

Appendix RF Test Data for 2.4GWIFI

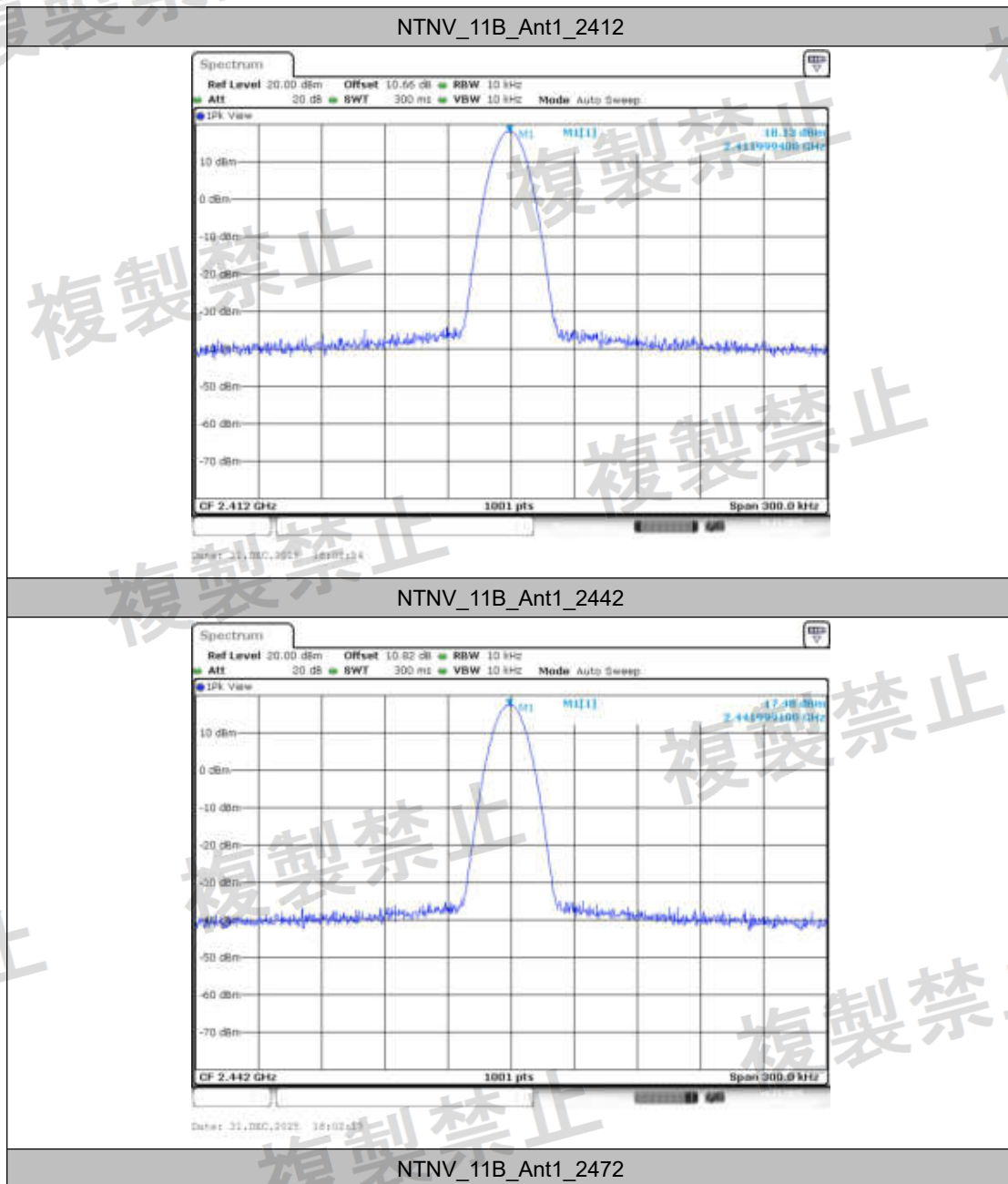
Company : Lubinsong
EUT : Lubinsong Karaoke Machine Integrated Type
Model Number : Lubinsong 20261905
Report No. : CTA25122600103
Reviewed By : Eric Wang

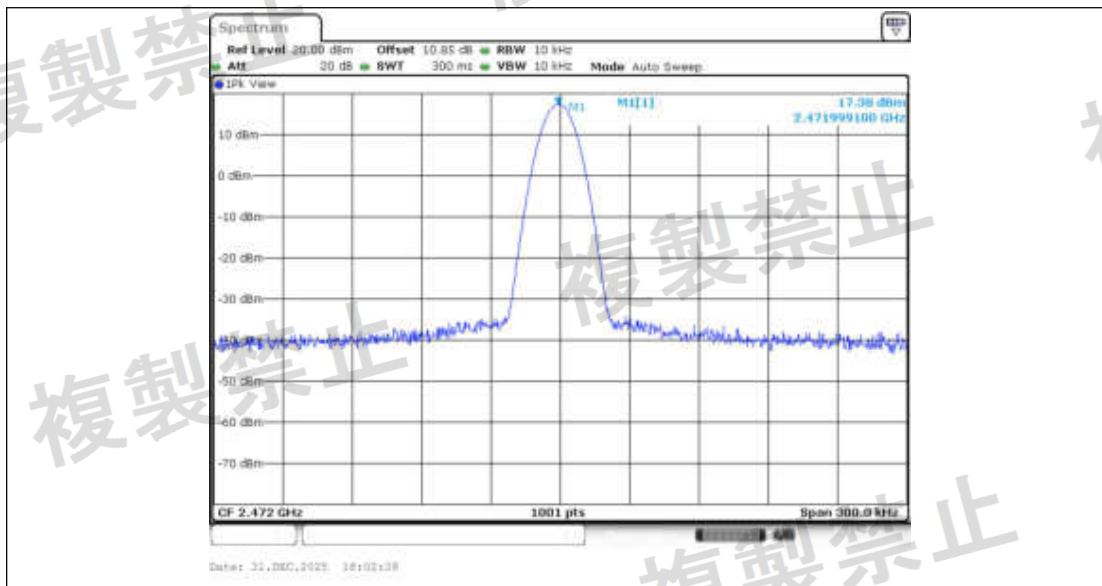
Appendix A: Frequency Error

Test Result

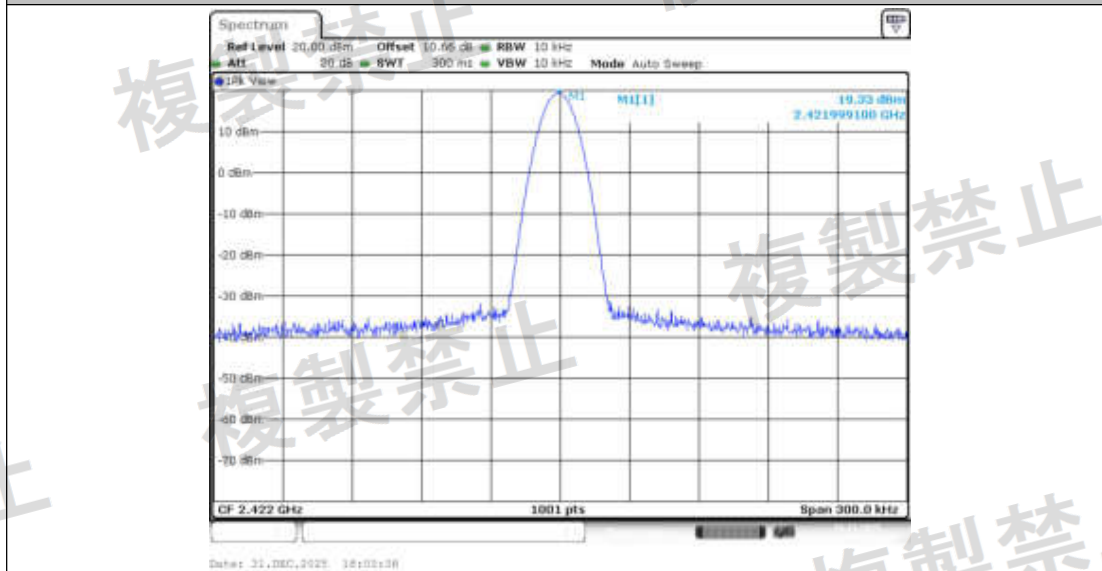
TestCondition	TestMode	Antenna	Freq(MHz)	CenterFrequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.9994	-0.24876	±50	PASS
			2442	2441.9991	-0.36855	±50	PASS
			2472	2471.9991	-0.36408	±50	PASS
	11N40SISO	Ant1	2422	2421.9991	-0.37159	±50	PASS
			2462	2461.9988	-0.48741	±50	PASS

Test Graphs

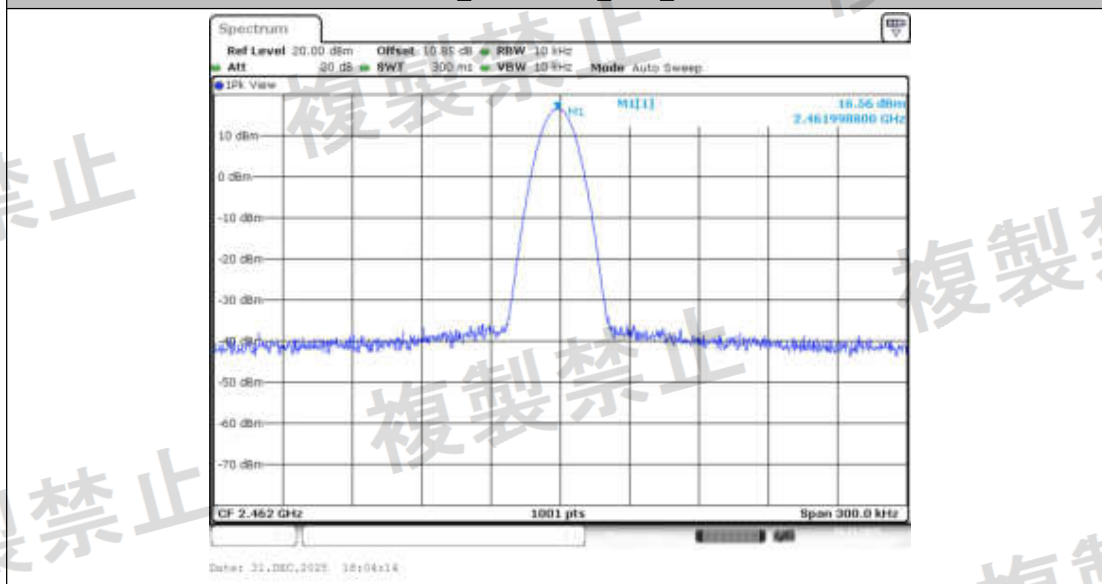




NTV_11N40SISO_Ant1_2422



NTV_11N40SISO_Ant1_2462



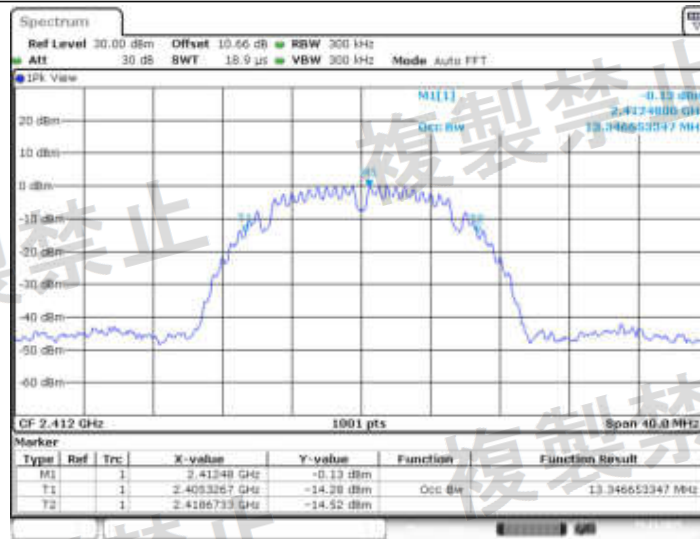
Appendix B: Occupied Bandwidth

Test Result

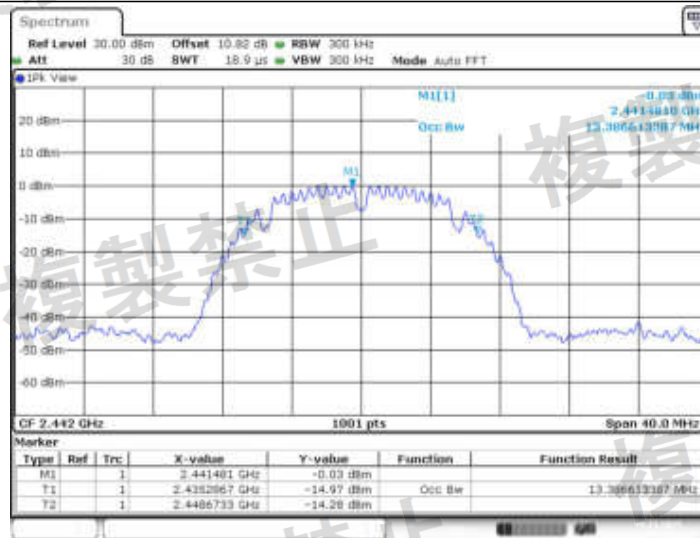
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	13.347	≤26	PASS
			2442	13.387	≤26	PASS
			2472	13.347	≤26	PASS
	11G	Ant1	2412	16.743	≤26	PASS
			2442	16.703	≤26	PASS
			2472	16.464	≤26	PASS
	11N20SI SO	Ant1	2412	17.782	≤26	PASS
			2442	17.782	≤26	PASS
			2472	17.662	≤26	PASS
	11N40SI SO	Ant1	2422	35.884	26-40	PASS
			2442	36.044	26-40	PASS
			2462	36.124	26-40	PASS

Test Graphs

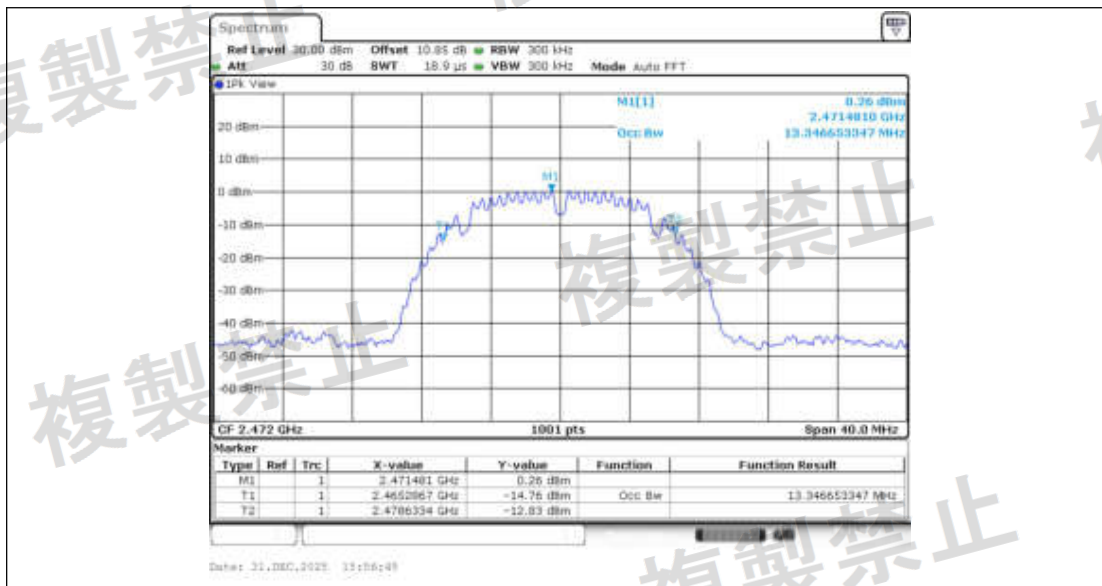
NTNV_11B_Ant1_2412



NTNV_11B_Ant1_2442



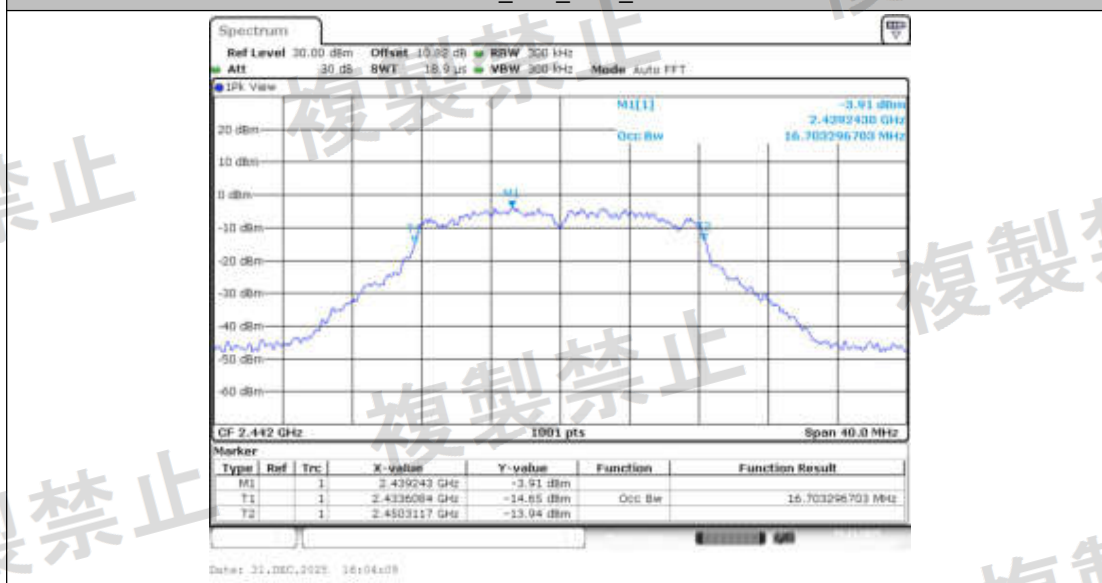
NTNV_11B_Ant1_2472

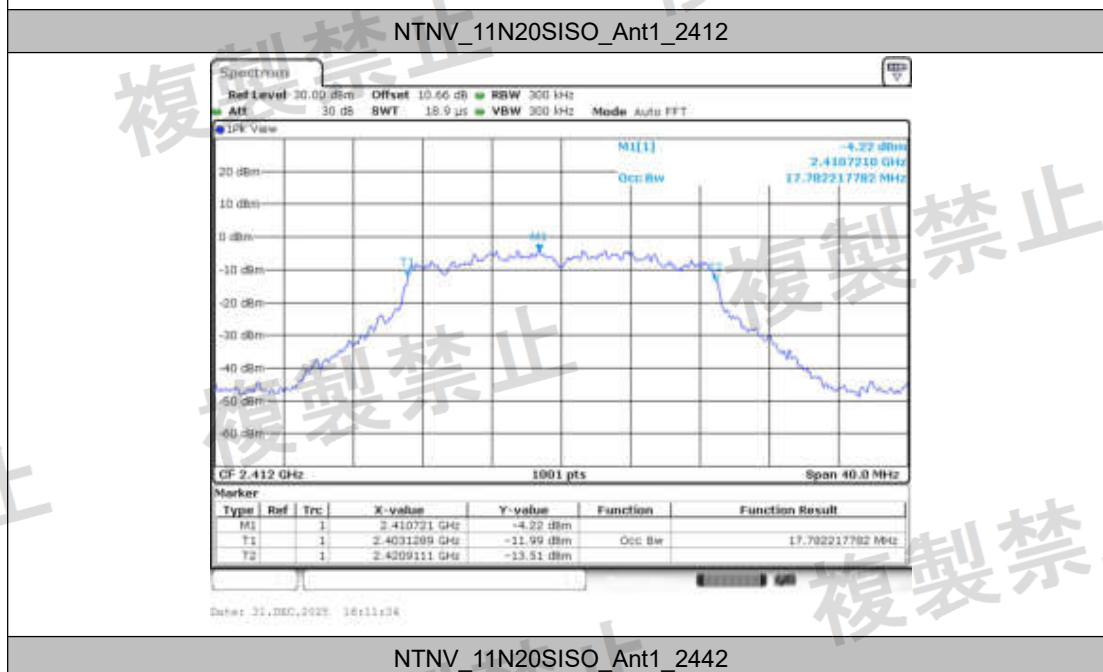
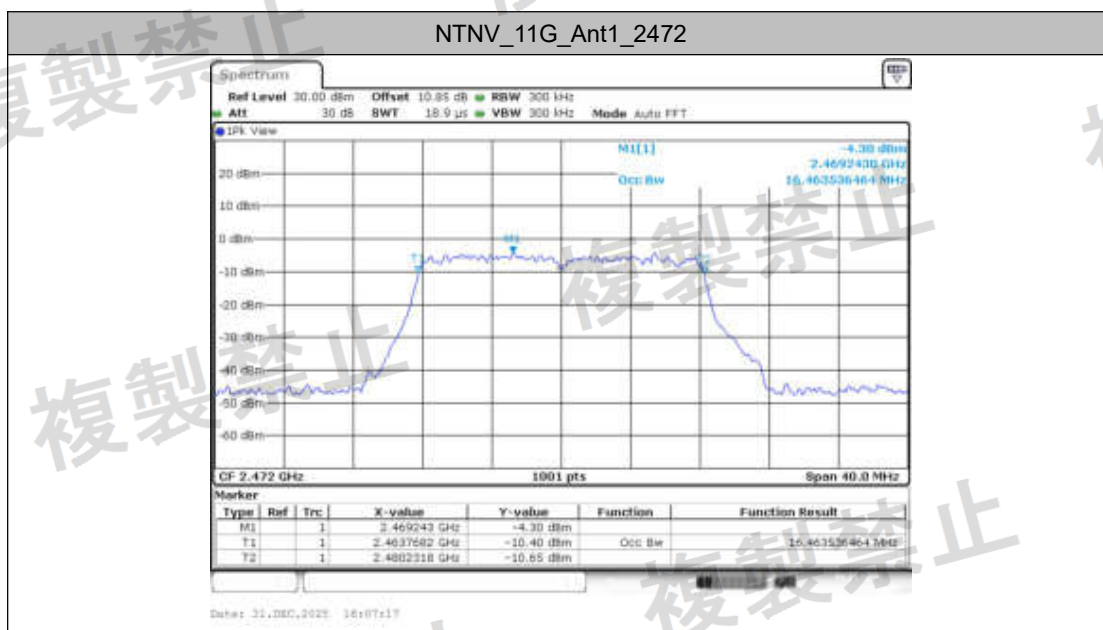


NTV_11G_Ant1_2412

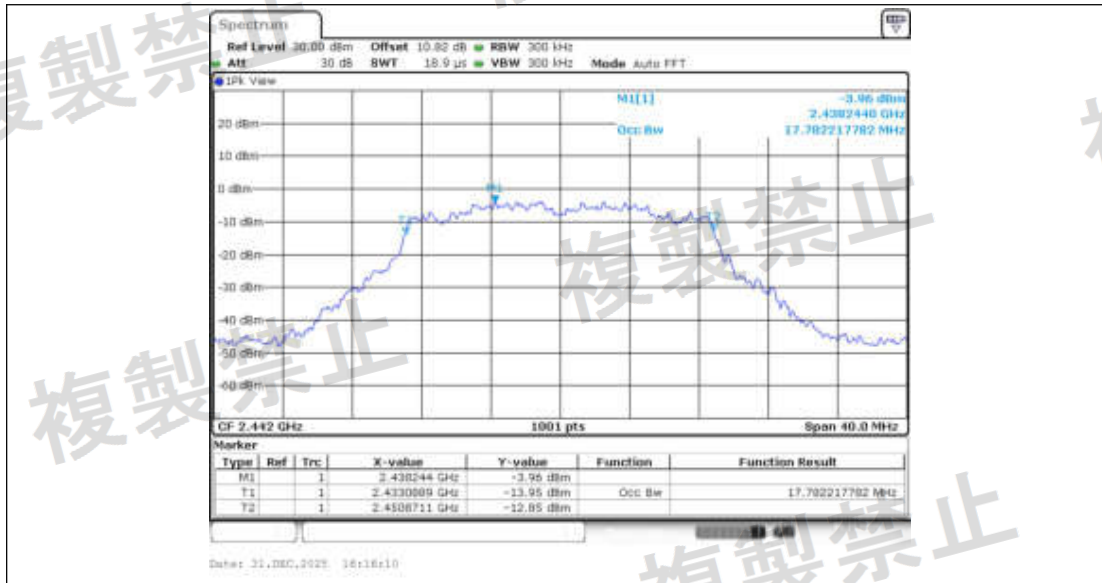


NTV_11G_Ant1_2442

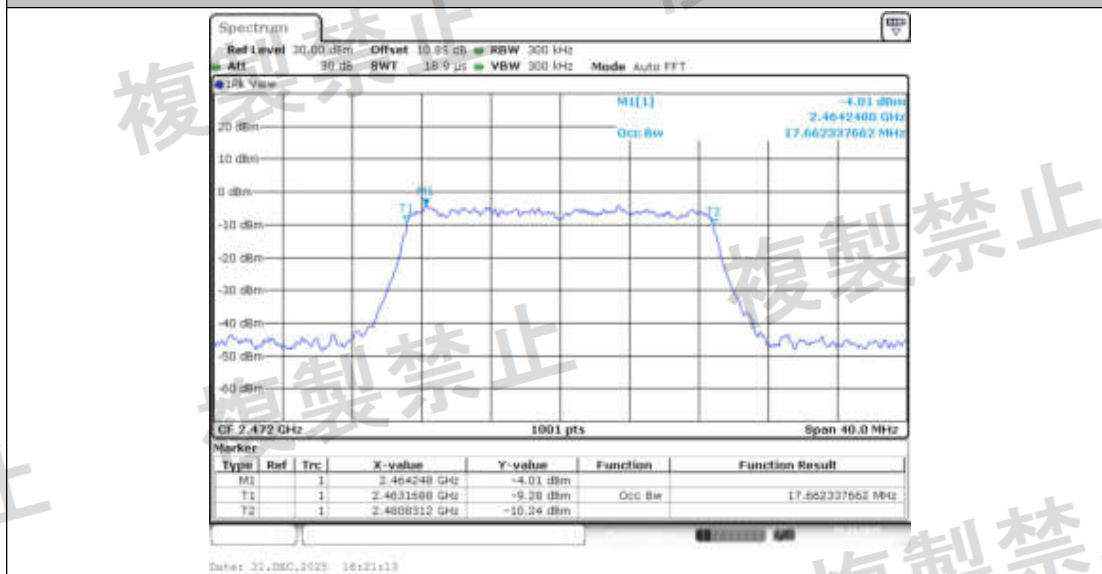




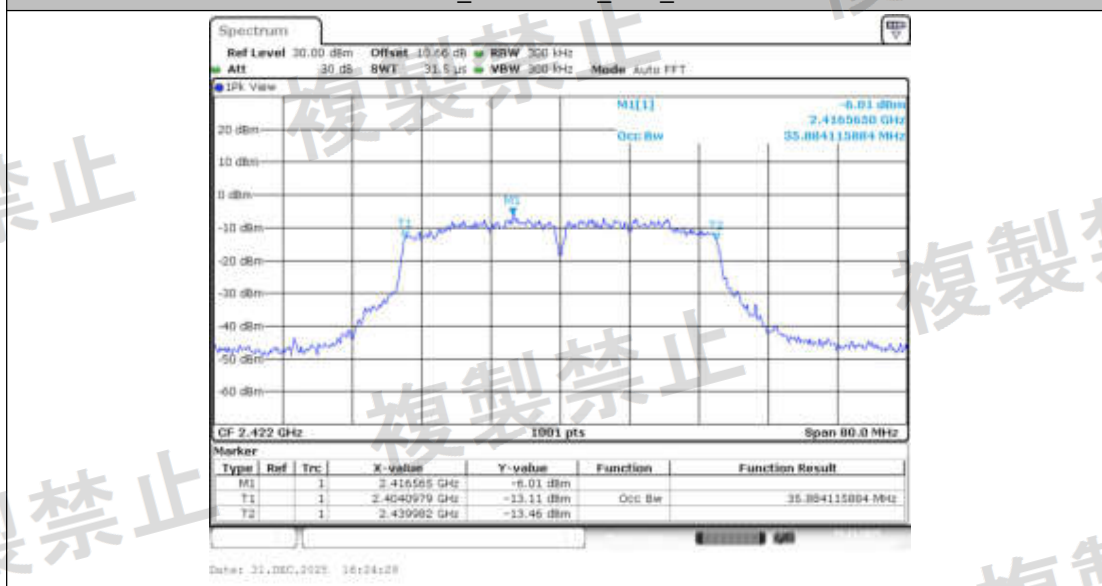
NTNV_11N20SISO_Ant1_2442

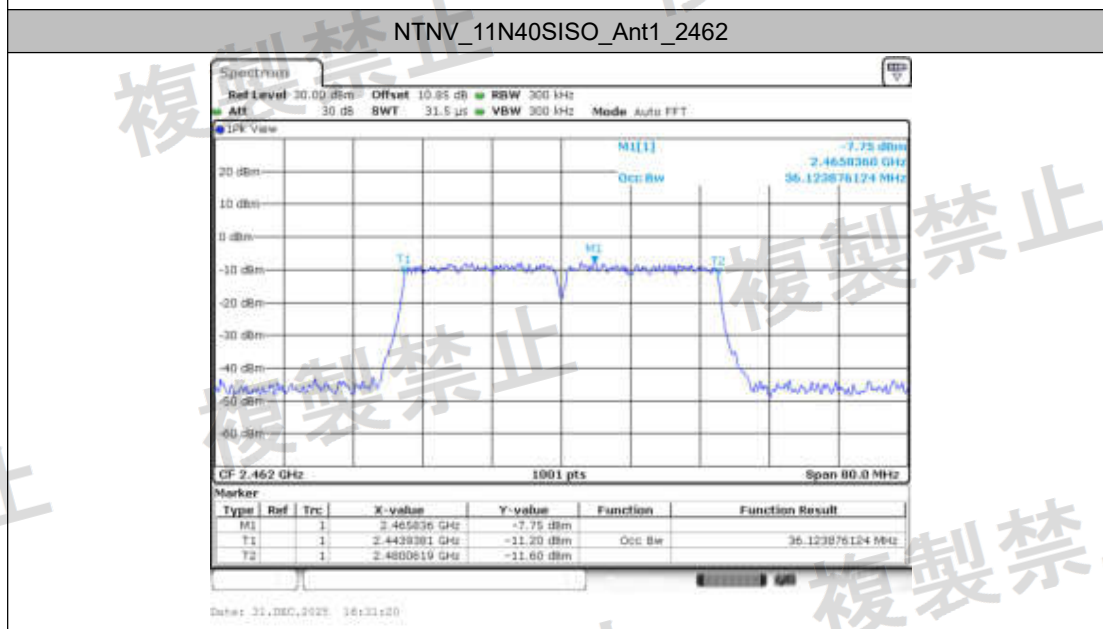
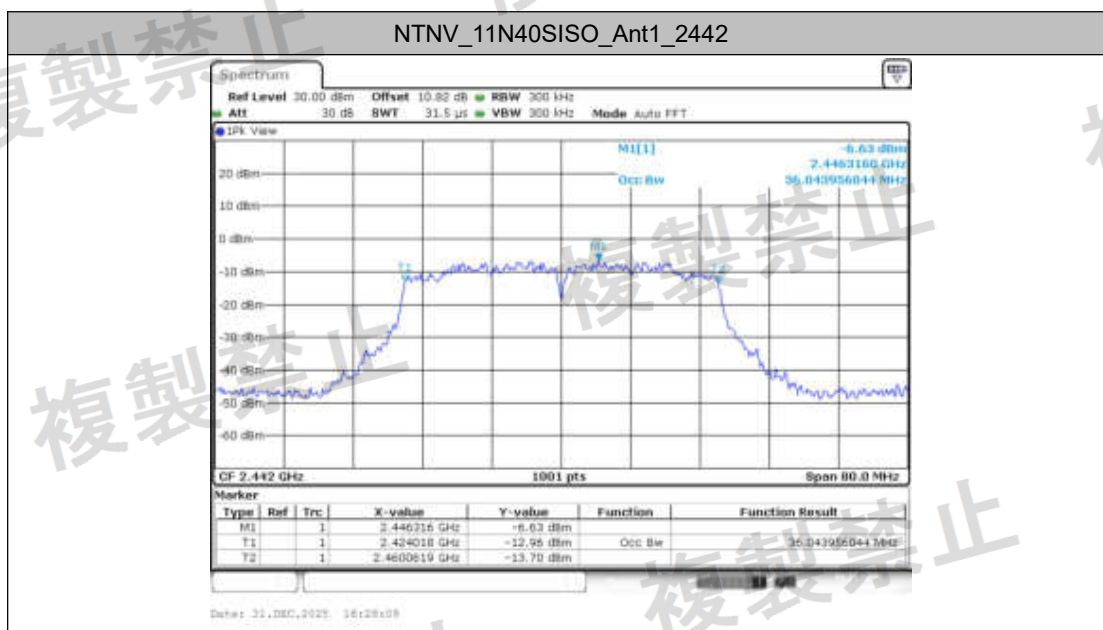


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





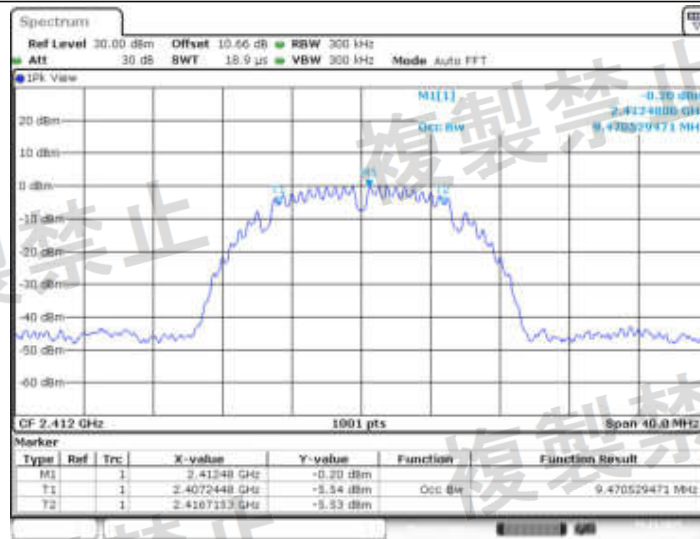
Appendix C: Spread Bandwidth

Test Result

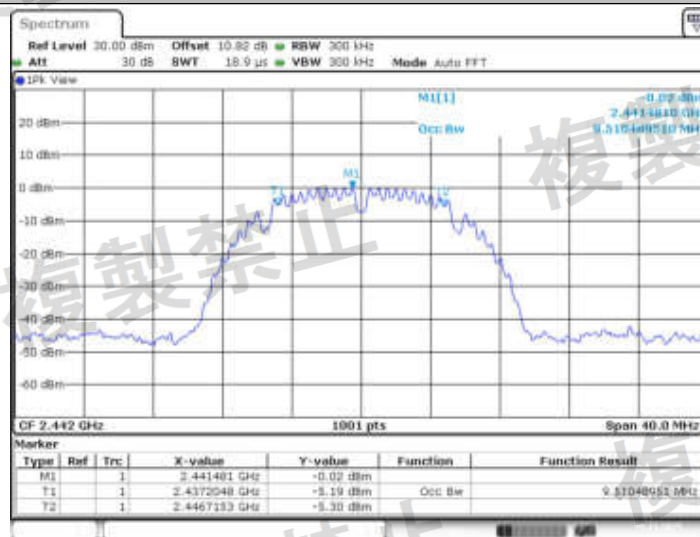
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	9.471	≥0.5	6.888	>5	PASS
			2442	9.510	≥0.5	6.916	>5	PASS
			2472	9.471	≥0.5	6.888	>5	PASS
	11G	Ant1	2412	13.826	≥0.5	---	---	PASS
			2442	13.826	≥0.5	---	---	PASS
			2472	14.825	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	15.025	≥0.5	---	---	PASS
			2442	15.105	≥0.5	---	---	PASS
			2472	15.784	≥0.5	---	---	PASS
	11N40SI SO	Ant1	2422	29.890	≥0.5	---	---	PASS
			2442	30.529	≥0.5	---	---	PASS
			2462	32.448	≥0.5	---	---	PASS

Test Graphs

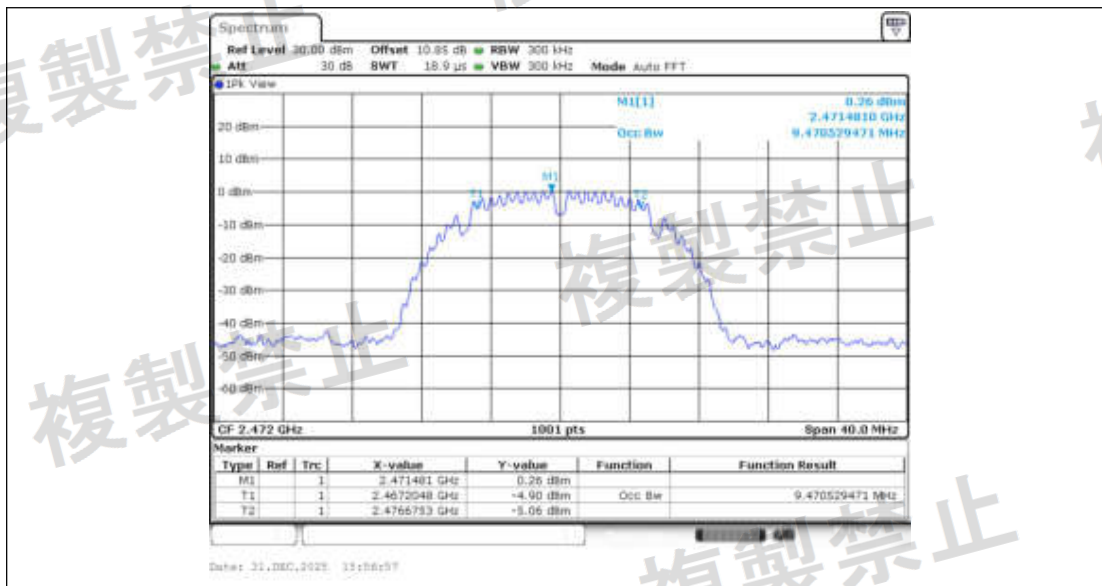
NTNV_11B_Ant1_2412



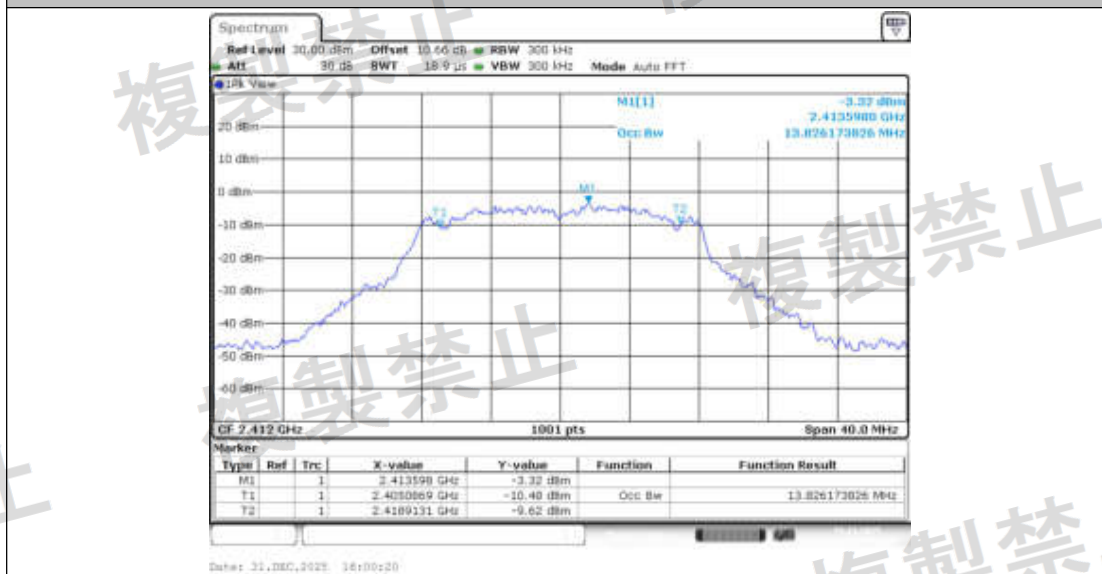
NTNV_11B_Ant1_2442



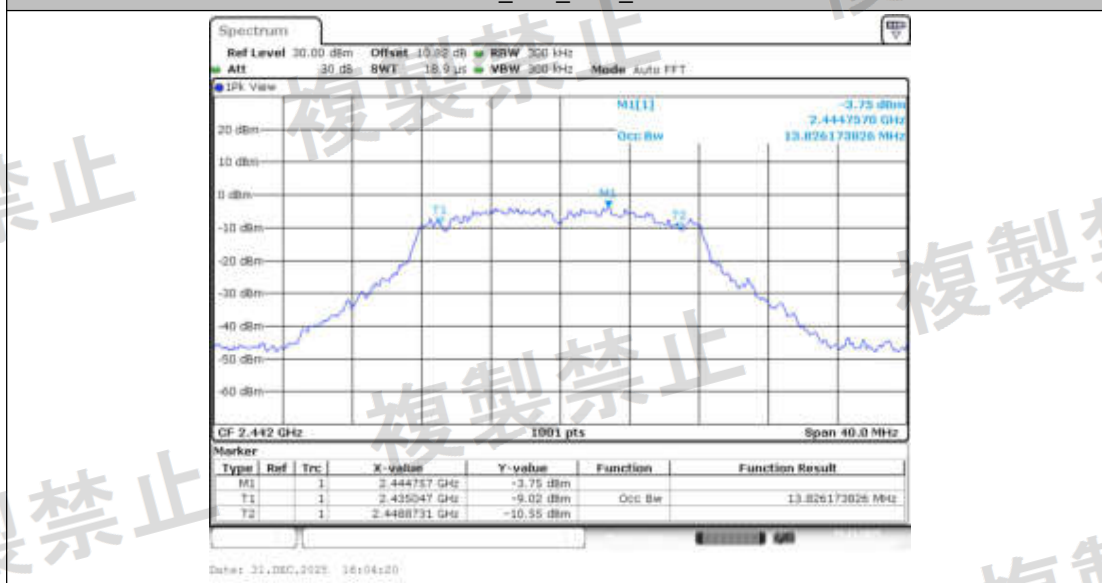
NTNV_11B_Ant1_2472

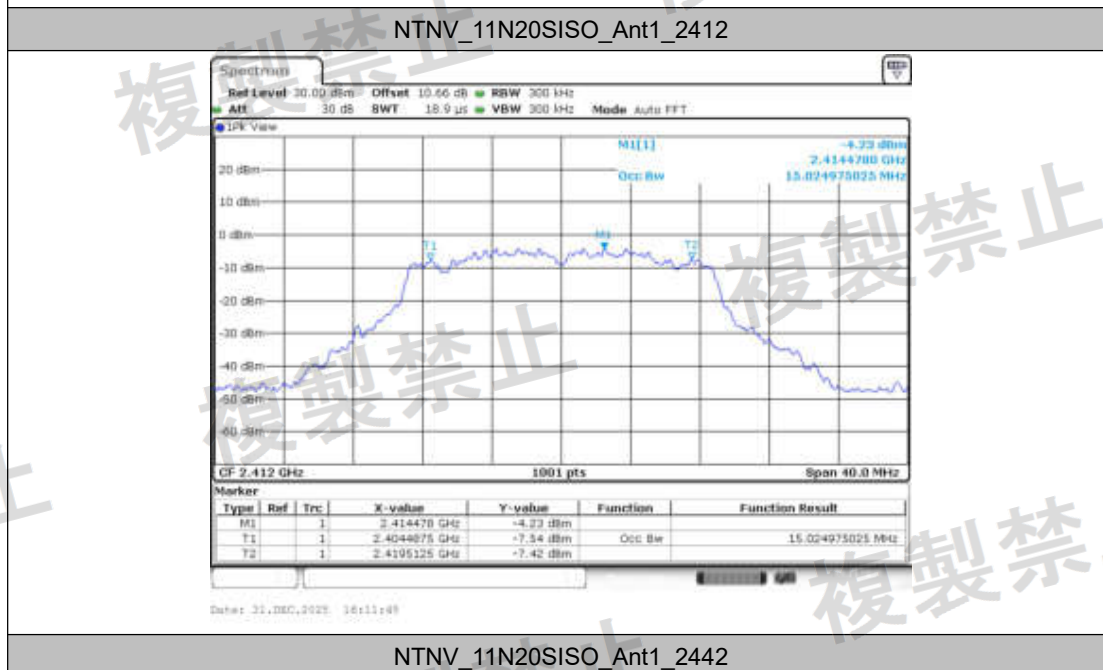
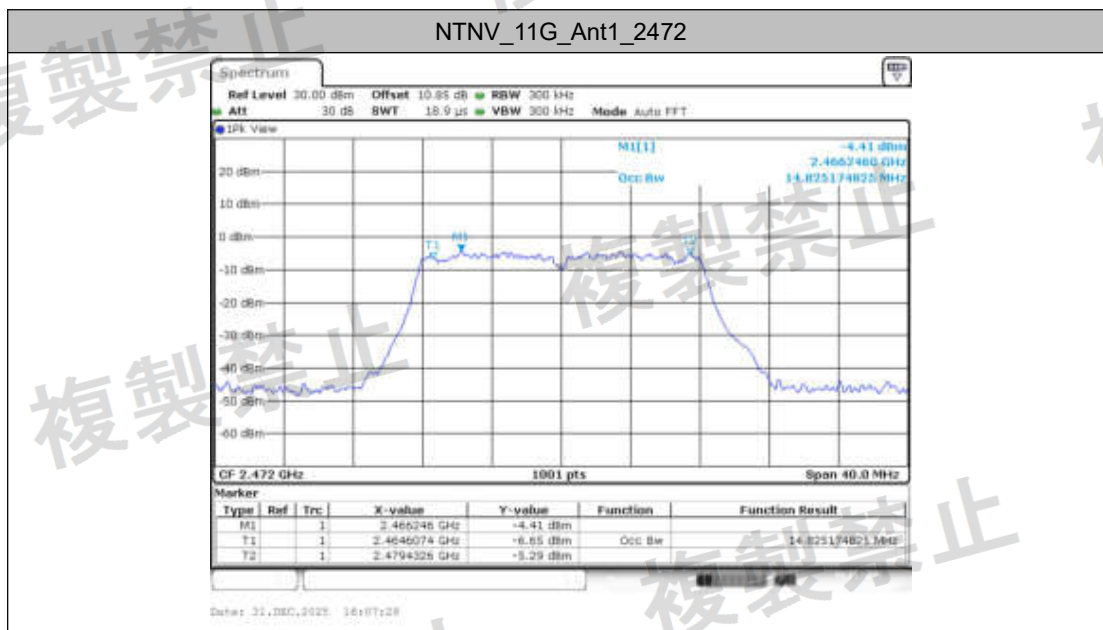


NTV_11G_Ant1_2412

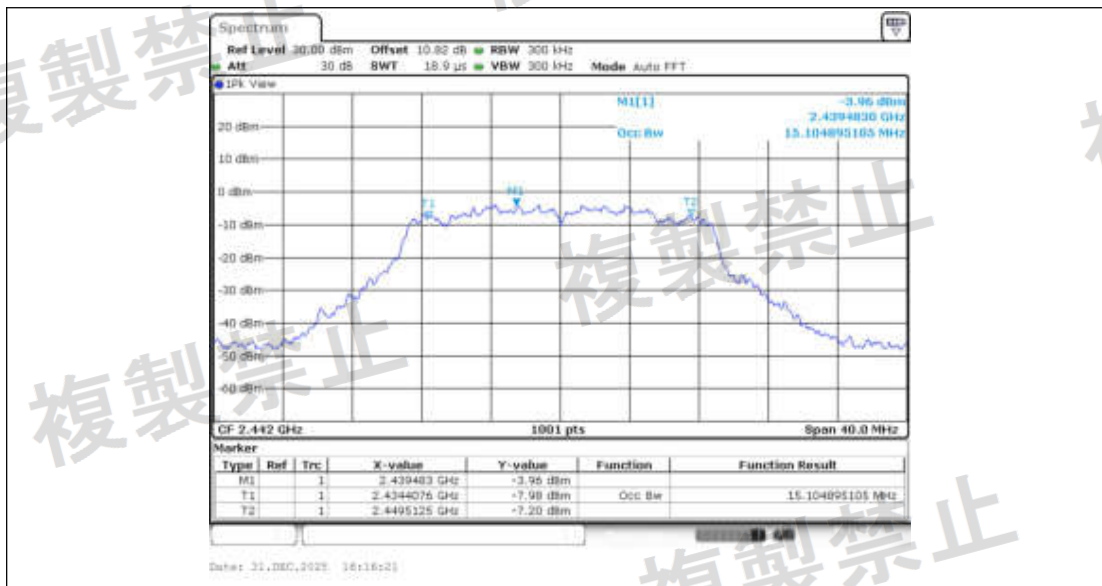


NTV_11G_Ant1_2442





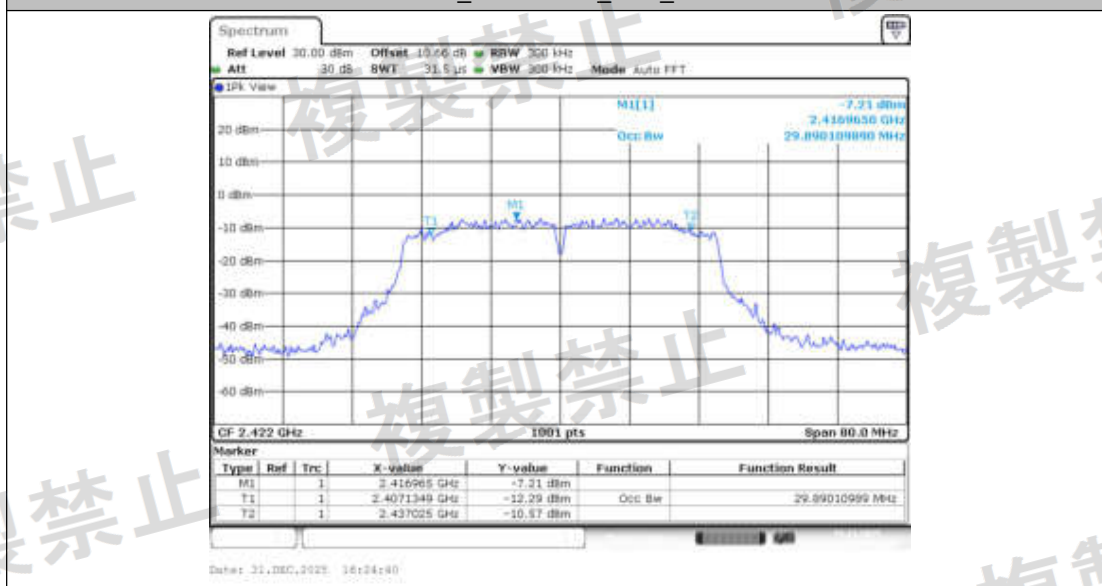
NTNV_11N20SISO_Ant1_2442

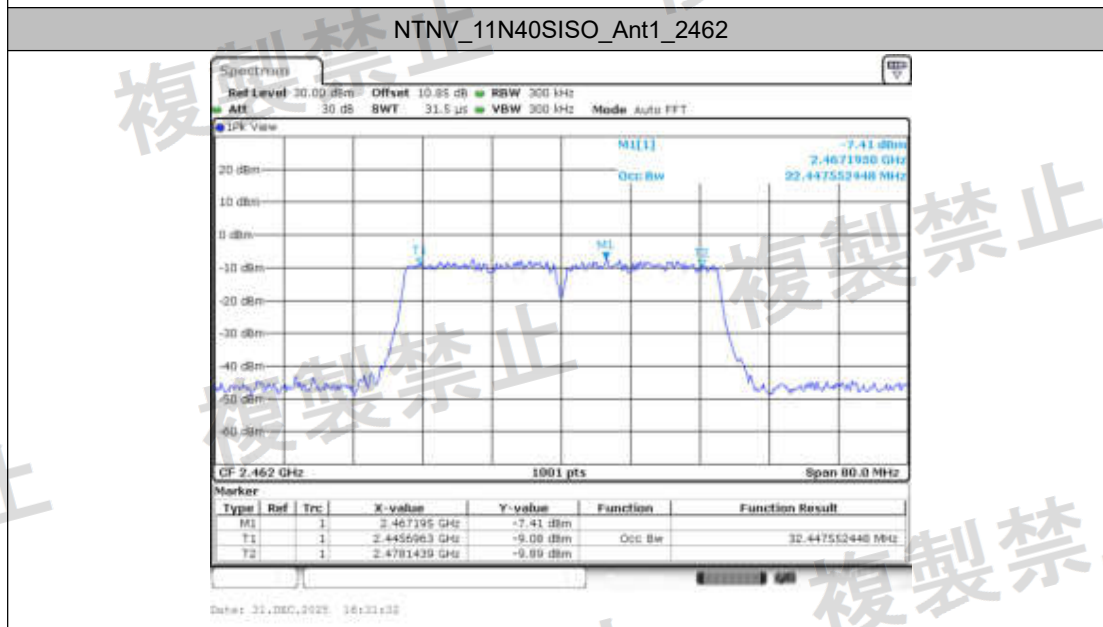
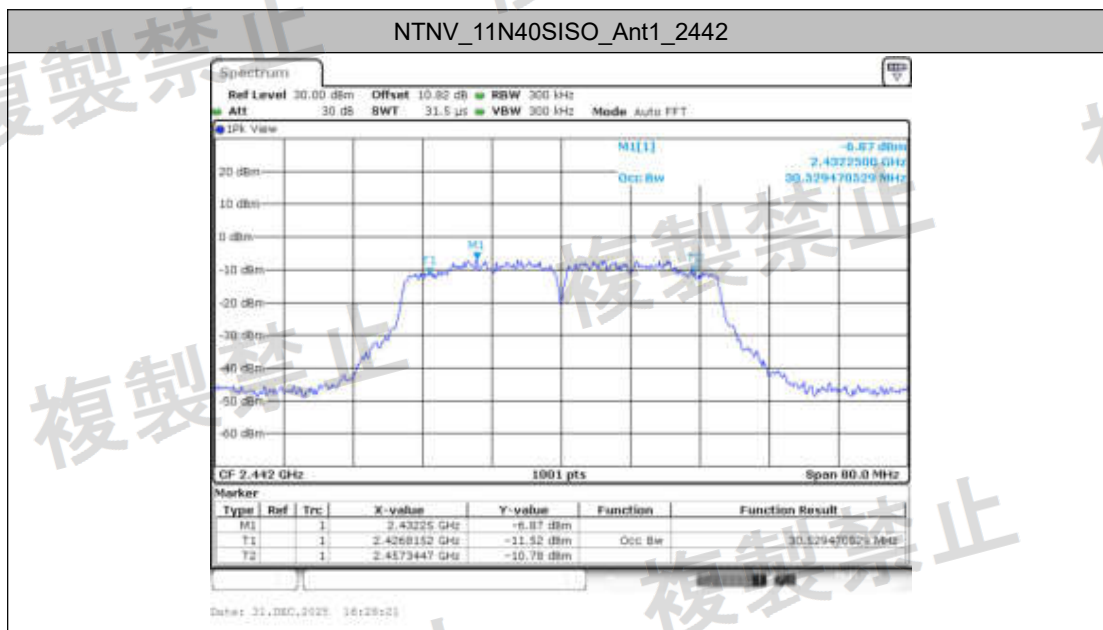


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





Appendix D: Spurious Emission of TX

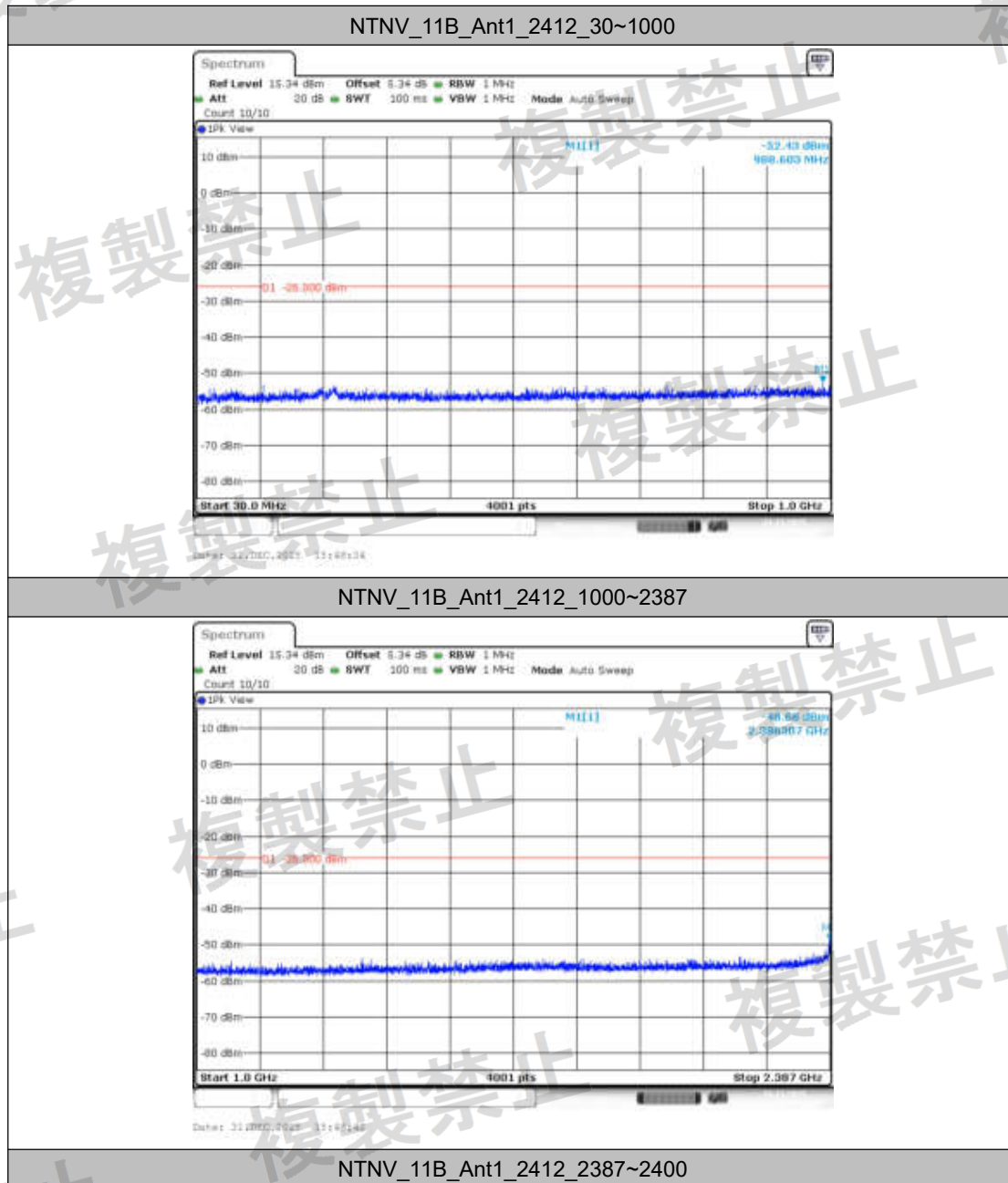
Test Result

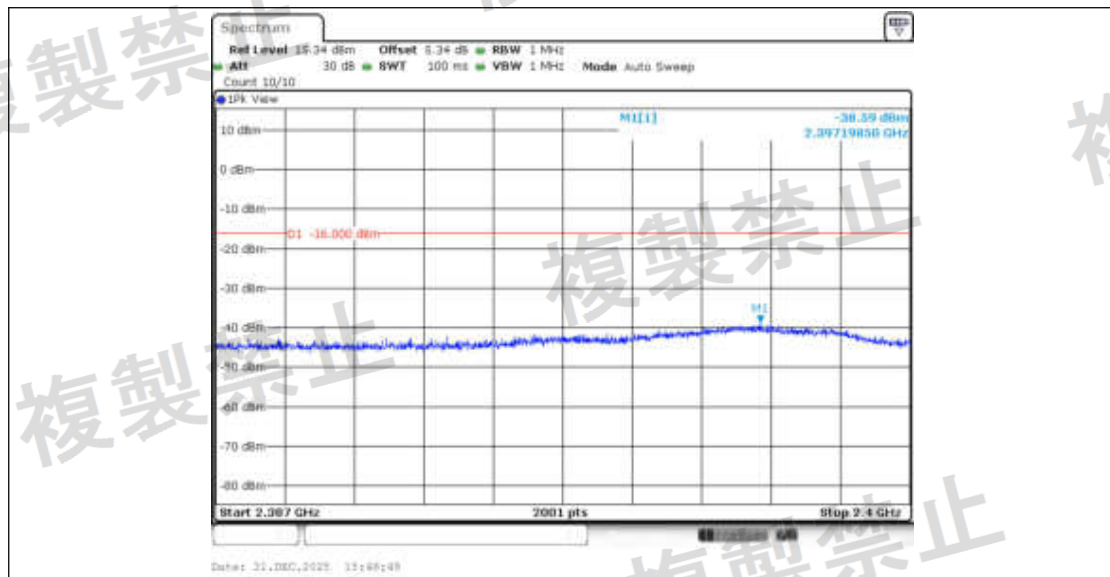
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	988.60	-52.43	≤-26	0.00571	≤2.5	PASS
				1000~2387	2386.3 1	-48.68	≤-26	0.01355	≤2.5	PASS
				2387~2400	2397.2 0	-38.59	≤-16	0.13836	≤25	PASS
				2483.5~2496.5	2488.7 3	-42.79	≤-16	0.05260	≤25	PASS
				2496.5~13000	6955.7 6	-48.57	≤-26	0.01390	≤2.5	PASS
			2442	30~1000	83.11	-51.86	≤-26	0.00652	≤2.5	PASS
				1000~2387	2378.6 8	-52.60	≤-26	0.00550	≤2.5	PASS
				2387~2400	2396.9 7	-43.12	≤-16	0.04875	≤25	PASS
				2483.5~2496.5	2488.5 8	-43.14	≤-16	0.04853	≤25	PASS
				2496.5~13000	6784.0 3	-49.03	≤-26	0.01250	≤2.5	PASS
	11G	Ant1	2472	30~1000	980.60	-53.00	≤-26	0.00501	≤2.5	PASS
				1000~2387	2325.2 8	-53.03	≤-26	0.00498	≤2.5	PASS
				2387~2400	2388.2 2	-43.44	≤-16	0.04529	≤25	PASS
				2483.5~2496.5	2486.9 6	-39.83	≤-16	0.10399	≤25	PASS
				2496.5~13000	6734.1 4	-48.56	≤-26	0.01393	≤2.5	PASS
			2412	30~1000	849.89	-53.11	≤-26	0.00489	≤2.5	PASS
				1000~2387	2315.9 2	-52.52	≤-26	0.00560	≤2.5	PASS
				2387~2400	2399.9 6	-22.24	≤-16	5.97035	≤25	PASS
				2483.5~2496.5	2485.3 9	-42.97	≤-16	0.05047	≤25	PASS
				2496.5~13000	6851.2 5	-48.91	≤-26	0.01285	≤2.5	PASS
			2442	30~1000	982.54	-52.42	≤-26	0.00573	≤2.5	PASS
				1000~2387	2313.4	-53.31	≤-26	0.00467	≤2.5	PASS

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				2387~2400	2388.9 2	-42.80	≤-16	0.05248	≤25	PASS
				2483.5~2496.5	2494.9 5	-42.88	≤-16	0.05152	≤25	PASS
				2496.5~13000	12701. 70	-48.22	≤-26	0.01507	≤2.5	PASS
			2472	30~1000	955.62	-52.62	≤-26	0.00547	≤2.5	PASS
				1000~2387	2124.1 6	-53.43	≤-26	0.00454	≤2.5	PASS
				2387~2400	2391.6 4	-42.92	≤-16	0.05105	≤25	PASS
				2483.5~2496.5	2483.5 1	-28.08	≤-16	1.55597	≤25	PASS
				2496.5~13000	6945.7 8	-48.23	≤-26	0.01503	≤2.5	PASS
	11N20Si SO	Ant1	2412	30~1000	243.89	-52.10	≤-26	0.00617	≤2.5	PASS
				1000~2387	1820.0 6	-52.52	≤-26	0.00560	≤2.5	PASS
				2387~2400	2399.9 5	-20.20	≤-16	9.54993	≤25	PASS
				2483.5~2496.5	2487.5 5	-43.25	≤-16	0.04732	≤25	PASS
				2496.5~13000	6825.5 2	-48.17	≤-26	0.01524	≤2.5	PASS
			2442	30~1000	981.81	-52.85	≤-26	0.00519	≤2.5	PASS
				1000~2387	2017.7 1	-52.96	≤-26	0.00506	≤2.5	PASS
				2387~2400	2387.6 9	-42.88	≤-16	0.05152	≤25	PASS
				2483.5~2496.5	2487.0 8	-42.73	≤-16	0.05333	≤25	PASS
				2496.5~13000	6968.8 9	-48.92	≤-26	0.01282	≤2.5	PASS
			2472	30~1000	829.04	-49.07	≤-26	0.01239	≤2.5	PASS
				1000~2387	2366.5 4	-53.38	≤-26	0.00459	≤2.5	PASS
				2387~2400	2392.4 9	-43.05	≤-16	0.04955	≤25	PASS
				2483.5~2496.5	2483.5 0	-28.05	≤-16	1.56675	≤25	PASS
				2496.5~13000	6148.0 4	-48.90	≤-26	0.01288	≤2.5	PASS

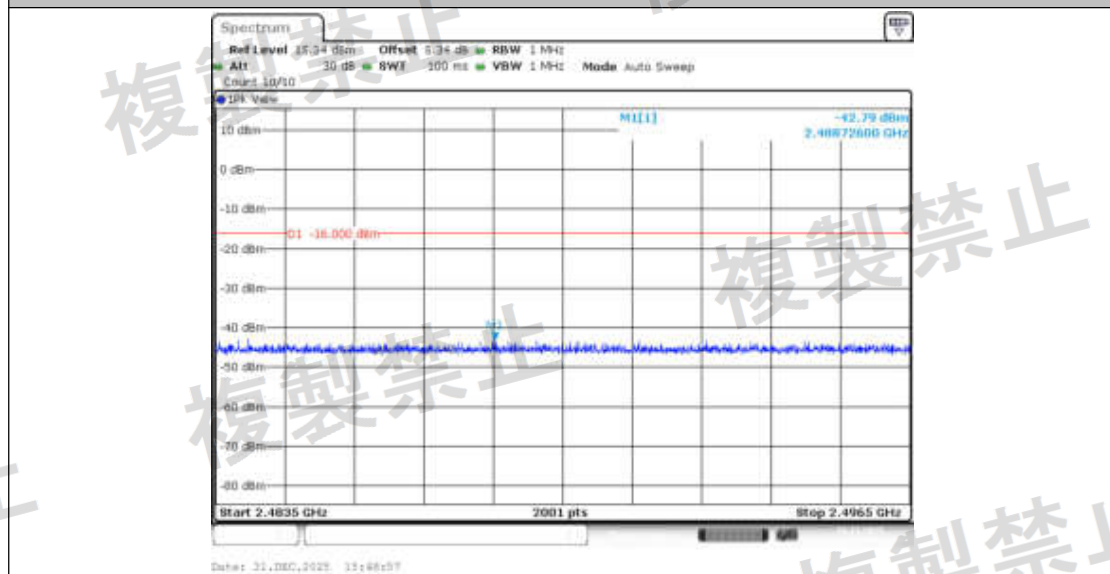
	11N40SI SO	Ant1	2422	30~1000	931.86	-52.93	≤-26	0.00509	≤2.5	PASS
				1000~2387	2385.9 6	-52.66	≤-26	0.00542	≤2.5	PASS
				2387~2400	2399.8 4	-25.92	≤-16	2.55859	≤25	PASS
				2483.5~2496.5	2485.3 8	-43.17	≤-16	0.04819	≤25	PASS
				2496.5~13000	6969.4 2	-49.13	≤-26	0.01222	≤2.5	PASS
			2442	30~1000	988.12	-53.11	≤-26	0.00489	≤2.5	PASS
				1000~2387	2373.8 2	-53.42	≤-26	0.00455	≤2.5	PASS
				2387~2400	2395.6 0	-42.38	≤-16	0.05781	≤25	PASS
				2483.5~2496.5	2485.0 0	-42.52	≤-16	0.05598	≤25	PASS
				2496.5~13000	6889.0 6	-48.28	≤-26	0.01486	≤2.5	PASS
			2462	30~1000	945.20	-53.32	≤-26	0.00466	≤2.5	PASS
				1000~2387	2380.4 1	-51.08	≤-26	0.00780	≤2.5	PASS
				2387~2400	2397.3 9	-42.91	≤-16	0.05117	≤25	PASS
				2483.5~2496.5	2483.5 0	-31.97	≤-16	0.63533	≤25	PASS
				2496.5~13000	2500.1 8	-45.18	≤-26	0.03034	≤2.5	PASS

Test Graphs

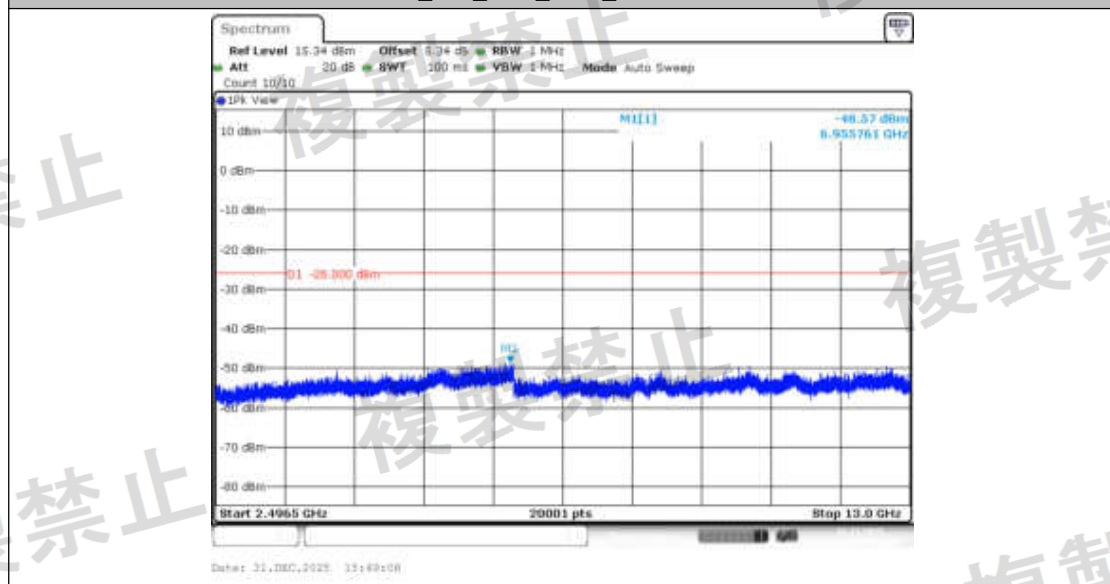


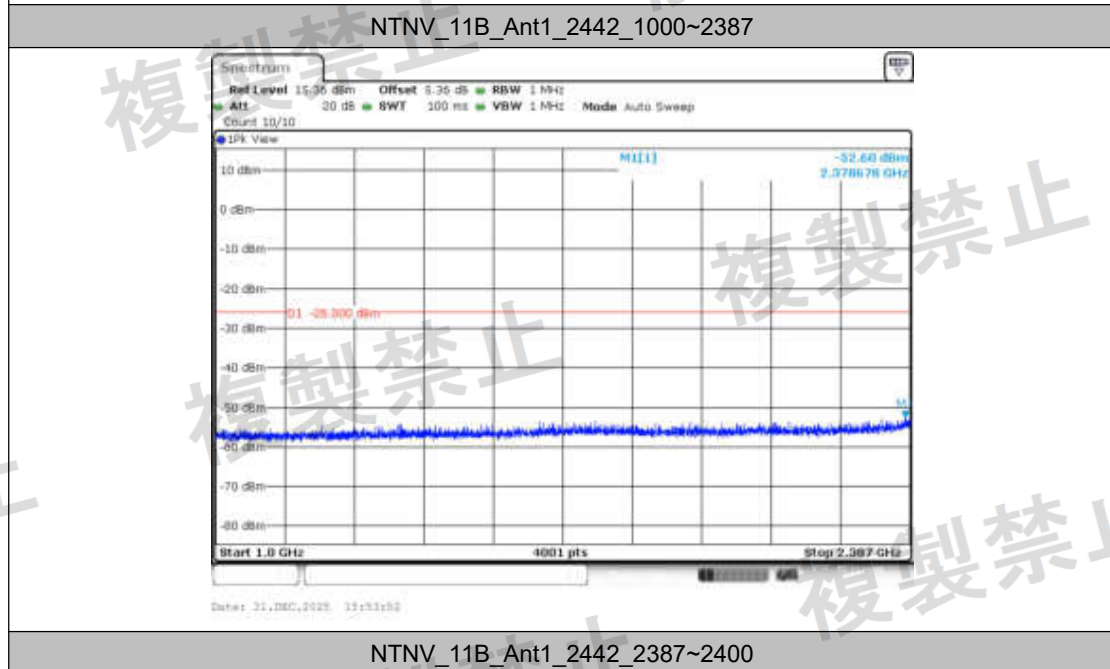
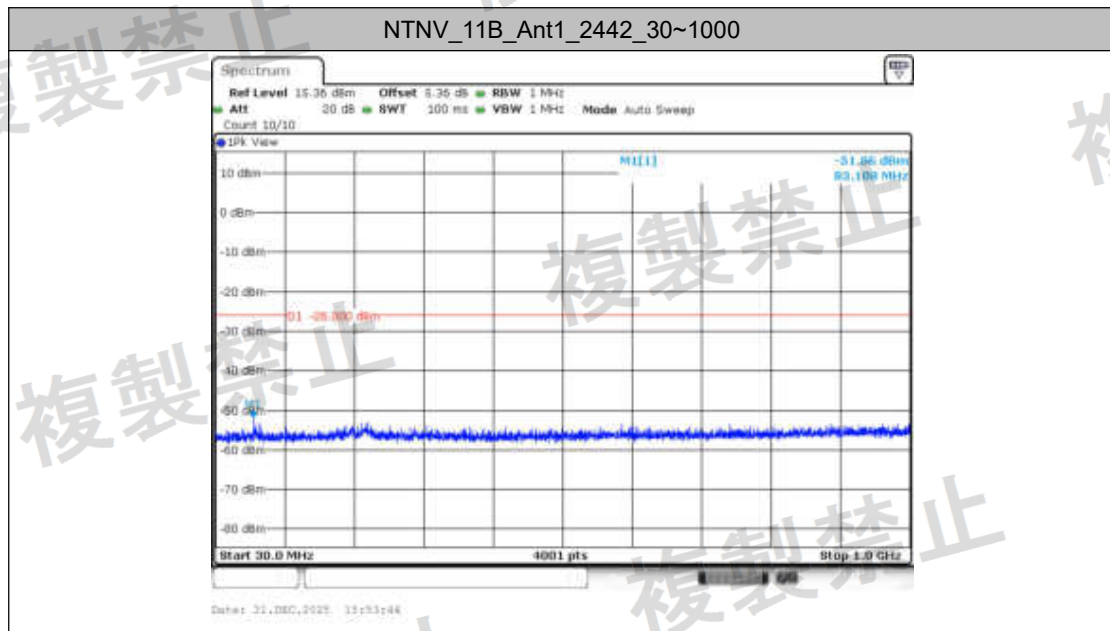


NTNV_11B_Ant1_2412_2483.5~2496.5

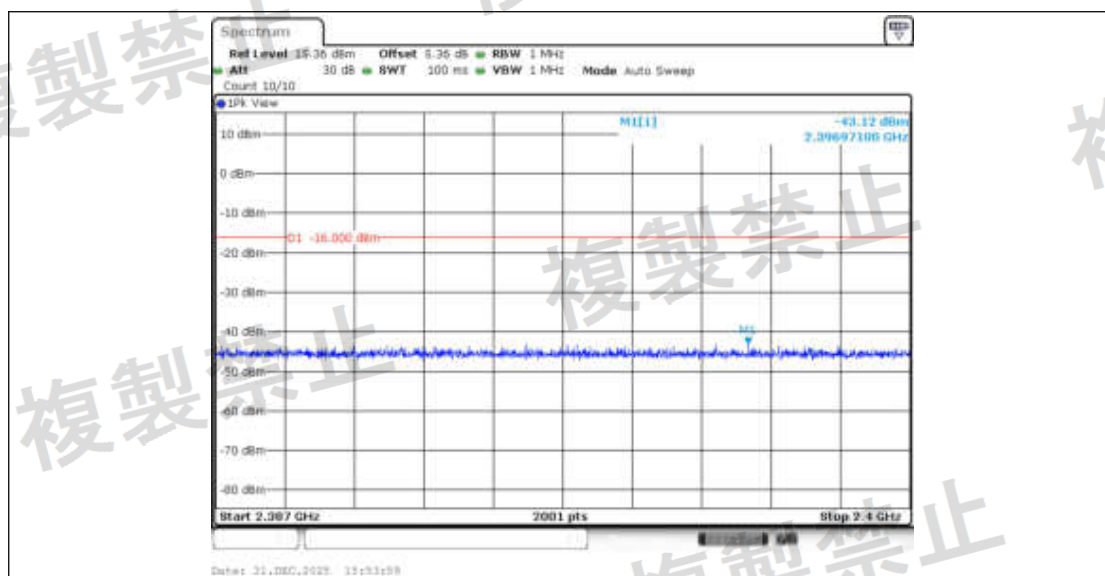


NTNV_11B_Ant1_2412_2496.5~13000

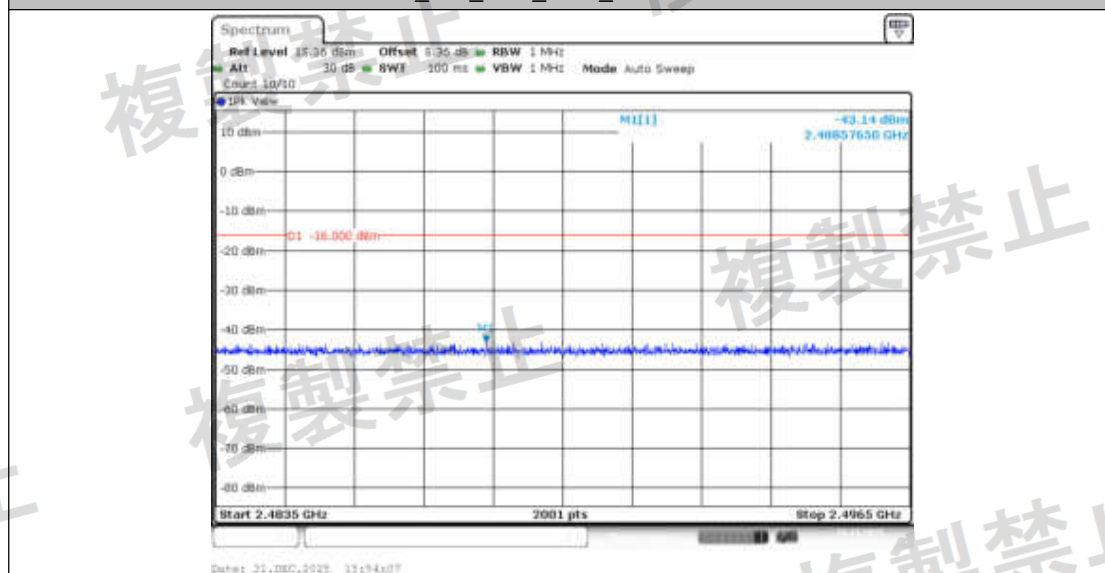




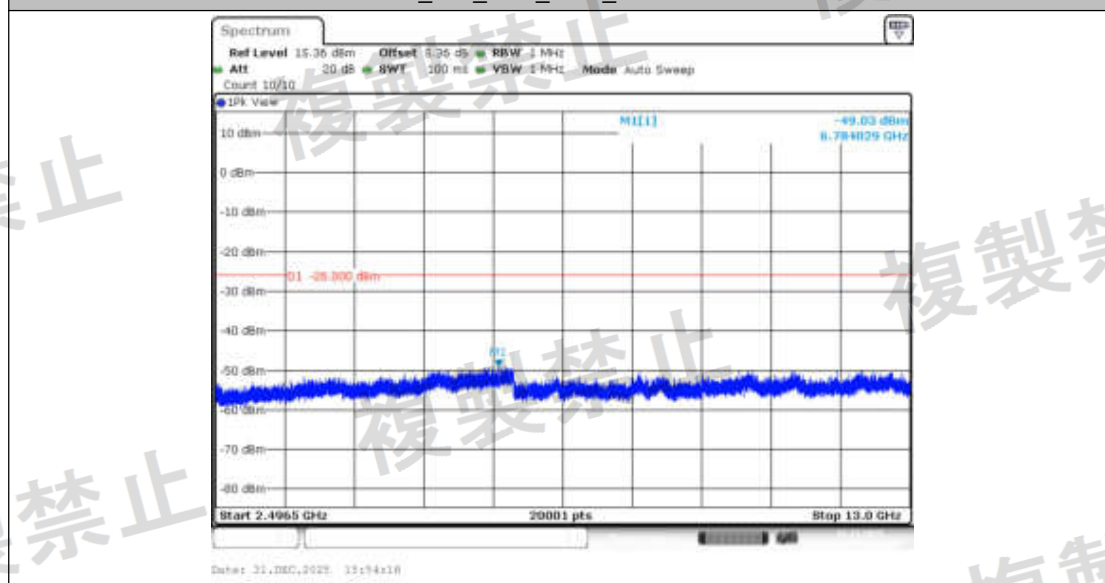
NTNV_11B_Ant1_2442_2387~2400

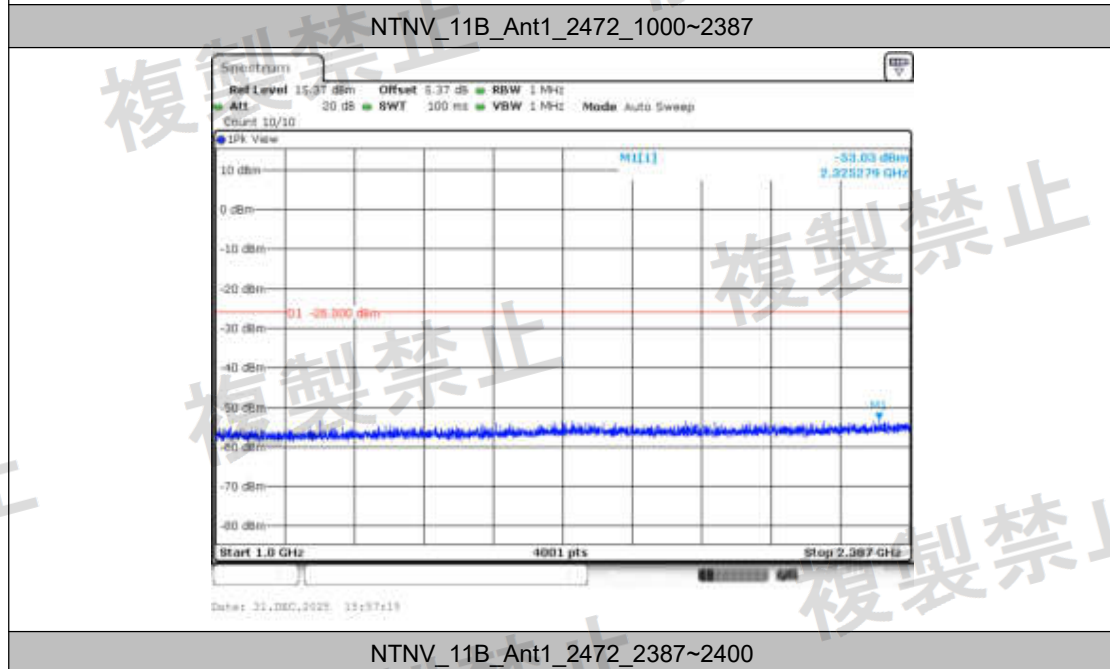
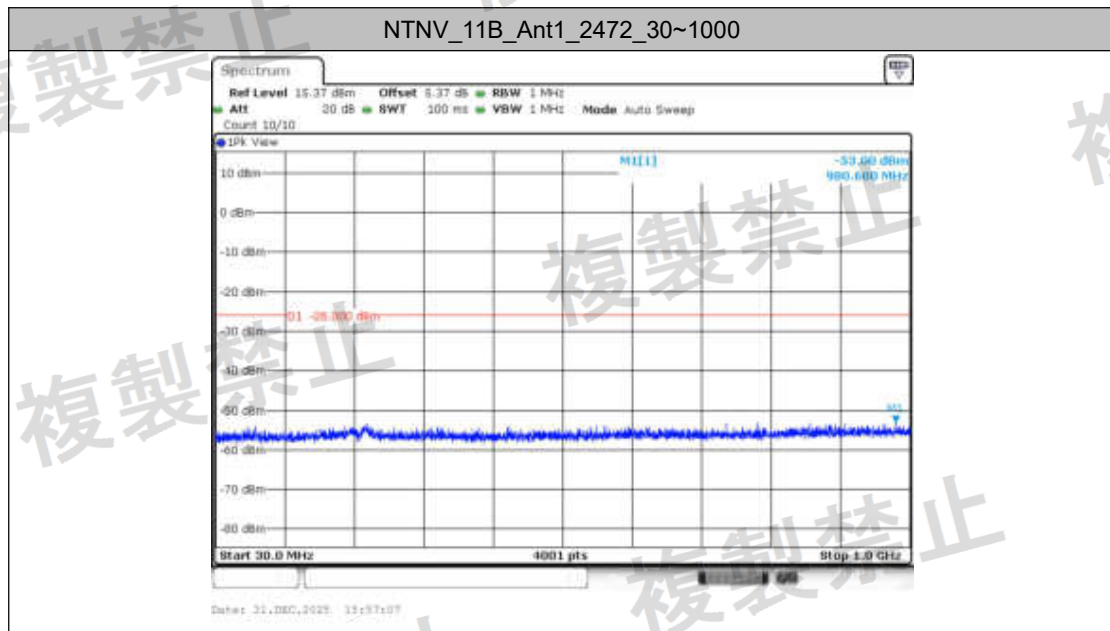


NTNV_11B_Ant1_2442_2483.5~2496.5

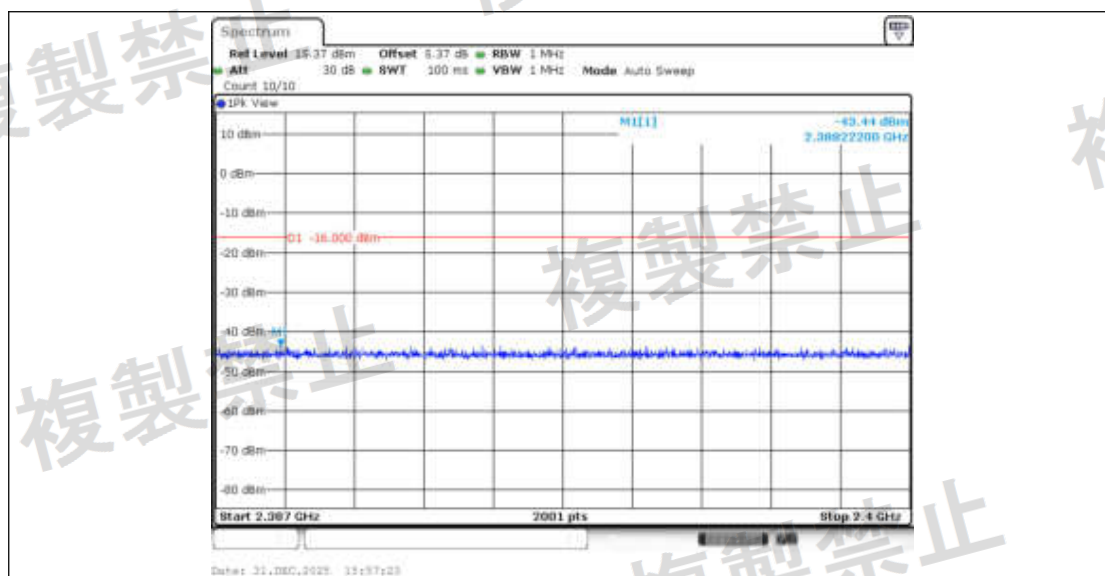


NTNV_11B_Ant1_2442_2496.5~13000

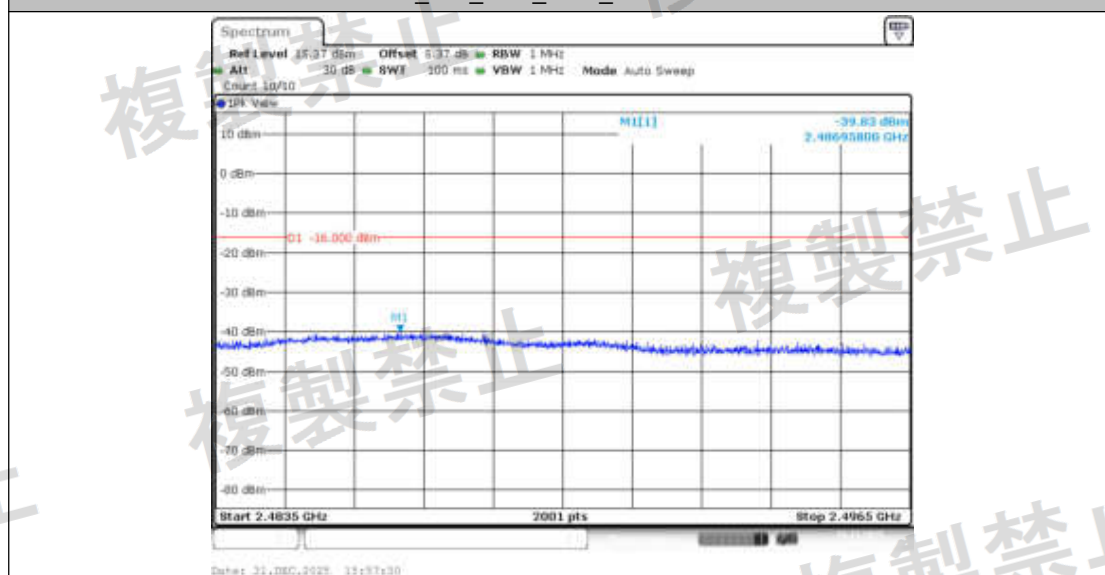




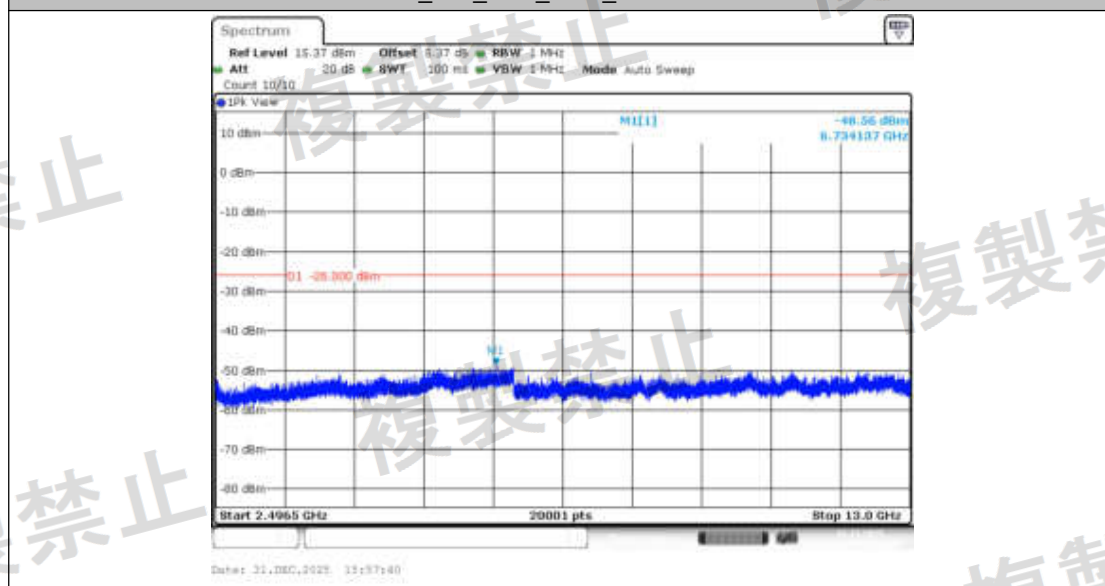
NTNV_11B_Ant1_2472_2387~2400

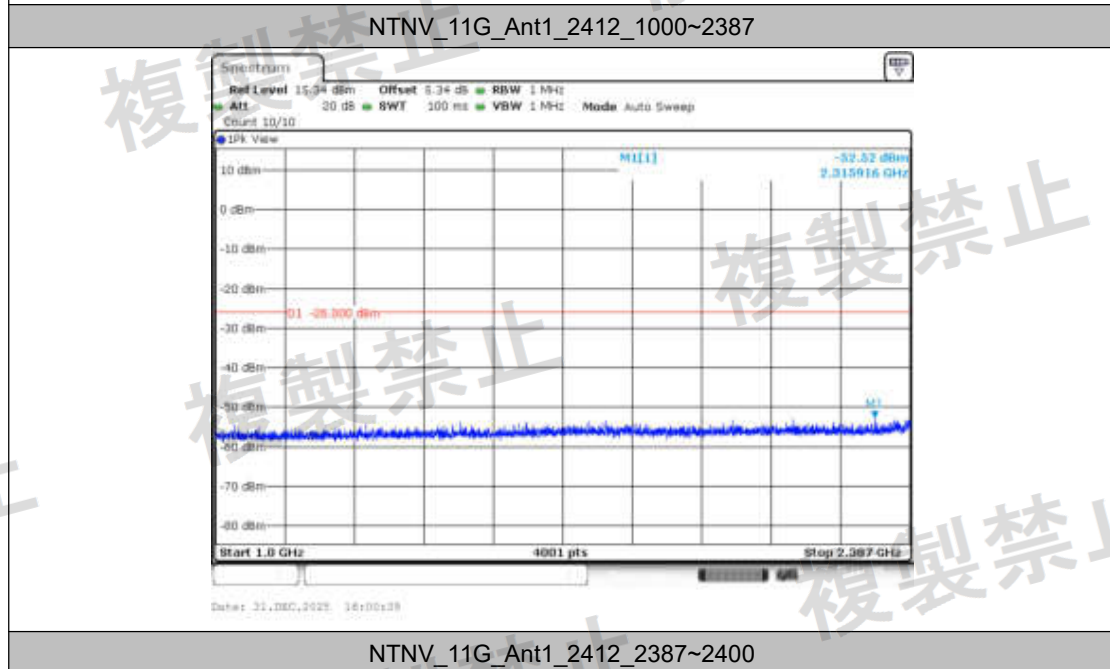
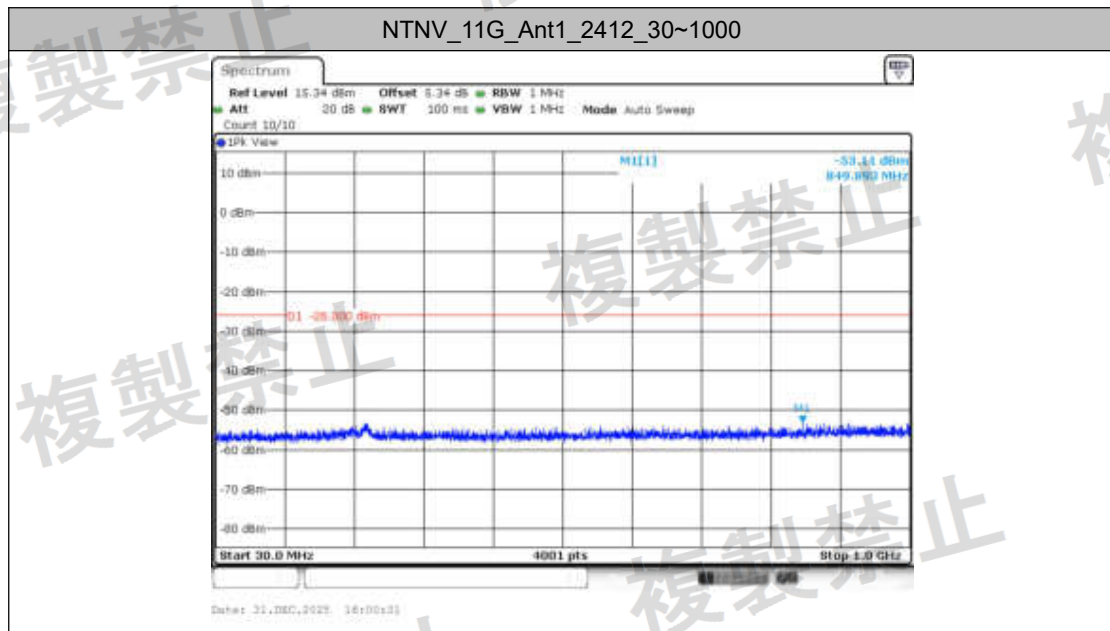


NTNV_11B_Ant1_2472_2483.5~2496.5

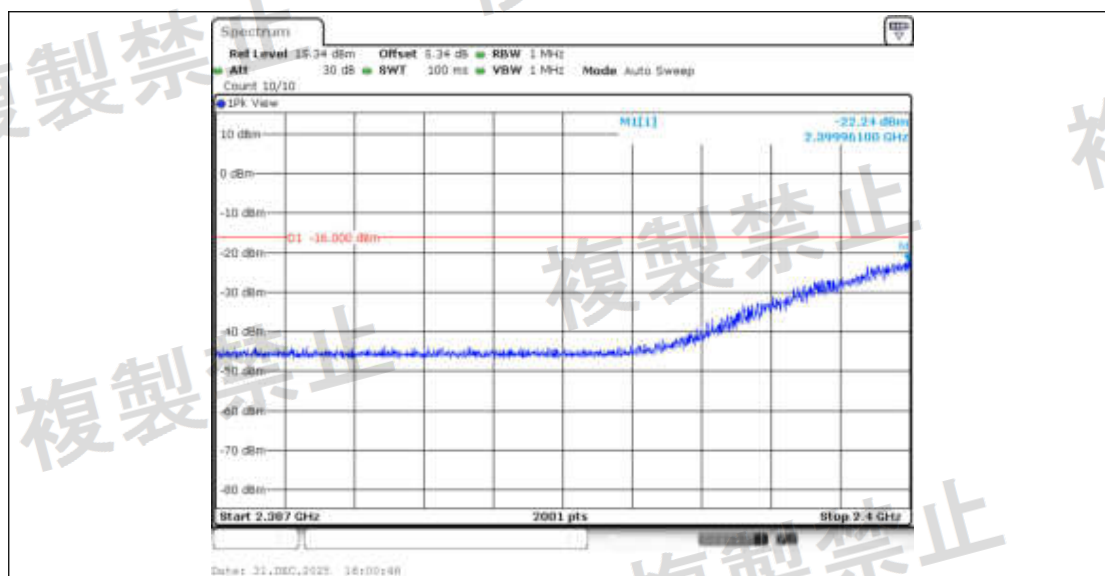


NTNV_11B_Ant1_2472_2496.5~13000

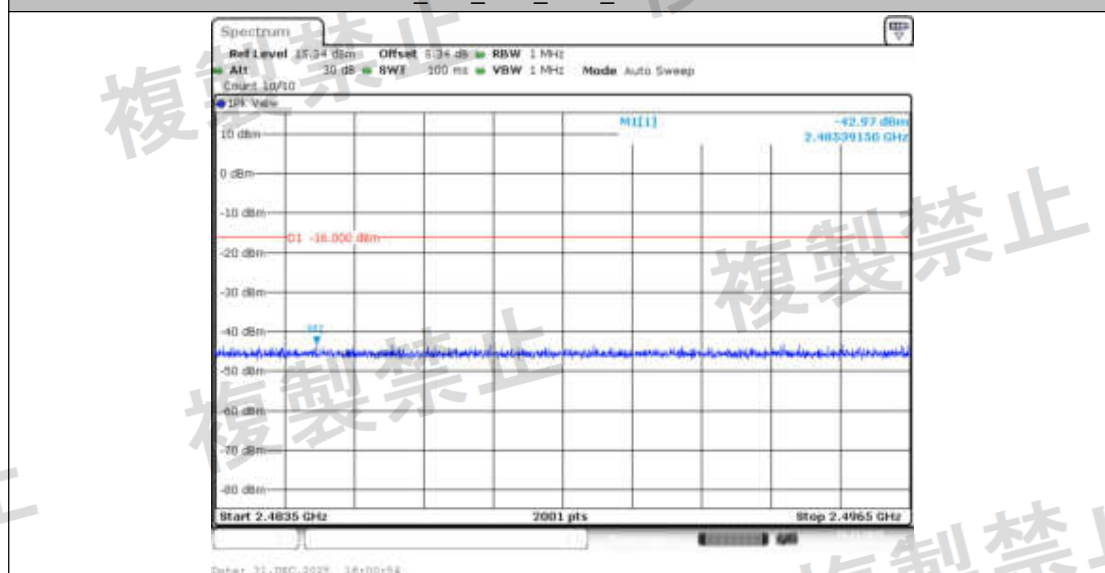




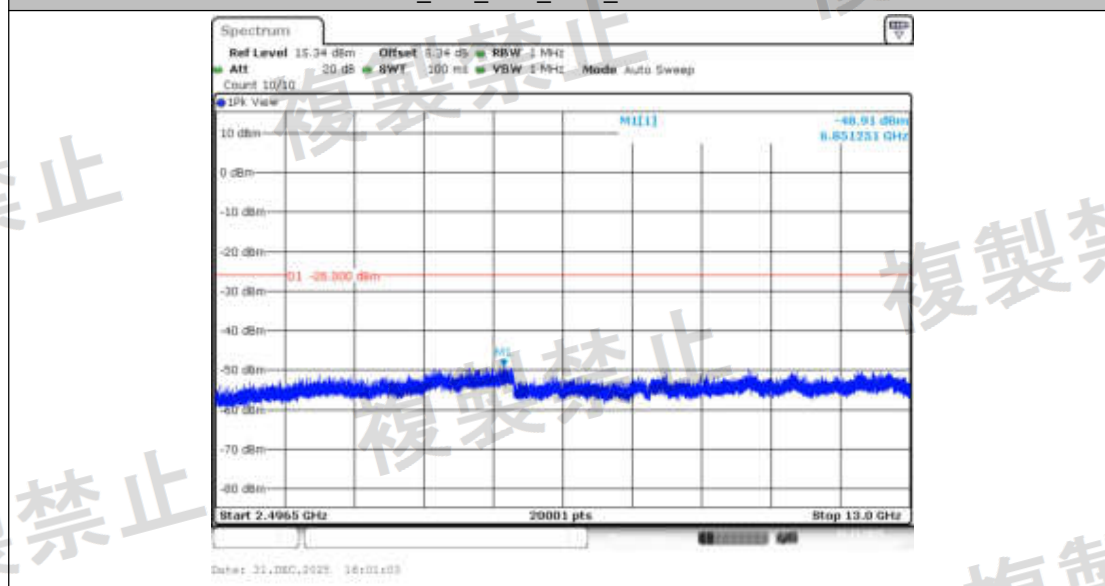
NTNV_11G_Ant1_2412_2387~2400

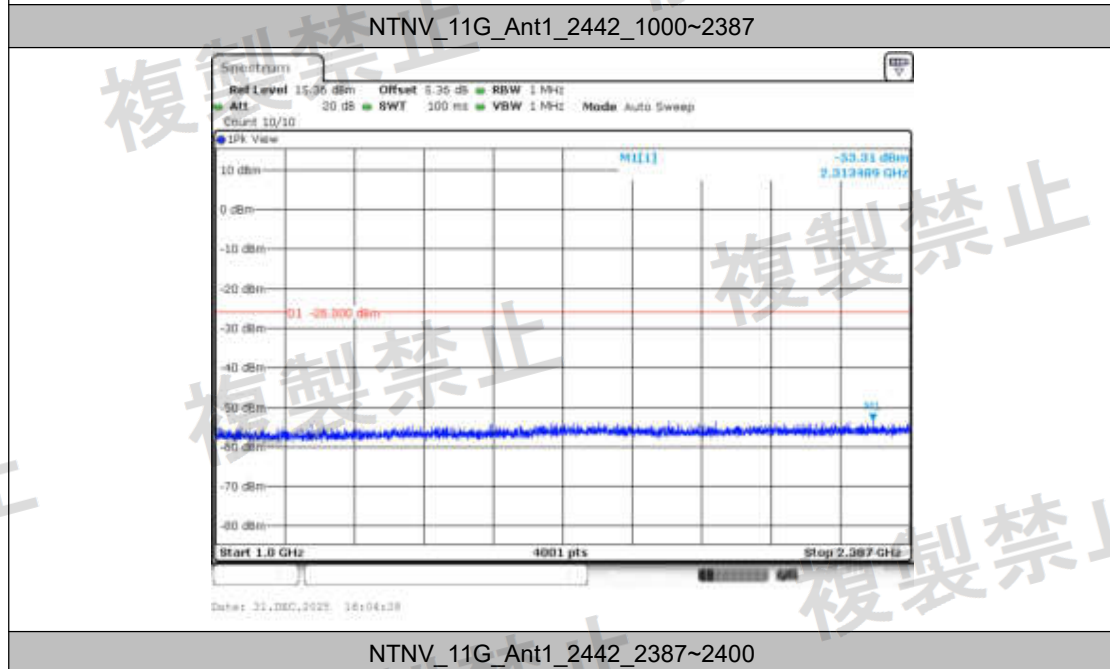
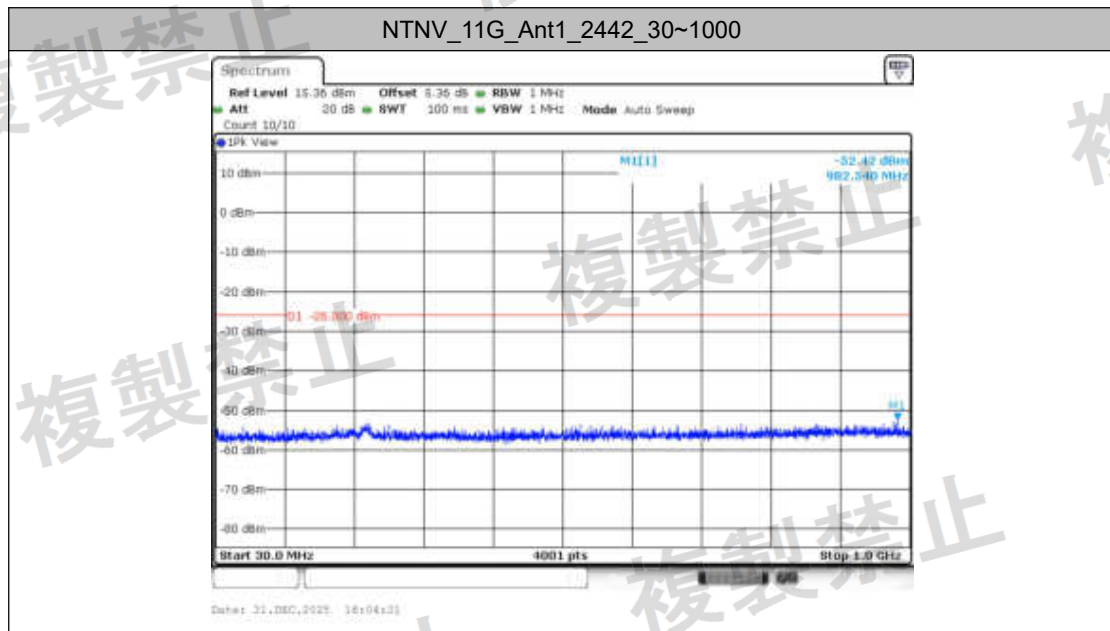


NTNV_11G_Ant1_2412_2483.5~2496.5

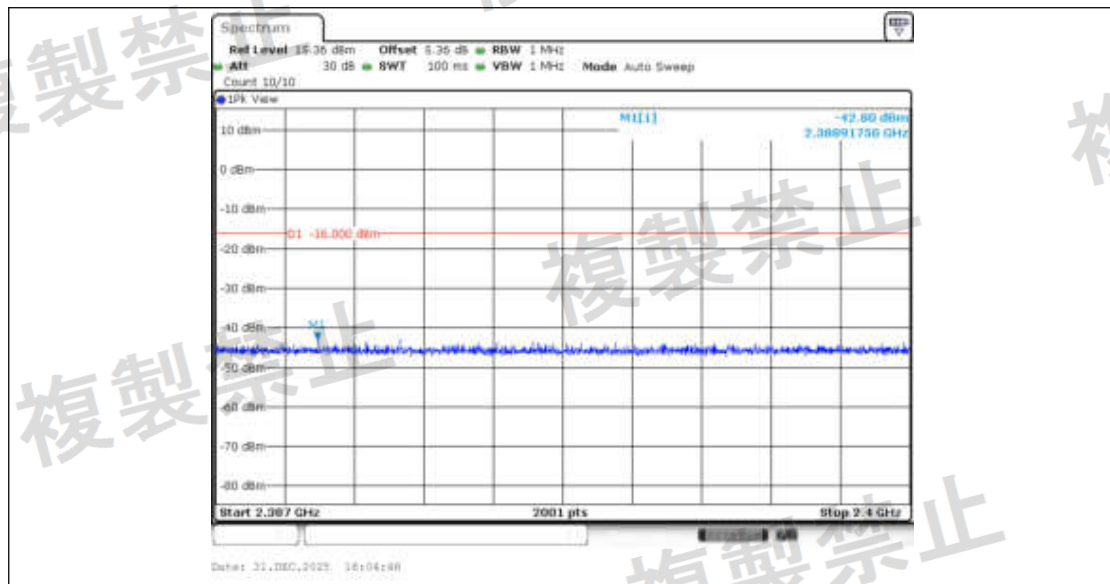


NTNV_11G_Ant1_2412_2496.5~13000

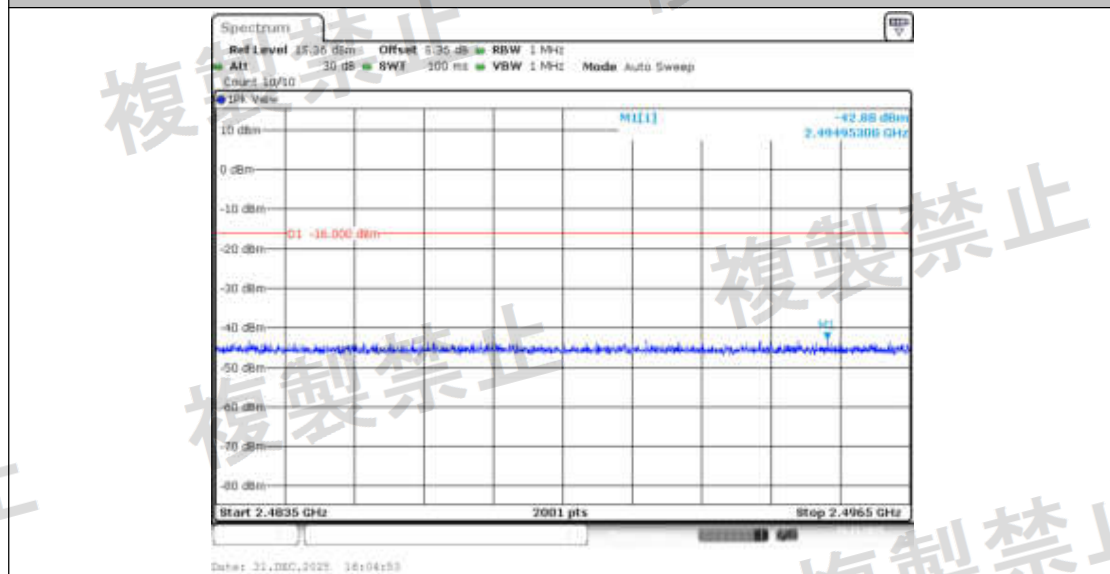




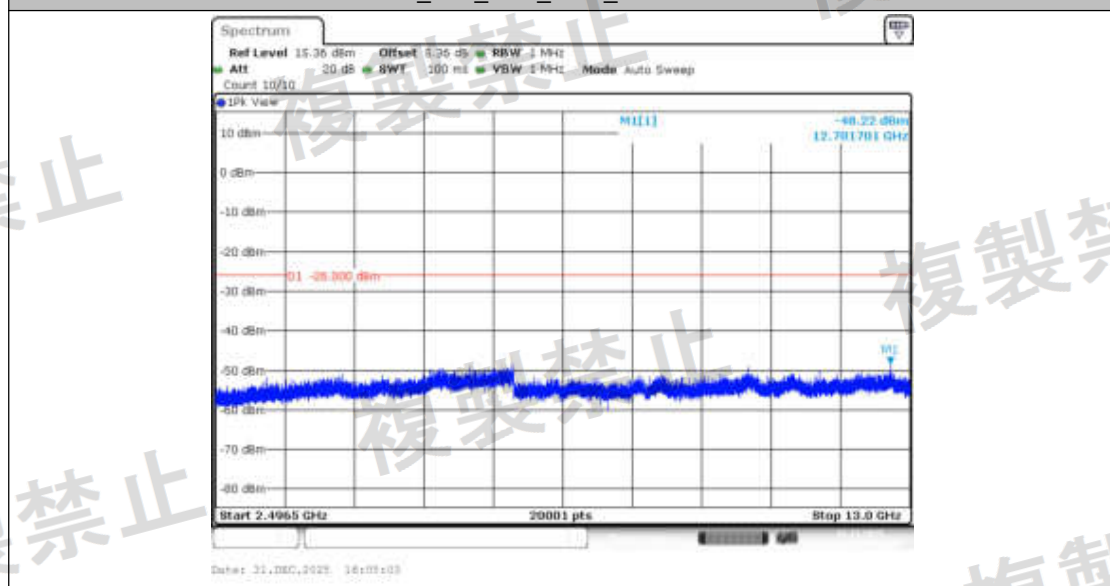
NTNV_11G_Ant1_2442_2387~2400

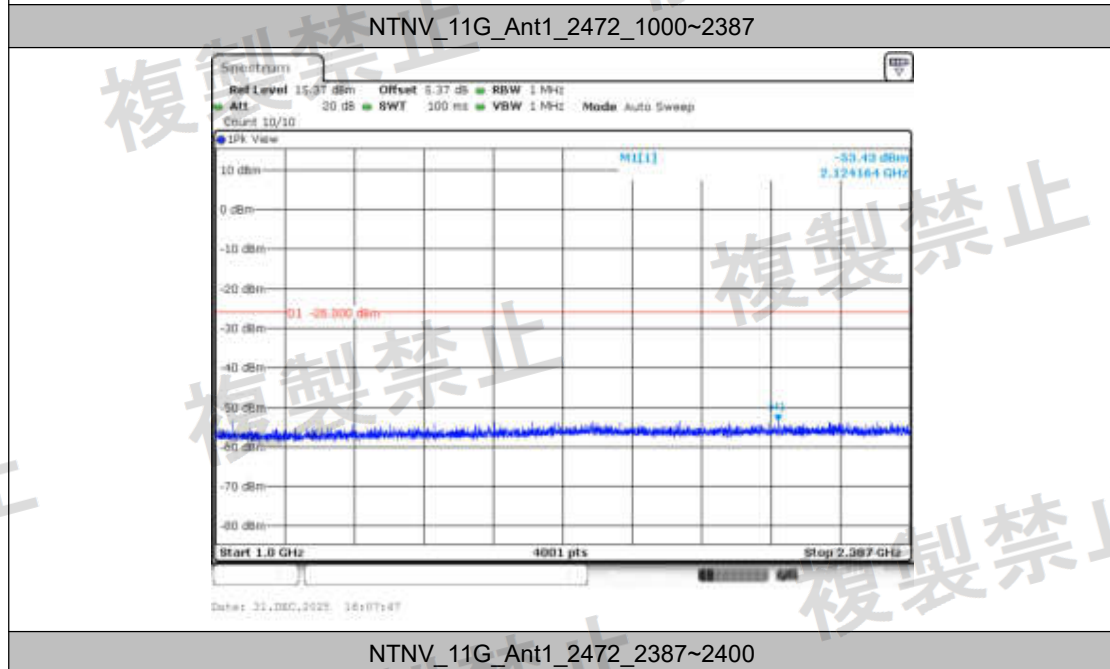
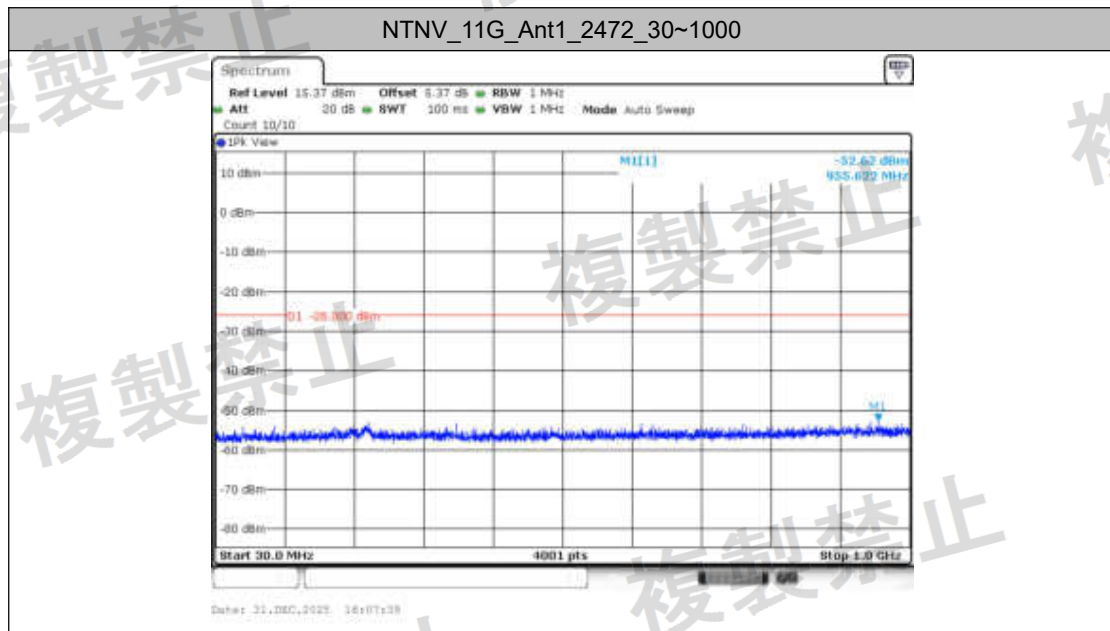


NTNV_11G_Ant1_2442_2483.5~2496.5

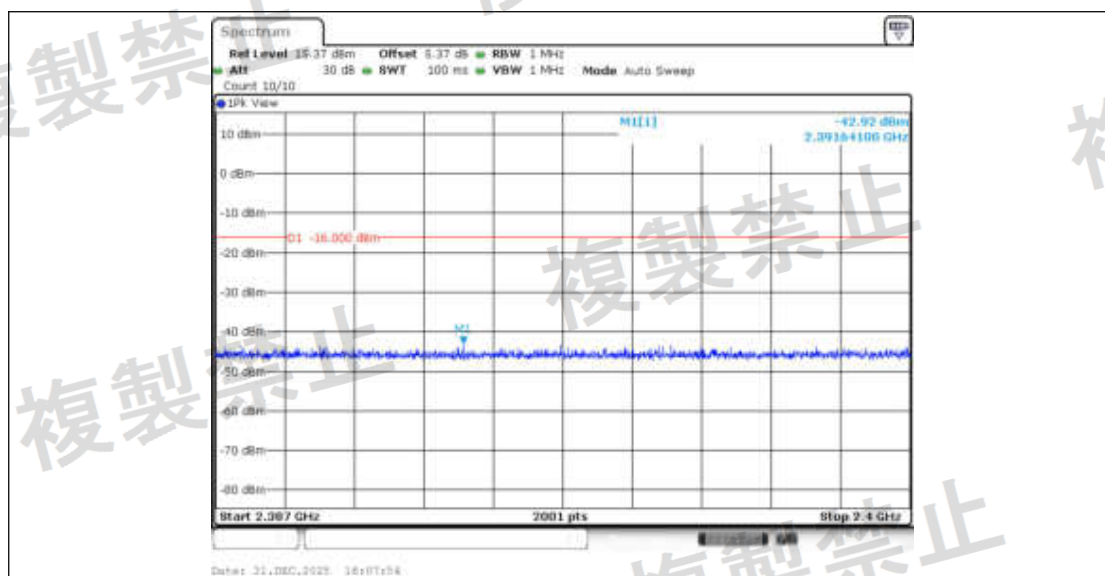


NTNV_11G_Ant1_2442_2496.5~13000

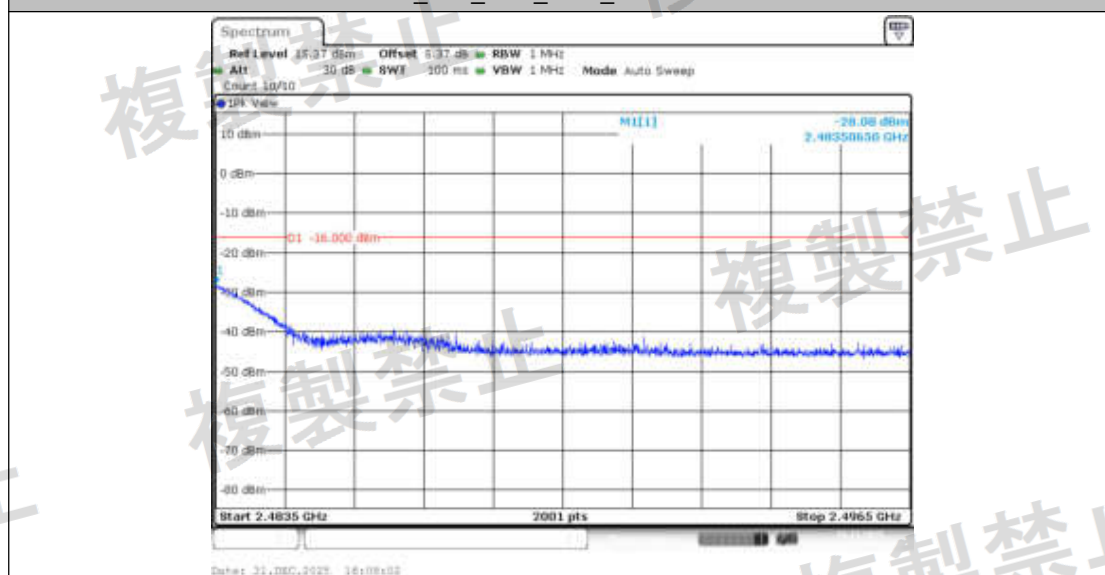




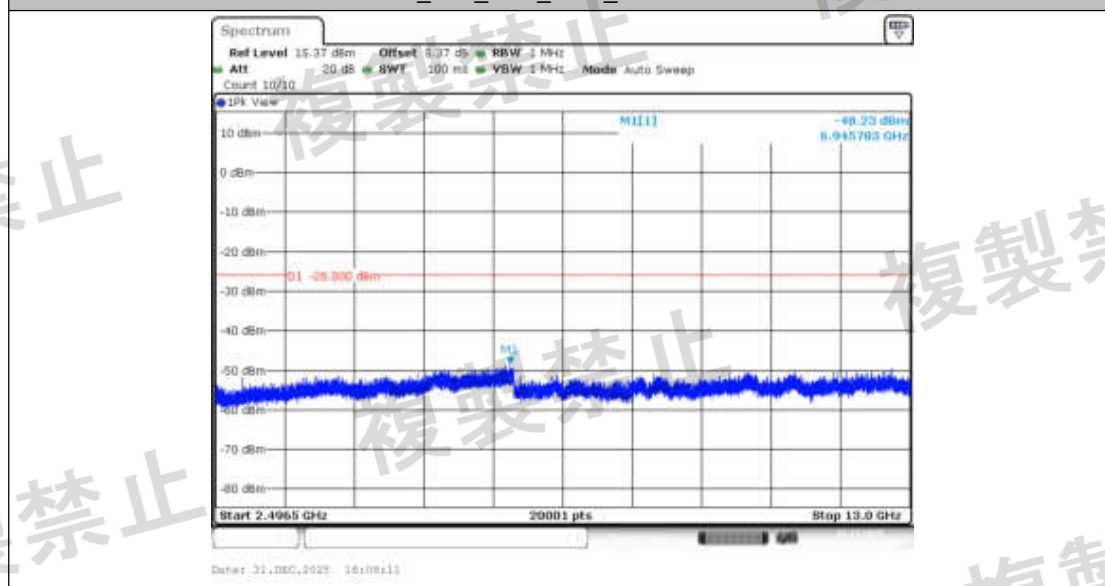
NTNV_11G_Ant1_2472_2387~2400

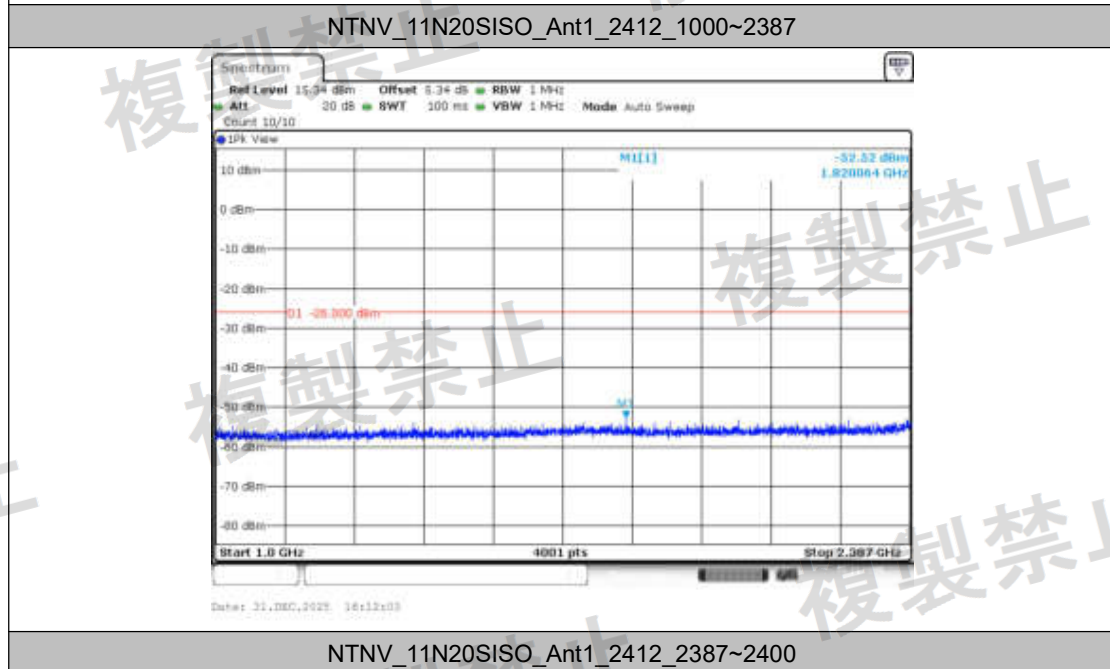
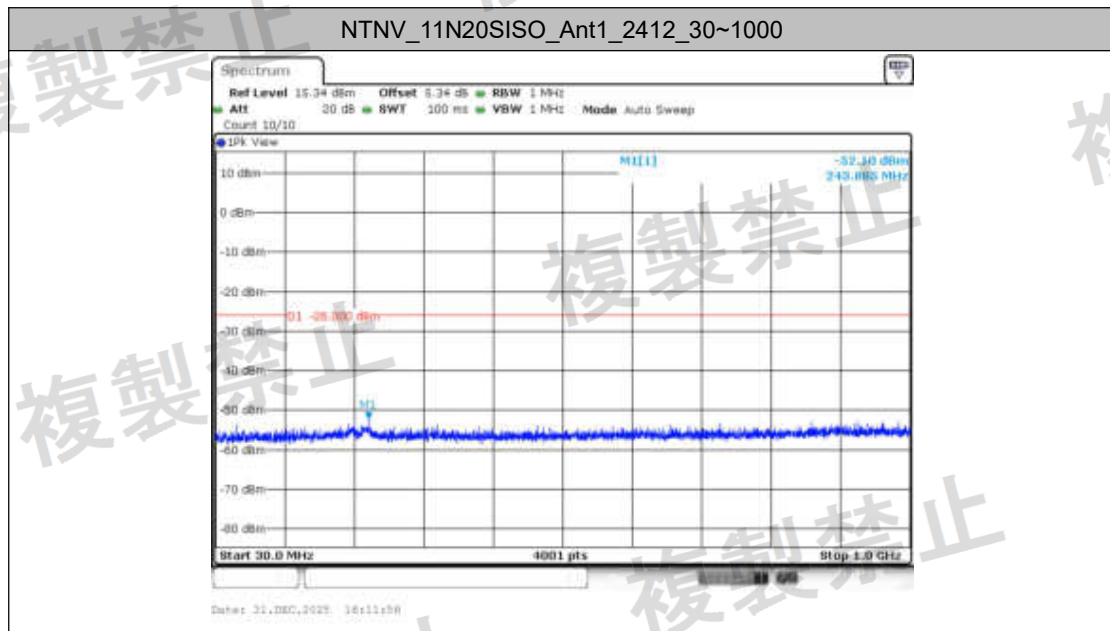


NTNV_11G_Ant1_2472_2483.5~2496.5

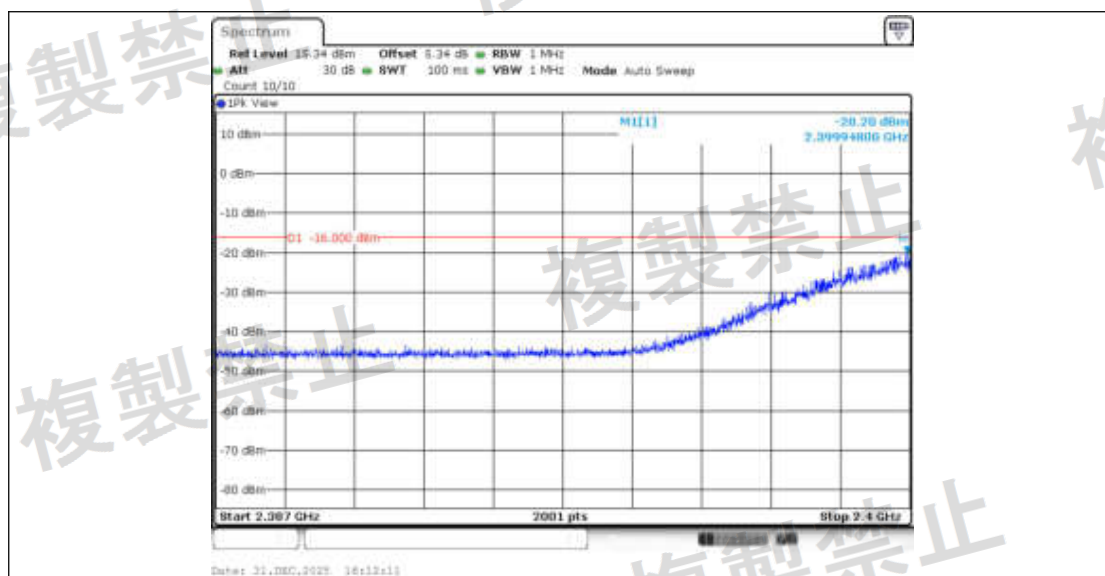


NTNV_11G_Ant1_2472_2496.5~13000

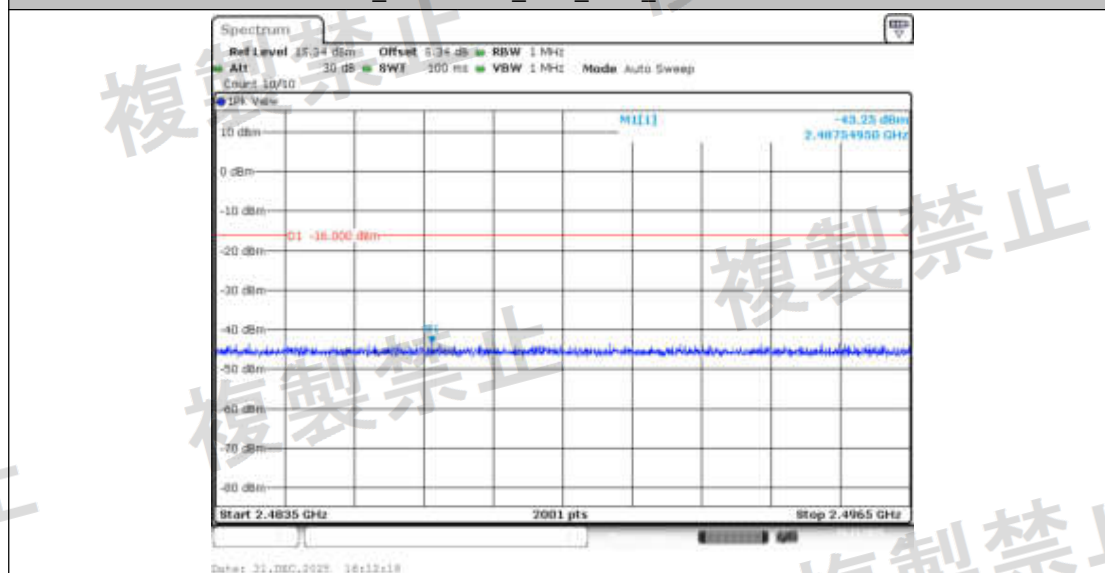




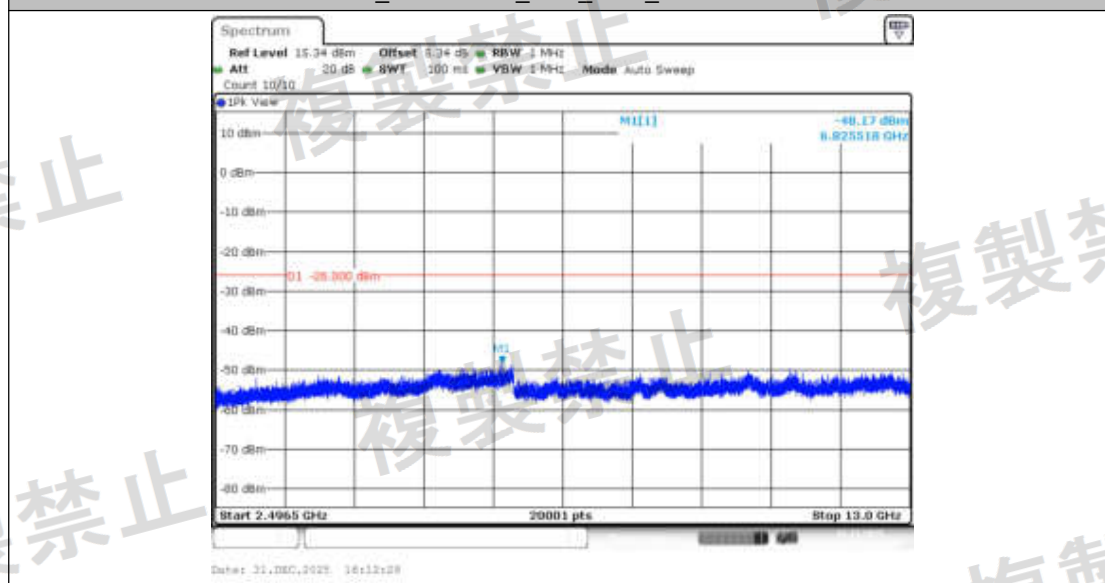
NTNV_11N20SISO_Ant1_2412_2387~2400

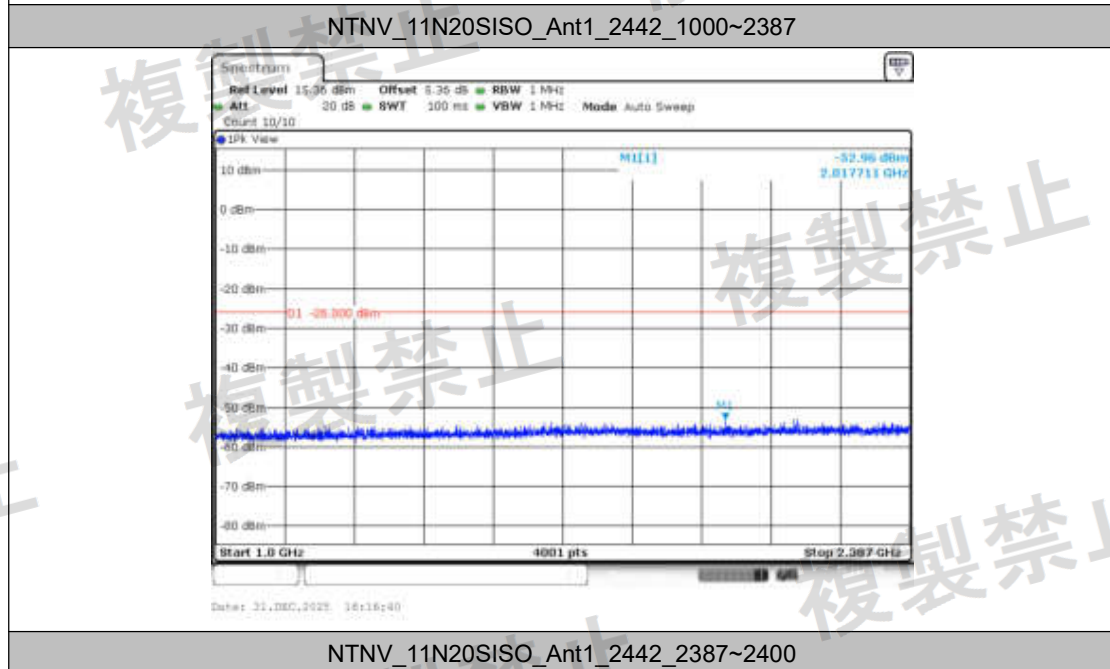
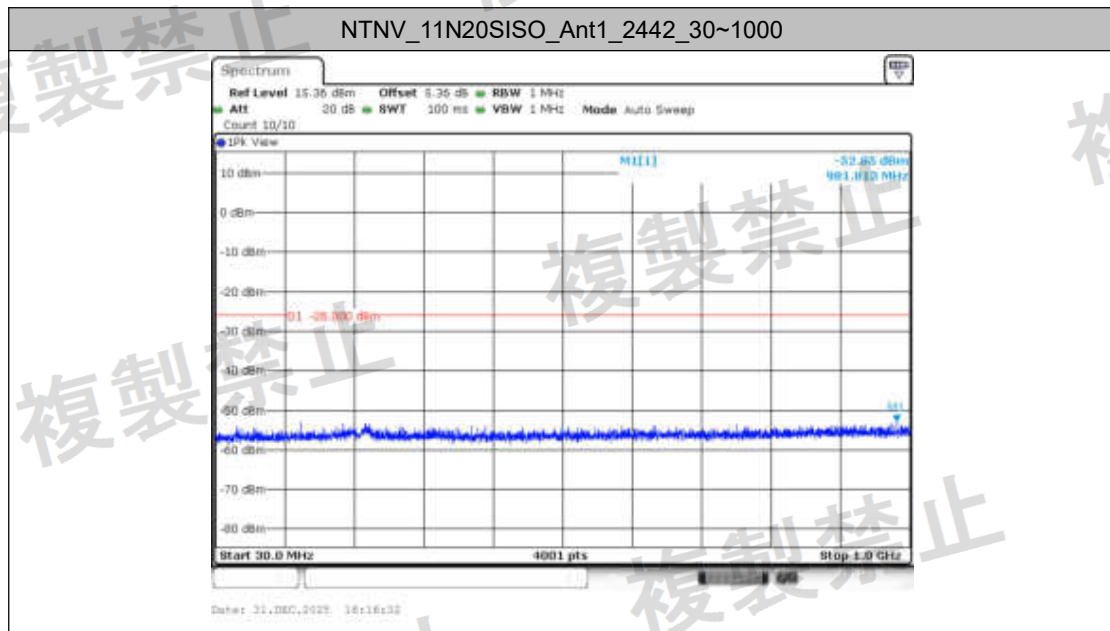


NTNV_11N20SISO_Ant1_2412_2483.5~2496.5

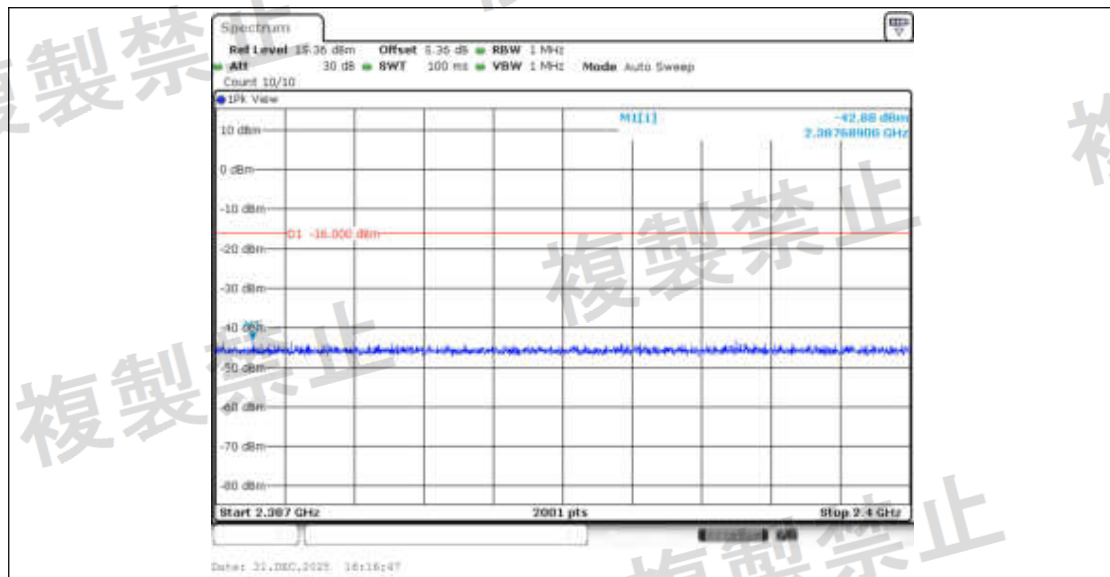


NTNV_11N20SISO_Ant1_2412_2496.5~13000

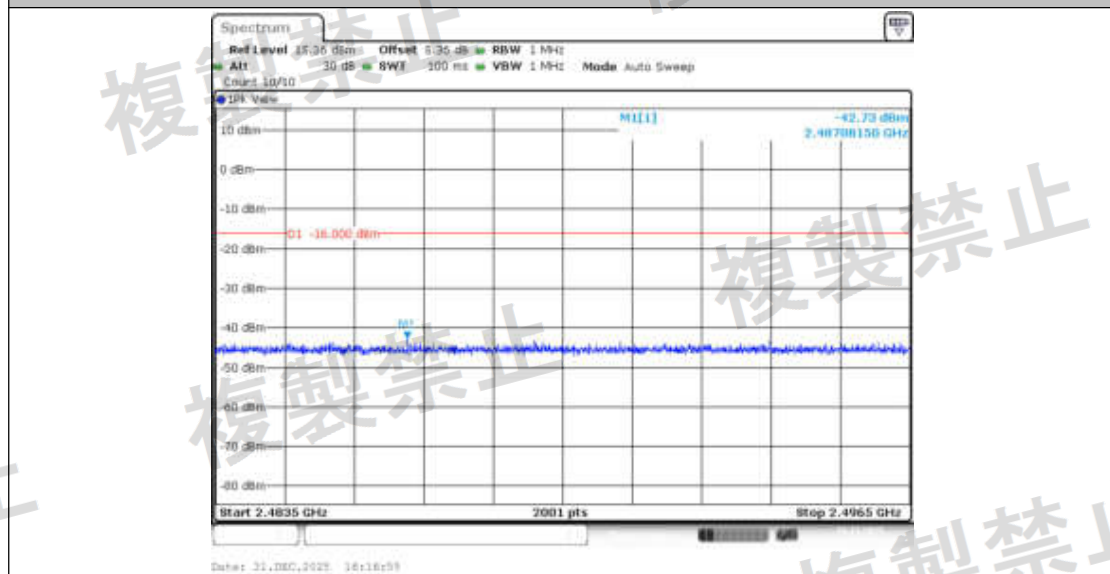




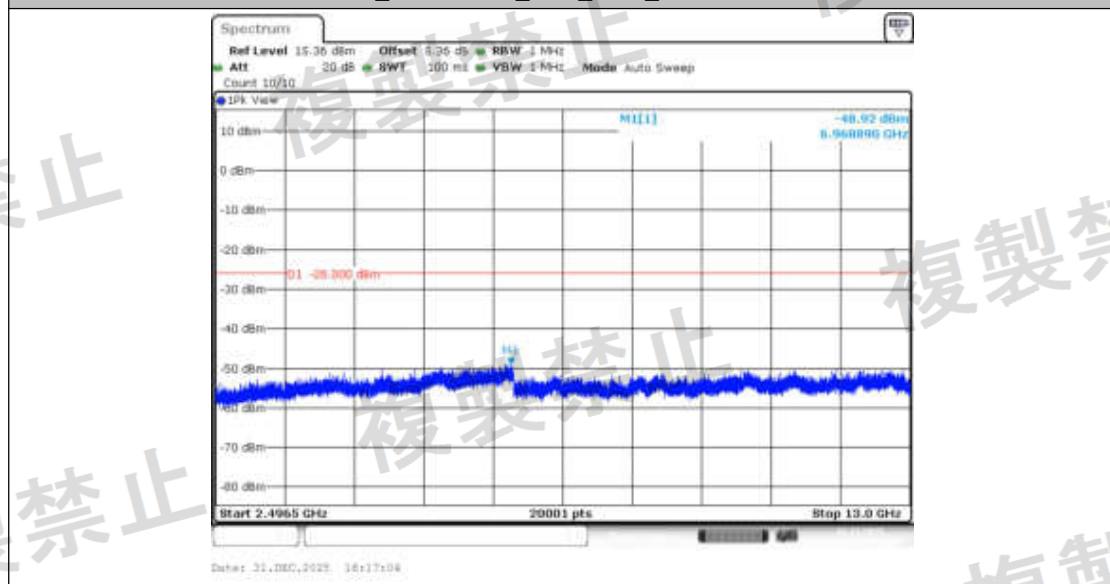
NTNV_11N20SISO_Ant1_2442_2387~2400

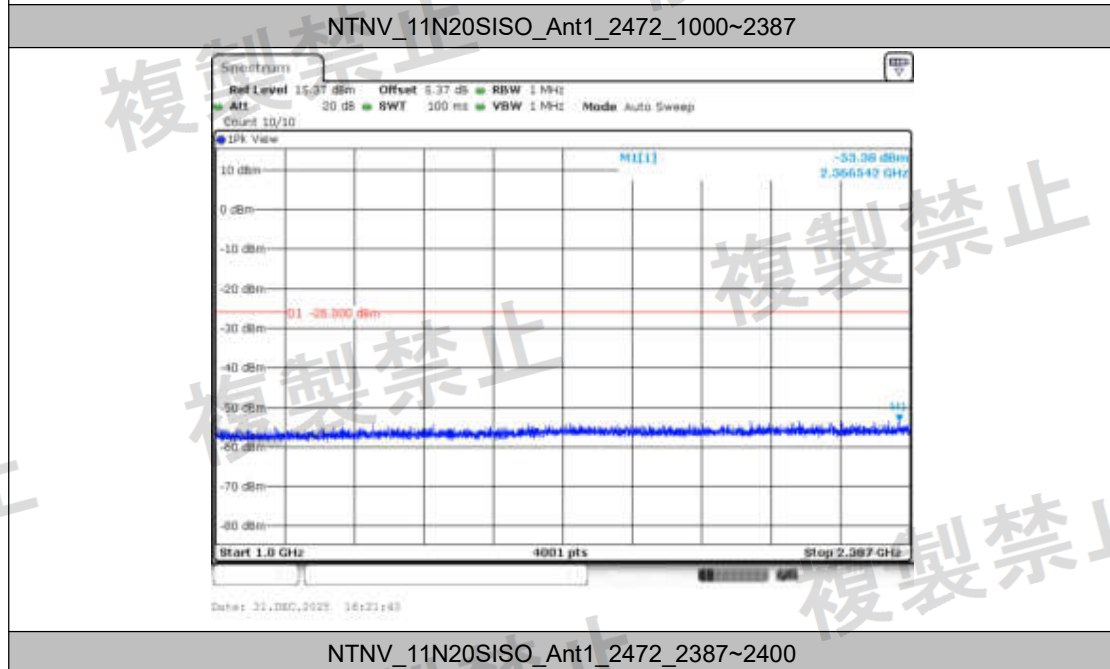
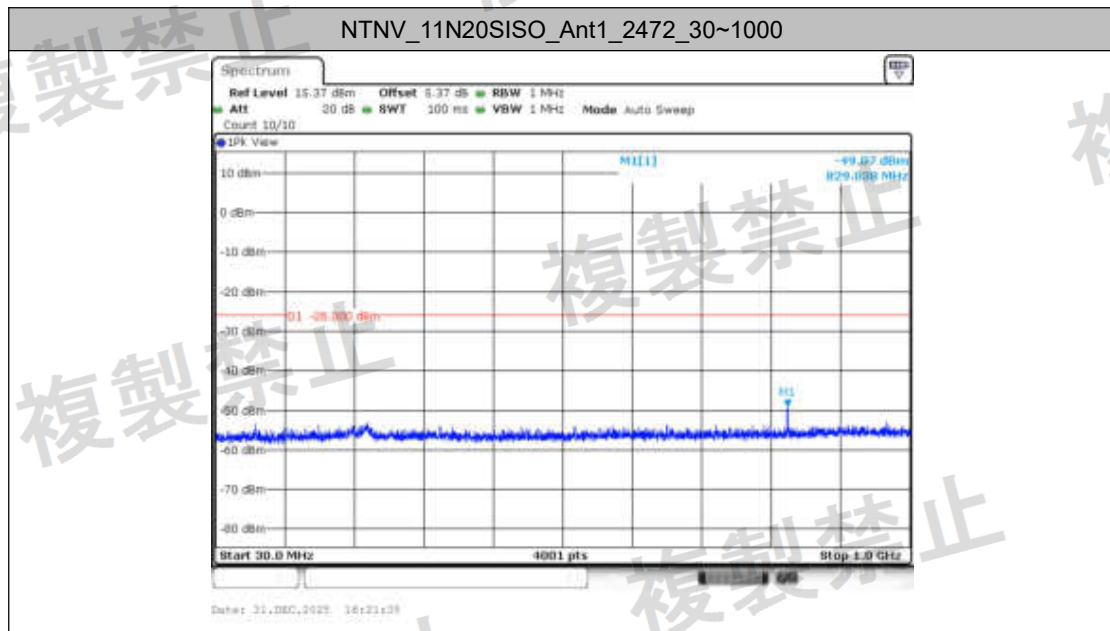


NTNV_11N20SISO_Ant1_2442_2483.5~2496.5

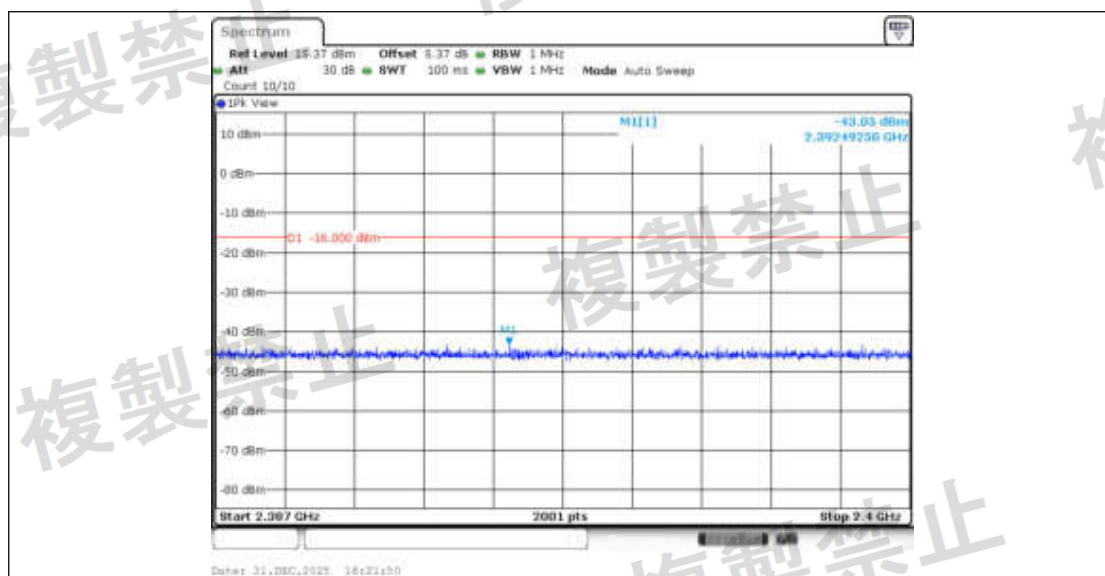


NTNV_11N20SISO_Ant1_2442_2496.5~13000

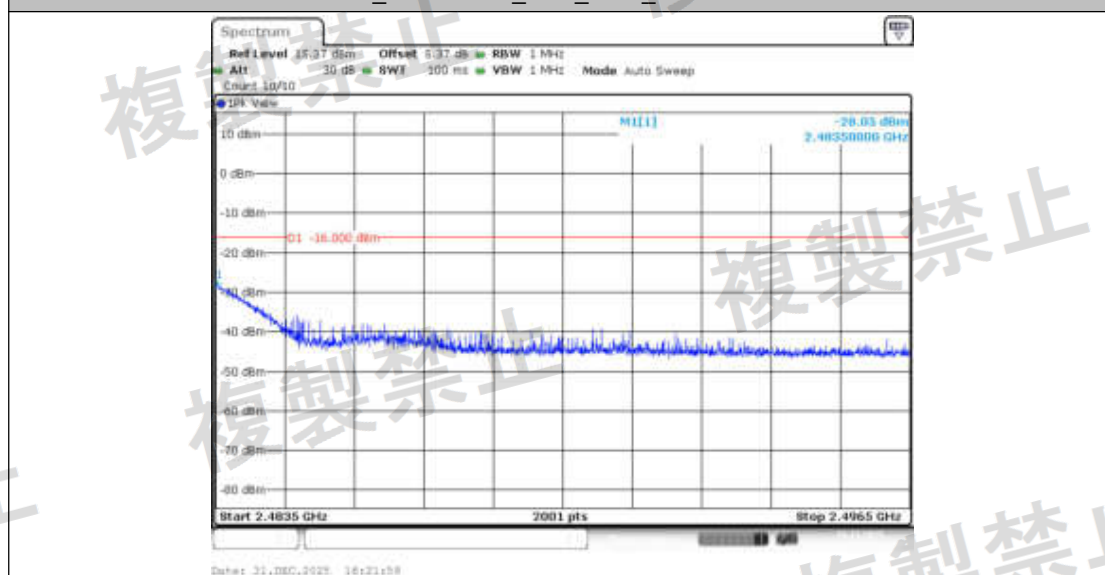




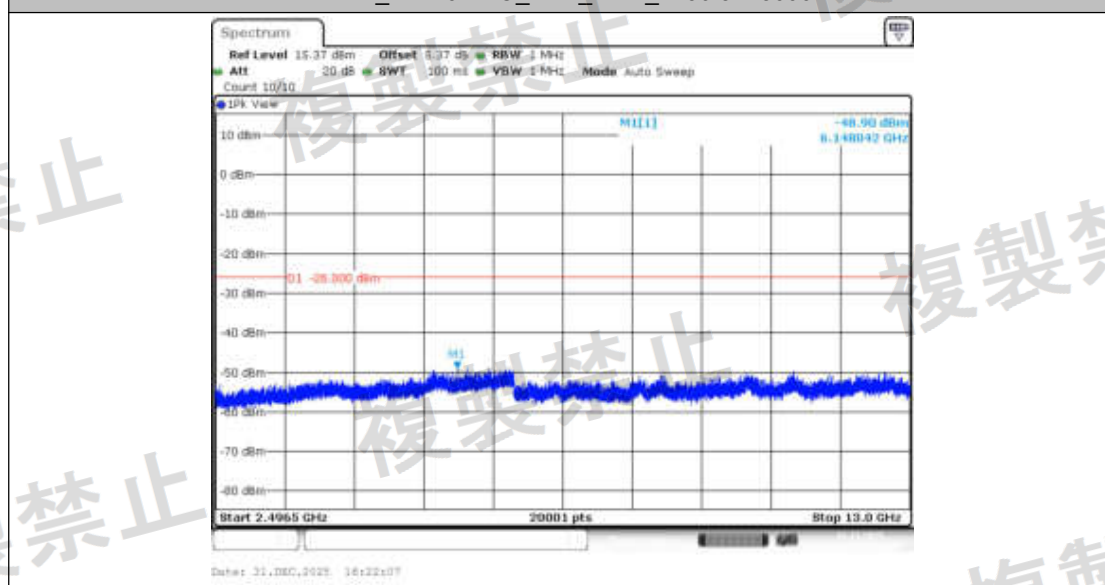
NTNV_11N20SISO_Ant1_2472_2387~2400

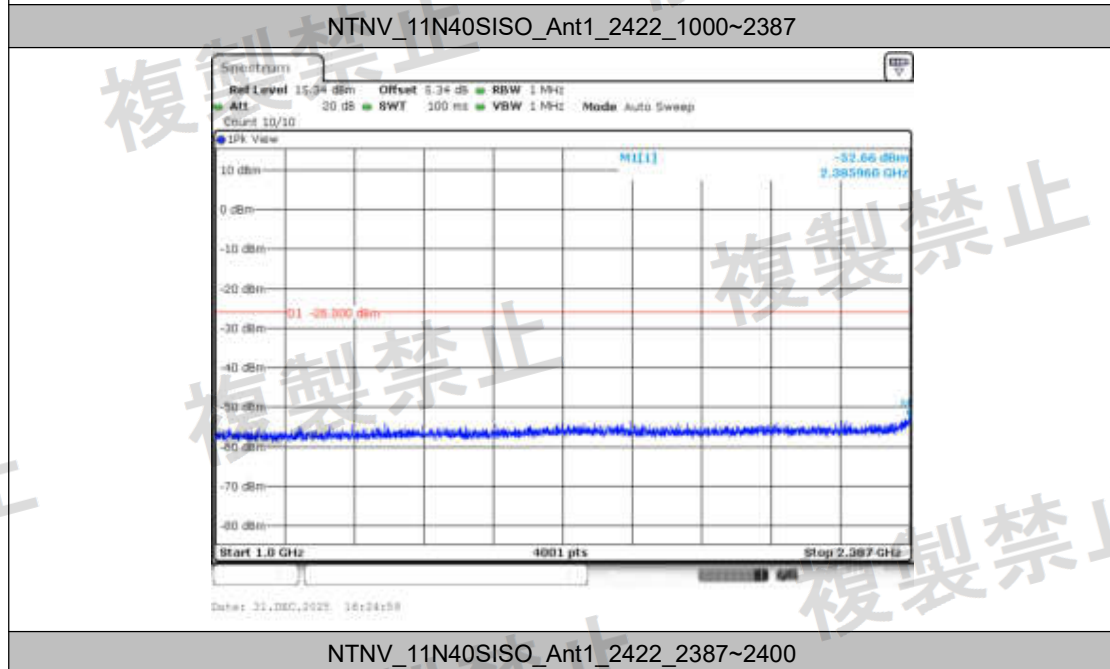
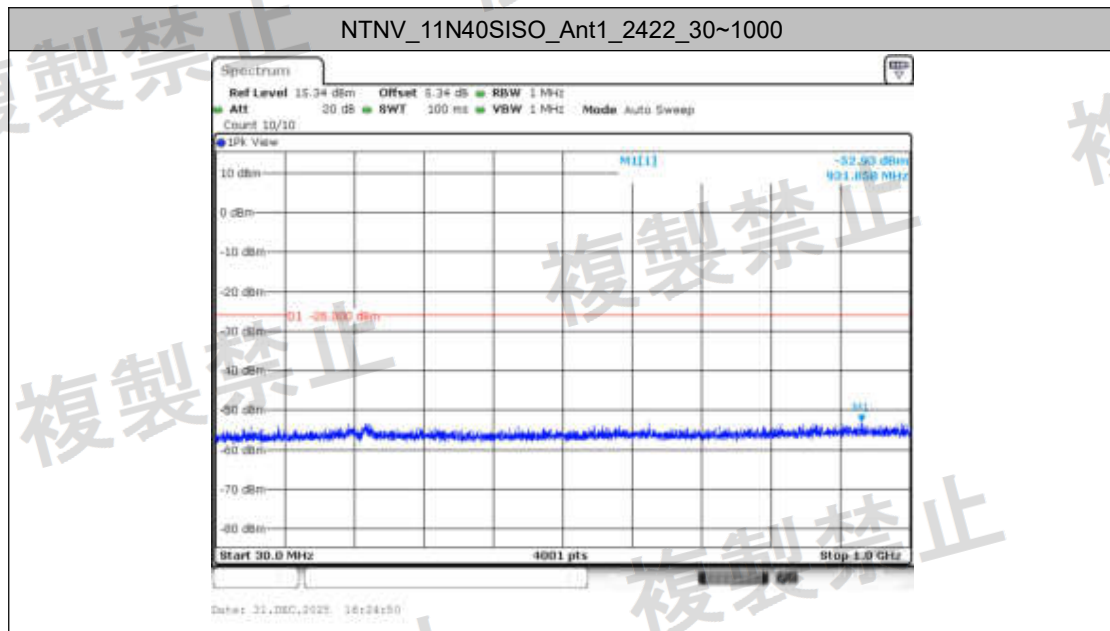


NTNV_11N20SISO_Ant1_2472_2483.5~2496.5

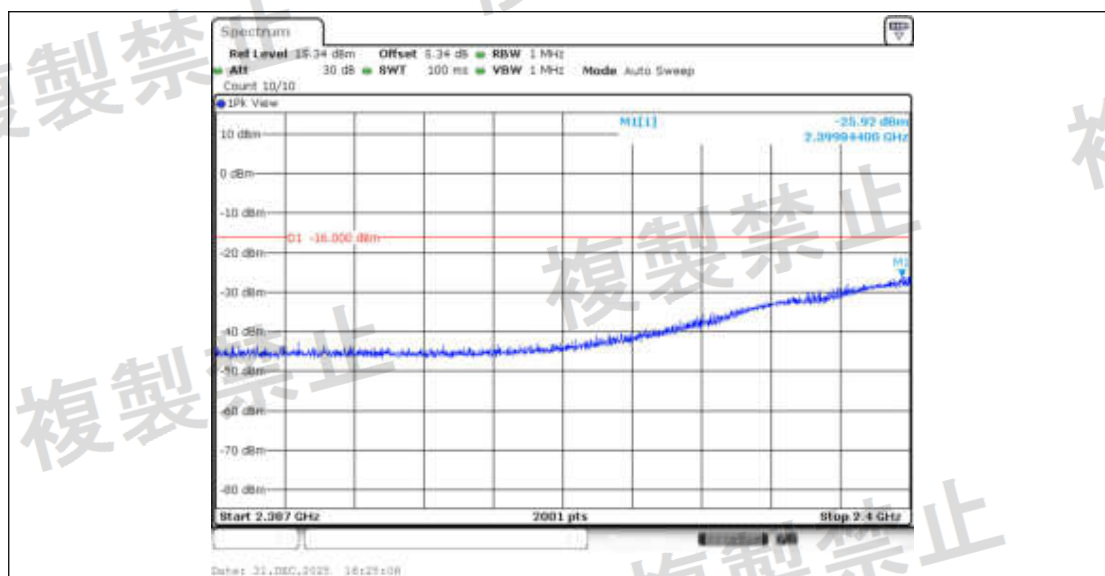


NTNV_11N20SISO_Ant1_2472_2496.5~13000

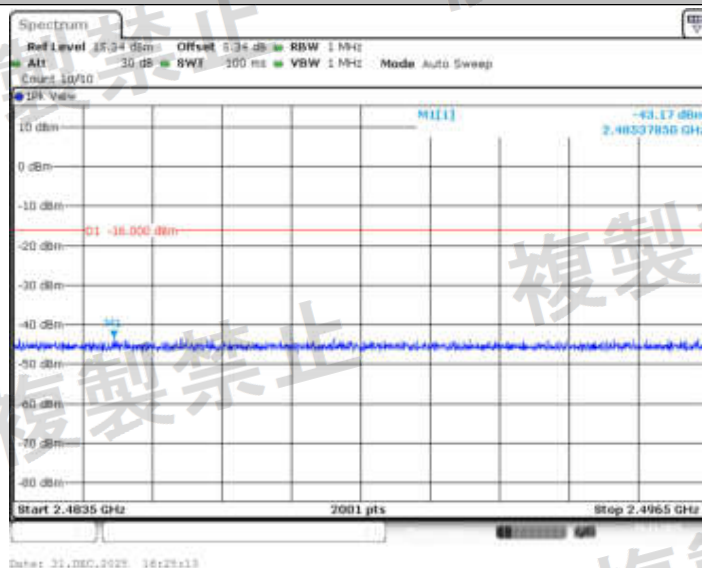




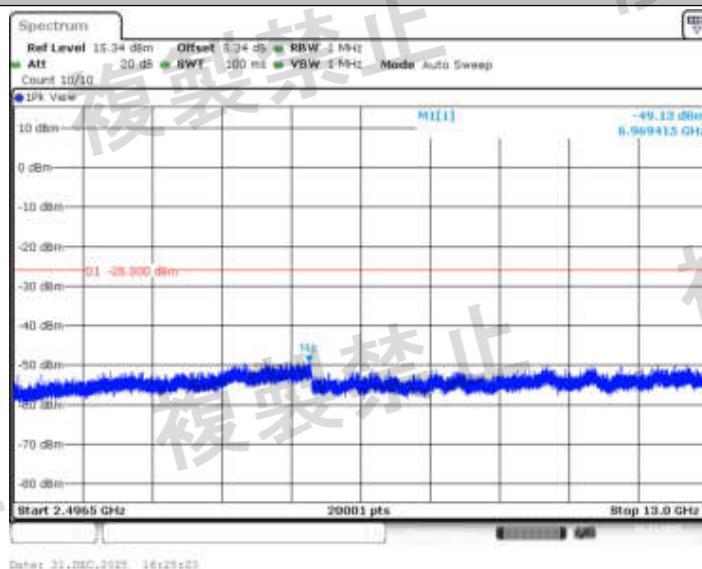
NTNV_11N40SISO_Ant1_2422_2387~2400



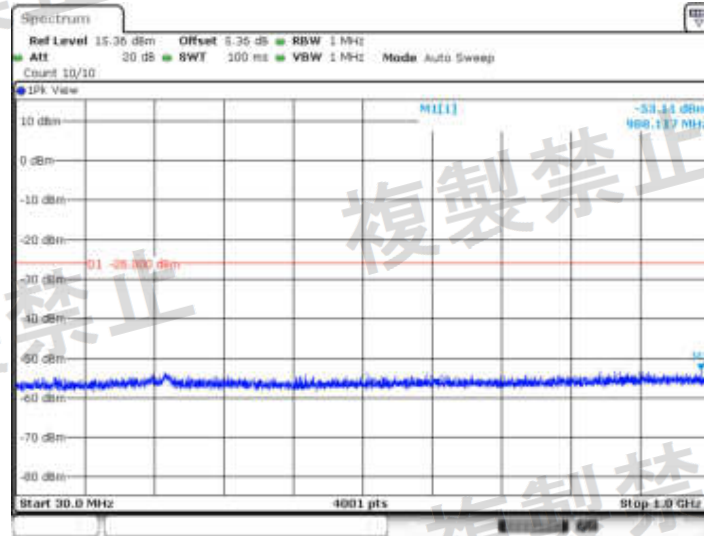
NTNV_11N40SISO_Ant1_2422_2483.5~2496.5



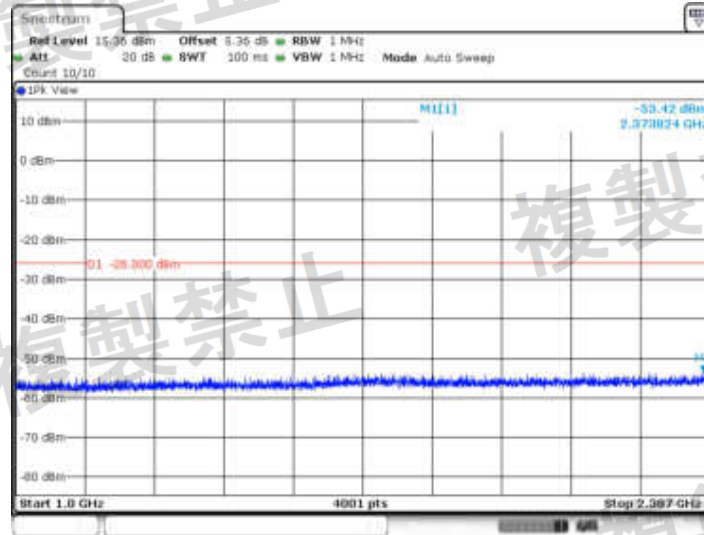
NTNV_11N40SISO_Ant1_2422_2496.5~13000



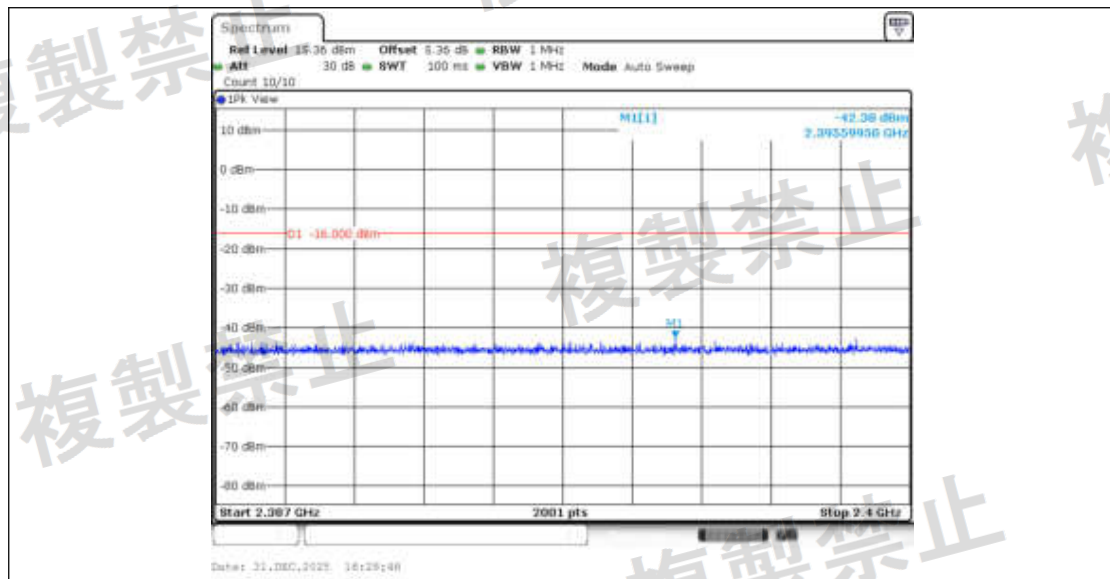
NTNV_11N40SISO_Ant1_2442_30~1000



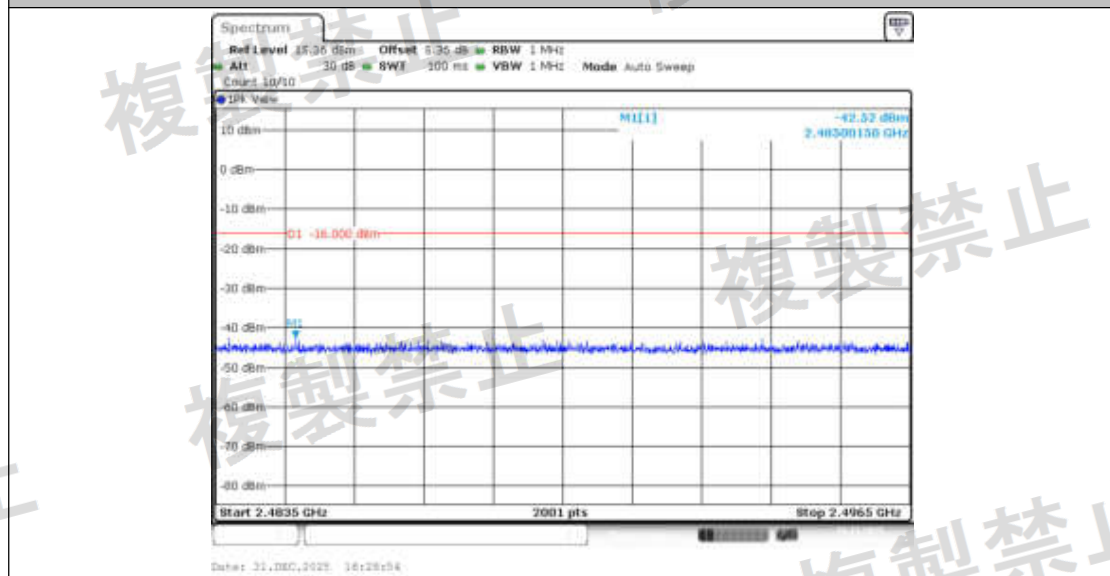
NTNV_11N40SISO_Ant1_2442_1000~2387



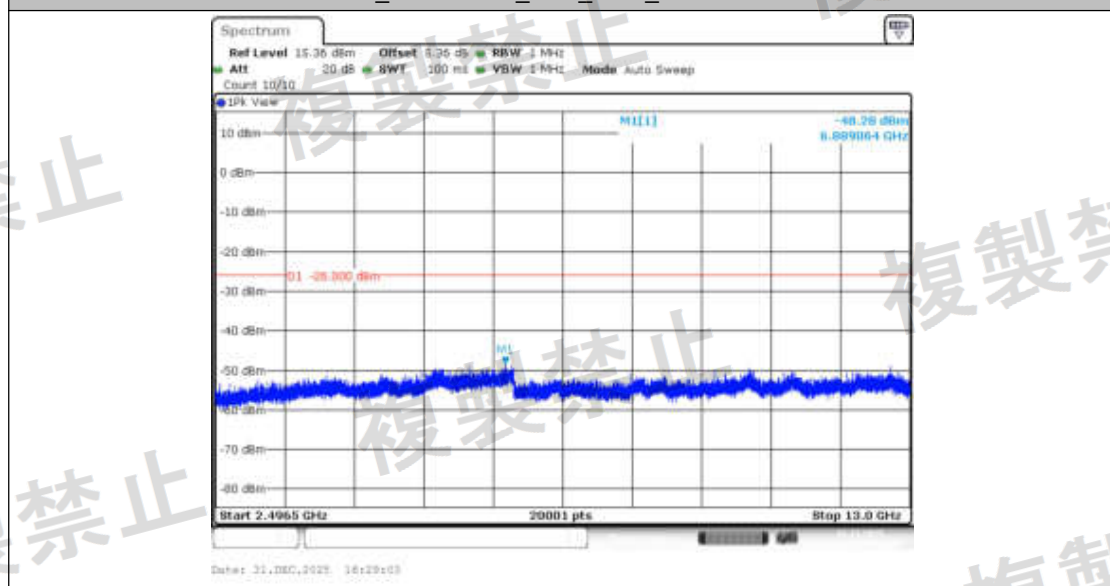
NTNV_11N40SISO_Ant1_2442_2387~2400

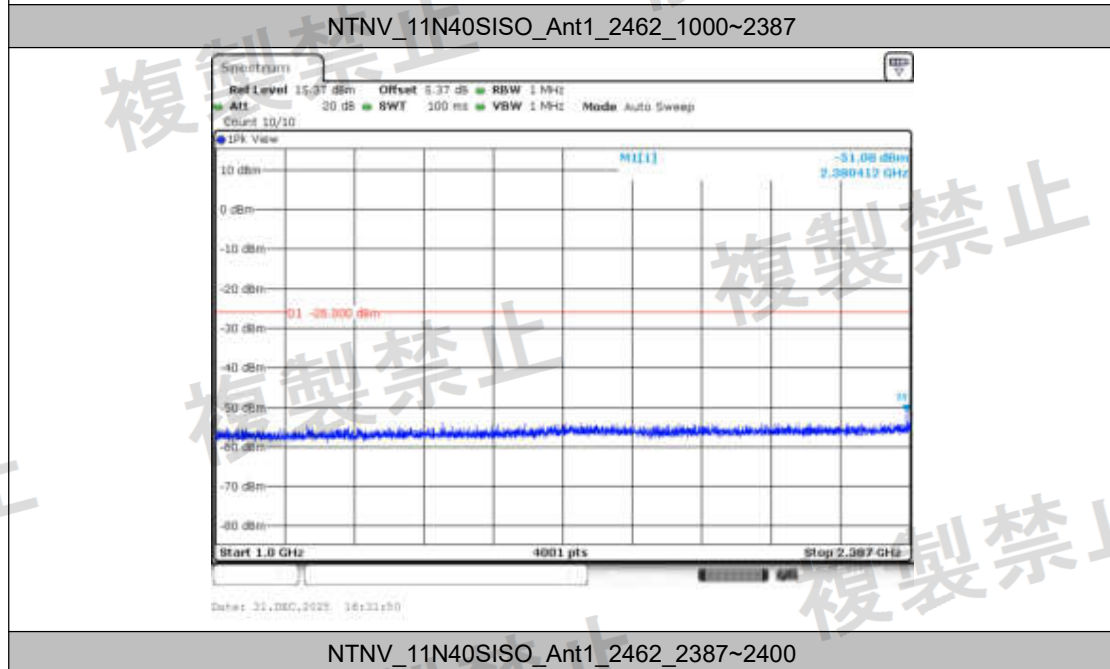
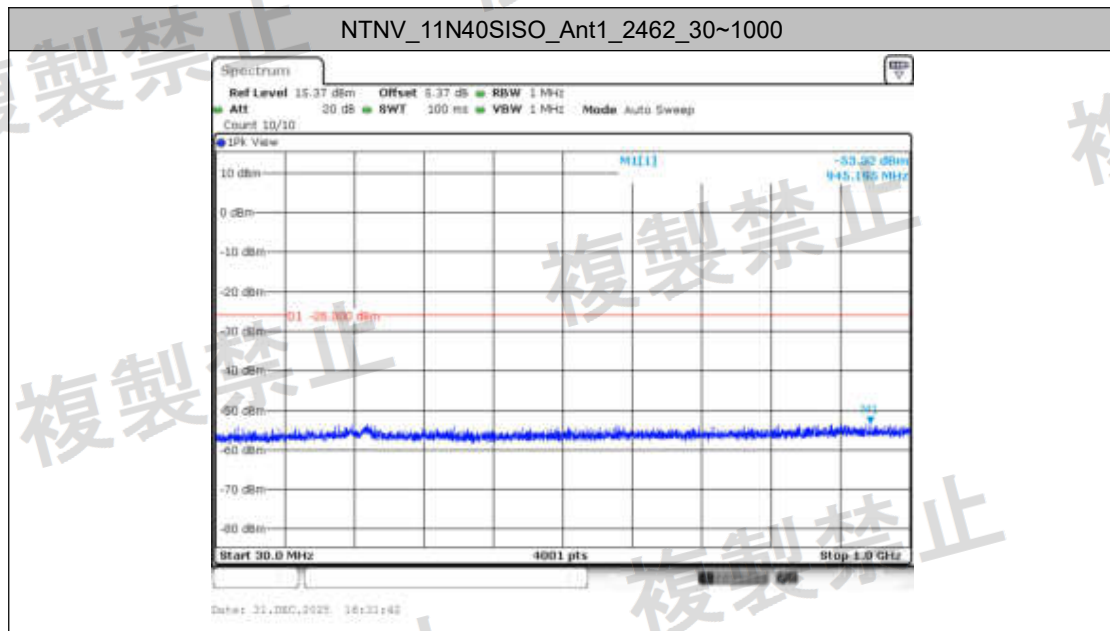


NTNV_11N40SISO_Ant1_2442_2483.5~2496.5

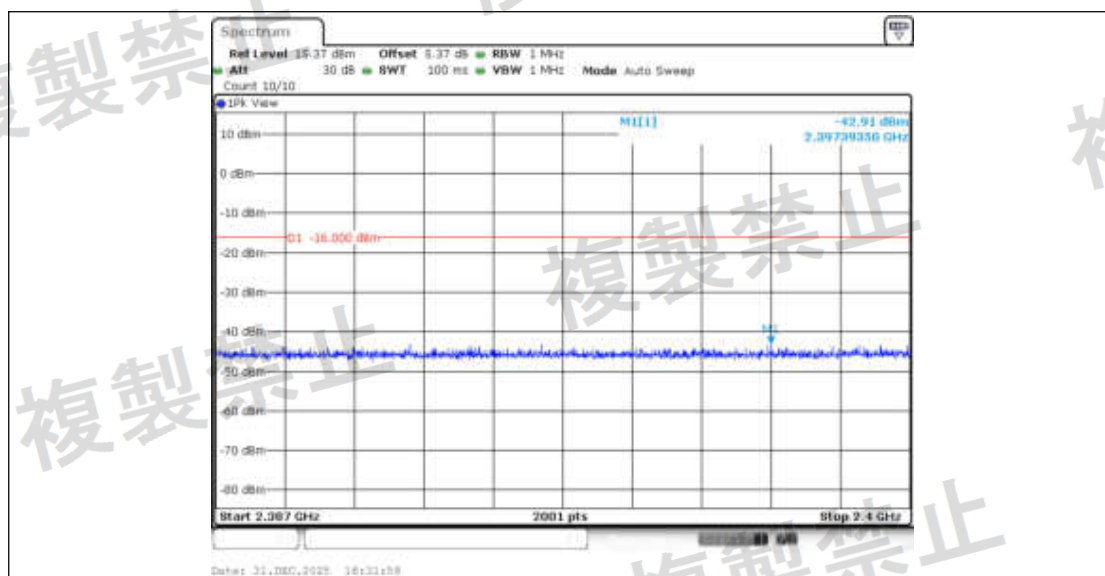


NTNV_11N40SISO_Ant1_2442_2496.5~13000

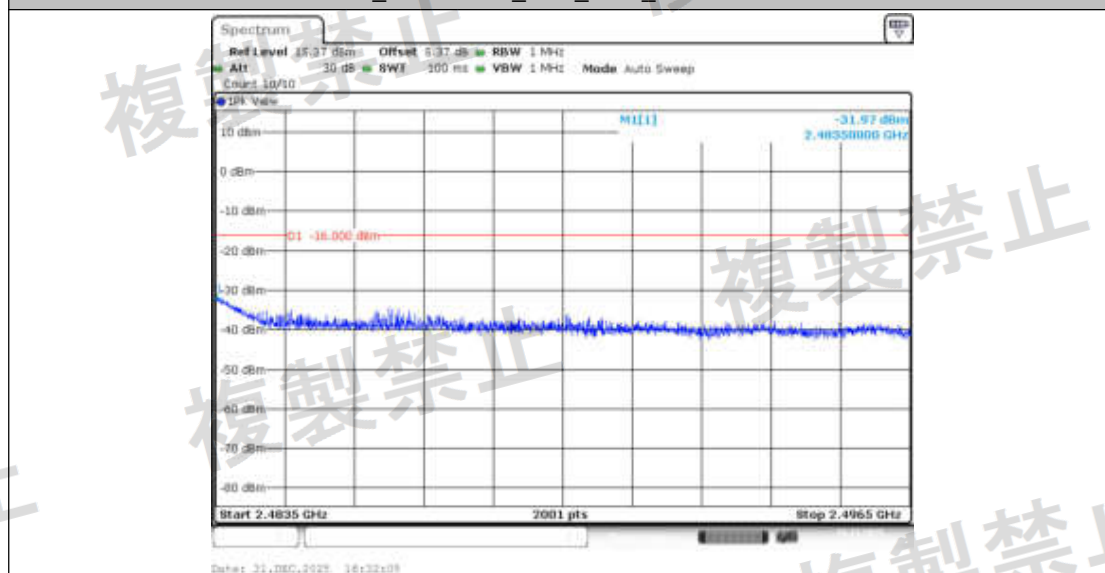




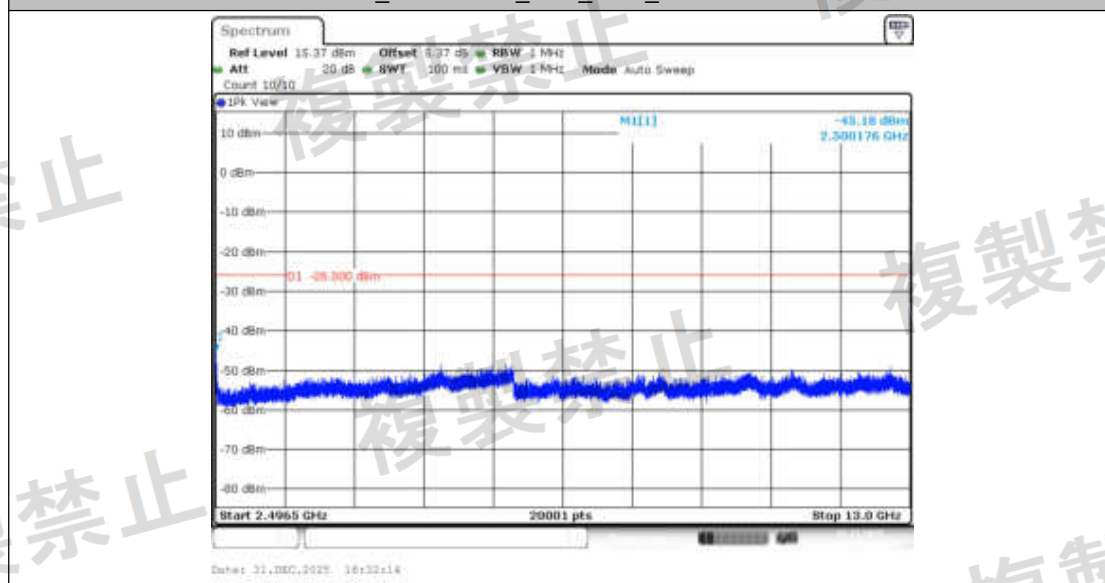
NTNV_11N40SISO_Ant1_2462_2387~2400



NTVN_11N40SISO_Ant1_2462_2483.5~2496.5



NTVN_11N40SISO_Ant1_2462_2496.5~13000

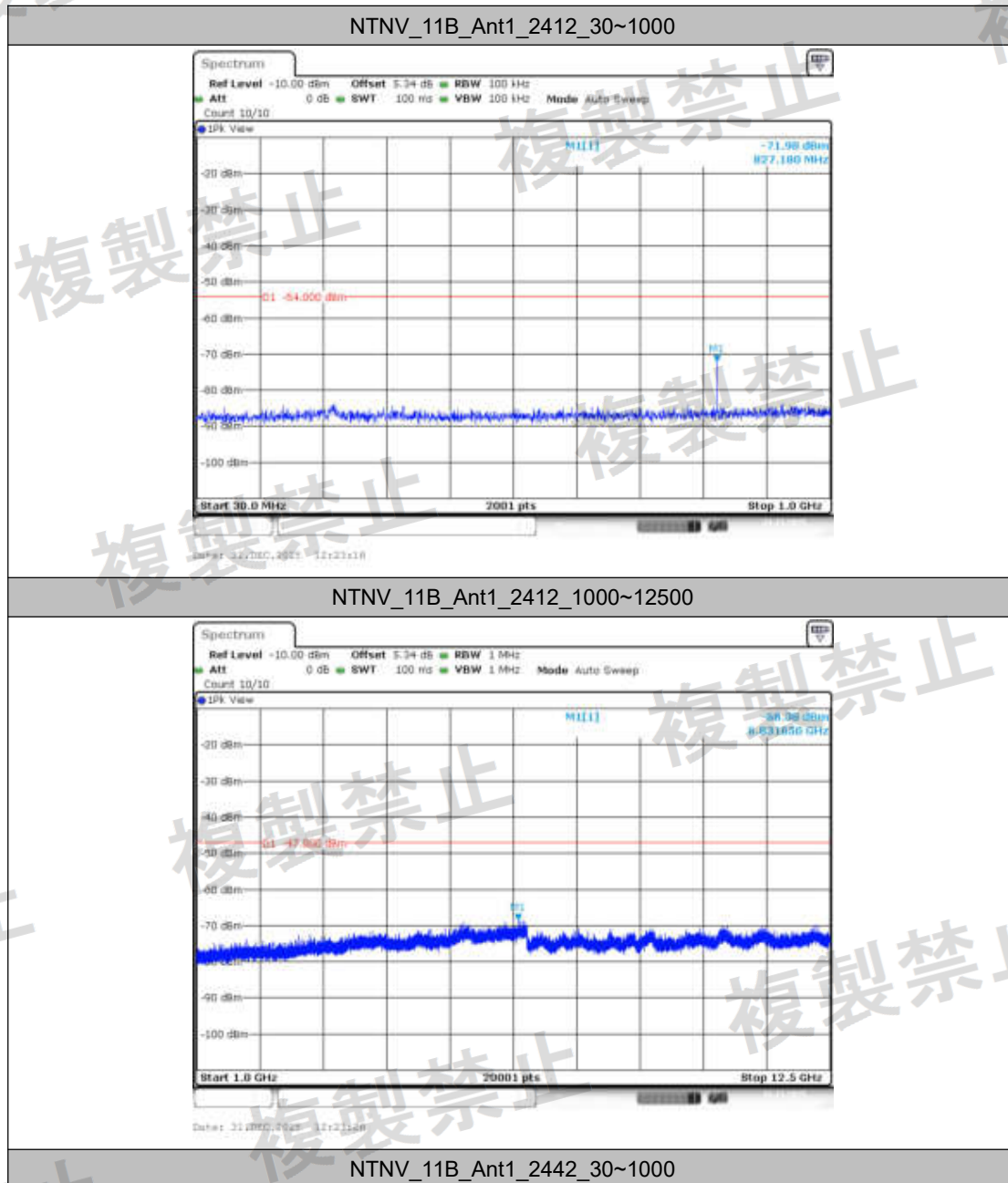


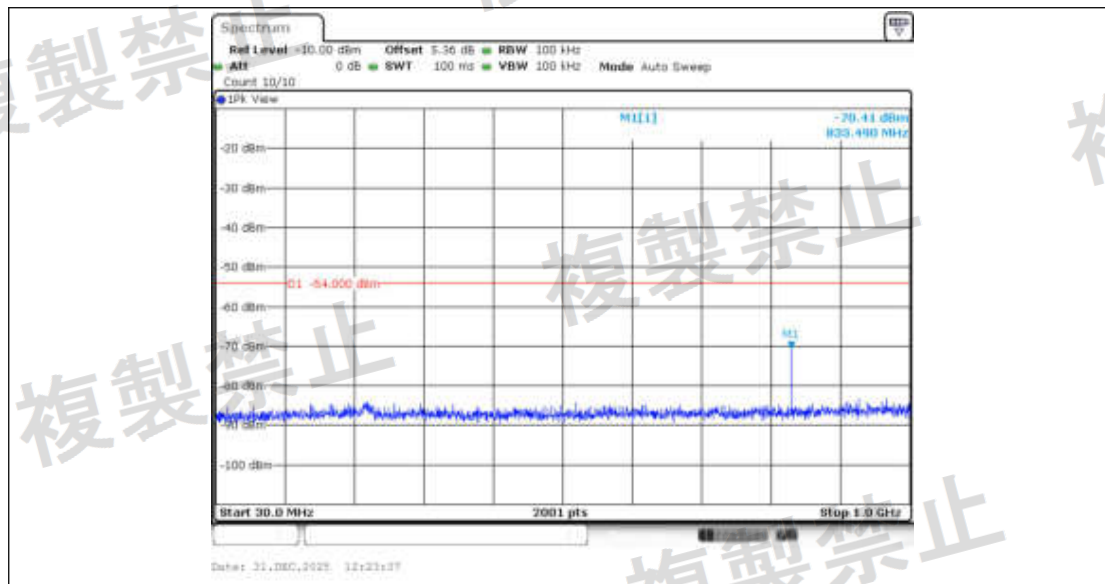
Appendix E: Spurious Emission of RX

Test Result

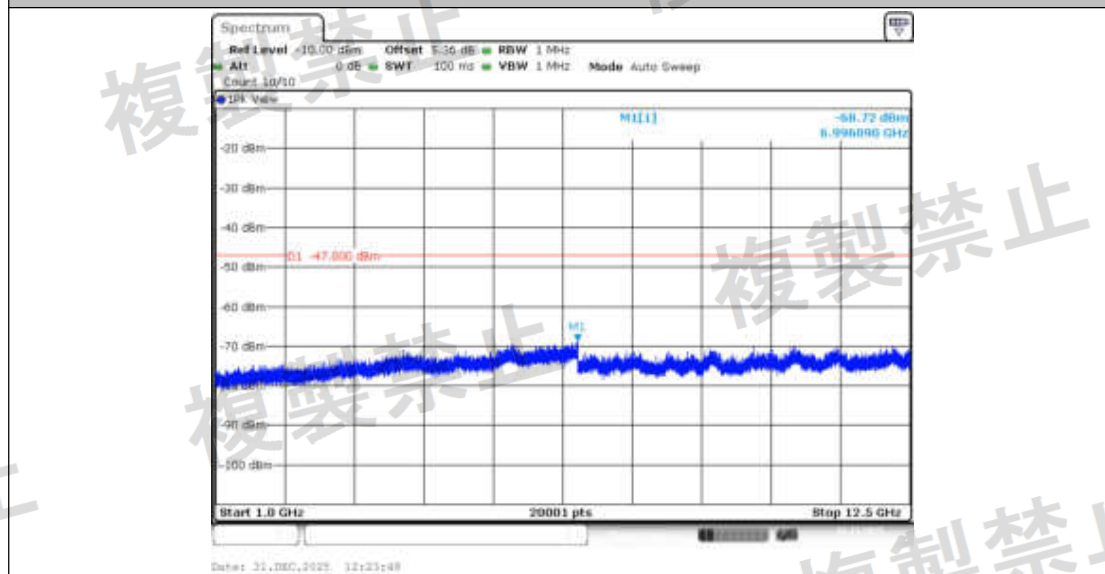
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	827.18	-71.98	≤-54	0.06339	≤4	PASS
				1000~12500	6831.65	-68.38	≤-47	0.14521	≤20	PASS
			2442	30~1000	833.49	-70.41	≤-54	0.09099	≤4	PASS
				1000~12500	6996.09	-68.72	≤-47	0.13428	≤20	PASS
			2472	30~1000	109.74	-82.99	≤-54	0.00502	≤4	PASS
				1000~12500	6633.28	-68.52	≤-47	0.14060	≤20	PASS
	11G	Ant1	2412	30~1000	226.57	-82.88	≤-54	0.00515	≤4	PASS
				1000~12500	6936.29	-69.18	≤-47	0.12078	≤20	PASS
			2442	30~1000	245.47	-83.71	≤-54	0.00426	≤4	PASS
				1000~12500	6989.76	-67.94	≤-47	0.16069	≤20	PASS
			2472	30~1000	241.60	-83.48	≤-54	0.00449	≤4	PASS
				1000~12500	6954.69	-68.37	≤-47	0.14555	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	848.51	-83.69	≤-54	0.00428	≤4	PASS
				1000~12500	6697.68	-68.56	≤-47	0.13932	≤20	PASS
			2442	30~1000	626.01	-83.00	≤-54	0.00501	≤4	PASS
				1000~12500	11213.50	-68.87	≤-47	0.12972	≤20	PASS
			2472	30~1000	924.62	-83.48	≤-54	0.00449	≤4	PASS
				1000~12500	6247.48	-68.07	≤-47	0.15596	≤20	PASS
	11N40SI SO	Ant1	2422	30~1000	239.17	-83.44	≤-54	0.00453	≤4	PASS
				1000~12500	6980.56	-68.94	≤-47	0.12764	≤20	PASS
			2442	30~1000	973.10	-83.62	≤-54	0.00435	≤4	PASS
				1000~12500	5215.40	-68.19	≤-47	0.15171	≤20	PASS
			2462	30~1000	889.23	-83.10	≤-54	0.00490	≤4	PASS
				1000~12500	6888.57	-68.99	≤-47	0.12618	≤20	PASS

Test Graphs

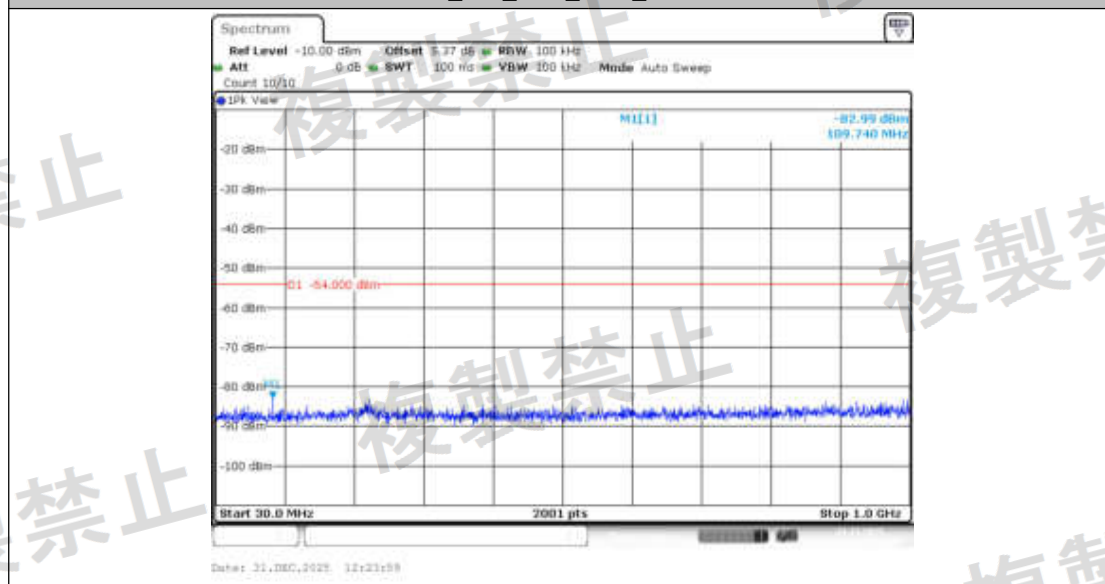


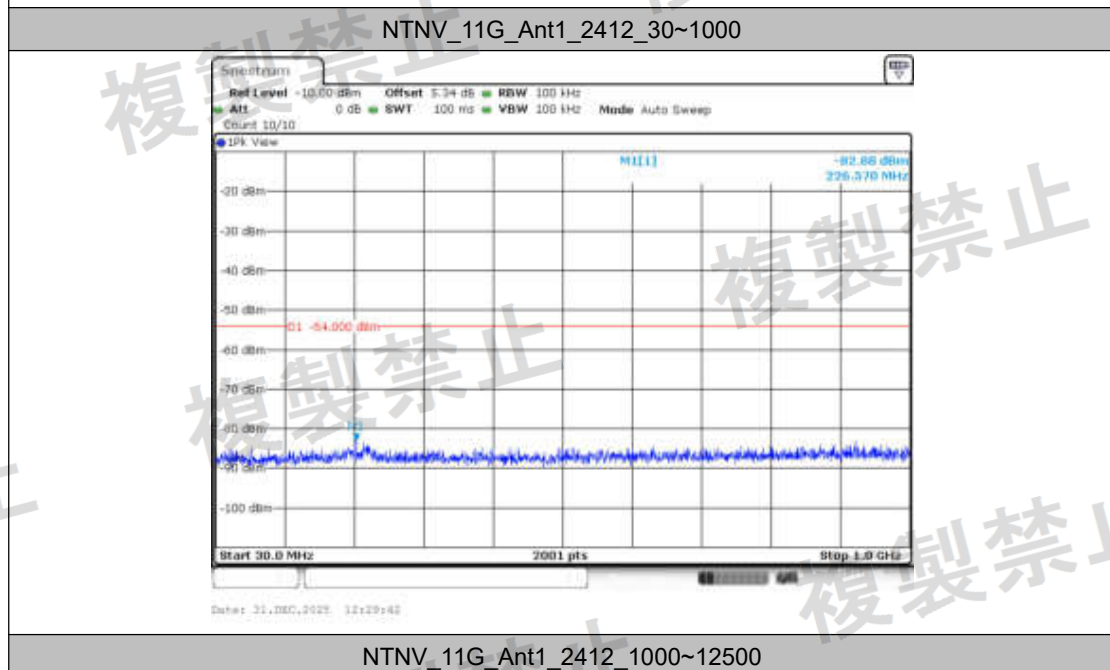
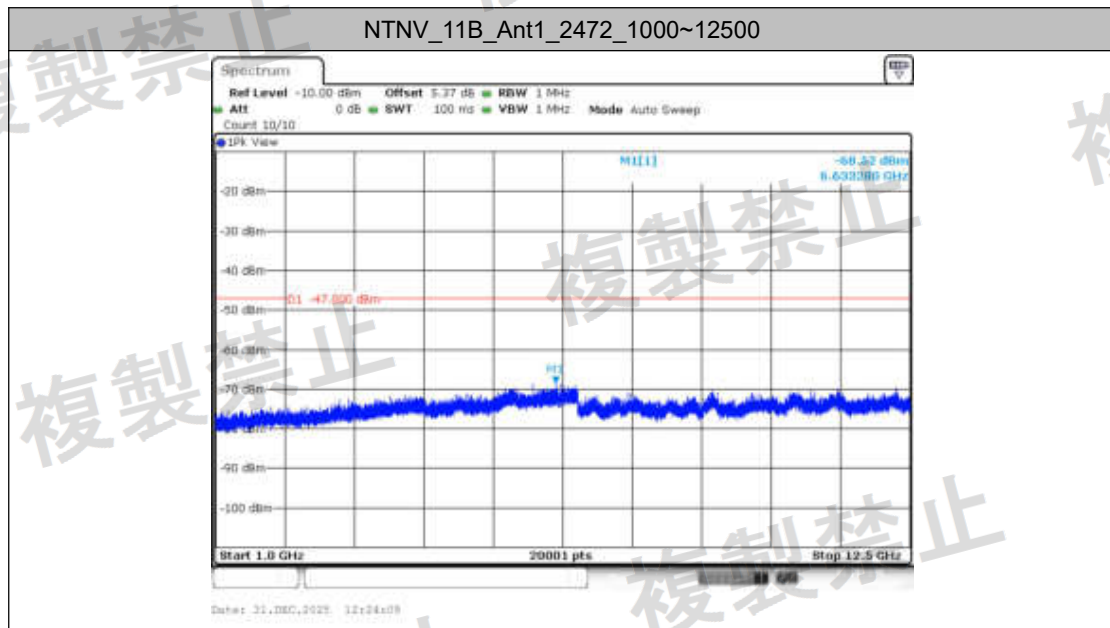


NTNV_11B_Ant1_2442_1000~12500

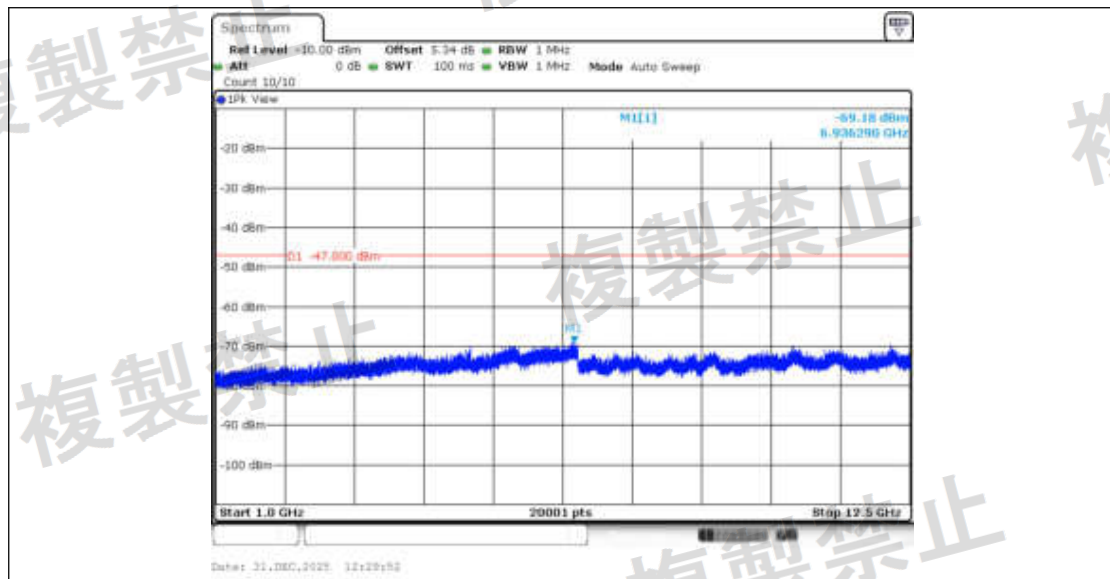


NTNV_11B_Ant1_2472_30~1000

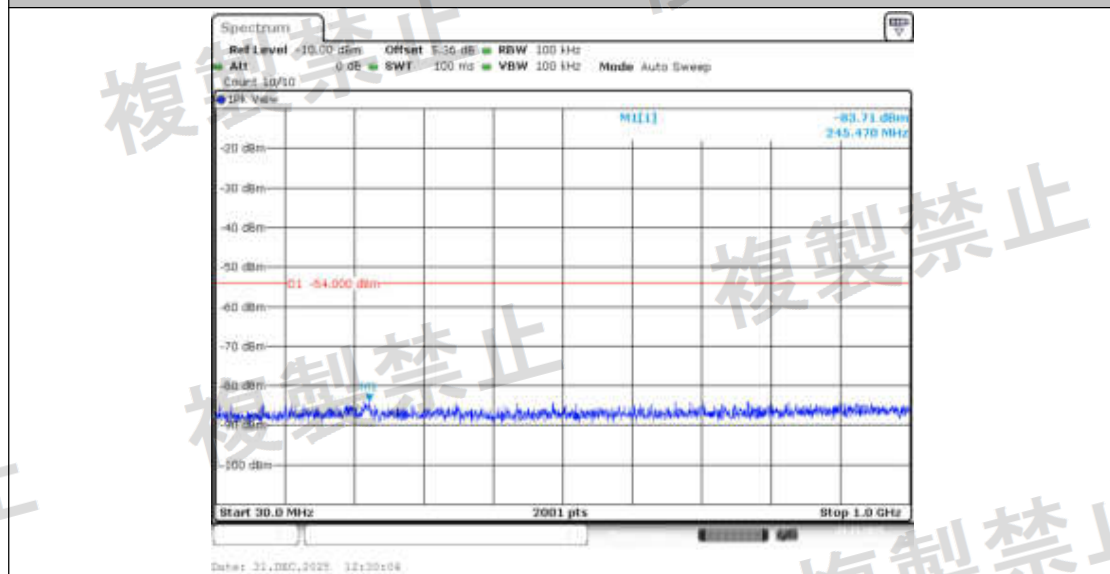




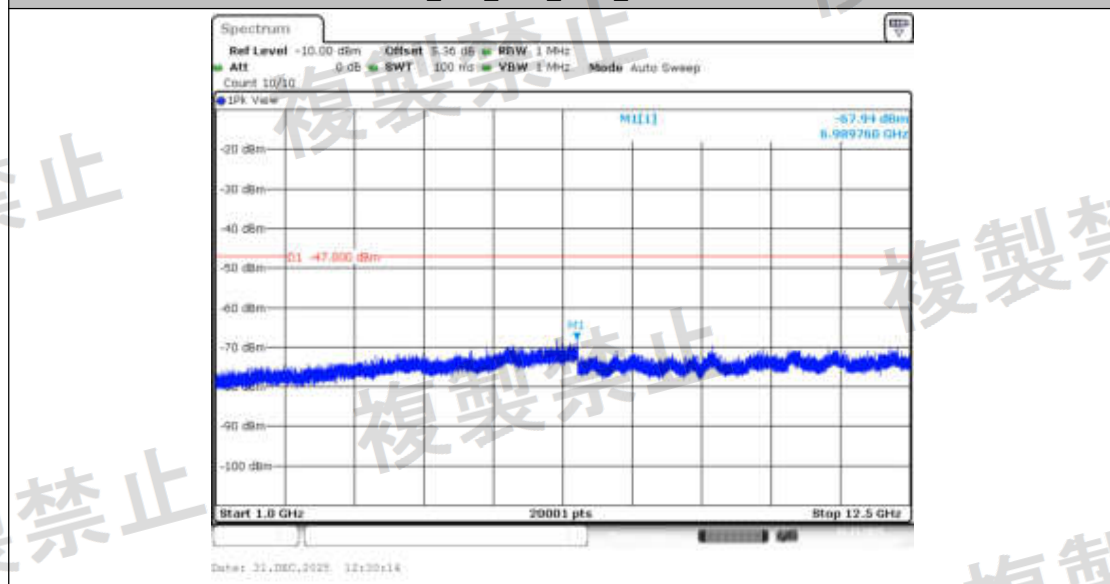
NTNV_11G_Ant1_2412_1000~12500

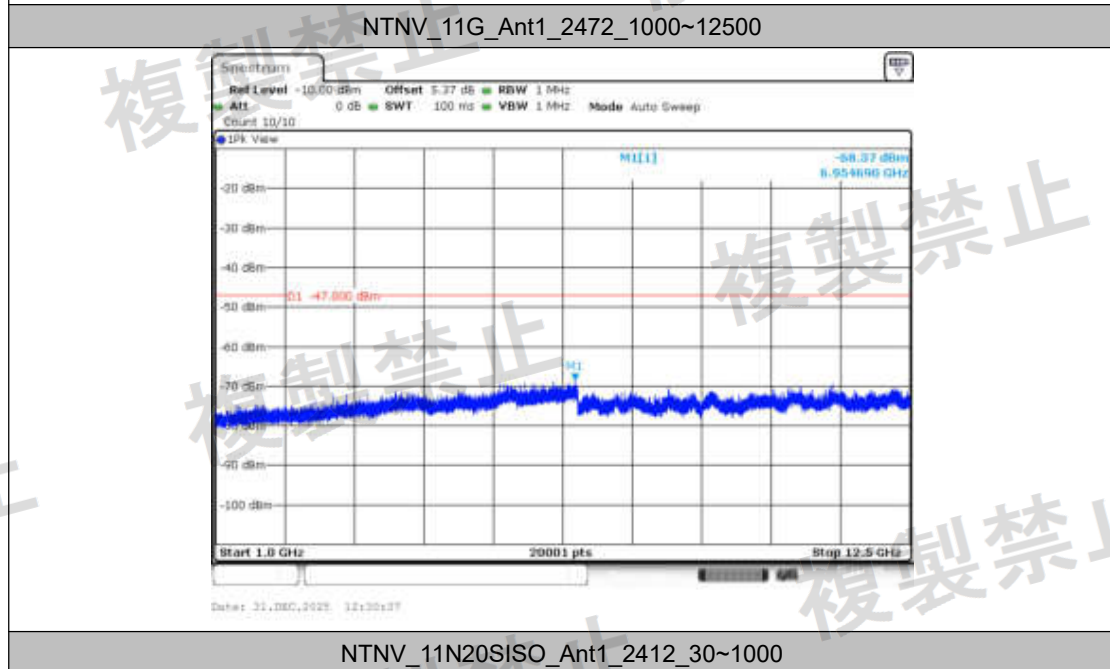
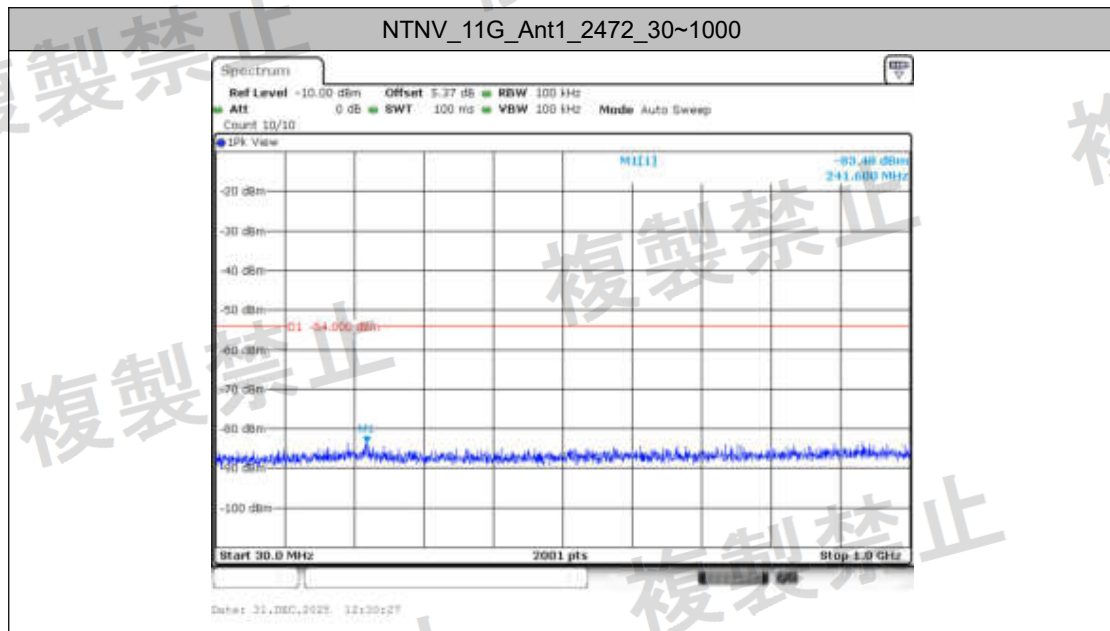


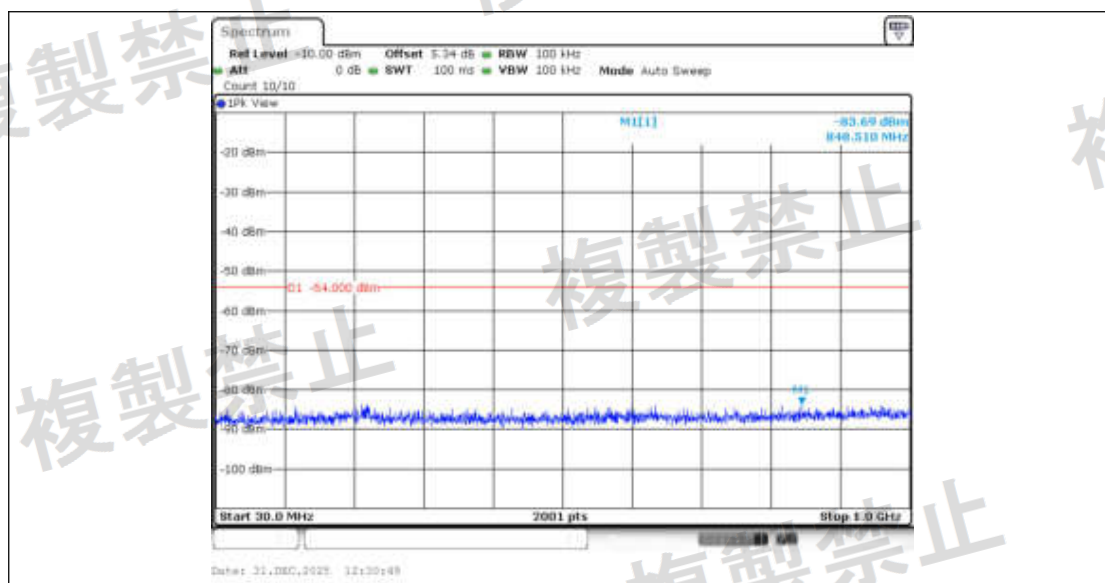
NTVN_11G_Ant1_2442_30~1000



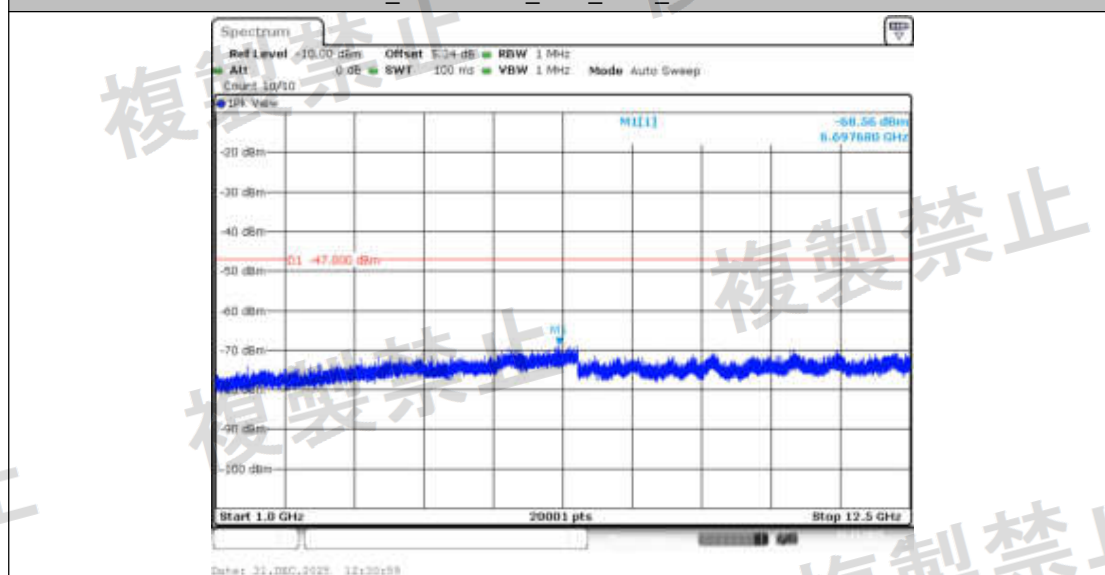
NTVN_11G_Ant1_2442_1000~12500



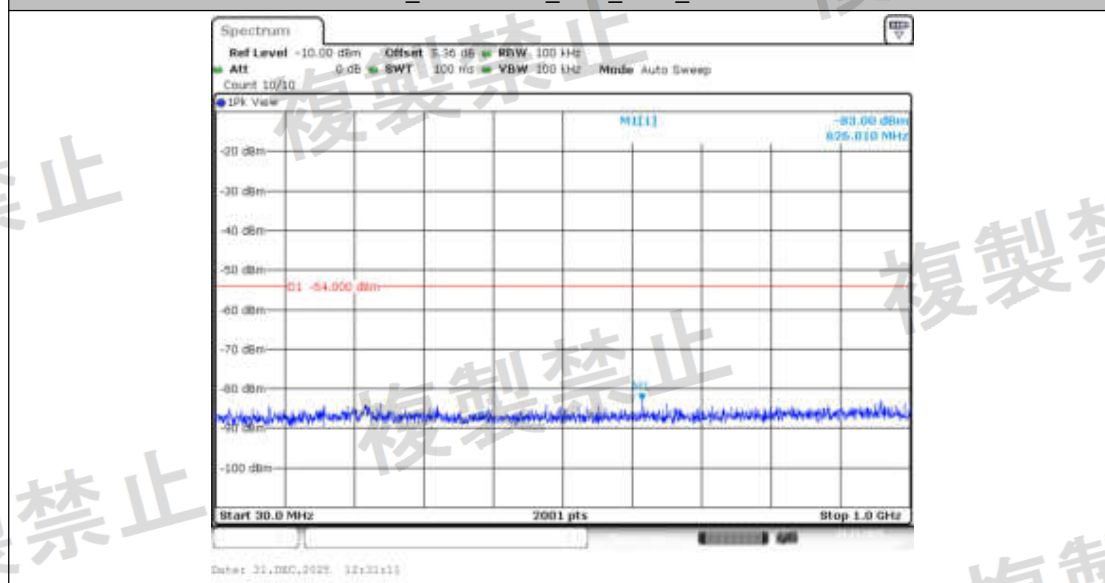


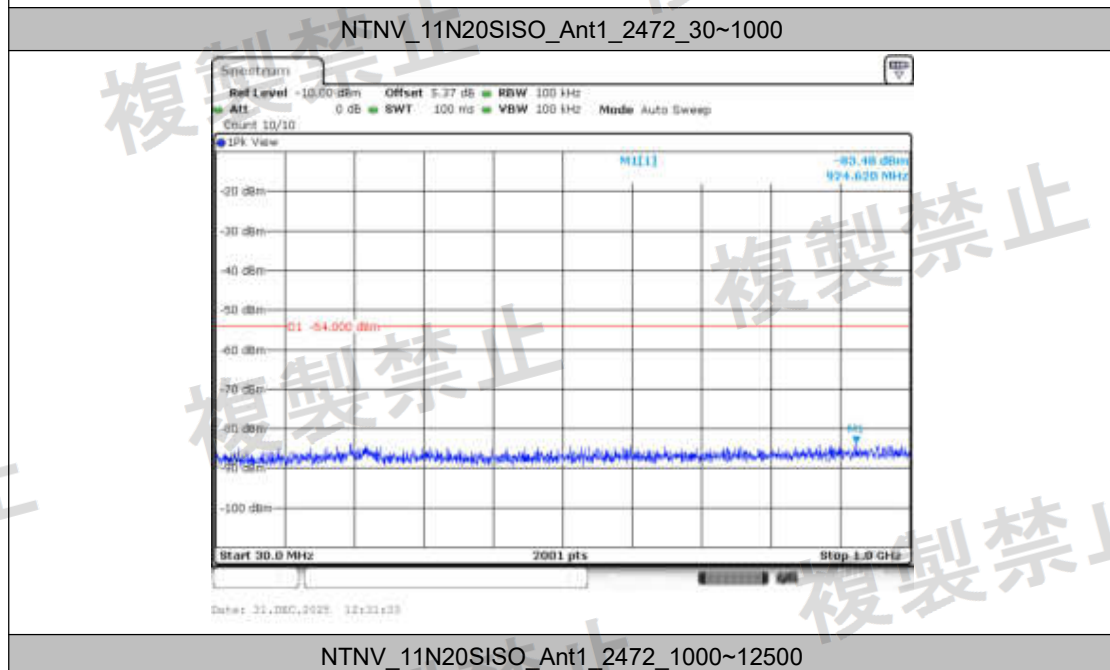
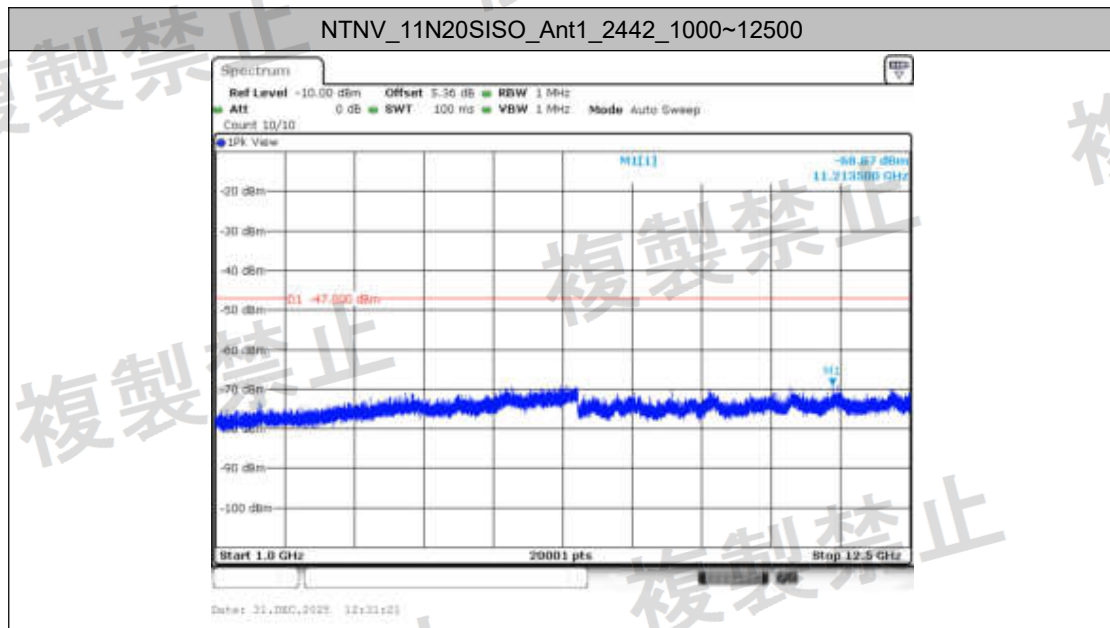


NTVN_11N20SISO_Ant1_2412_1000~12500

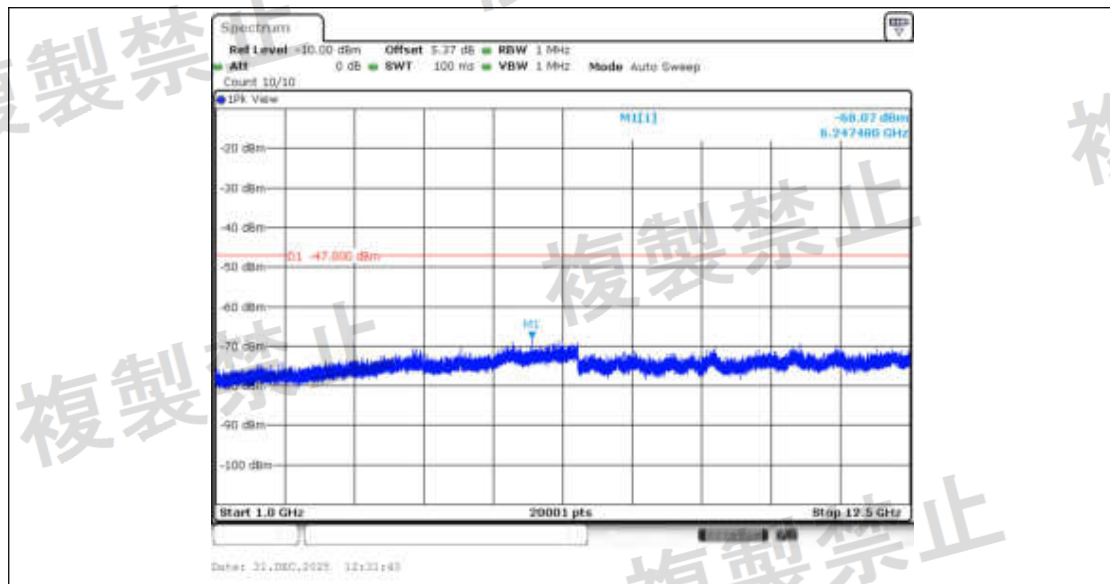


NTVN_11N20SISO_Ant1_2442_30~1000

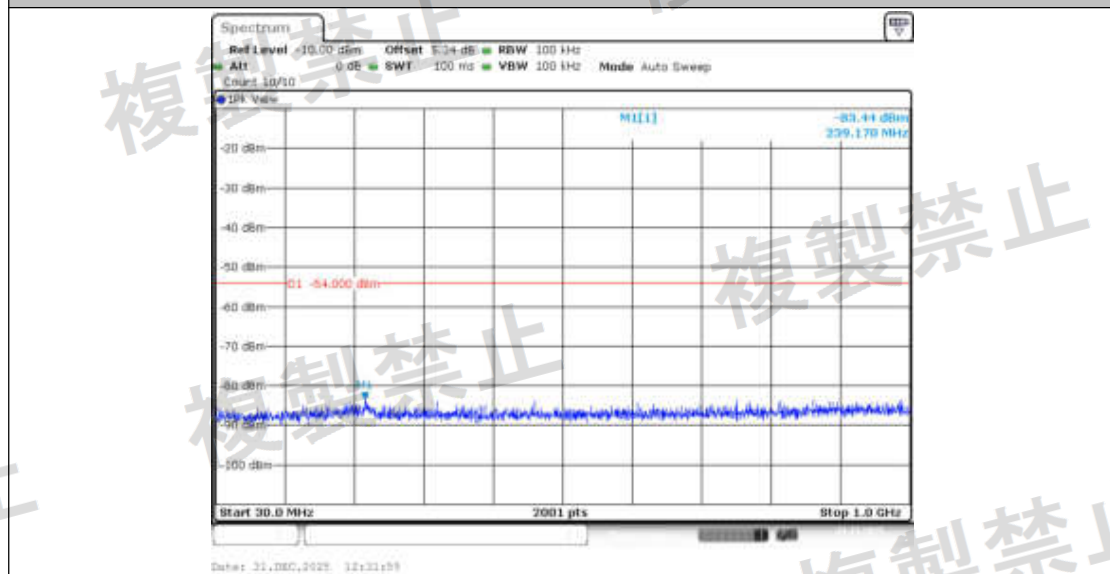




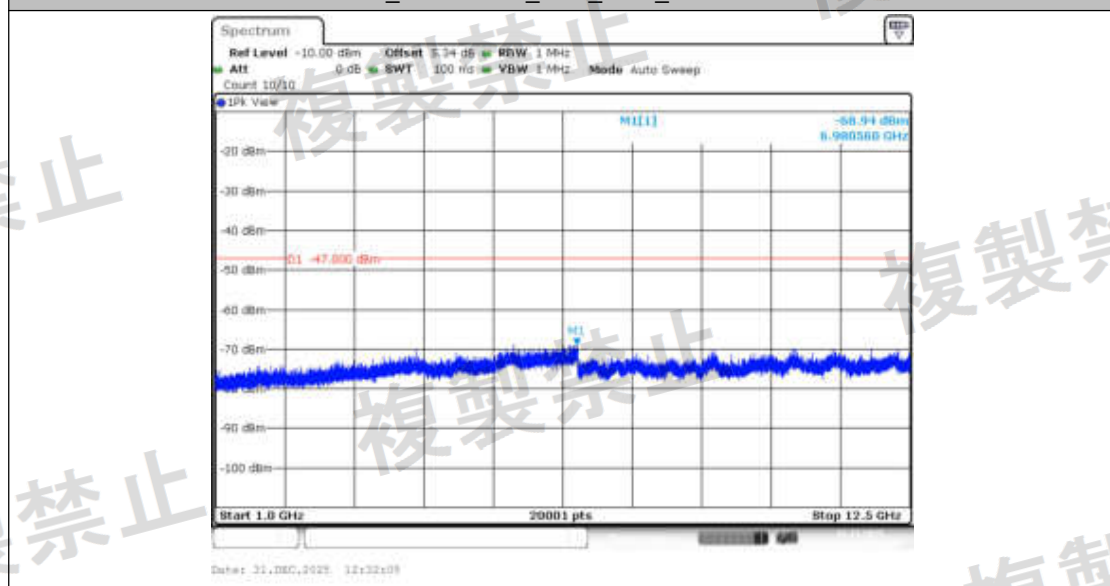
NTNV_11N20SISO_Ant1_2472_1000~12500

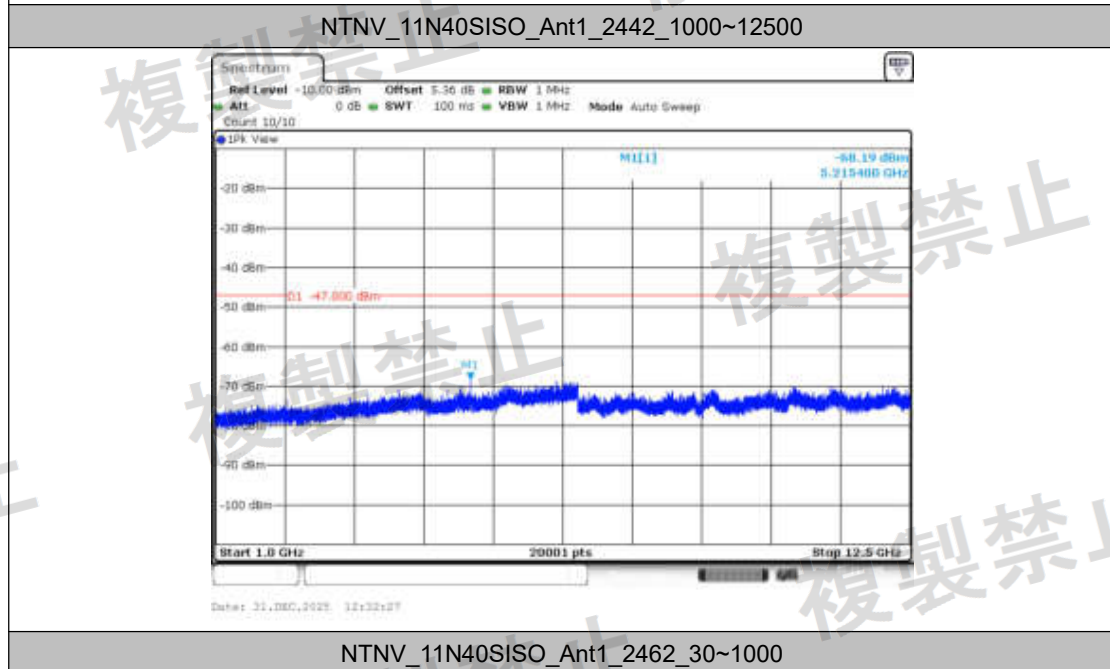
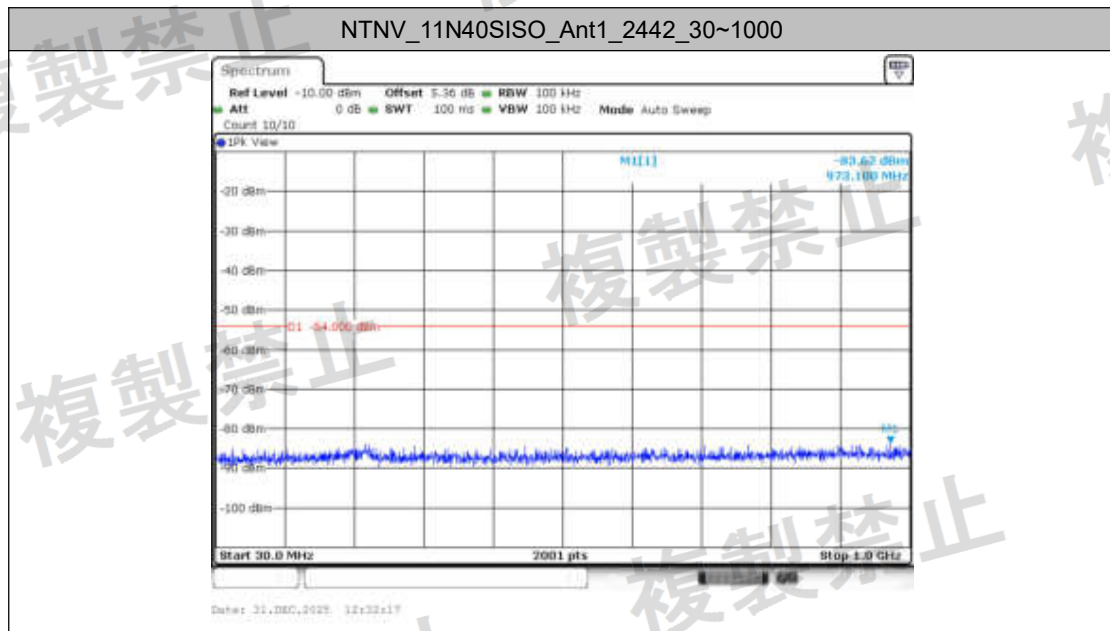


NTNV_11N40SISO_Ant1_2422_30~1000

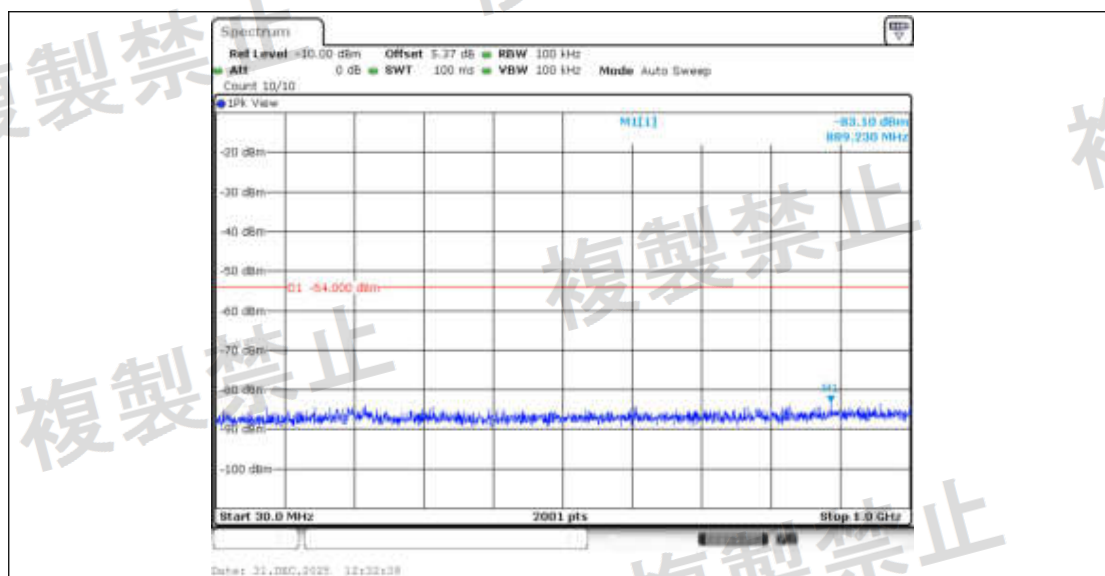


NTNV_11N40SISO_Ant1_2422_1000~12500





NTNV_11N40SISO_Ant1_2462_30~1000



NTNV_11N40SISO_Ant1_2462_1000~12500

