

Appendix RF Test Data for 2.4GWIFI

Company : D.CO INTERNATIONAL EQUIPMENT MANUFACTURING
(HENAN) CO.,LTD.

EUT : Intelligent liquid dispenser

Model Number : DK-CY1

Report No. : CTA25082702302

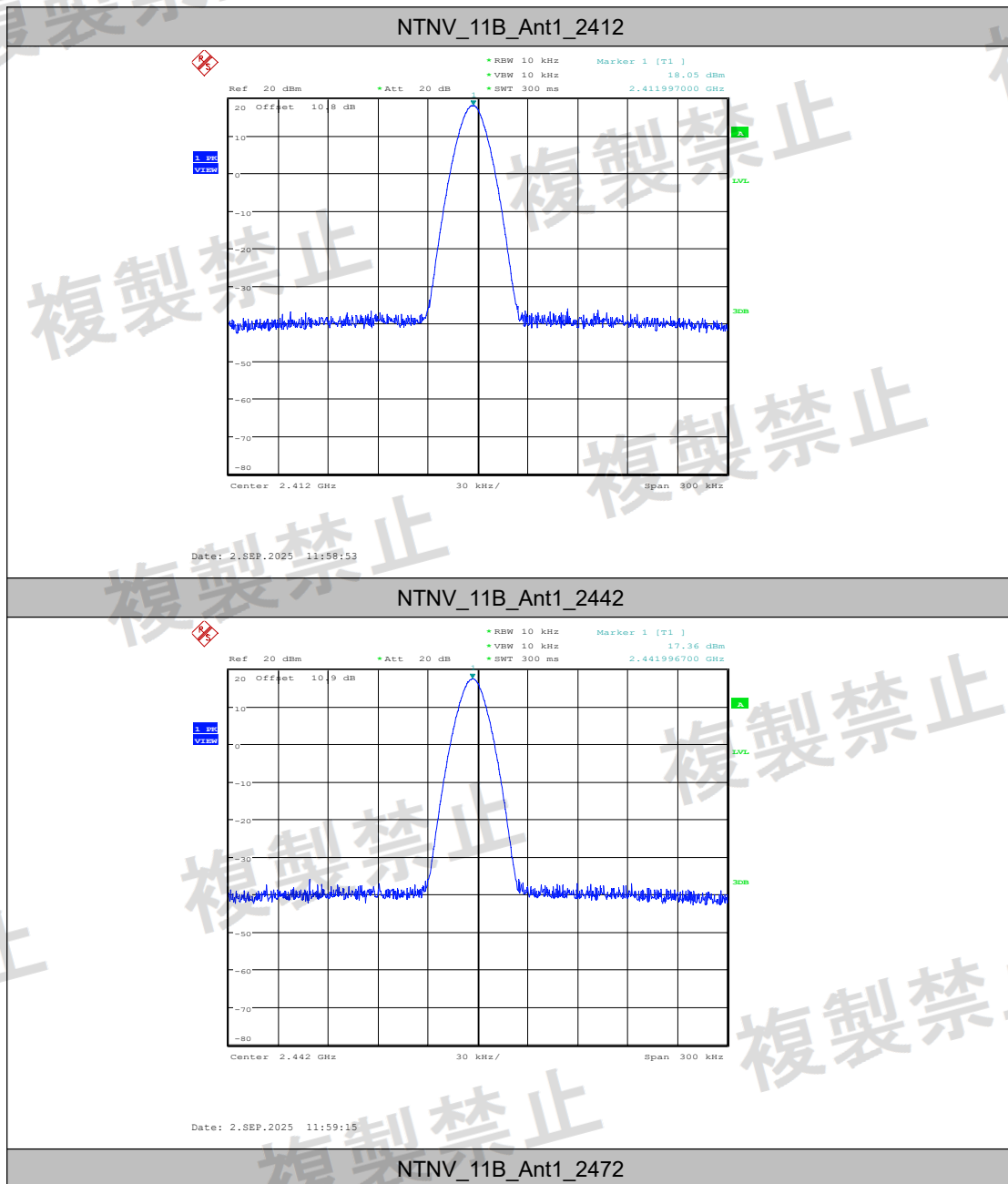
Reviewed By : Eric Wang

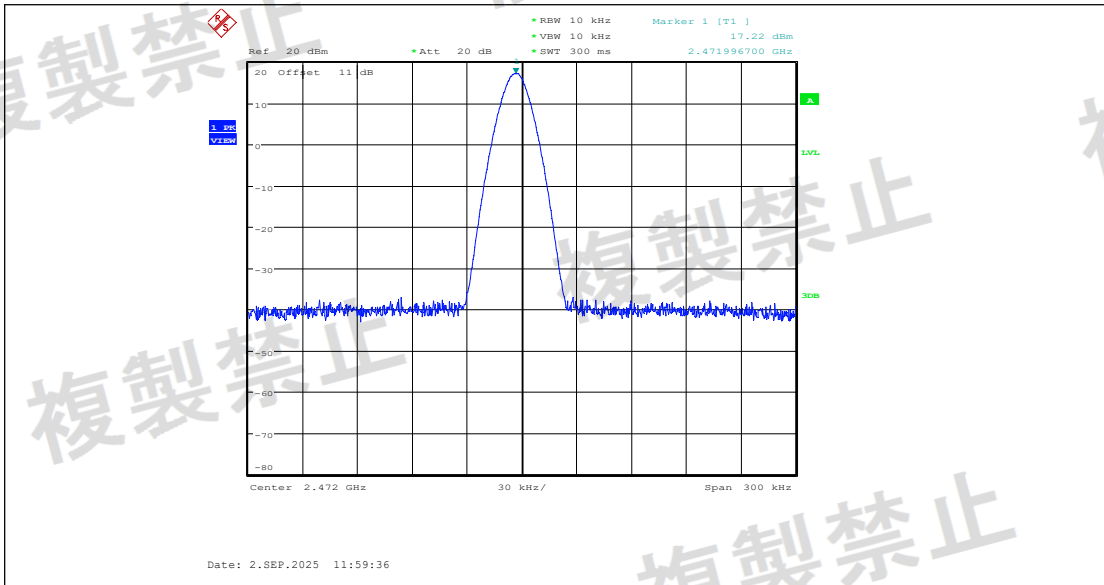
Appendix A: Frequency Error

Test Result

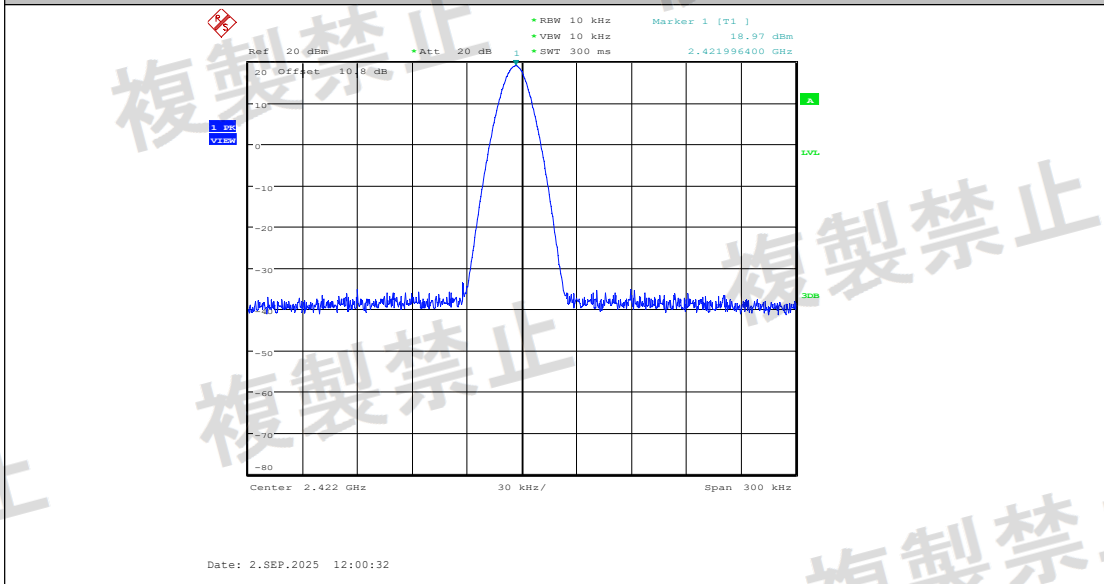
TestCondition	TestMode	Antenna	Freq(MHz)	CenterFrequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.997	-1.24378	±50	PASS
			2442	2441.9967	-1.35135	±50	PASS
			2472	2471.9967	-1.33495	±50	PASS
	11N40SISO	Ant1	2422	2421.9964	-1.48638	±50	PASS
			2462	2461.9964	-1.46223	±50	PASS

Test Graphs

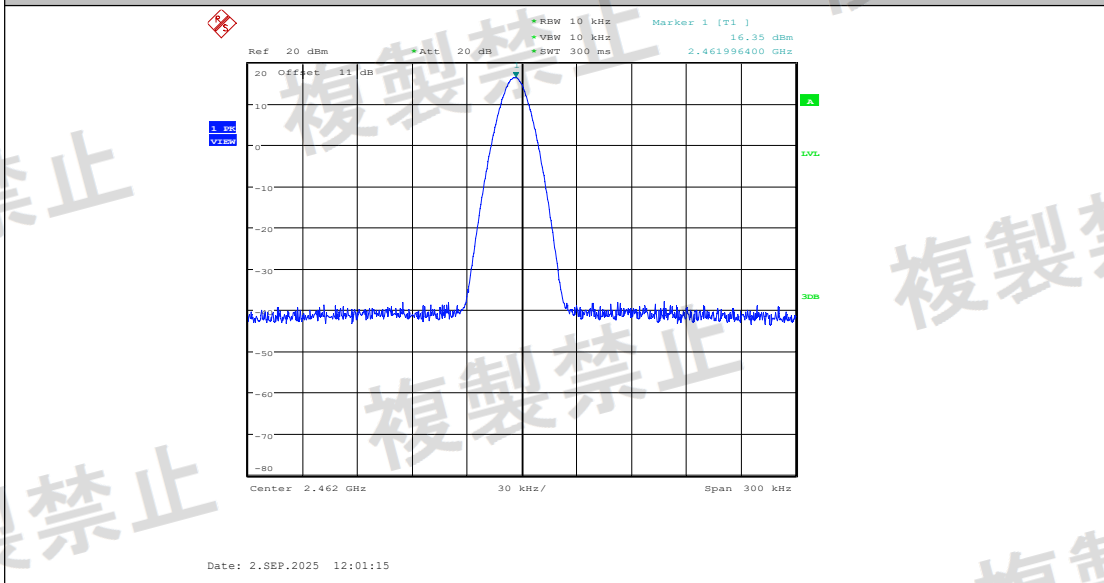




NTNV_11N40SISO_Ant1_2422



NTNV_11N40SISO_Ant1_2462

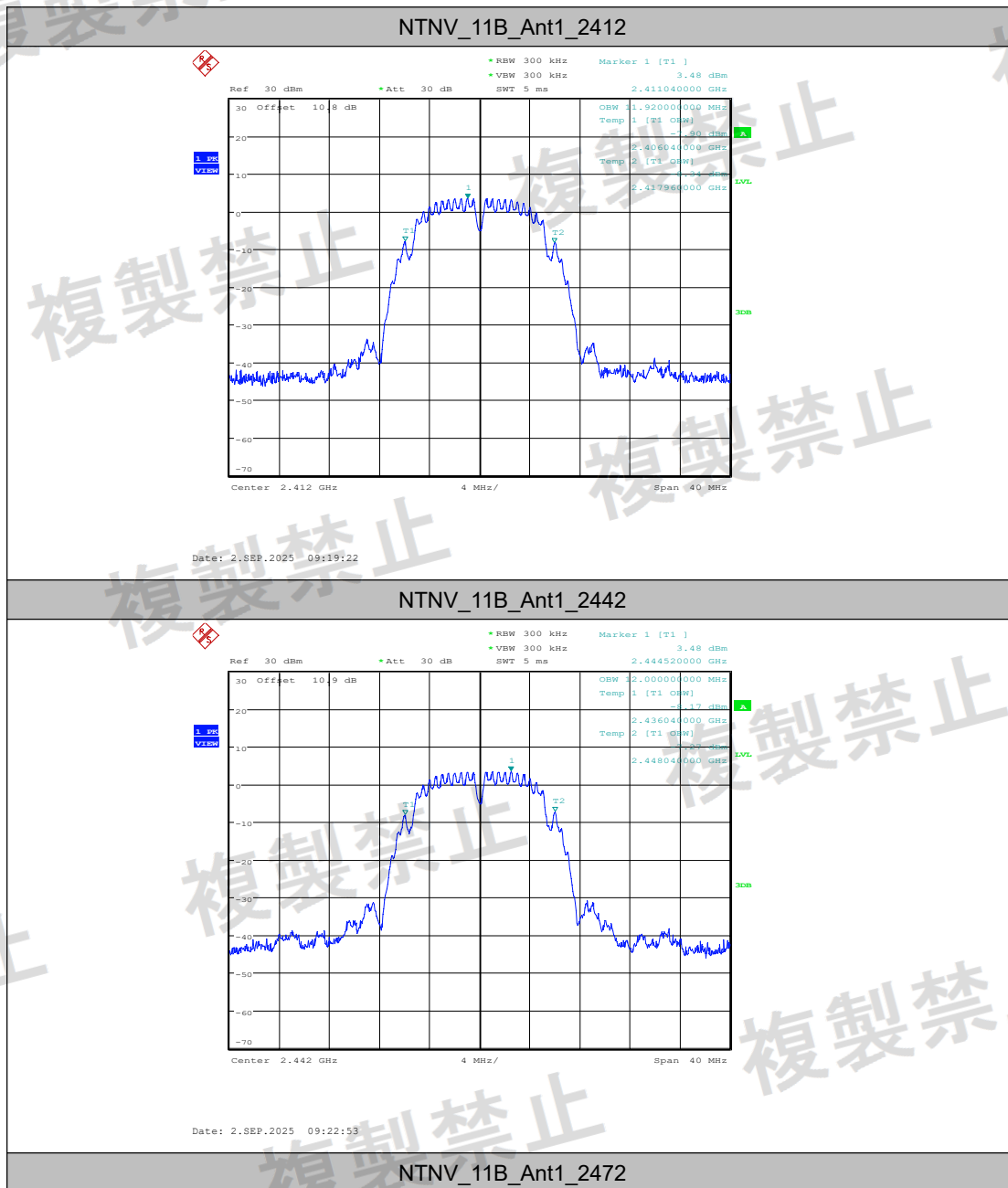


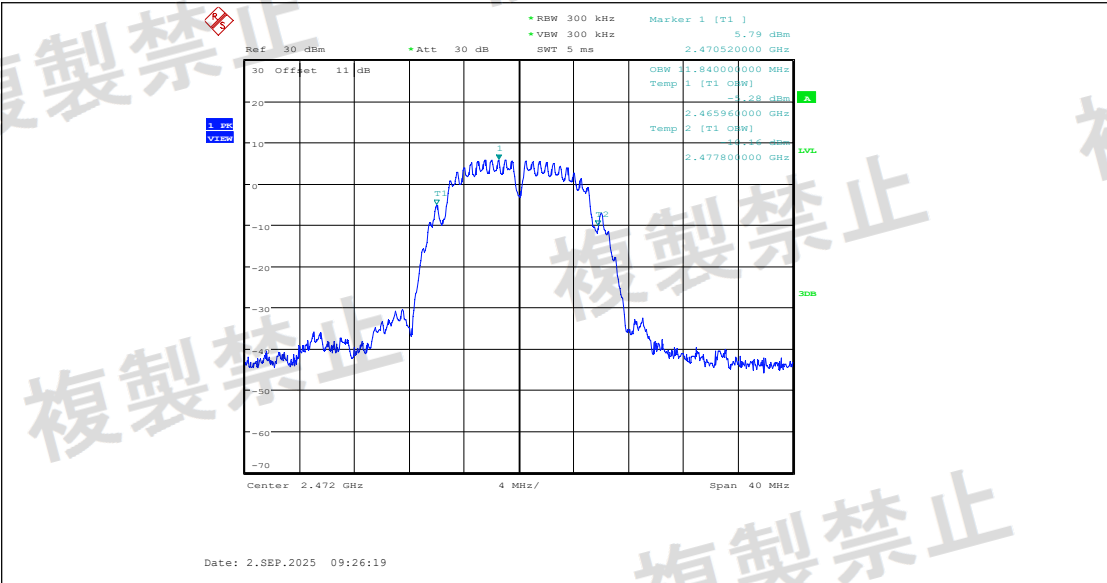
Appendix B: Occupied Bandwidth

Test Result

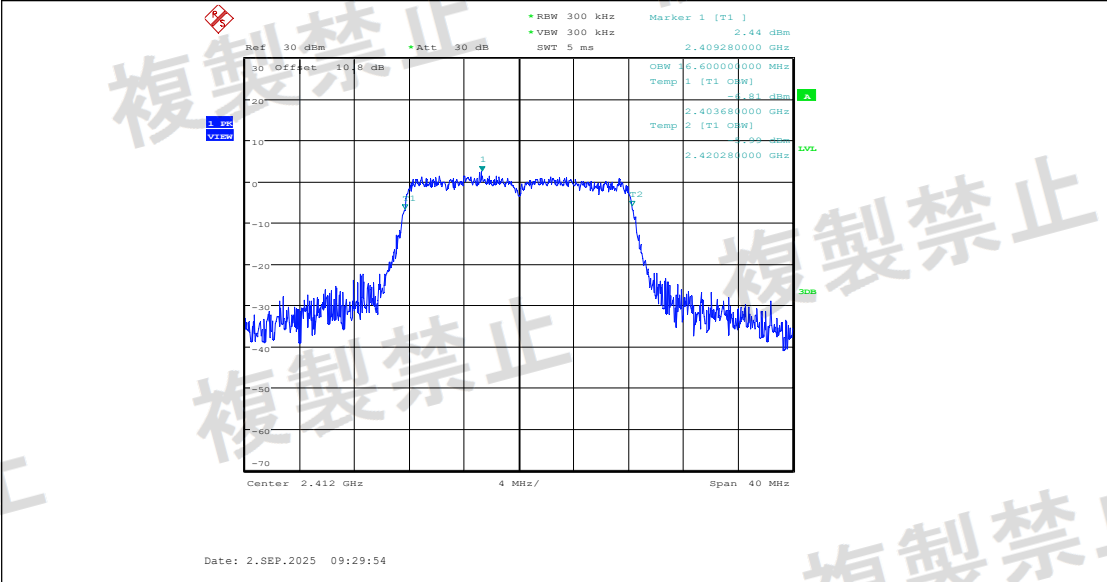
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	11.920	≤26	PASS
			2442	12.000	≤26	PASS
			2472	11.840	≤26	PASS
	11G	Ant1	2412	16.600	≤26	PASS
			2442	16.760	≤26	PASS
			2472	16.640	≤26	PASS
	11N20SI SO	Ant1	2412	17.720	≤26	PASS
			2442	17.840	≤26	PASS
			2472	17.640	≤26	PASS
	11N40SI SO	Ant1	2422	35.840	26-40	PASS
			2442	36.080	26-40	PASS
			2462	36.160	26-40	PASS

Test Graphs

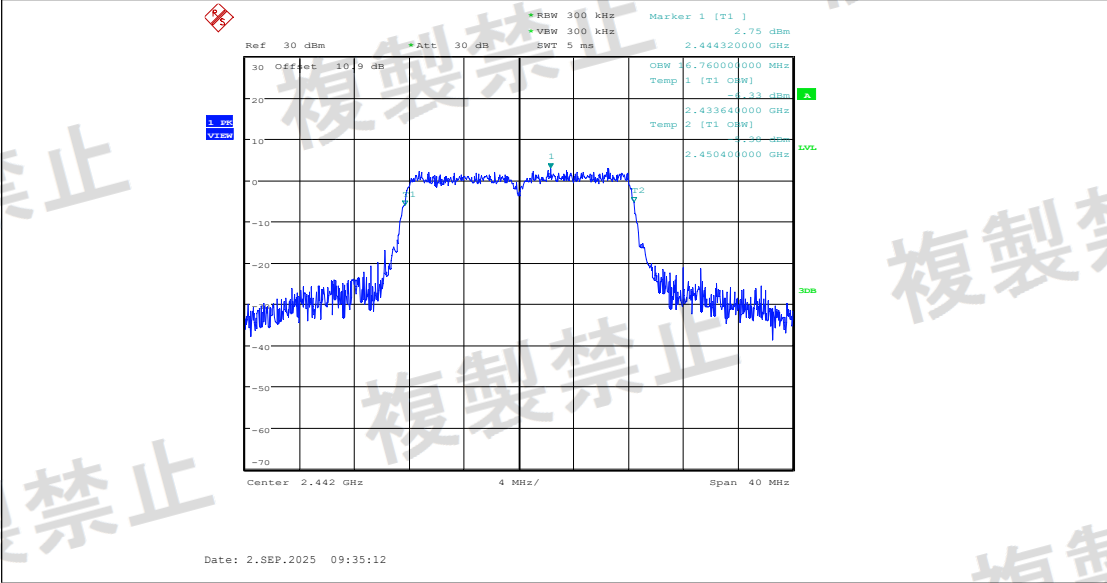


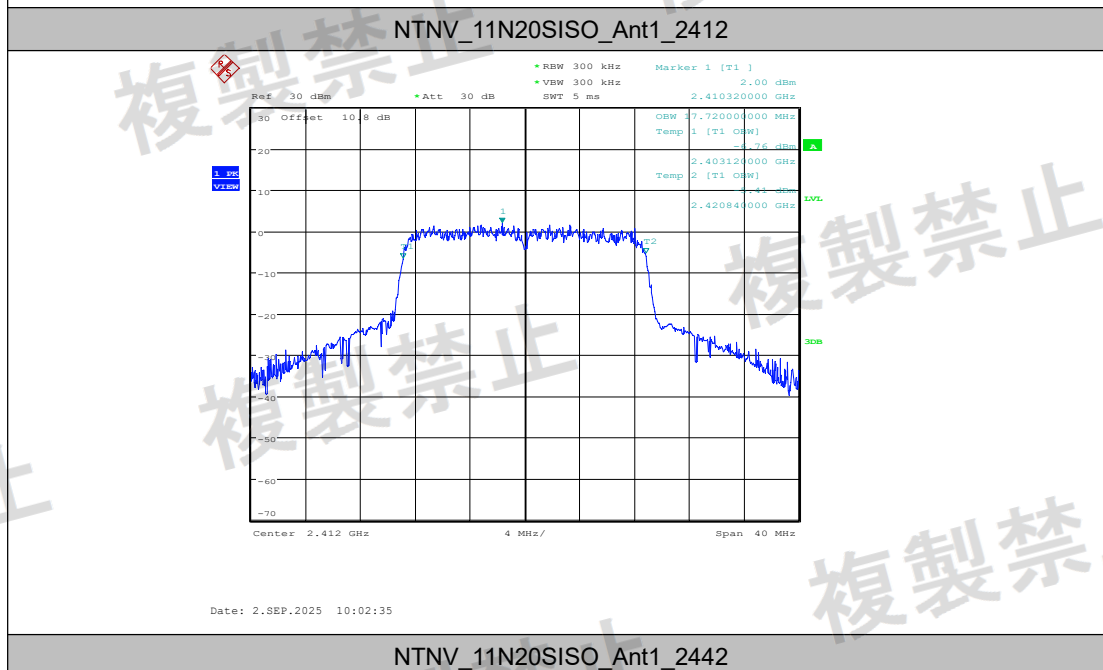
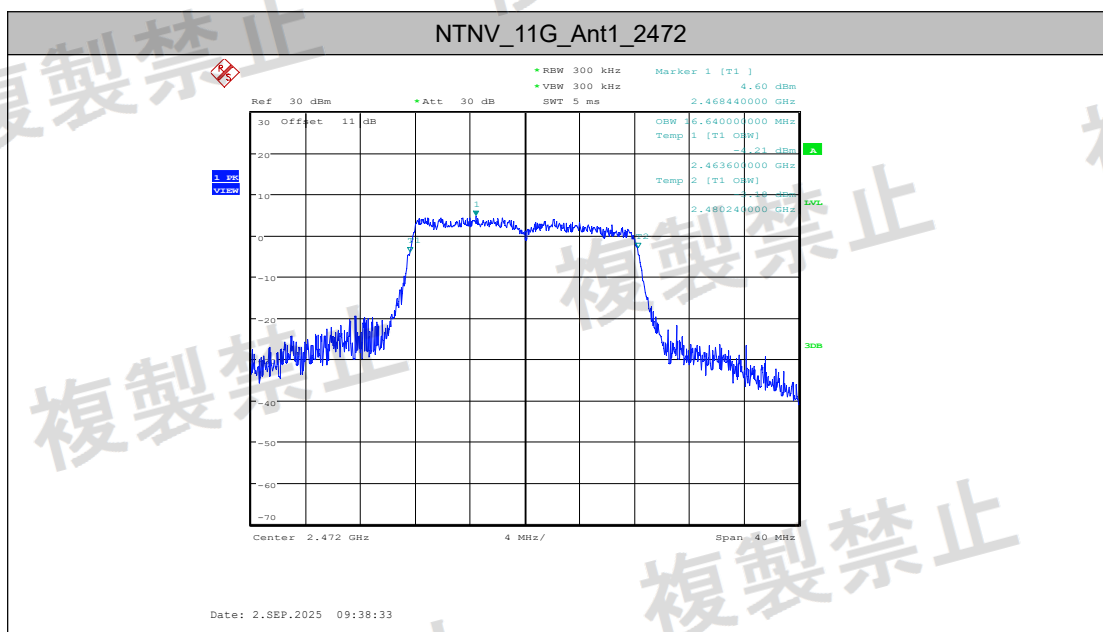


NTVN_11G_Ant1_2412

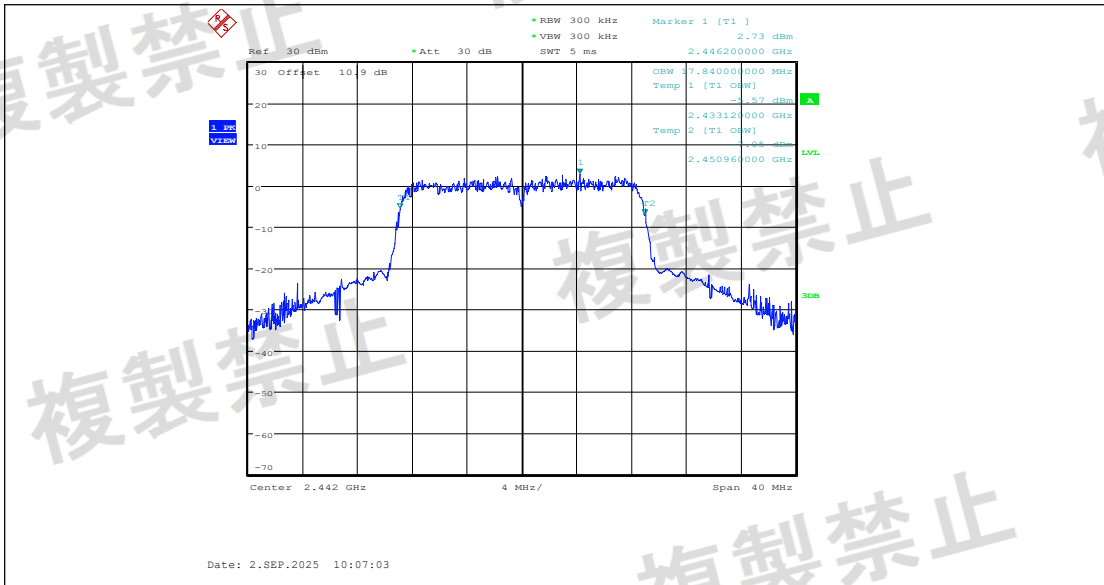


NTVN_11G_Ant1_2442

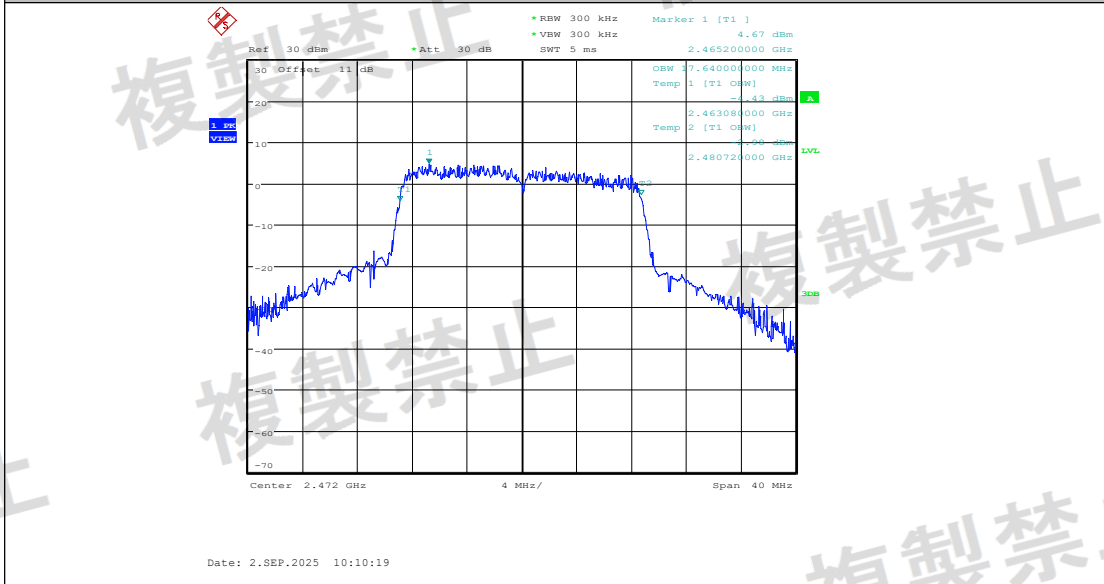




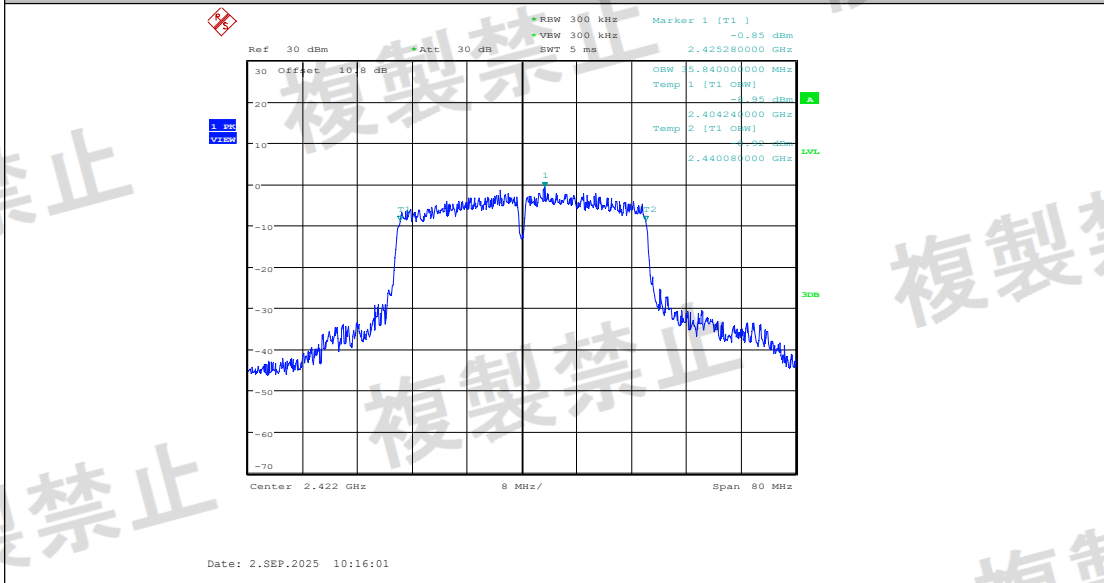
NTNV_11N20SISO_Ant1_2442

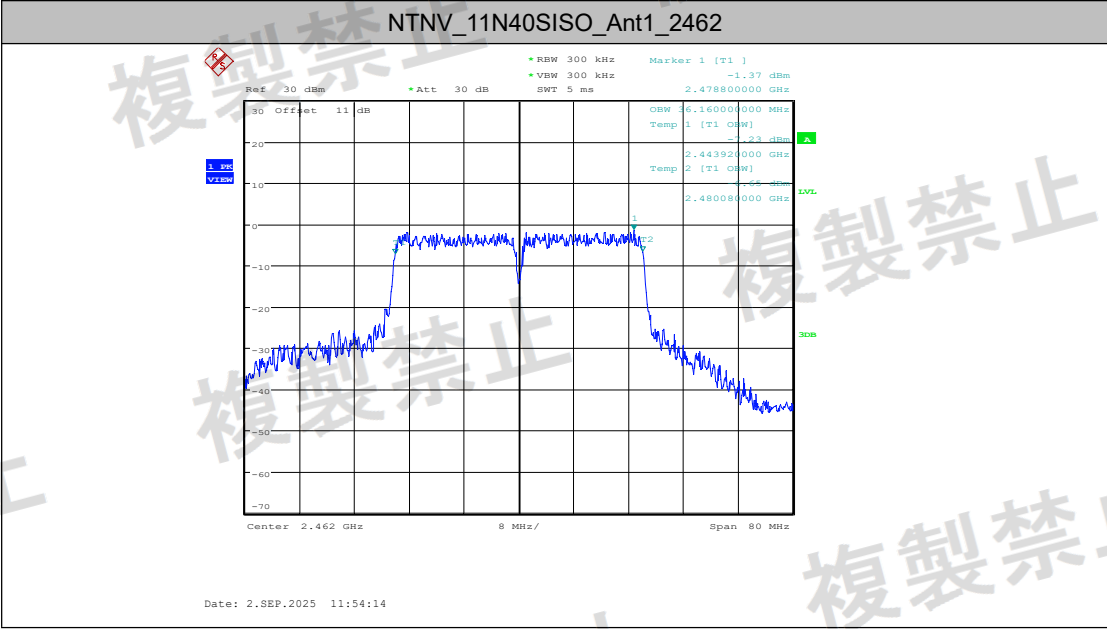
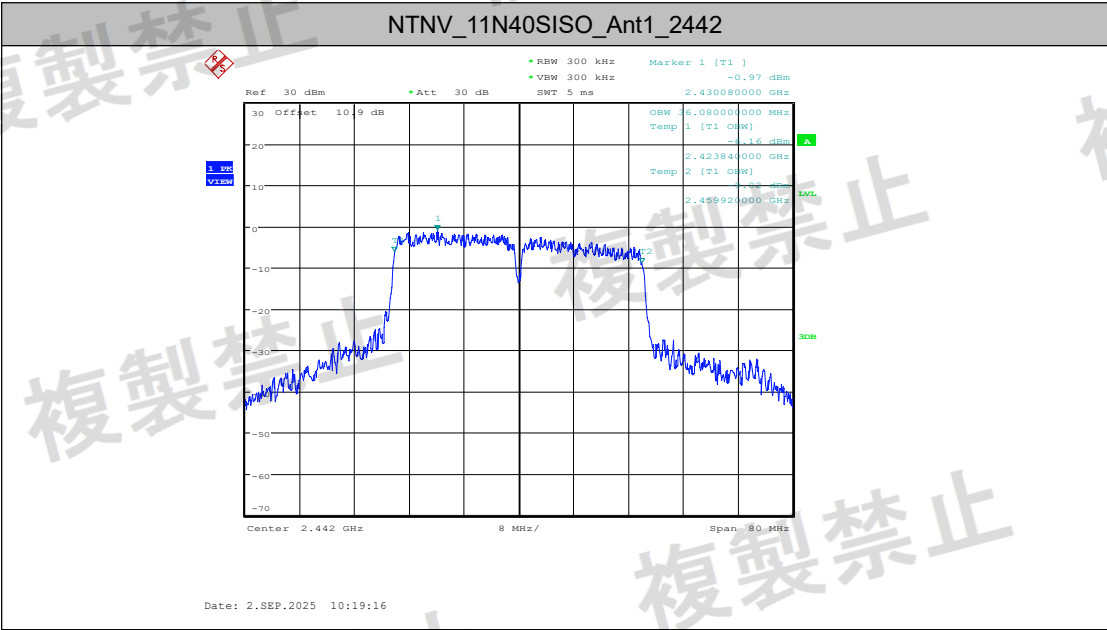


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





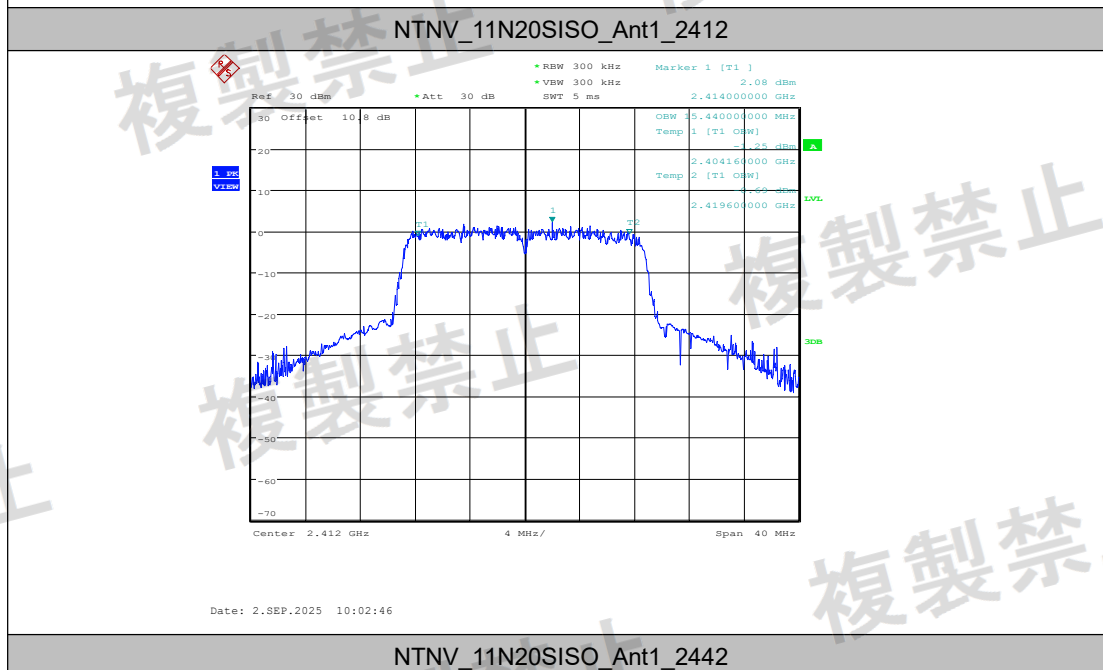
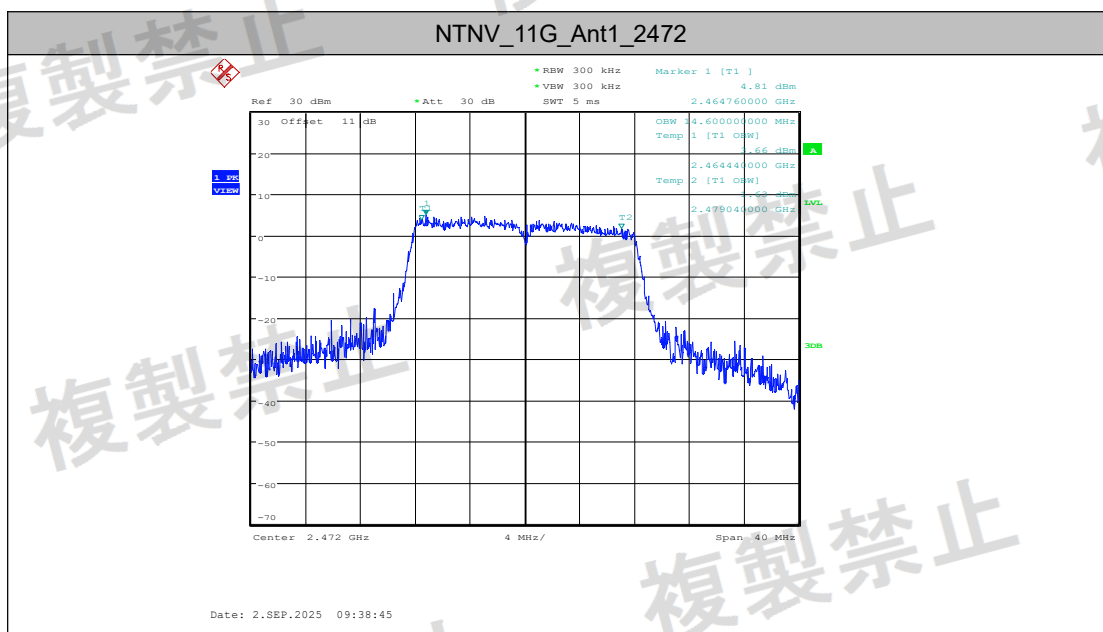
Appendix C: Spread Bandwidth

Test Result

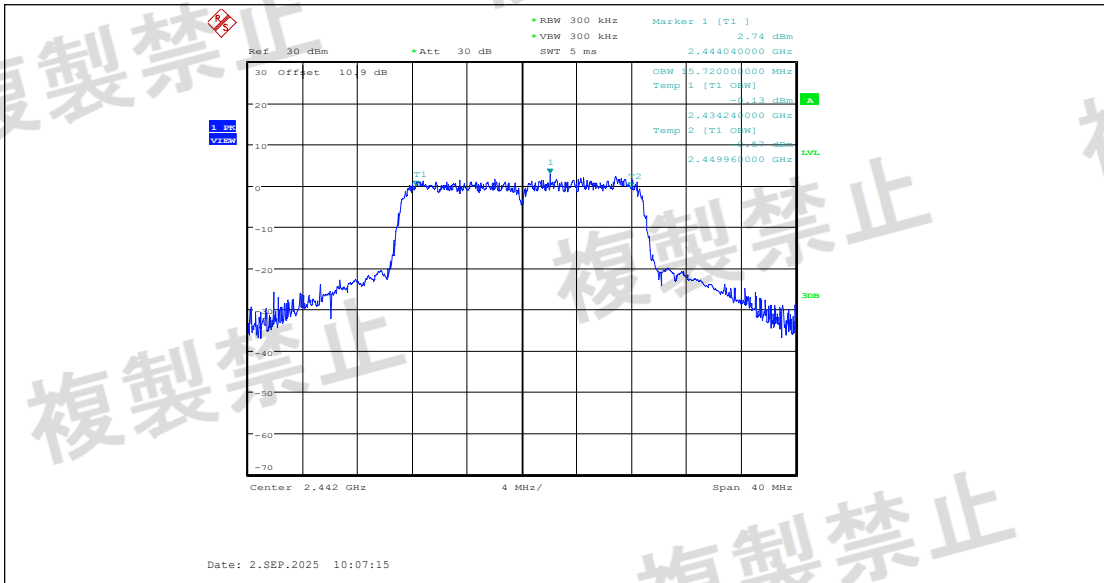
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	8.720	≥0.5	6.342	>5	PASS
			2442	8.840	≥0.5	6.429	>5	PASS
			2472	8.600	≥0.5	6.255	>5	PASS
	11G	Ant1	2412	14.640	≥0.5	---	---	PASS
			2442	14.920	≥0.5	---	---	PASS
			2472	14.600	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	15.440	≥0.5	---	---	PASS
			2442	15.720	≥0.5	---	---	PASS
			2472	15.400	≥0.5	---	---	PASS
	11N40SI SO	Ant1	2422	30.960	≥0.5	---	---	PASS
			2442	31.840	≥0.5	---	---	PASS
			2462	32.720	≥0.5	---	---	PASS

複製禁止

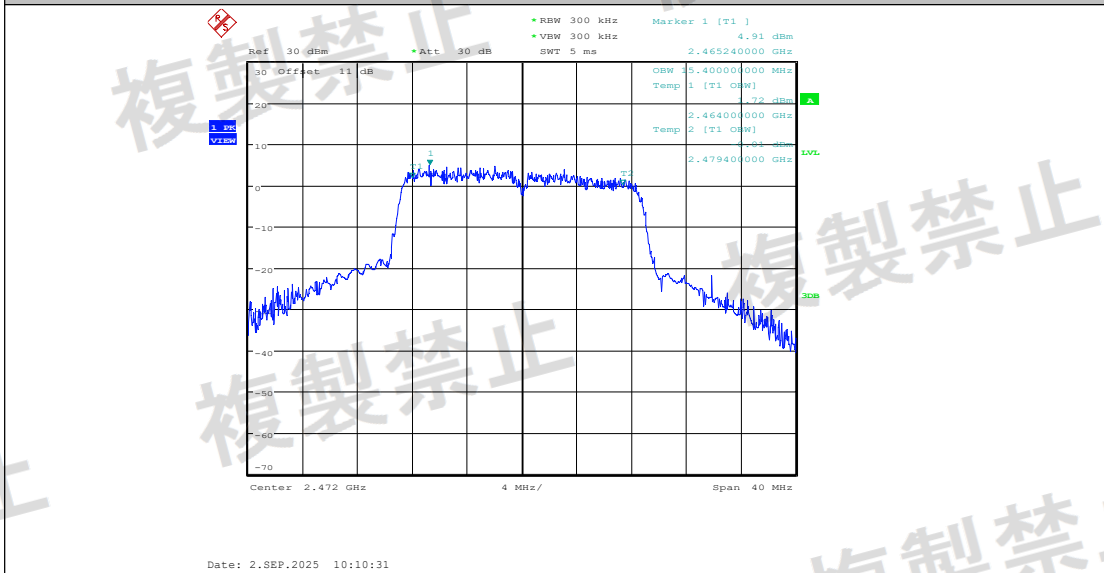




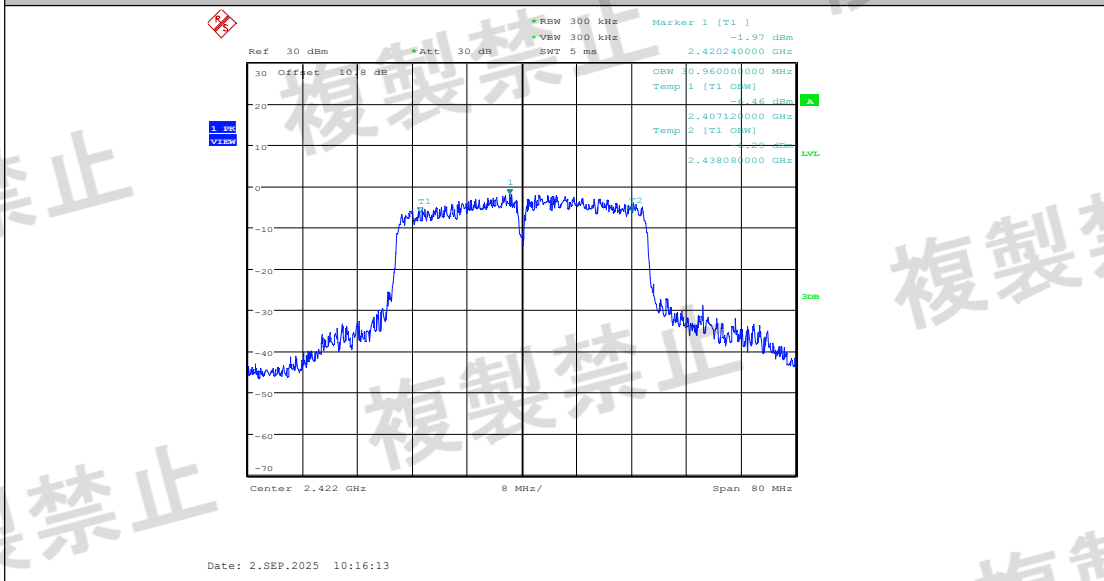
NTNV_11N20SISO_Ant1_2442

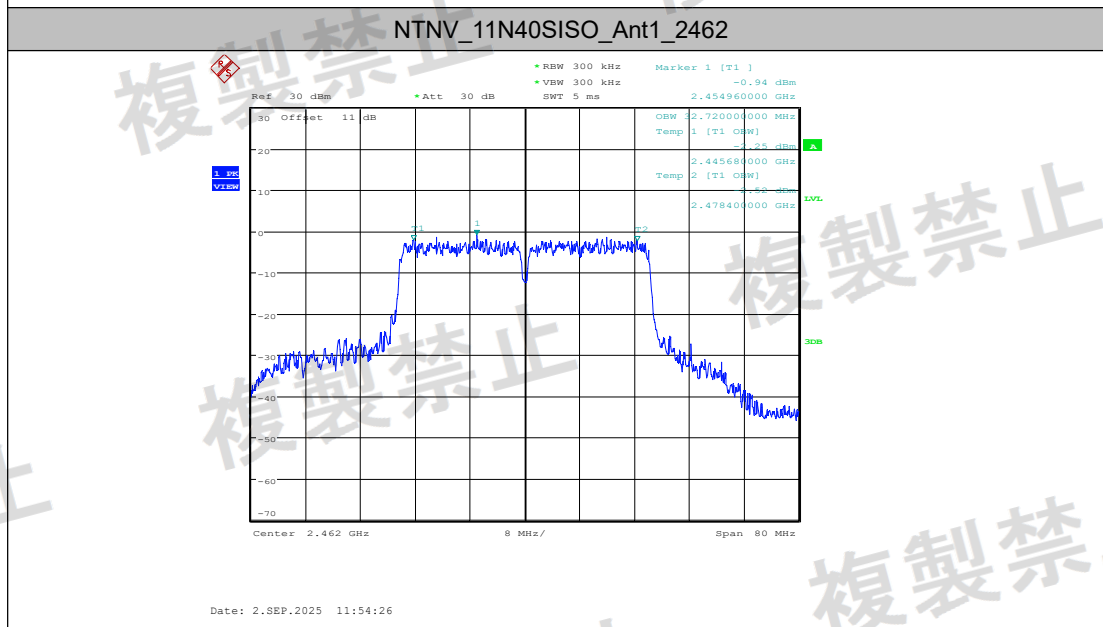
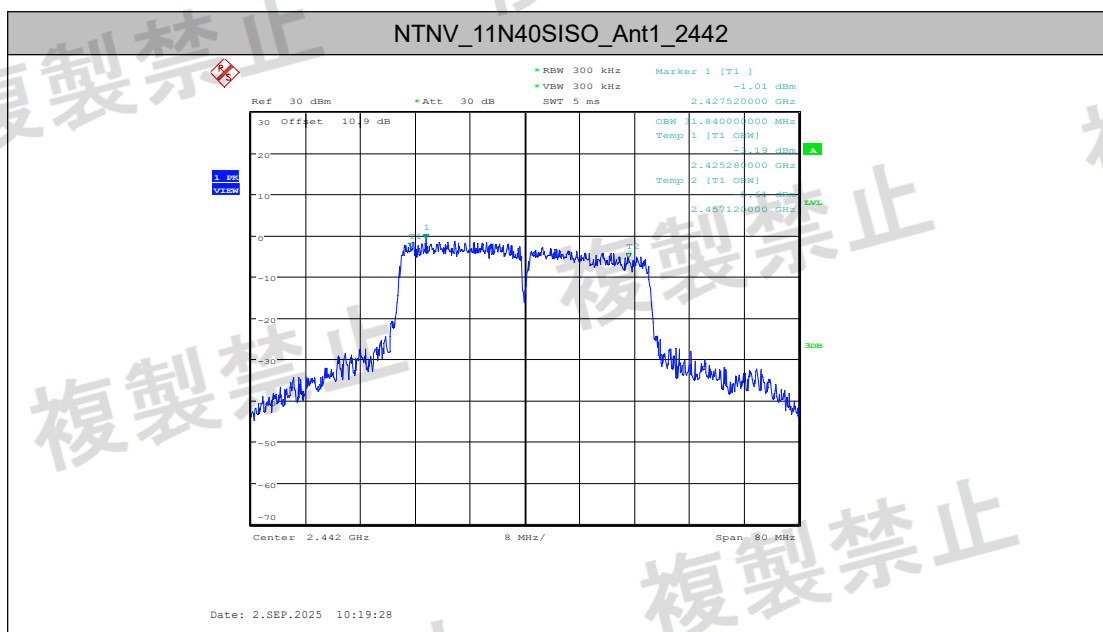


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





Appendix D: Spurious Emission of TX

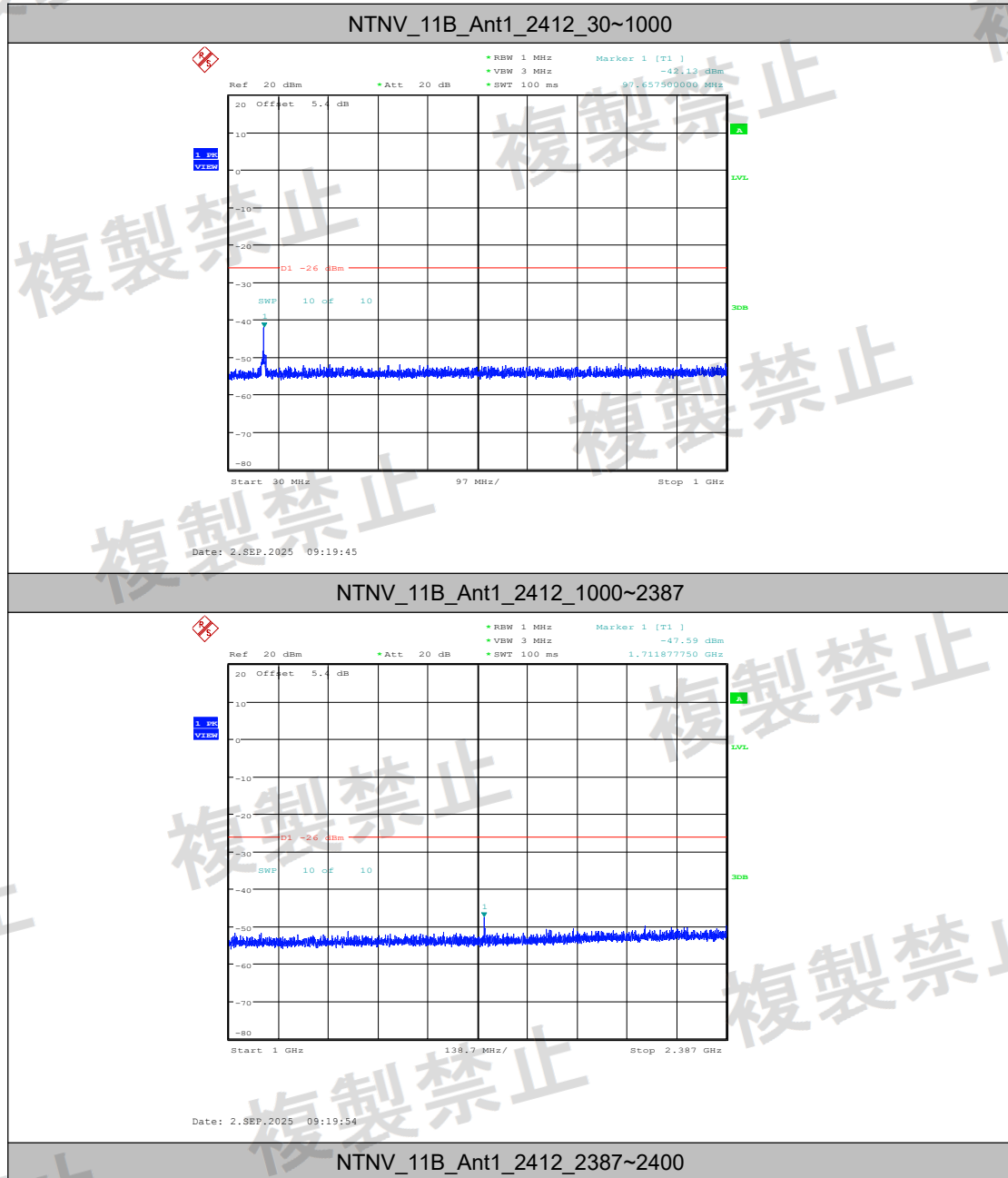
Test Result

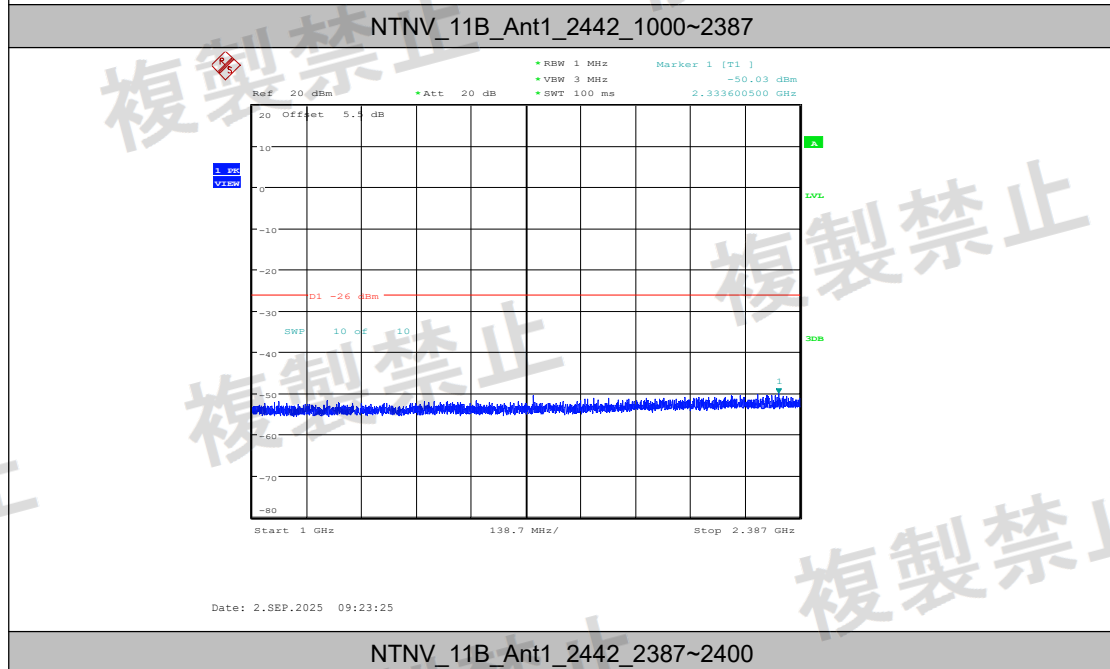
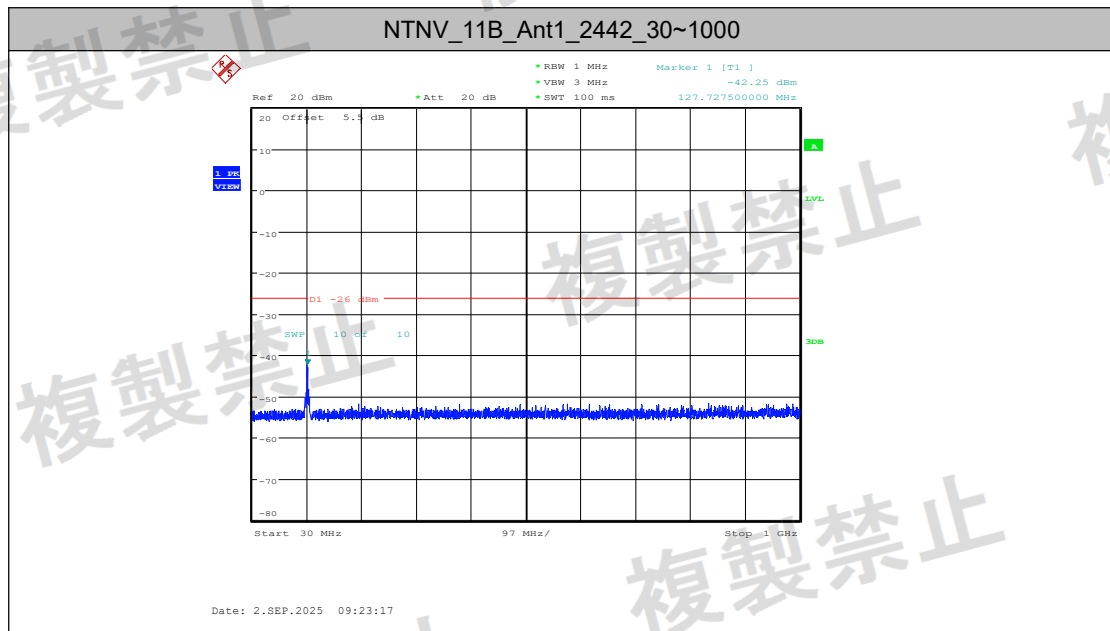
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	97.66	-42.13	≤-26	0.06124	≤2.5	PASS
				1000~2387	1711.8 8	-47.59	≤-26	0.01742	≤2.5	PASS
				2387~2400	2399.6 1	-36.62	≤-16	0.21777	≤25	PASS
				2483.5~2496.5	2484.0 5	-38.91	≤-16	0.12853	≤25	PASS
				2496.5~13000	4824.0 8	-40.53	≤-26	0.08851	≤2.5	PASS
			2442	30~1000	127.73	-42.25	≤-26	0.05957	≤2.5	PASS
				1000~2387	2333.6 0	-50.03	≤-26	0.00993	≤2.5	PASS
				2387~2400	2391.7 5	-38.64	≤-16	0.13677	≤25	PASS
				2483.5~2496.5	2484.2 5	-38.74	≤-16	0.13366	≤25	PASS
				2496.5~13000	4883.9 5	-40.04	≤-26	0.09908	≤2.5	PASS
	11G	Ant1	2472	30~1000	157.80	-38.63	≤-26	0.13709	≤2.5	PASS
				1000~2387	1713.6 1	-46.24	≤-26	0.02377	≤2.5	PASS
				2387~2400	2388.7 4	-39.17	≤-16	0.12106	≤25	PASS
				2483.5~2496.5	2483.5 5	-34.27	≤-16	0.37411	≤25	PASS
				2496.5~13000	4943.8 2	-33.85	≤-26	0.41210	≤2.5	PASS
			2412	30~1000	892.09	-51.60	≤-26	0.00692	≤2.5	PASS
				1000~2387	1713.9 6	-43.43	≤-26	0.04539	≤2.5	PASS
				2387~2400	2399.6 9	-20.25	≤-16	9.44061	≤25	PASS
			2442	2483.5~2496.5	2489.4 1	-39.19	≤-16	0.12050	≤25	PASS
				2496.5~13000	3327.3 3	-51.00	≤-26	0.00794	≤2.5	PASS
			2442	30~1000	126.76	-42.93	≤-26	0.05093	≤2.5	PASS
				1000~2387	2259.7	-49.66	≤-26	0.01081	≤2.5	PASS

					4					
				2387~2400	2390.0 2	-38.95	≤-16	0.12735	≤25	PASS
				2483.5~2496.5	2485.3 6	-37.79	≤-16	0.16634	≤25	PASS
				2496.5~13000	4884.4 7	-44.98	≤-26	0.03177	≤2.5	PASS
			2472	30~1000	158.53	-50.82	≤-26	0.00828	≤2.5	PASS
				1000~2387	1715.3 5	-46.56	≤-26	0.02208	≤2.5	PASS
				2387~2400	2394.5 5	-39.07	≤-16	0.12388	≤25	PASS
				2483.5~2496.5	2483.7 3	-19.16	≤-16	12.1338 9	≤25	PASS
				2496.5~13000	4943.2 9	-49.45	≤-26	0.01135	≤2.5	PASS
				30~1000	358.35	-51.15	≤-26	0.00767	≤2.5	PASS
	11N20Si SO	Ant1	2412	1000~2387	1711.1 8	-48.74	≤-26	0.01337	≤2.5	PASS
				2387~2400	2398.5 4	-20.33	≤-16	9.26830	≤25	PASS
				2483.5~2496.5	2494.6 9	-38.37	≤-16	0.14555	≤25	PASS
				2496.5~13000	3144.5 7	-51.08	≤-26	0.00780	≤2.5	PASS
				30~1000	129.43	-41.99	≤-26	0.06324	≤2.5	PASS
			2442	1000~2387	1713.9 6	-46.05	≤-26	0.02483	≤2.5	PASS
				2387~2400	2396.0 8	-39.45	≤-16	0.11350	≤25	PASS
				2483.5~2496.5	2484.8 7	-36.73	≤-16	0.21232	≤25	PASS
				2496.5~13000	4891.3 0	-44.30	≤-26	0.03715	≤2.5	PASS
				30~1000	161.68	-50.63	≤-26	0.00865	≤2.5	PASS
			2472	1000~2387	1712.9 2	-44.90	≤-26	0.03236	≤2.5	PASS
				2387~2400	2396.4 9	-38.52	≤-16	0.14060	≤25	PASS
				2483.5~2496.5	2483.5 1	-35.55	≤-16	0.27861	≤25	PASS
				2496.5~13000	4941.1 9	-49.35	≤-26	0.01161	≤2.5	PASS

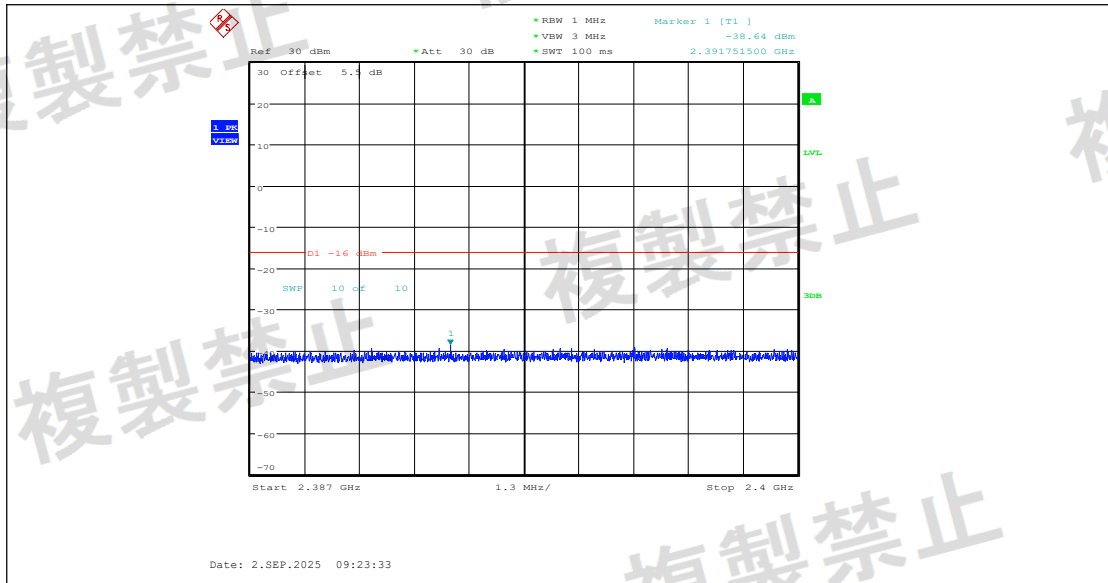
	11N40SI SO	Ant1	2422	30~1000	105.90	-48.42	≤-26	0.01439	≤2.5	PASS
				1000~2387	2387.0 0	-41.25	≤-26	0.07499	≤2.5	PASS
				2387~2400	2399.0 5	-19.86	≤-16	10.3276 1	≤25	PASS
				2483.5~2496.5	2489.4 2	-39.13	≤-16	0.12218	≤25	PASS
				2496.5~13000	4840.3 6	-50.08	≤-26	0.00982	≤2.5	PASS
			2442	30~1000	125.30	-47.05	≤-26	0.01972	≤2.5	PASS
				1000~2387	1711.1 8	-47.16	≤-26	0.01923	≤2.5	PASS
				2387~2400	2399.9 9	-33.31	≤-16	0.46666	≤25	PASS
				2483.5~2496.5	2483.9 6	-29.63	≤-16	1.08893	≤25	PASS
				2496.5~13000	4891.3 0	-47.64	≤-26	0.01722	≤2.5	PASS
			2462	30~1000	972.60	-51.23	≤-26	0.00753	≤2.5	PASS
				1000~2387	1710.8 4	-47.84	≤-26	0.01644	≤2.5	PASS
				2387~2400	2392.6 9	-38.24	≤-16	0.14997	≤25	PASS
				2483.5~2496.5	2484.0 7	-19.36	≤-16	11.5877 7	≤25	PASS
				2496.5~13000	3598.8 4	-50.00	≤-26	0.01000	≤2.5	PASS

Test Graphs

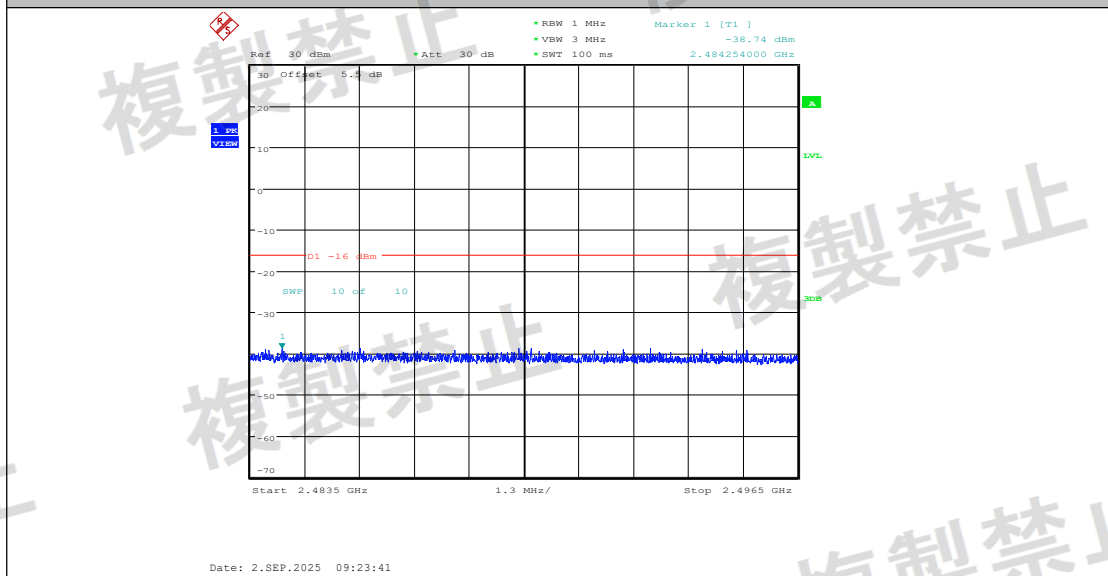




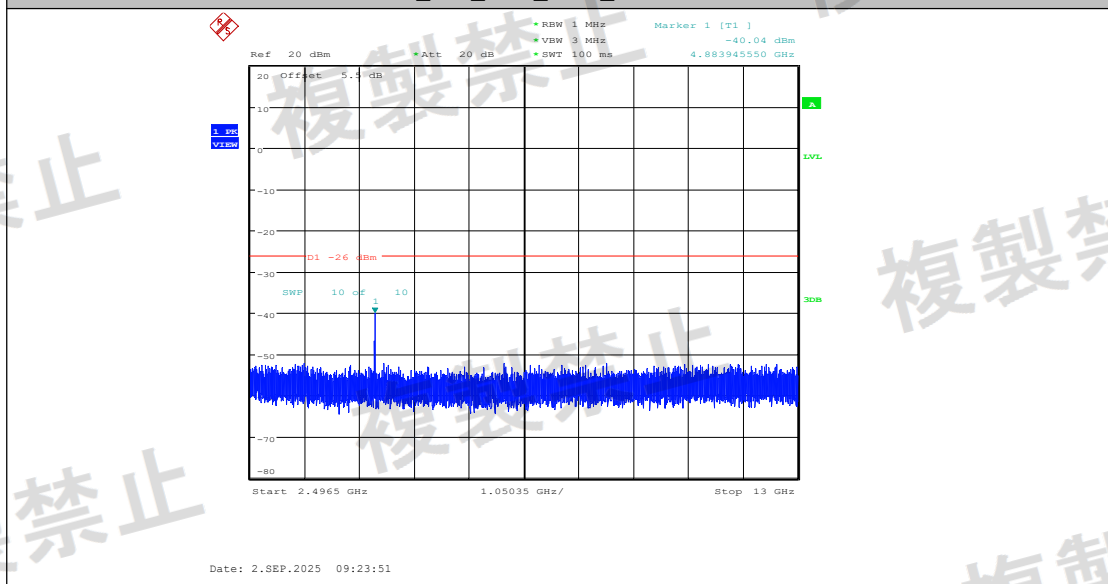
NTNV_11B_Ant1_2442_2387~2400

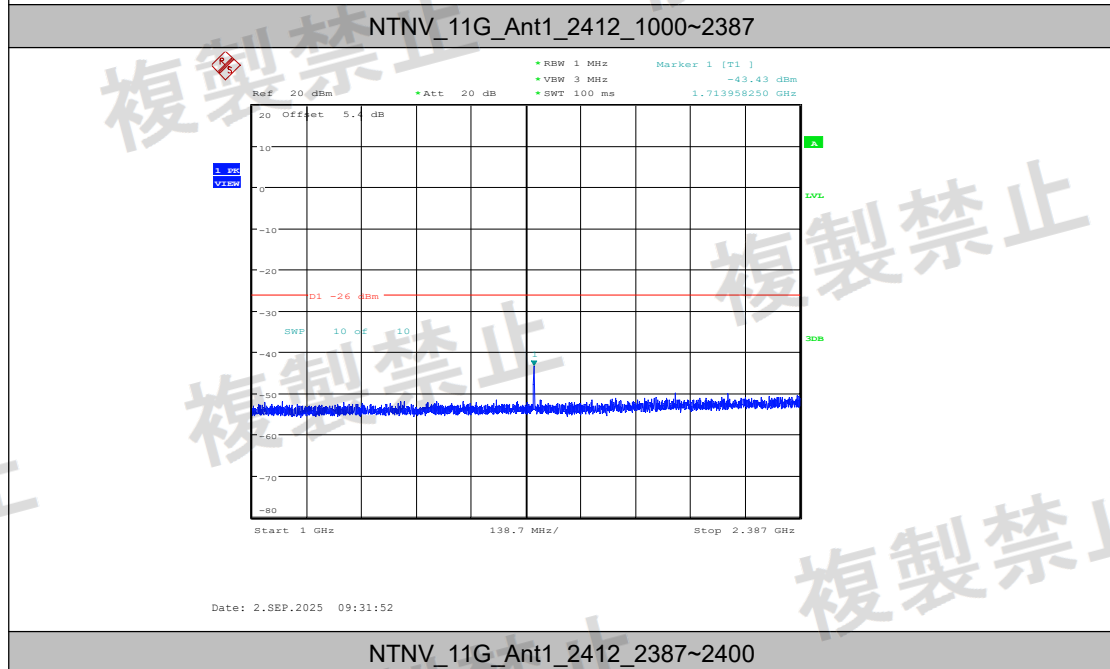
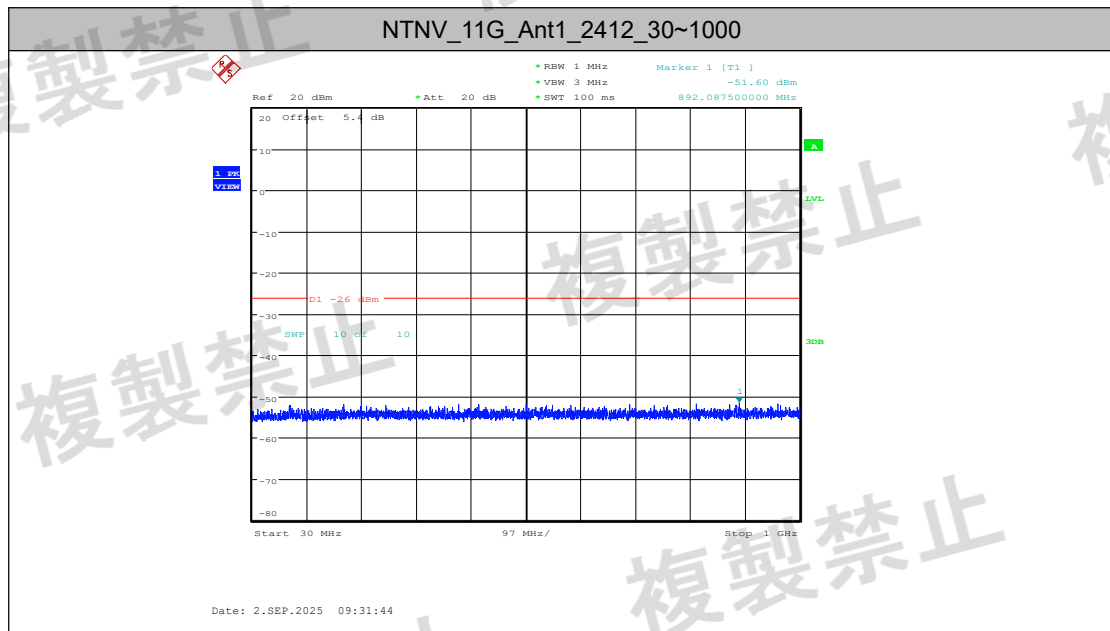


NTVN_11B_Ant1_2442_2483.5~2496.5

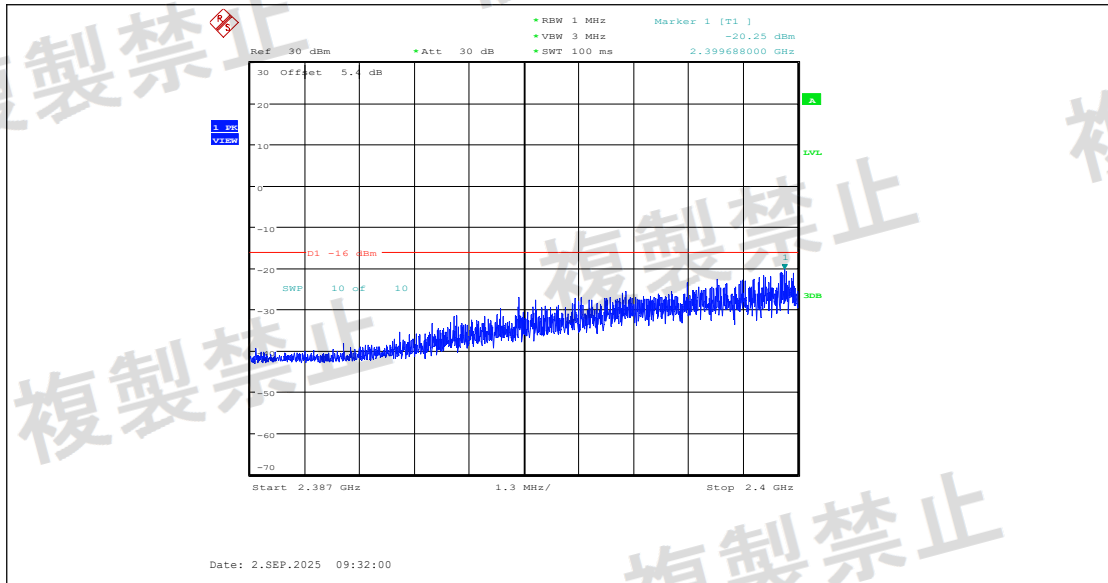


NTVN_11B_Ant1_2442_2496.5~13000

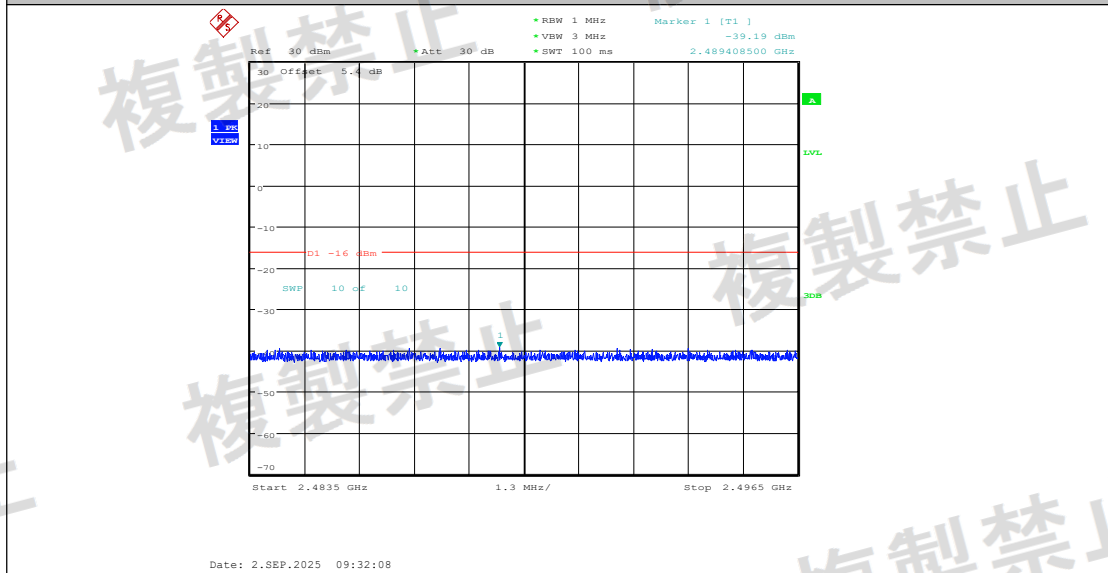




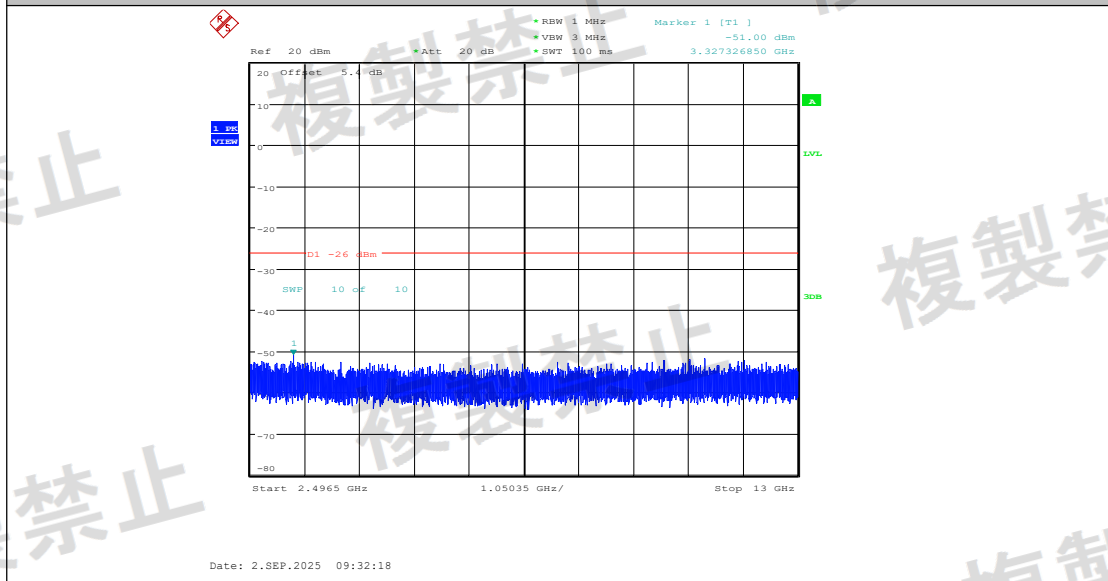
NTNV_11G_Ant1_2412_2387~2400

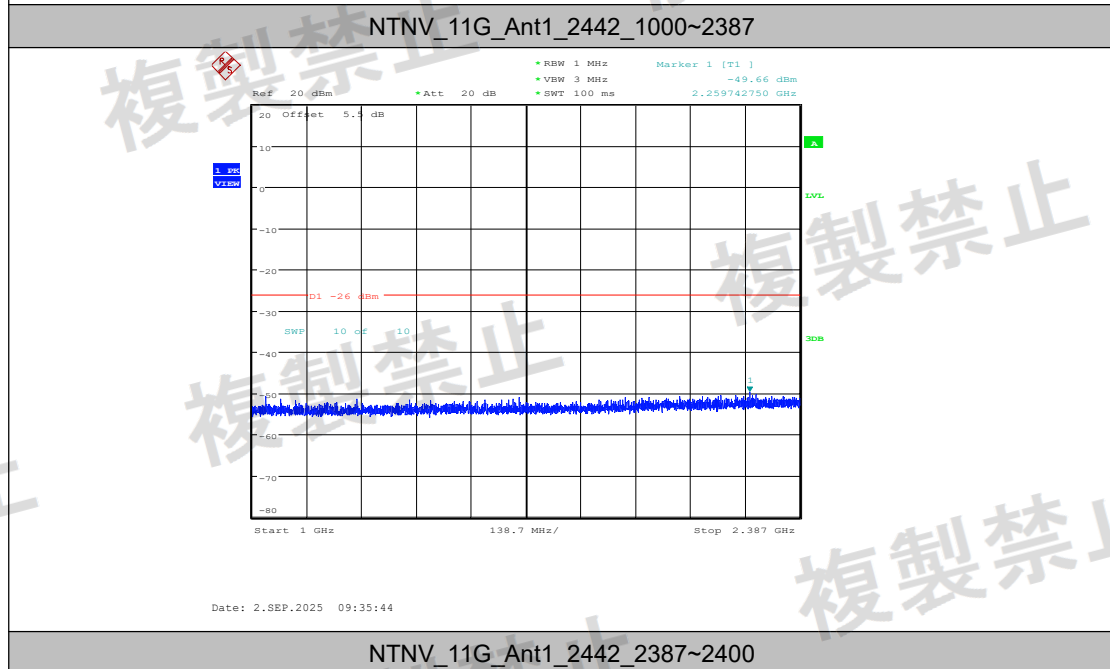
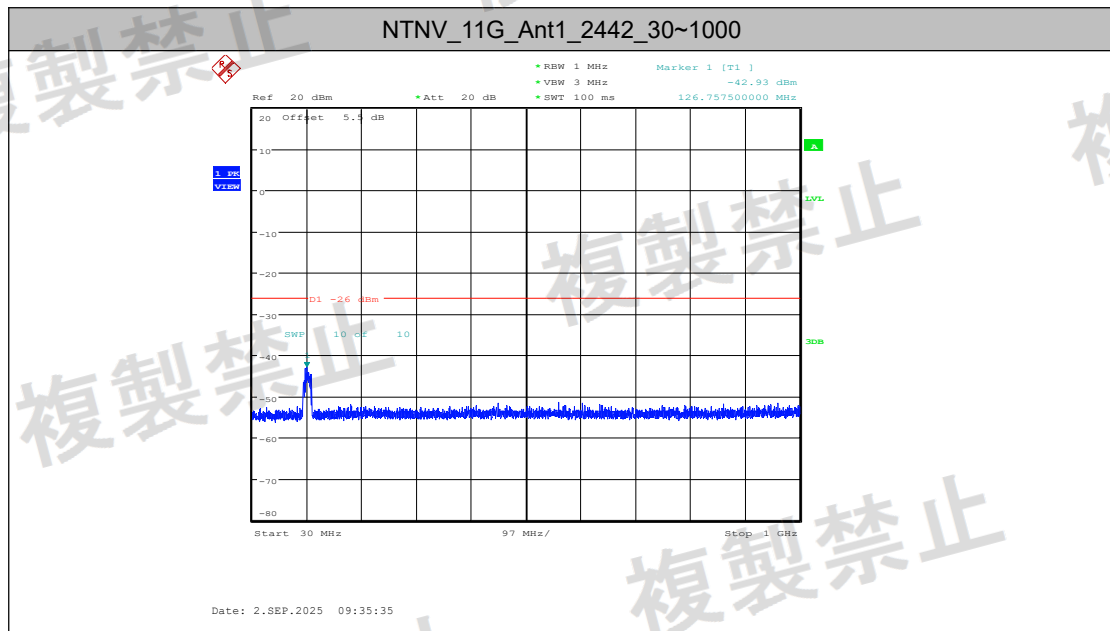


NTNV_11G_Ant1_2412_2483.5~2496.5

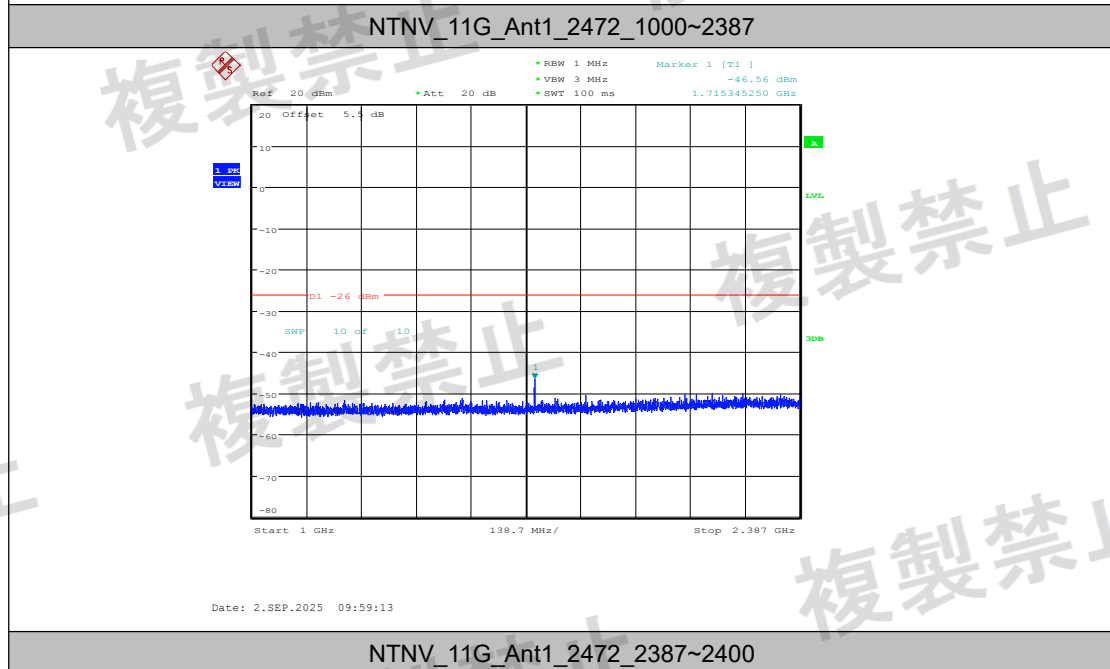
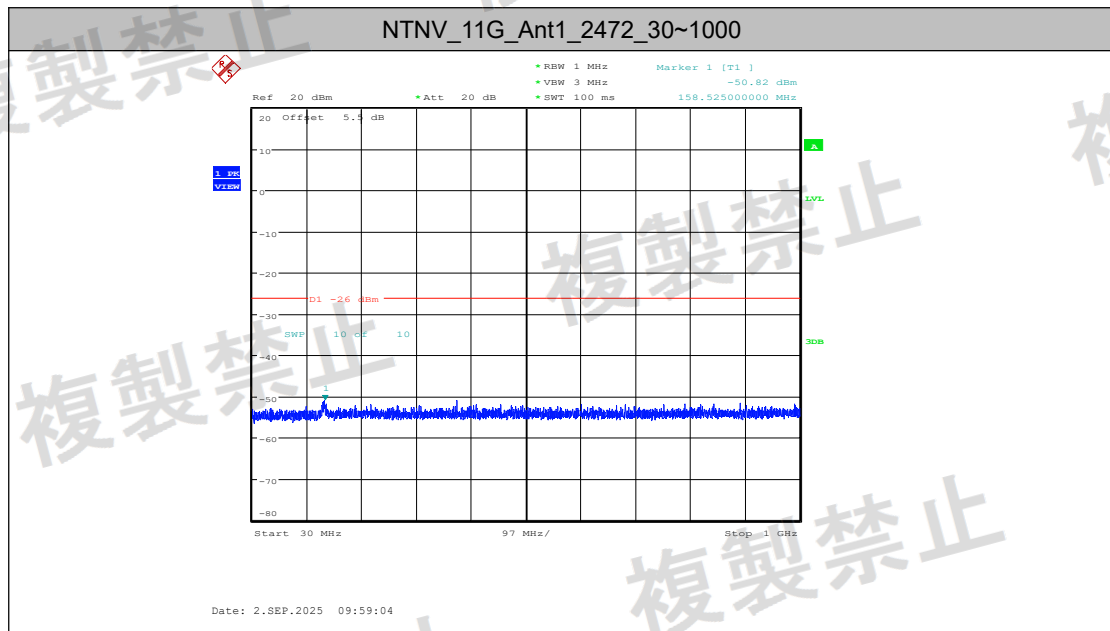


NTNV_11G_Ant1_2412_2496.5~13000

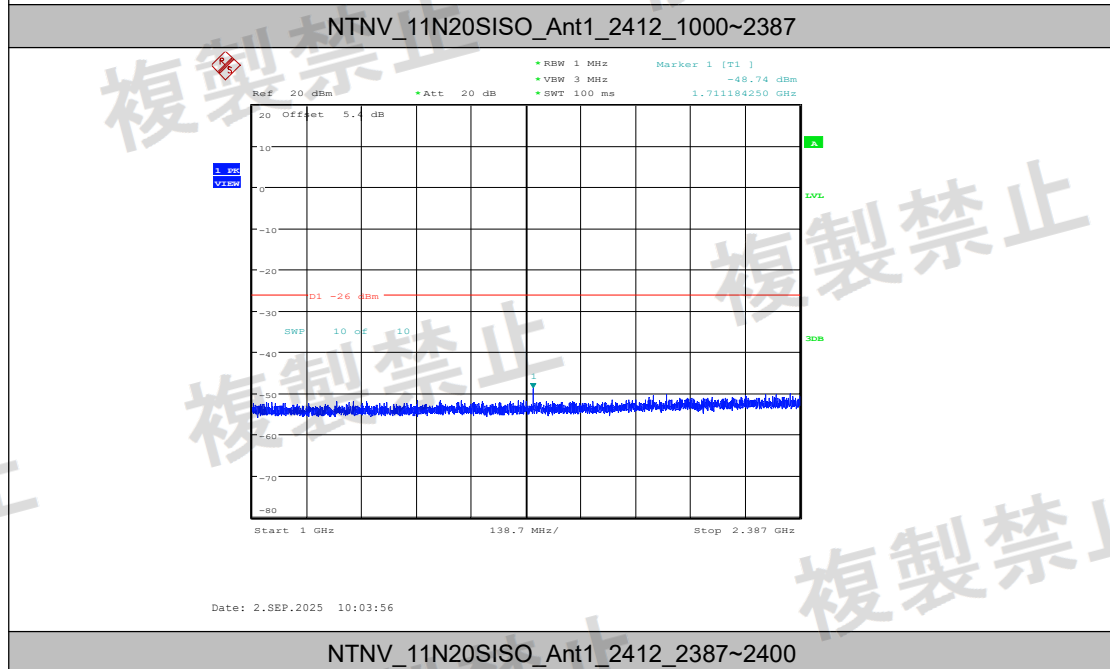
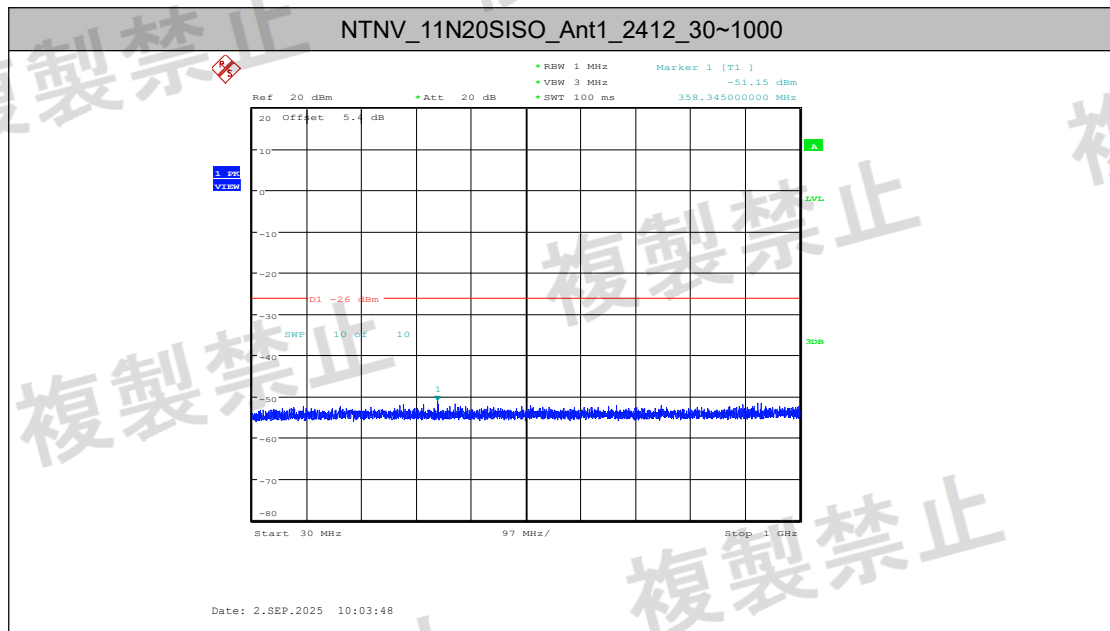




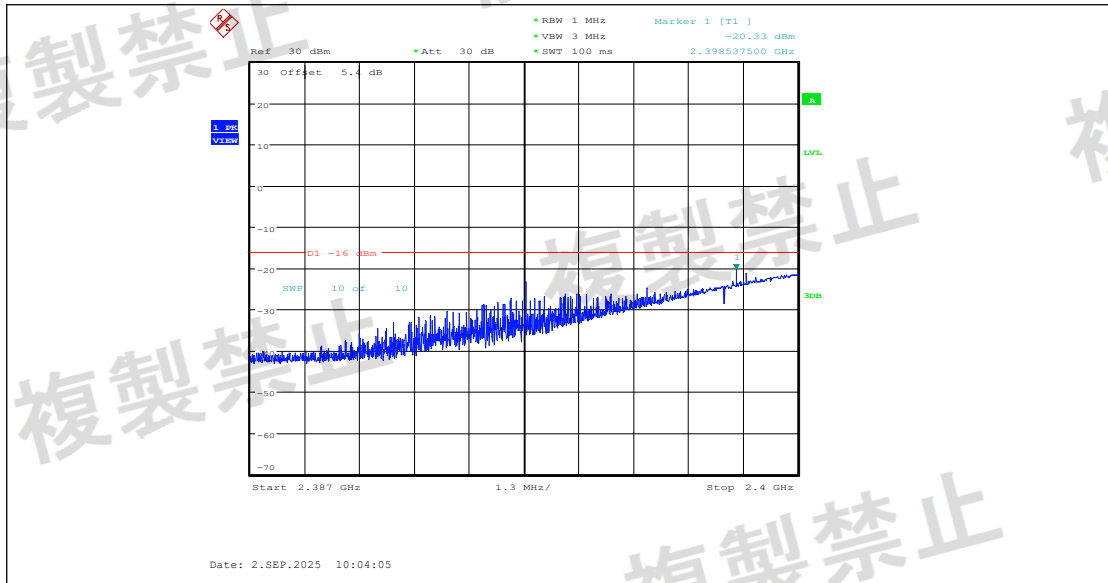
NTNV_11G_Ant1_2442_2387~2400



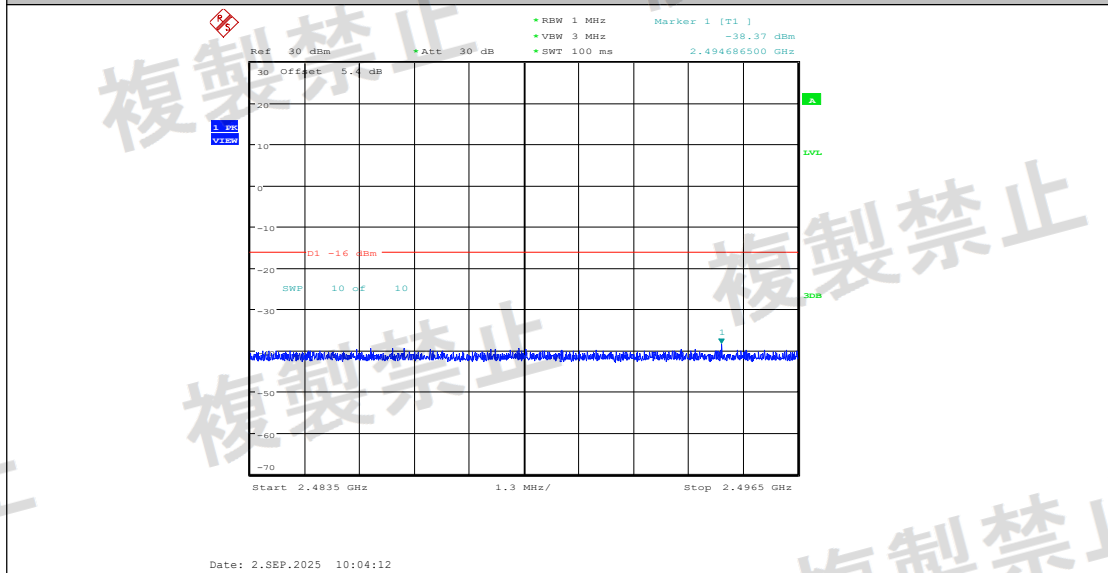
NTNV_11G_Ant1_2472_2387~2400



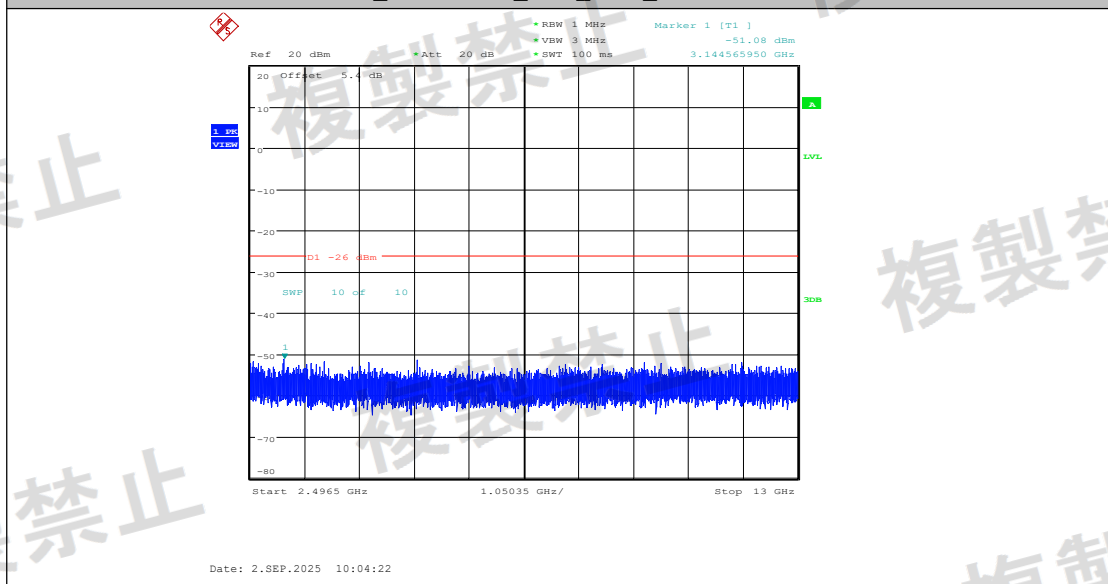
NTNV_11N20SISO_Ant1_2412_2387~2400

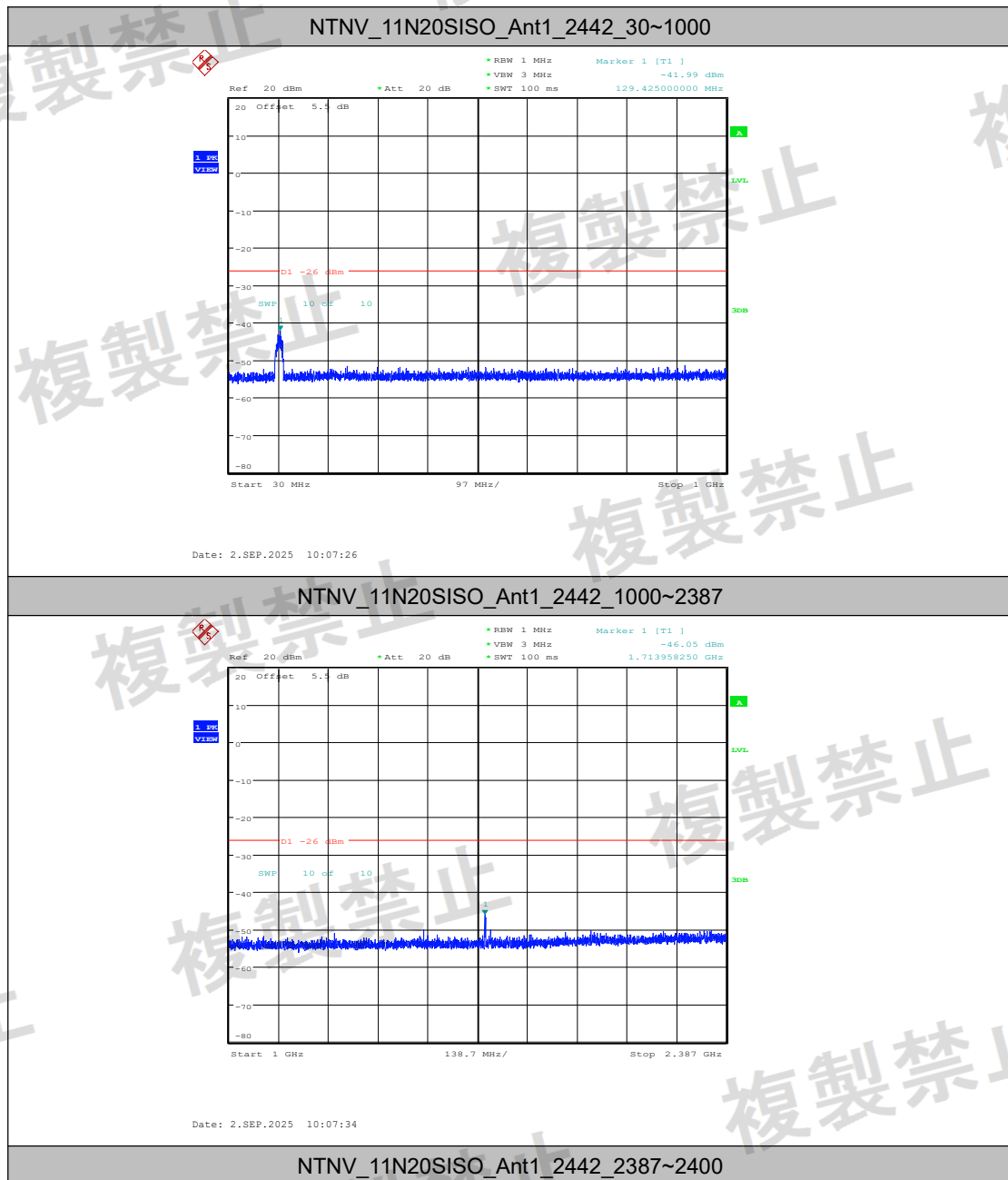


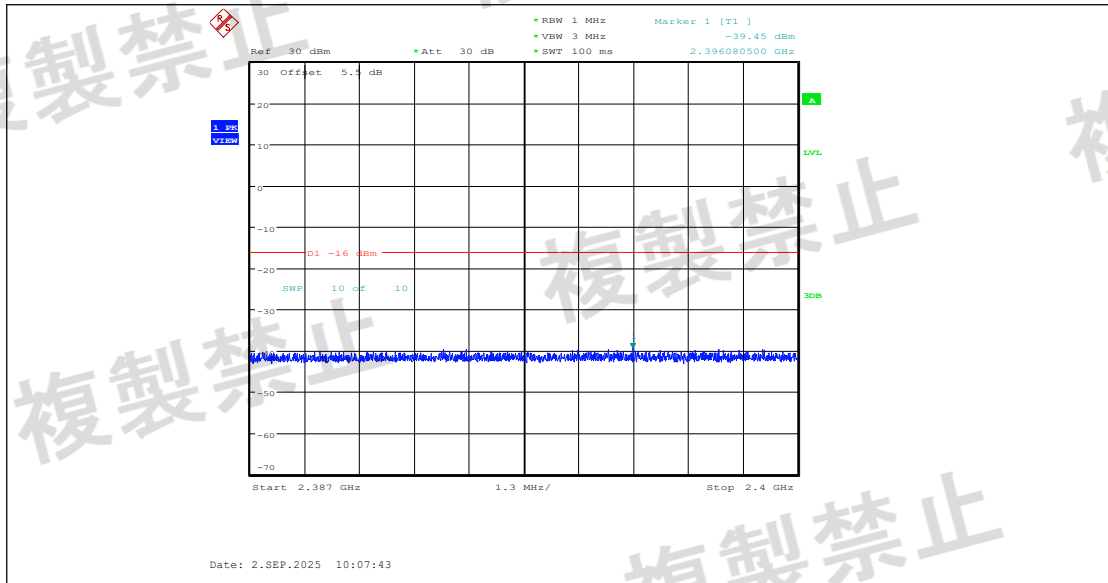
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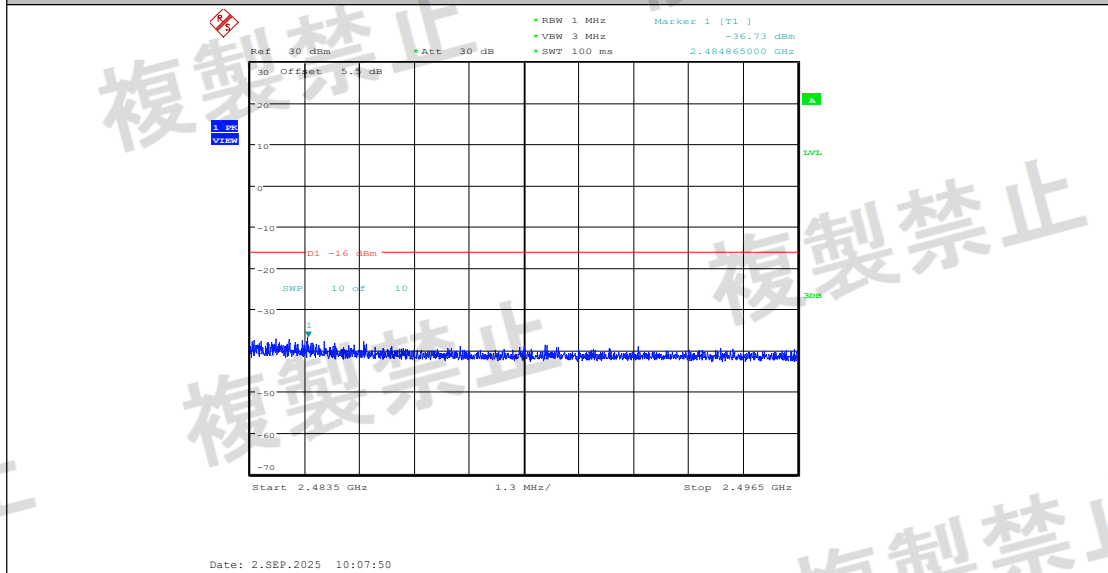
NTNV_11N20SISO_Ant1_2412_2496.5~13000



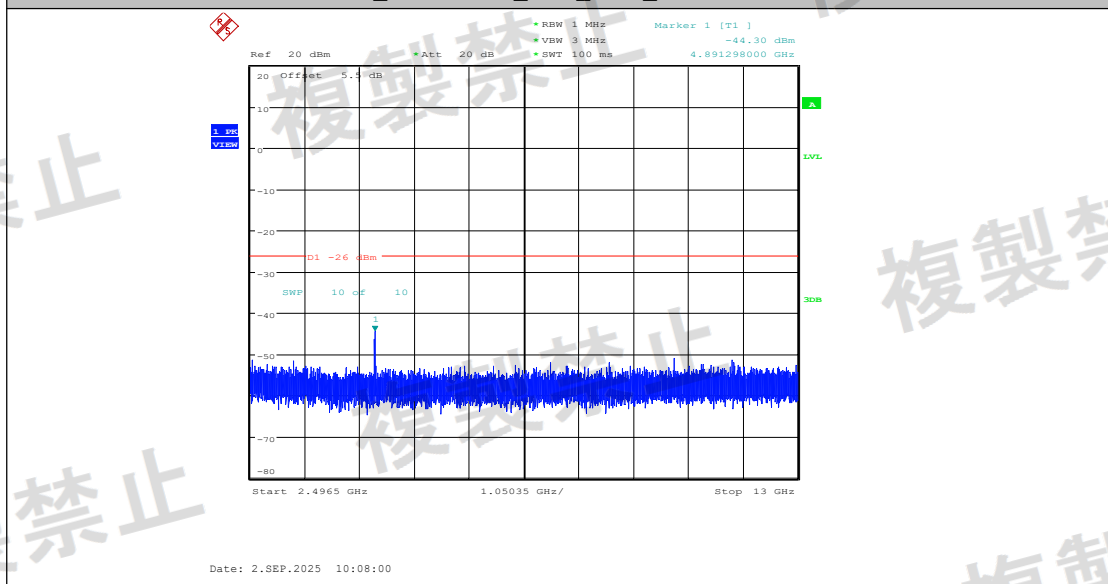


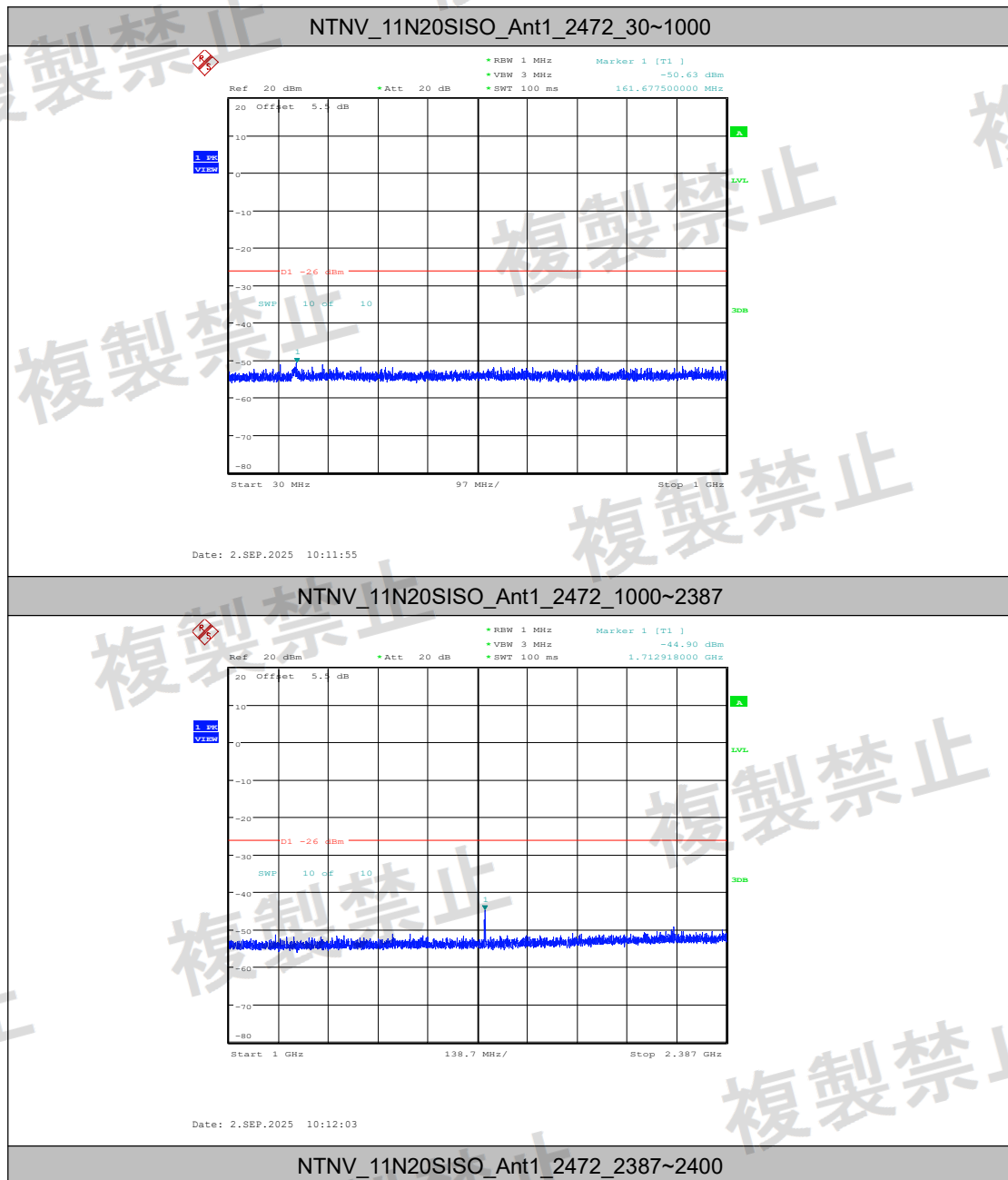


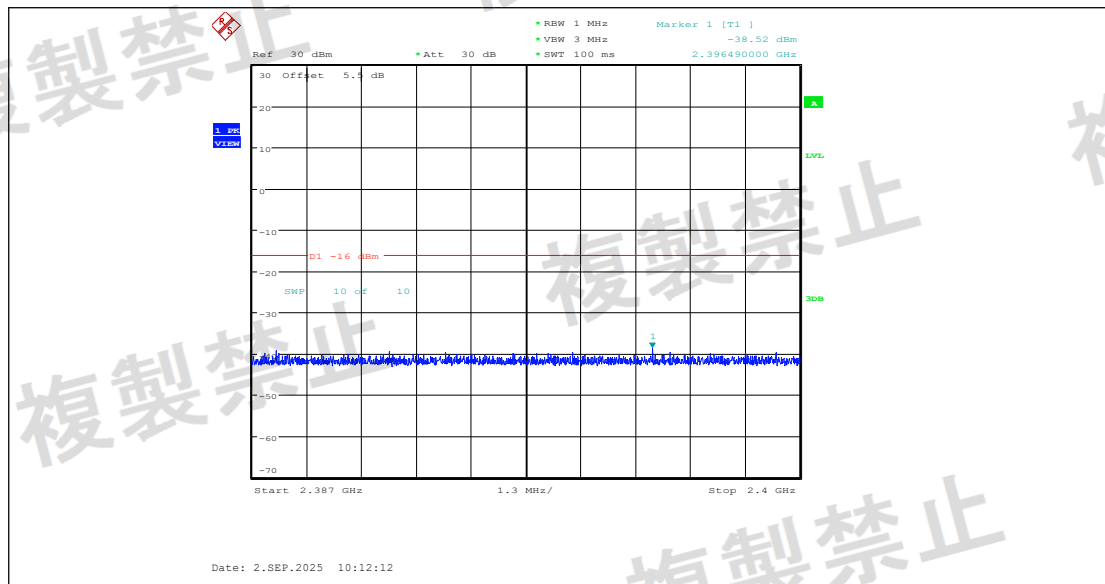
NTVN_11N20SISO_Ant1_2442_2483.5~2496.5



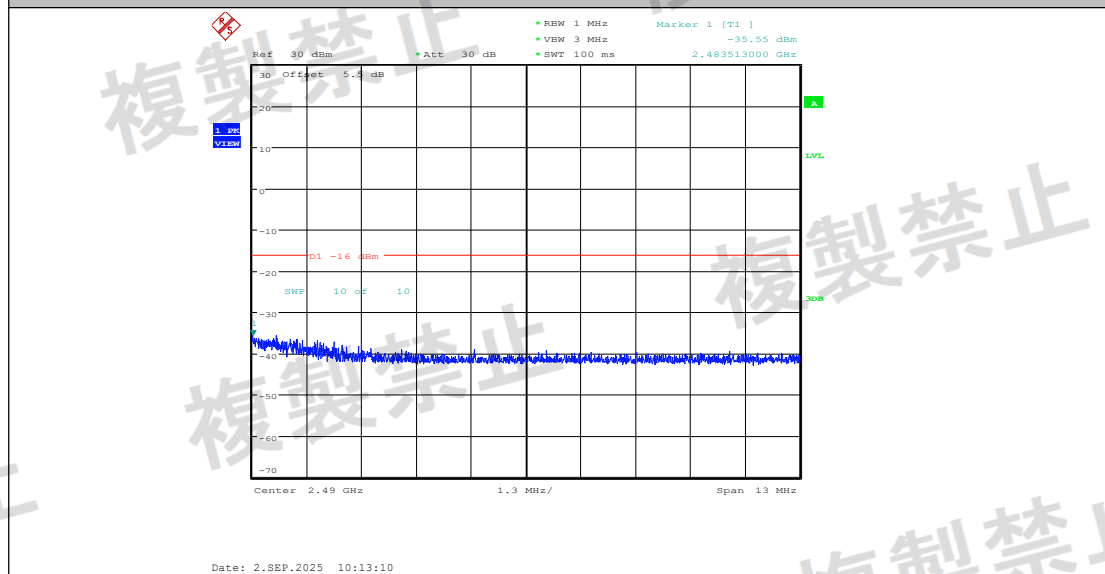
NTVN_11N20SISO_Ant1_2442_2496.5~13000



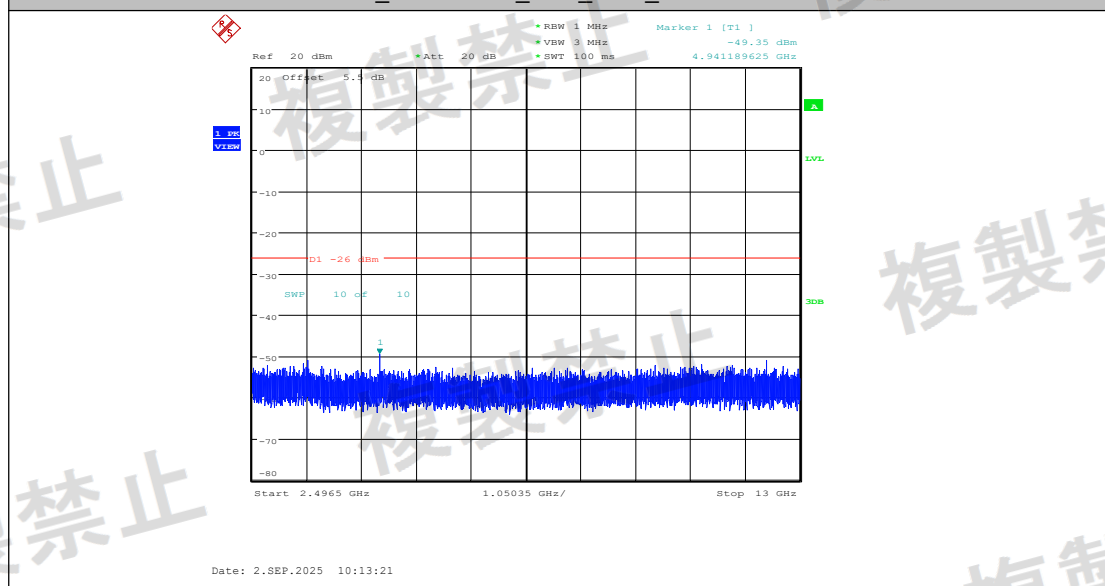


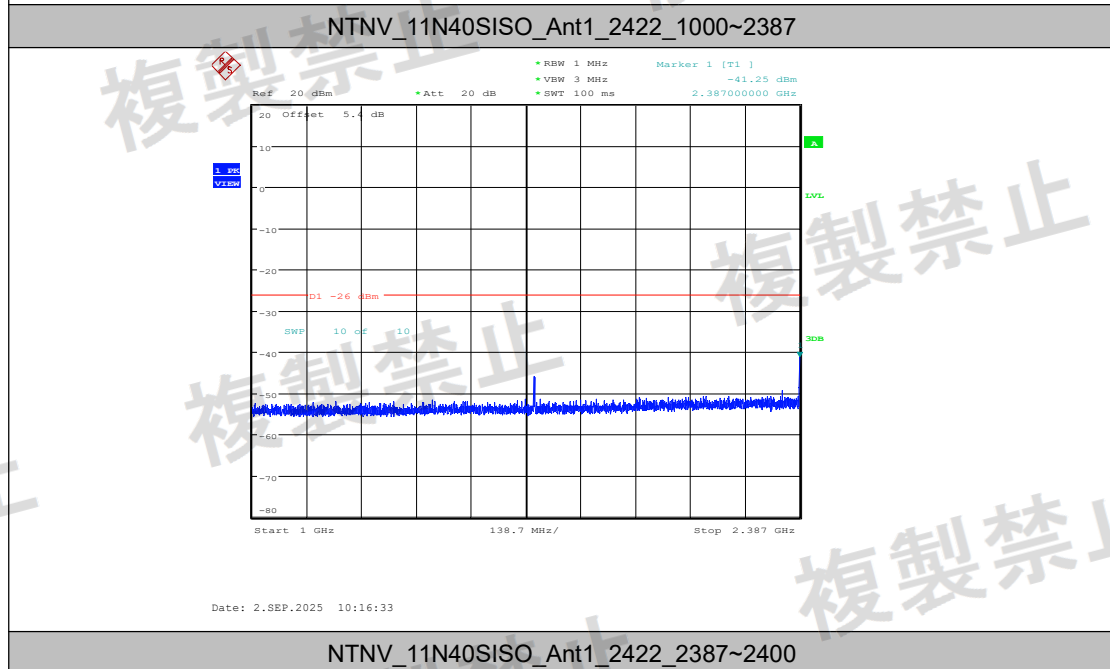
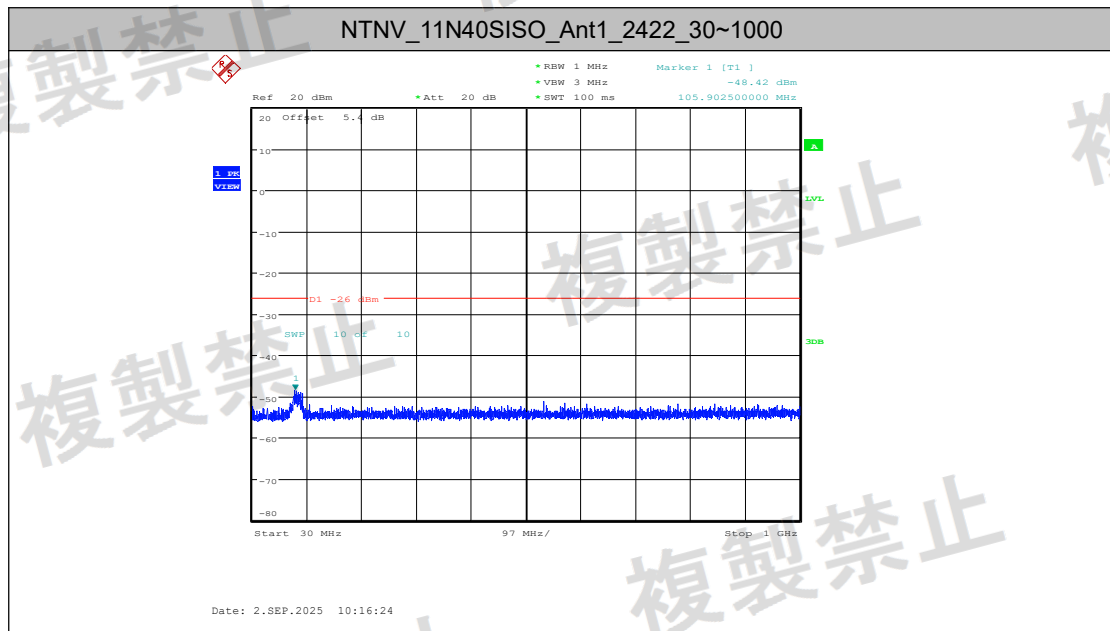


NTNV_11N20SISO_Ant1_2472_2483.5~2496.5

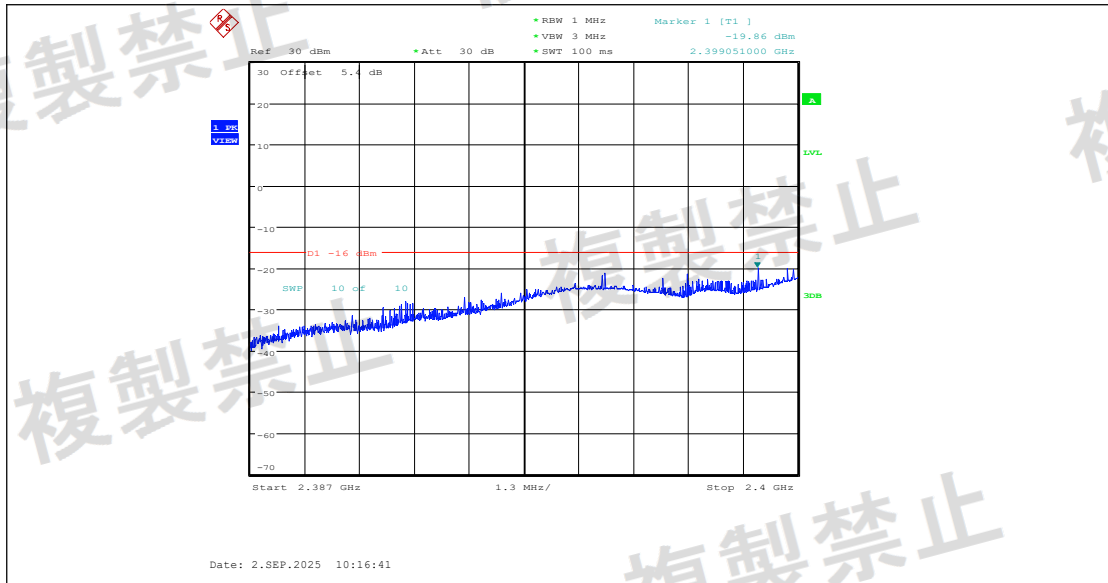


NTNV_11N20SISO_Ant1_2472_2496.5~13000

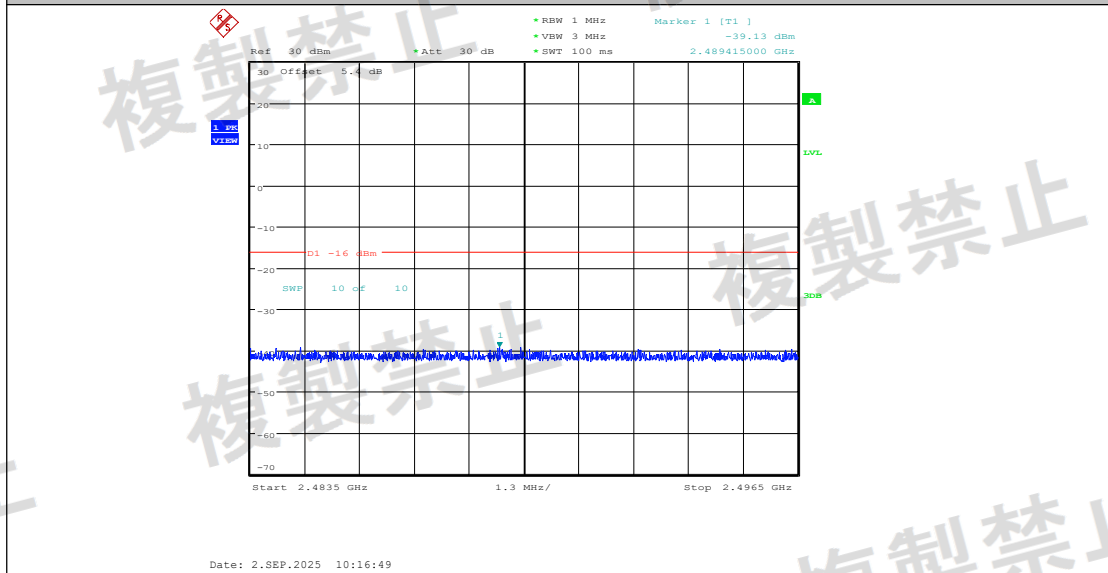




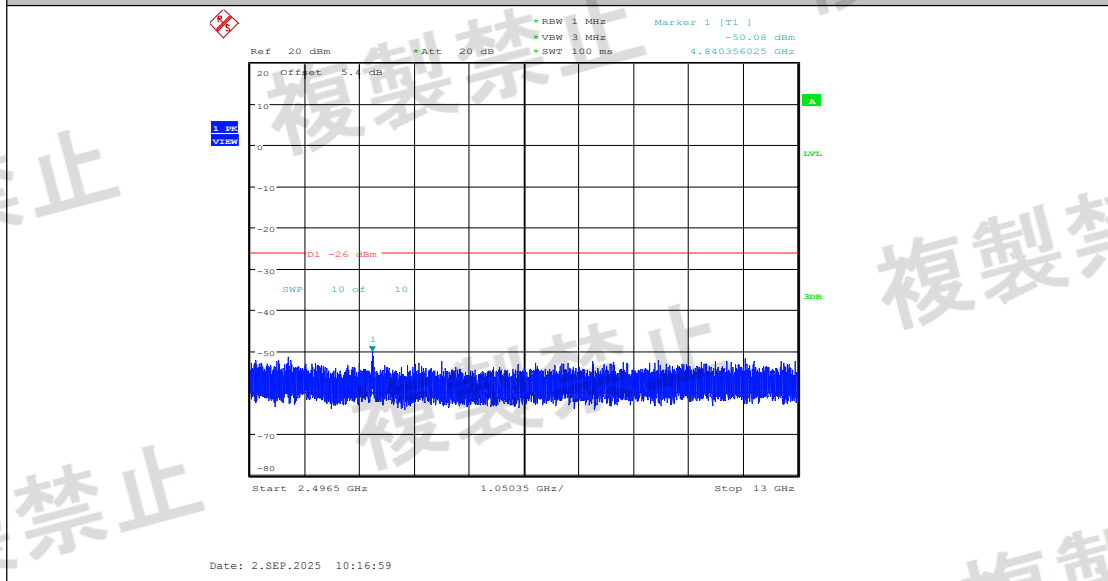
NTNV_11N40SISO_Ant1_2422_2387~2400

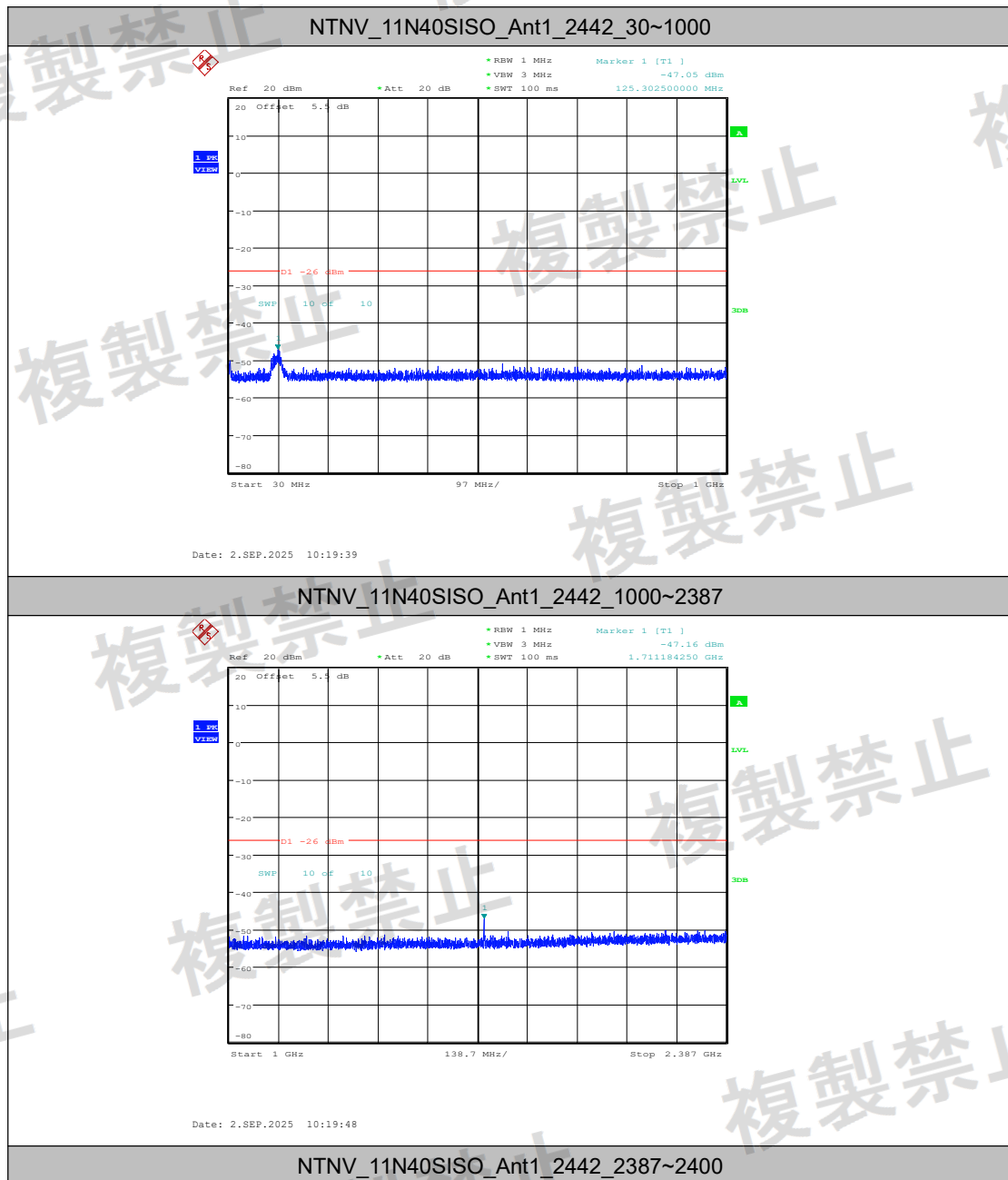


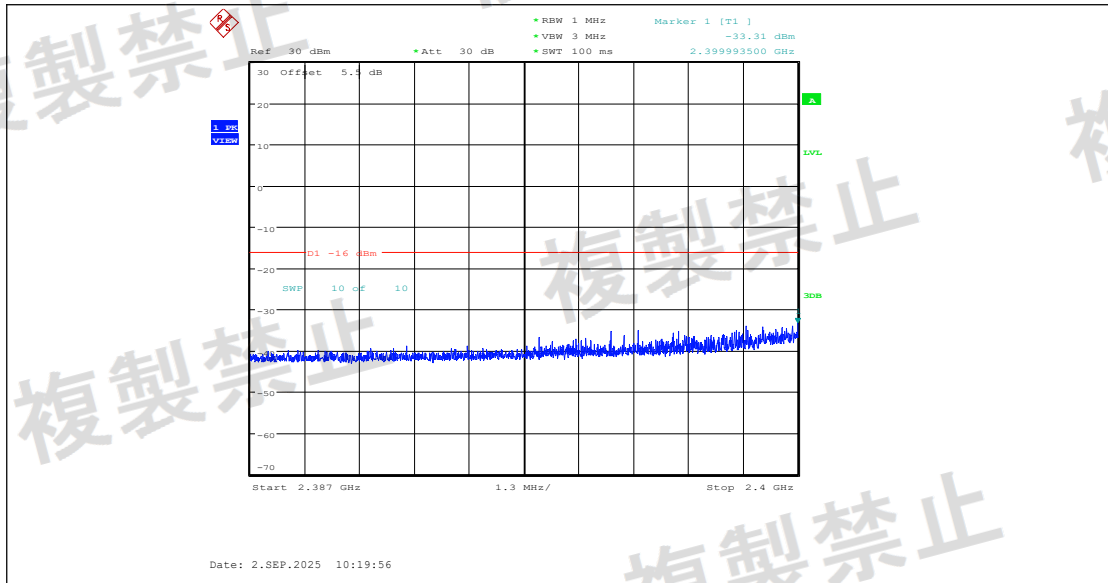
NTNV_11N40SISO_Ant1_2422_2483.5~2496.5



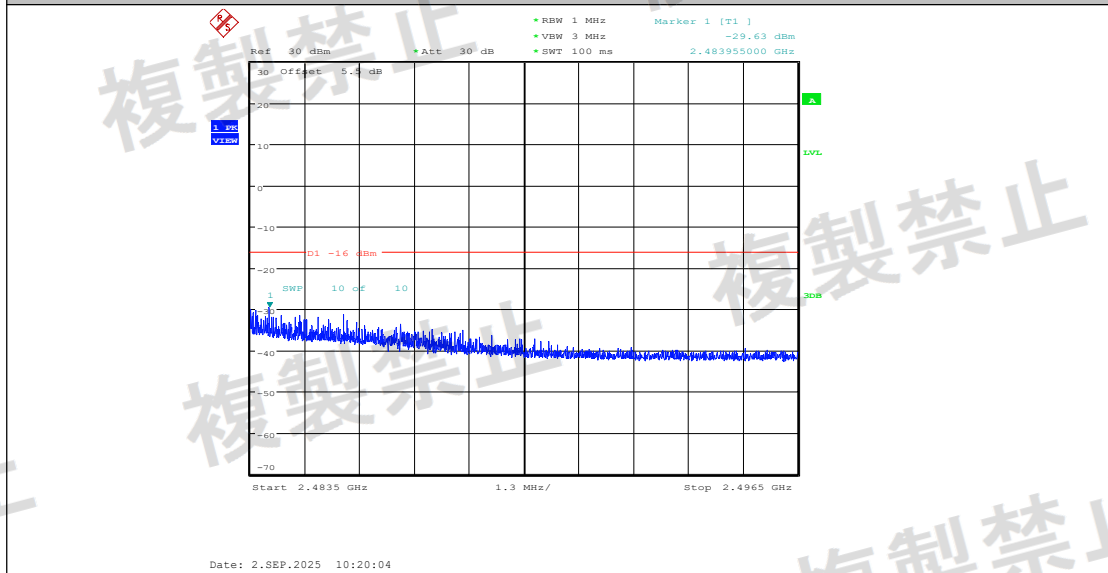
NTNV_11N40SISO_Ant1_2422_2496.5~13000



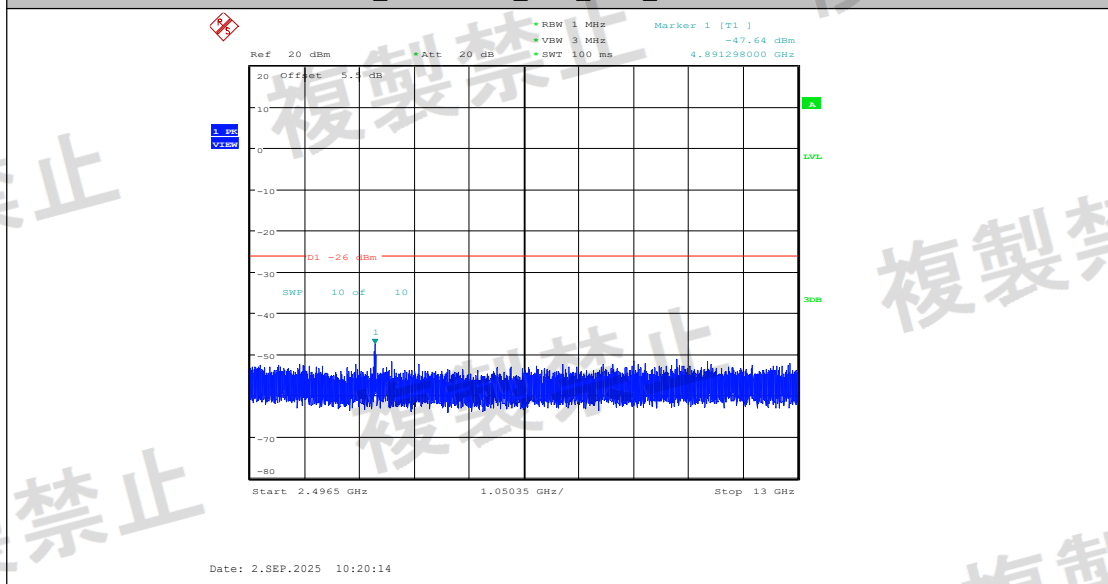


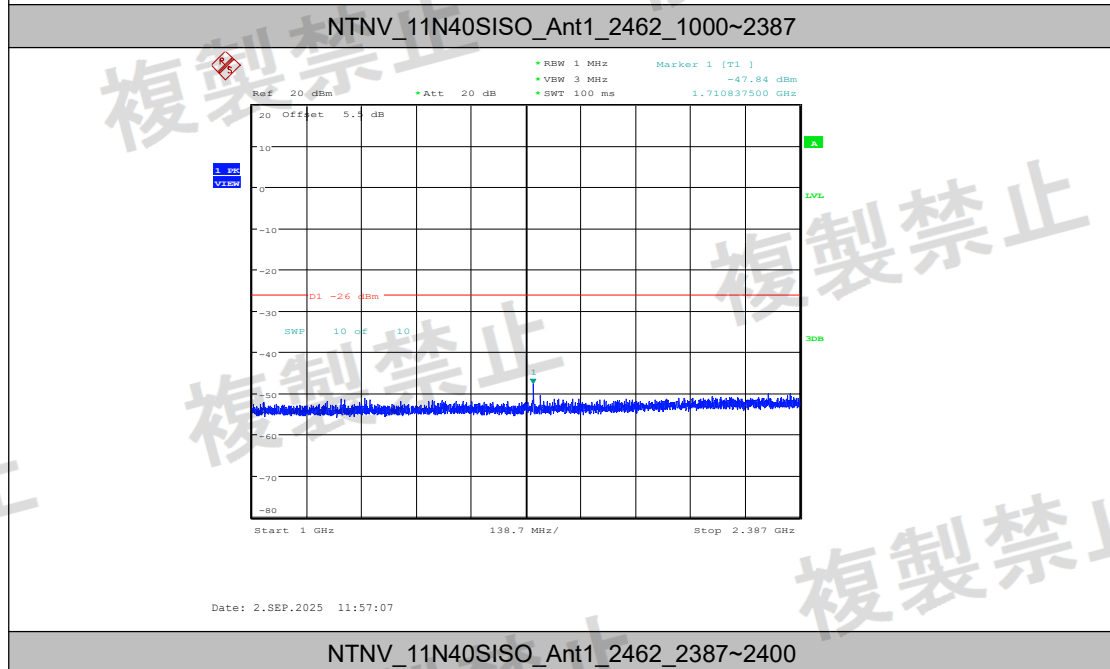
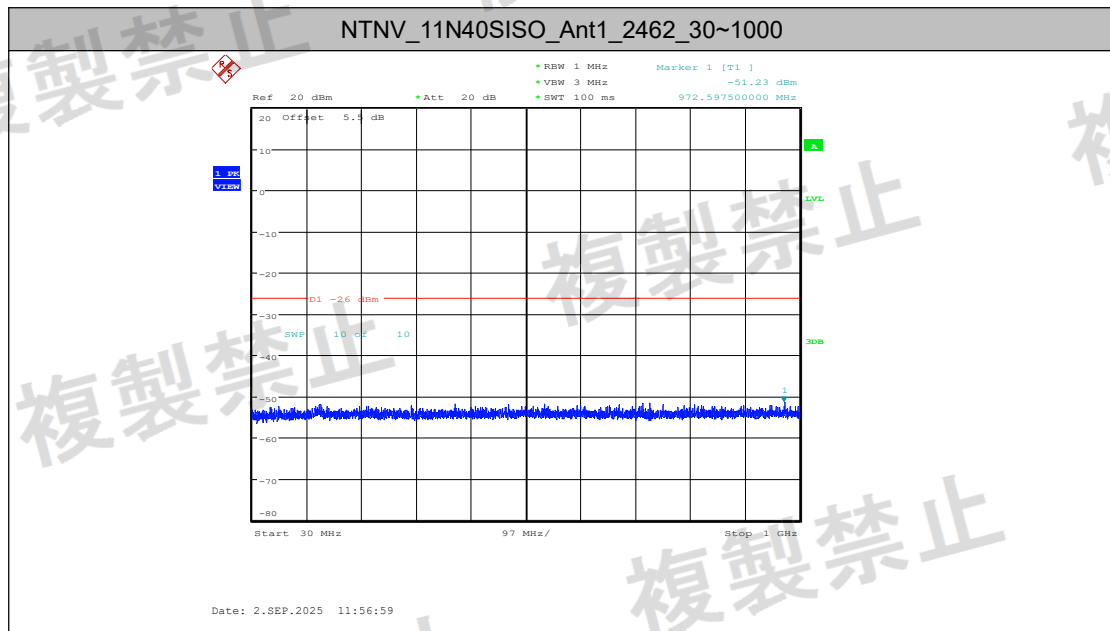


NTNV_11N40SISO_Ant1_2442_2483.5~2496.5

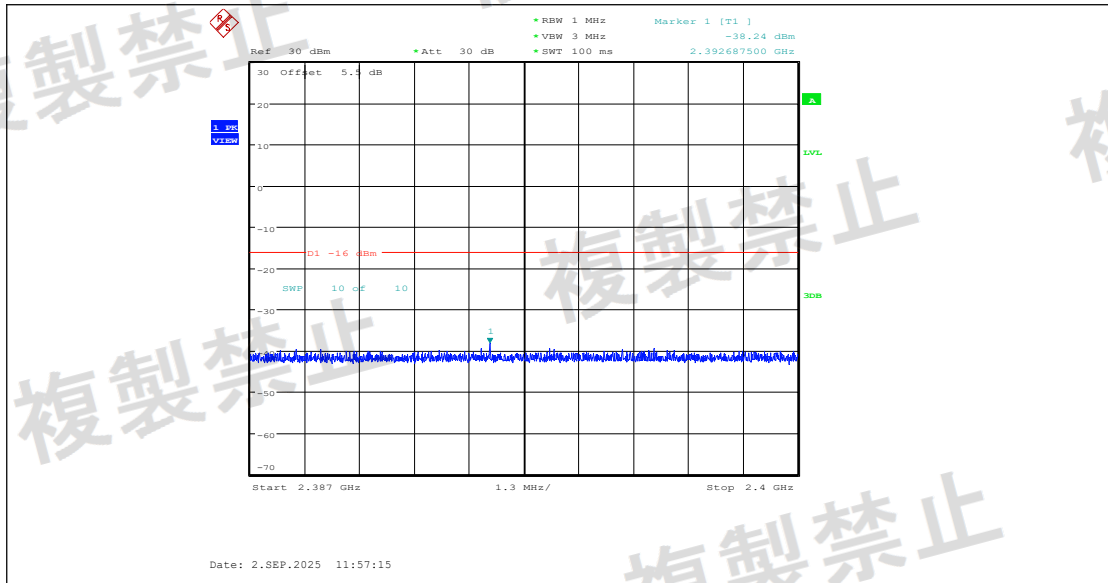


NTNV_11N40SISO_Ant1_2442_2496.5~13000

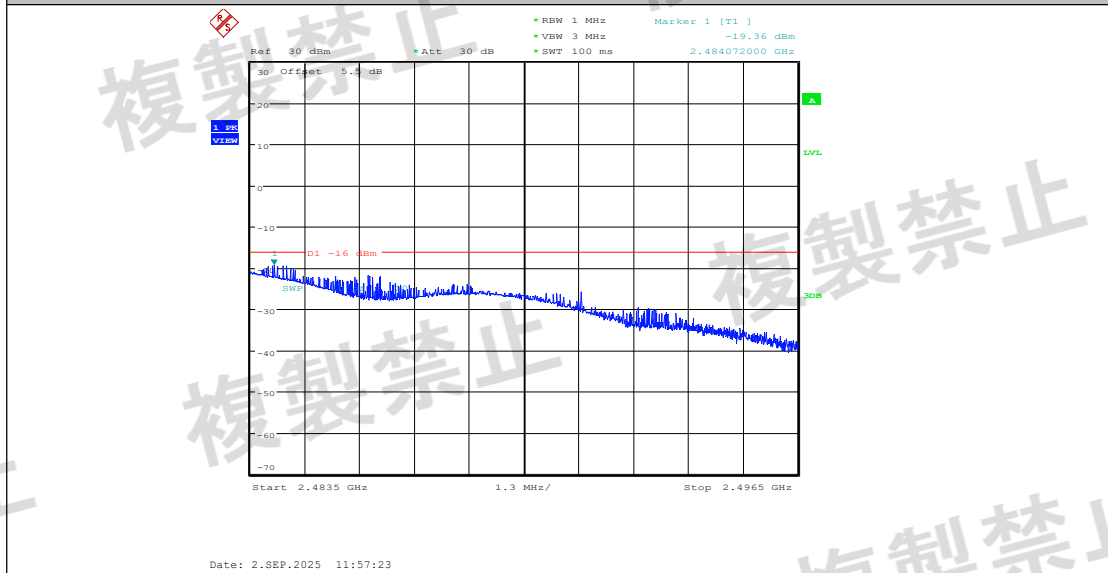




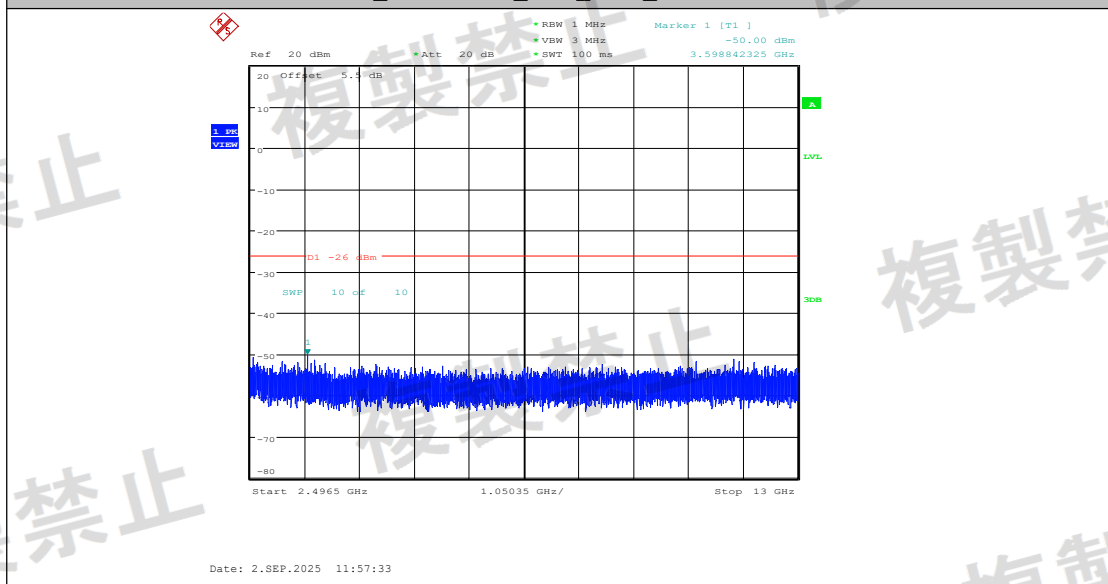
NTNV_11N40SISO_Ant1_2462_2387~2400



NTNV_11N40SISO_Ant1_2462_2483.5~2496.5



NTNV_11N40SISO_Ant1_2462_2496.5~13000

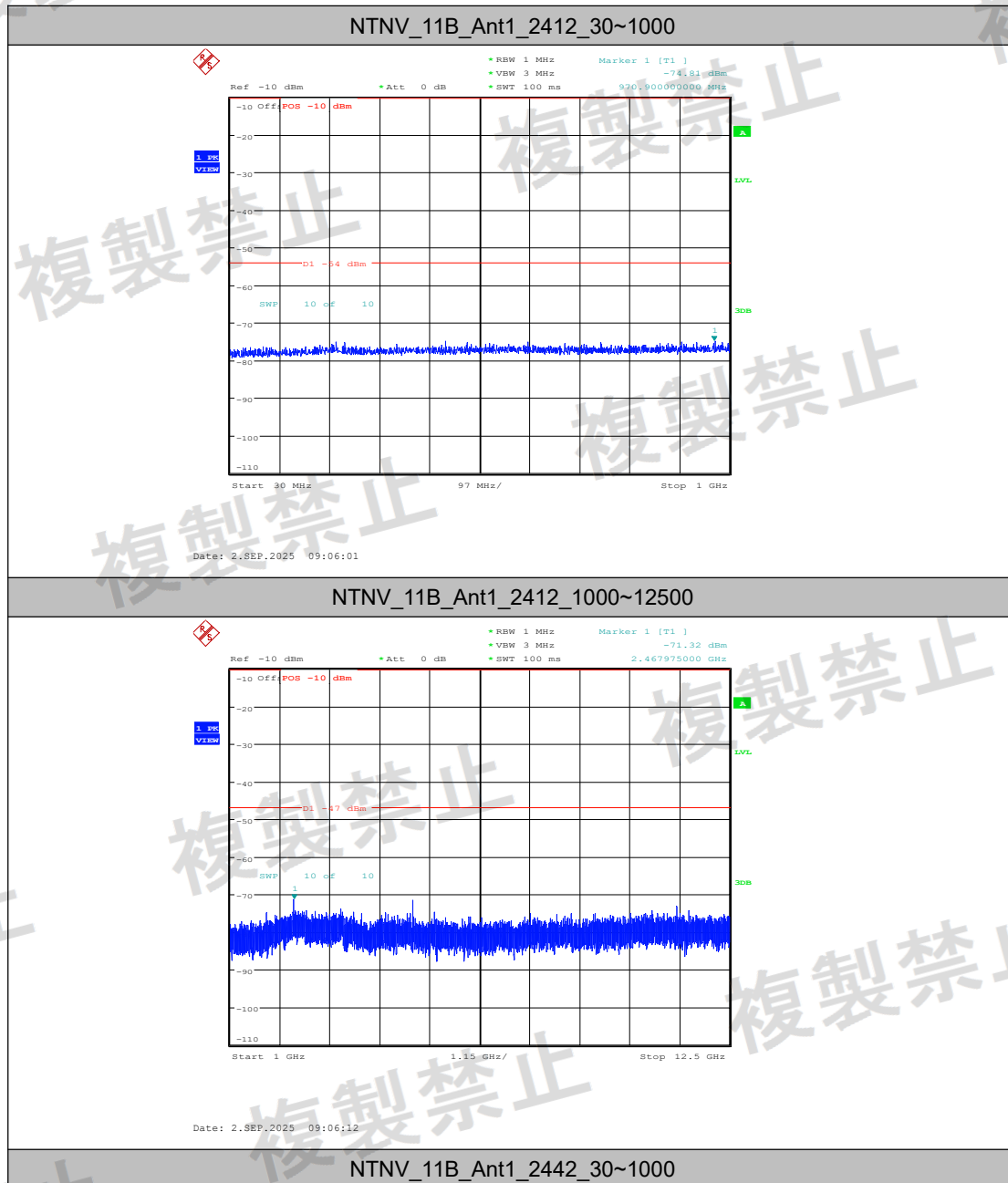


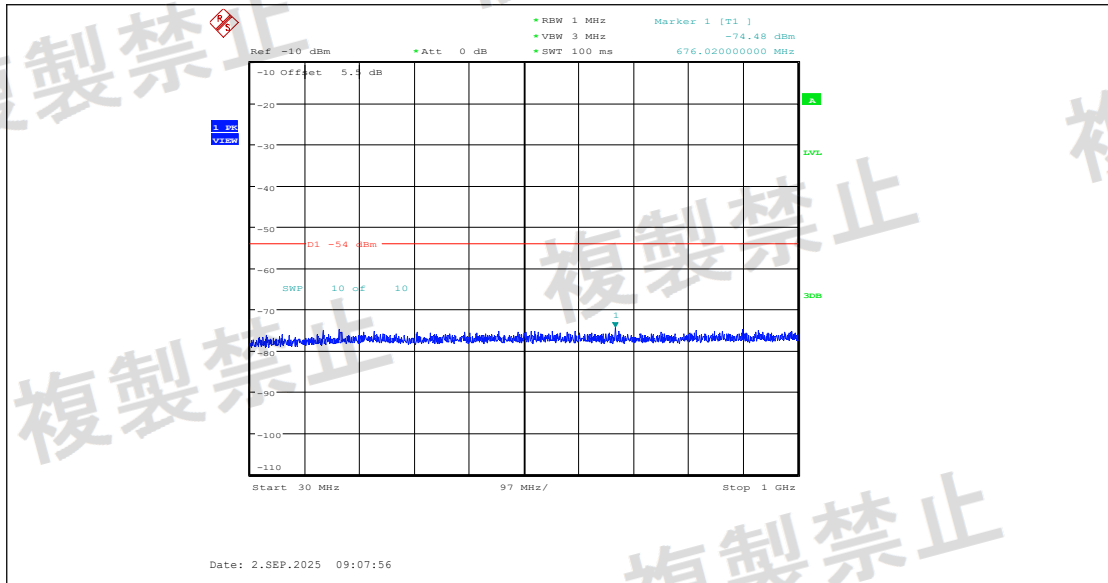
Appendix E: Spurious Emission of RX

Test Result

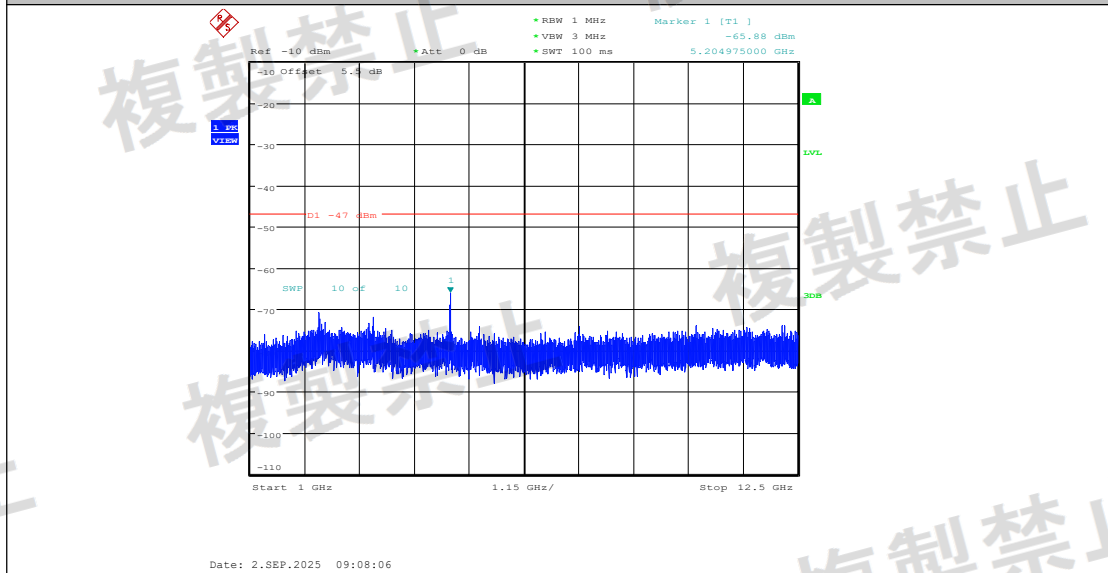
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	970.90	-74.81	≤-54	0.03304	≤4	PASS
				1000~12500	2467.98	-71.32	≤-47	0.07379	≤20	PASS
			2442	30~1000	676.02	-74.48	≤-54	0.03565	≤4	PASS
				1000~12500	5204.98	-65.88	≤-47	0.25823	≤20	PASS
			2472	30~1000	554.29	-74.14	≤-54	0.03855	≤4	PASS
				1000~12500	5203.25	-70.42	≤-47	0.09078	≤20	PASS
	11G	Ant1	2412	30~1000	520.34	-74.86	≤-54	0.03266	≤4	PASS
				1000~12500	2446.13	-66.09	≤-47	0.24604	≤20	PASS
			2442	30~1000	806.00	-74.89	≤-54	0.03243	≤4	PASS
				1000~12500	2439.23	-63.50	≤-47	0.44668	≤20	PASS
			2472	30~1000	911.25	-74.33	≤-54	0.03690	≤4	PASS
				1000~12500	2415.08	-60.23	≤-47	0.94842	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	670.20	-73.71	≤-54	0.04256	≤4	PASS
				1000~12500	5247.53	-71.61	≤-47	0.06902	≤20	PASS
			2442	30~1000	747.32	-74.59	≤-54	0.03475	≤4	PASS
				1000~12500	5202.68	-68.80	≤-47	0.13183	≤20	PASS
			2472	30~1000	361.74	-74.52	≤-54	0.03532	≤4	PASS
				1000~12500	2406.45	-63.30	≤-47	0.46774	≤20	PASS
	11N40SI SO	Ant1	2422	30~1000	996.12	-74.64	≤-54	0.03436	≤4	PASS
				1000~12500	2409.33	-71.31	≤-47	0.07396	≤20	PASS
			2442	30~1000	829.77	-74.54	≤-54	0.03516	≤4	PASS
				1000~12500	5202.68	-72.74	≤-47	0.05321	≤20	PASS
			2462	30~1000	595.51	-74.82	≤-54	0.03296	≤4	PASS
				1000~12500	3373.03	-72.92	≤-47	0.05105	≤20	PASS

Test Graphs

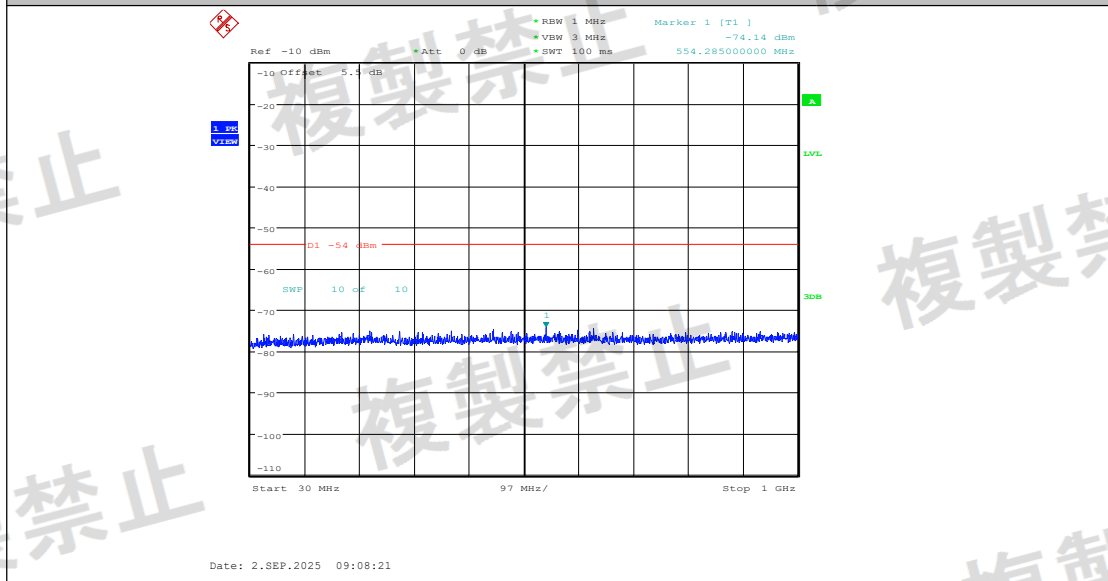


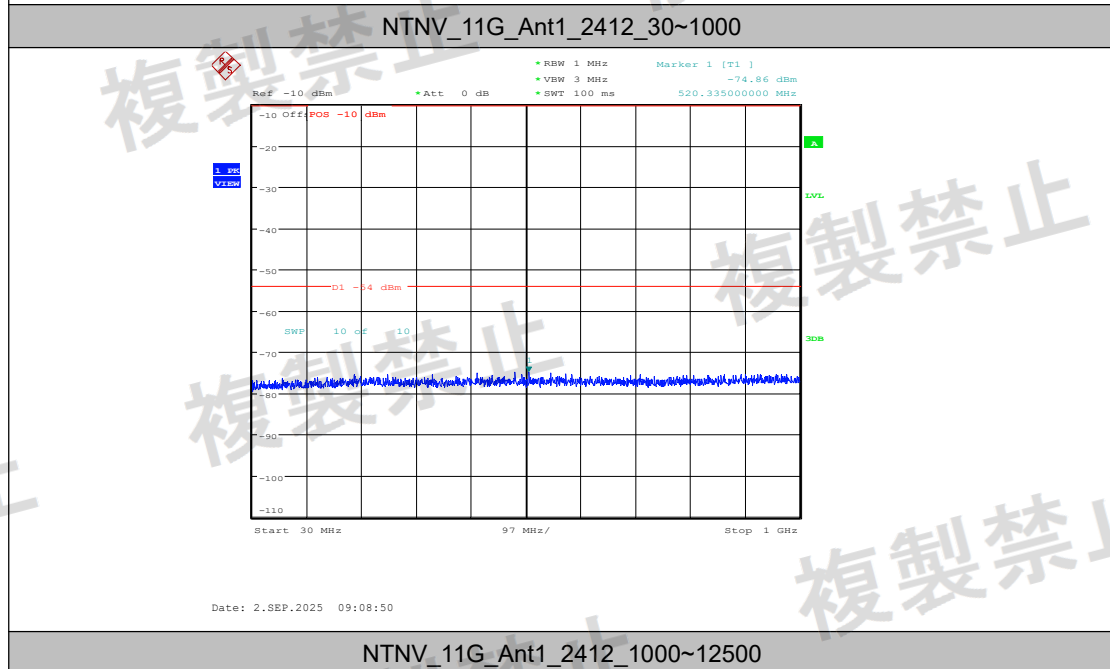
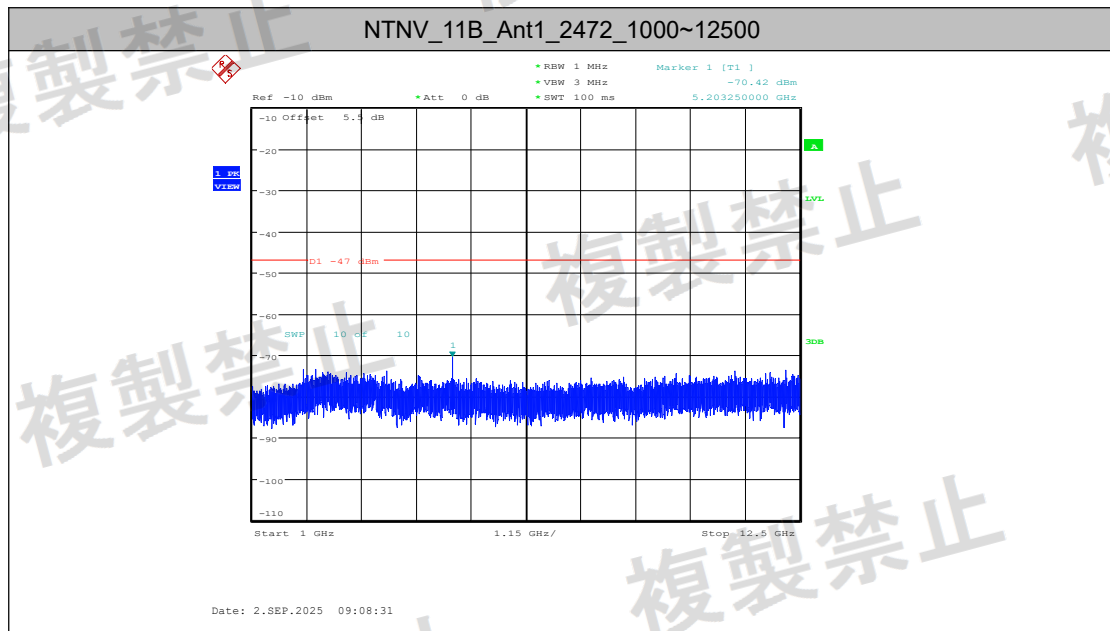


NTVN_11B_Ant1_2442_1000~12500

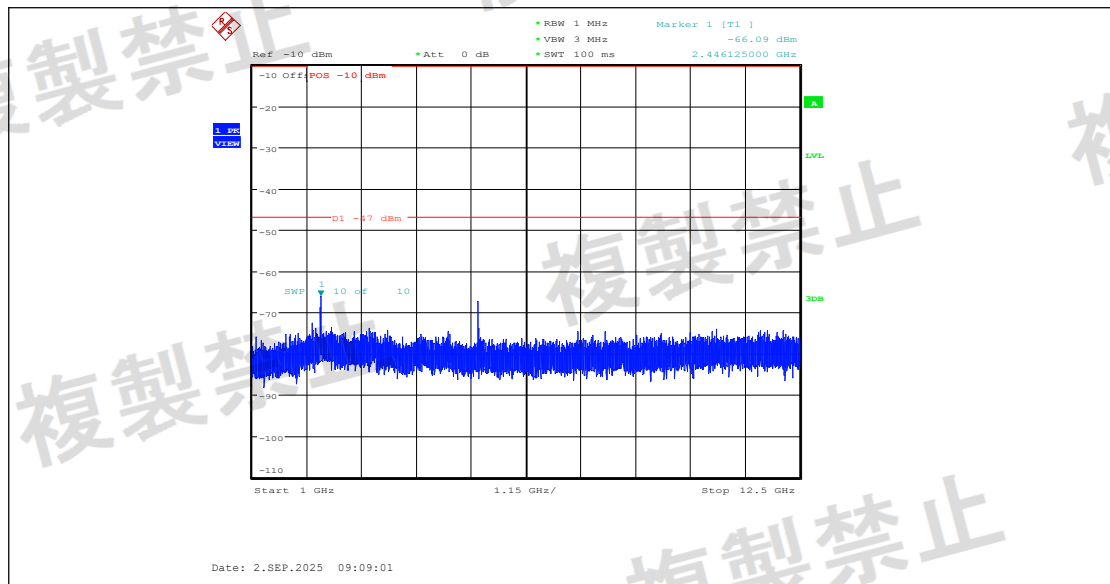


NTVN_11B_Ant1_2472_30~1000

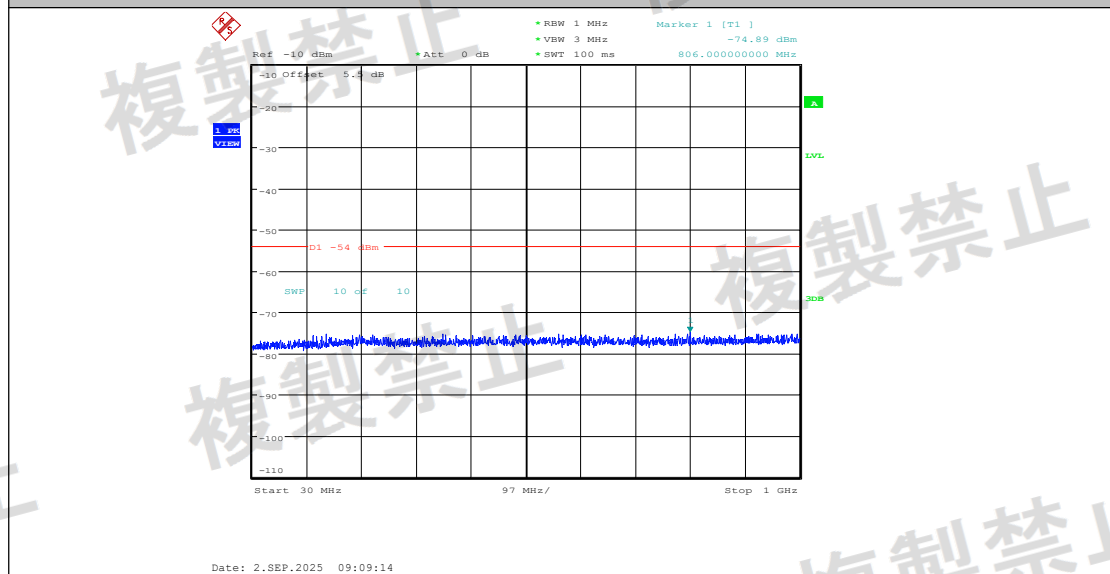




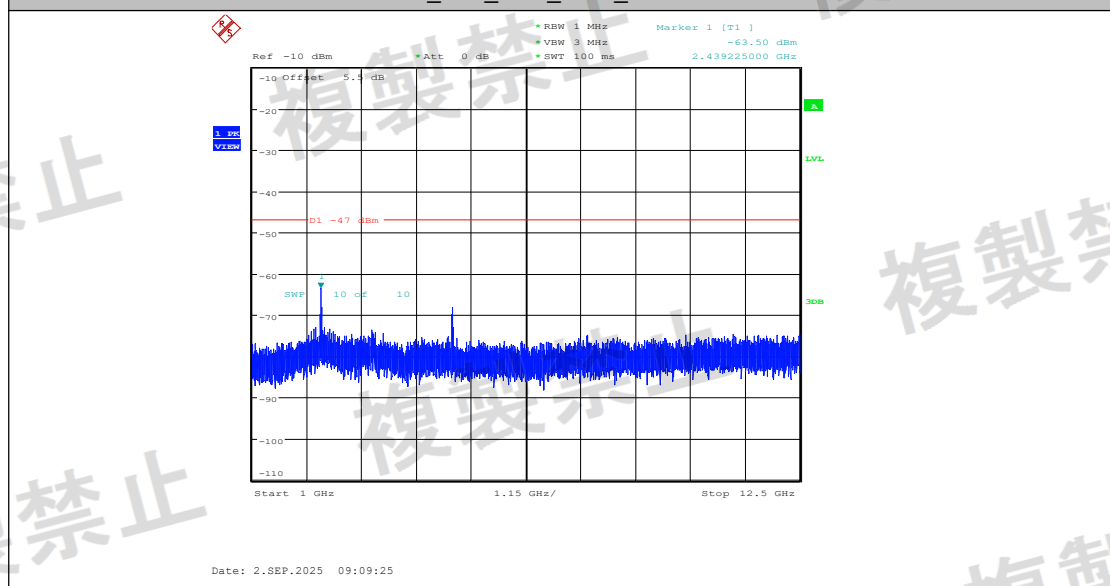
NTNV_11G_Ant1_2412_1000~12500

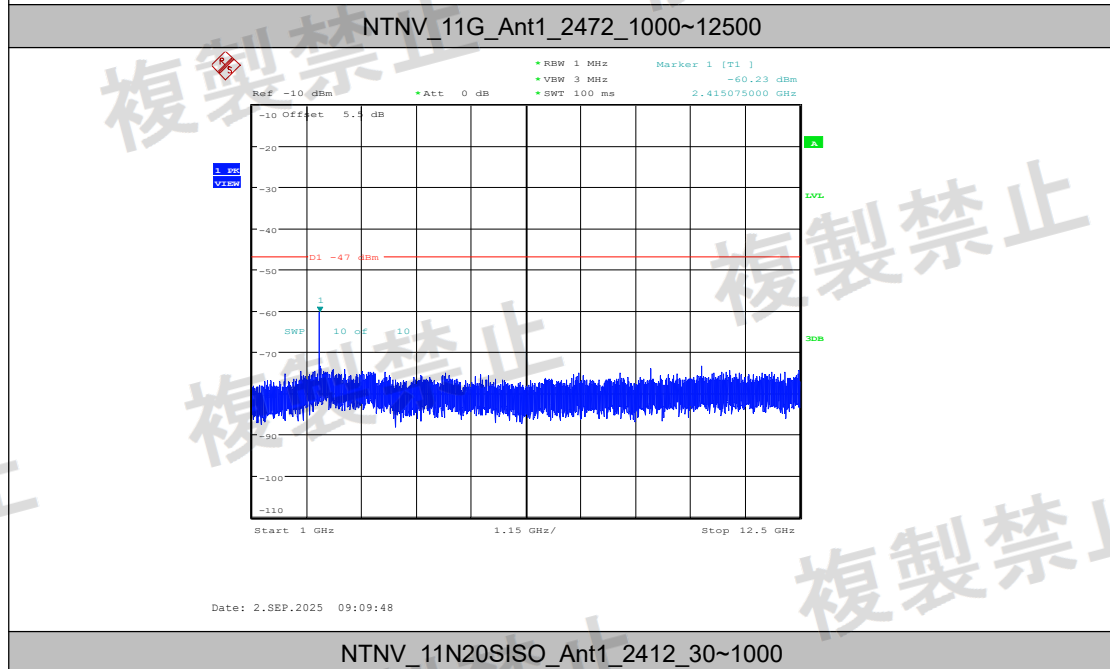
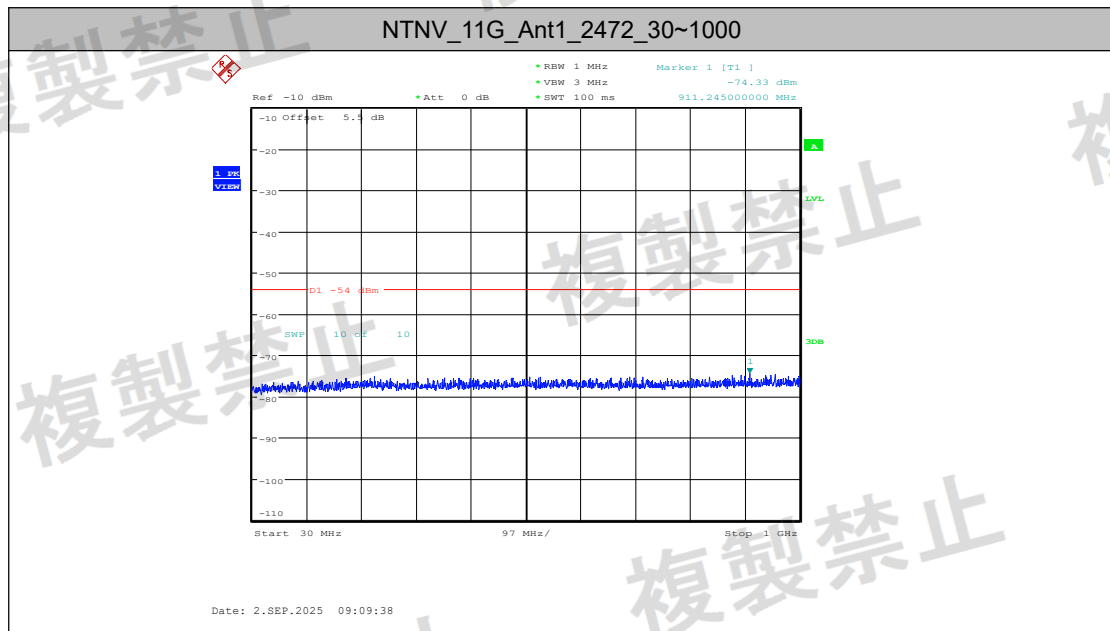


NTNV_11G_Ant1_2442_30~1000

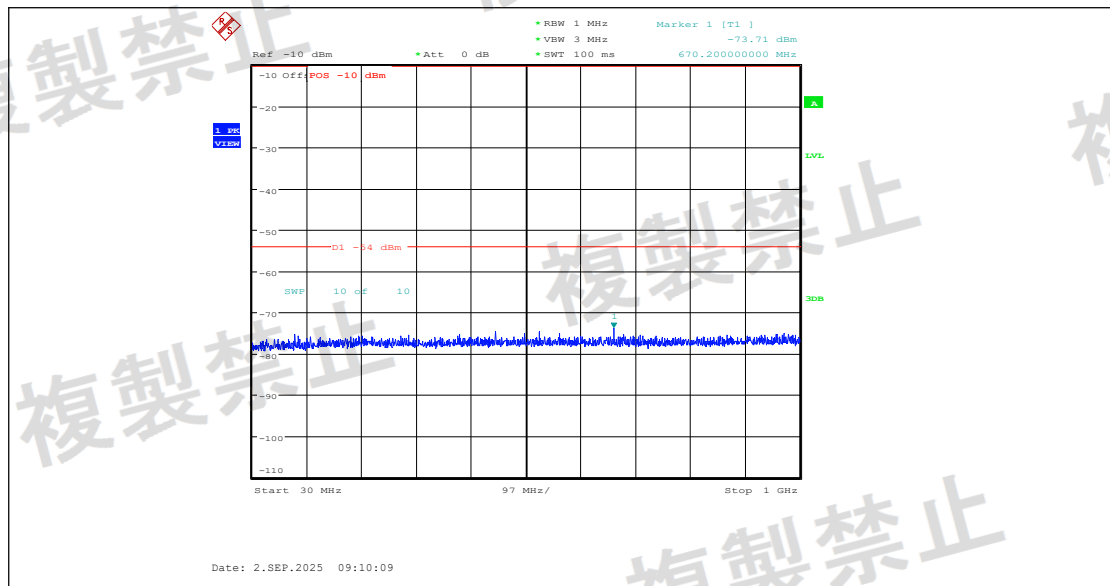


NTNV_11G_Ant1_2442_1000~12500

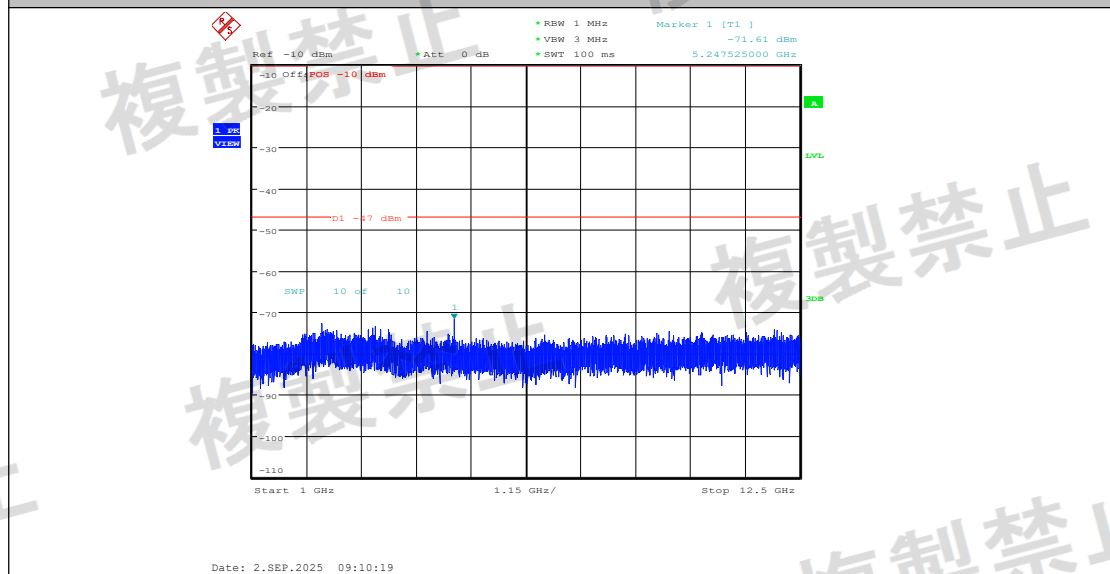




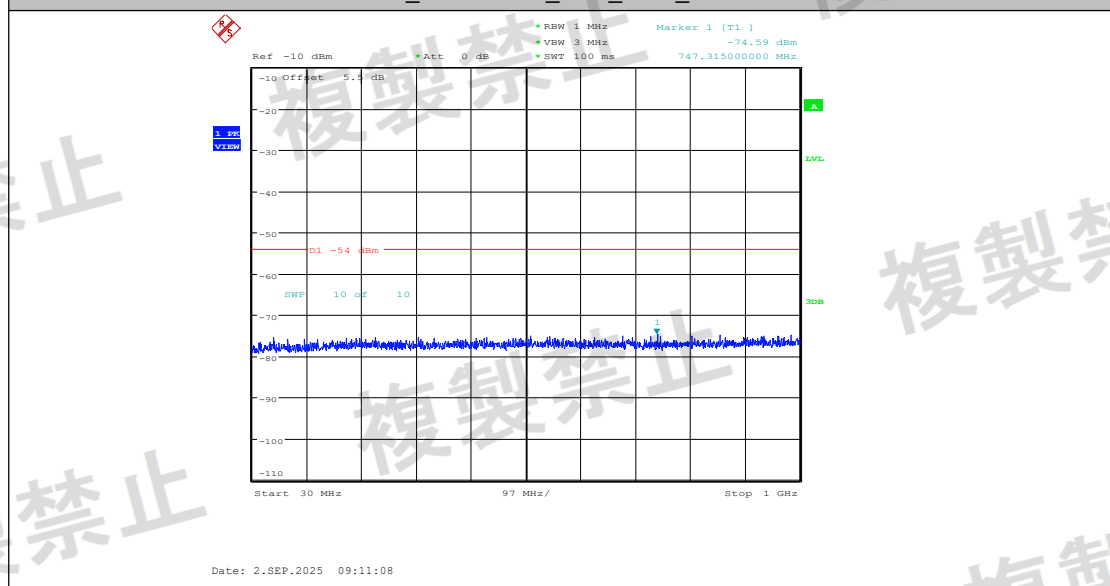
NTNV_11N20SISO_Ant1_2412_30~1000

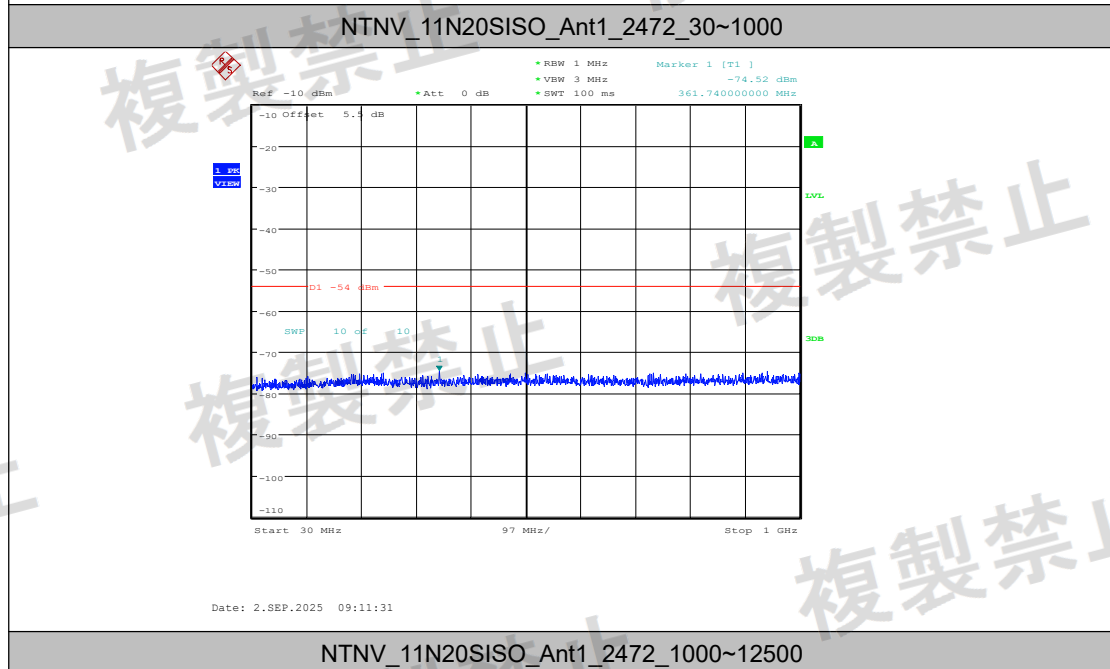
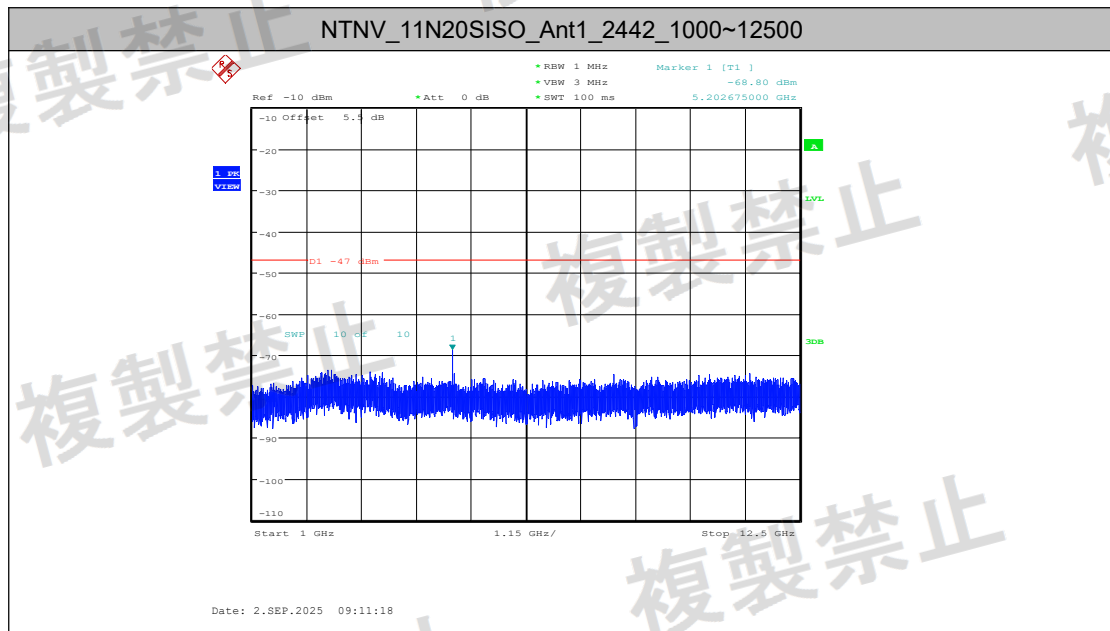


NTNV_11N20SISO_Ant1_2412_1000~12500

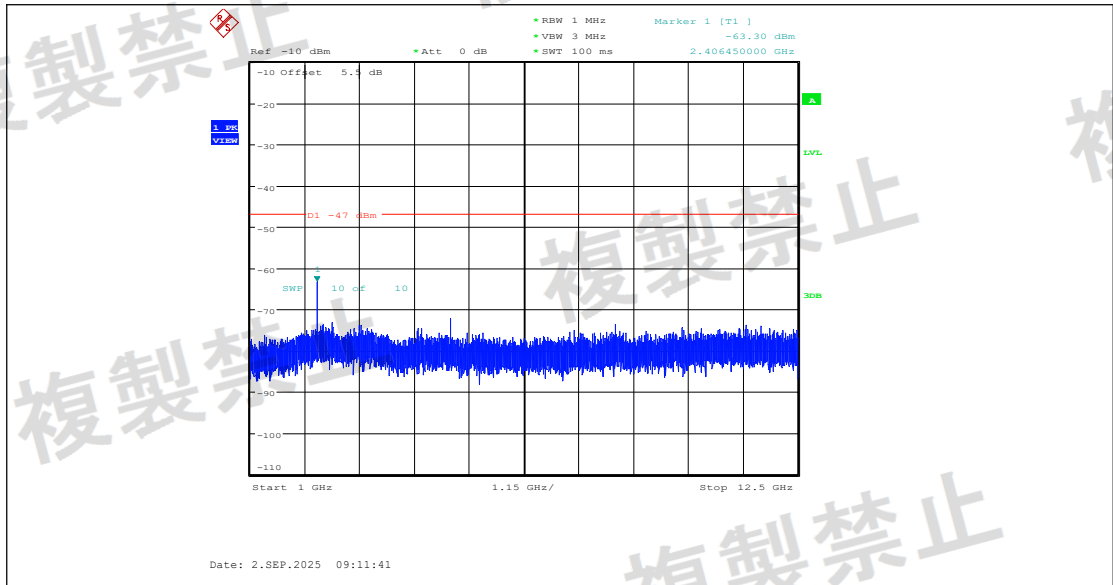


NTNV_11N20SISO_Ant1_2442_30~1000

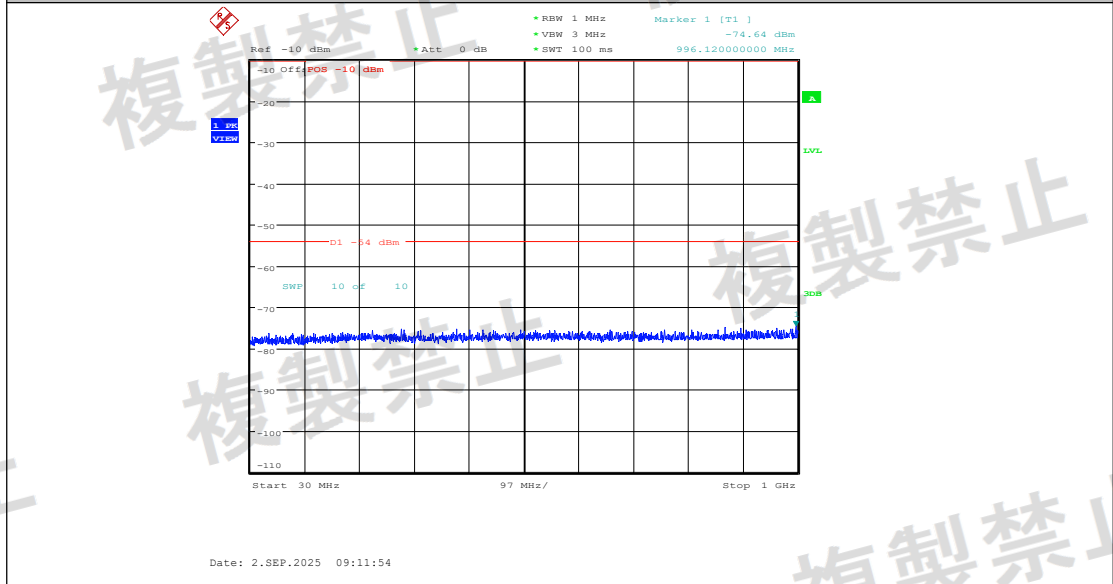




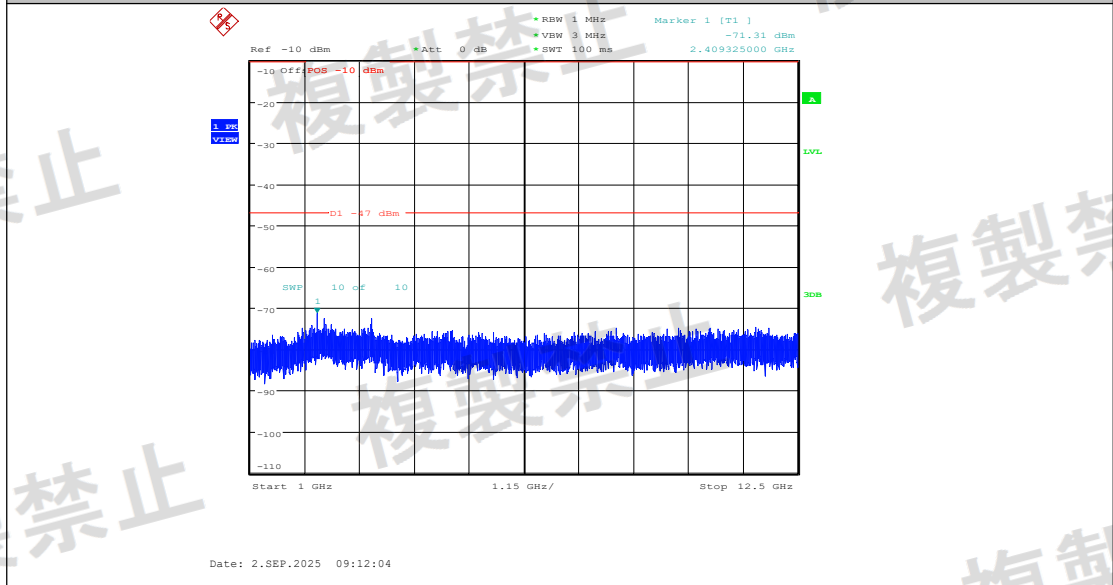
NTNV_11N20SISO_Ant1_2472_1000~12500

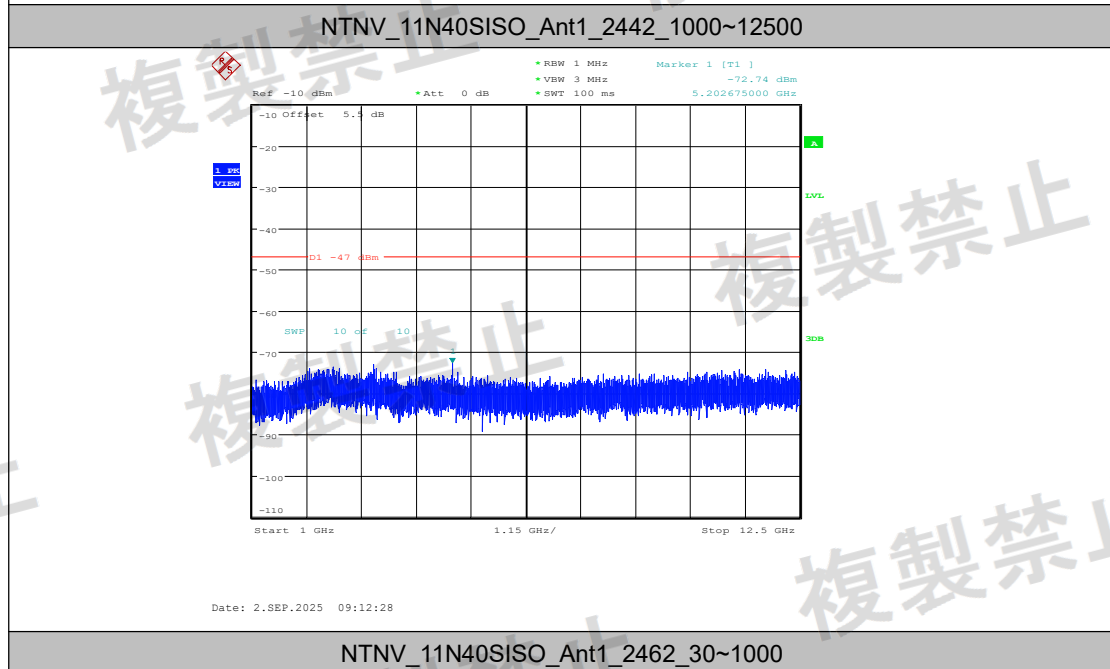
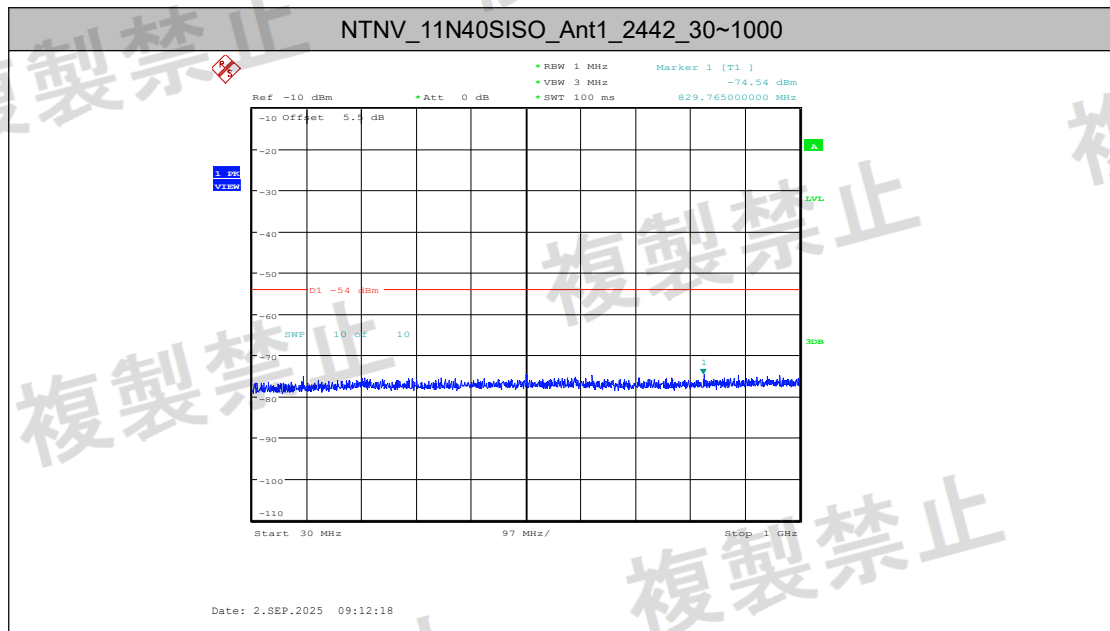


NTNV_11N40SISO_Ant1_2422_30~1000



NTNV_11N40SISO_Ant1_2422_1000~12500





NTNV_11N40SISO_Ant1_2462_30~1000

