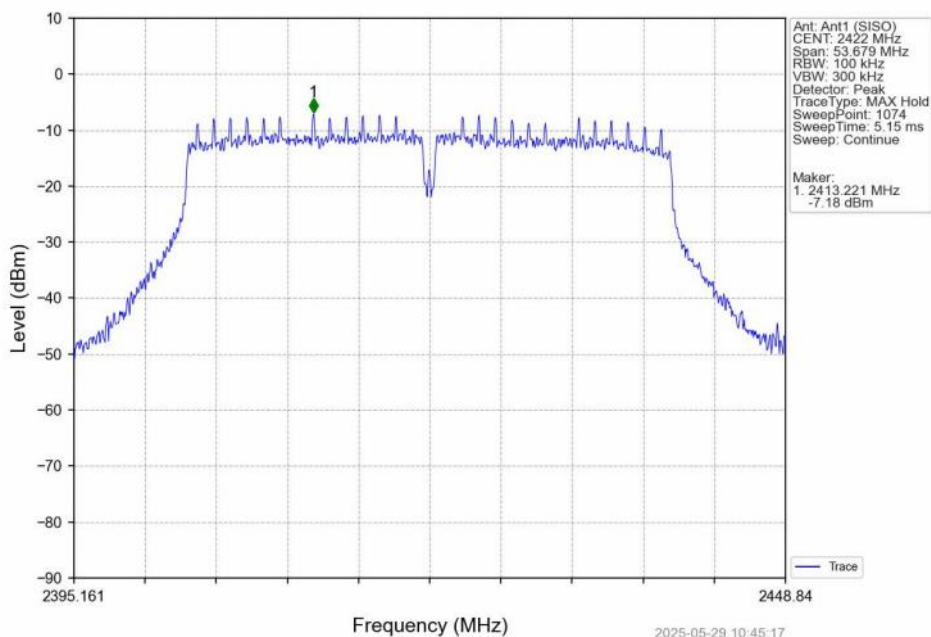




802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

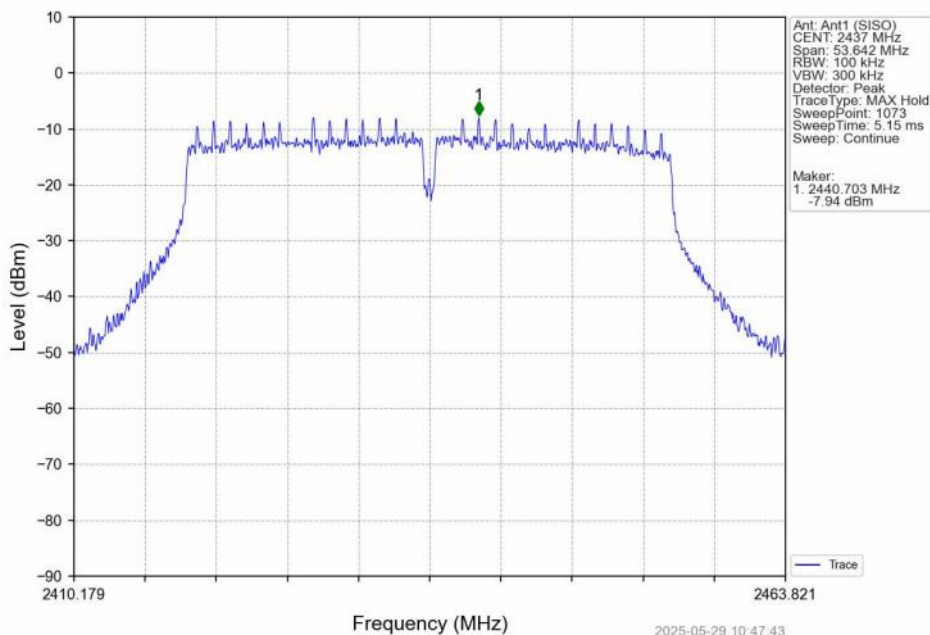


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

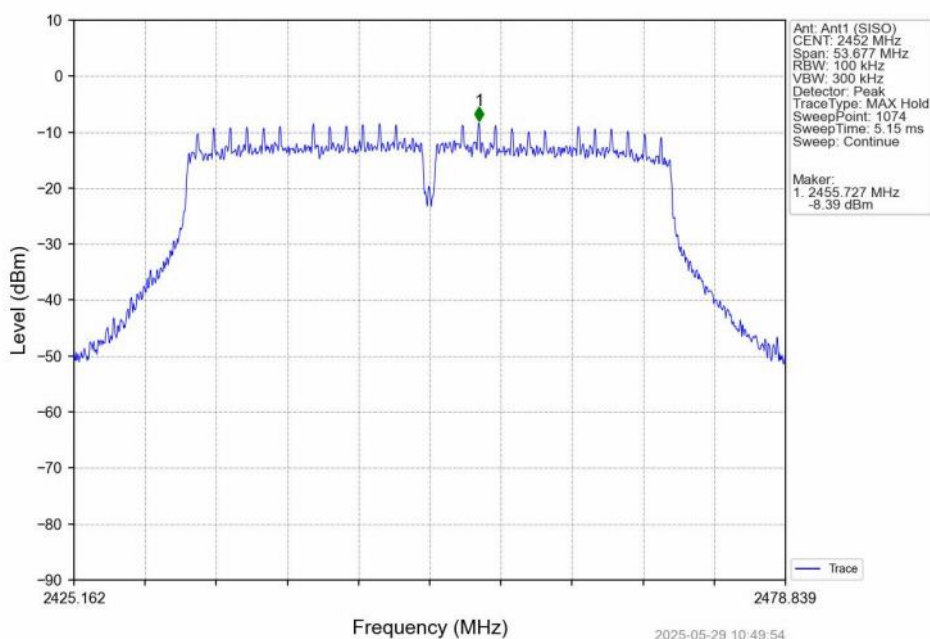




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

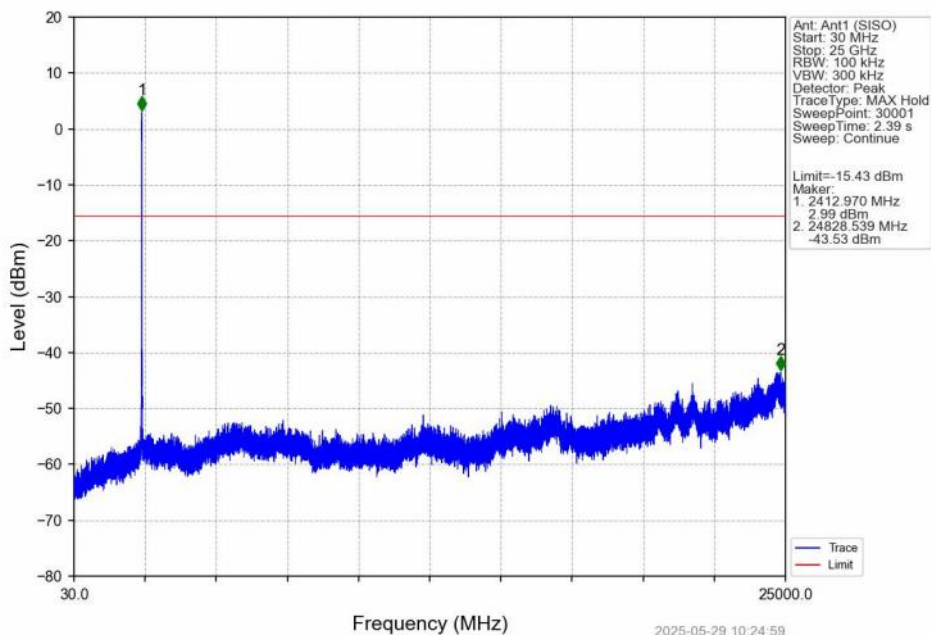


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

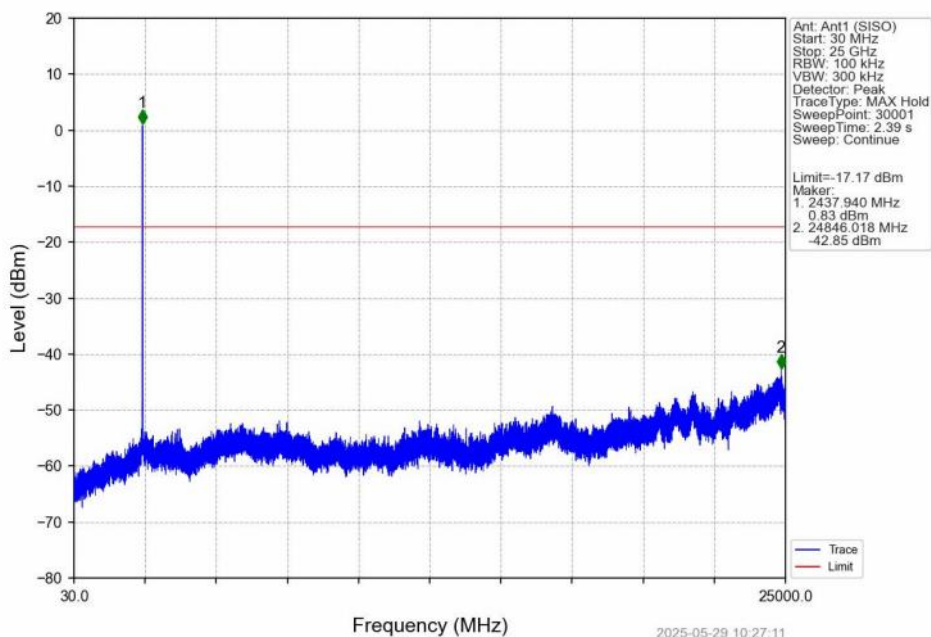




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

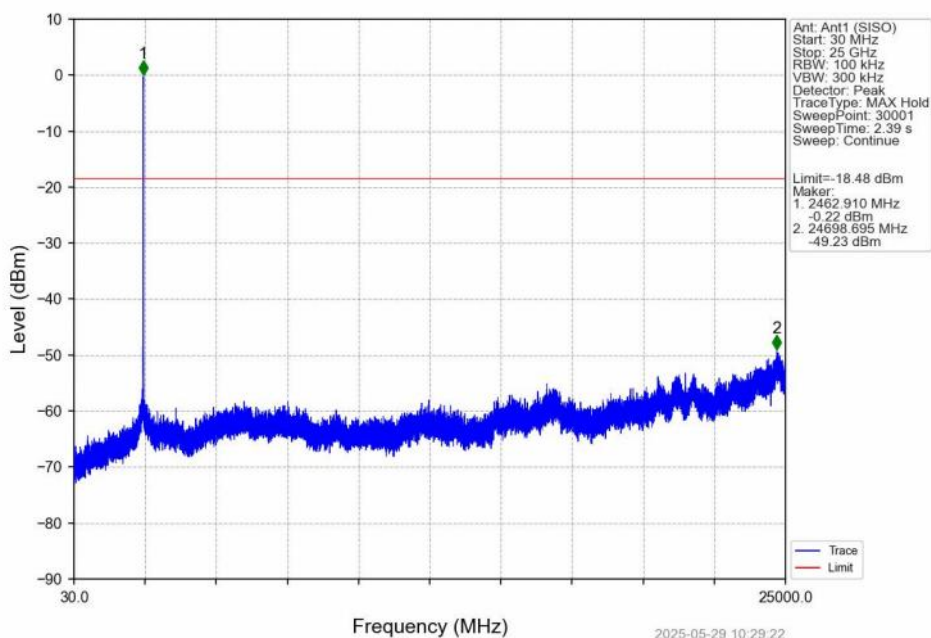


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

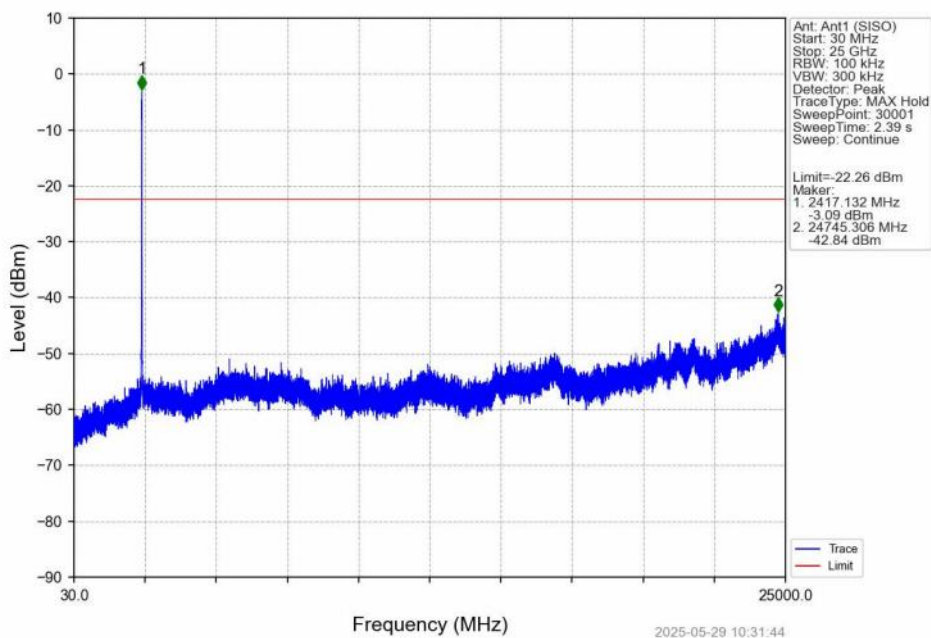


802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



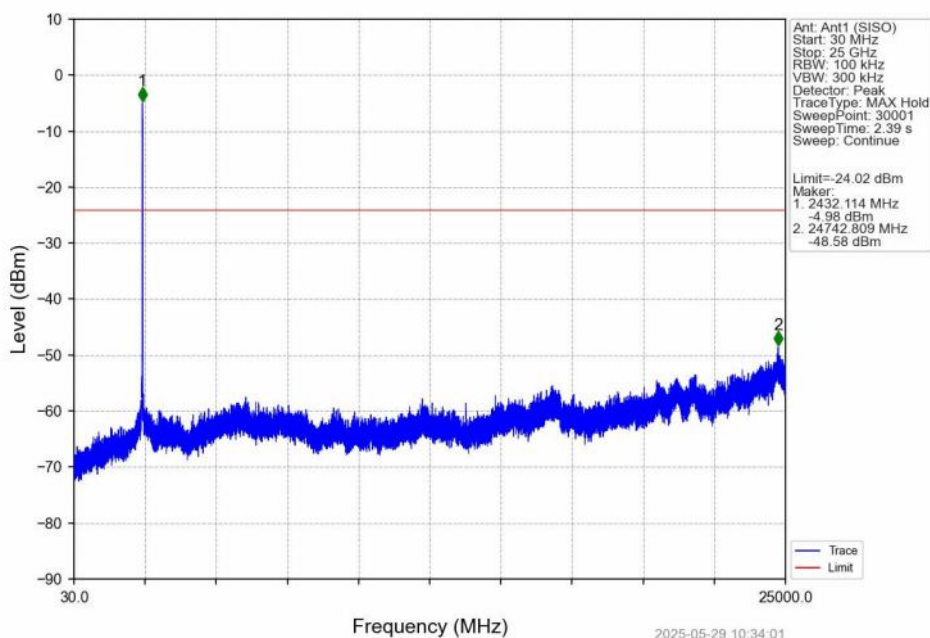


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

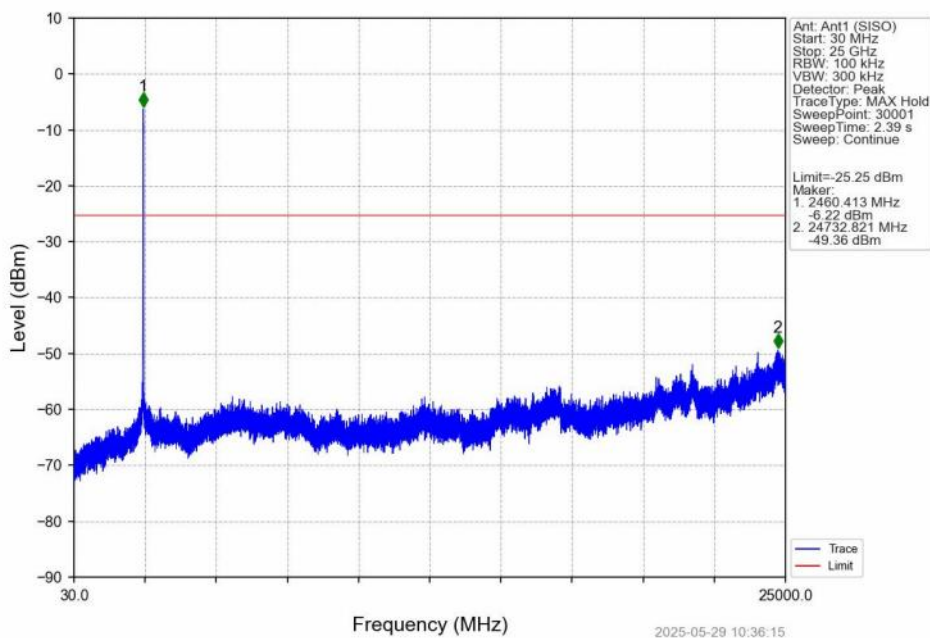


802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



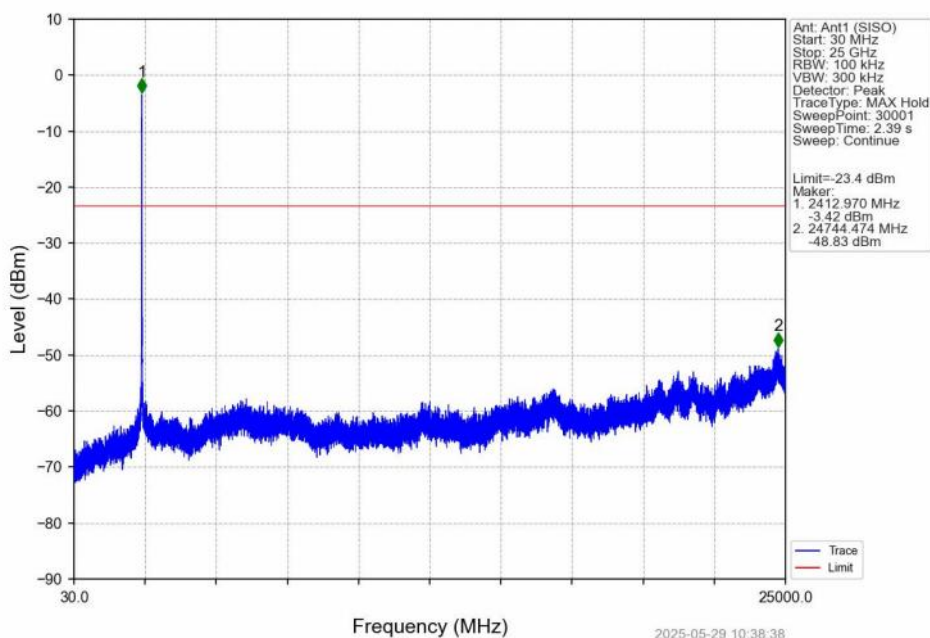


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

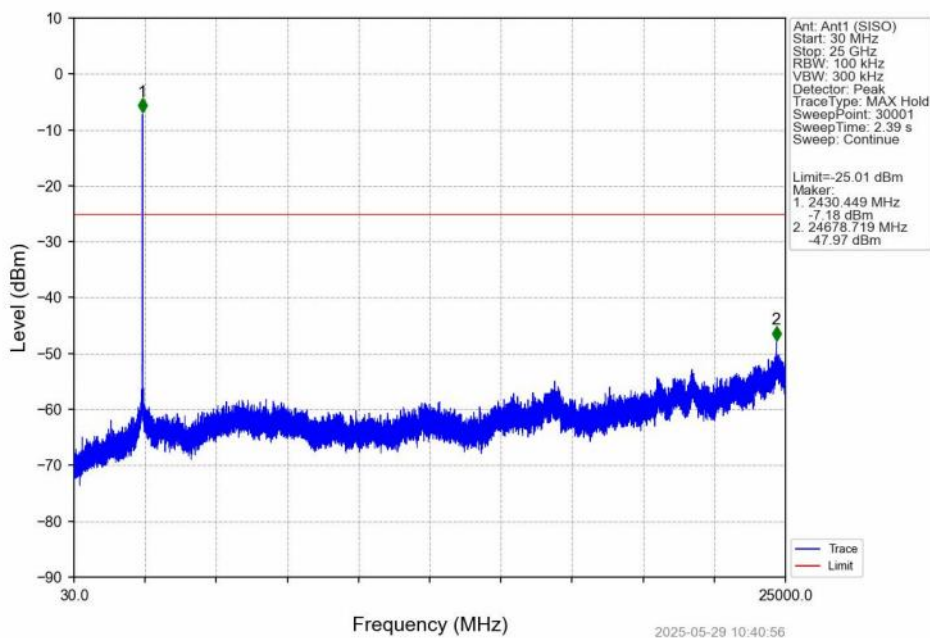


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



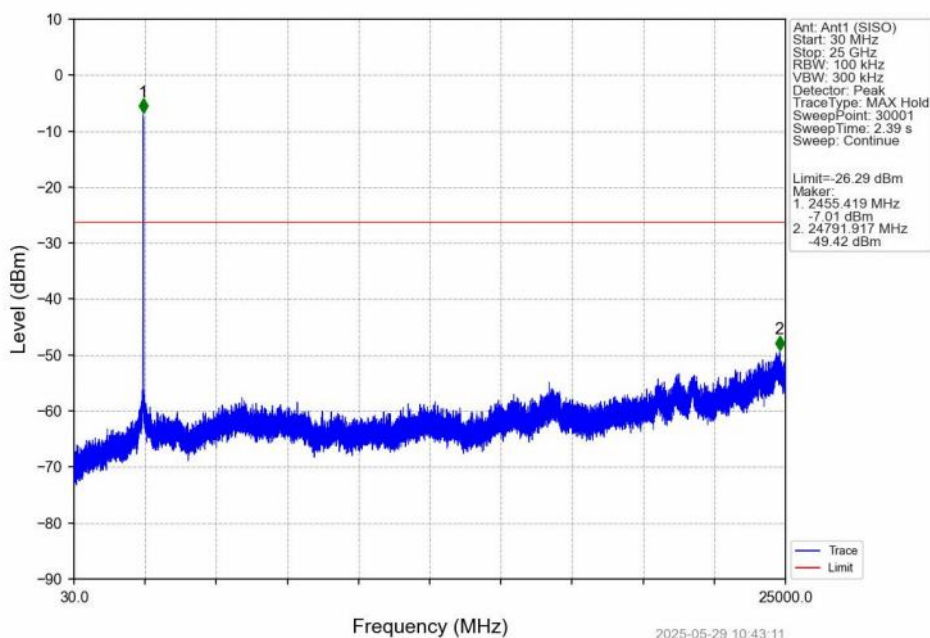


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

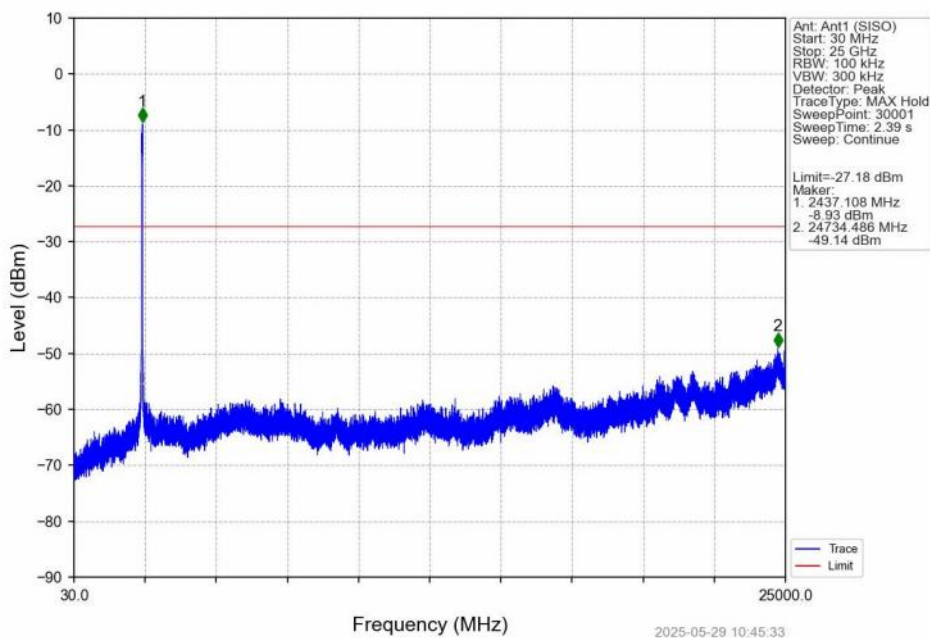


802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



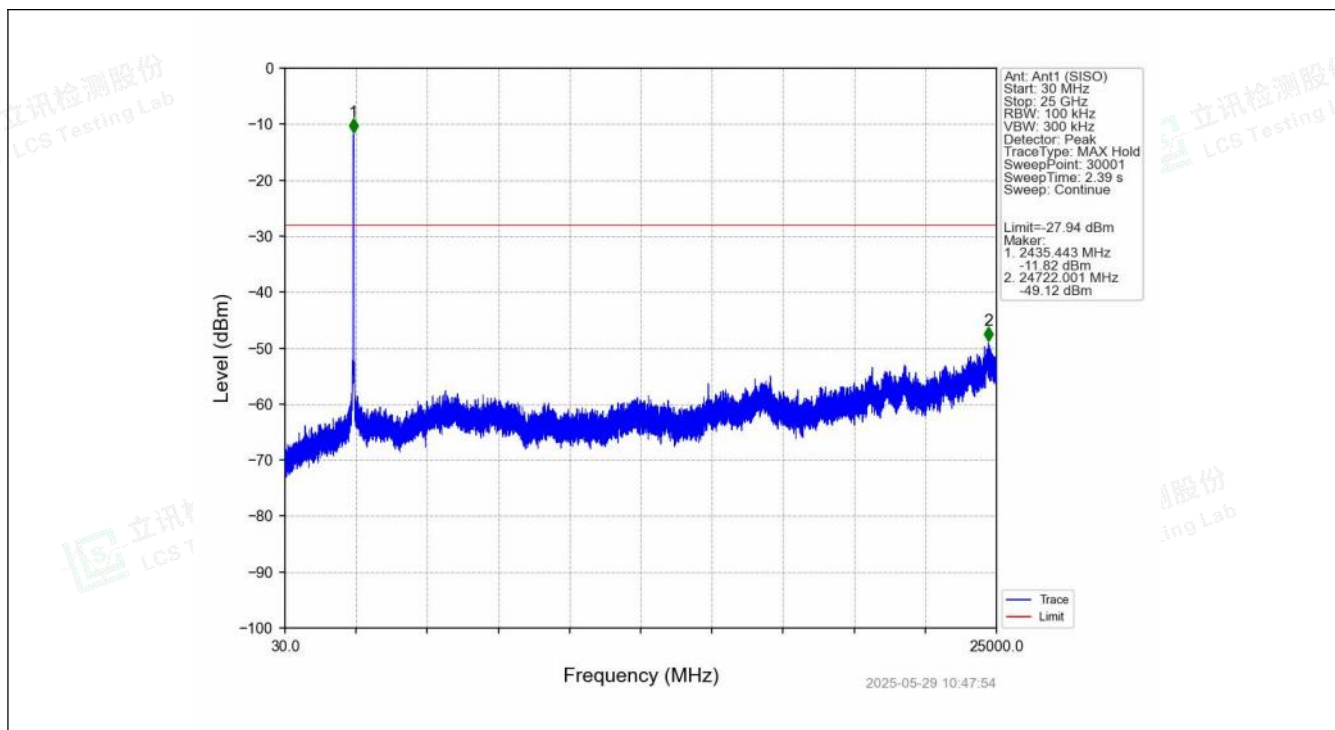


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

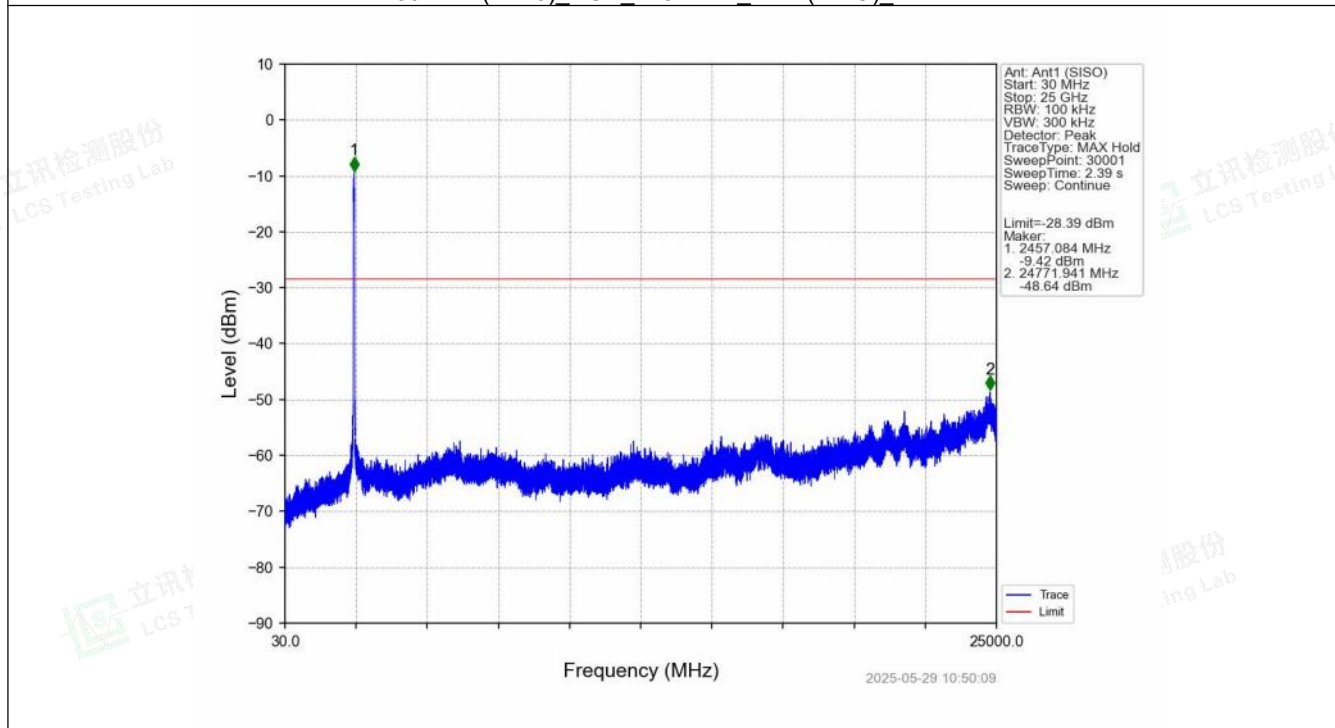


802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV





802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





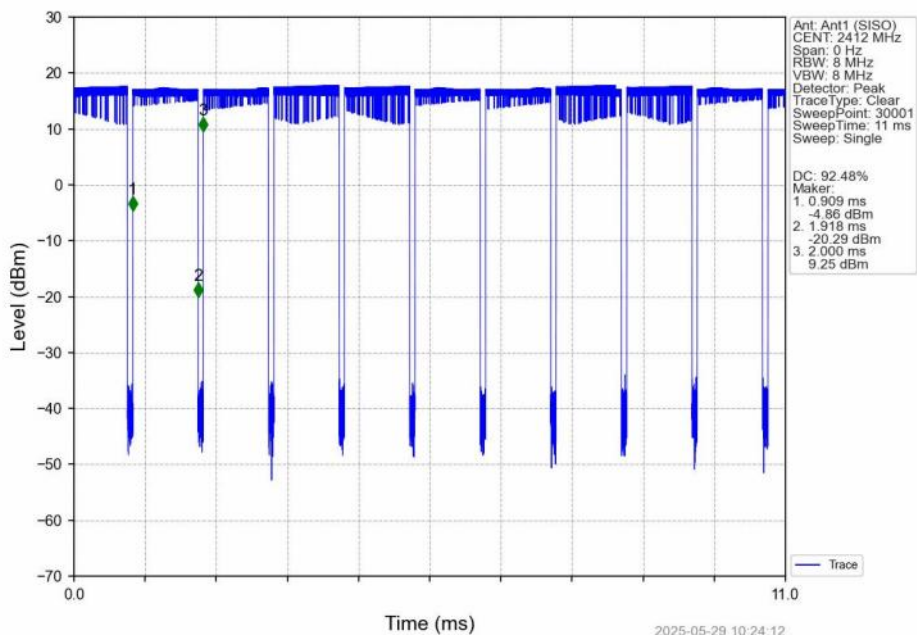
B.6 Duty Cycle

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	1.009	1.091	92.48	0.34	0.03
		2437	1.008	1.091	92.39	0.34	0.03
		2462	1.009	1.091	92.48	0.34	0.03
802.11g	SISO	2412	0.616	0.660	93.33	0.30	0.04
		2437	0.616	0.659	93.47	0.29	0.00
		2462	0.616	0.660	93.33	0.30	0.07
802.11n (HT20)	SISO	2412	0.612	0.656	93.29	0.30	0.04
		2437	0.612	0.656	93.29	0.30	0.00
		2462	0.613	0.656	93.45	0.29	0.04
802.11n (HT40)	SISO	2422	0.613	0.656	93.45	0.29	0.04
		2437	0.613	0.656	93.45	0.29	0.04
		2452	0.613	0.656	93.45	0.29	0.04

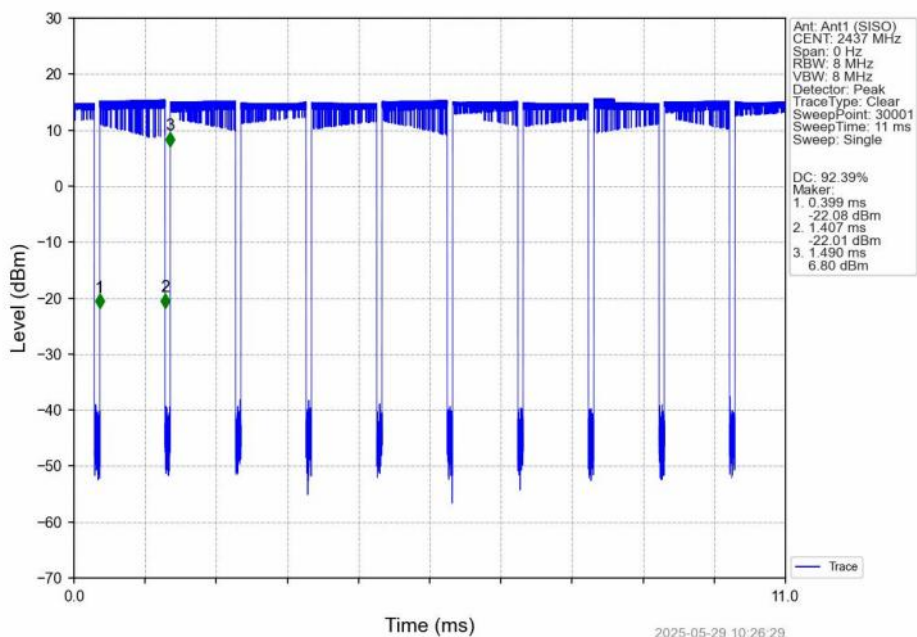




802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

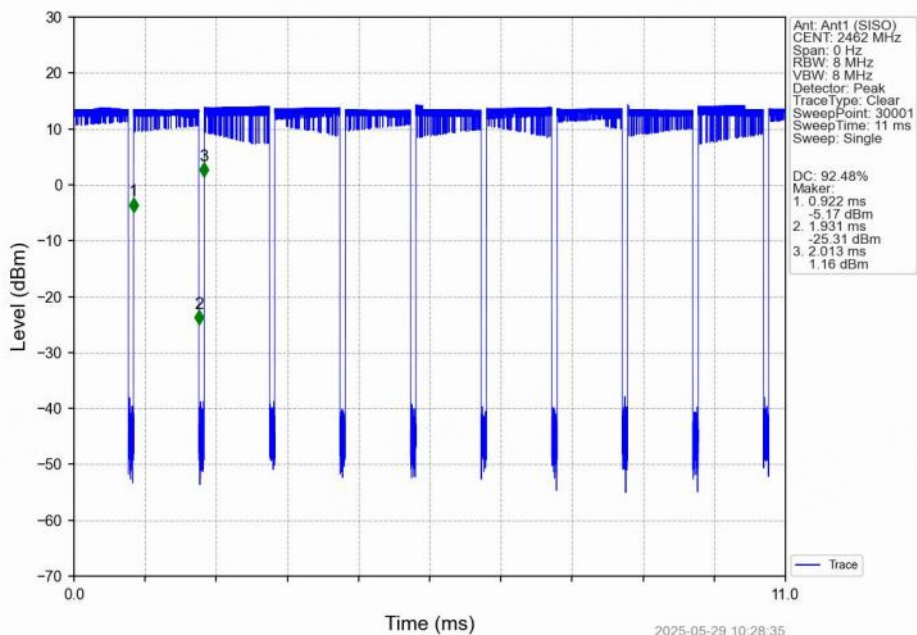


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

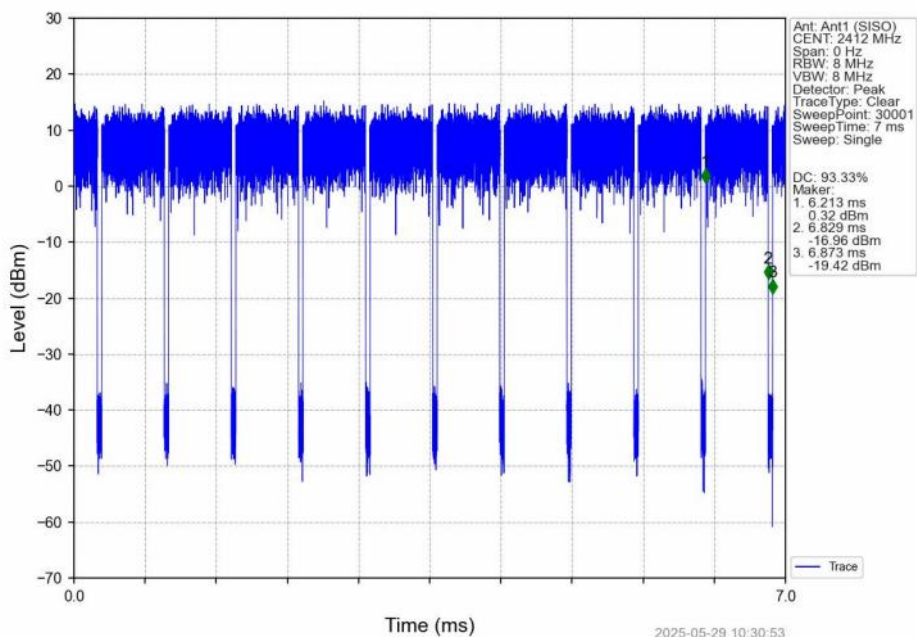




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

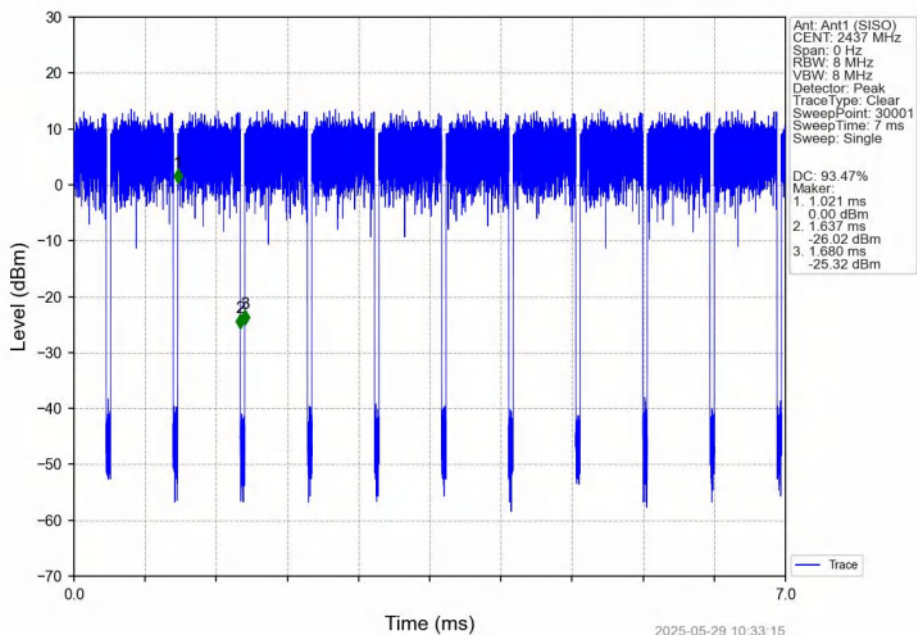


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

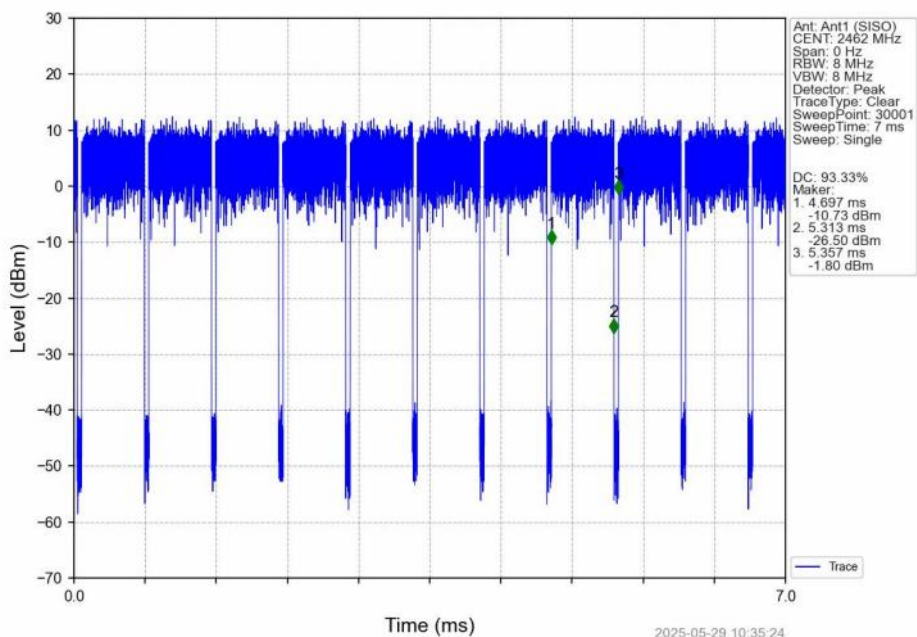




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

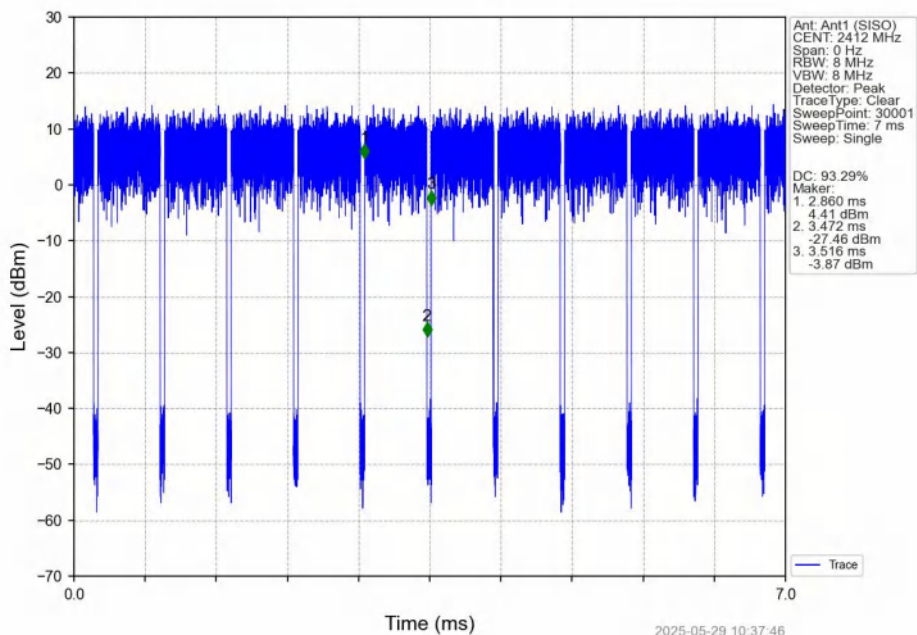


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

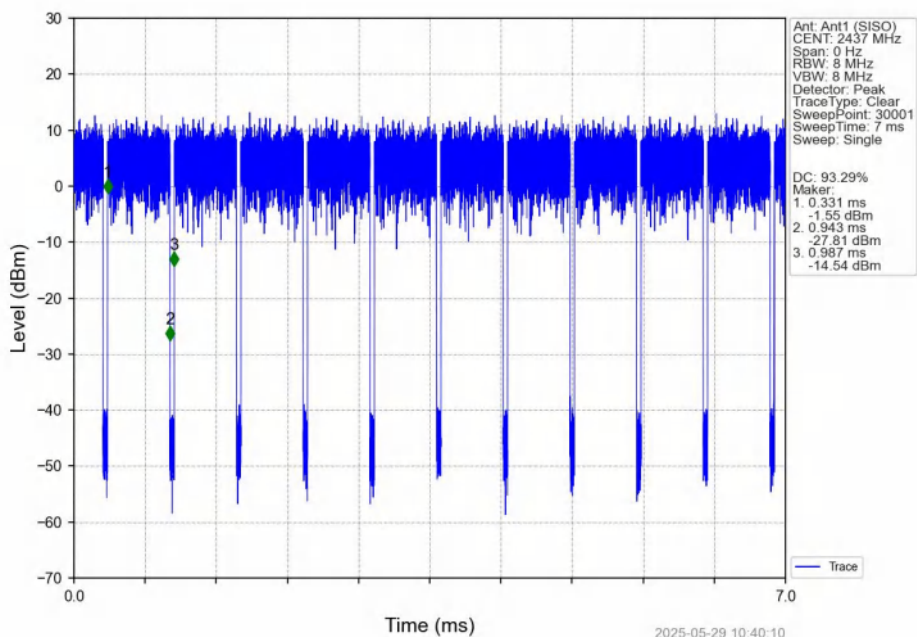




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

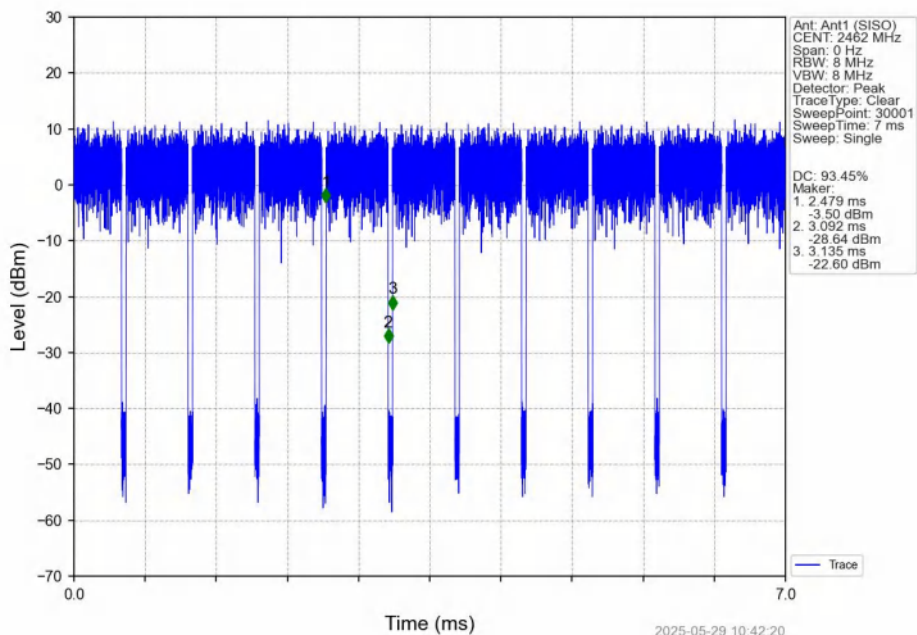


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

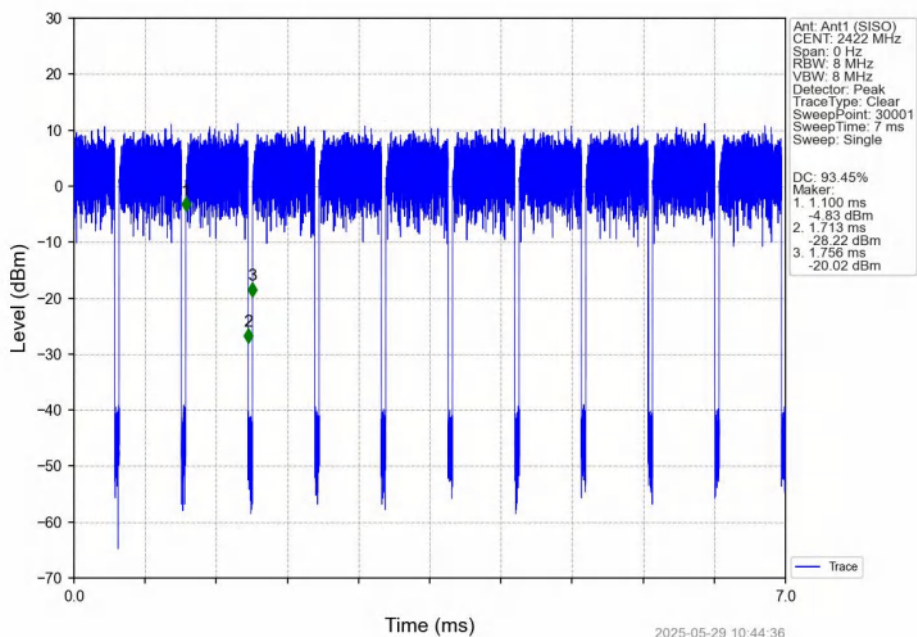




802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

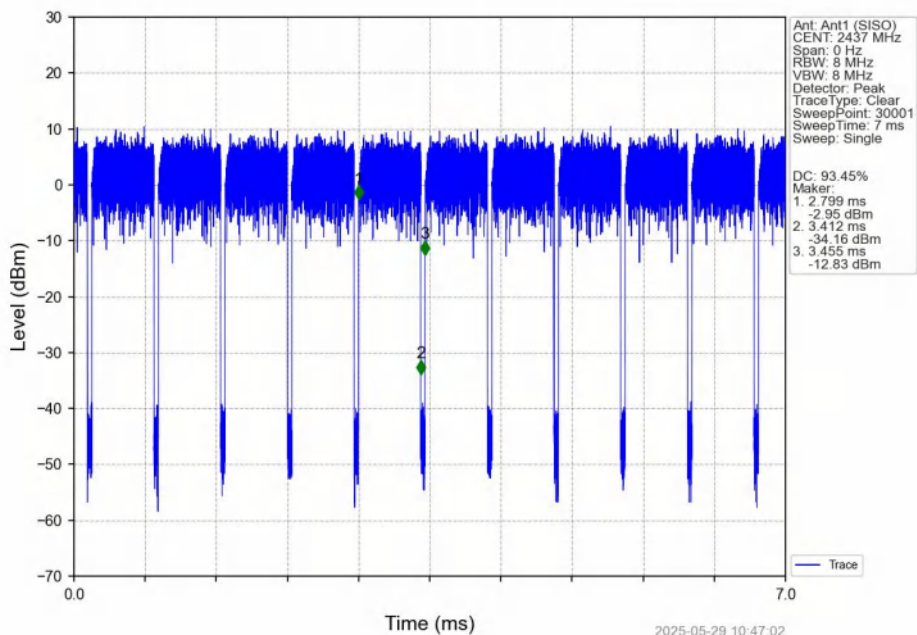


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

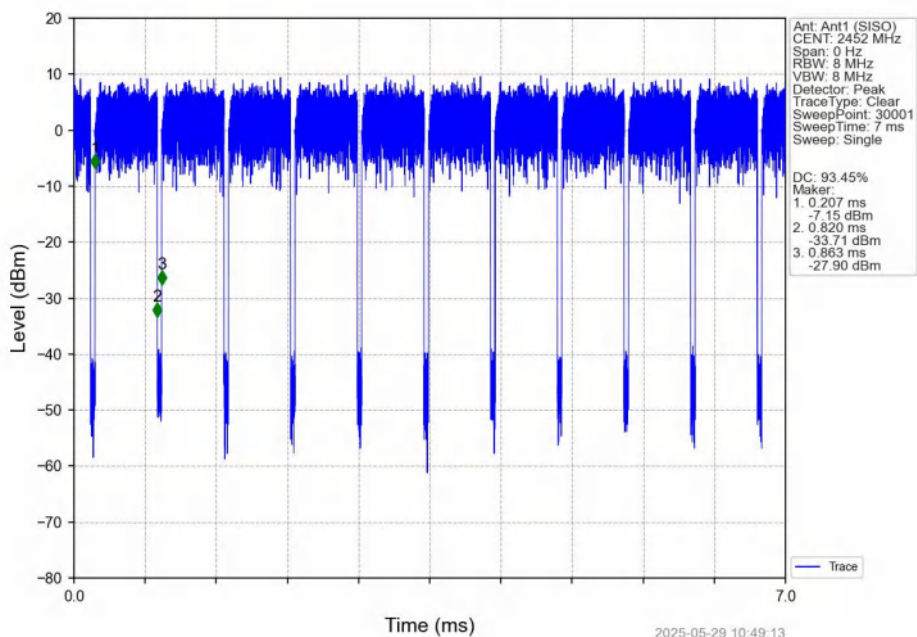




802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



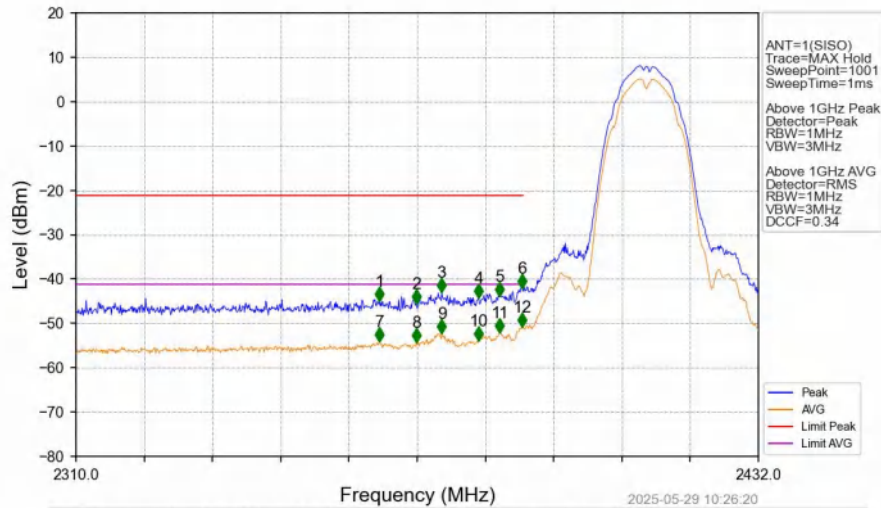
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV





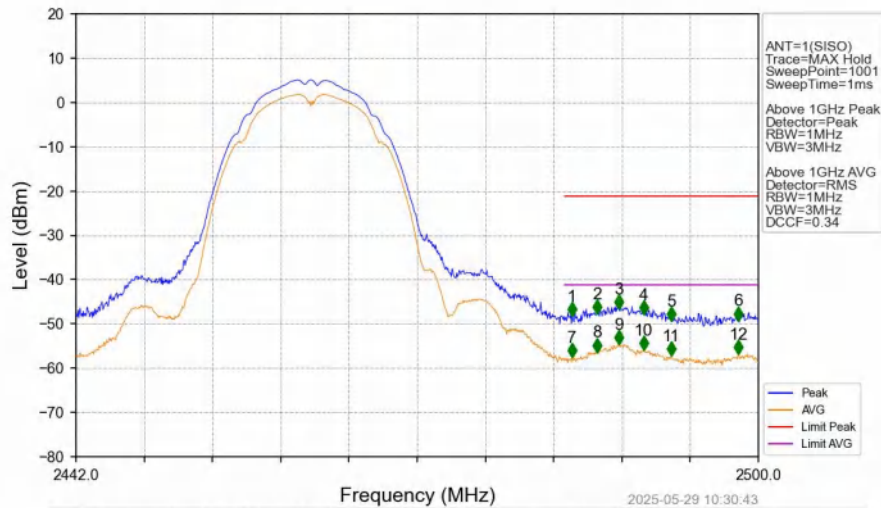
B.7 Restrict Band

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2364.290	-44.96	-21.20	23.76	Pass	Peak	7	2364.290	-54.08	-41.20	12.88	Pass	AVG
2	2370.878	-45.60	-21.20	24.40	Pass	Peak	8	2370.878	-54.20	-41.20	13.00	Pass	AVG
3	2375.392	-42.96	-21.20	21.76	Pass	Peak	9	2375.392	-52.31	-41.20	11.11	Pass	AVG
4	2381.980	-44.17	-21.20	22.97	Pass	Peak	10	2381.980	-53.85	-41.20	12.65	Pass	AVG
5	2385.762	-43.95	-21.20	22.75	Pass	Peak	11	2385.762	-52.00	-41.20	10.80	Pass	AVG
6	2389.788	-42.01	-21.20	20.81	Pass	Peak	12	2389.788	-50.81	-41.20	9.61	Pass	AVG

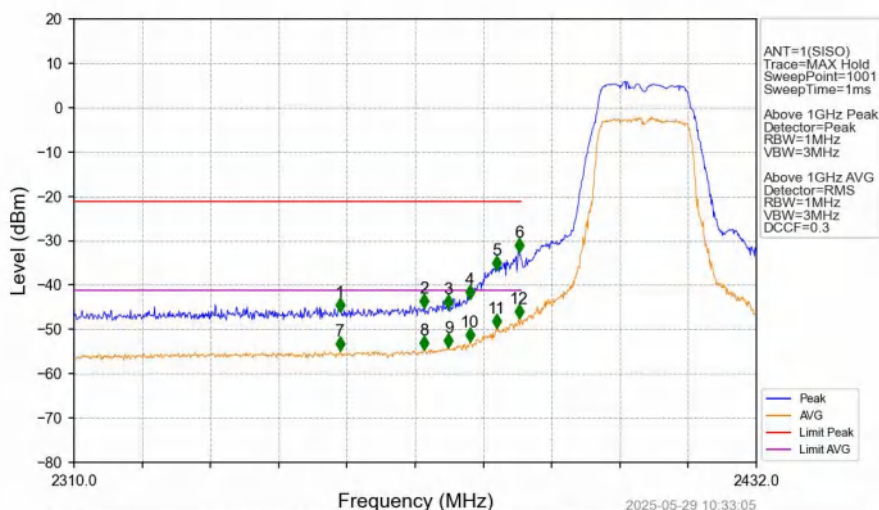
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



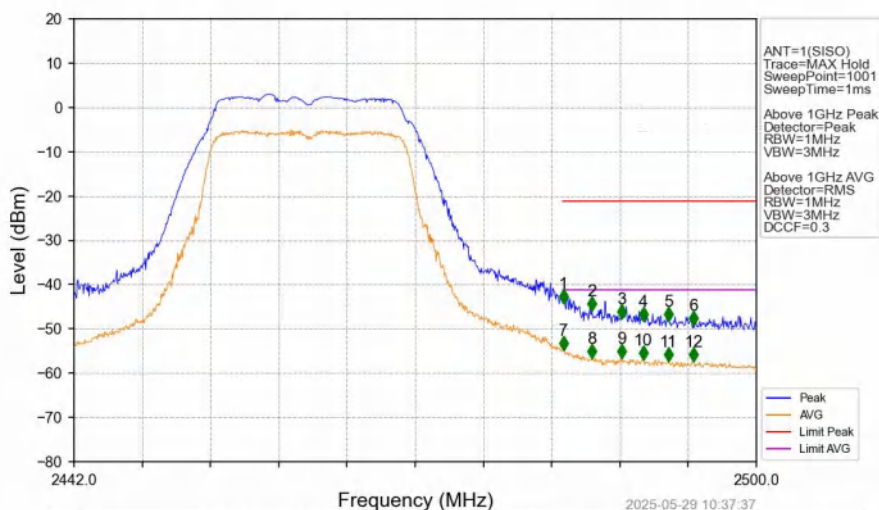
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2484.166	-48.19	-21.20	26.99	Pass	Peak	7	2484.166	-57.61	-41.20	16.41	Pass	AVG
2	2486.312	-47.70	-21.20	26.50	Pass	Peak	8	2486.312	-56.35	-41.20	15.15	Pass	AVG
3	2488.110	-46.58	-21.20	25.38	Pass	Peak	9	2488.110	-54.69	-41.20	13.49	Pass	AVG
4	2490.256	-47.80	-21.20	26.60	Pass	Peak	10	2490.256	-55.98	-41.20	14.78	Pass	AVG
5	2492.576	-49.43	-21.20	28.23	Pass	Peak	11	2492.576	-57.14	-41.20	15.94	Pass	AVG
6	2498.318	-49.25	-21.20	28.05	Pass	Peak	12	2498.318	-56.79	-41.20	15.59	Pass	AVG

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



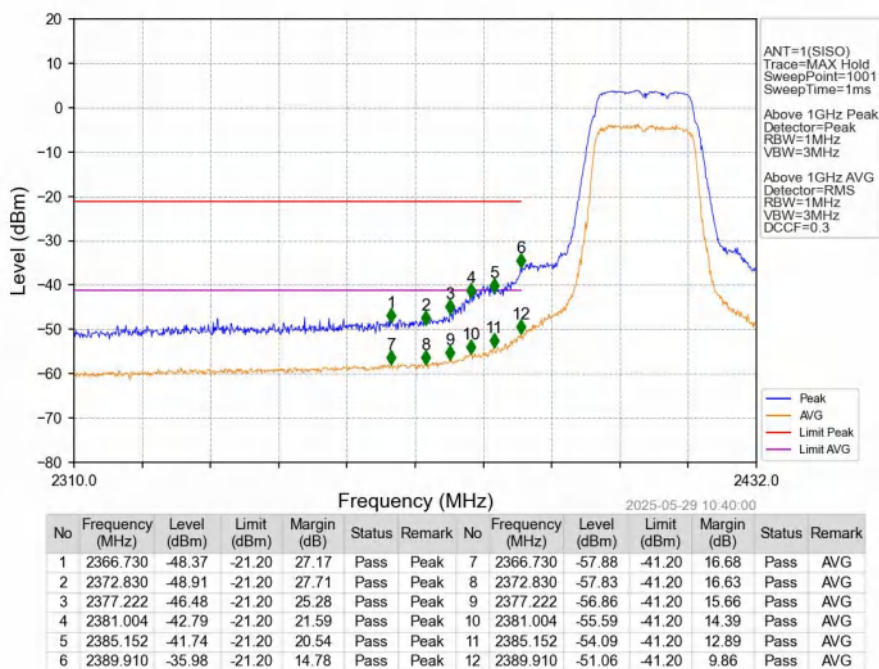


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

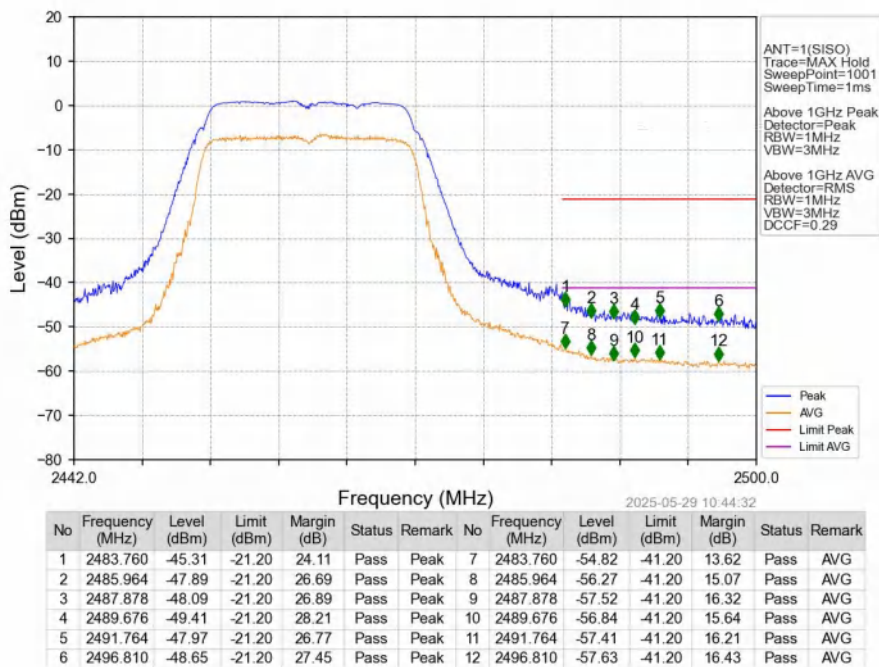


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV





802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

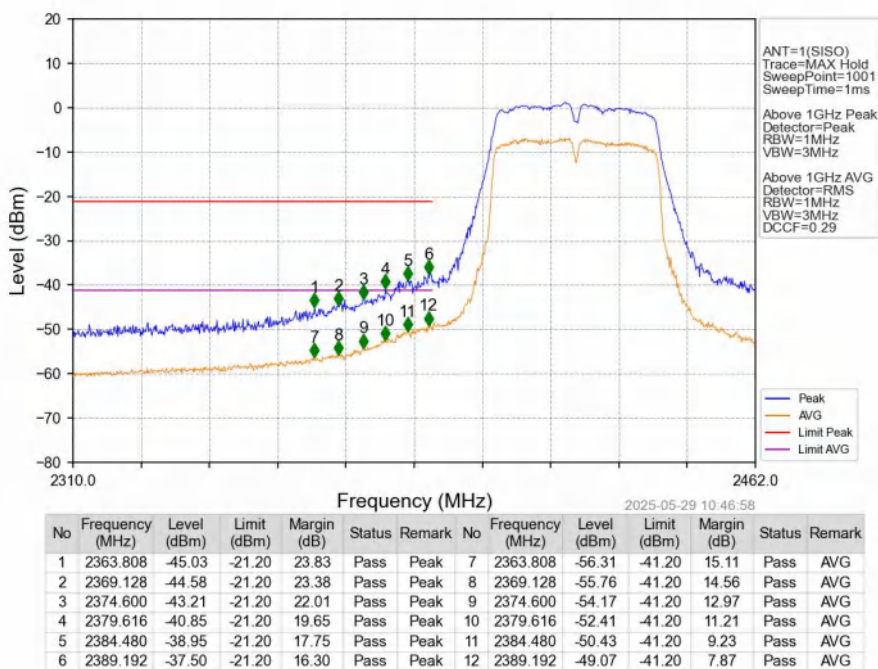


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



802.11n(HT40)_HCH_2452MHz_Ant1(SISO)_NTNV

