

Appendix RF Test Data for 2.4GWIFI

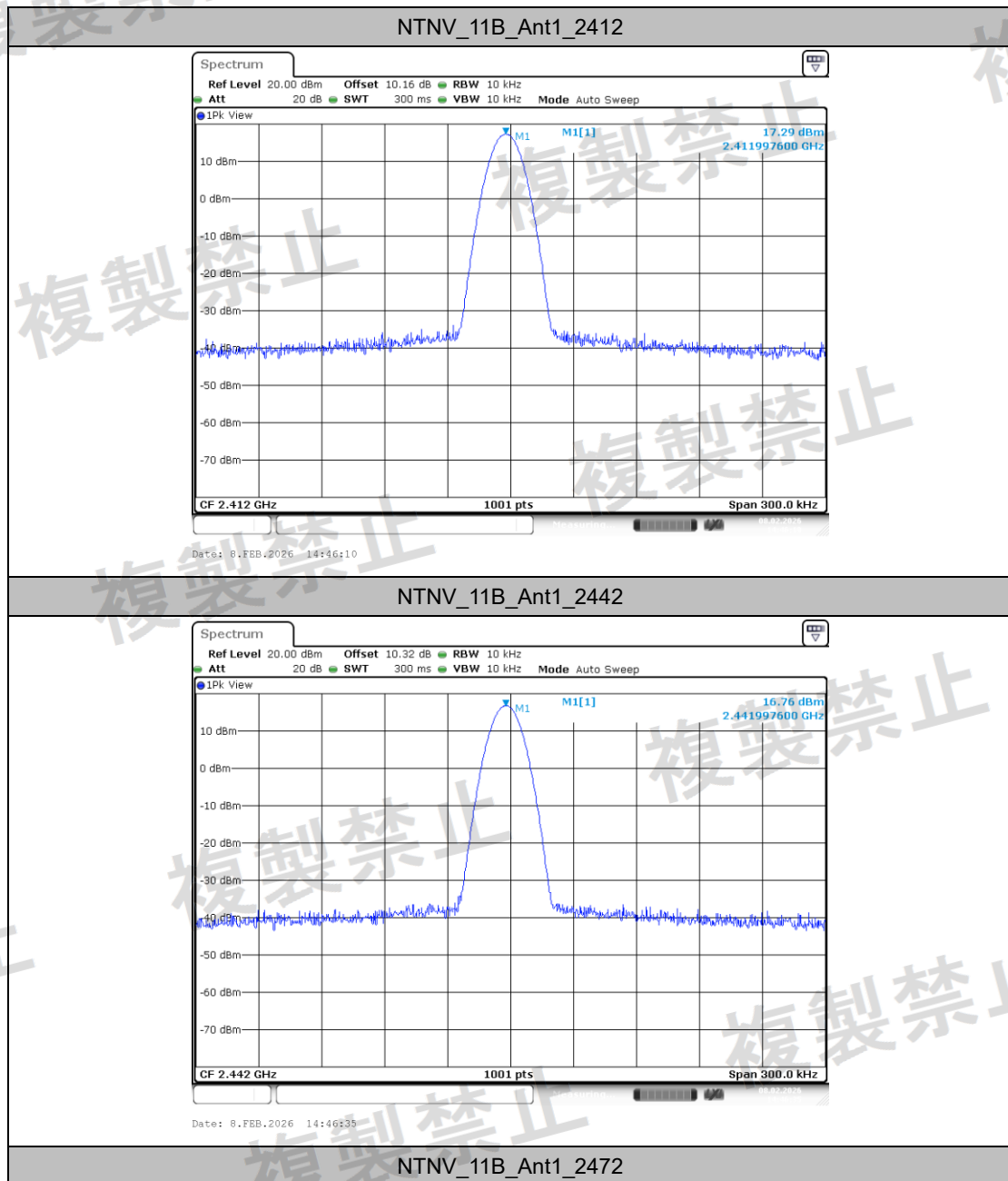
Company : Shenzhen Yufengzhixing Electronics Tech Co Ltd
EUT : Car Navigation
Model Number : S8LF1509ADM
Report No. : CTA26020202102
Reviewed By : Eric Wang

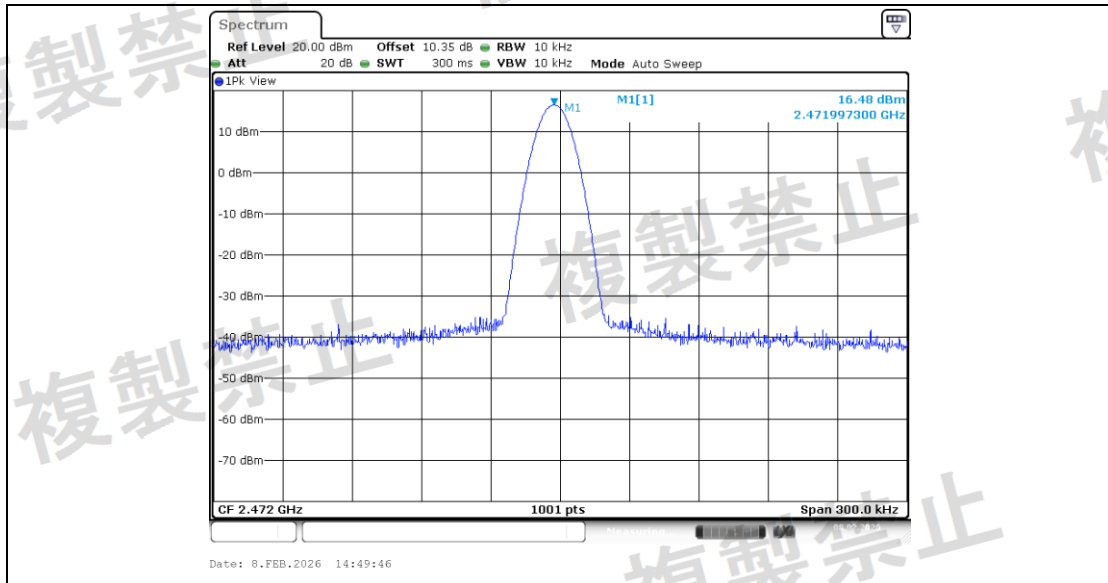
Appendix A: Frequency Error

Test Result

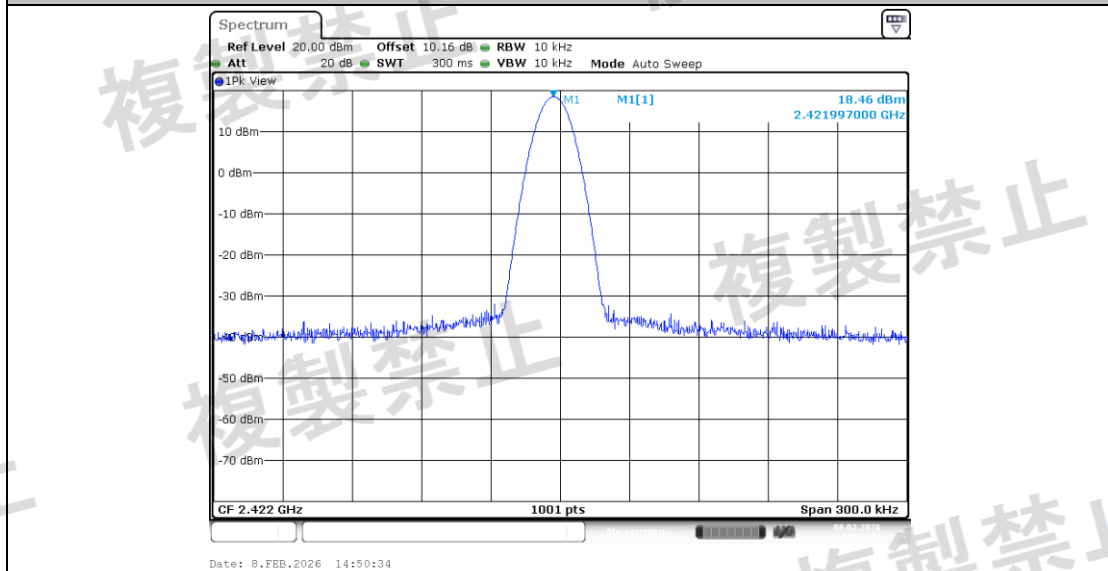
TestCondition	TestMode	Antenna	Freq(MHz)	CenterFrequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.9976	-0.99503	±50	PASS
			2442	2441.9976	-0.98280	±50	PASS
			2472	2471.9973	-1.09223	±50	PASS
	11N40SISO	Ant1	2422	2421.997	-1.23865	±50	PASS
			2462	2461.997	-1.21852	±50	PASS

Test Graphs

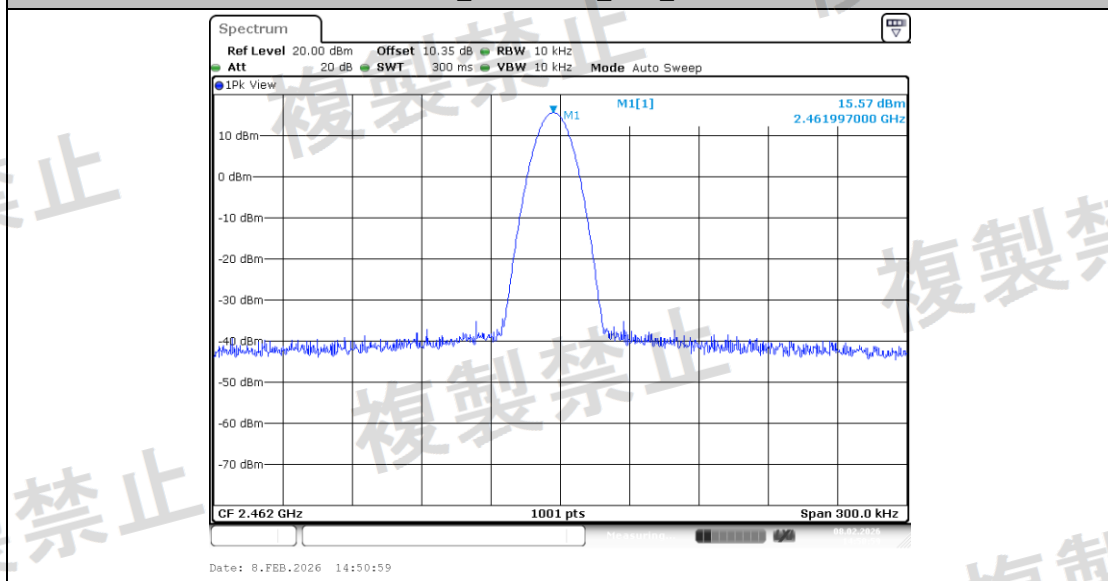




NTV_11N40SISO_Ant1_2422



NTV_11N40SISO_Ant1_2462

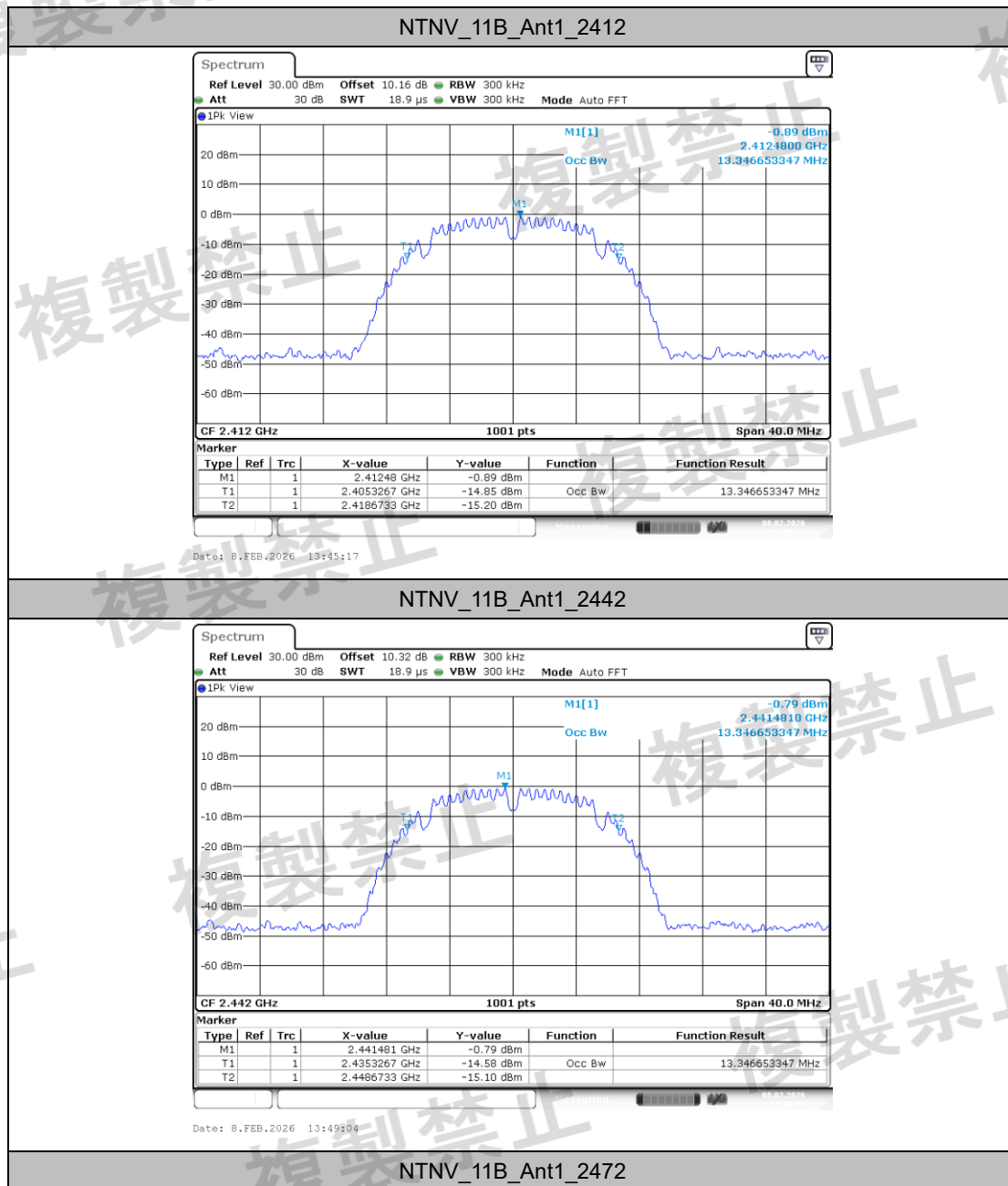


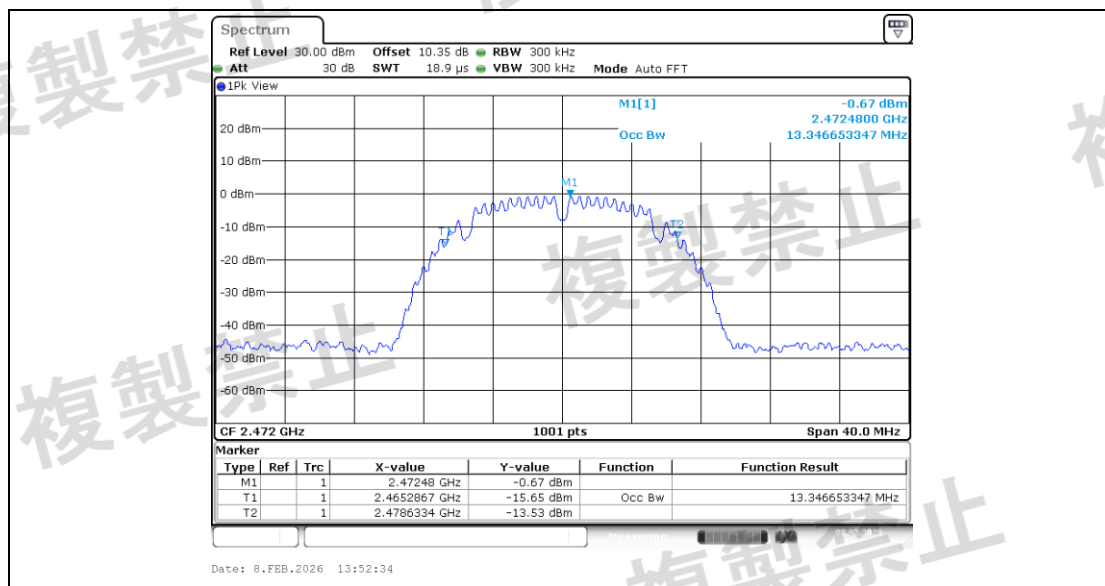
Appendix B: Occupied Bandwidth

Test Result

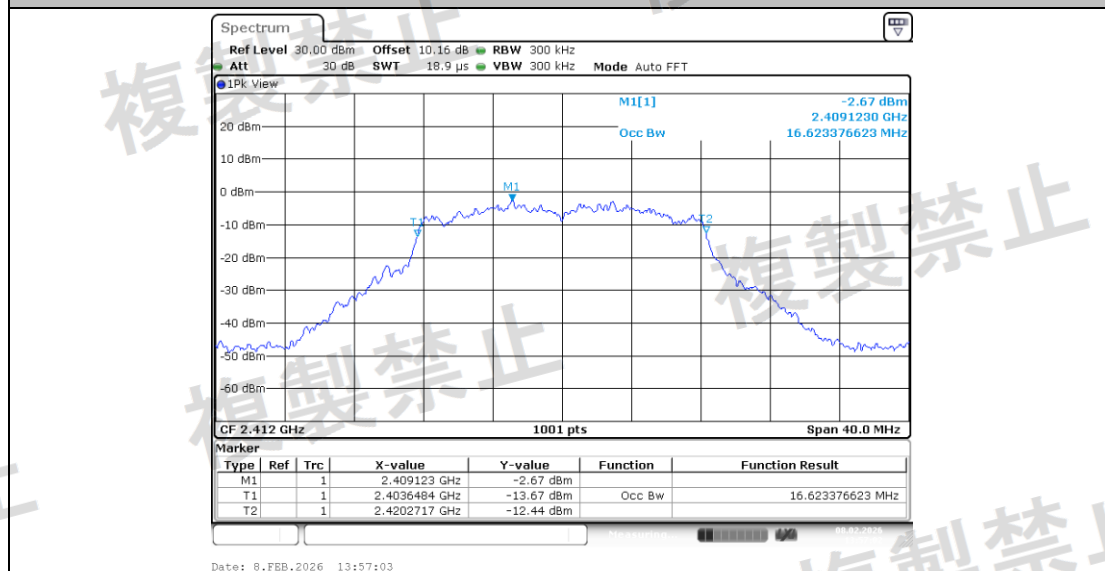
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	13.347	≤26	PASS
			2442	13.347	≤26	PASS
			2472	13.347	≤26	PASS
	11G	Ant1	2412	16.623	≤26	PASS
			2442	16.863	≤26	PASS
			2472	16.503	≤26	PASS
	11N20SI SO	Ant1	2412	17.742	≤26	PASS
			2442	17.782	≤26	PASS
			2472	17.662	≤26	PASS
	11N40SI SO	Ant1	2422	36.044	26-40	PASS
			2442	35.964	26-40	PASS
			2462	36.124	26-40	PASS

Test Graphs

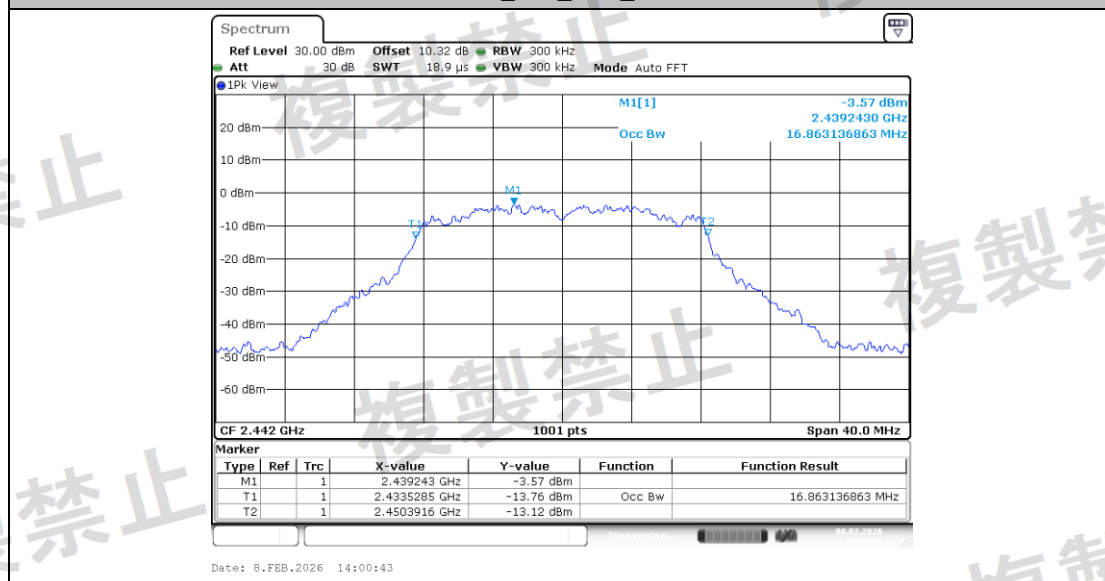


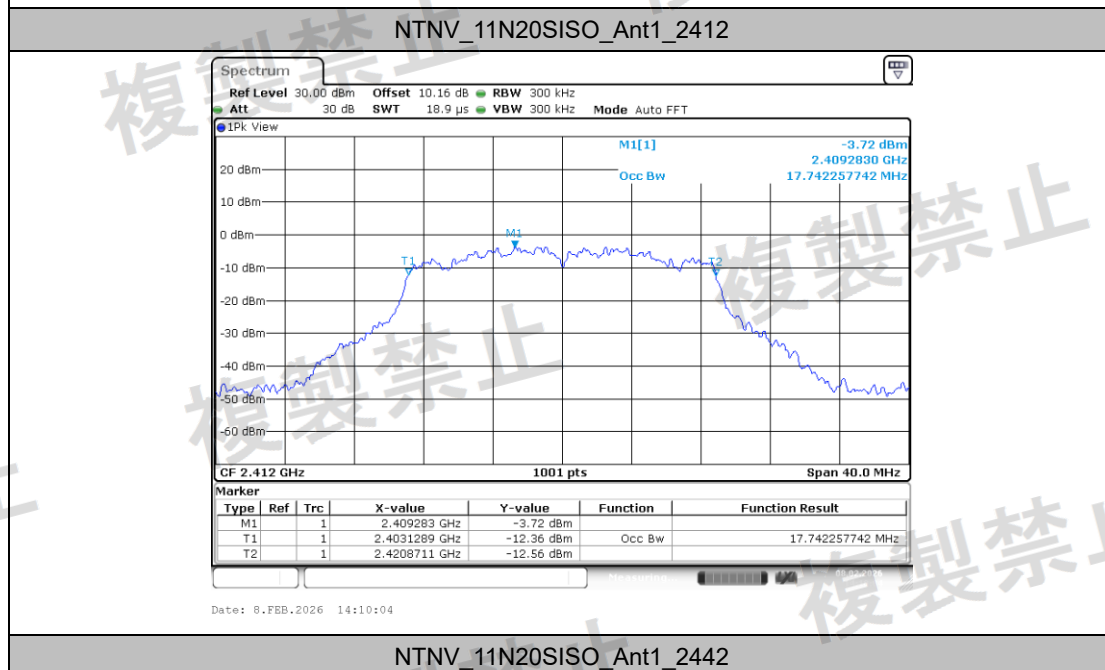
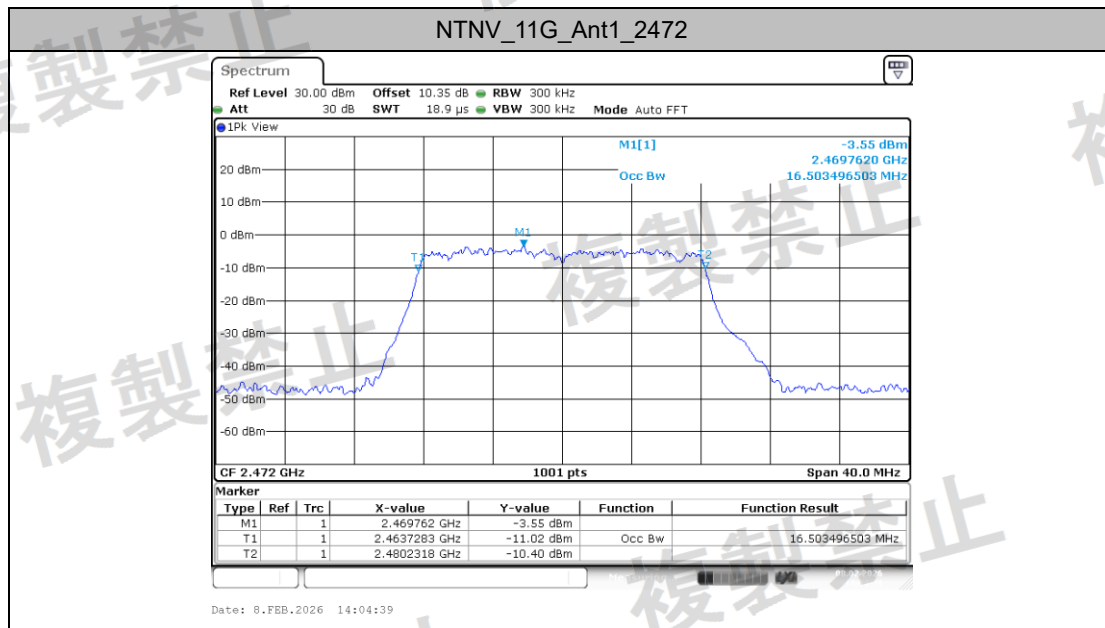


NTNV_11G_Ant1_2412

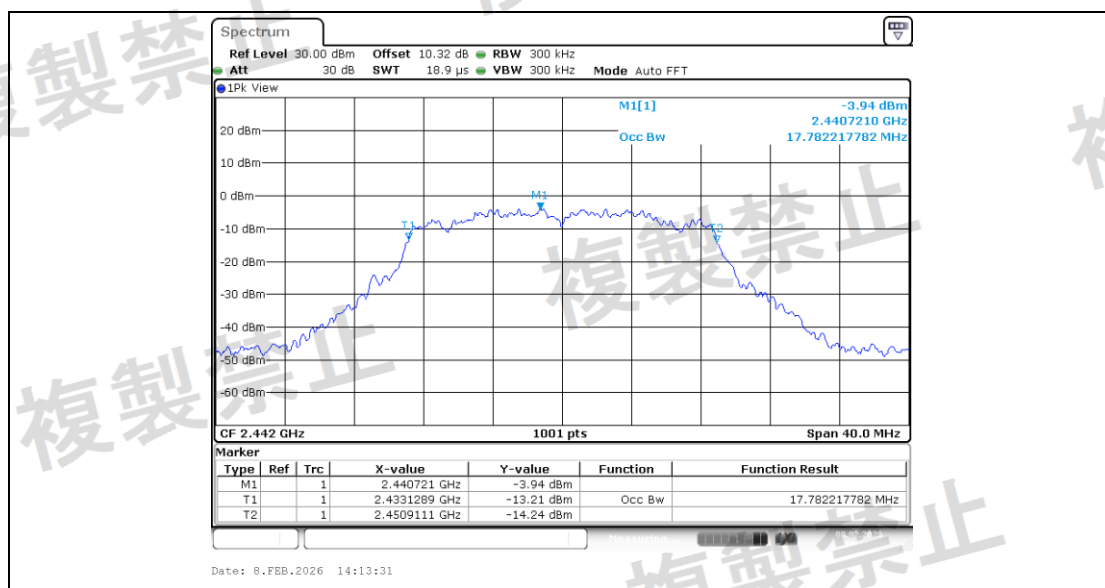


NTNV_11G_Ant1_2442

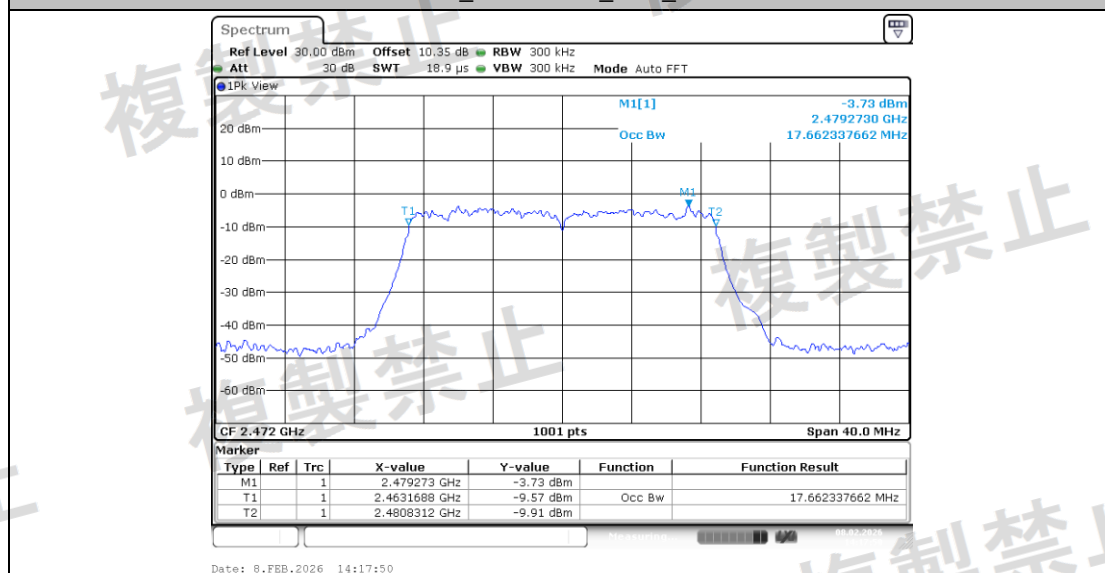




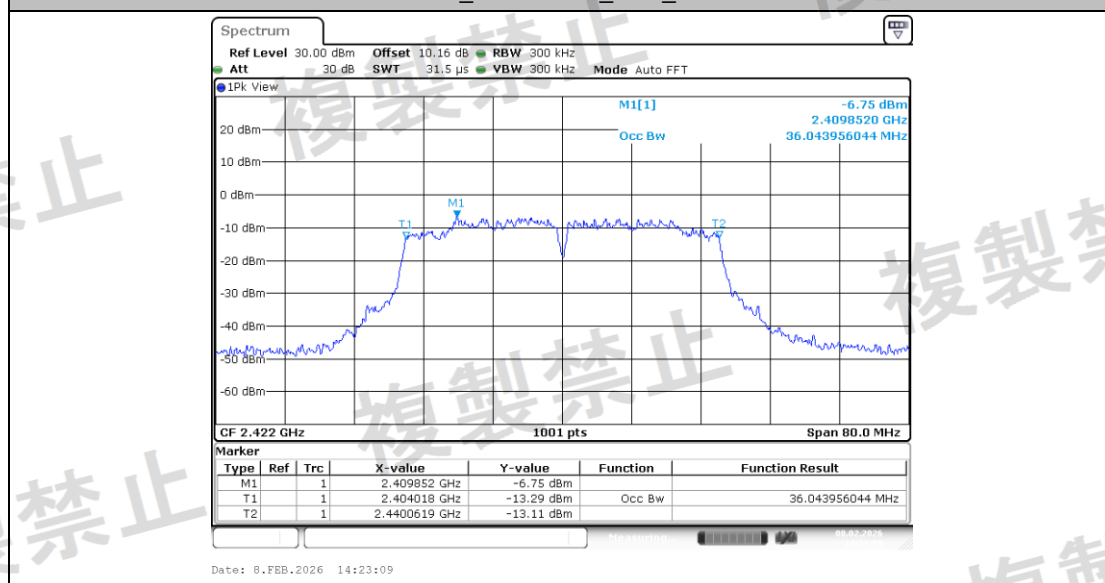
NTNV_11N20SISO_Ant1_2442

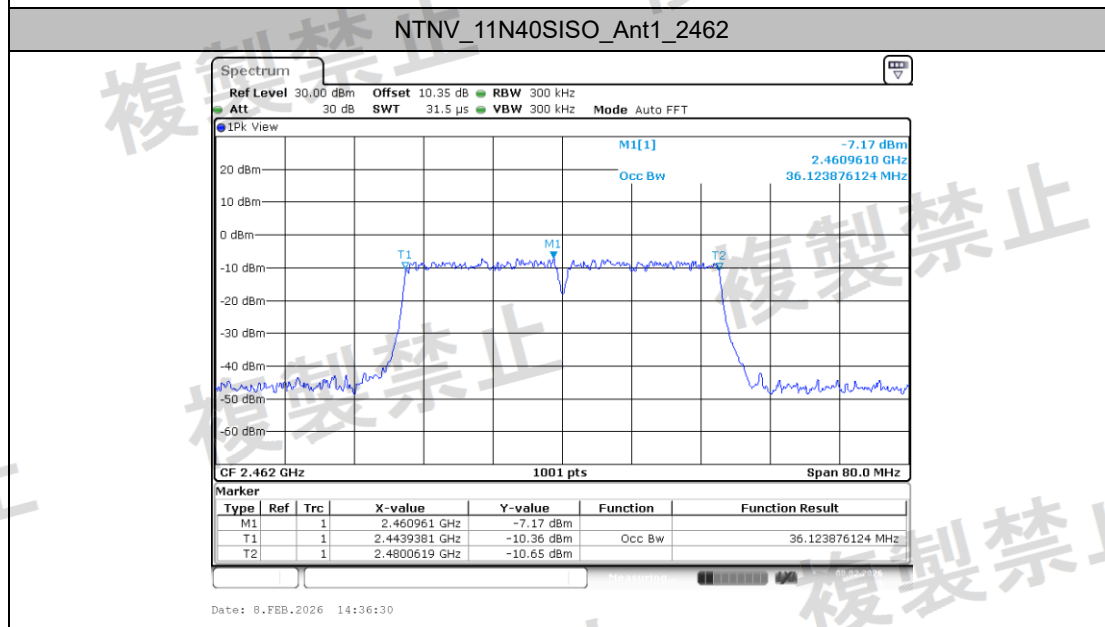
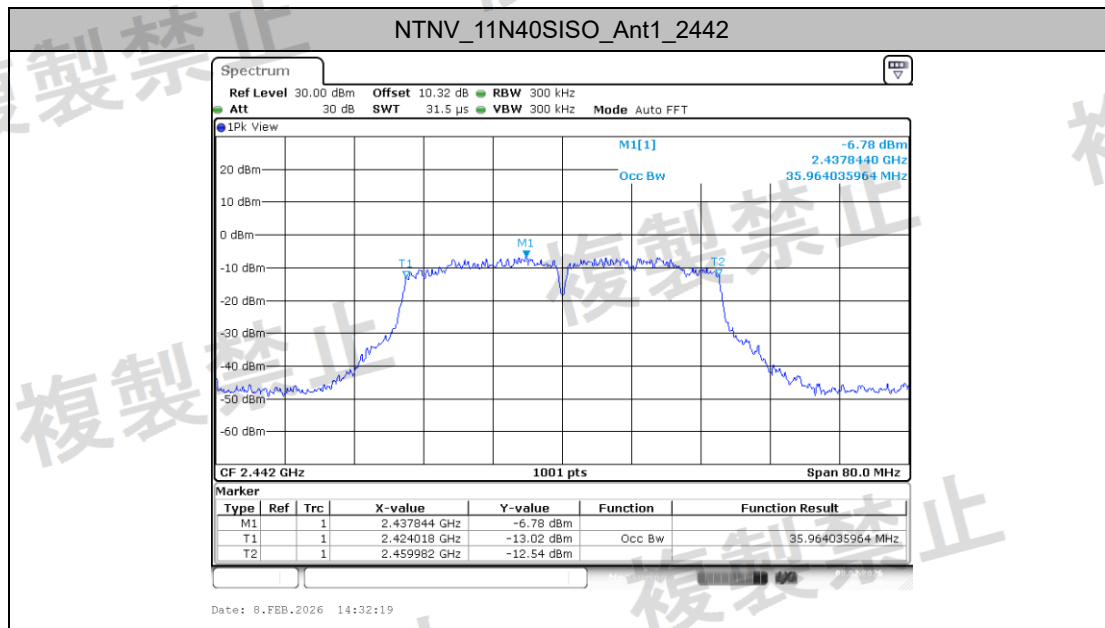


NTNV_11N20SISO_Ant1_2472



NTNV_11N40SISO_Ant1_2422



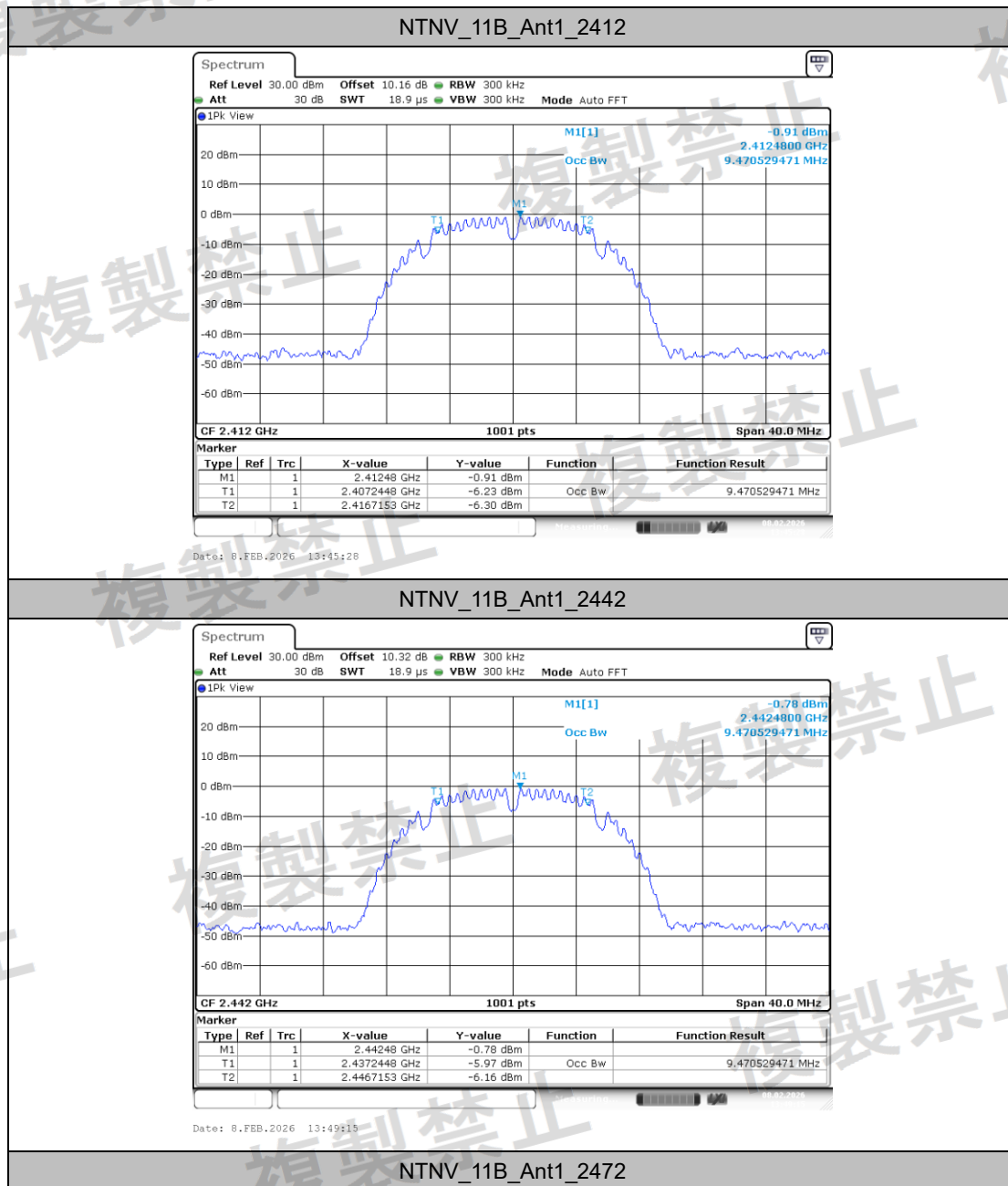


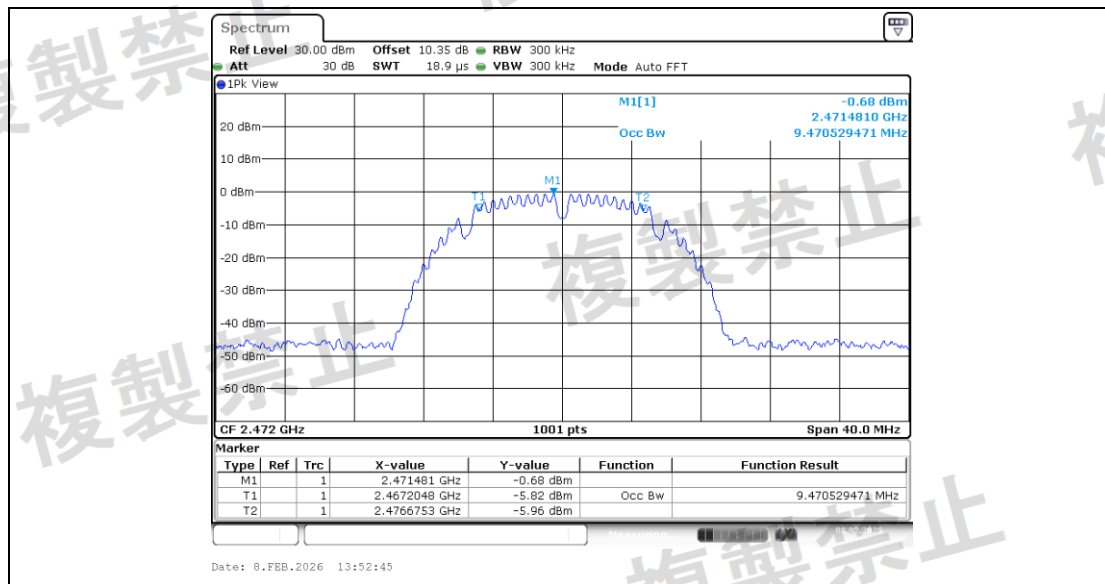
Appendix C: Spread Bandwidth

Test Result

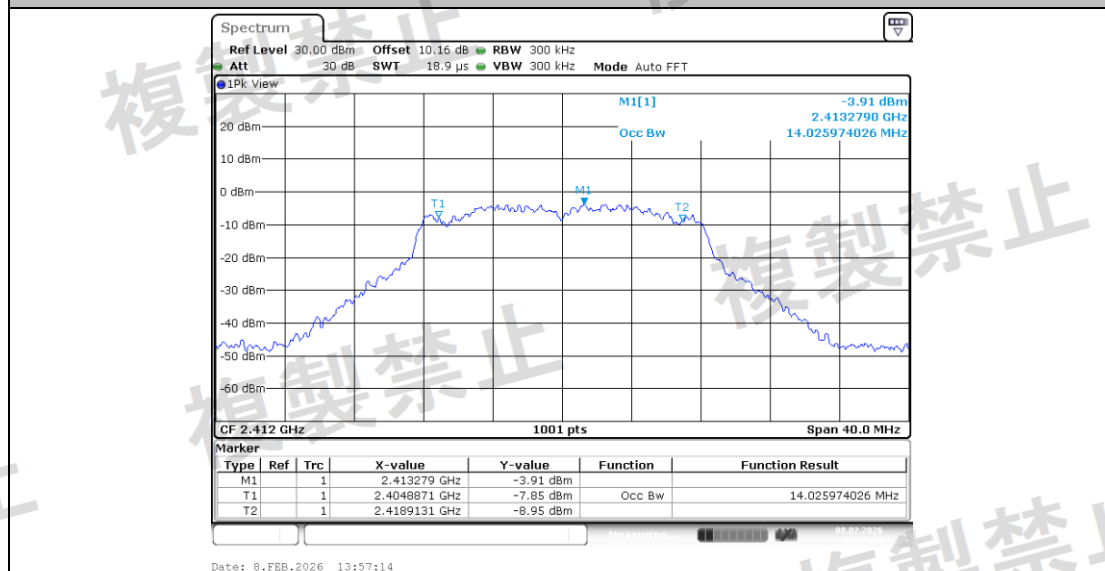
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	9.471	≥0.5	6.888	>5	PASS
			2442	9.471	≥0.5	6.888	>5	PASS
			2472	9.471	≥0.5	6.888	>5	PASS
	11G	Ant1	2412	14.026	≥0.5	---	---	PASS
			2442	13.666	≥0.5	---	---	PASS
			2472	14.745	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	14.745	≥0.5	---	---	PASS
			2442	15.105	≥0.5	---	---	PASS
			2472	15.704	≥0.5	---	---	PASS
	11N40SI SO	Ant1	2422	29.730	≥0.5	---	---	PASS
			2442	30.210	≥0.5	---	---	PASS
			2462	32.368	≥0.5	---	---	PASS

Test Graphs

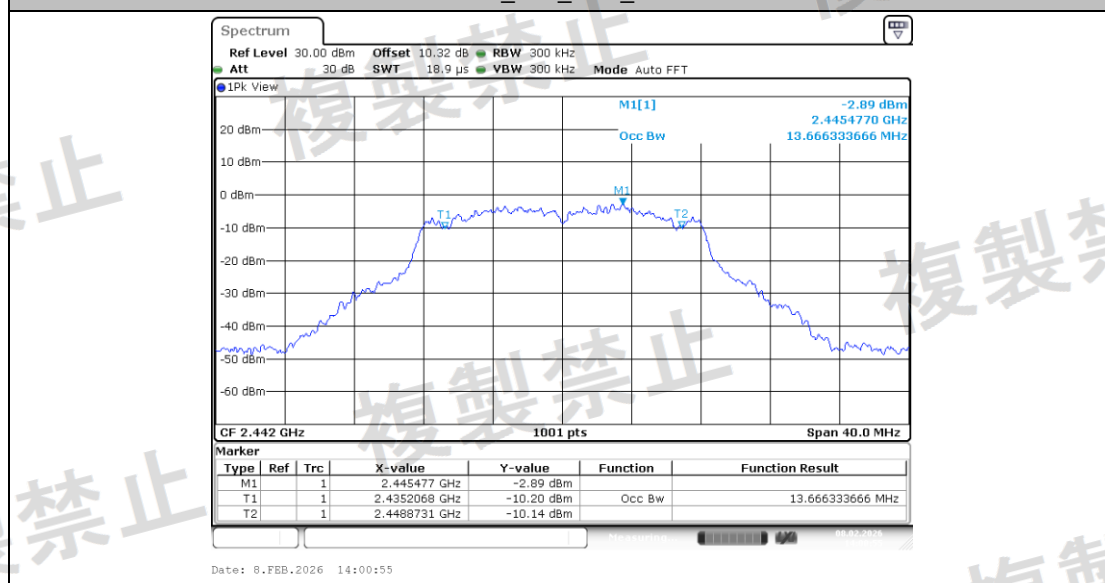


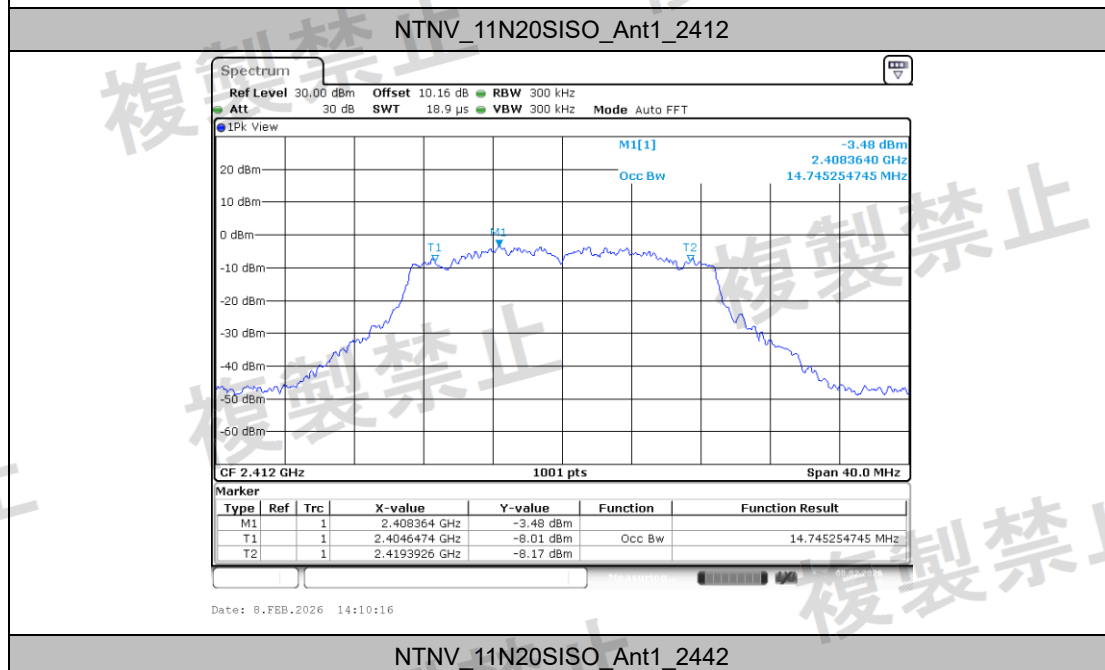
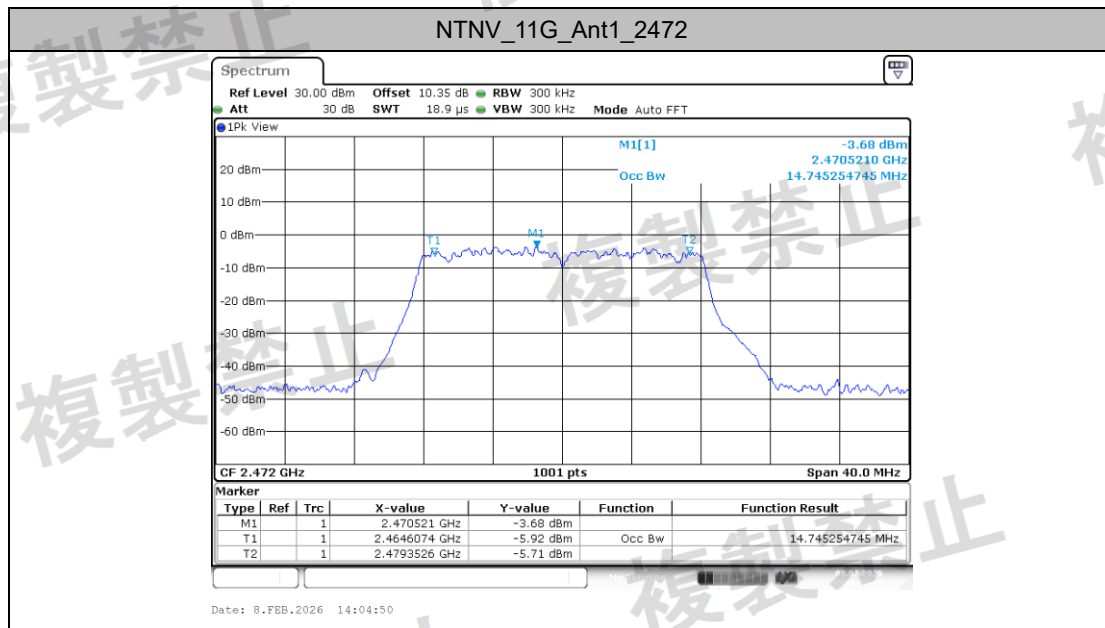


NTNV_11G_Ant1_2412

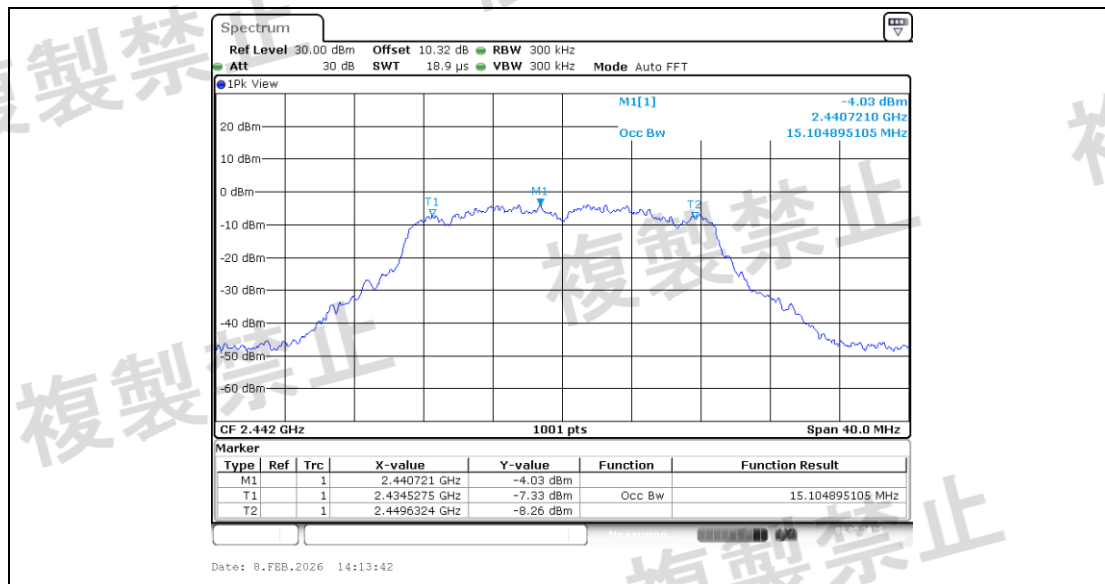


NTNV_11G_Ant1_2442

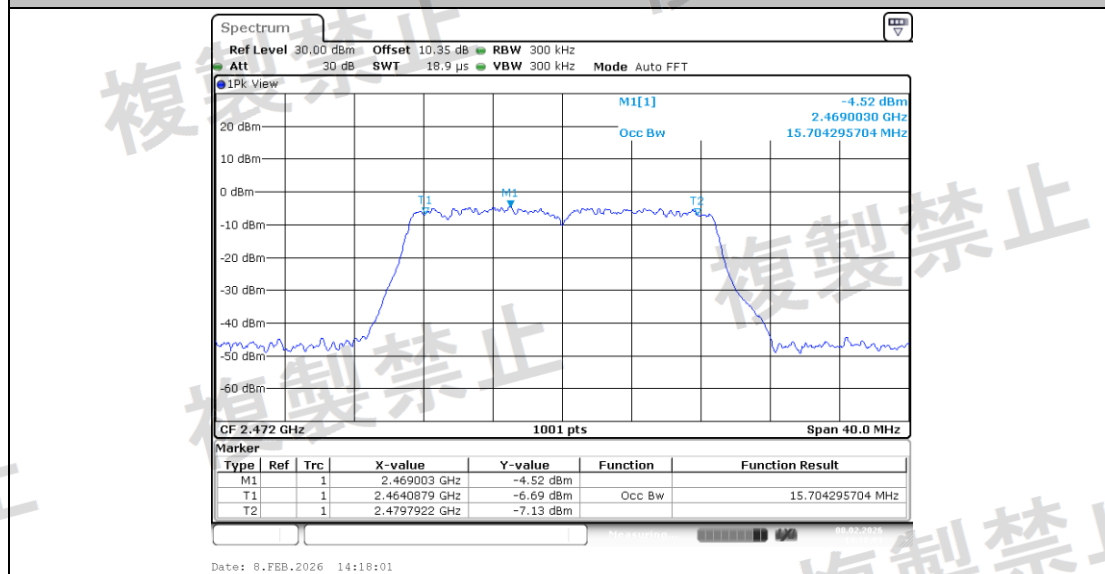




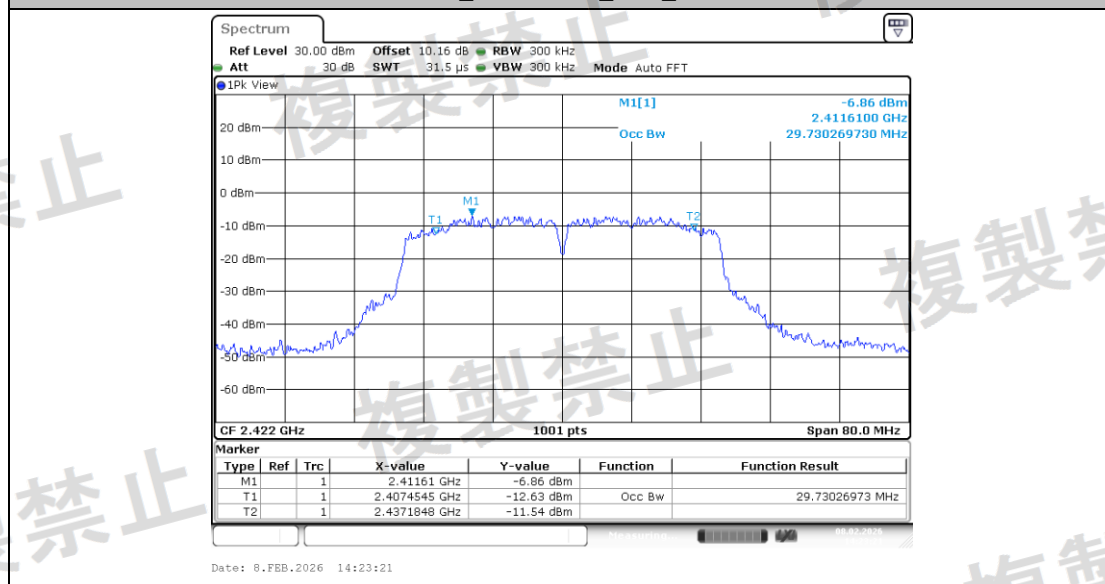
NTNV_11N20SISO_Ant1_2442

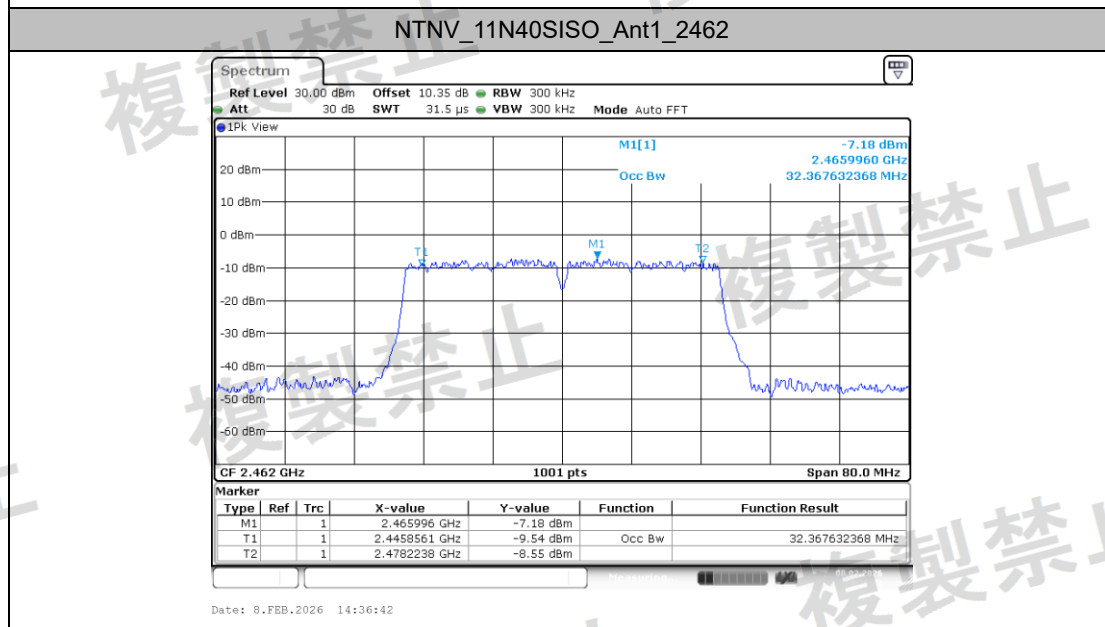
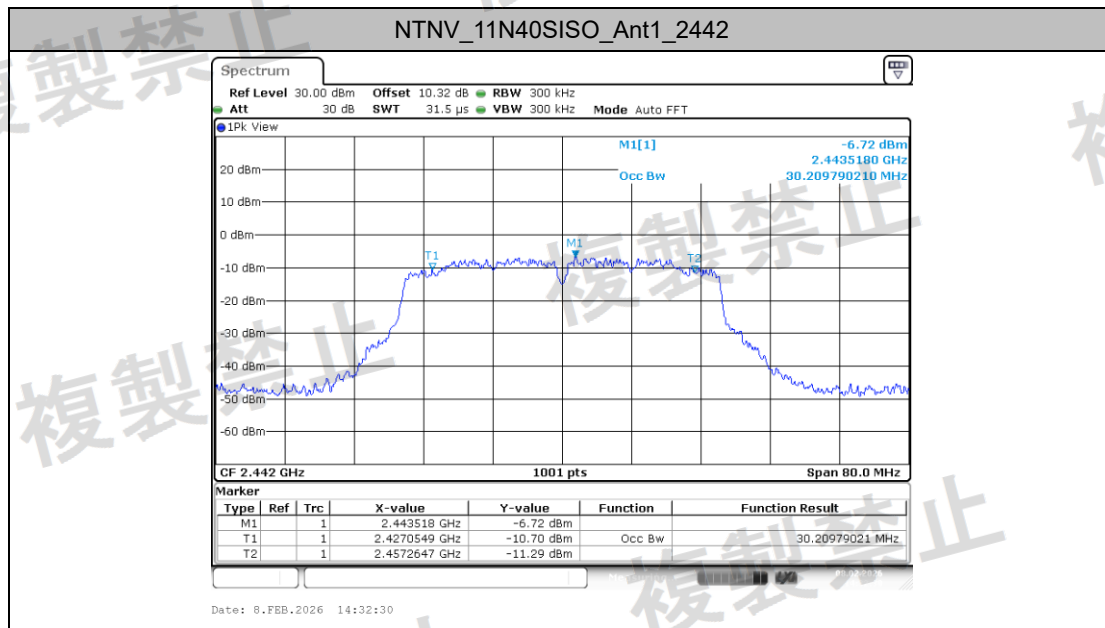


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





Appendix D: Spurious Emission of TX

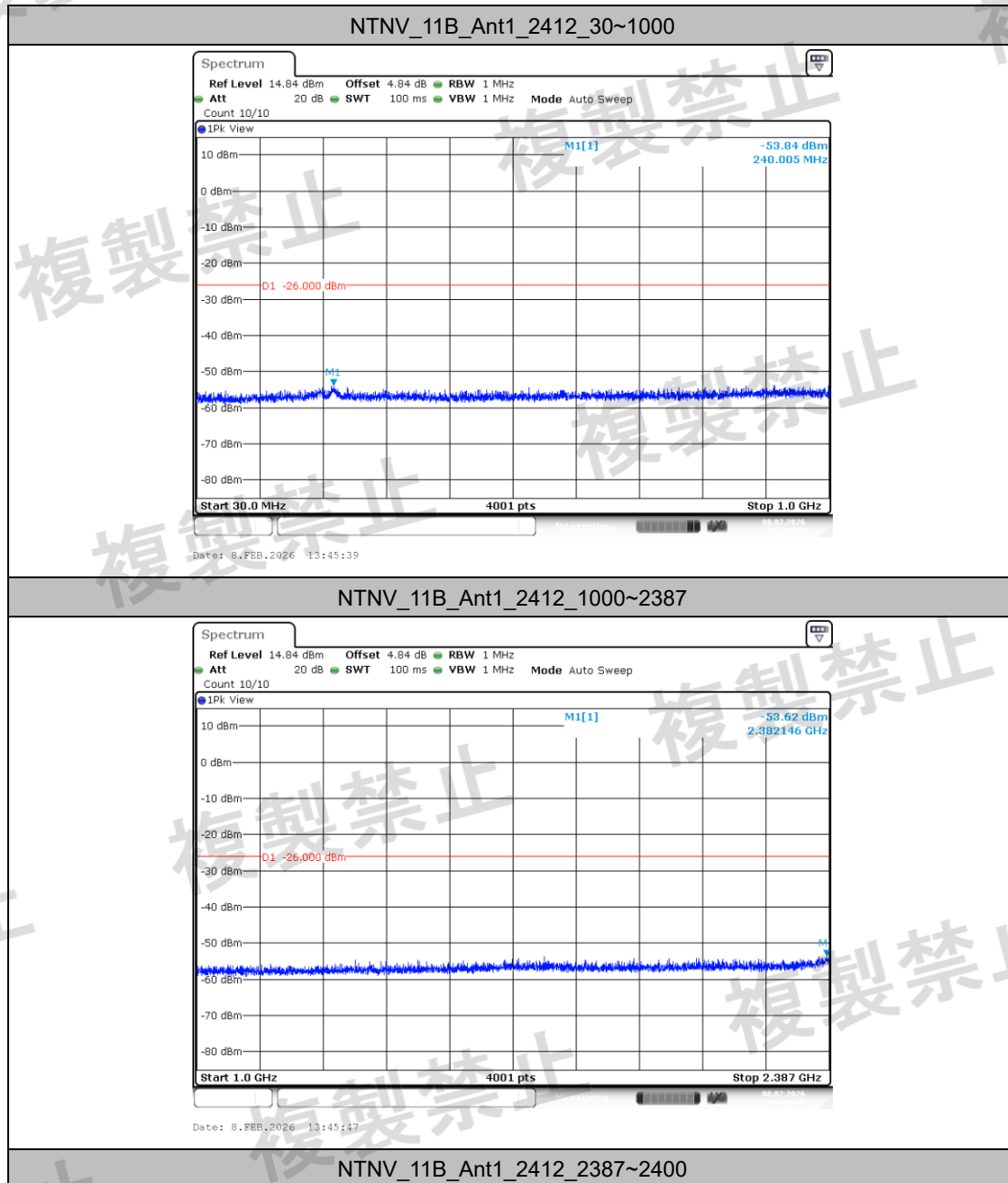
Test Result

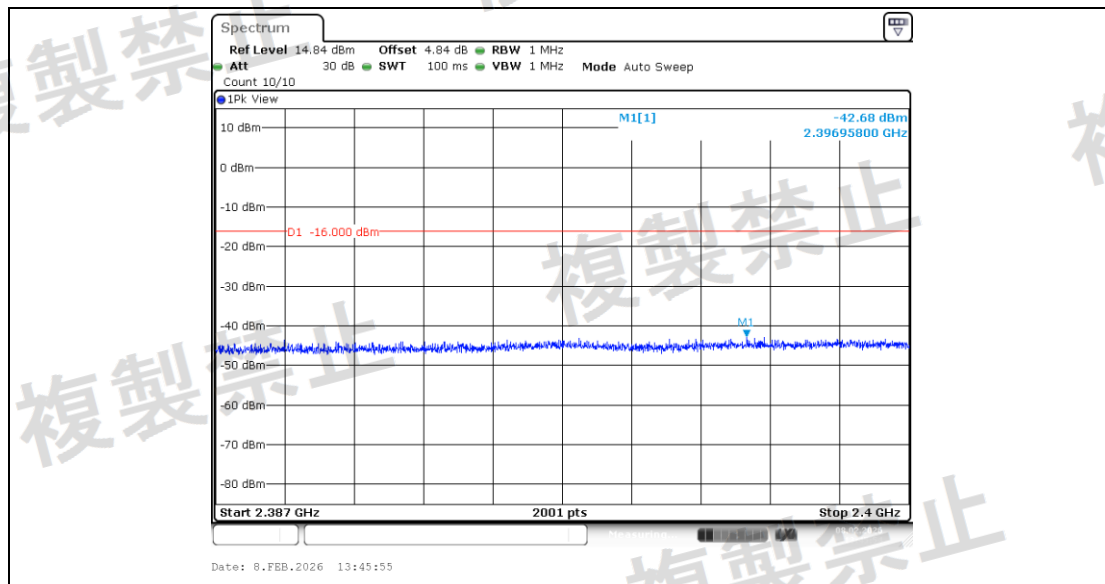
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	240.01	-53.84	≤-26	0.00413	≤2.5	PASS
				1000~2387	2382.15	-53.62	≤-26	0.00435	≤2.5	PASS
				2387~2400	2396.96	-42.68	≤-16	0.05395	≤25	PASS
				2483.5~2496.5	2493.07	-43.59	≤-16	0.04375	≤25	PASS
				2496.5~13000	6945.26	-49.27	≤-26	0.01183	≤2.5	PASS
			2442	30~1000	872.20	-52.86	≤-26	0.00518	≤2.5	PASS
				1000~2387	2354.06	-53.11	≤-26	0.00489	≤2.5	PASS
				2387~2400	2393.77	-43.58	≤-16	0.04385	≤25	PASS
				2483.5~2496.5	2494.51	-43.58	≤-16	0.04385	≤25	PASS
				2496.5~13000	6698.43	-49.56	≤-26	0.01107	≤2.5	PASS
			2472	30~1000	746.10	-53.70	≤-26	0.00427	≤2.5	PASS
				1000~2387	2128.67	-53.16	≤-26	0.00483	≤2.5	PASS
				2387~2400	2394.36	-43.19	≤-16	0.04797	≤25	PASS
				2483.5~2496.5	2486.91	-41.77	≤-16	0.06653	≤25	PASS
				2496.5~13000	6809.24	-49.56	≤-26	0.01107	≤2.5	PASS
	11G	Ant1	2412	30~1000	947.38	-53.43	≤-26	0.00454	≤2.5	PASS
				1000~2387	2385.96	-53.28	≤-26	0.00470	≤2.5	PASS
				2387~2400	2399.98	-21.40	≤-16	7.24436	≤25	PASS
				2483.5~2496.5	2494.45	-43.67	≤-16	0.04295	≤25	PASS
				2496.5~13000	6961.54	-49.10	≤-26	0.01230	≤2.5	PASS
			2442	30~1000	858.62	-53.61	≤-26	0.00436	≤2.5	PASS
				1000~2387	2046.1	-53.75	≤-26	0.00422	≤2.5	PASS

					4					
				2387~2400	2387.68	-43.44	≤-16	0.04529	≤25	PASS
				2483.5~2496.5	2493.97	-43.23	≤-16	0.04753	≤25	PASS
				2496.5~13000	6964.69	-49.29	≤-26	0.01178	≤2.5	PASS
			2472	30~1000	927.74	-53.62	≤-26	0.00435	≤2.5	PASS
				1000~2387	1820.76	-53.76	≤-26	0.00421	≤2.5	PASS
				2387~2400	2387.79	-44.11	≤-16	0.03882	≤25	PASS
				2483.5~2496.5	2483.51	-27.79	≤-16	1.66341	≤25	PASS
				2496.5~13000	5921.17	-49.54	≤-26	0.01112	≤2.5	PASS
				30~1000	210.66	-53.36	≤-26	0.00461	≤2.5	PASS
11N20Si SO	Ant1		2412	1000~2387	2383.53	-52.12	≤-26	0.00614	≤2.5	PASS
				2387~2400	2399.97	-19.68	≤-16	10.76465	≤25	PASS
				2483.5~2496.5	2494.40	-43.80	≤-16	0.04169	≤25	PASS
				2496.5~13000	6988.85	-49.44	≤-26	0.01138	≤2.5	PASS
				30~1000	964.11	-53.51	≤-26	0.00446	≤2.5	PASS
			2442	1000~2387	1725.75	-53.96	≤-26	0.00402	≤2.5	PASS
				2387~2400	2393.25	-43.77	≤-16	0.04198	≤25	PASS
				2483.5~2496.5	2491.56	-42.89	≤-16	0.05140	≤25	PASS
				2496.5~13000	6844.95	-49.26	≤-26	0.01186	≤2.5	PASS
				30~1000	241.46	-53.37	≤-26	0.00460	≤2.5	PASS
			2472	1000~2387	2344.70	-53.92	≤-26	0.00406	≤2.5	PASS
				2387~2400	2390.58	-43.39	≤-16	0.04581	≤25	PASS
				2483.5~2496.5	2483.54	-27.90	≤-16	1.62181	≤25	PASS
				2496.5~13000	6970.47	-48.39	≤-26	0.01449	≤2.5	PASS

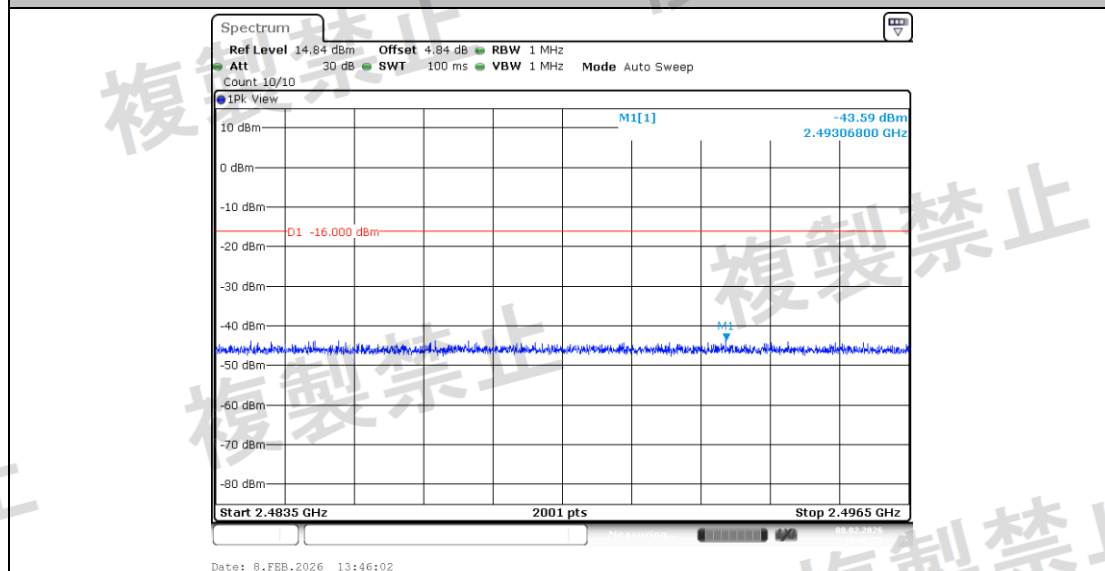
	11N40SI SO	Ant1	2422	30~1000	887.00	-53.87	≤-26	0.00410	≤2.5	PASS
				1000~2387	2386.3 1	-51.48	≤-26	0.00711	≤2.5	PASS
				2387~2400	2399.8 4	-25.90	≤-16	2.57040	≤25	PASS
				2483.5~2496.5	2489.1 2	-43.42	≤-16	0.04550	≤25	PASS
				2496.5~13000	6871.7 3	-48.57	≤-26	0.01390	≤2.5	PASS
			2442	30~1000	959.75	-52.69	≤-26	0.00538	≤2.5	PASS
				1000~2387	1944.2 0	-53.53	≤-26	0.00444	≤2.5	PASS
				2387~2400	2390.8 1	-43.32	≤-16	0.04656	≤25	PASS
				2483.5~2496.5	2492.2 2	-43.15	≤-16	0.04842	≤25	PASS
				2496.5~13000	6984.6 5	-49.59	≤-26	0.01099	≤2.5	PASS
			2462	30~1000	244.37	-53.67	≤-26	0.00430	≤2.5	PASS
				1000~2387	2385.9 6	-52.00	≤-26	0.00631	≤2.5	PASS
				2387~2400	2394.6 2	-42.89	≤-16	0.05140	≤25	PASS
				2483.5~2496.5	2483.5 5	-31.24	≤-16	0.75162	≤25	PASS
				2496.5~13000	2498.6 0	-43.77	≤-26	0.04198	≤2.5	PASS

Test Graphs

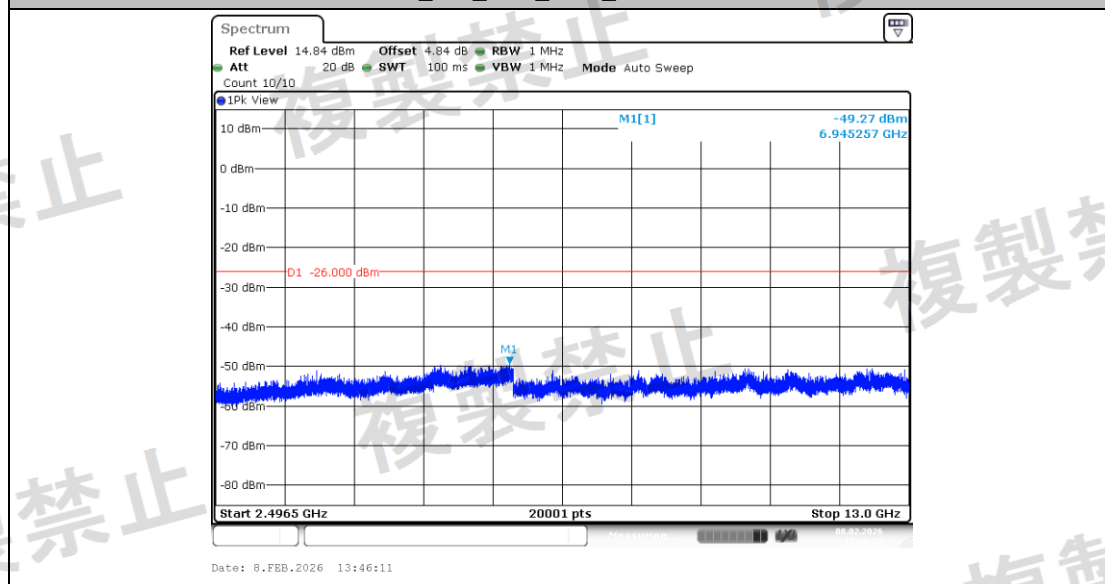


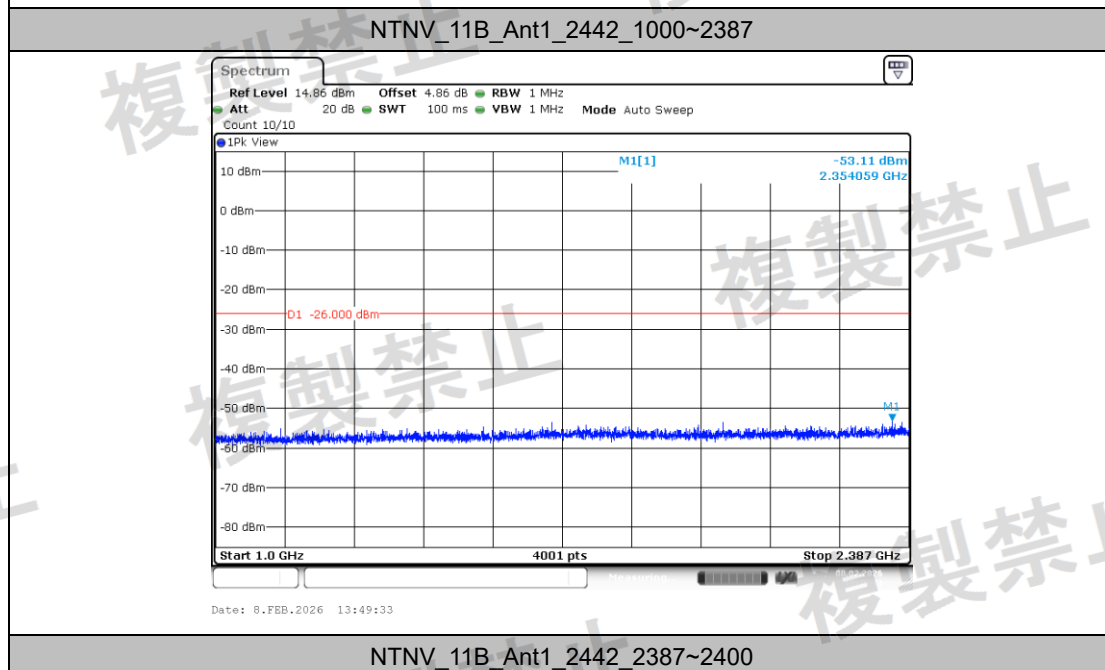
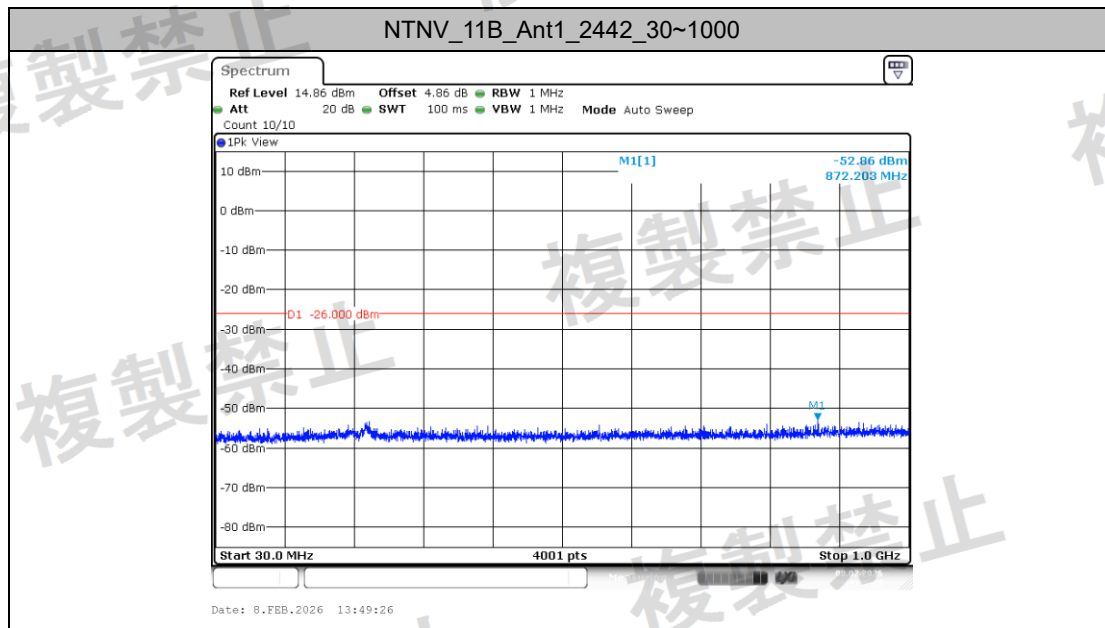


NTNV_11B_Ant1_2412_2483.5~2496.5

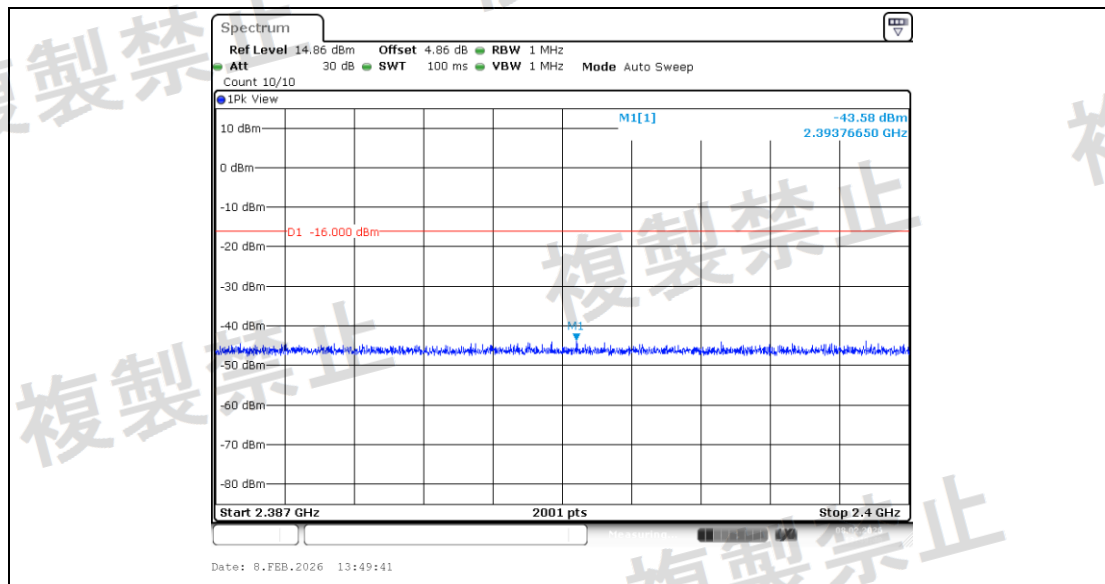


NTNV_11B_Ant1_2412_2496.5~13000

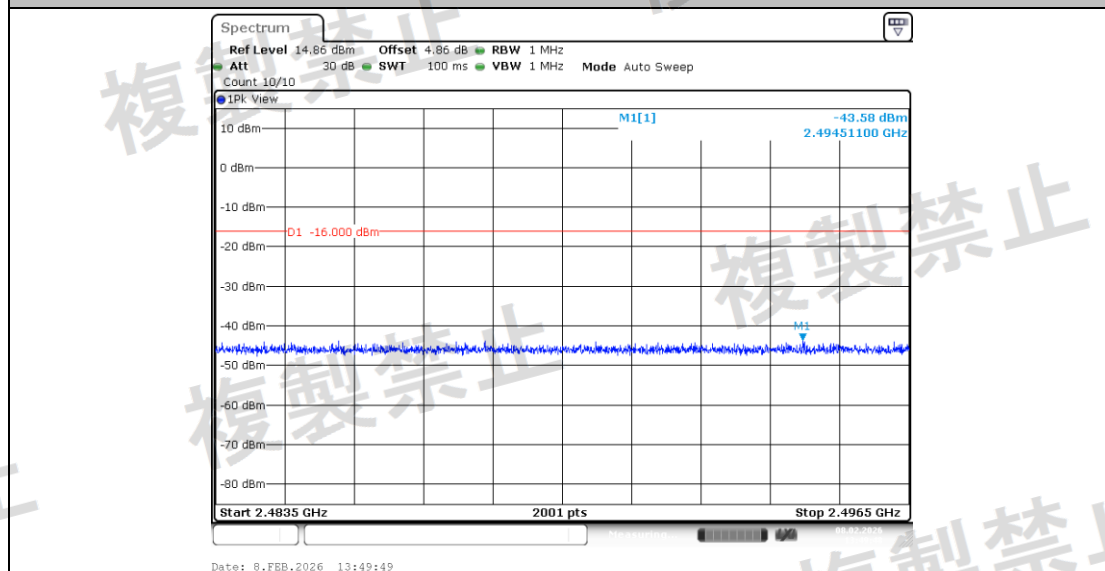




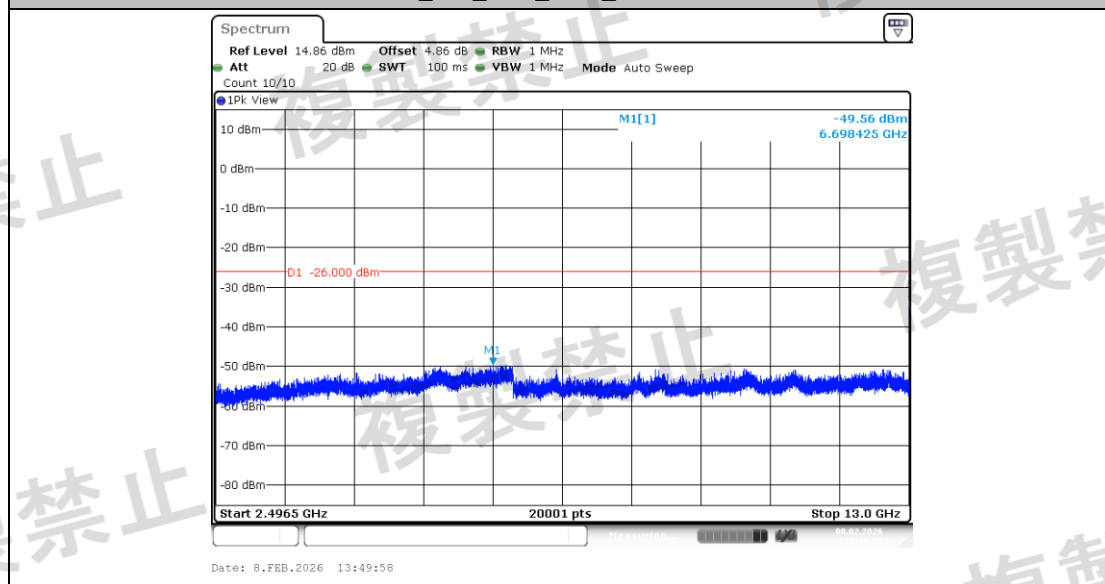
NTNV_11B_Ant1_2442_2387~2400

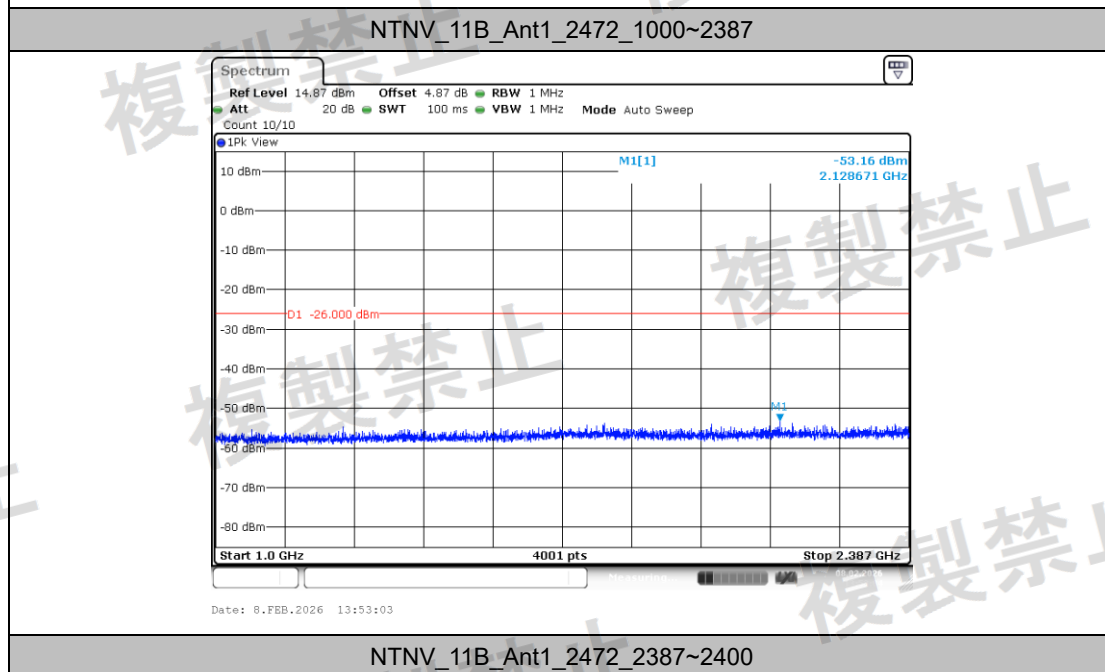
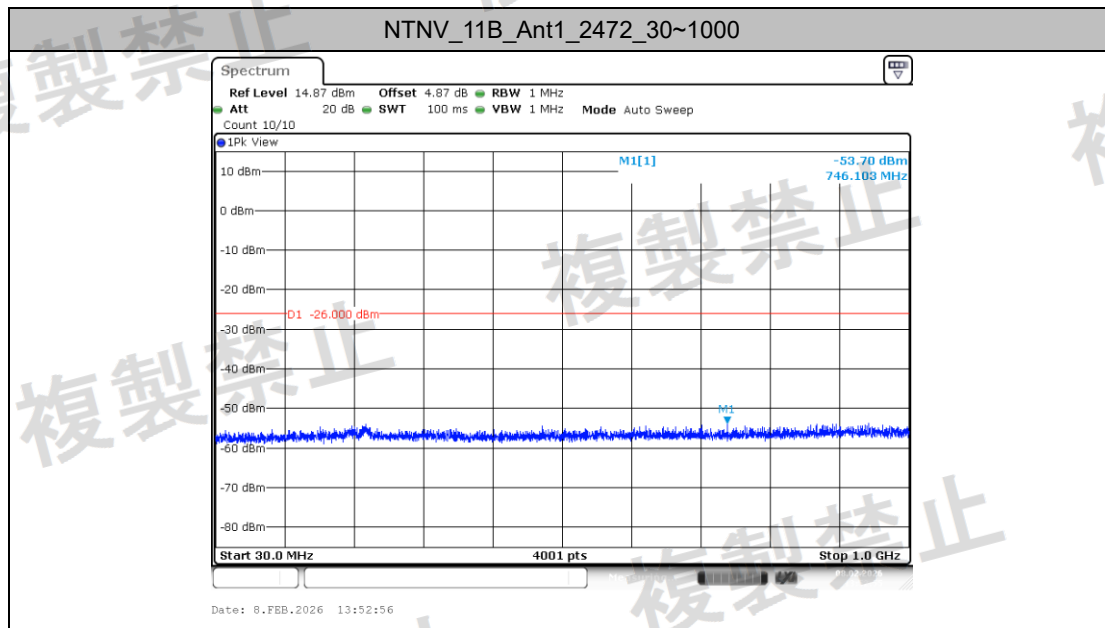


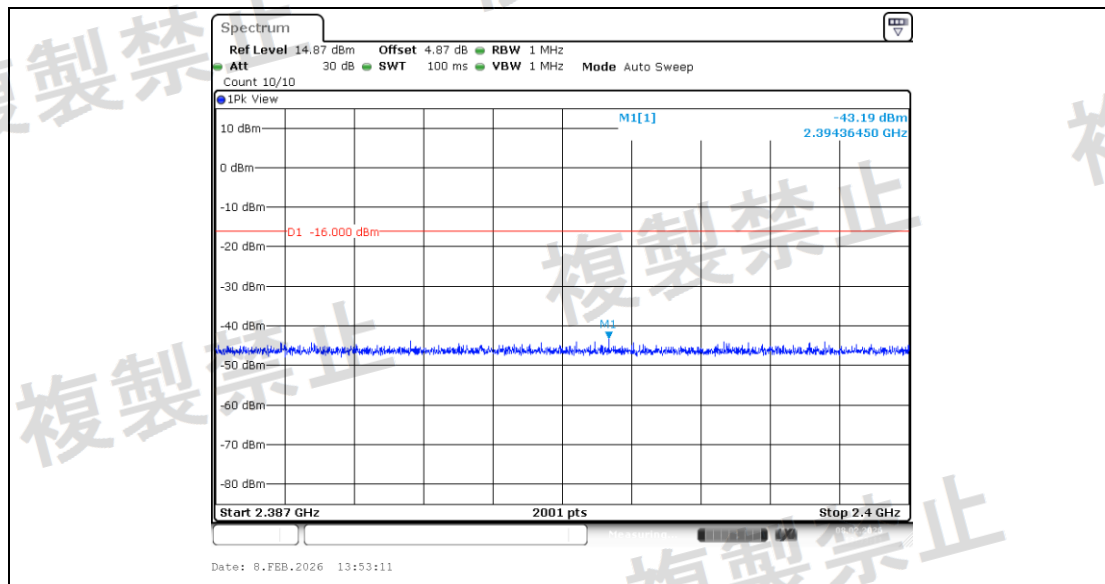
NTNV_11B_Ant1_2442_2483.5~2496.5



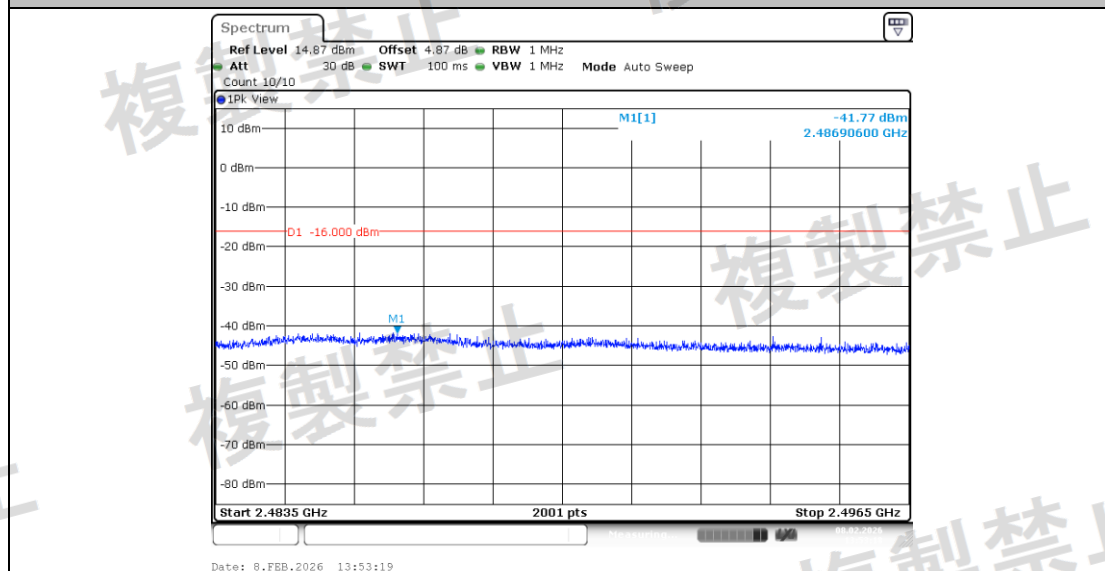
NTNV_11B_Ant1_2442_2496.5~13000



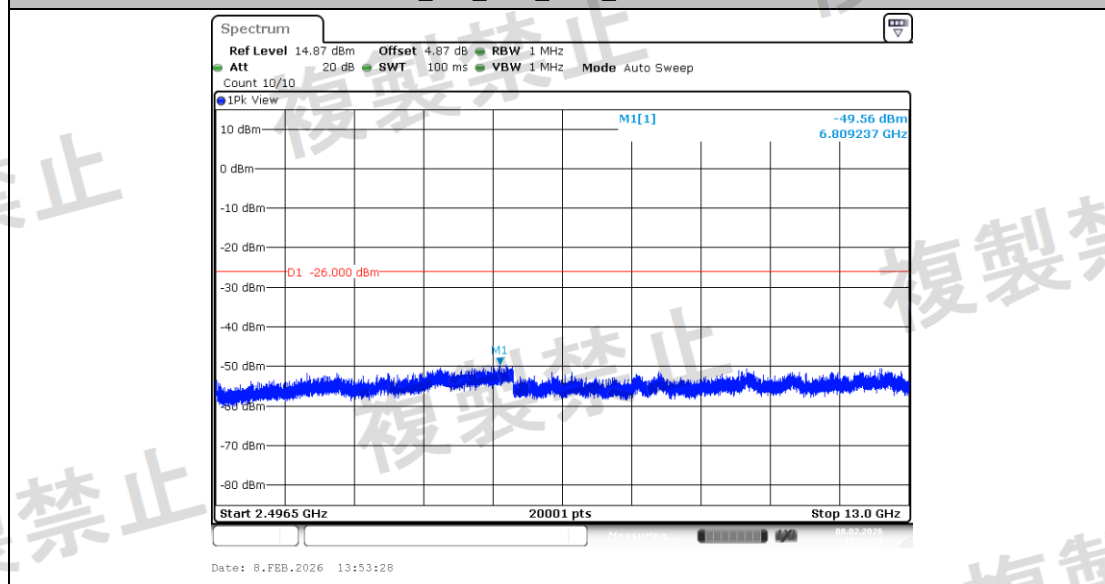


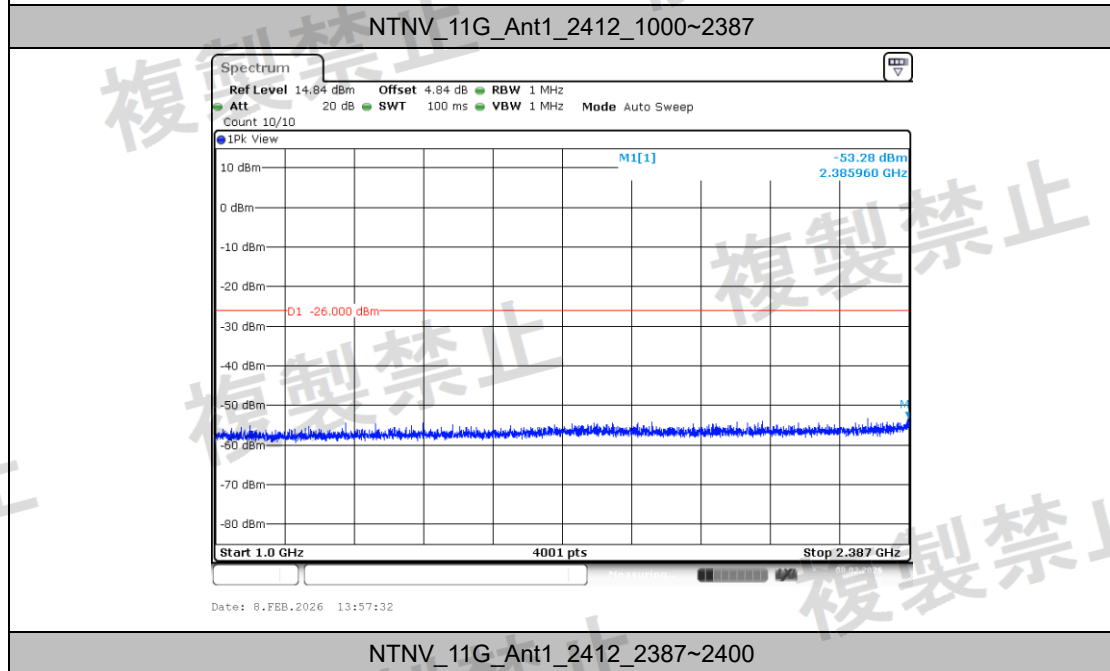
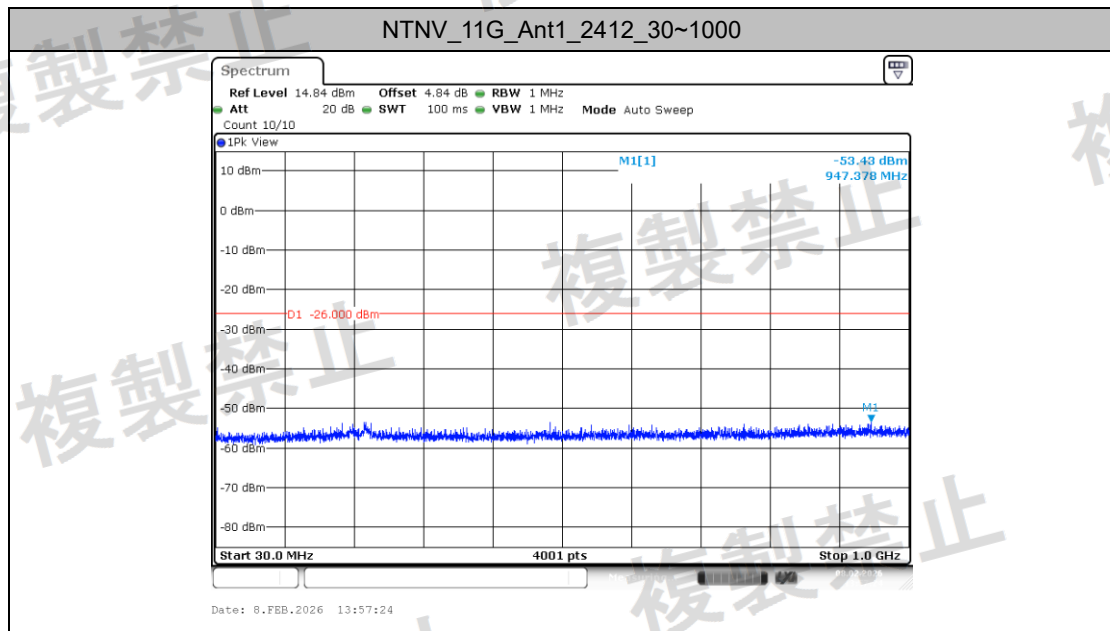


NTNV_11B_Ant1_2472_2483.5~2496.5

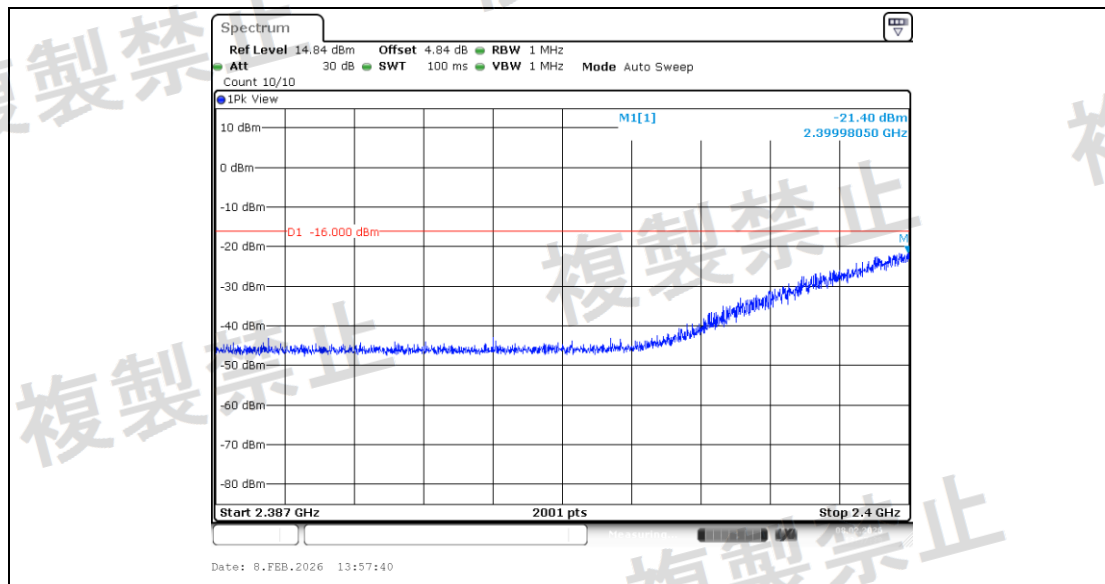


NTNV_11B_Ant1_2472_2496.5~13000

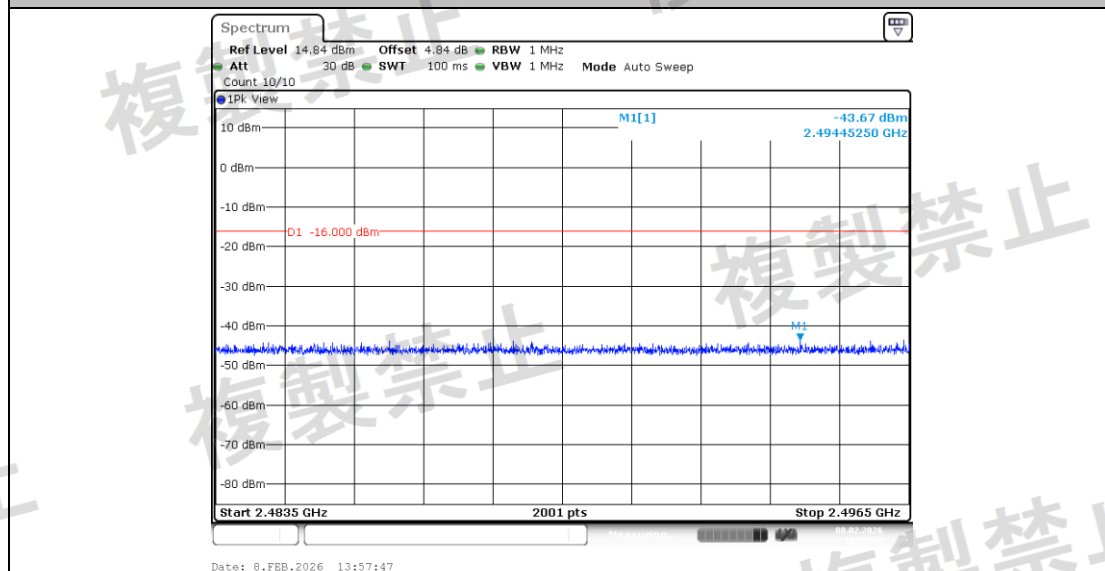




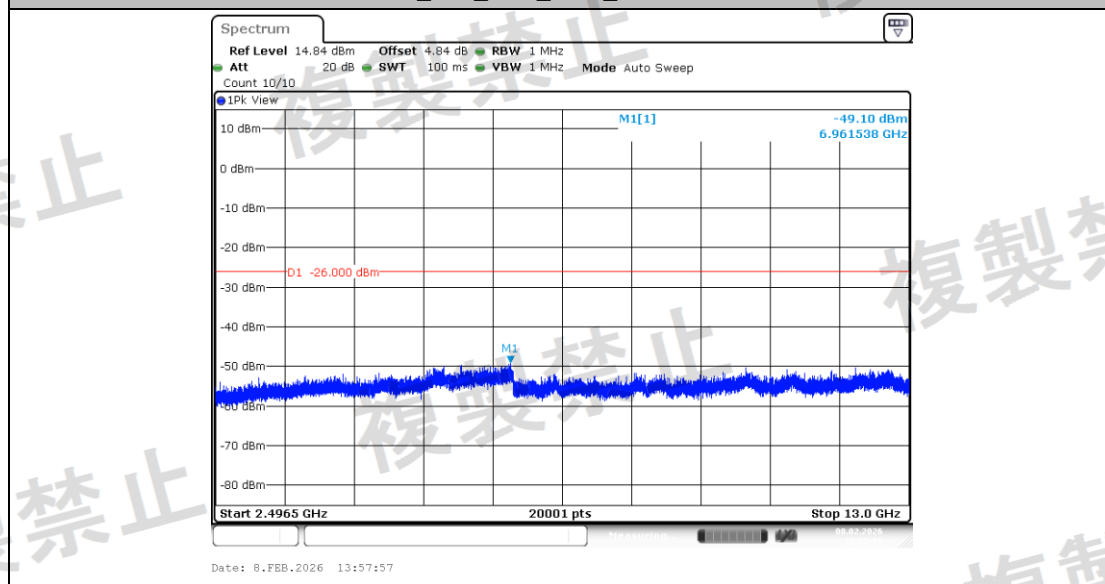
NTNV_11G_Ant1_2412_2387~2400

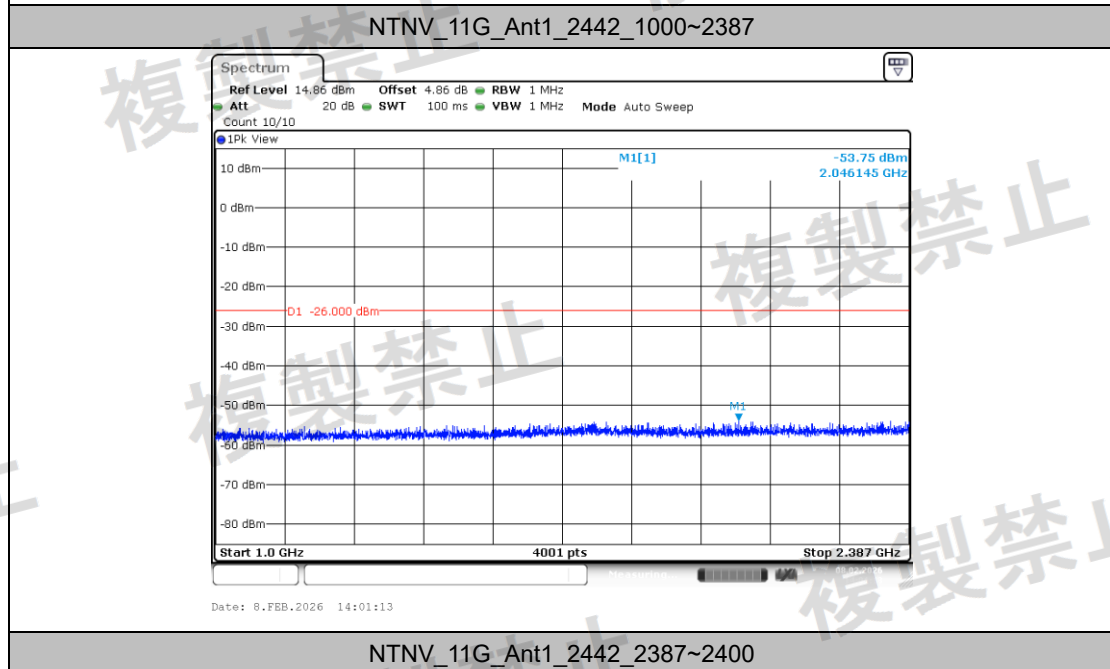
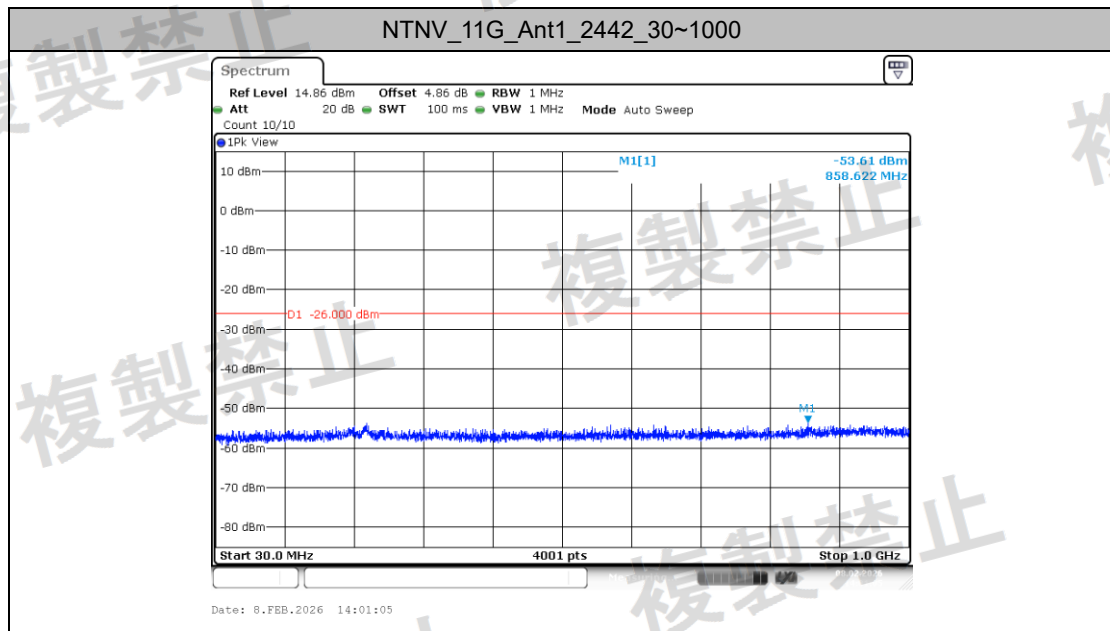


NTNV_11G_Ant1_2412_2483.5~2496.5

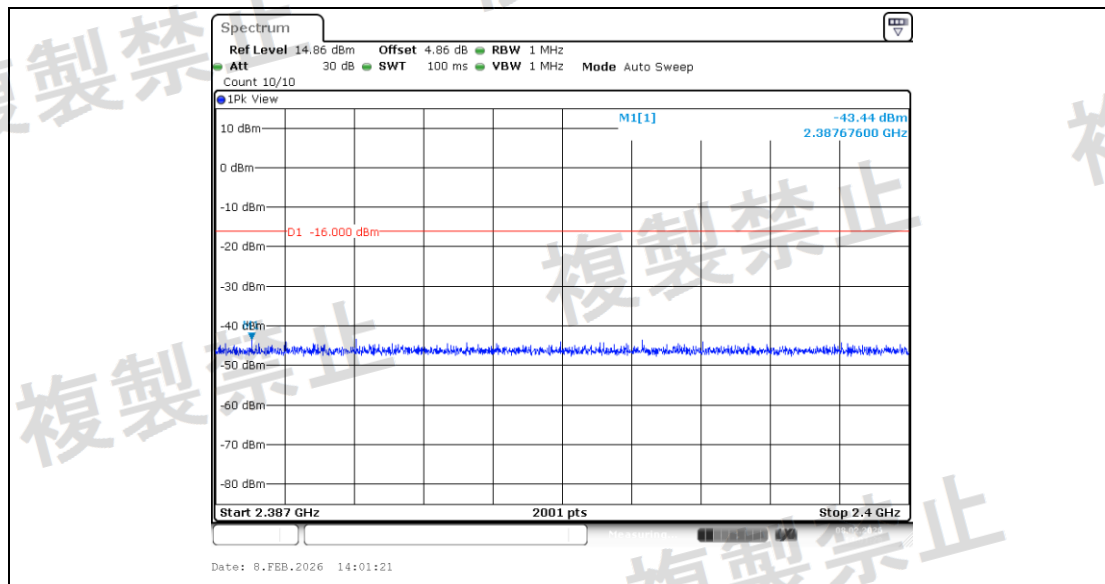


NTNV_11G_Ant1_2412_2496.5~13000

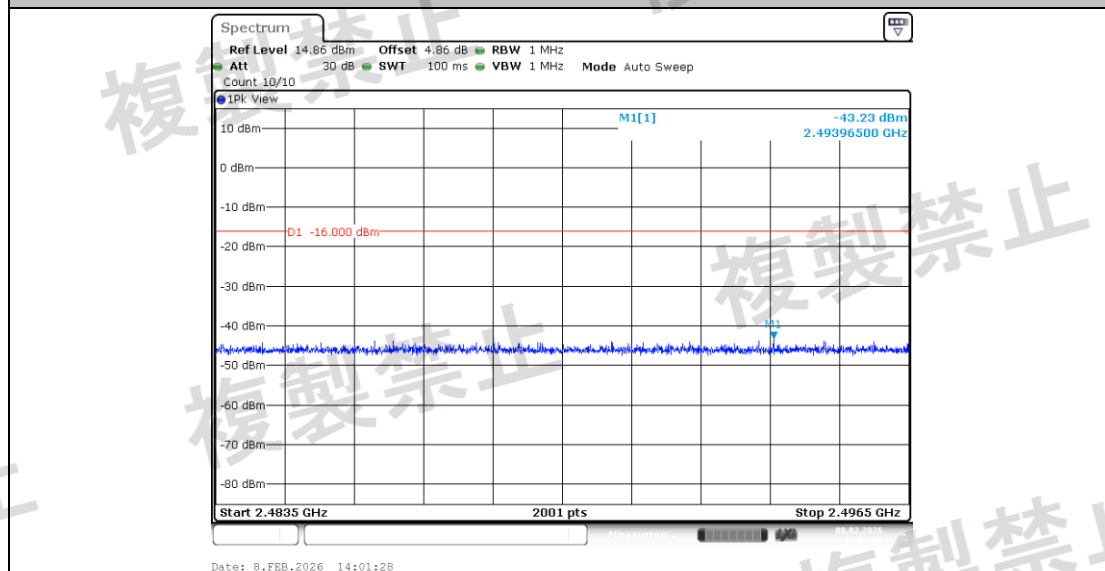




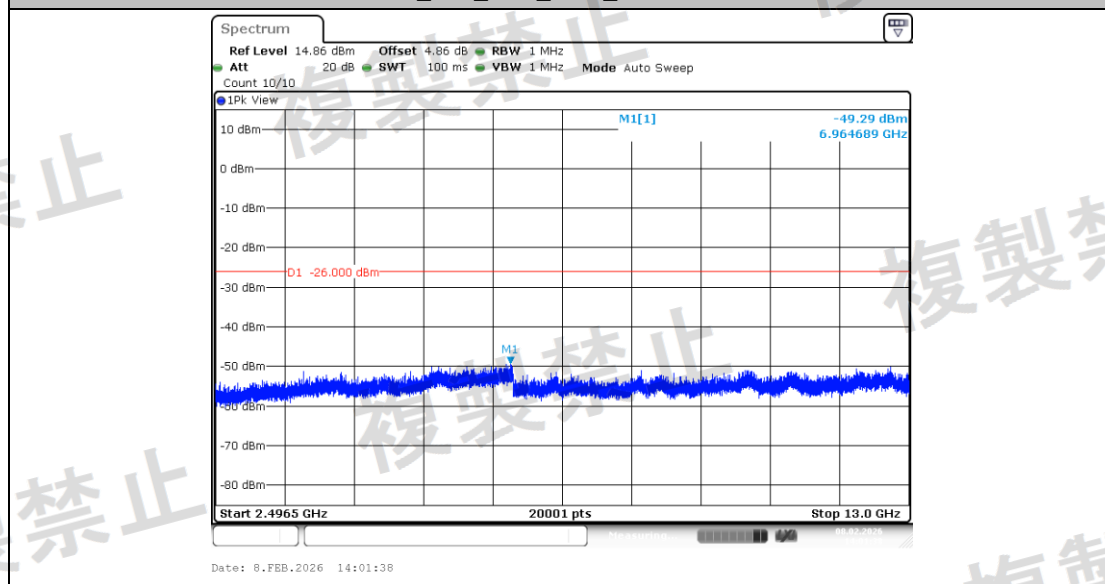
NTNV_11G_Ant1_2442_2387~2400

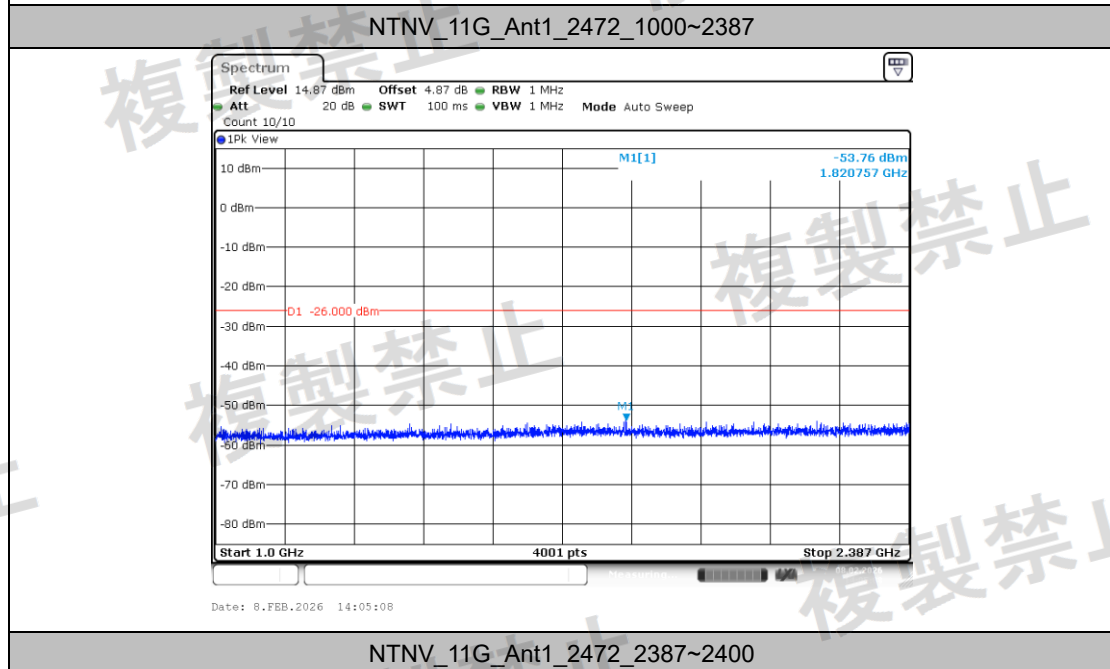
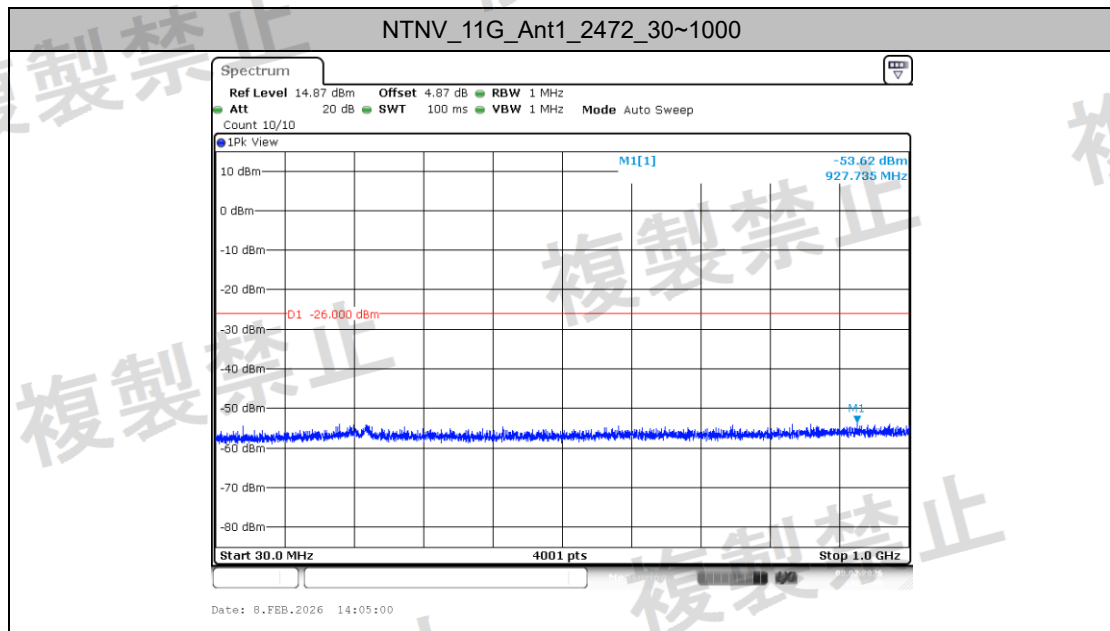


NTNV_11G_Ant1_2442_2483.5~2496.5

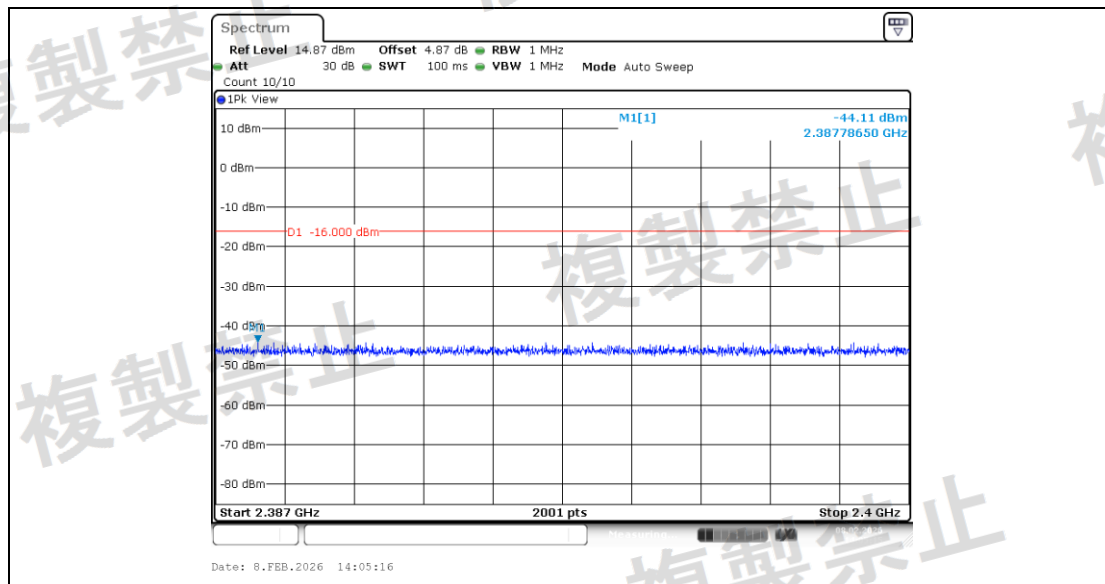


NTNV_11G_Ant1_2442_2496.5~13000

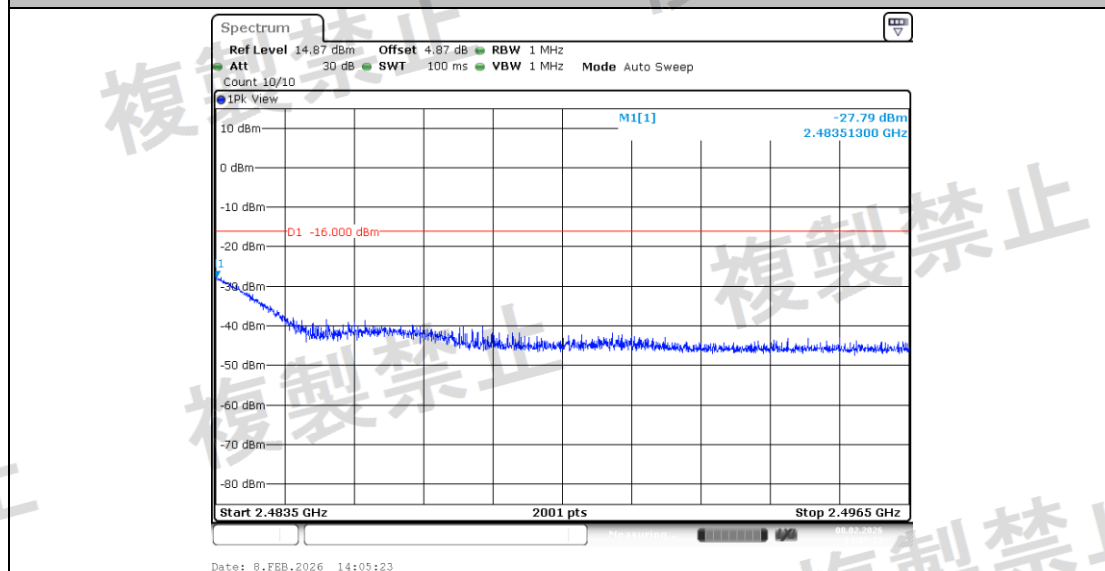




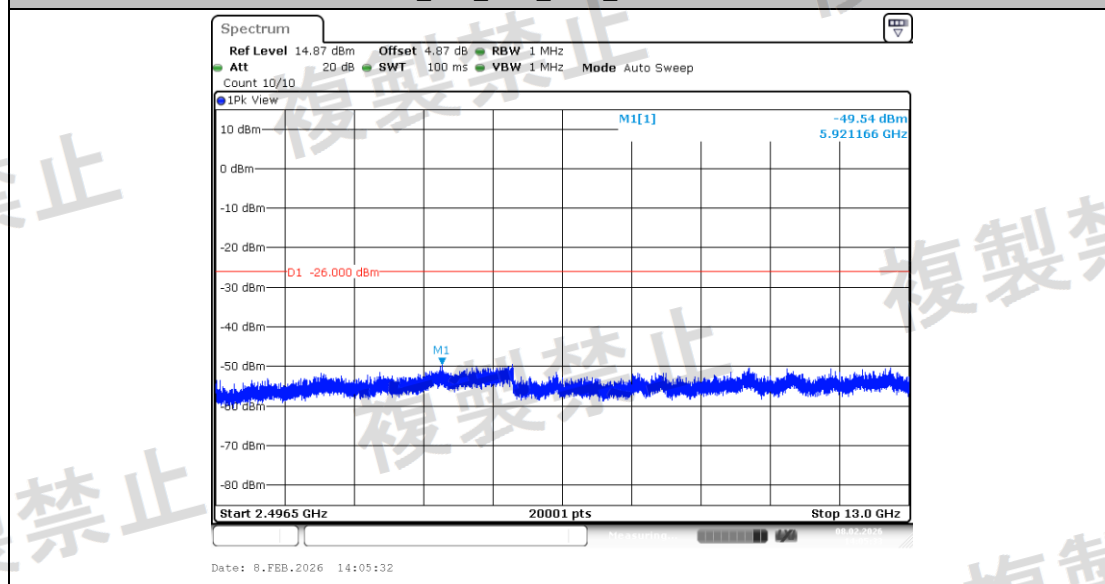
NTNV_11G_Ant1_2472_2387~2400

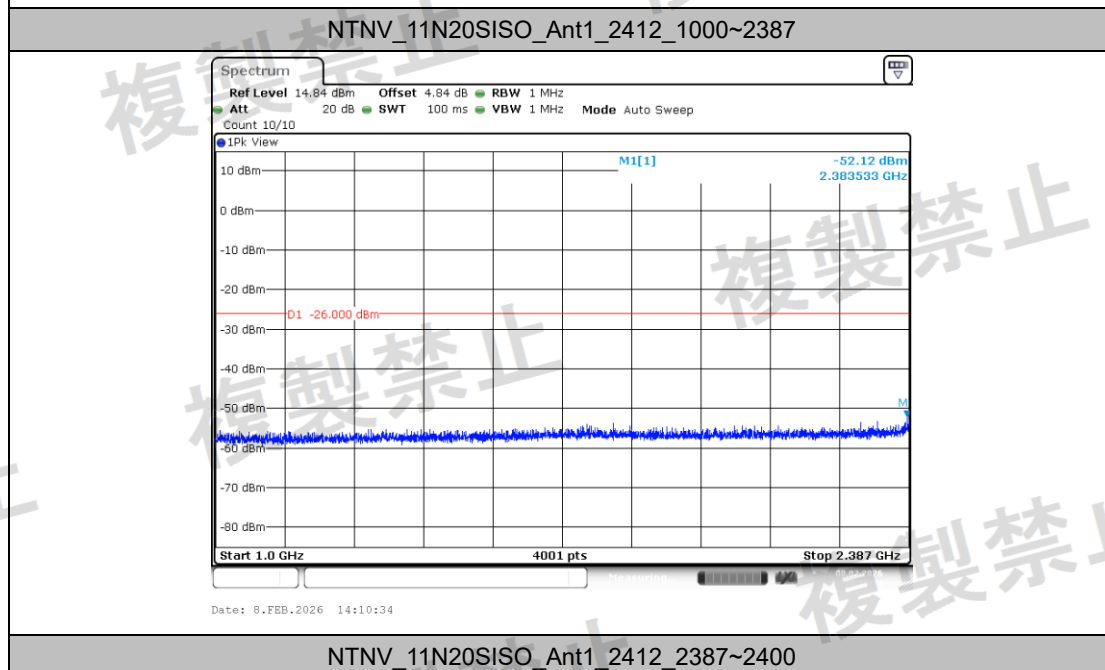
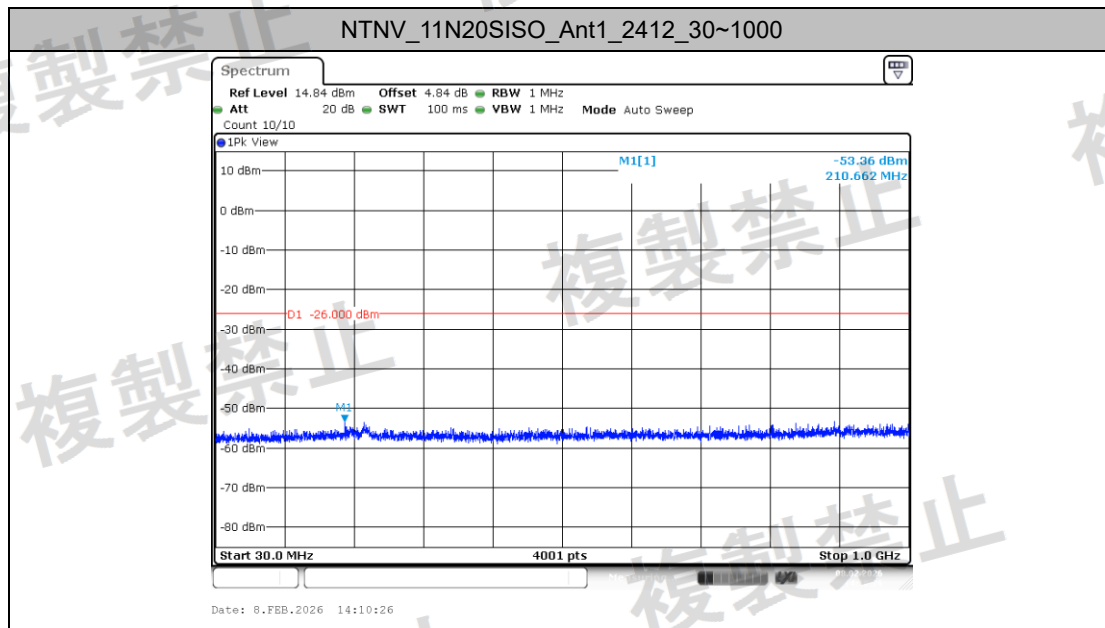


NTNV_11G_Ant1_2472_2483.5~2496.5

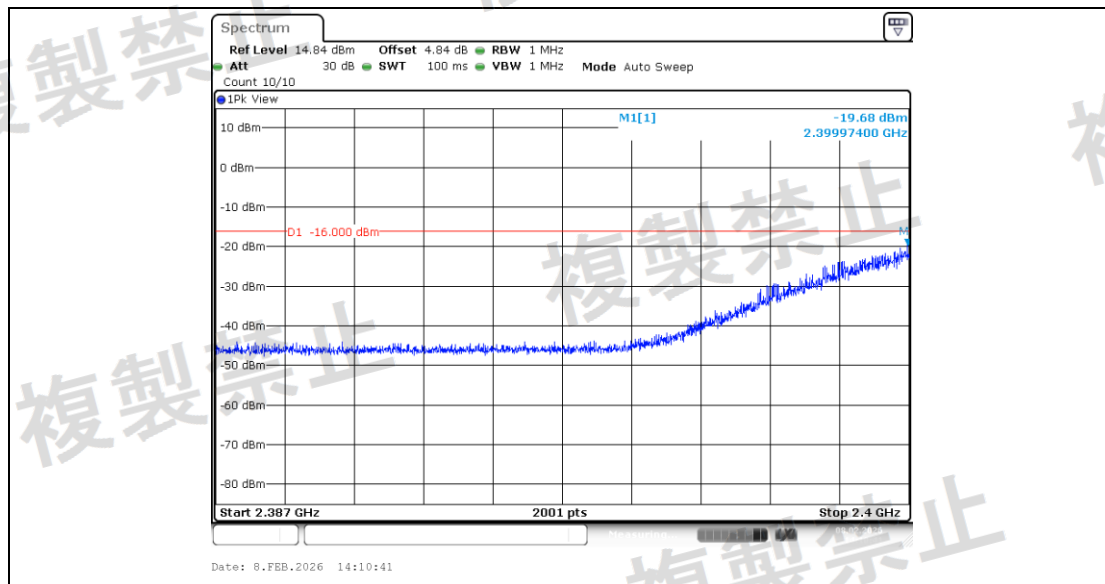


NTNV_11G_Ant1_2472_2496.5~13000

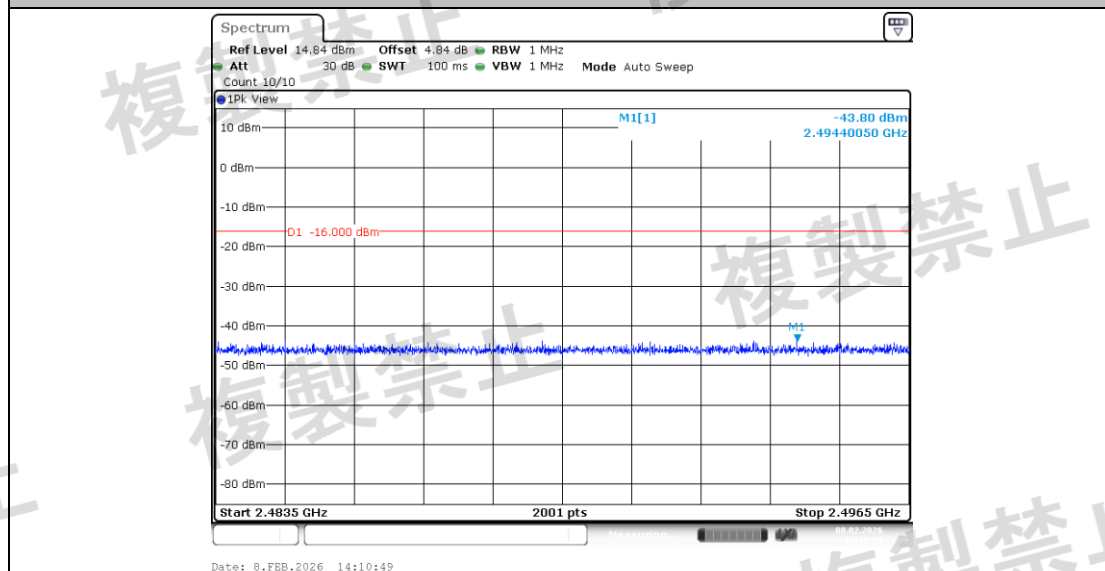




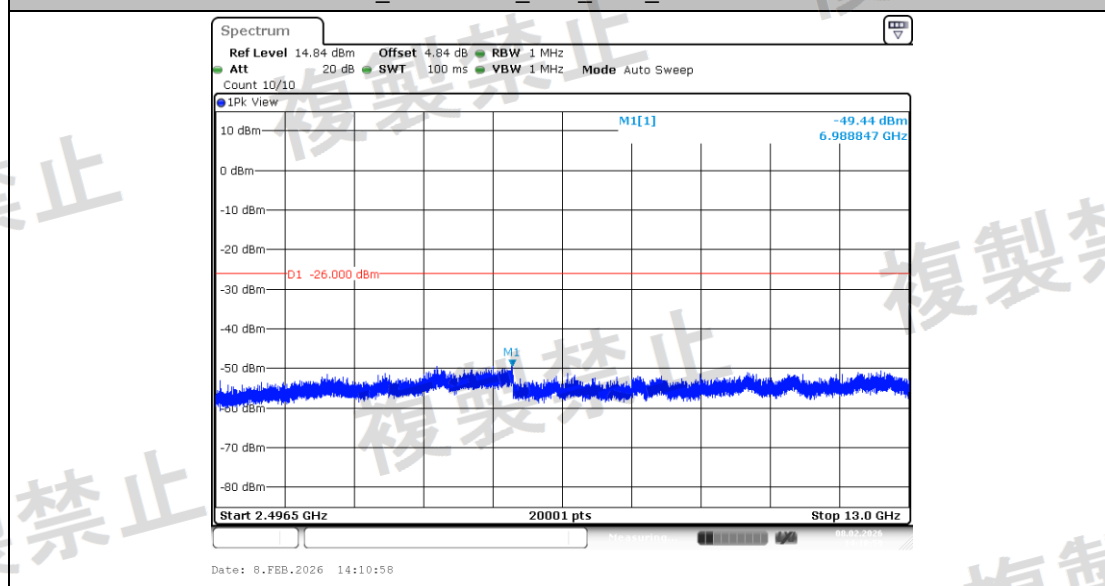
NTNV_11N20SISO_Ant1_2412_2387~2400

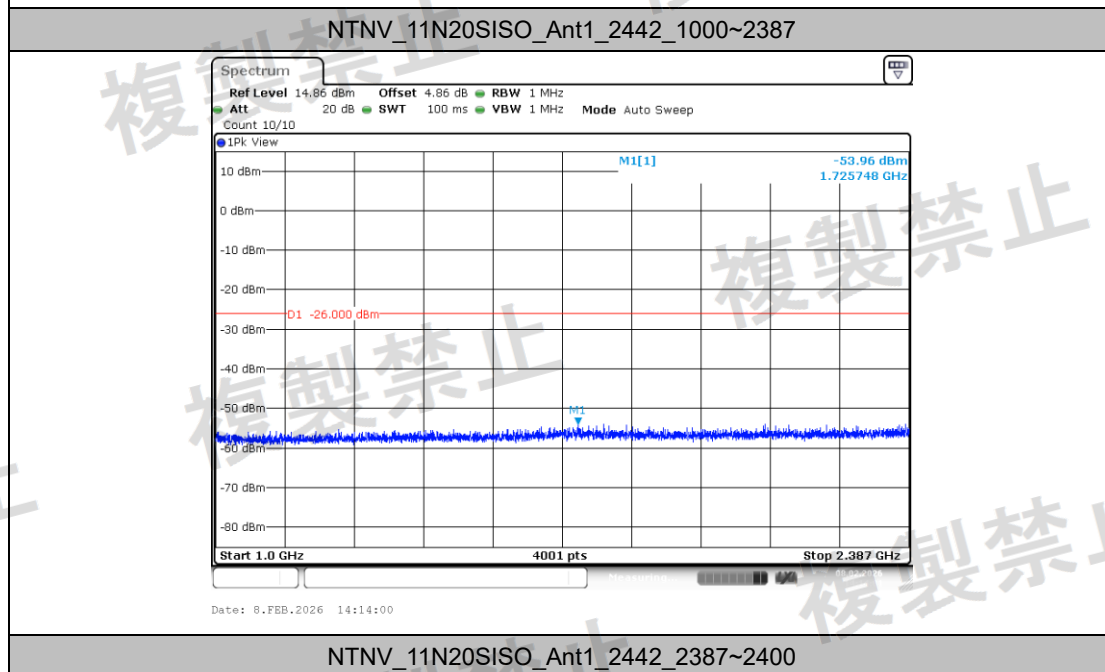
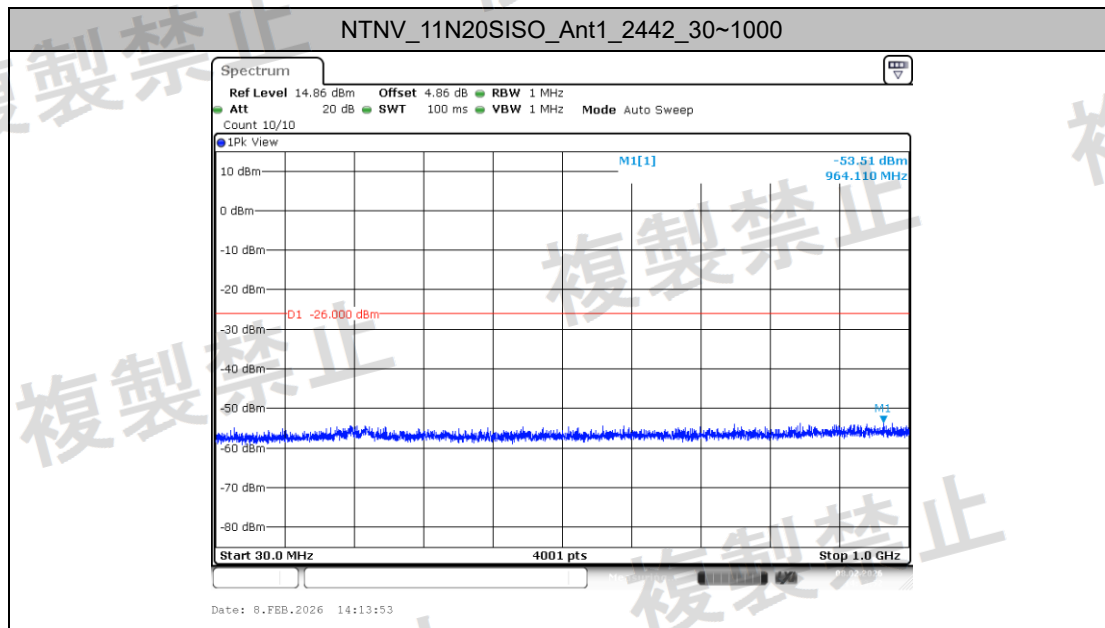


NTNV_11N20SISO_Ant1_2412_2483.5~2496.5

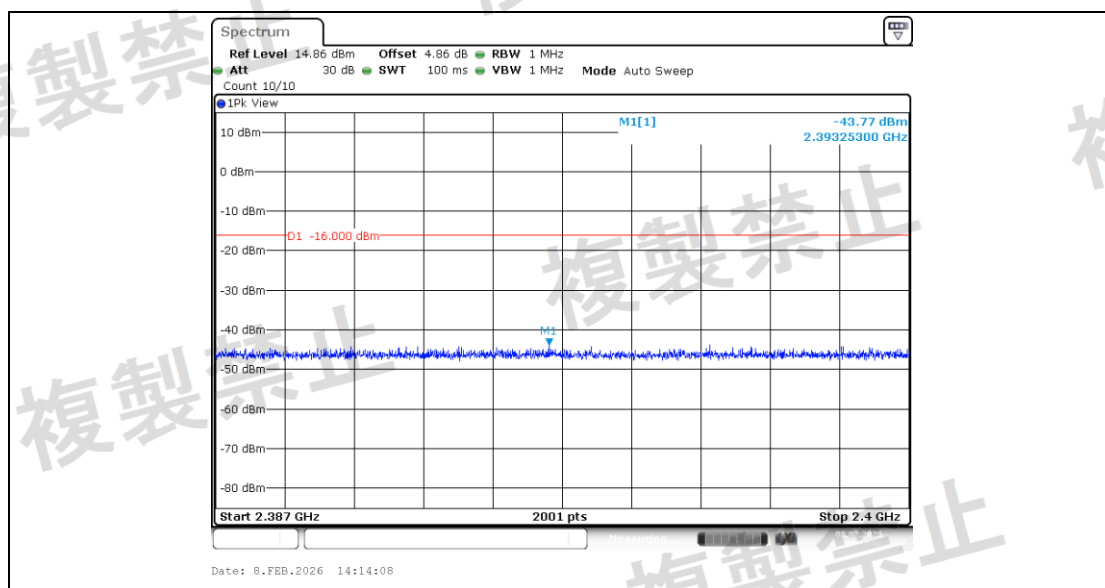


NTNV_11N20SISO_Ant1_2412_2496.5~13000

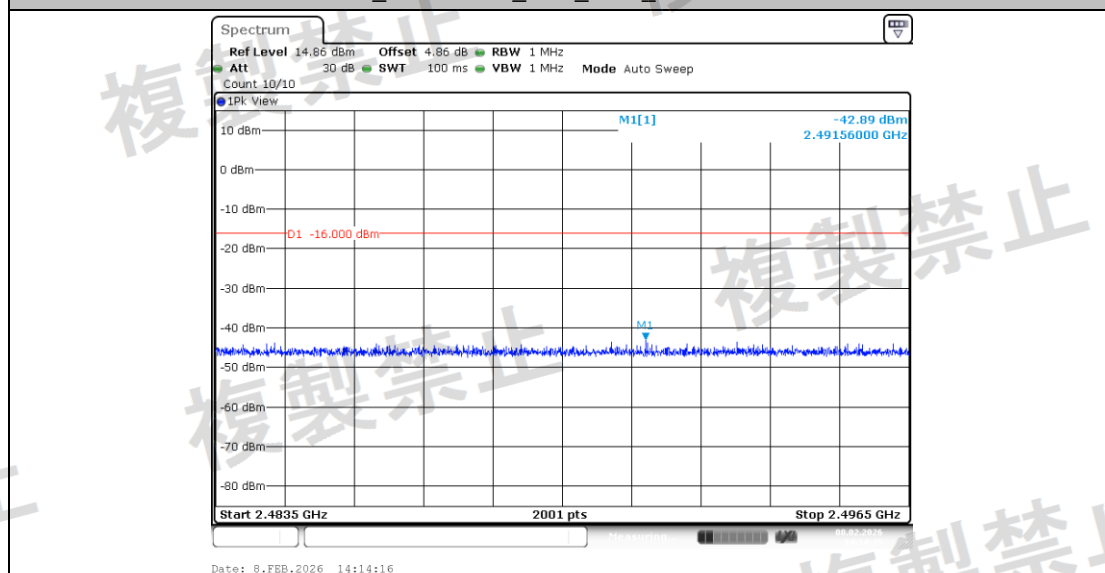




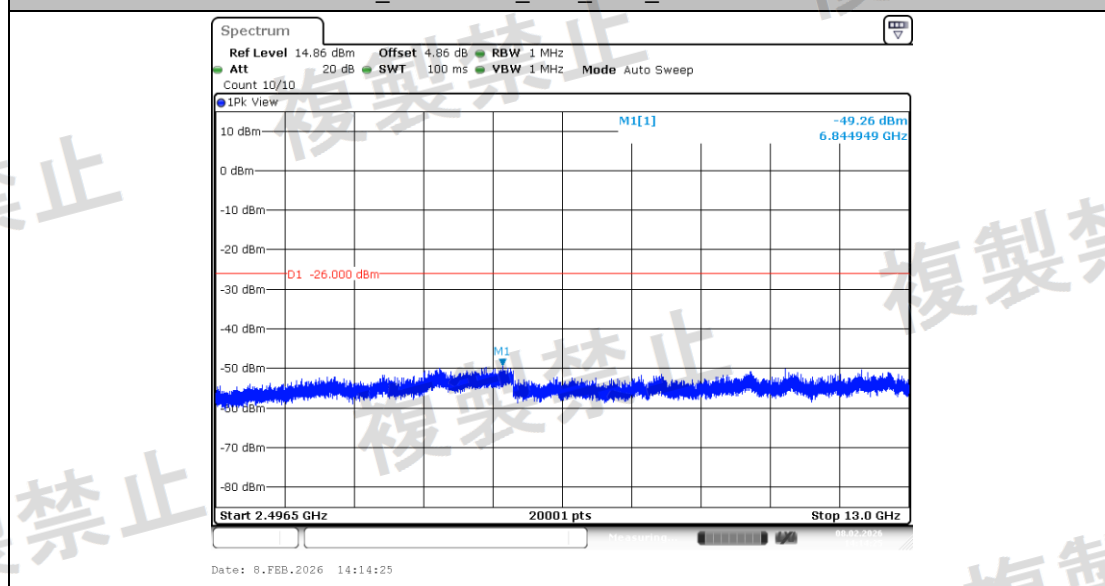
NTNV_11N20SISO_Ant1_2442_2387~2400

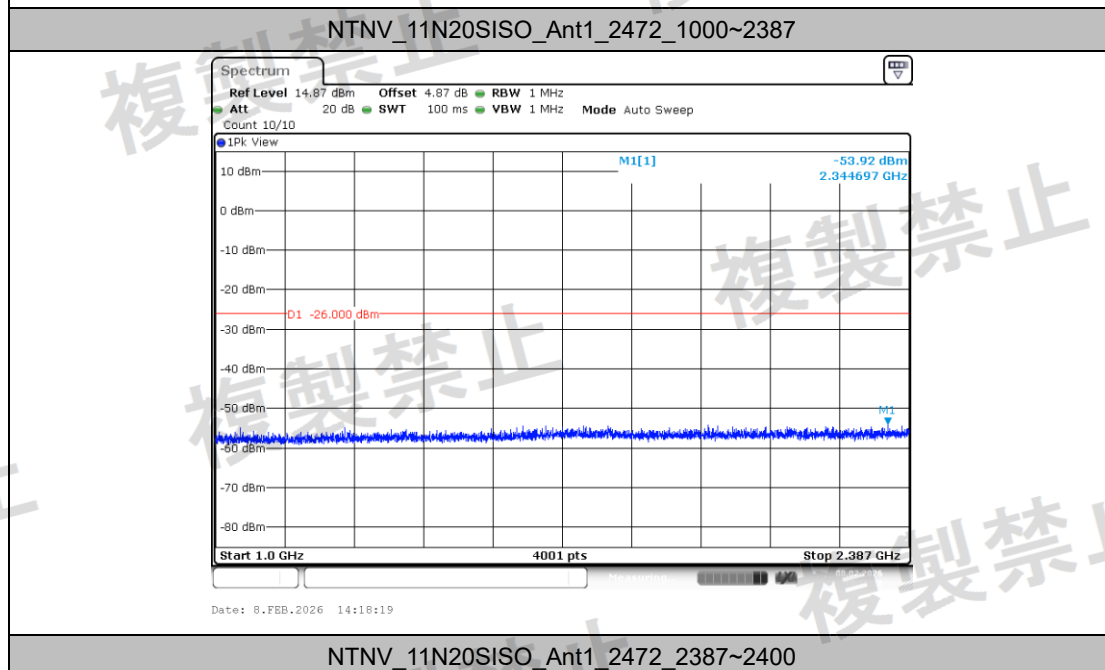
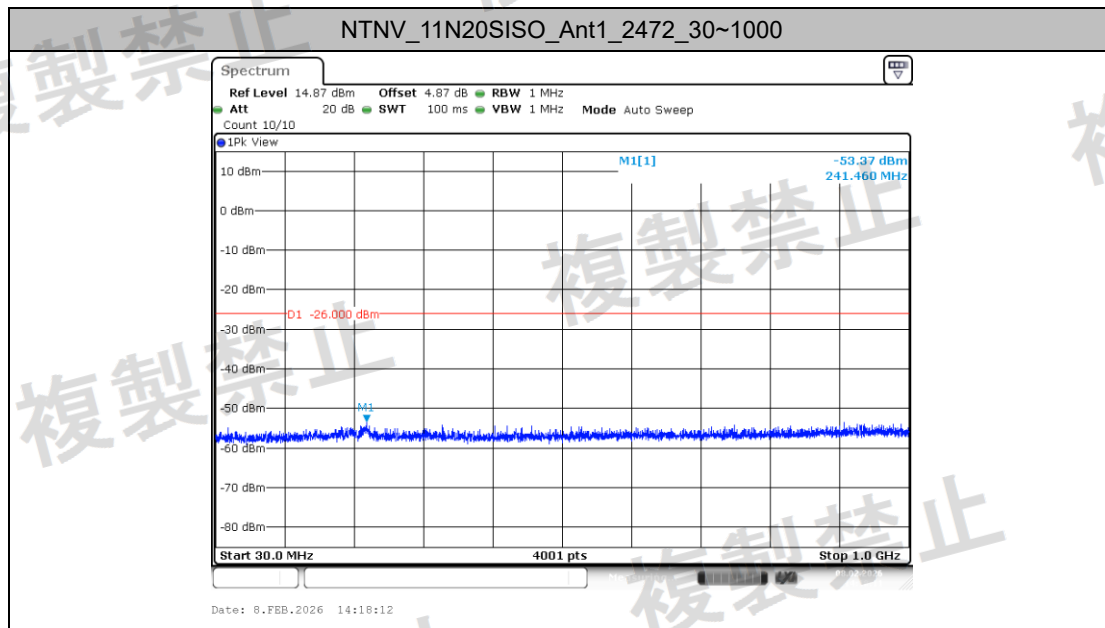


NTNV_11N20SISO_Ant1_2442_2483.5~2496.5

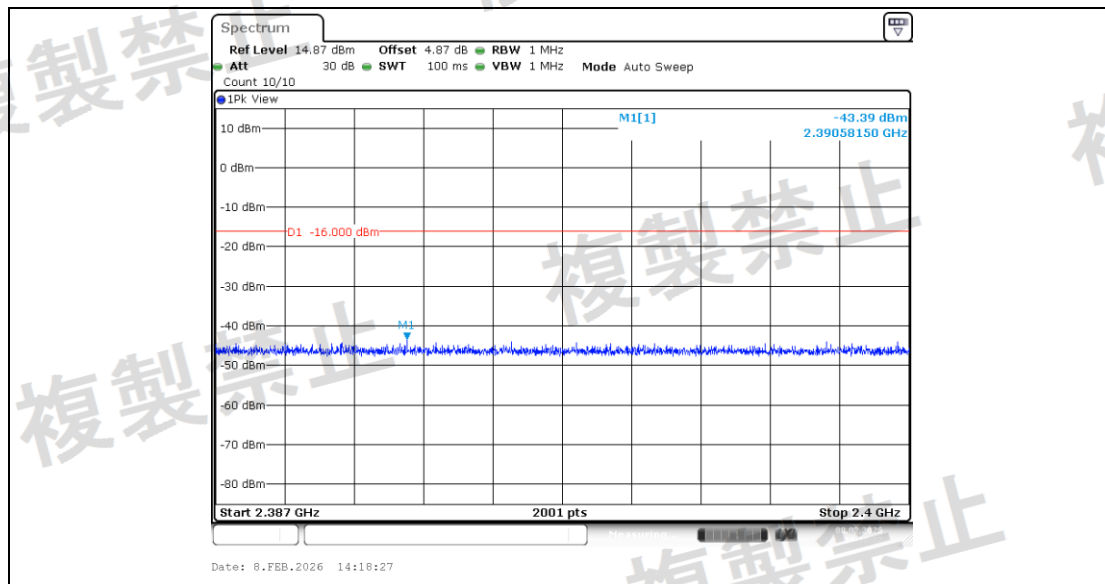


NTNV_11N20SISO_Ant1_2442_2496.5~13000

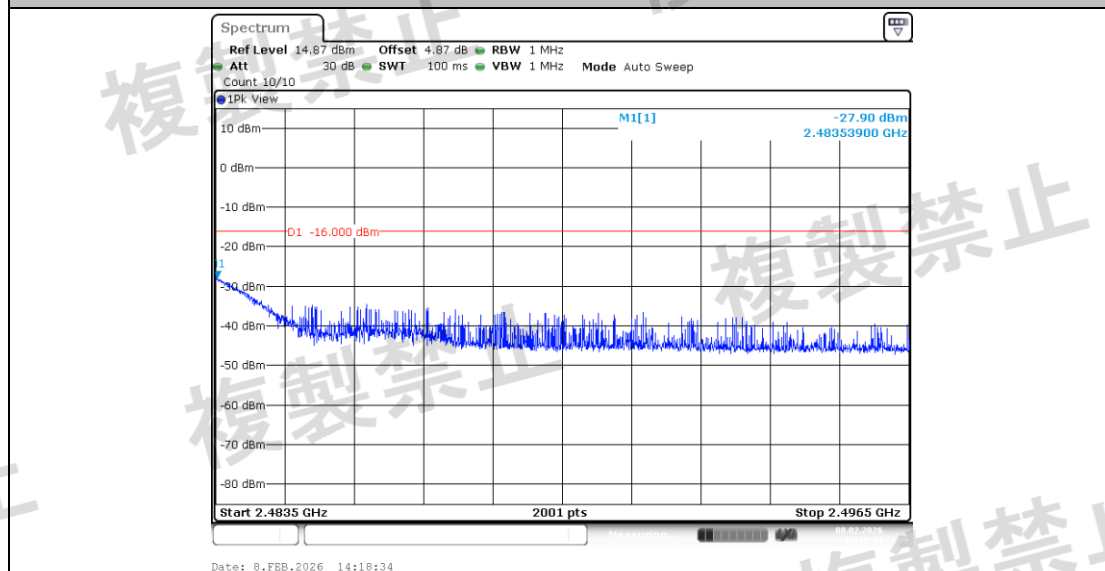




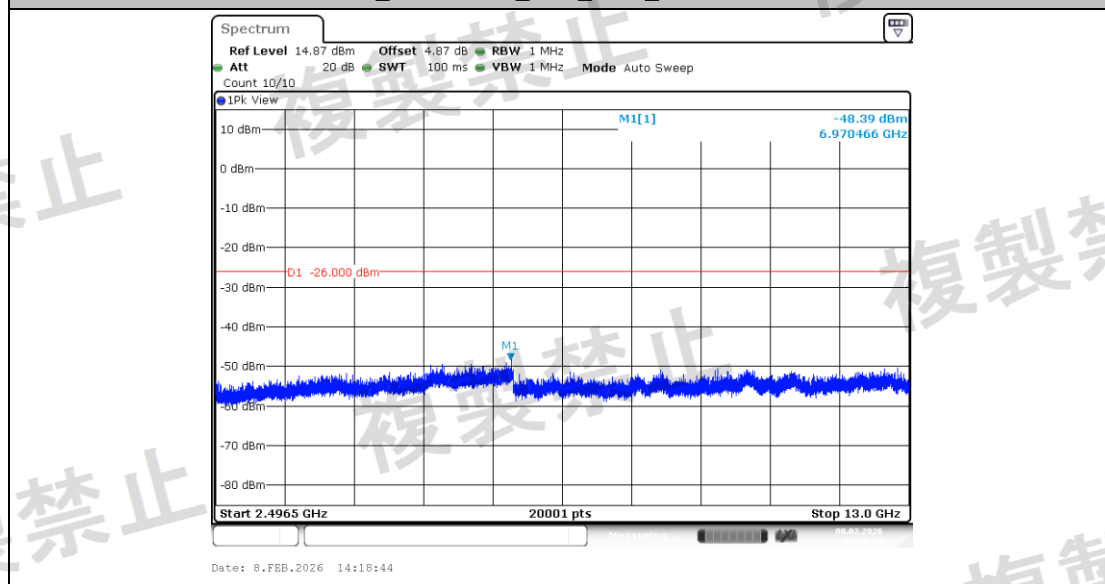
NTNV_11N20SISO_Ant1_2472_2387~2400

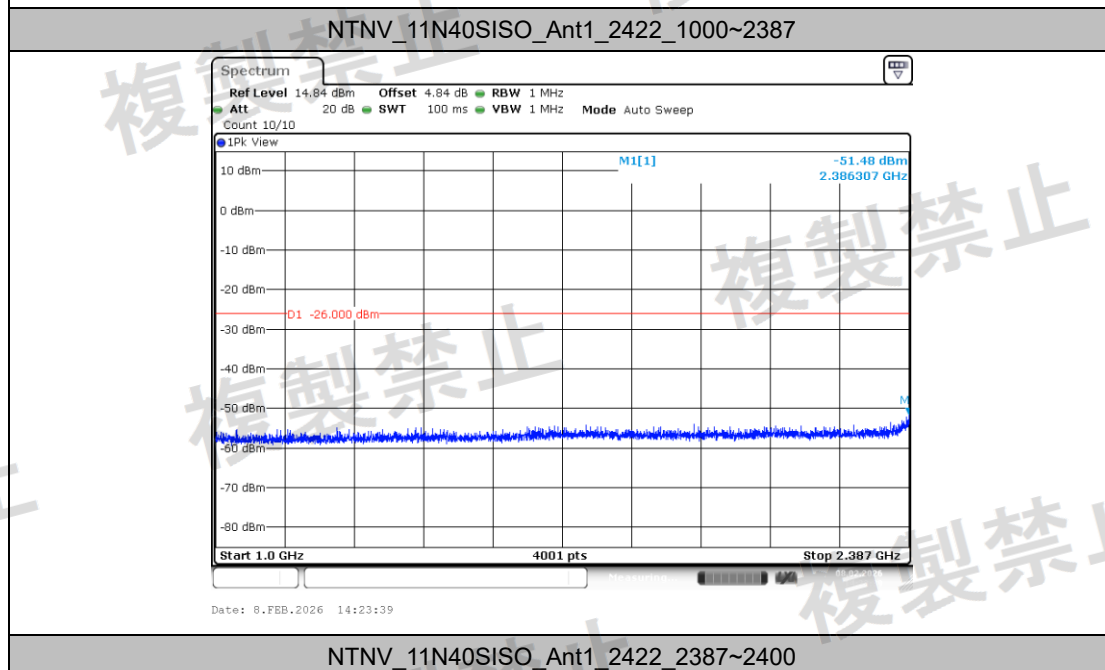
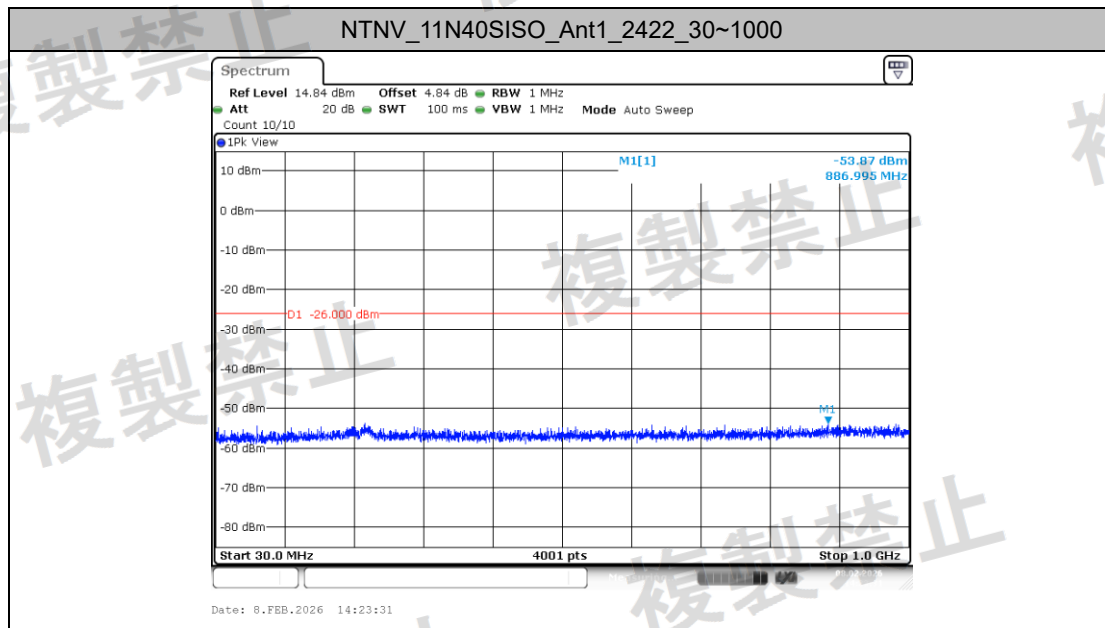


NTNV_11N20SISO_Ant1_2472_2483.5~2496.5

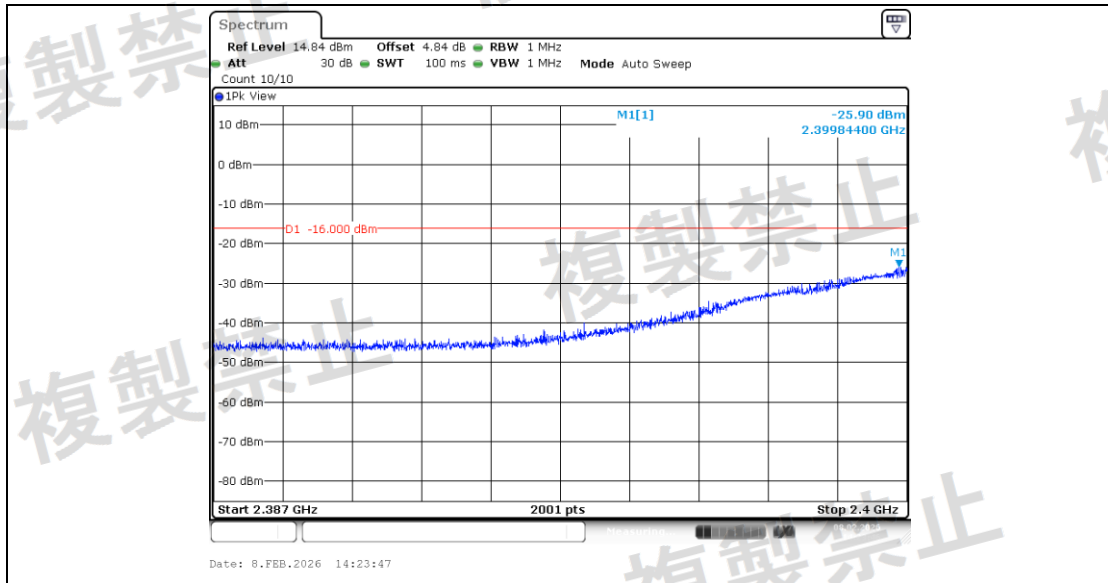


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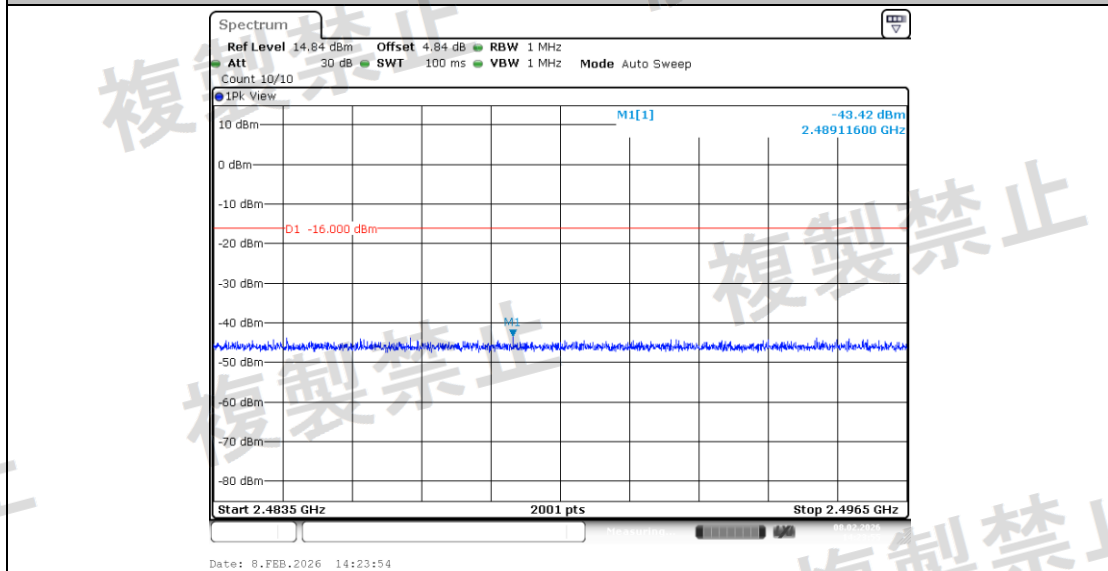




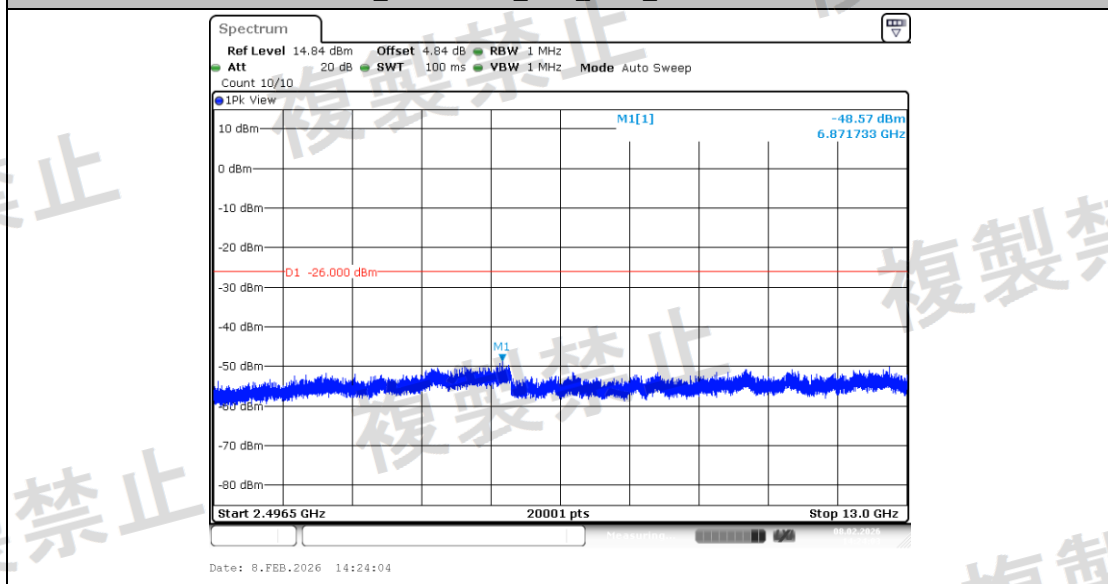
NTNV_11N40SISO_Ant1_2422_2387~2400

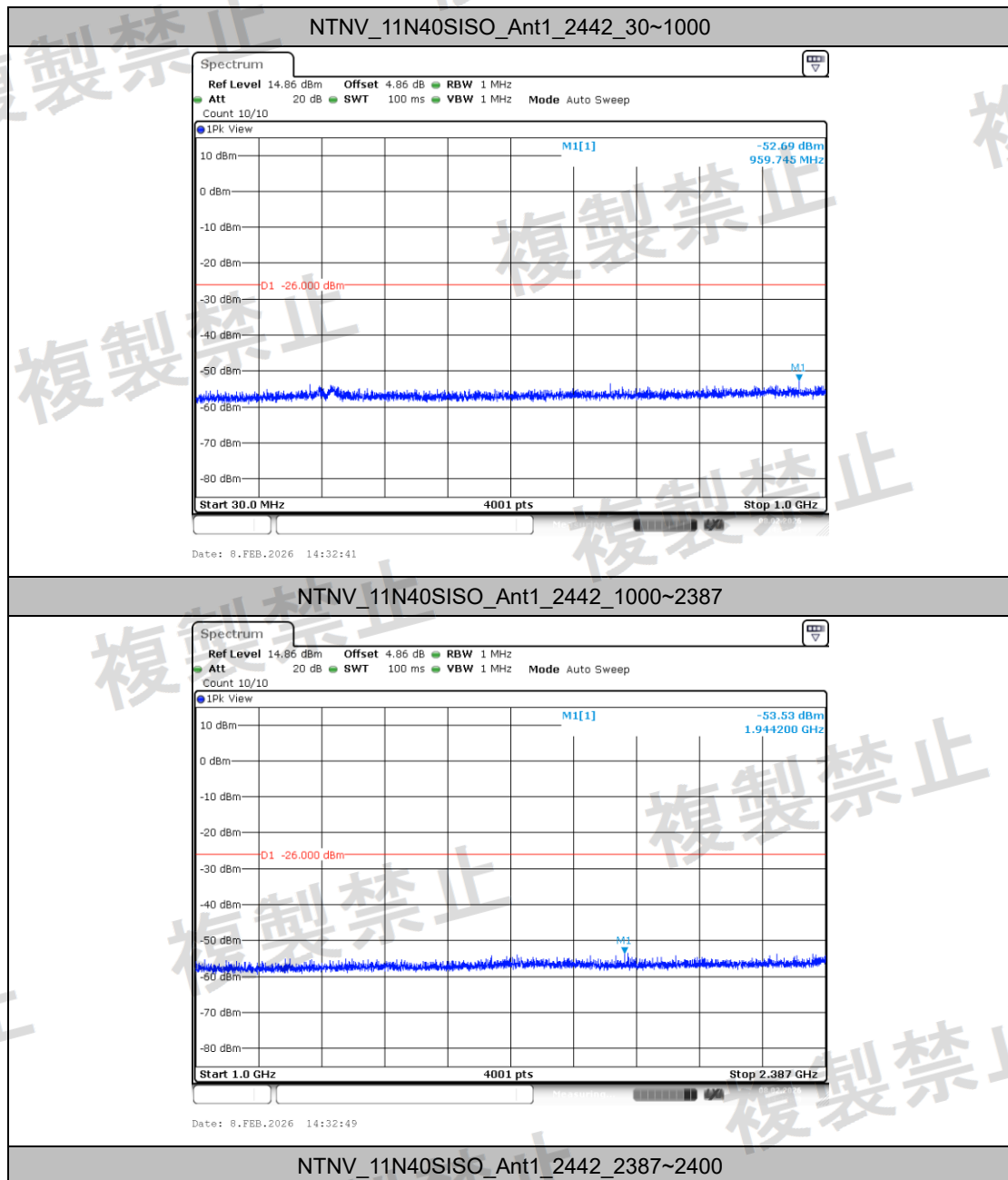


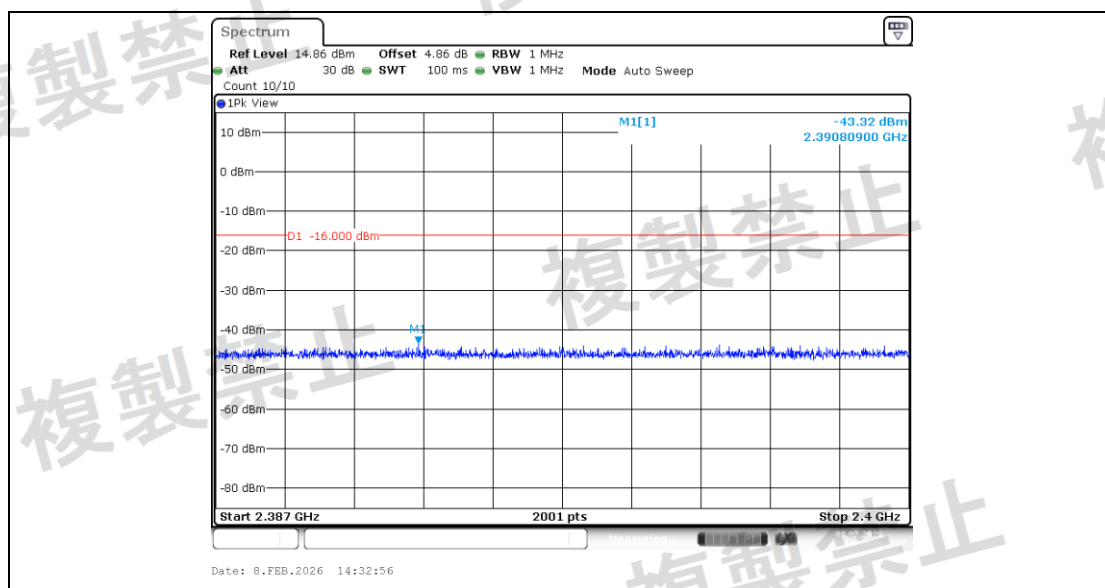
NTNV_11N40SISO_Ant1_2422_2483.5~2496.5



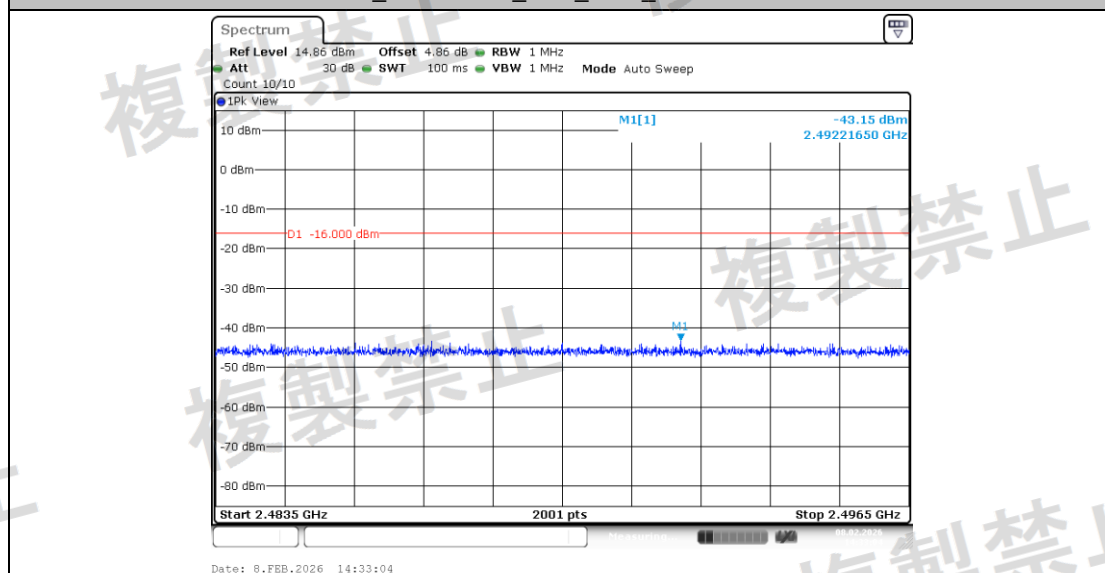
NTNV_11N40SISO_Ant1_2422_2496.5~13000



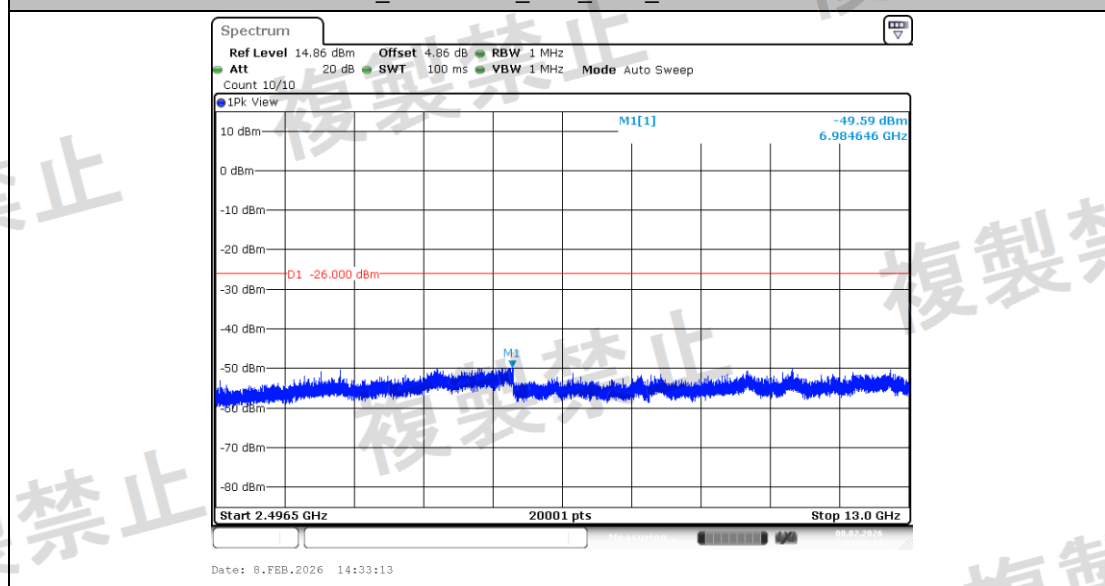


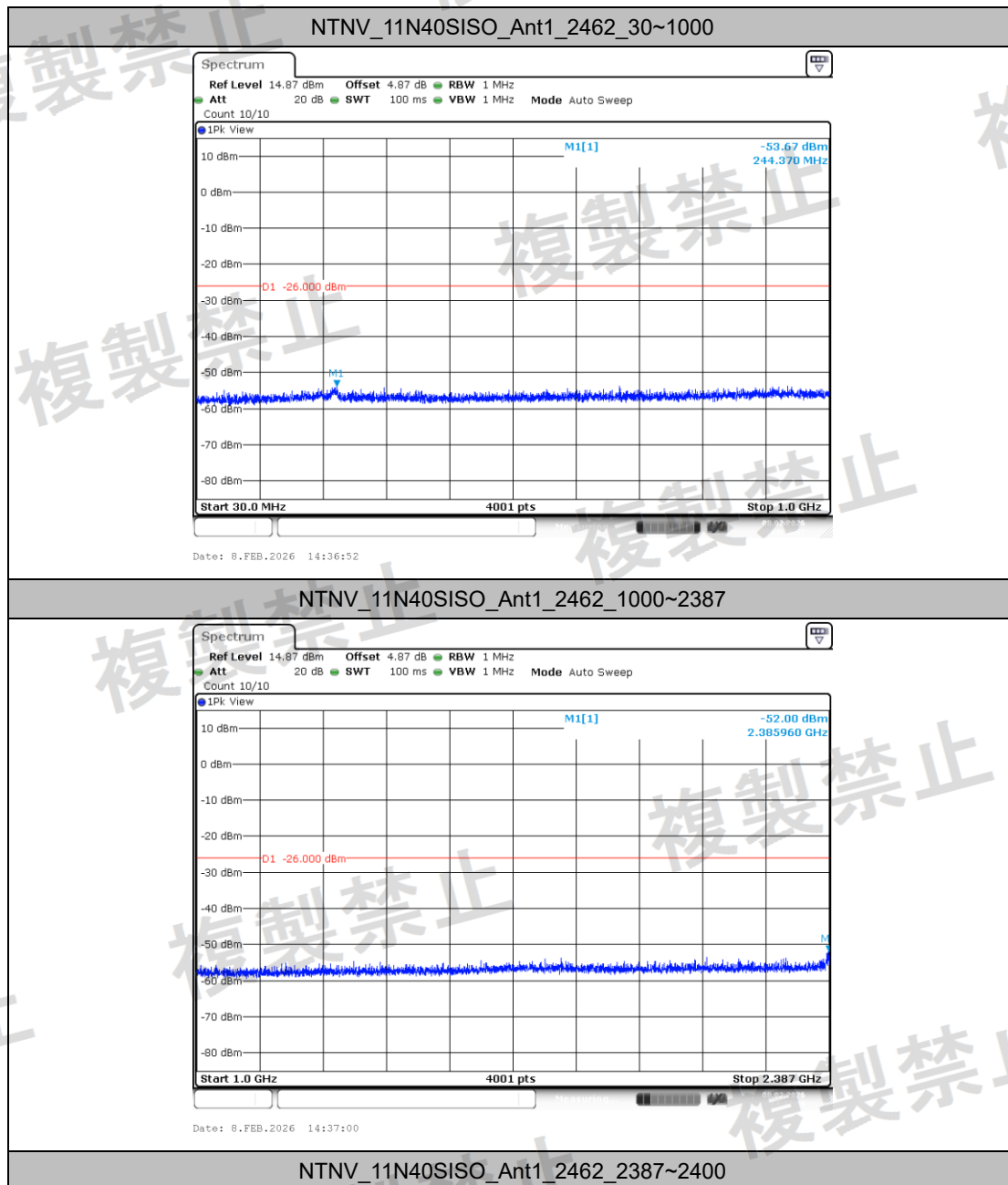


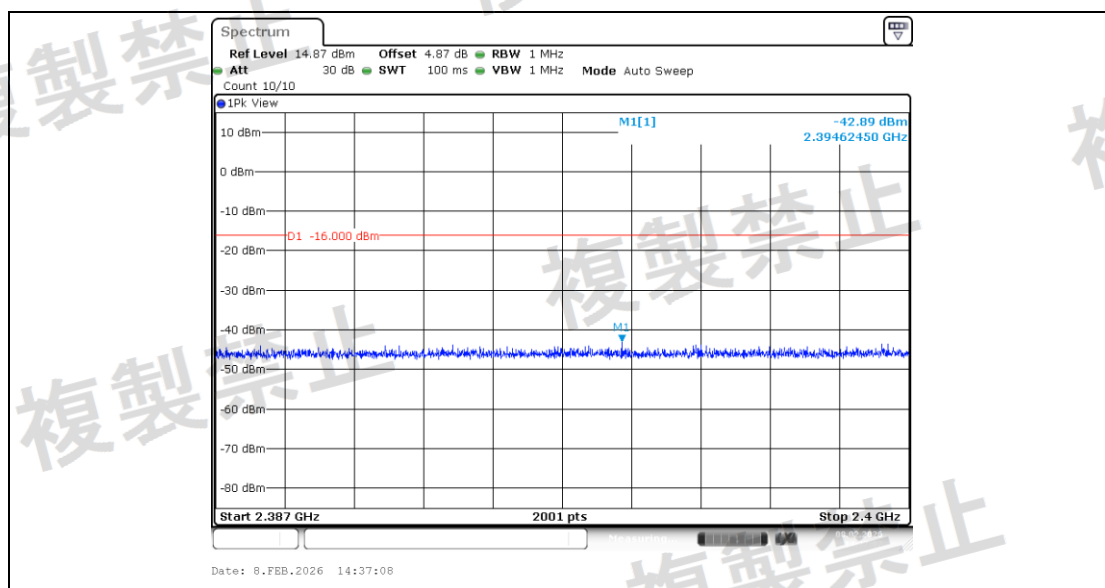
NTNV_11N40SISO_Ant1_2442_2483.5~2496.5



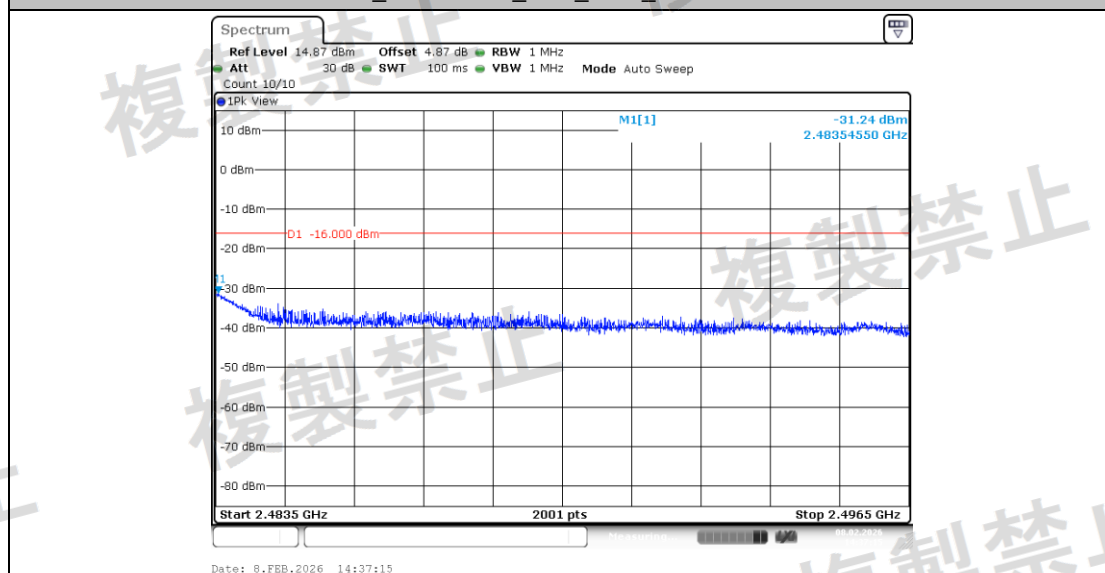
NTNV_11N40SISO_Ant1_2442_2496.5~13000



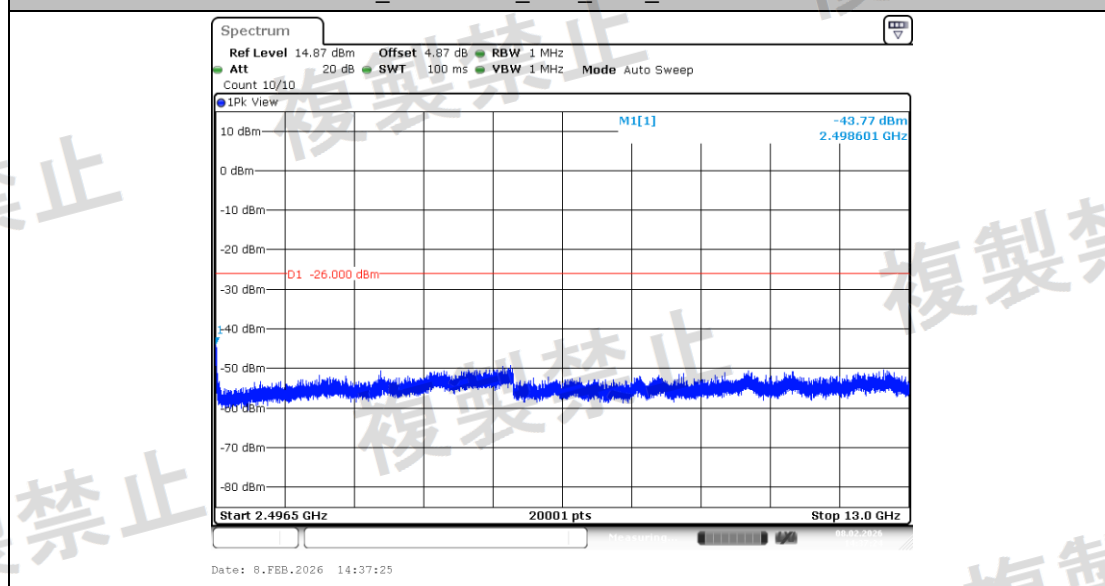




NTNV_11N40SISO_Ant1_2462_2483.5~2496.5



NTNV_11N40SISO_Ant1_2462_2496.5~13000

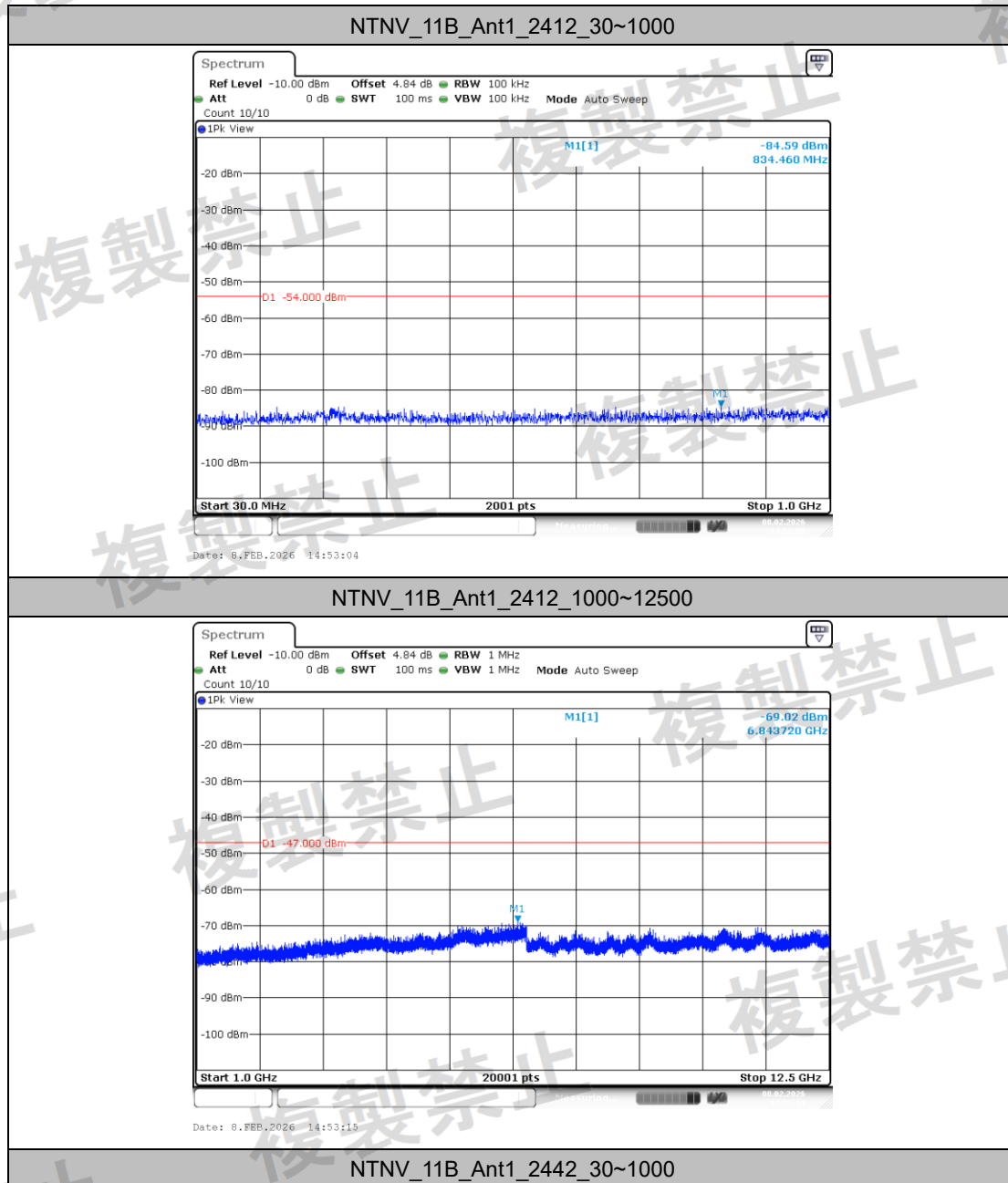


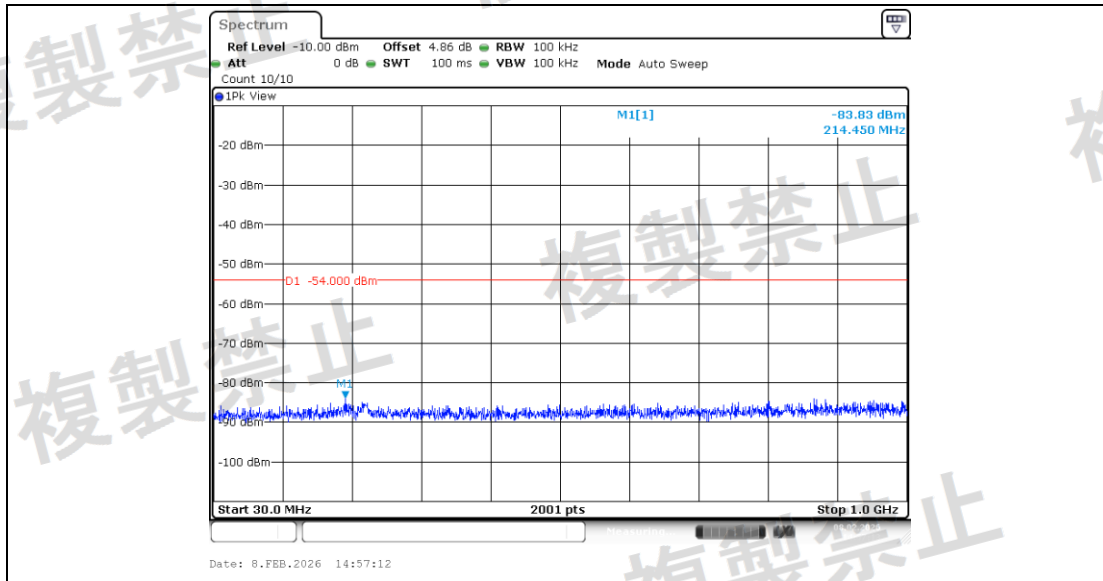
Appendix E: Spurious Emission of RX

Test Result

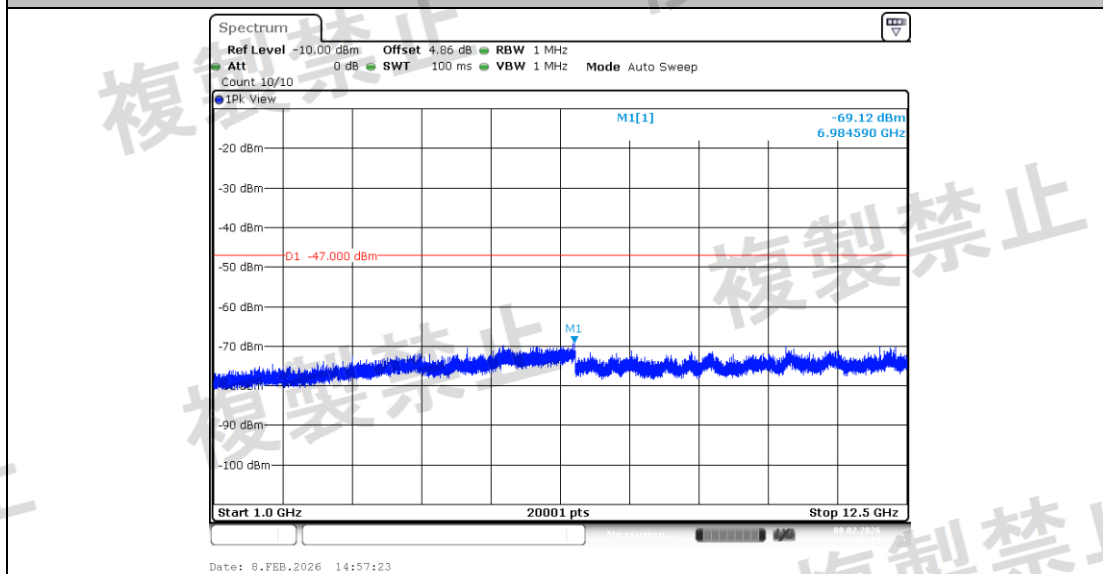
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	834.46	-84.59	≤-54	0.00348	≤4	PASS
				1000~12500	6843.72	-69.02	≤-47	0.12531	≤20	PASS
			2442	30~1000	214.45	-83.83	≤-54	0.00414	≤4	PASS
				1000~12500	6984.59	-69.12	≤-47	0.12246	≤20	PASS
			2472	30~1000	864.03	-83.87	≤-54	0.00410	≤4	PASS
				1000~12500	6954.11	-68.60	≤-47	0.13804	≤20	PASS
	11G	Ant1	2412	30~1000	810.22	-83.67	≤-54	0.00430	≤4	PASS
				1000~12500	6991.49	-69.38	≤-47	0.11535	≤20	PASS
			2442	30~1000	645.40	-84.36	≤-54	0.00366	≤4	PASS
				1000~12500	6983.44	-69.72	≤-47	0.10666	≤20	PASS
			2472	30~1000	968.73	-84.24	≤-54	0.00377	≤4	PASS
				1000~12500	10234.90	-69.44	≤-47	0.11376	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	711.81	-83.85	≤-54	0.00412	≤4	PASS
				1000~12500	6729.30	-68.79	≤-47	0.13213	≤20	PASS
			2442	30~1000	922.20	-83.51	≤-54	0.00446	≤4	PASS
				1000~12500	6894.32	-69.80	≤-47	0.10471	≤20	PASS
			2472	30~1000	223.18	-83.92	≤-54	0.00406	≤4	PASS
				1000~12500	5964.01	-69.34	≤-47	0.11641	≤20	PASS
	11N40SI SO	Ant1	2422	30~1000	986.67	-84.10	≤-54	0.00389	≤4	PASS
				1000~12500	6919.04	-69.38	≤-47	0.11535	≤20	PASS
			2442	30~1000	974.07	-83.01	≤-54	0.00500	≤4	PASS
				1000~12500	6577.51	-69.39	≤-47	0.11508	≤20	PASS
			2462	30~1000	240.63	-83.61	≤-54	0.00436	≤4	PASS
				1000~12500	6931.12	-69.31	≤-47	0.11722	≤20	PASS

Test Graphs

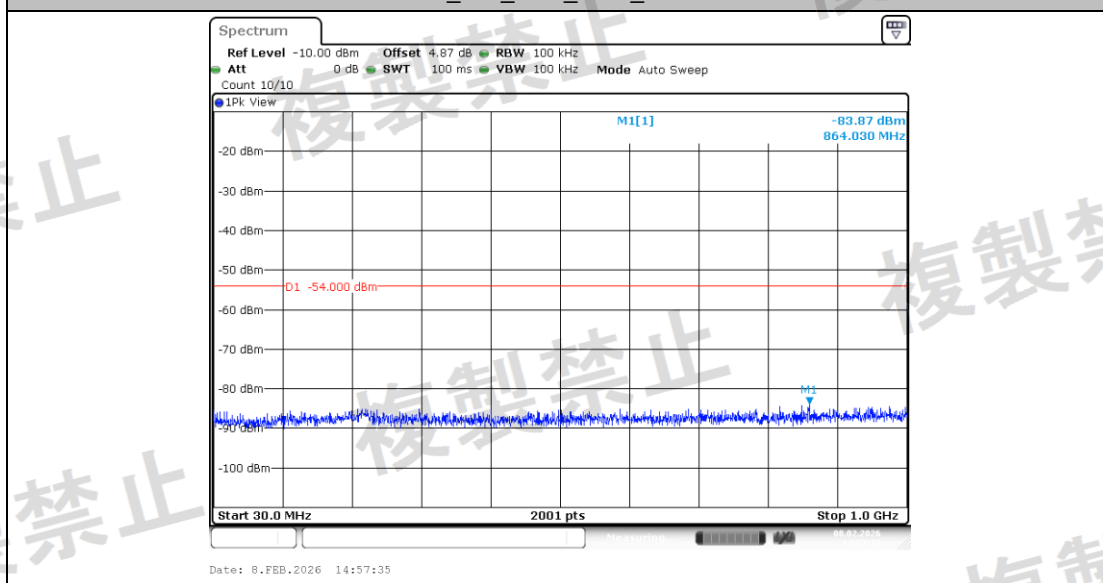


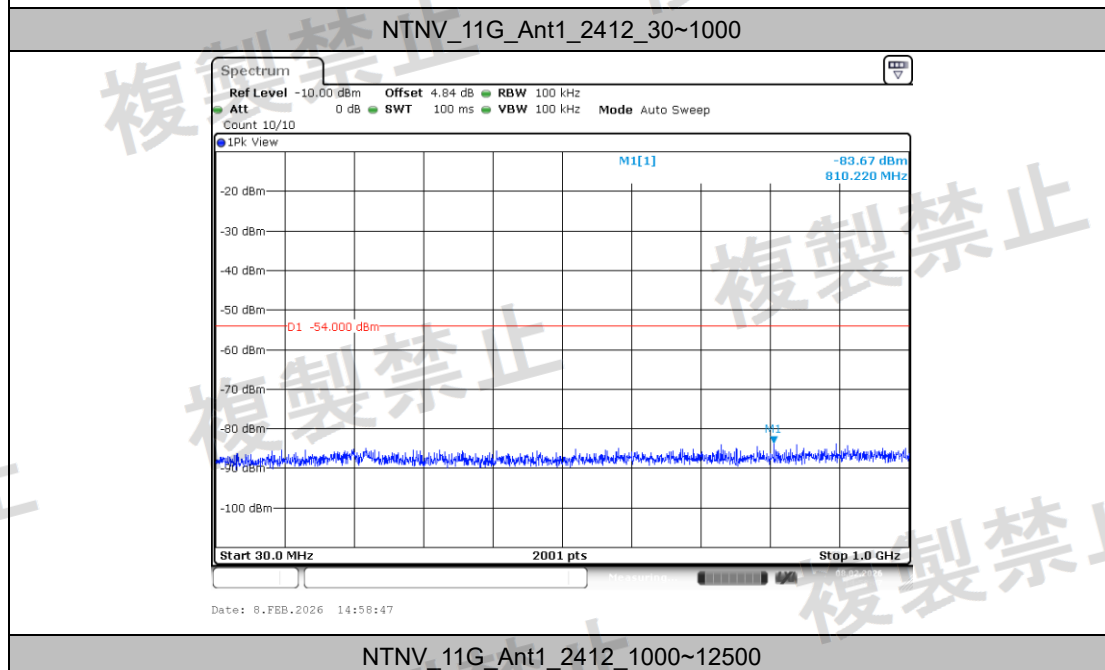
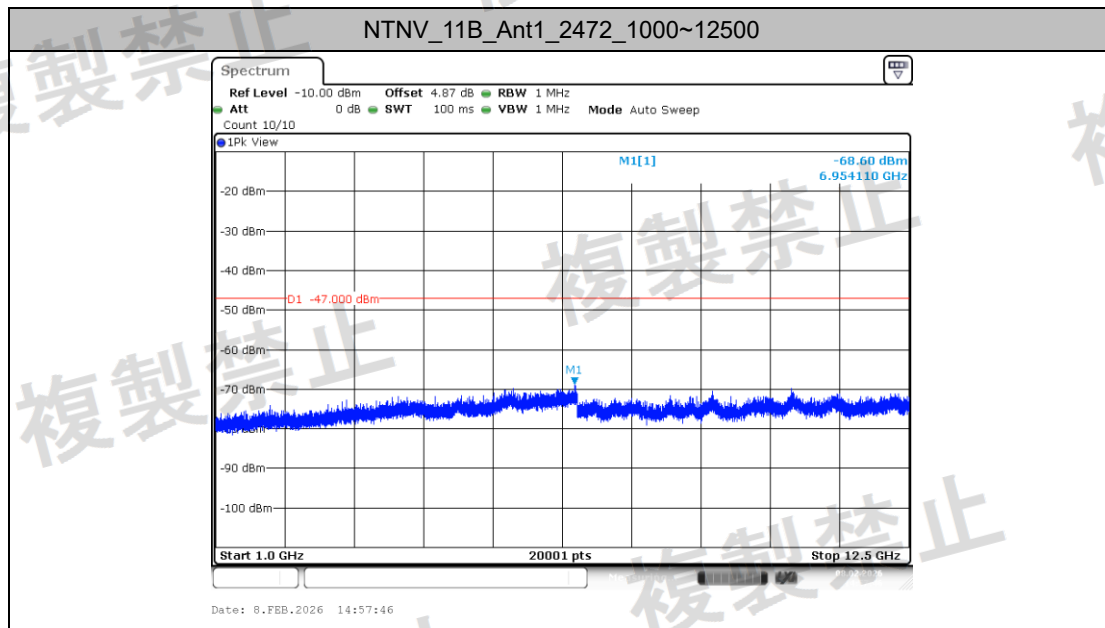


NTNV_11B_Ant1_2442_1000~12500

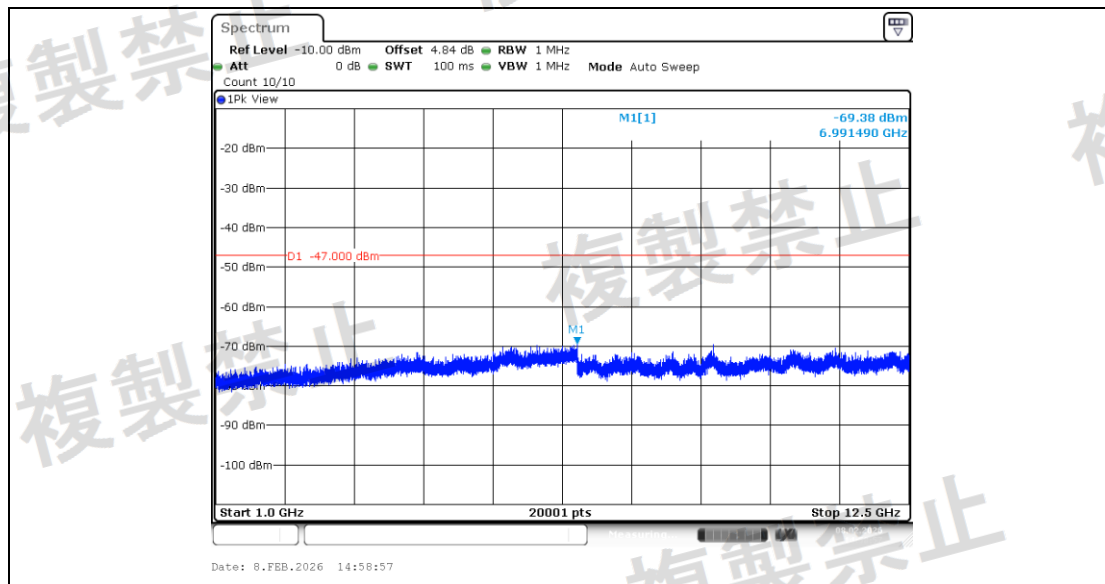


NTNV_11B_Ant1_2472_30~1000

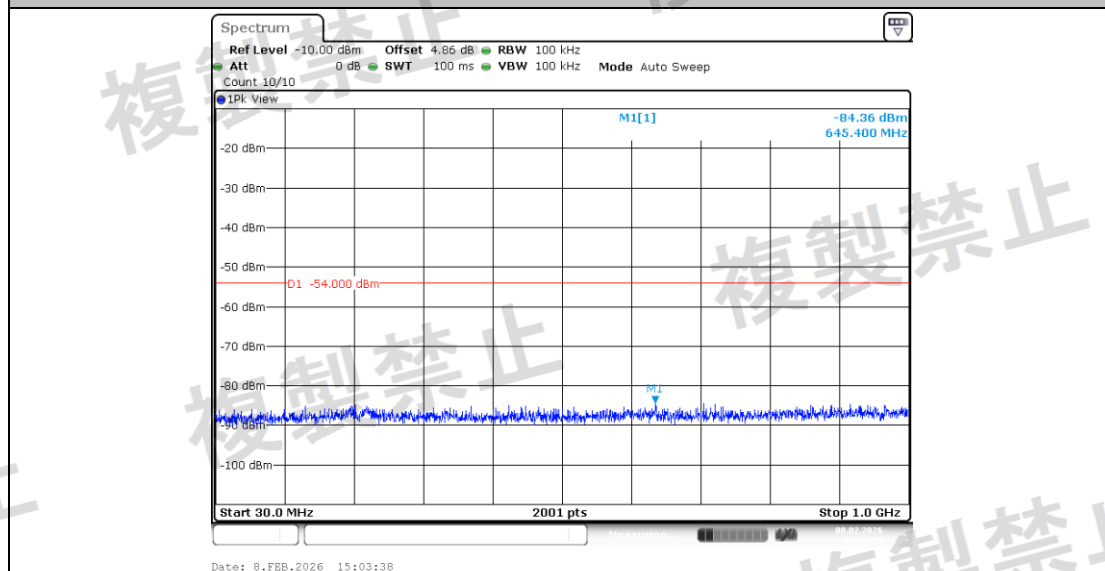




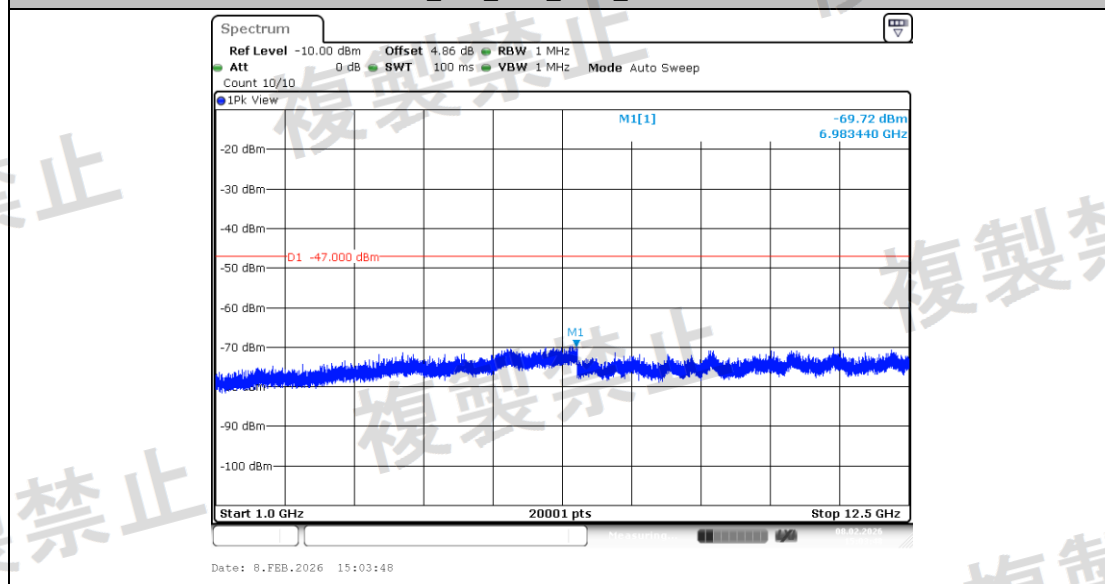
NTNV_11G_Ant1_2412_1000~12500

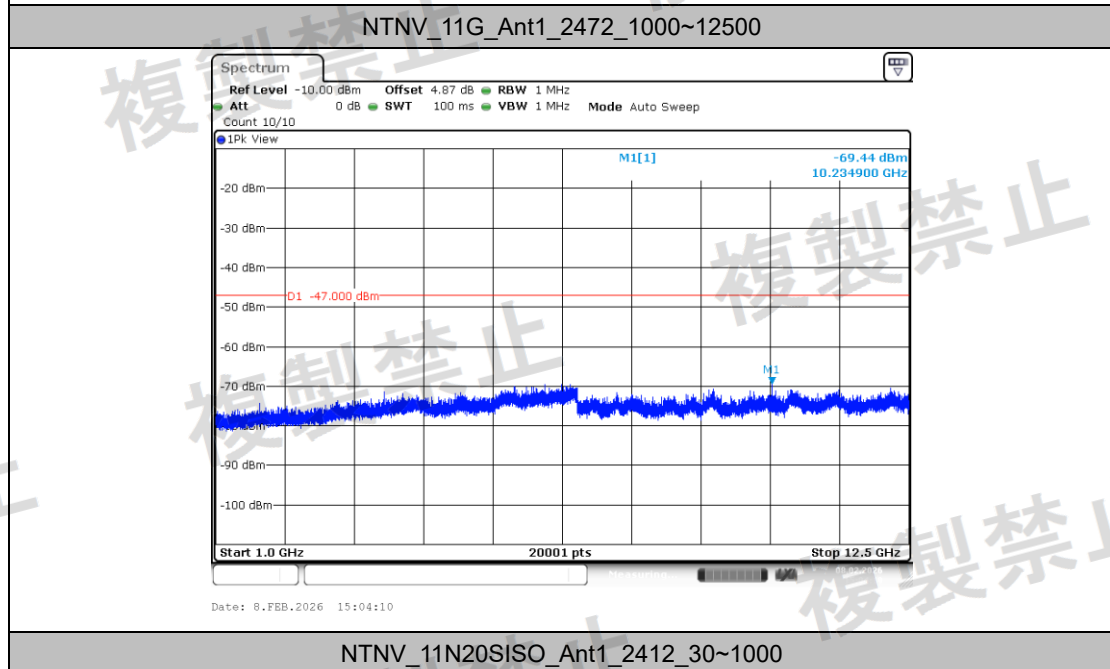
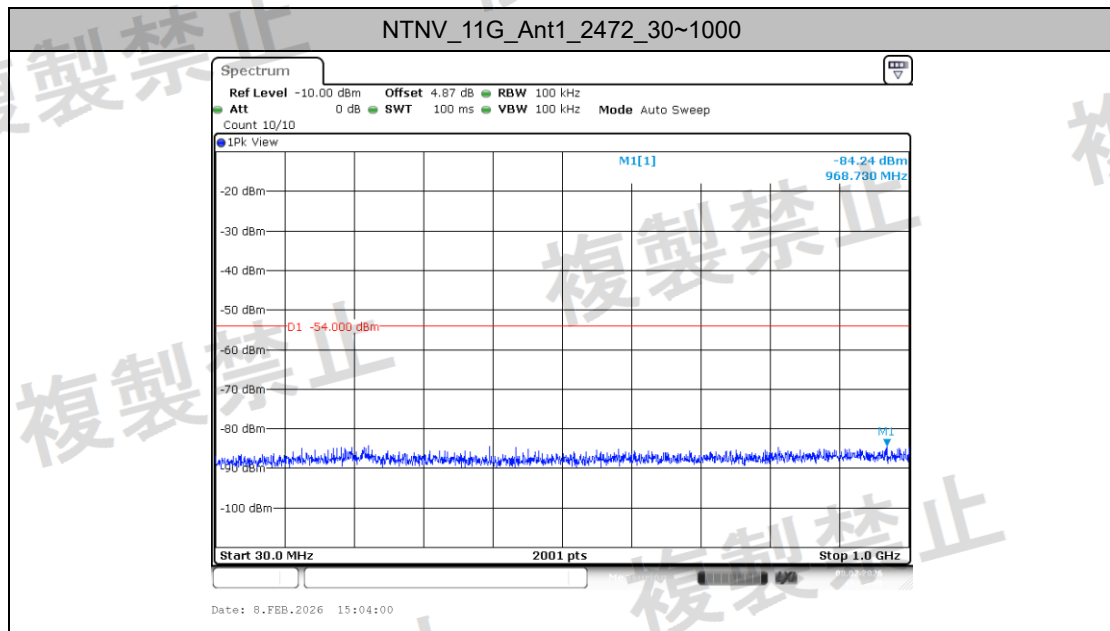


NTNV_11G_Ant1_2442_30~1000

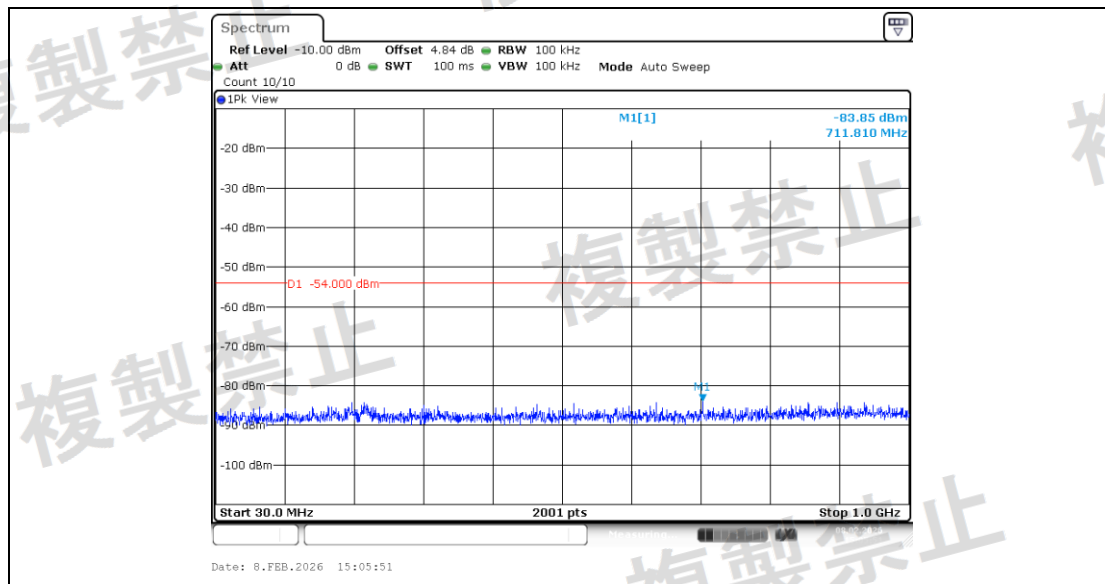


NTNV_11G_Ant1_2442_1000~12500

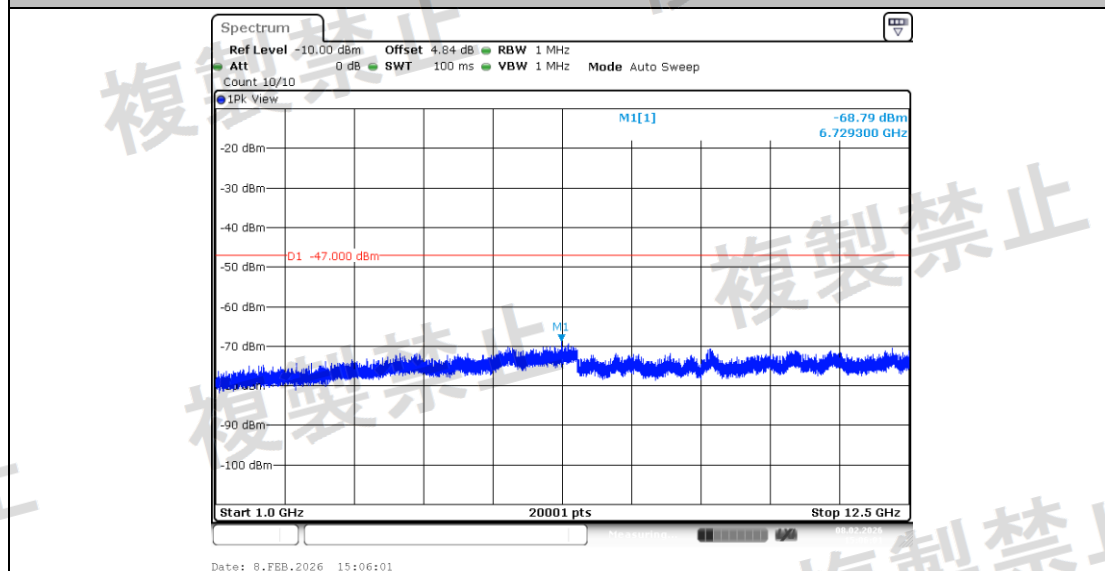




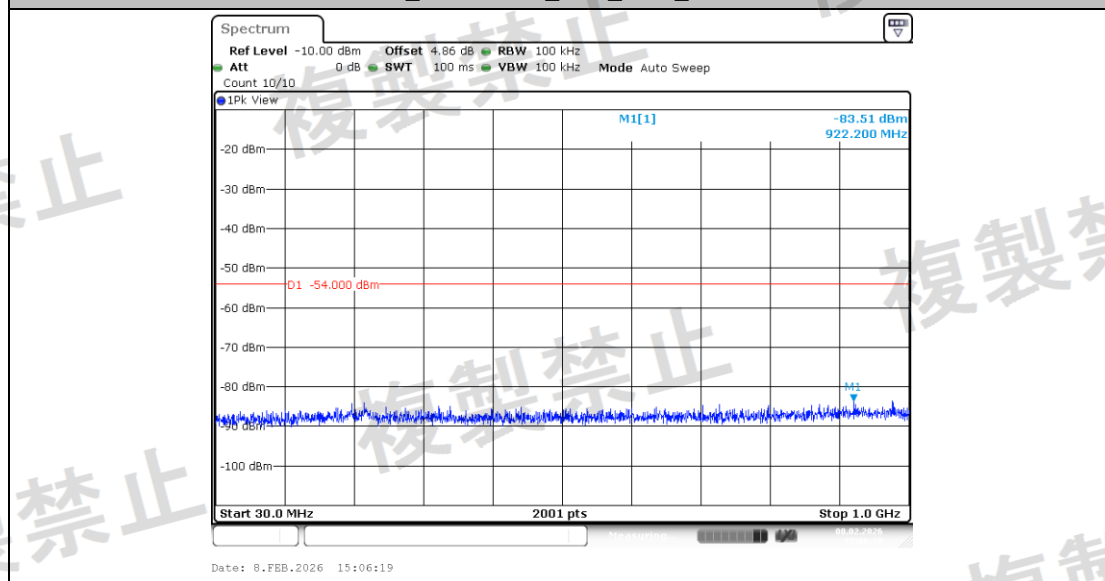
NTNV_11N20SISO_Ant1_2412_30~1000

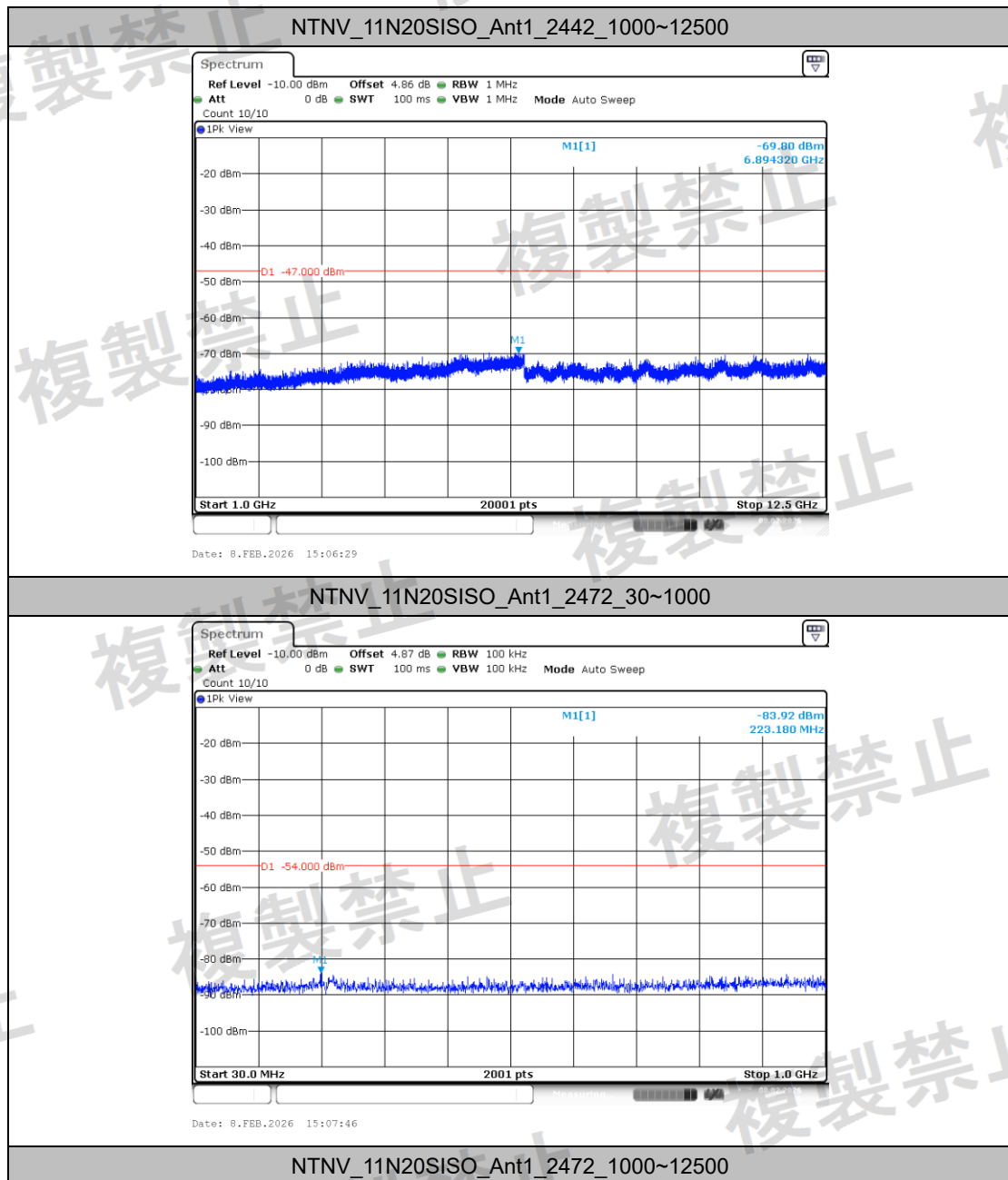


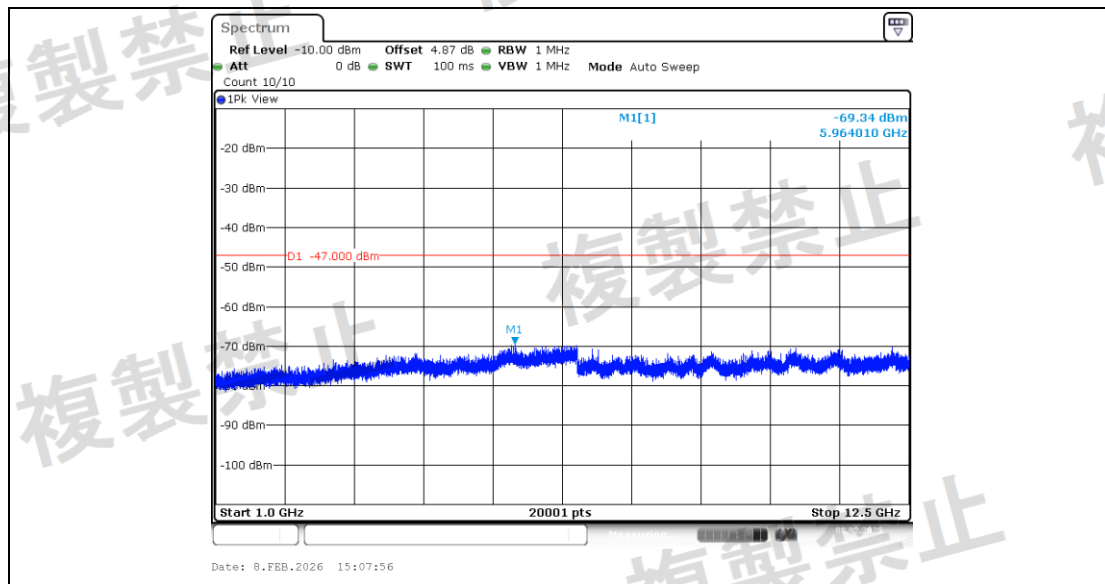
NTNV_11N20SISO_Ant1_2412_1000~12500



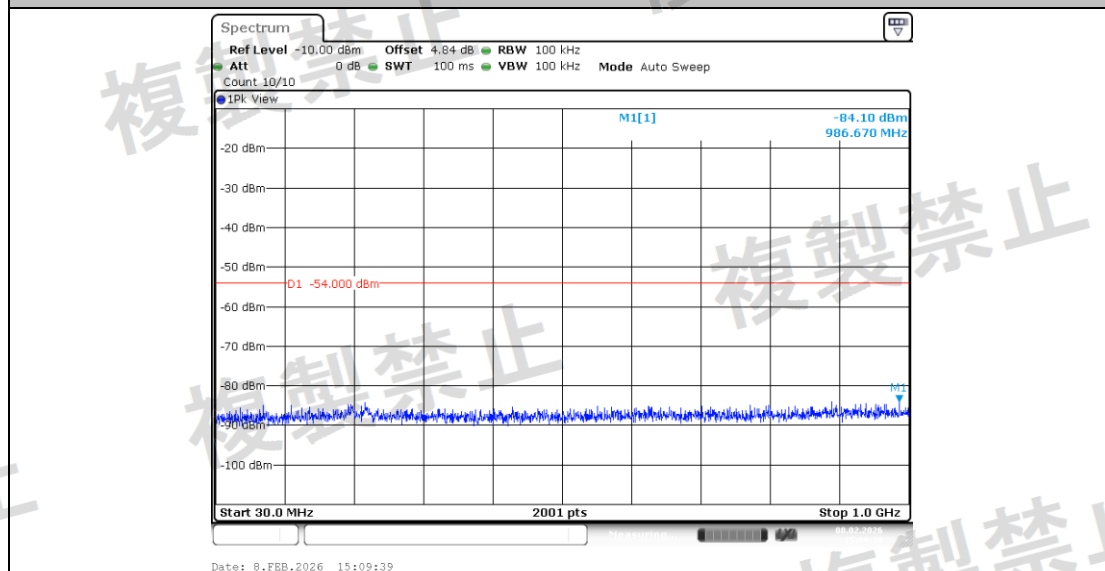
NTNV_11N20SISO_Ant1_2442_30~1000



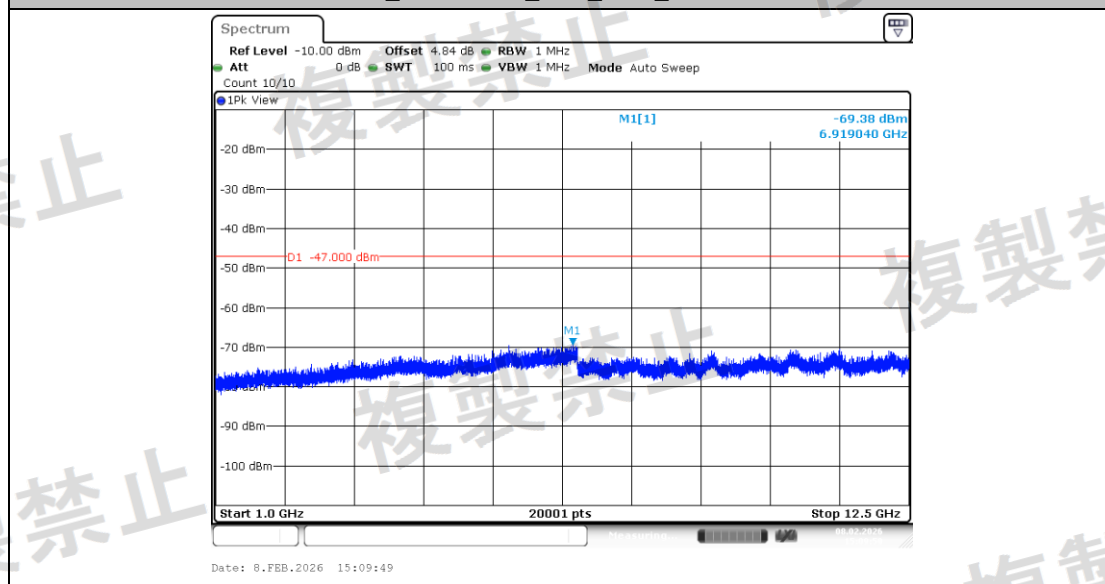


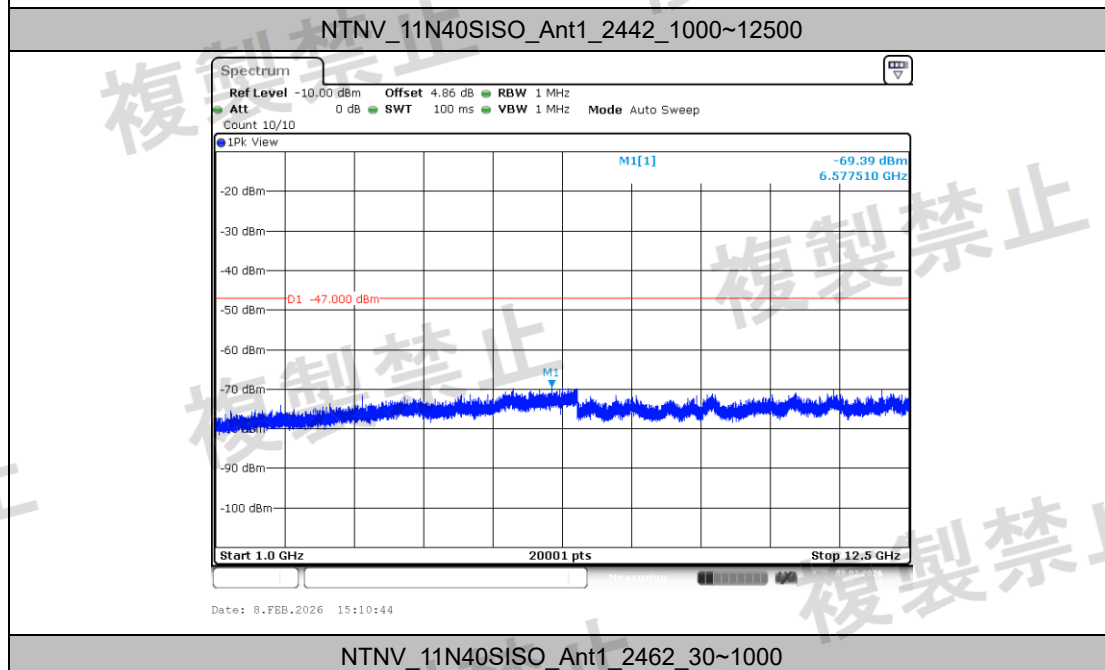
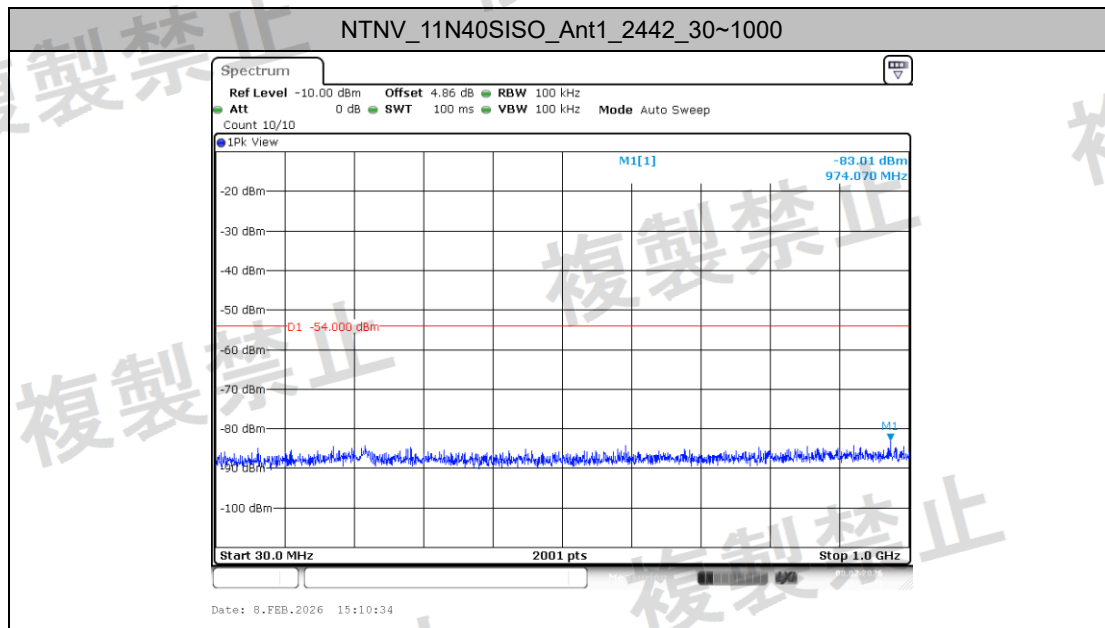


NTNV_11N40SISO_Ant1_2422_30~1000

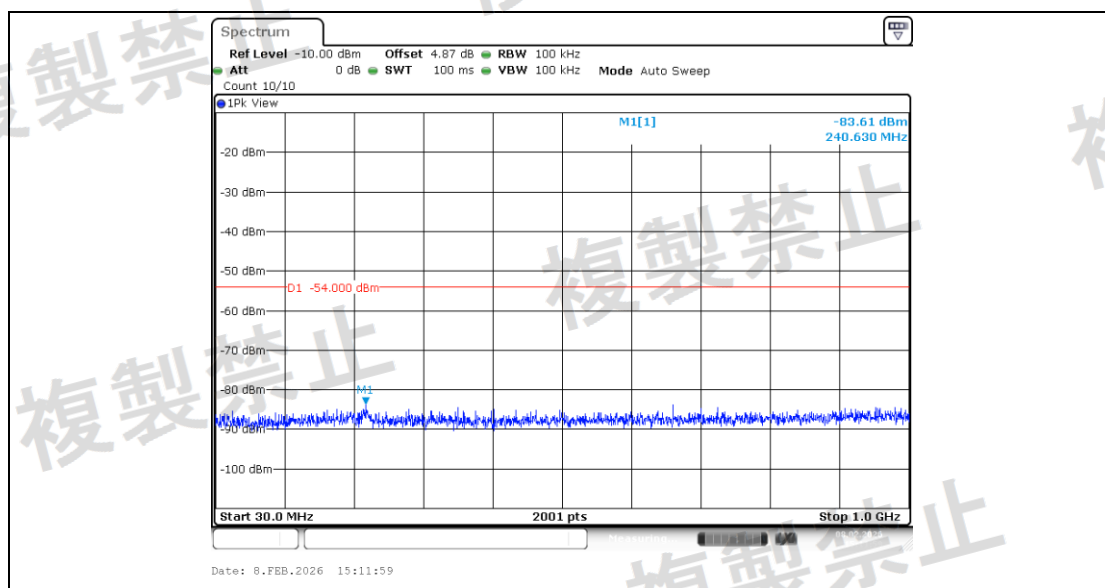


NTNV_11N40SISO_Ant1_2422_1000~12500





NTNV_11N40SISO_Ant1_2462_30~1000



NTNV_11N40SISO_Ant1_2462_1000~12500

