

MIC Appendix RF Test Data for 2.4GWIFI

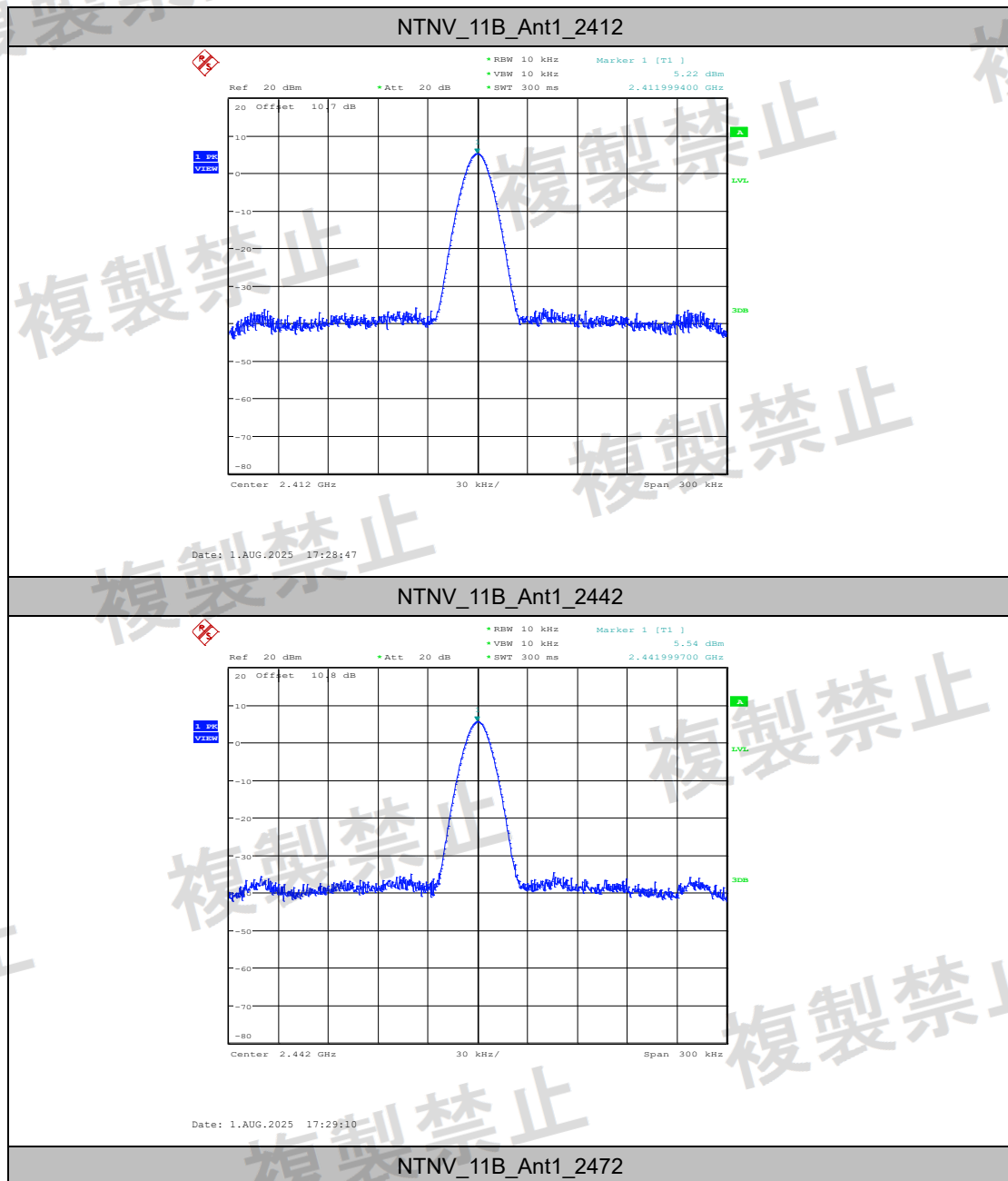
Company : Shenzhen Hingin Technology Co.,Ltd
EUT : LaserPecker LP2 Plus
Model Number : LP2-PLUS
Report No. : CTA25071700801
Reviewed By : Eric Wang

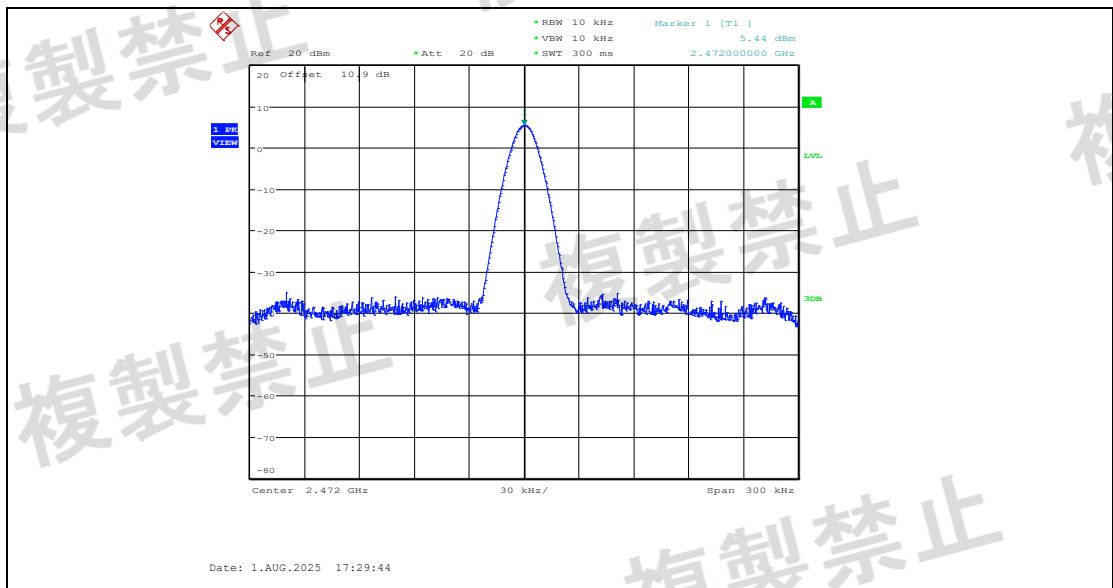
Appendix A: Frequency Error

Test Result

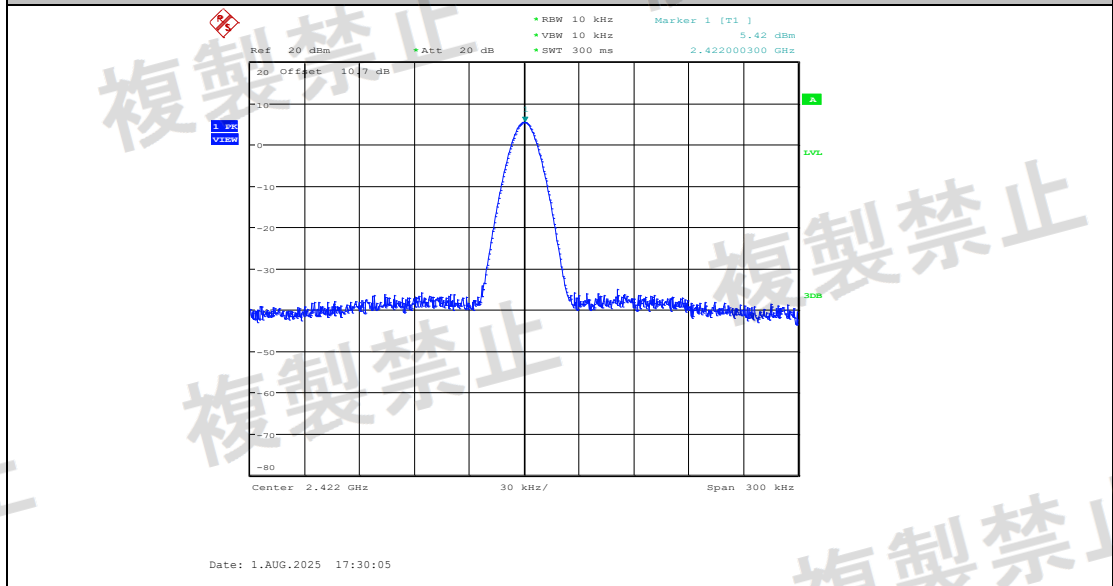
TestCondition	TestMode	Antenna	Freq(MHz)	CenterFrequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.9994	-0.24876	±50	PASS
			2442	2441.9997	-0.12285	±50	PASS
			2472	2472	0.00000	±50	PASS
	11N40SISO	Ant1	2422	2422.0003	0.12387	±50	PASS
			2462	2462.0003	0.12185	±50	PASS

Test Graphs

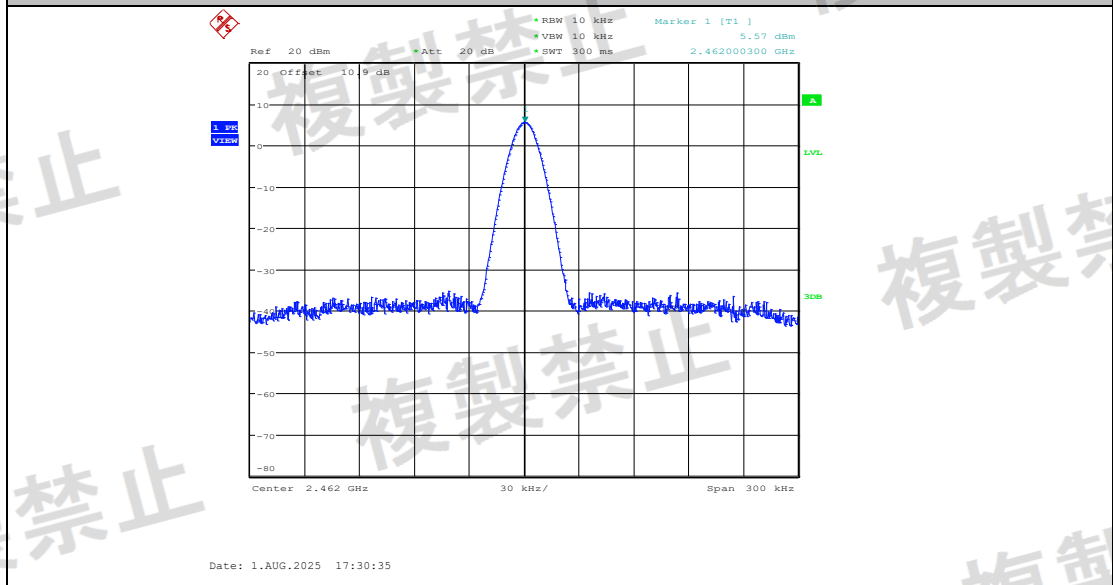




NTVN_11N40SISO_Ant1_2422



NTVN_11N40SISO_Ant1_2462

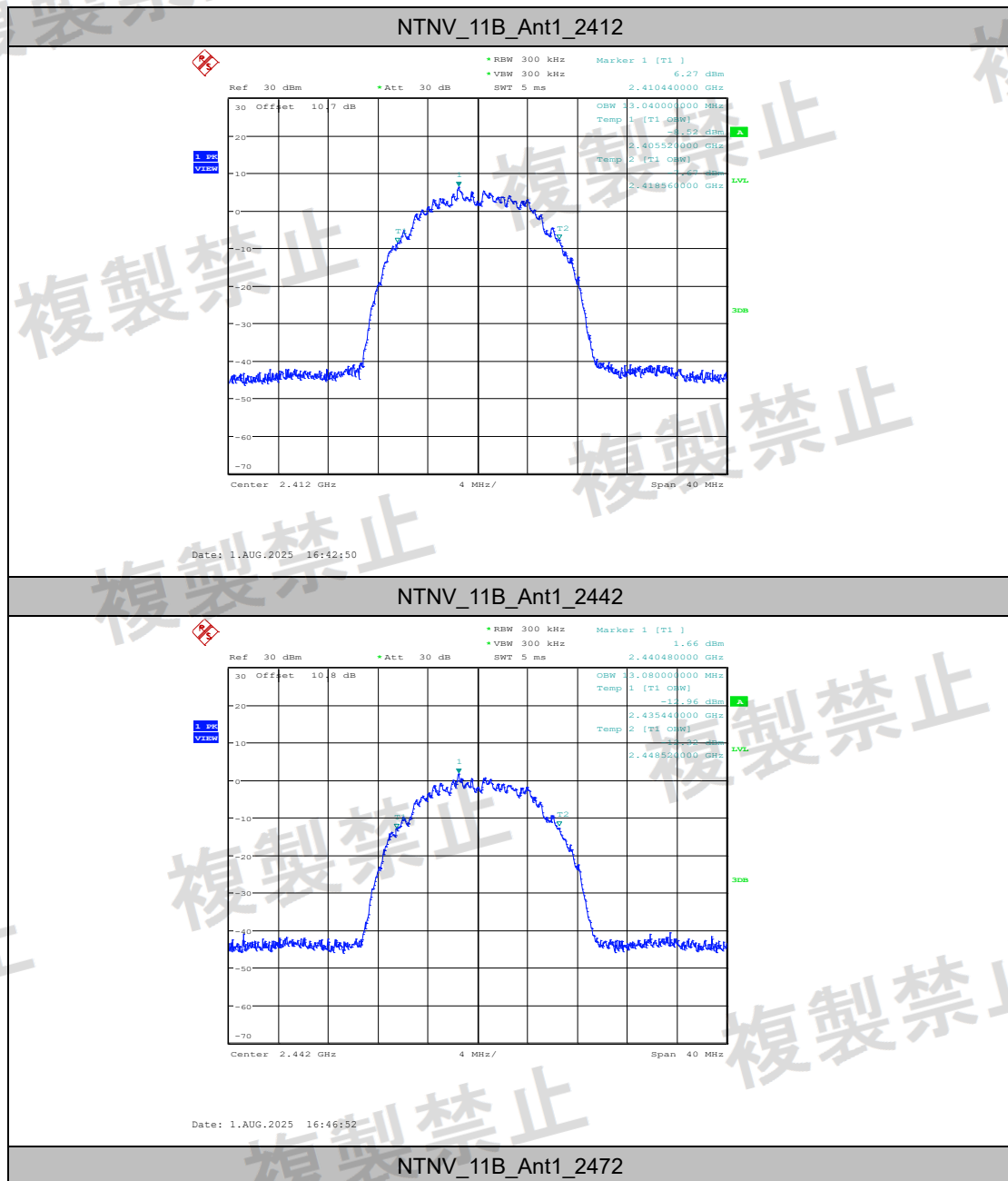


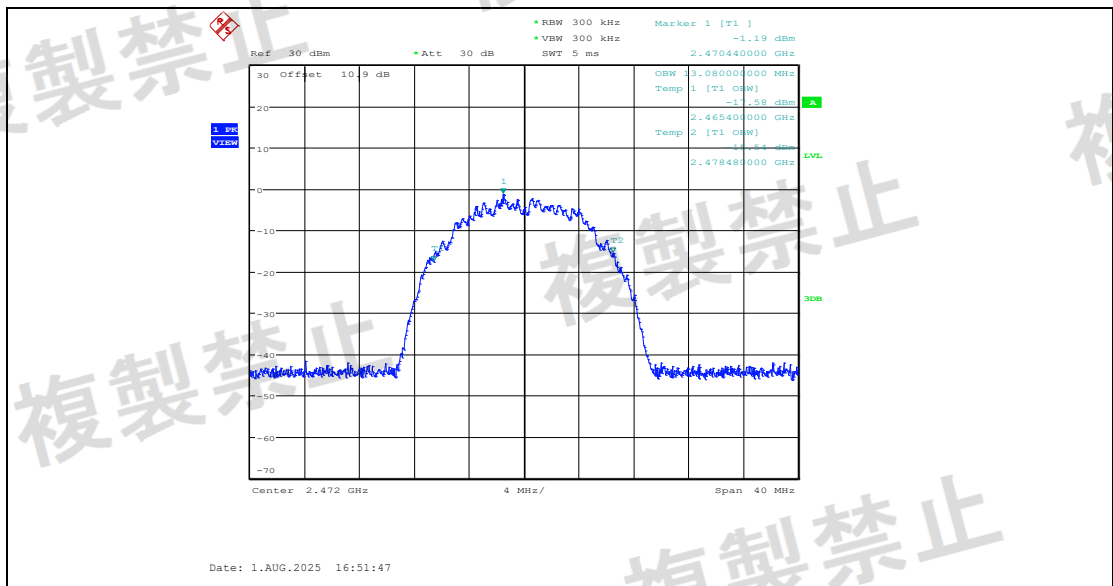
Appendix C: Occupied Bandwidth

Test Result

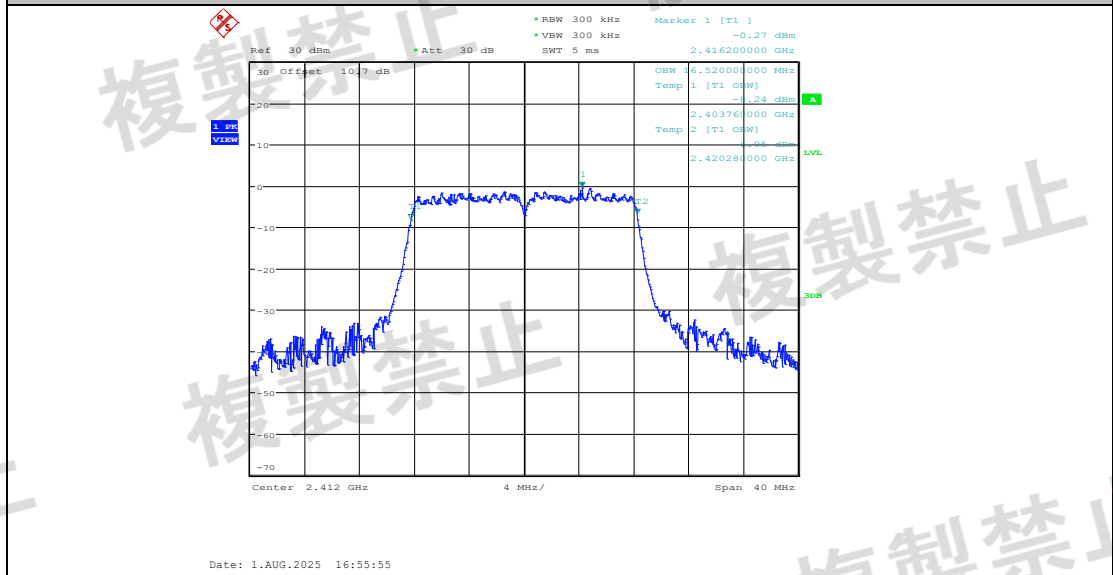
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	13.040	≤26	PASS
			2442	13.080	≤26	PASS
			2472	13.080	≤26	PASS
	11G	Ant1	2412	16.520	≤26	PASS
			2442	16.520	≤26	PASS
			2472	16.520	≤26	PASS
	11N20SI SO	Ant1	2412	17.440	≤26	PASS
			2442	17.440	≤26	PASS
			2472	17.440	≤26	PASS
	11N40SI SO	Ant1	2422	34.640	26-40	PASS
			2442	34.880	26-40	PASS
			2462	34.800	26-40	PASS

Test Graphs

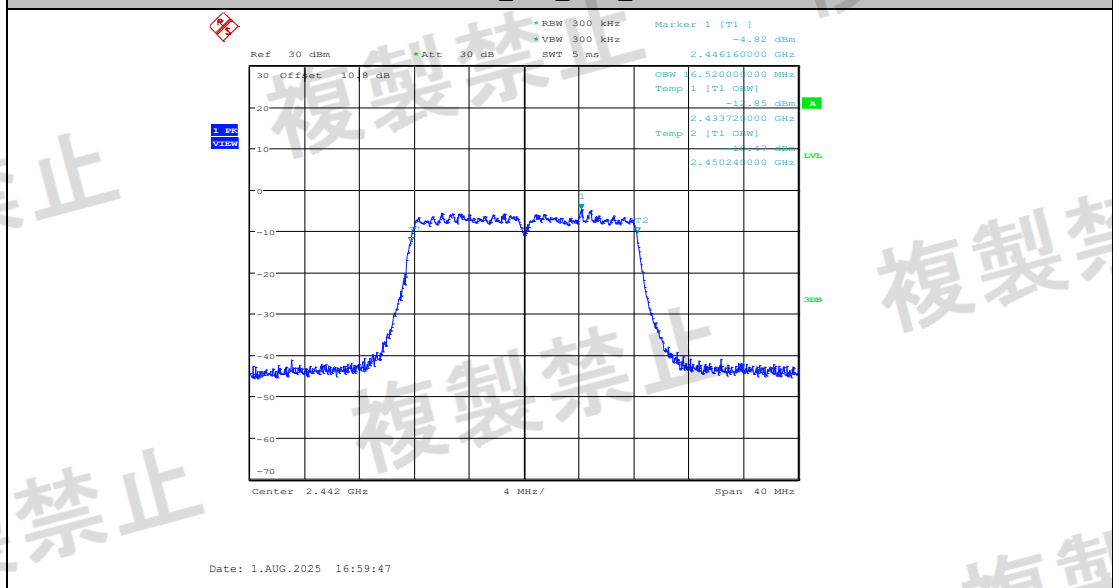


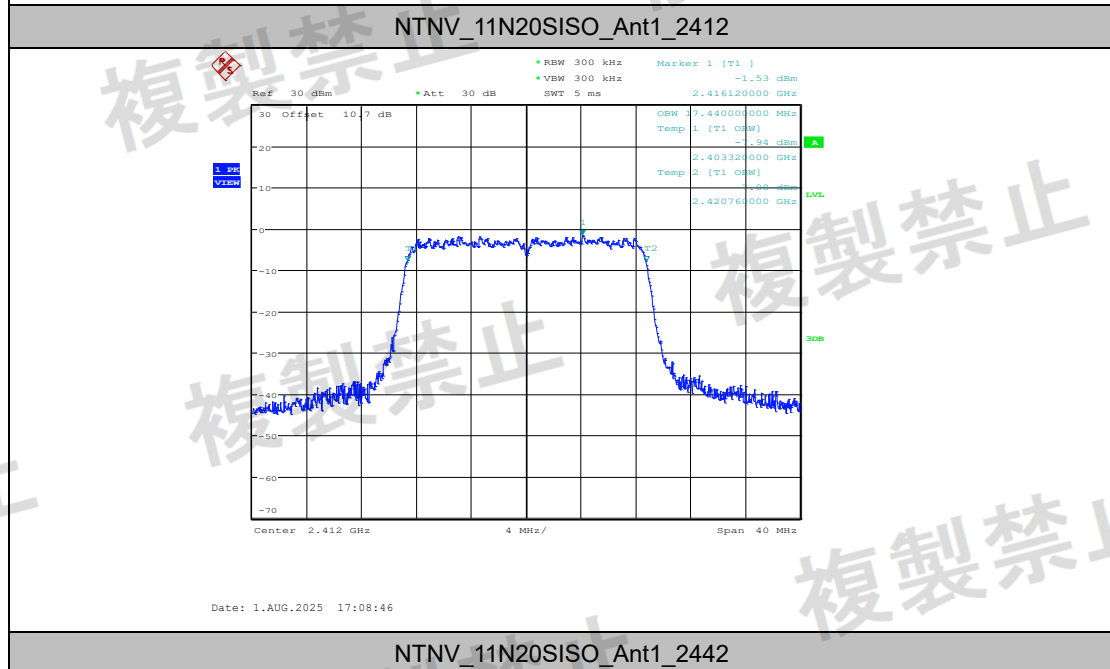
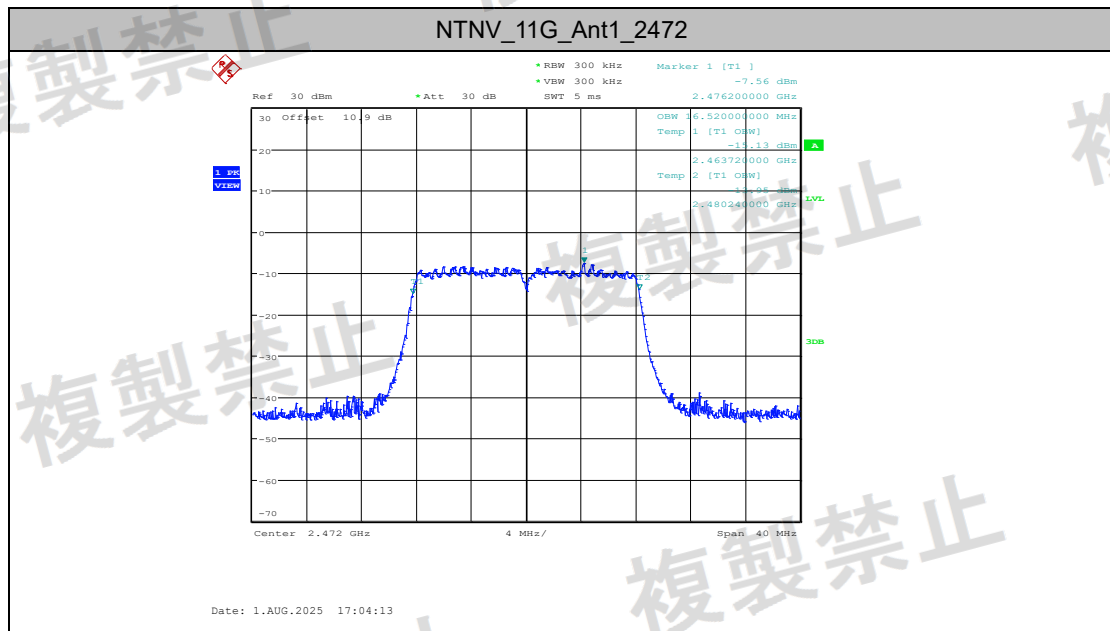


NTNV_11G_Ant1_2412

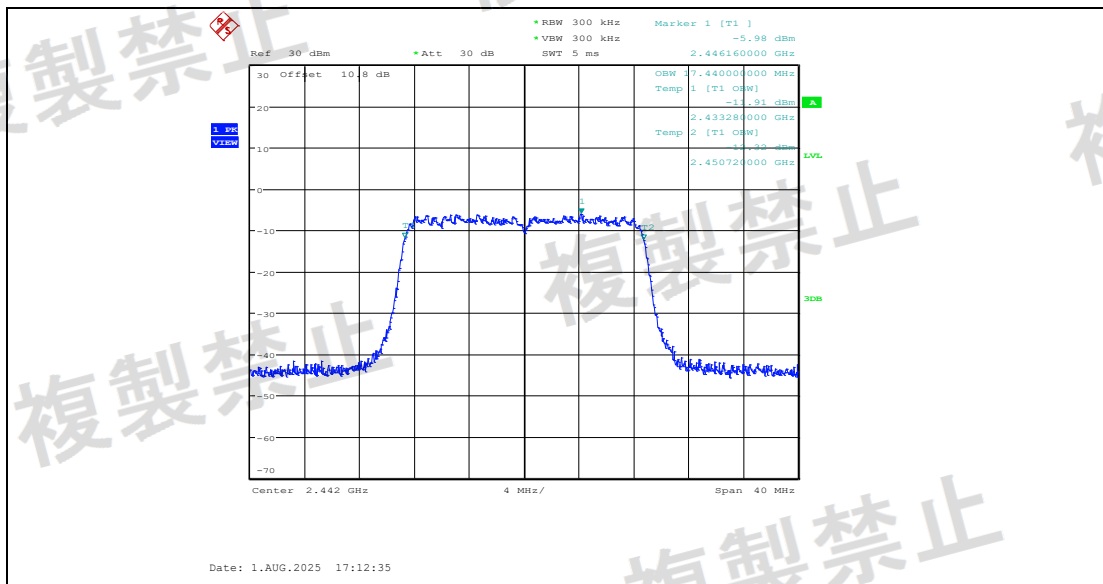


NTNV_11G_Ant1_2442

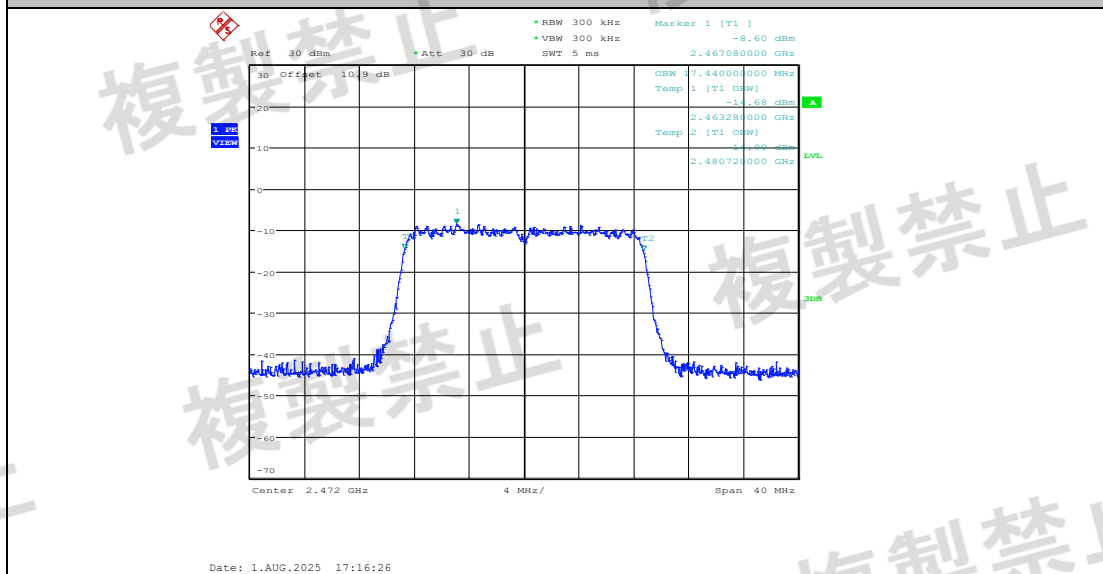




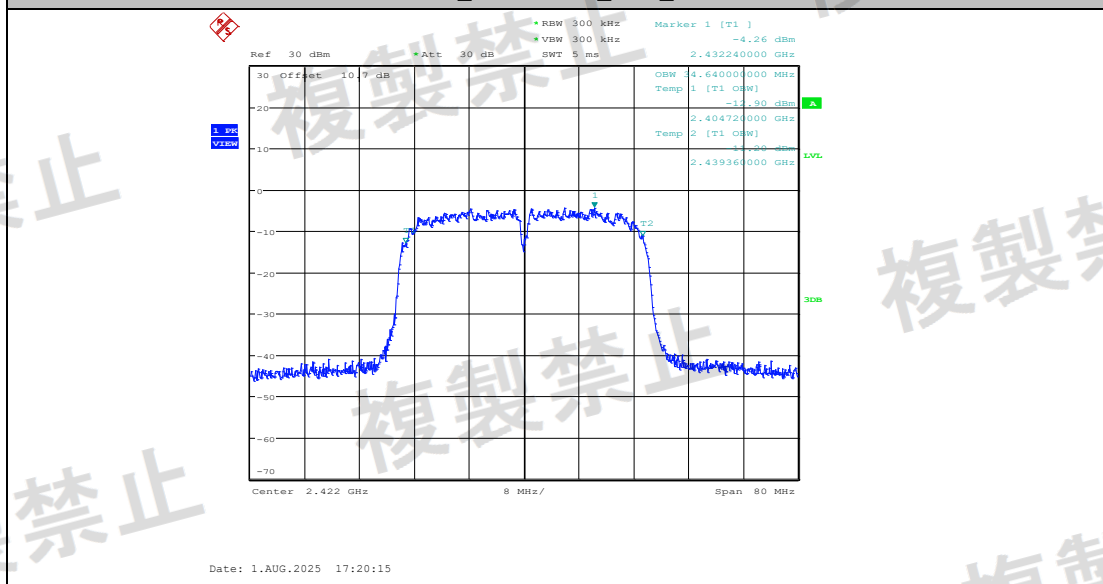
NTNV_11N20SISO_Ant1_2442

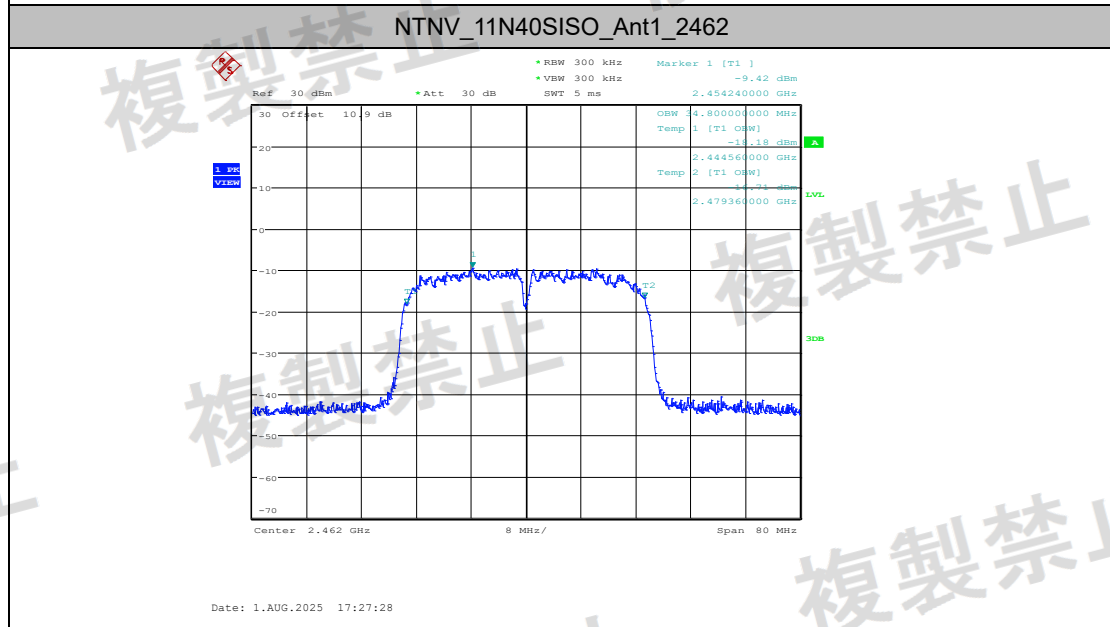
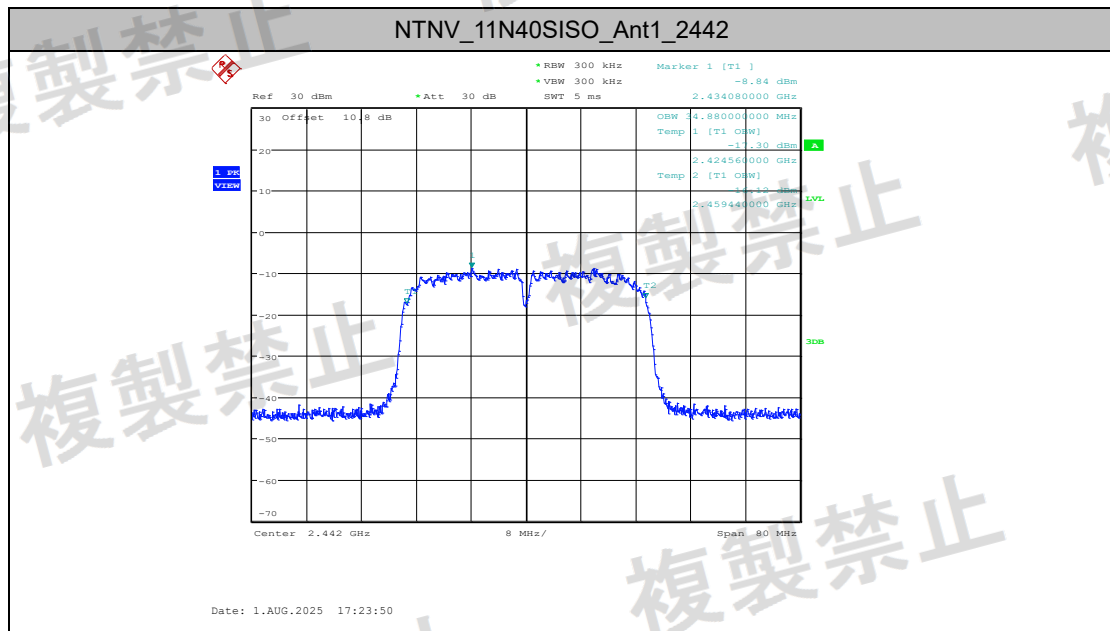


NTNV_11N20SISO_Ant1_2472



NTNV_11N40SISO_Ant1_2422



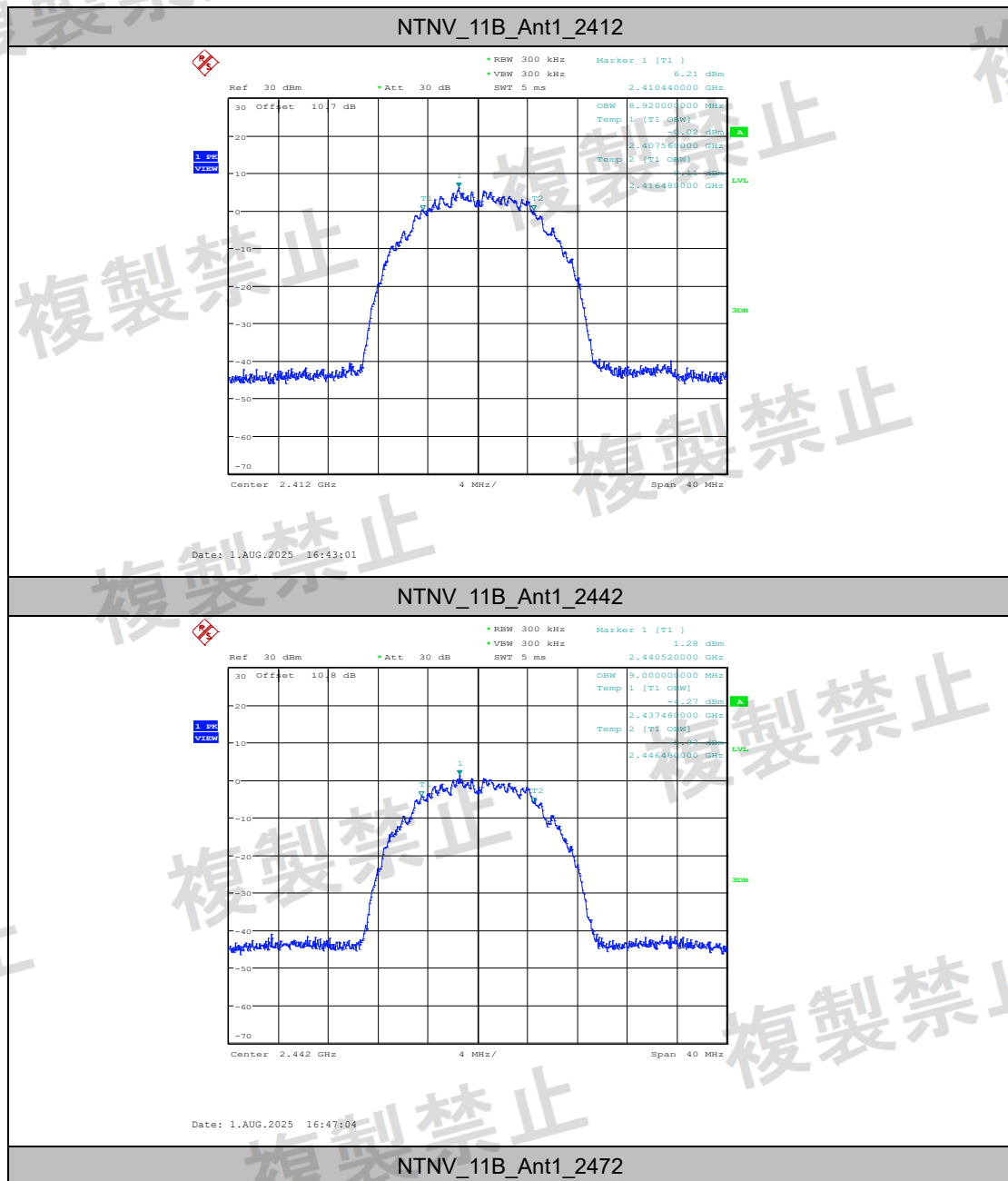


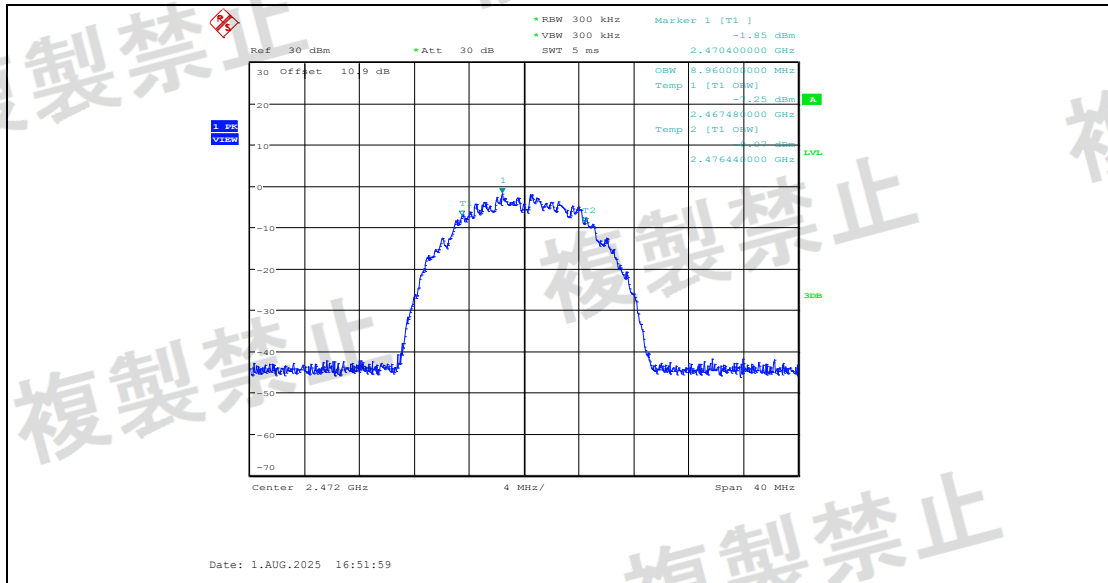
Appendix D: Spread Bandwidth

Test Result

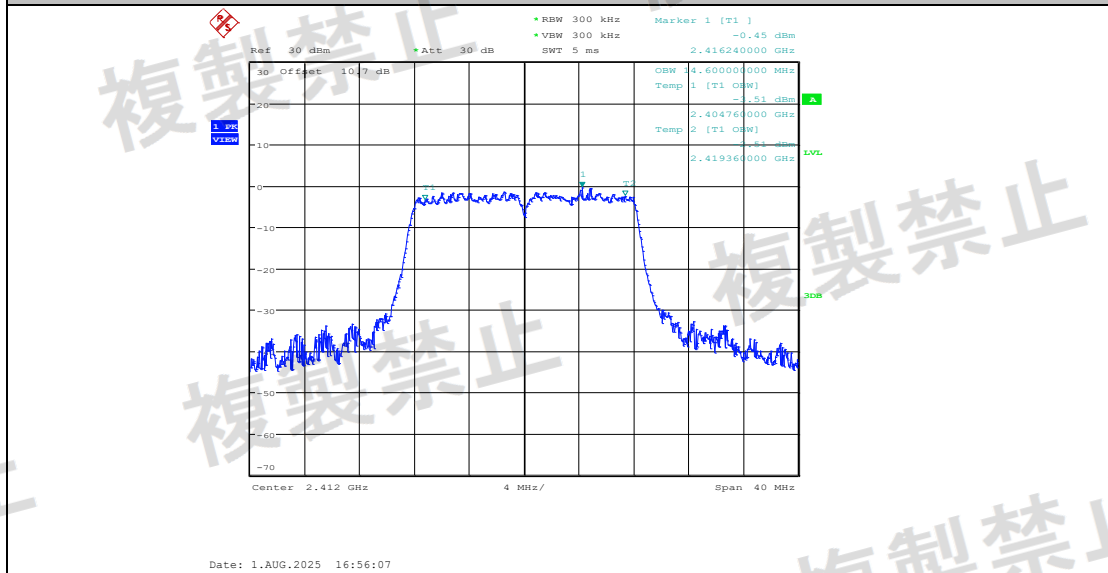
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	8.920	≥0.5	6.487	>5	PASS
			2442	9.000	≥0.5	6.545	>5	PASS
			2472	8.960	≥0.5	6.516	>5	PASS
	11G	Ant1	2412	14.600	≥0.5	---	---	PASS
			2442	14.680	≥0.5	---	---	PASS
			2472	14.680	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	15.440	≥0.5	---	---	PASS
			2442	15.440	≥0.5	---	---	PASS
			2472	15.440	≥0.5	---	---	PASS
	11N40SI SO	Ant1	2422	29.280	≥0.5	---	---	PASS
			2442	29.600	≥0.5	---	---	PASS
			2462	29.360	≥0.5	---	---	PASS

Test Graphs

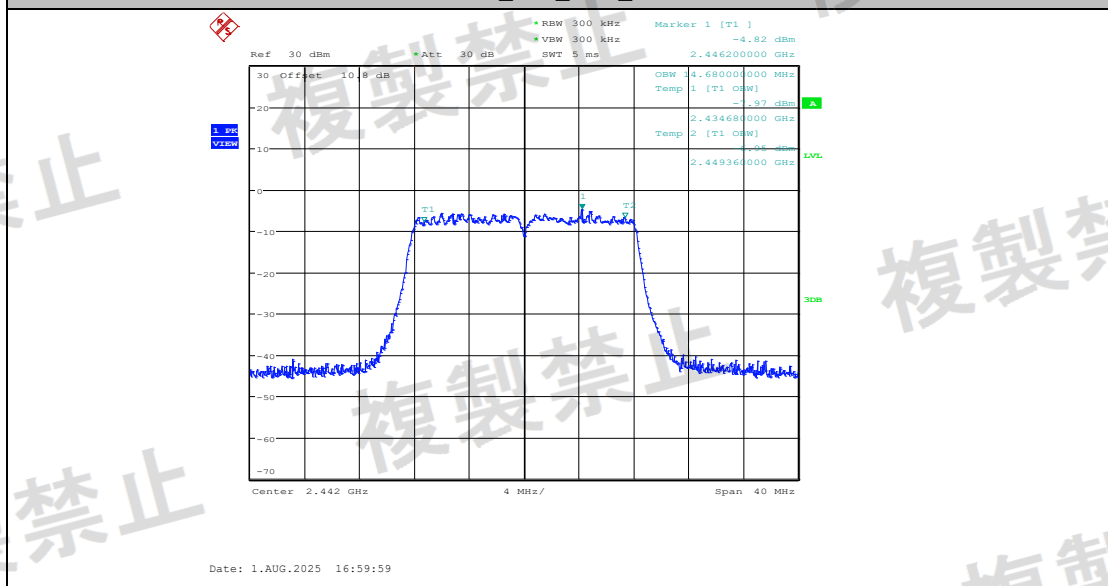


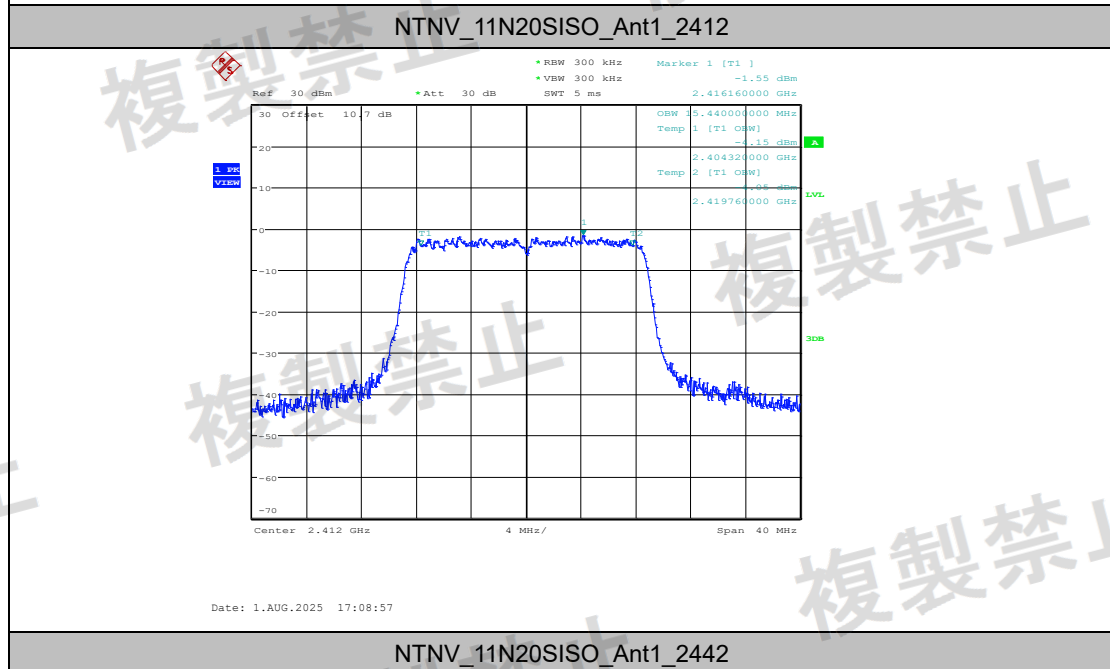
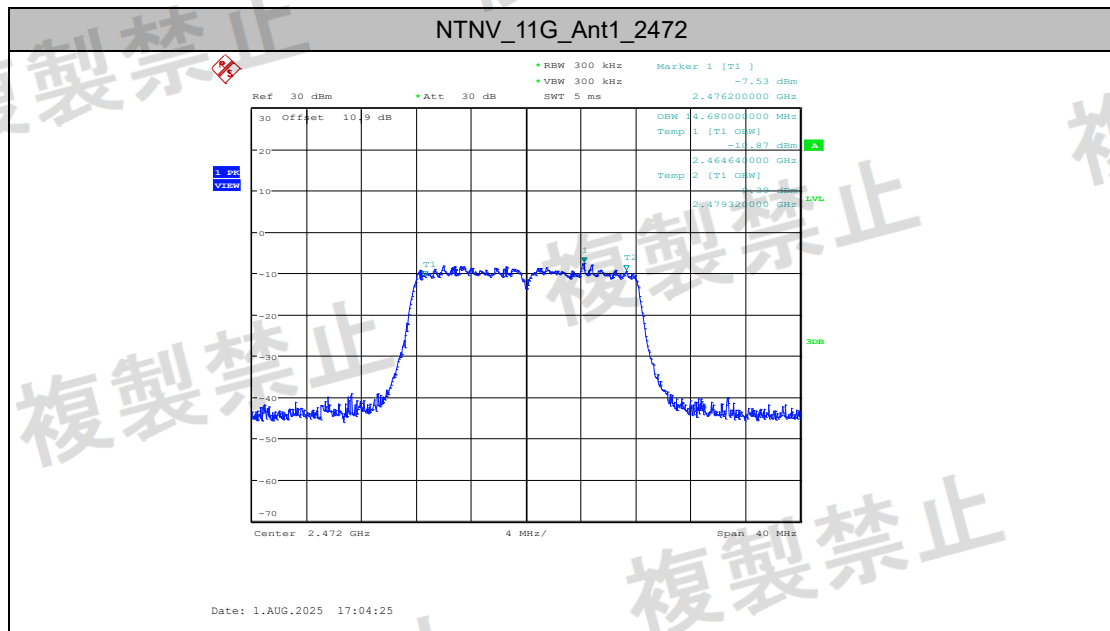


NTNV_11G_Ant1_2412

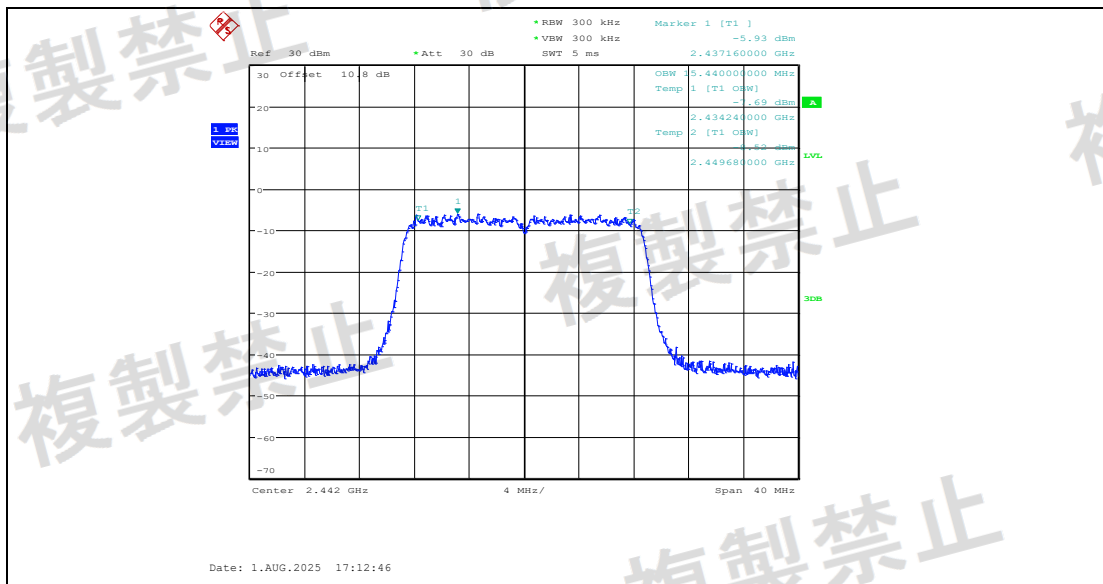


NTNV_11G_Ant1_2442

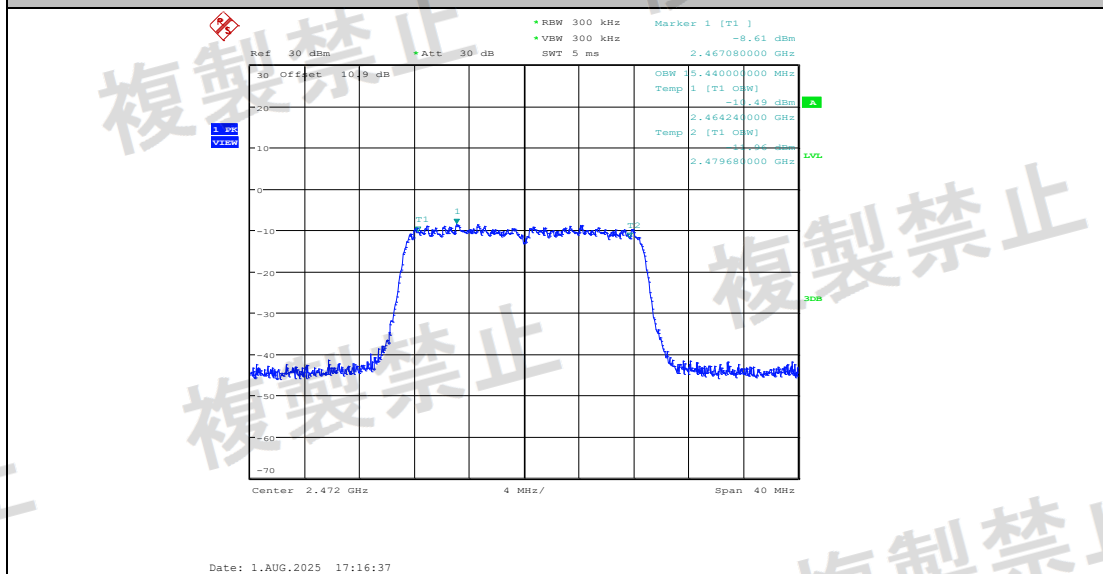




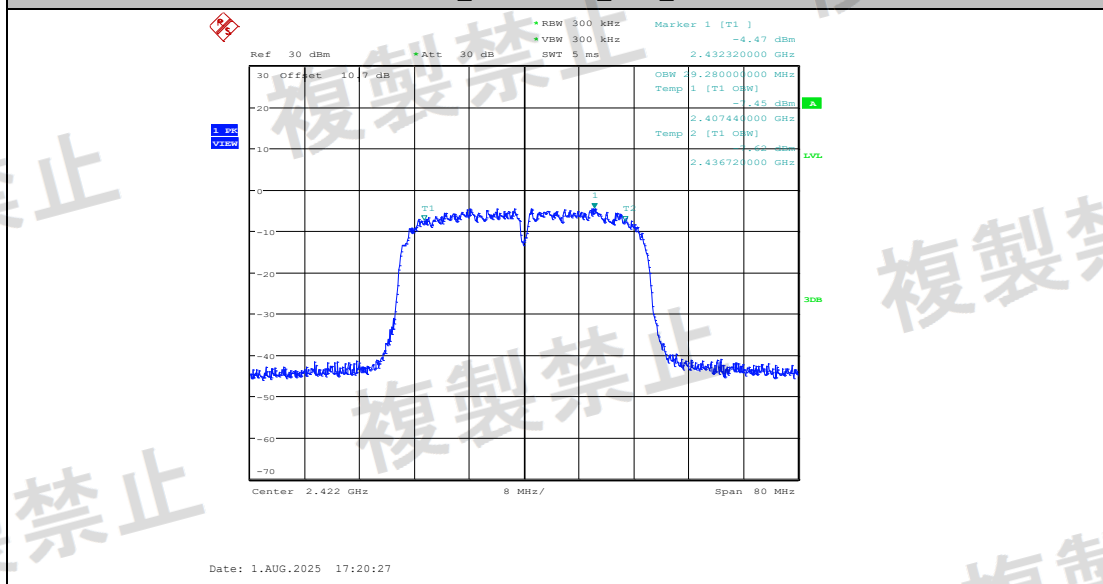
NTNV_11N20SISO_Ant1_2442

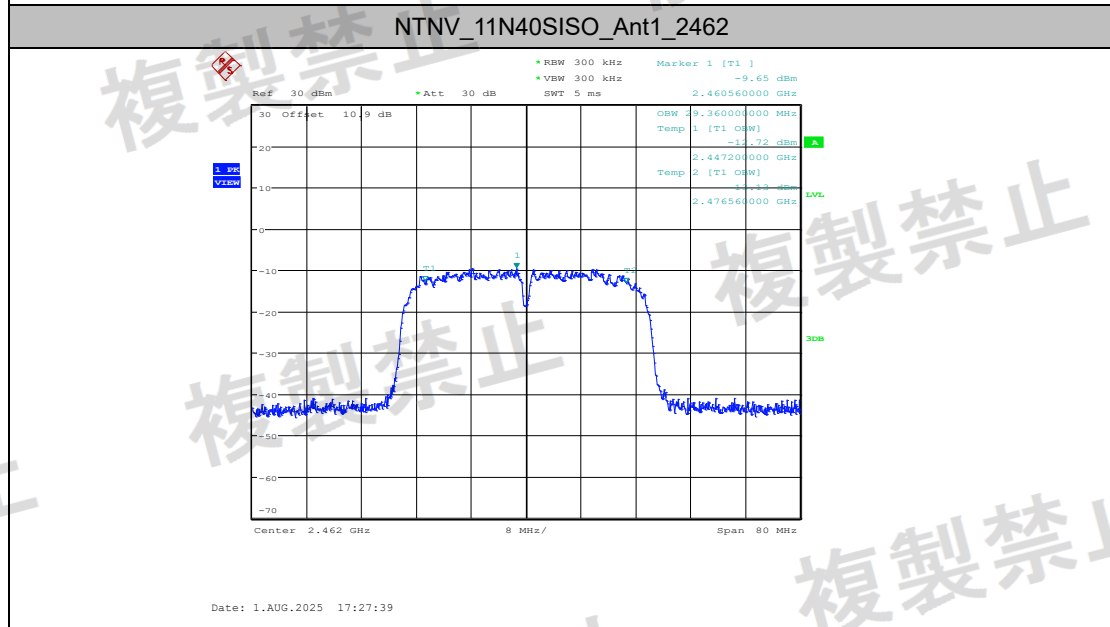
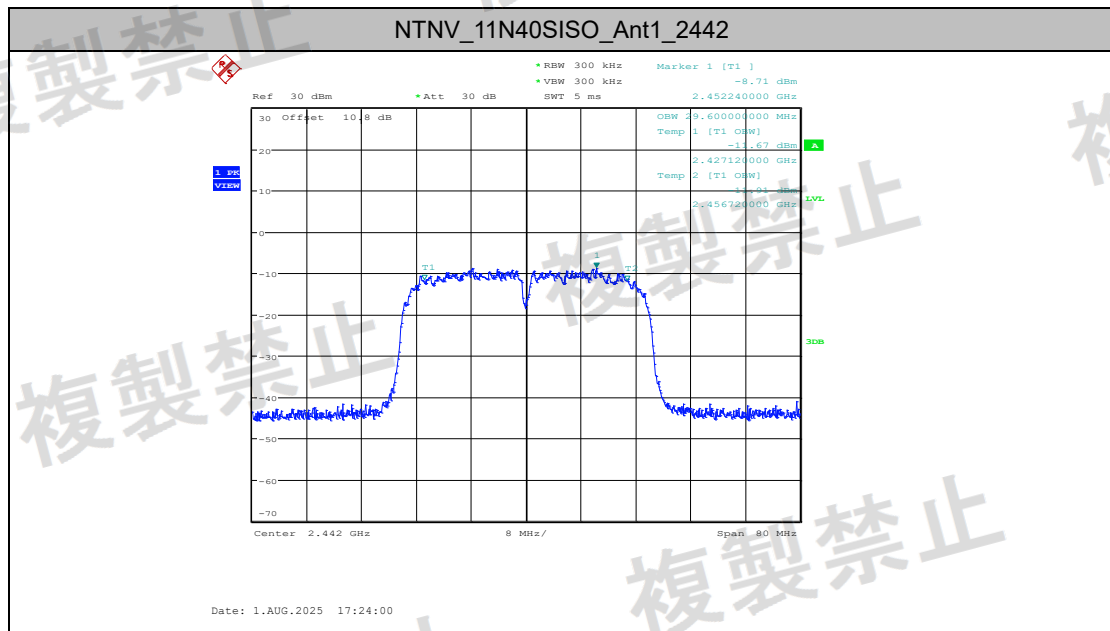


NTV_11N20SISO_Ant1_2472



NTV_11N40SISO_Ant1_2422





Appendix E: Spurious Emission of TX

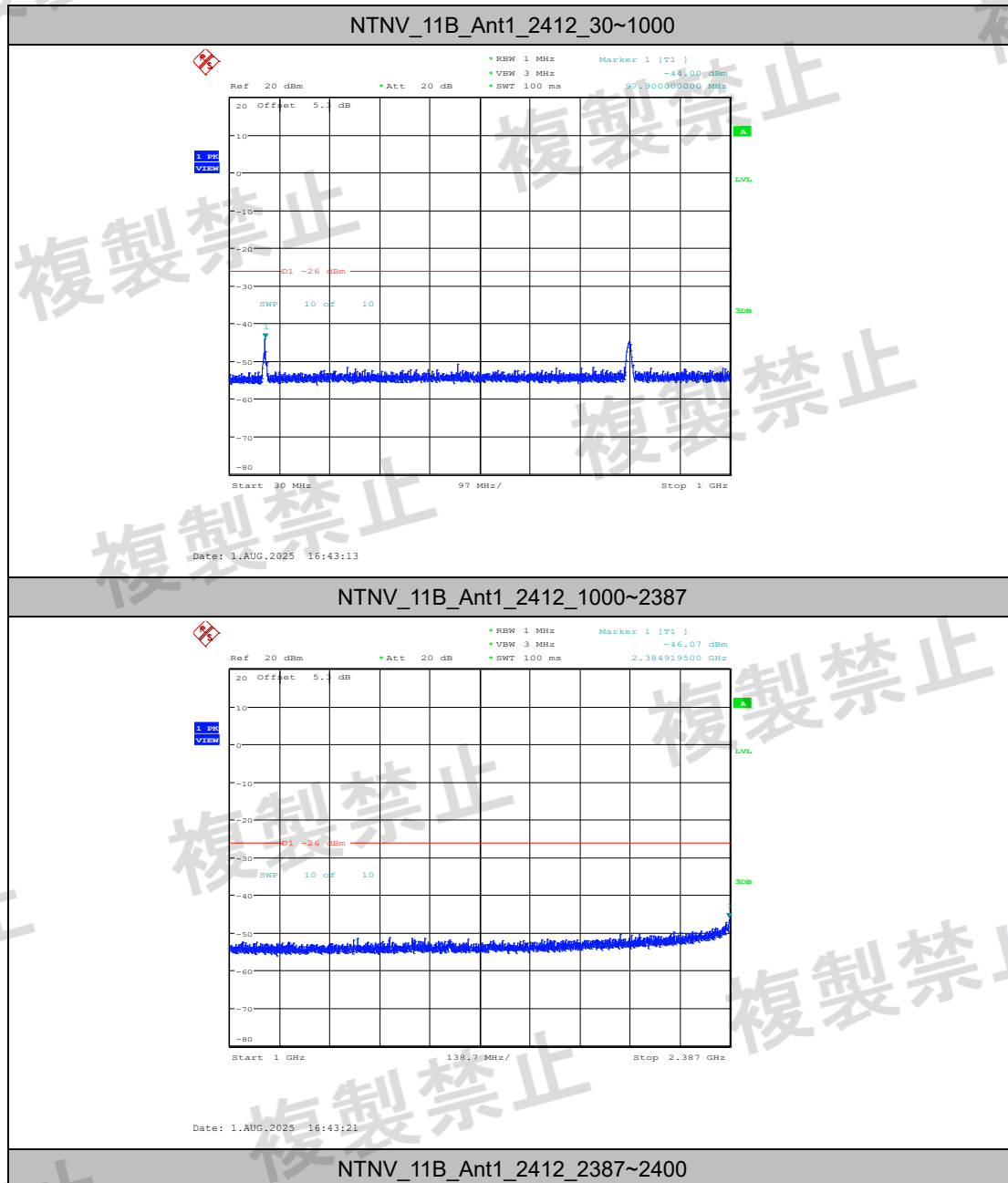
Test Result

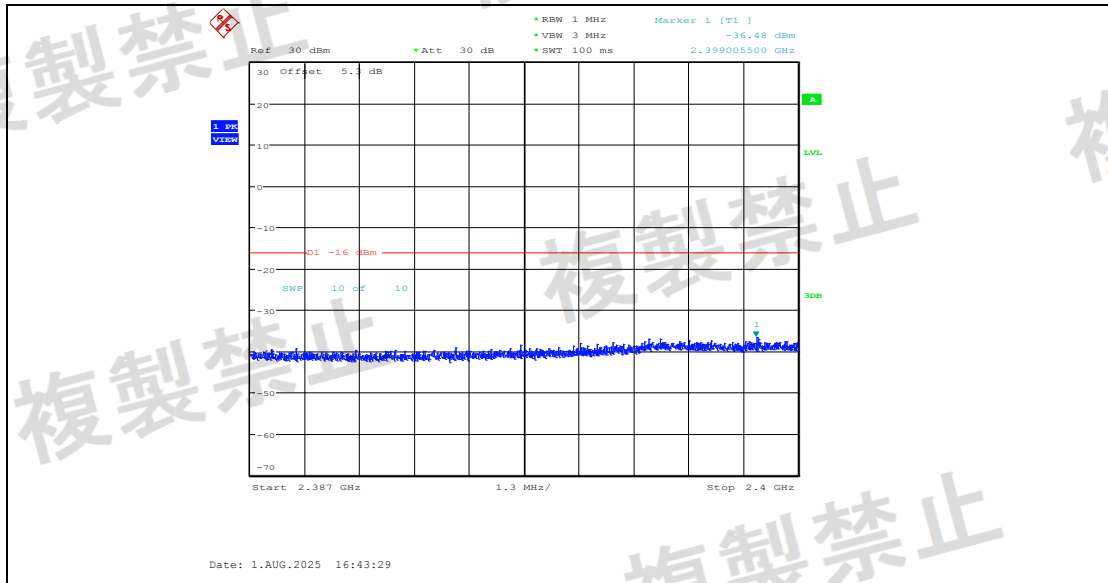
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	97.90	-44.00	≤-26	0.03981	≤2.5	PASS
				1000~2387	2384.9 2	-46.07	≤-26	0.02472	≤2.5	PASS
				2387~2400	2399.0 1	-36.48	≤-16	0.22491	≤25	PASS
				2483.5~2496.5	2490.4 6	-38.94	≤-16	0.12764	≤25	PASS
				2496.5~13000	3215.9 9	-45.81	≤-26	0.02624	≤2.5	PASS
			2442	30~1000	815.94	-44.99	≤-26	0.03170	≤2.5	PASS
				1000~2387	2377.9 8	-49.50	≤-26	0.01122	≤2.5	PASS
				2387~2400	2393.8 8	-39.41	≤-16	0.11455	≤25	PASS
				2483.5~2496.5	2484.6 8	-38.57	≤-16	0.13900	≤25	PASS
				2496.5~13000	3255.9 0	-45.27	≤-26	0.02972	≤2.5	PASS
			2472	30~1000	821.76	-48.56	≤-26	0.01393	≤2.5	PASS
				1000~2387	2360.6 5	-49.64	≤-26	0.01086	≤2.5	PASS
				2387~2400	2388.6 5	-39.20	≤-16	0.12023	≤25	PASS
				2483.5~2496.5	2493.1 7	-38.66	≤-16	0.13614	≤25	PASS
				2496.5~13000	3295.8 2	-46.64	≤-26	0.02168	≤2.5	PASS
	11G	Ant1	2412	30~1000	807.21	-47.31	≤-26	0.01858	≤2.5	PASS
				1000~2387	2386.6 5	-40.55	≤-26	0.08810	≤2.5	PASS
				2387~2400	2399.4 5	-22.69	≤-16	5.38270	≤25	PASS
				2483.5~2496.5	2496.0 5	-38.48	≤-16	0.14191	≤25	PASS
				2496.5~13000	3215.9 9	-44.38	≤-26	0.03648	≤2.5	PASS
			2442	30~1000	817.64	-48.48	≤-26	0.01419	≤2.5	PASS
				1000~2387	2302.0	-49.89	≤-26	0.01026	≤2.5	PASS

					5					
				2387~2400	2398.0 4	-38.75	≤-16	0.13335	≤25	PASS
				2483.5~2496.5	2487.2 3	-39.19	≤-16	0.12050	≤25	PASS
				2496.5~13000	3255.9 0	-45.51	≤-26	0.02812	≤2.5	PASS
			2472	30~1000	825.16	-48.81	≤-26	0.01315	≤2.5	PASS
				1000~2387	2384.5 7	-49.40	≤-26	0.01148	≤2.5	PASS
				2387~2400	2393.9 6	-39.32	≤-16	0.11695	≤25	PASS
				2483.5~2496.5	2484.3 1	-31.26	≤-16	0.74817	≤25	PASS
				2496.5~13000	3295.8 2	-46.32	≤-26	0.02333	≤2.5	PASS
	11N20Si SO	Ant1	2412	30~1000	798.73	-47.09	≤-26	0.01954	≤2.5	PASS
				1000~2387	2387.0 0	-41.31	≤-26	0.07396	≤2.5	PASS
				2387~2400	2399.8 6	-24.17	≤-16	3.82825	≤25	PASS
				2483.5~2496.5	2491.9 8	-38.75	≤-16	0.13335	≤25	PASS
				2496.5~13000	3215.9 9	-44.49	≤-26	0.03556	≤2.5	PASS
			2442	30~1000	819.10	-48.07	≤-26	0.01560	≤2.5	PASS
				1000~2387	2351.2 8	-49.12	≤-26	0.01225	≤2.5	PASS
				2387~2400	2399.2 3	-39.26	≤-16	0.11858	≤25	PASS
				2483.5~2496.5	2495.7 5	-38.49	≤-16	0.14158	≤25	PASS
				2496.5~13000	3255.9 0	-44.17	≤-26	0.03828	≤2.5	PASS
			2472	30~1000	819.34	-49.30	≤-26	0.01175	≤2.5	PASS
				1000~2387	2320.4 2	-49.68	≤-26	0.01076	≤2.5	PASS
				2387~2400	2393.1 2	-39.28	≤-16	0.11803	≤25	PASS
				2483.5~2496.5	2483.9 1	-31.08	≤-16	0.77983	≤25	PASS
				2496.5~13000	3295.8 2	-45.88	≤-26	0.02582	≤2.5	PASS

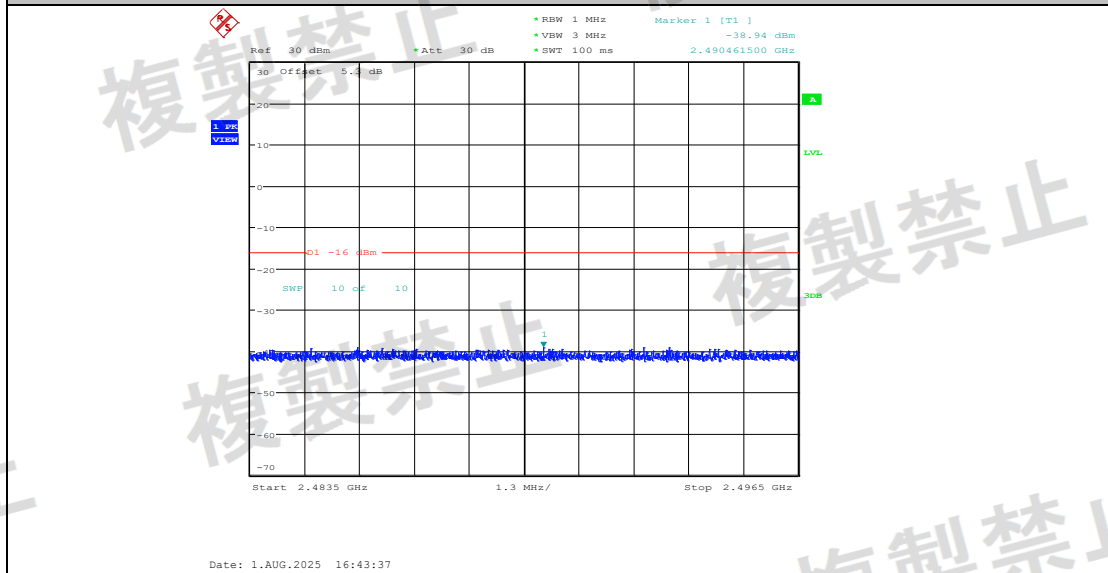
	11N40SI SO	Ant1	2422	30~1000	799.94	-48.02	≤-26	0.01578	≤2.5	PASS
				1000~2387	2386.3 1	-38.29	≤-26	0.14825	≤2.5	PASS
				2387~2400	2398.6 0	-30.25	≤-16	0.94406	≤25	PASS
				2483.5~2496.5	2491.6 6	-38.26	≤-16	0.14928	≤25	PASS
				2496.5~13000	3229.1 2	-43.78	≤-26	0.04188	≤2.5	PASS
			2442	30~1000	806.00	-49.94	≤-26	0.01014	≤2.5	PASS
				1000~2387	2387.0 0	-49.32	≤-26	0.01169	≤2.5	PASS
				2387~2400	2395.3 1	-39.12	≤-16	0.12246	≤25	PASS
				2483.5~2496.5	2495.5 7	-39.03	≤-16	0.12503	≤25	PASS
				2496.5~13000	3255.9 0	-45.22	≤-26	0.03006	≤2.5	PASS
			2462	30~1000	30.00	-49.88	≤-26	0.01028	≤2.5	PASS
				1000~2387	2382.1 5	-49.03	≤-26	0.01250	≤2.5	PASS
				2387~2400	2397.0 5	-38.78	≤-16	0.13243	≤25	PASS
				2483.5~2496.5	2484.9 2	-30.33	≤-16	0.92683	≤25	PASS
				2496.5~13000	3282.1 6	-46.99	≤-26	0.02000	≤2.5	PASS

Test Graphs

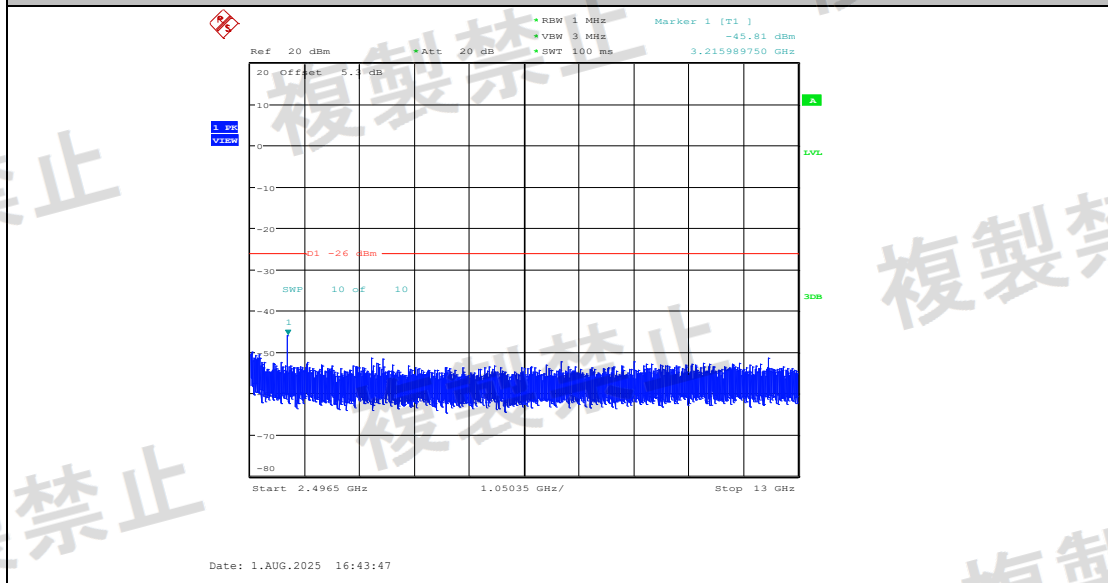


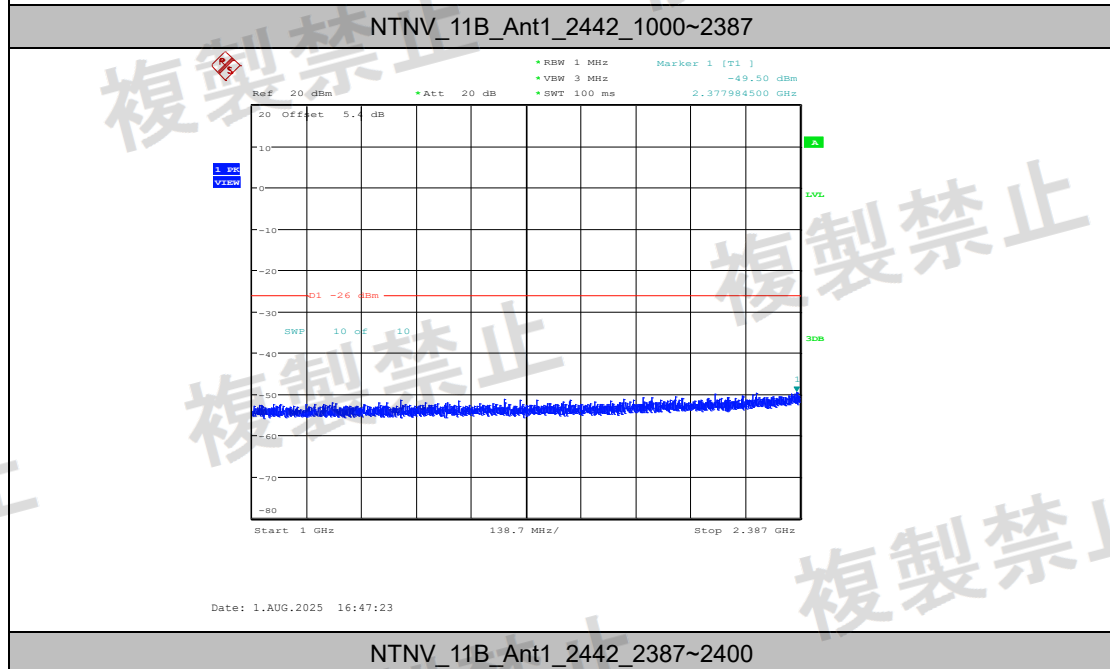
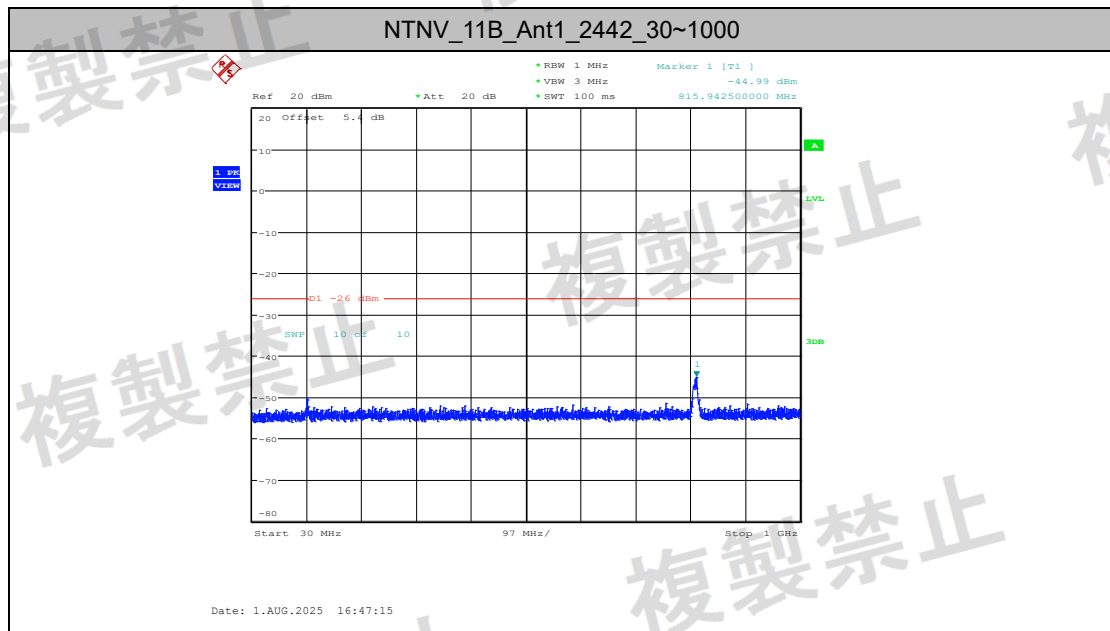


NTNV_11B_Ant1_2412_2483.5~2496.5

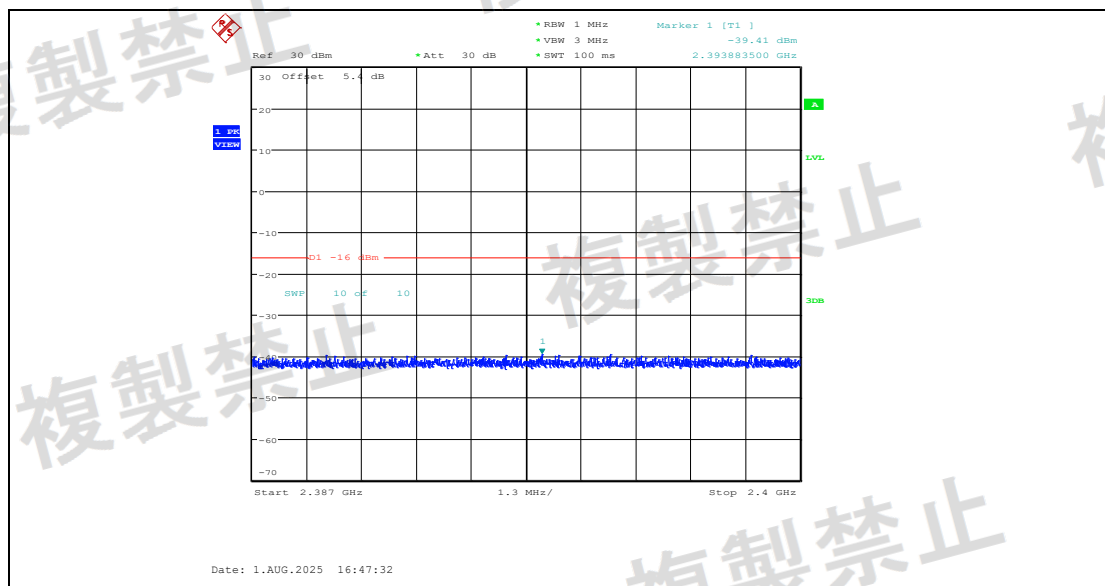


NTNV_11B_Ant1_2412_2496.5~13000

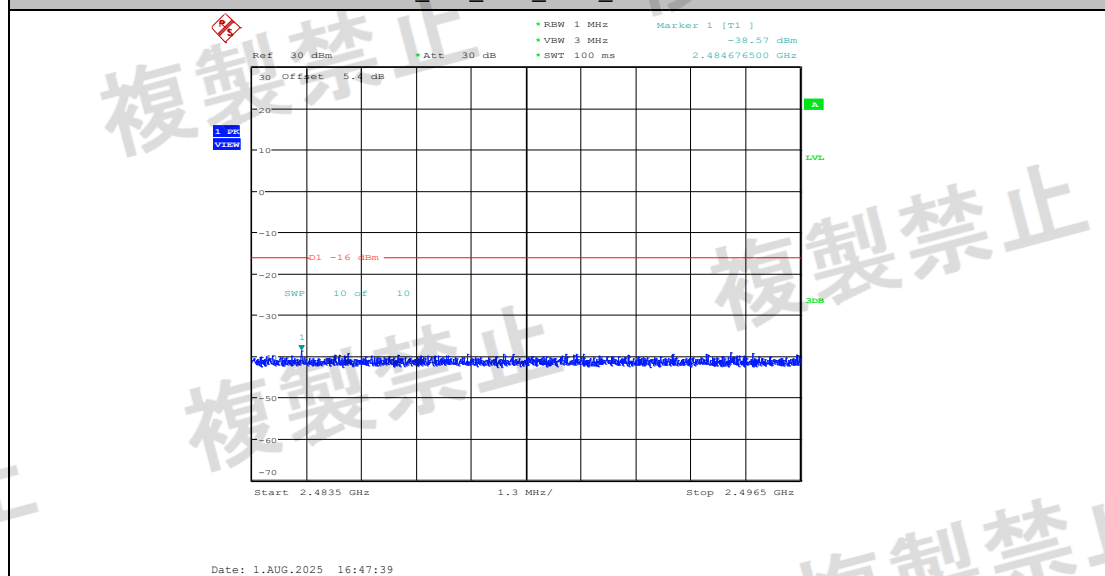




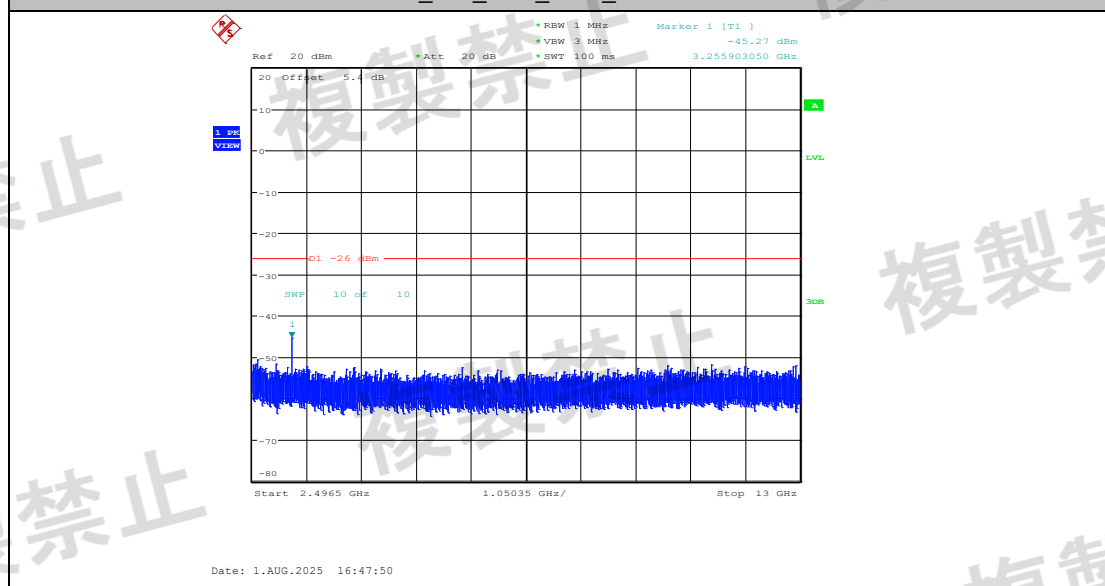
NTNV_11B_Ant1_2442_2387~2400

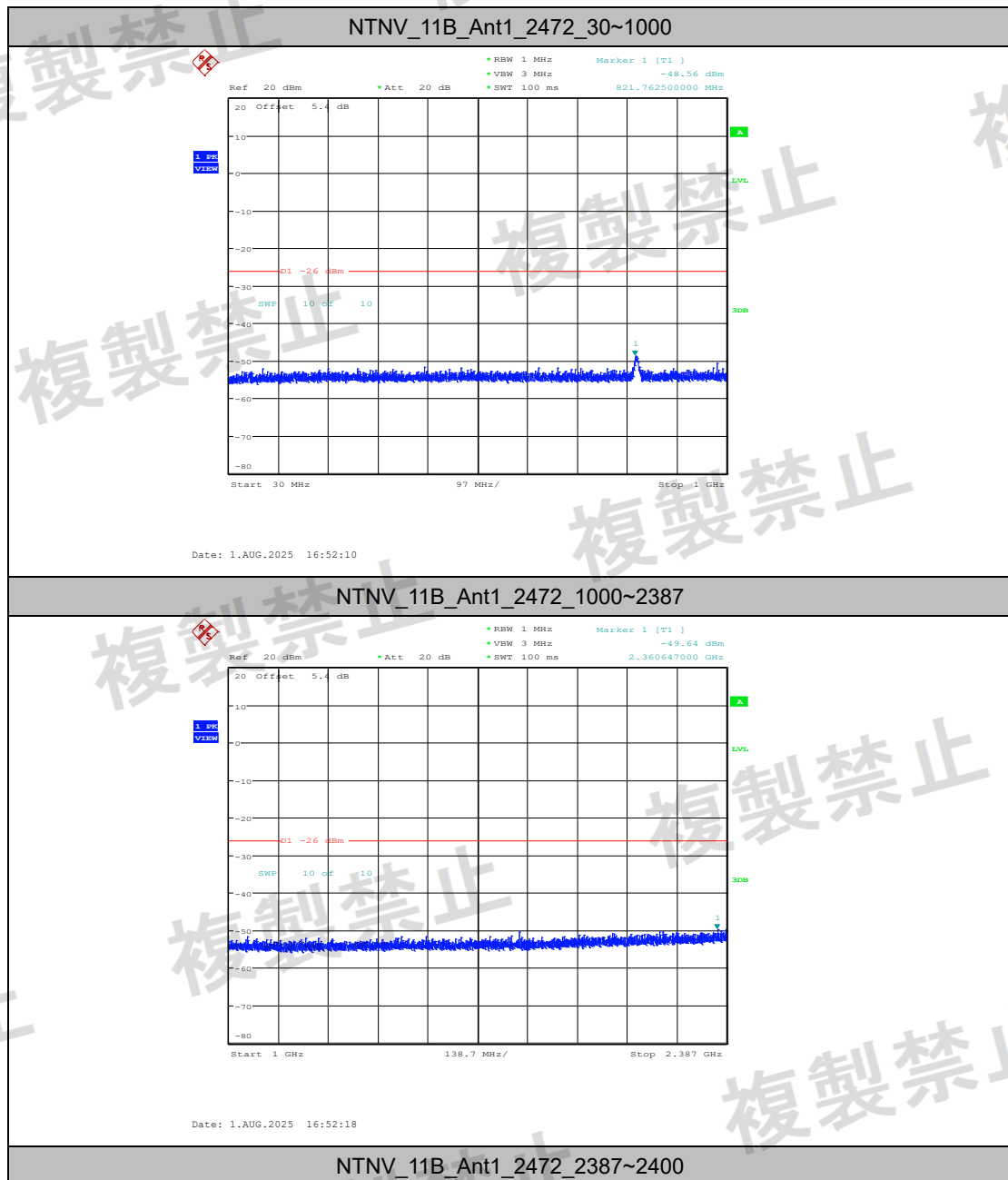


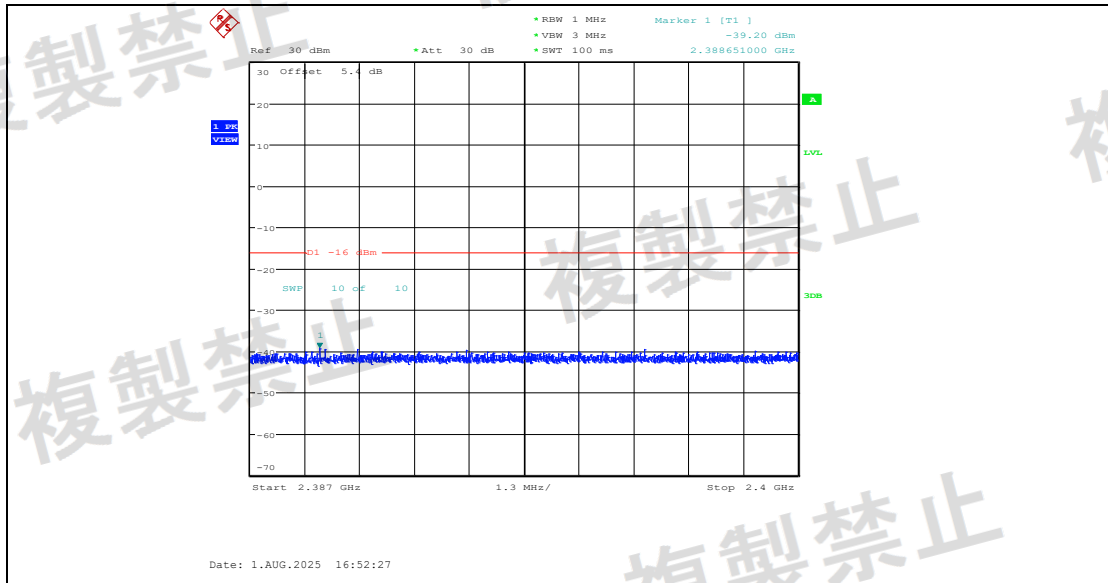
NTNV_11B_Ant1_2442_2483.5~2496.5



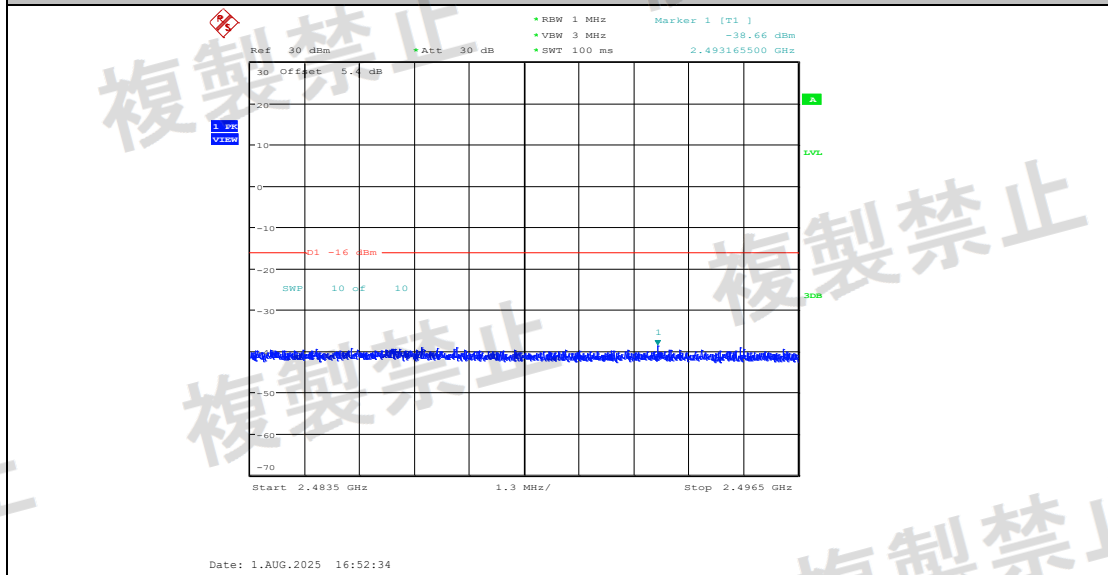
NTNV_11B_Ant1_2442_2496.5~13000



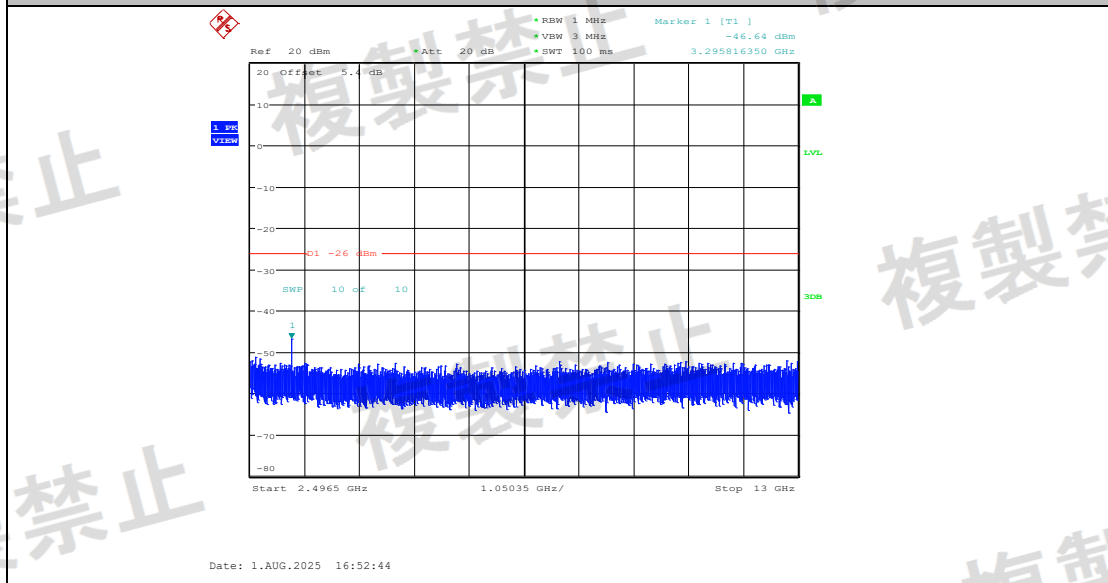


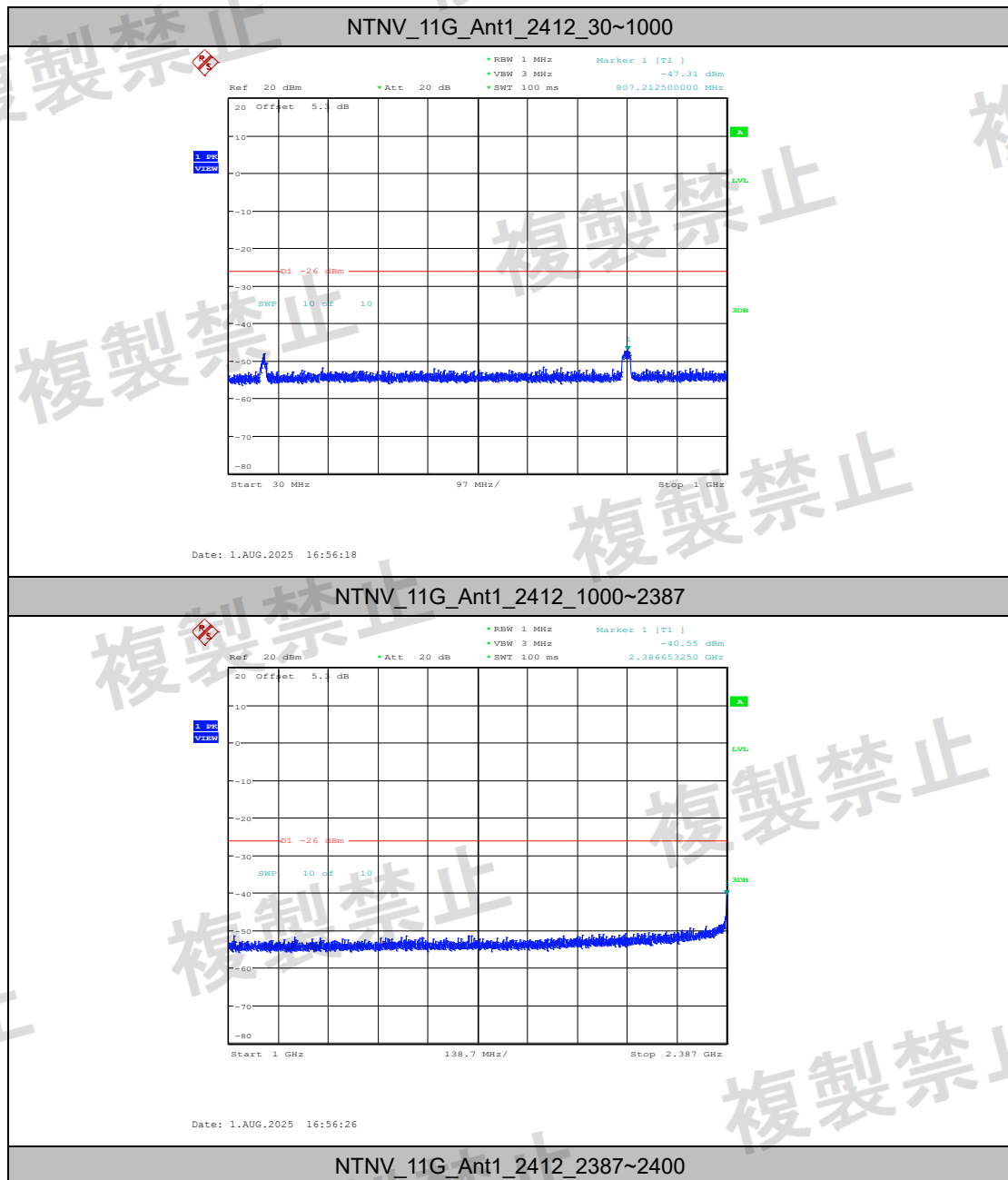


NTNV_11B_Ant1_2472_2483.5~2496.5



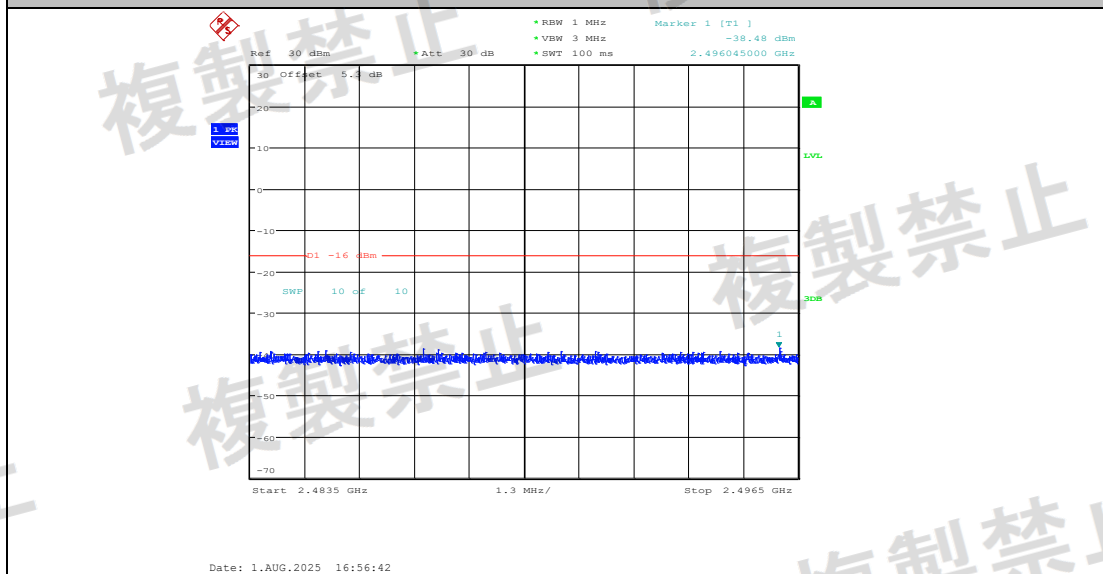
NTNV_11B_Ant1_2472_2496.5~13000



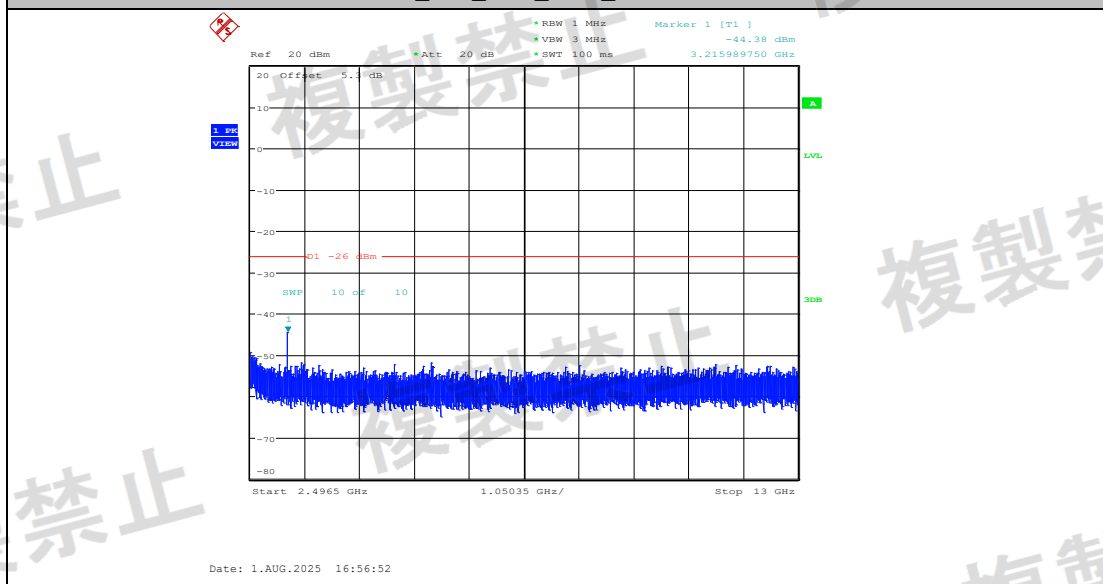


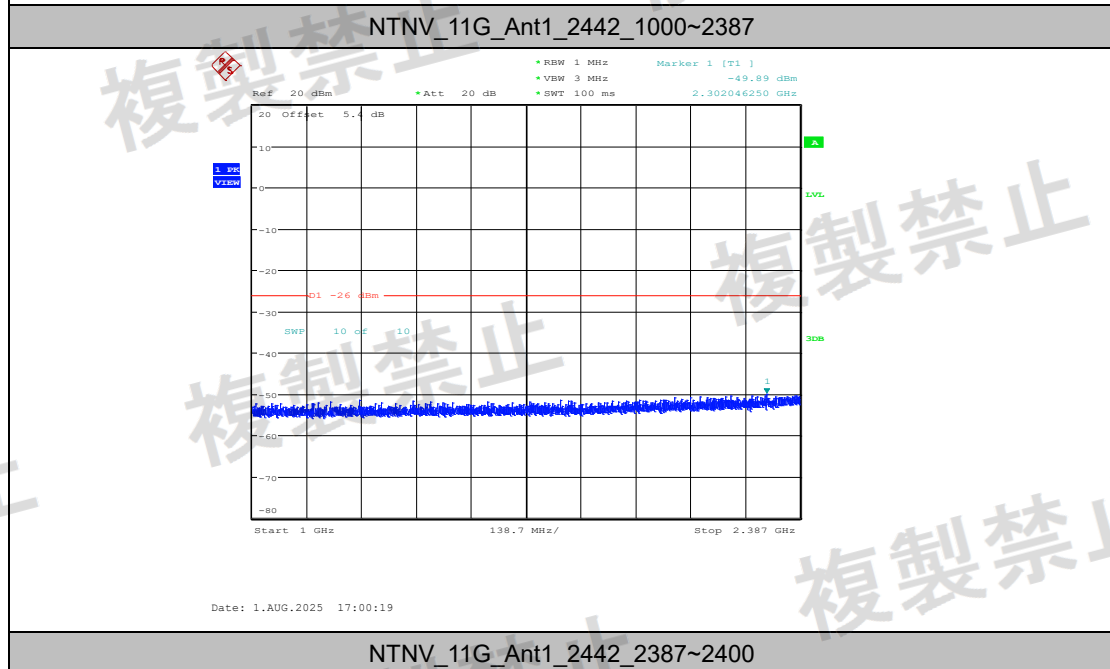
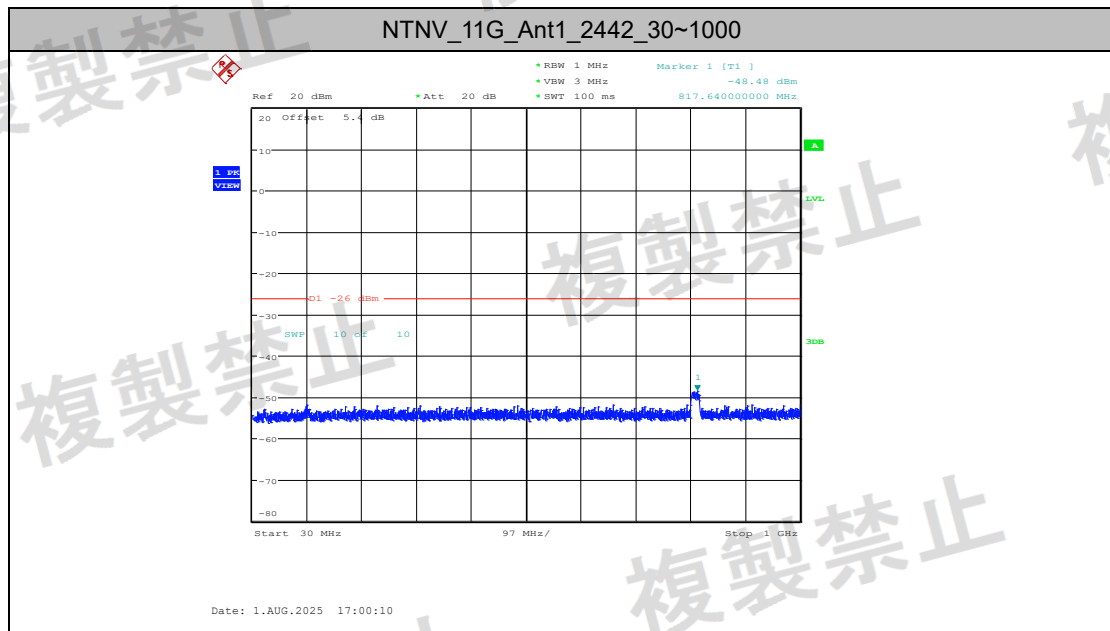


NTNV_11G_Ant1_2412_2483.5~2496.5

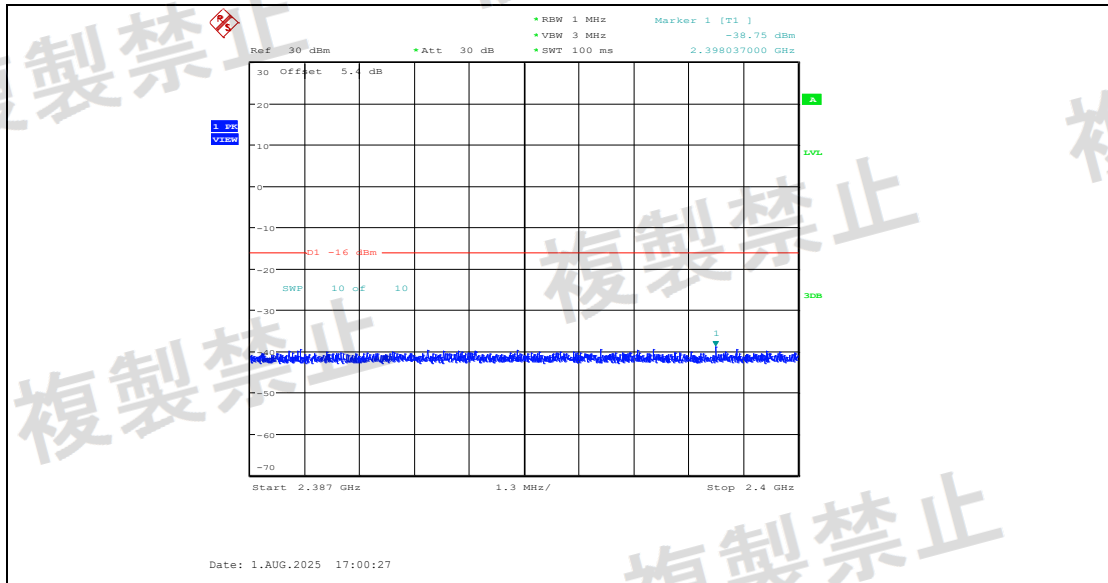


NTNV_11G_Ant1_2412_2496.5~13000

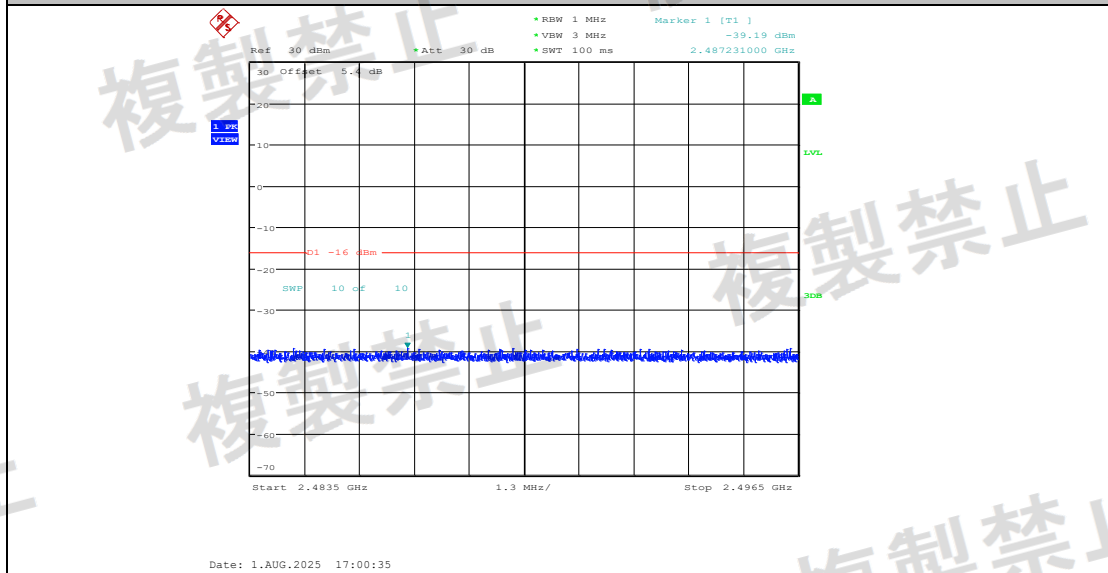




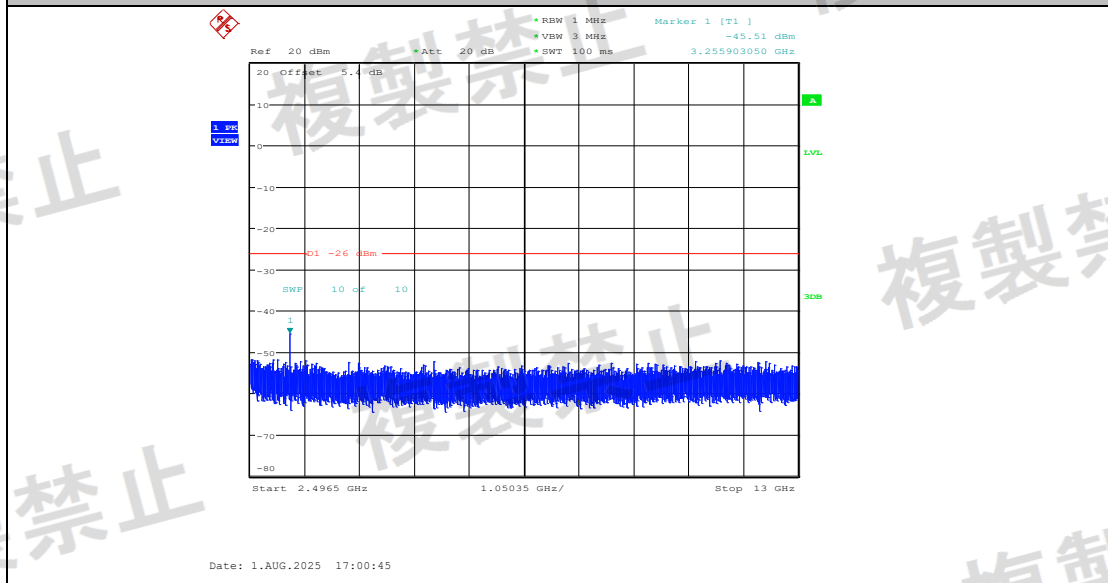
NTNV_11G_Ant1_2442_2387~2400

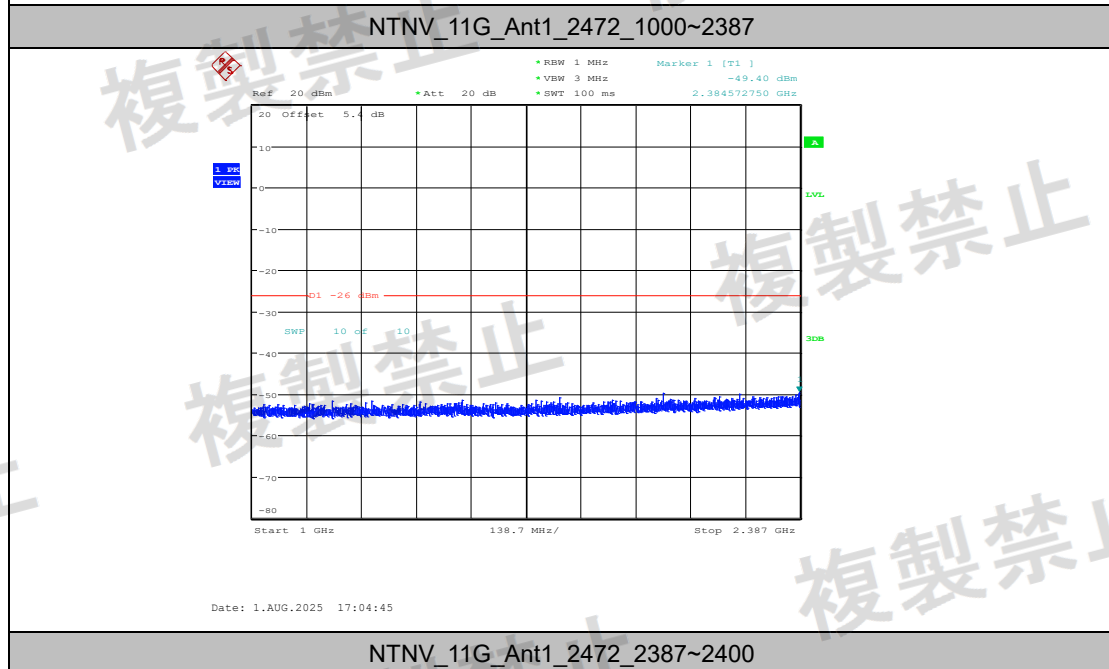
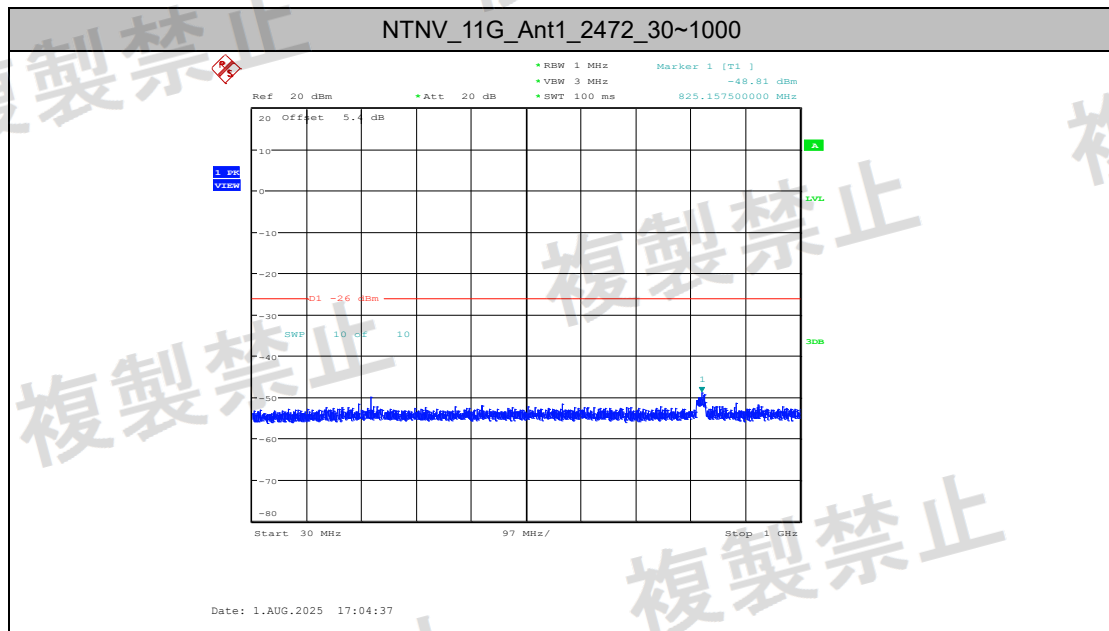


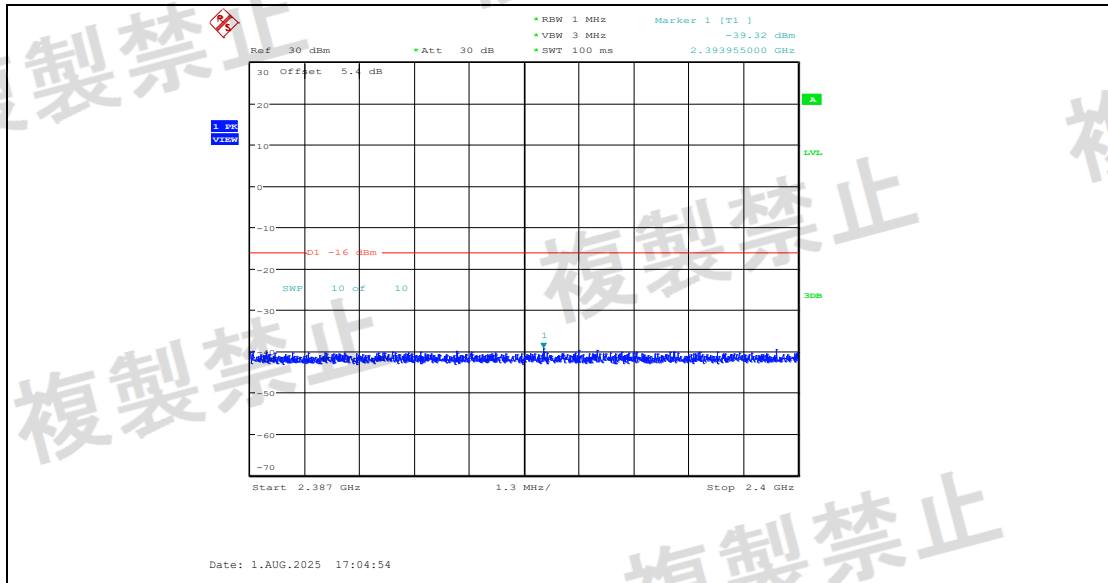
NTNV_11G_Ant1_2442_2483.5~2496.5



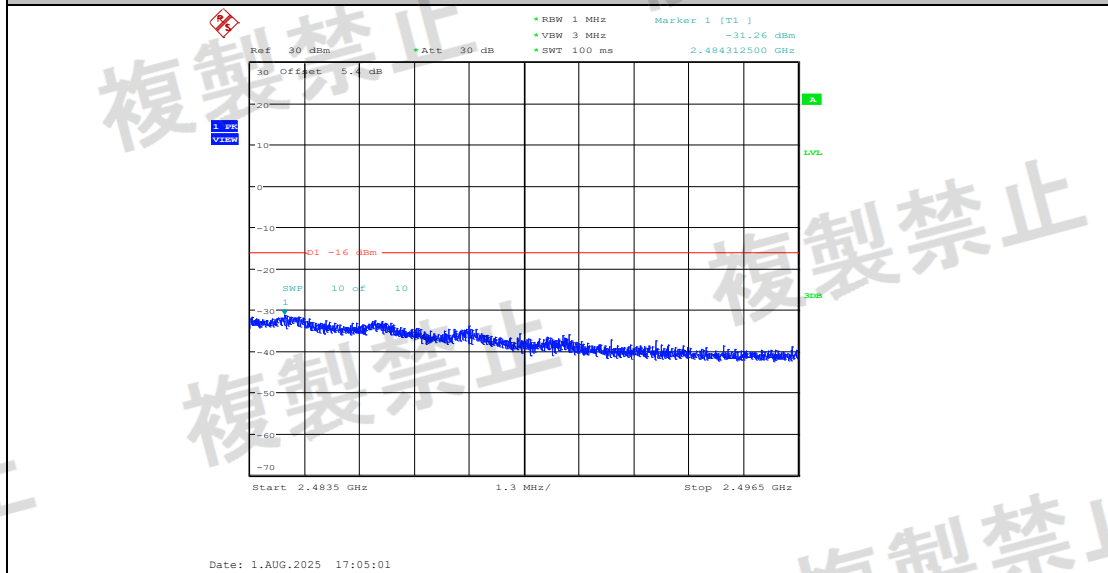
NTNV_11G_Ant1_2442_2496.5~13000



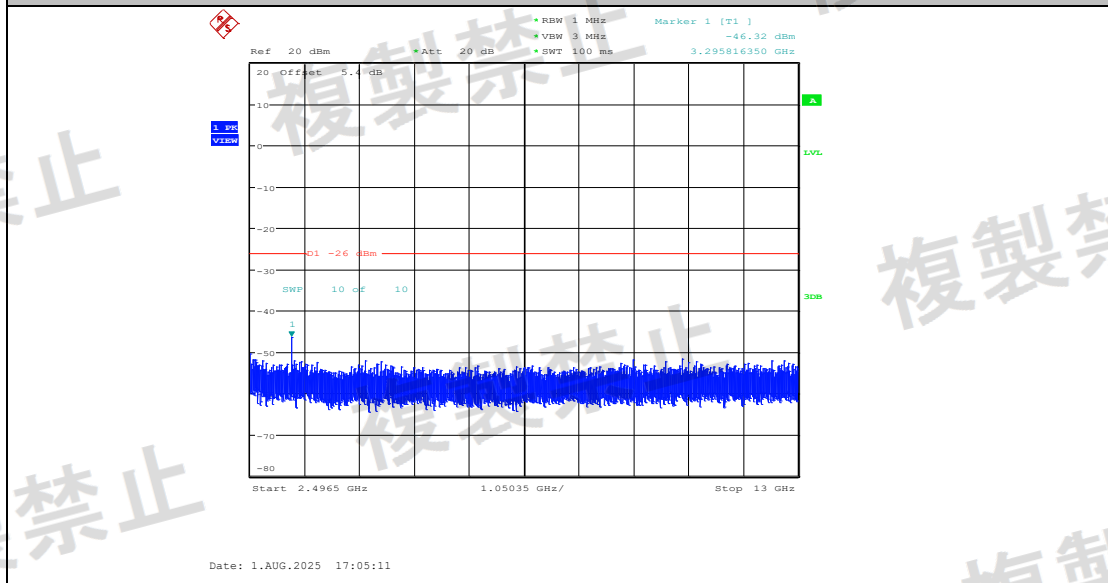


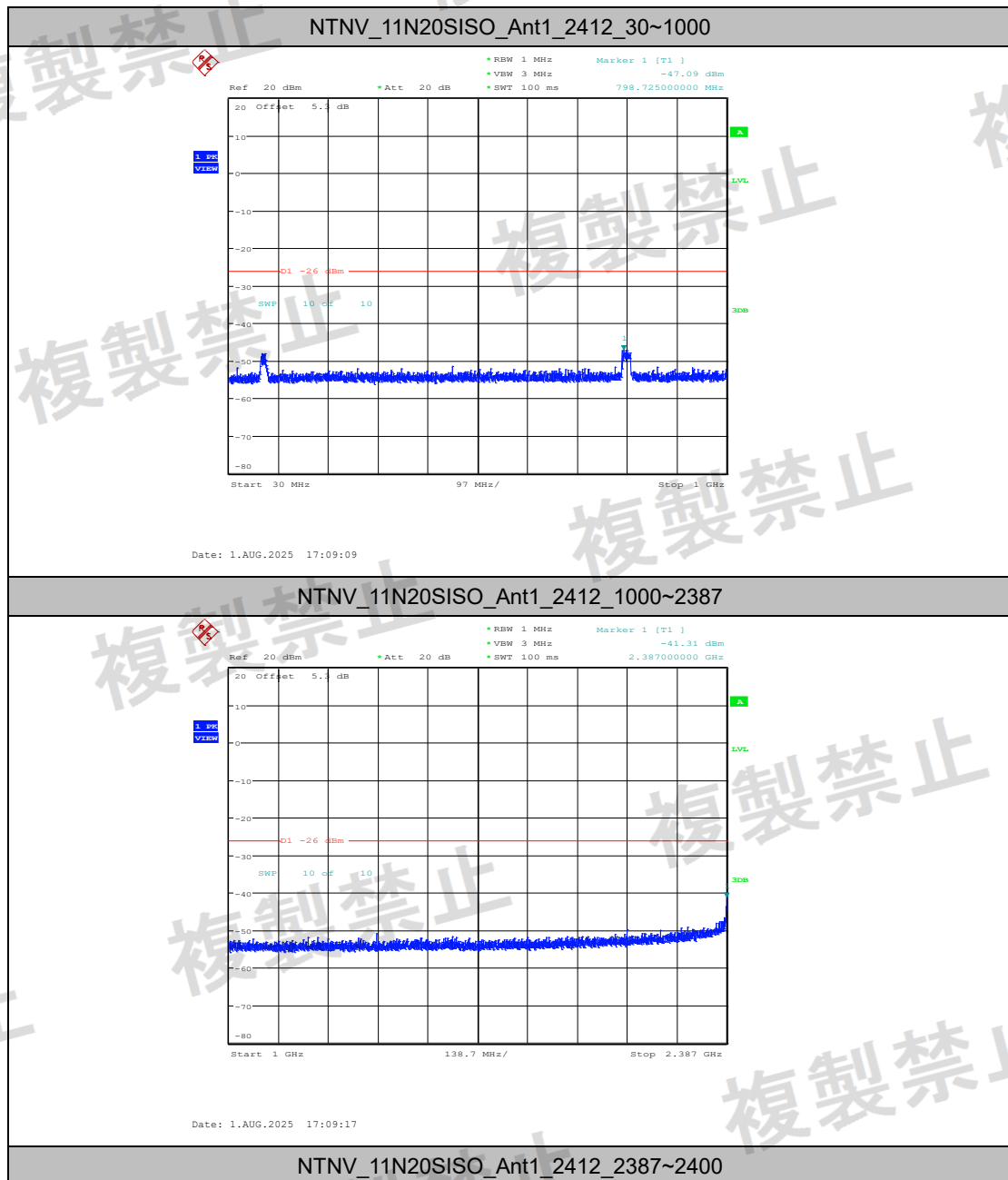


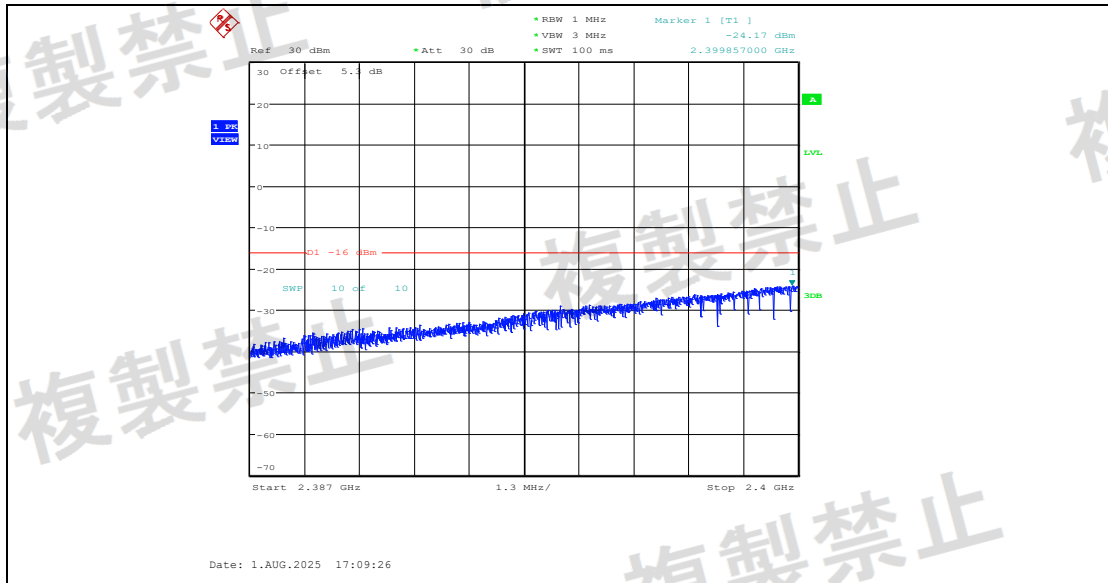
NTNV_11G_Ant1_2472_2483.5~2496.5



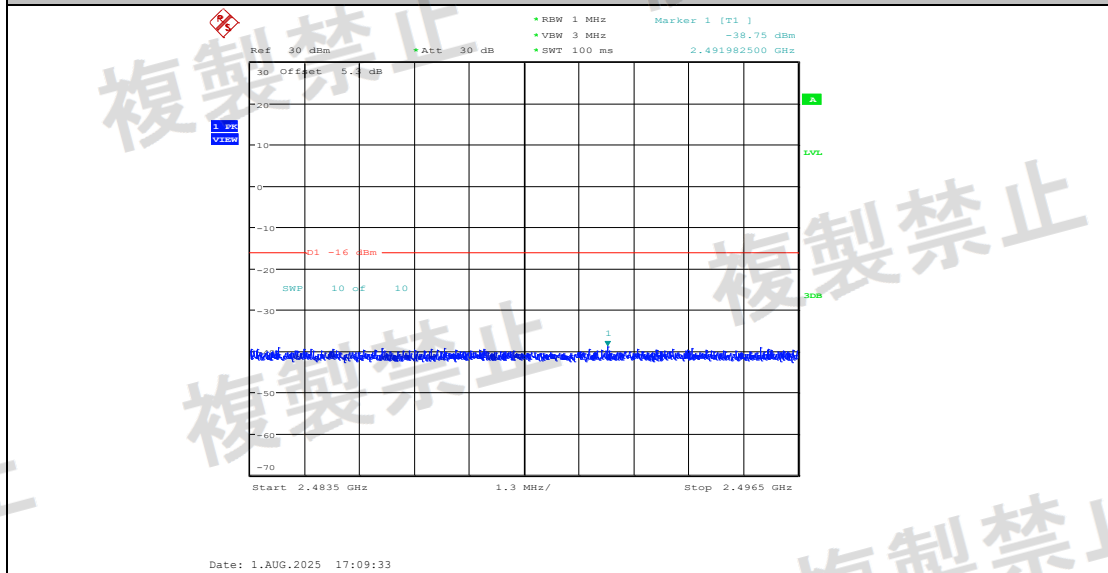
NTNV_11G_Ant1_2472_2496.5~13000



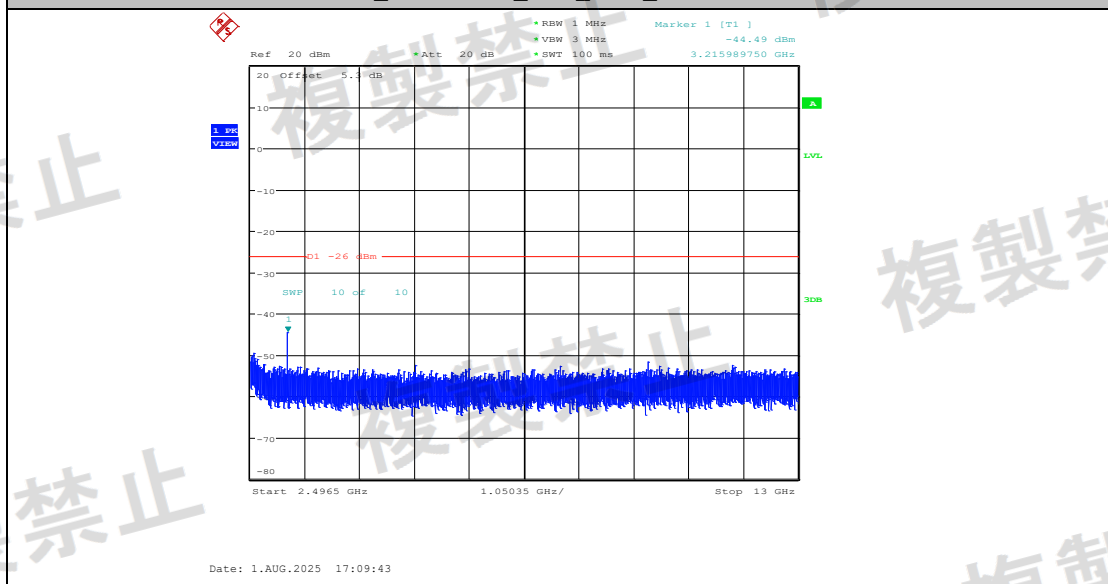


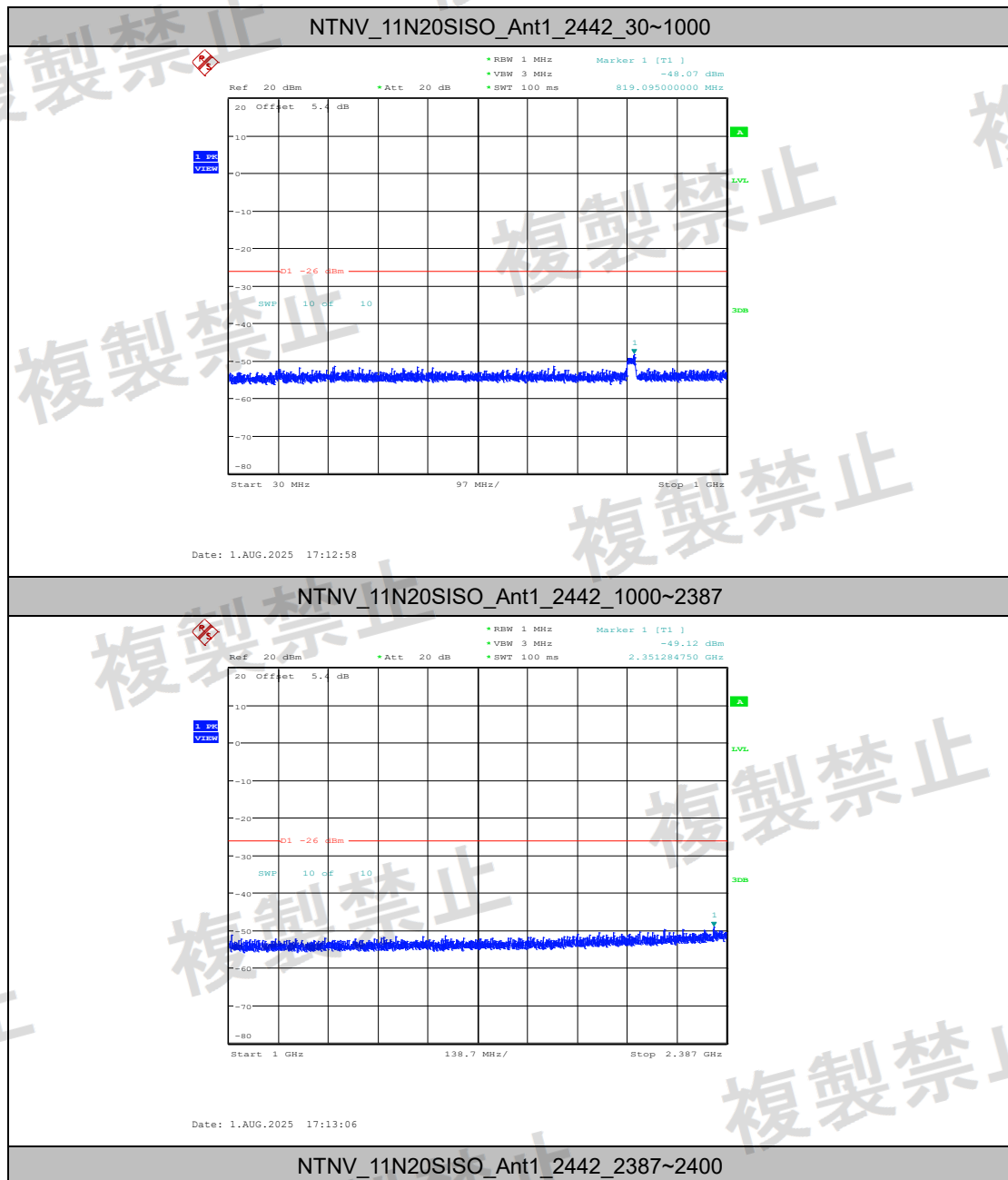


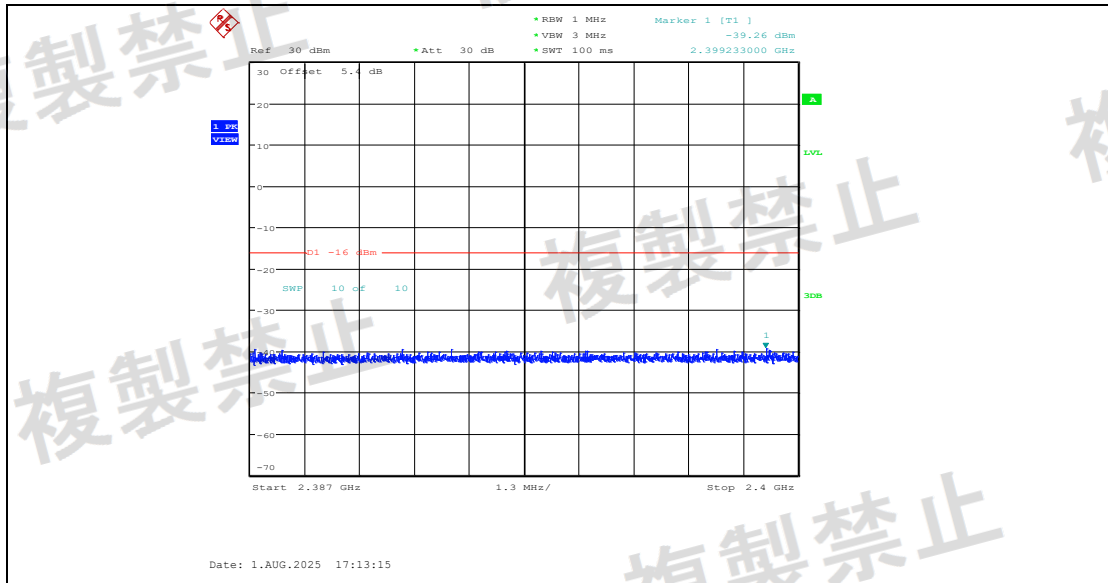
NTNV_11N20SISO_Ant1_2412_2483.5~2496.5



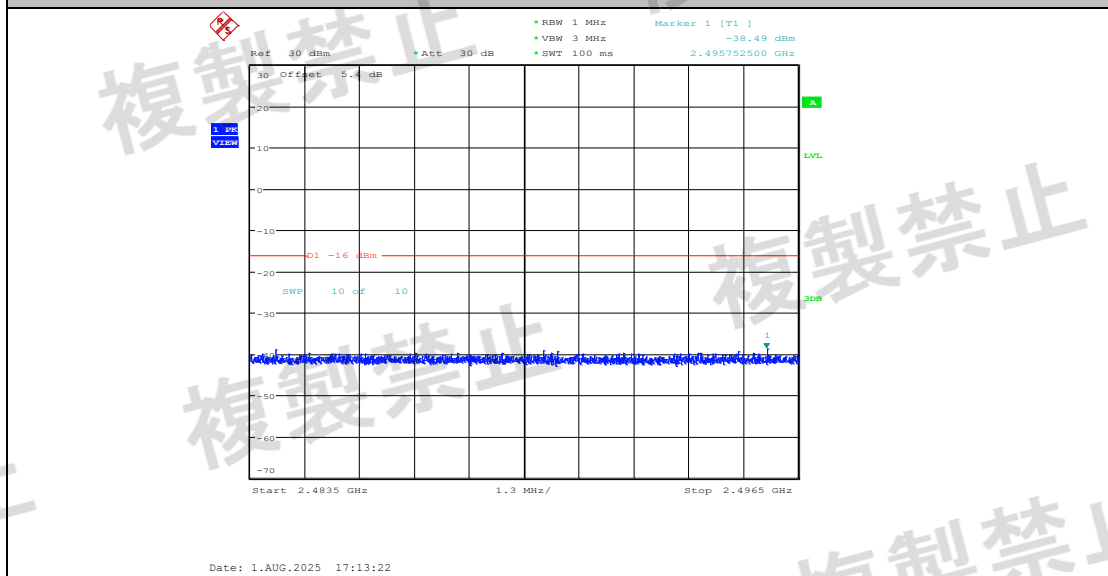
NTNV_11N20SISO_Ant1_2412_2496.5~13000



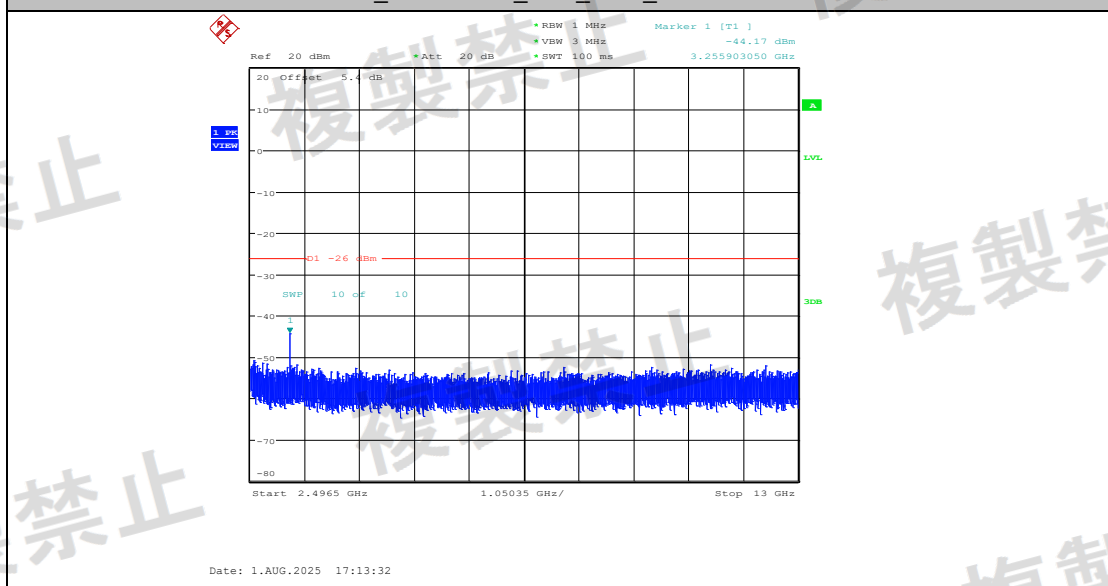


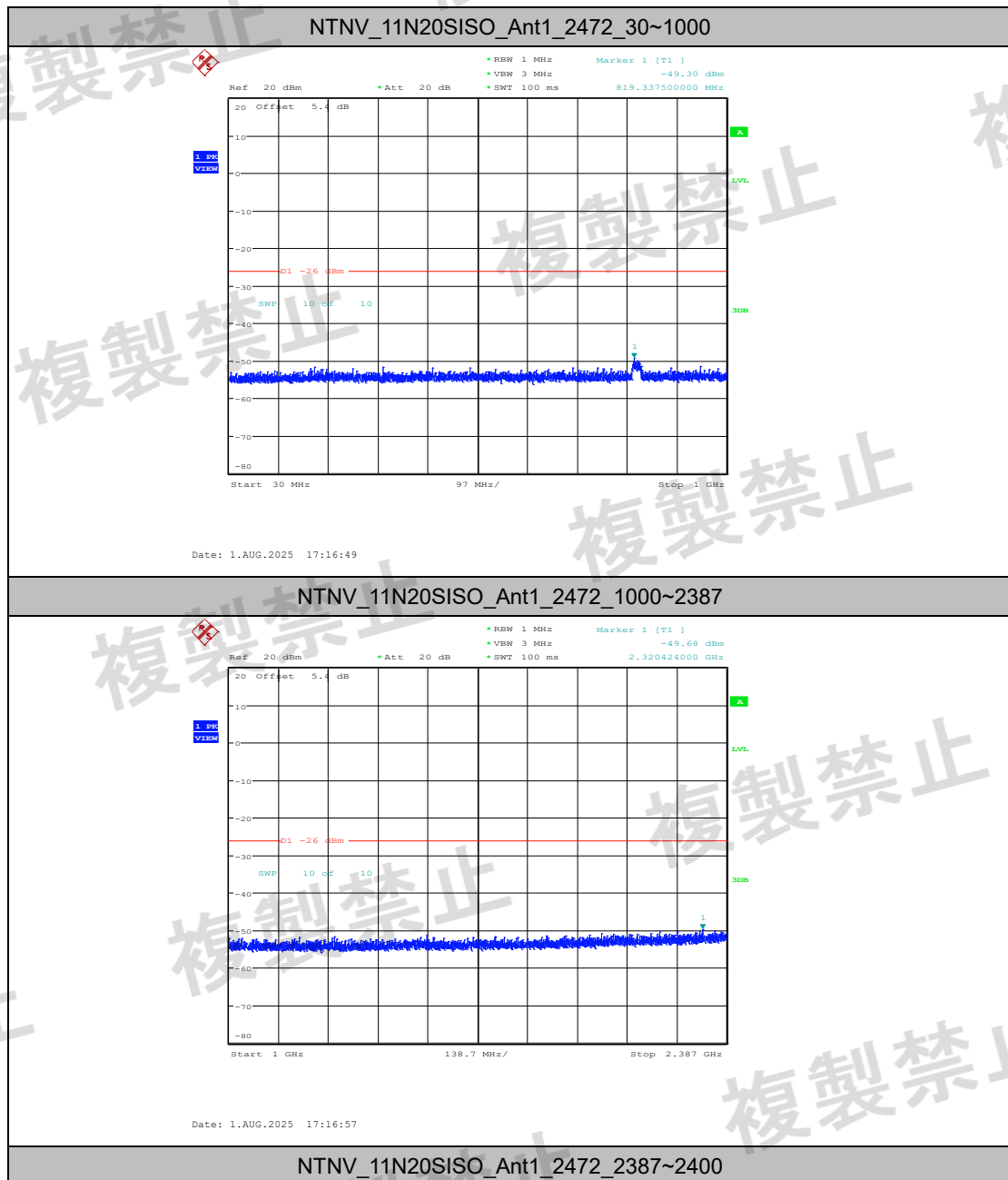


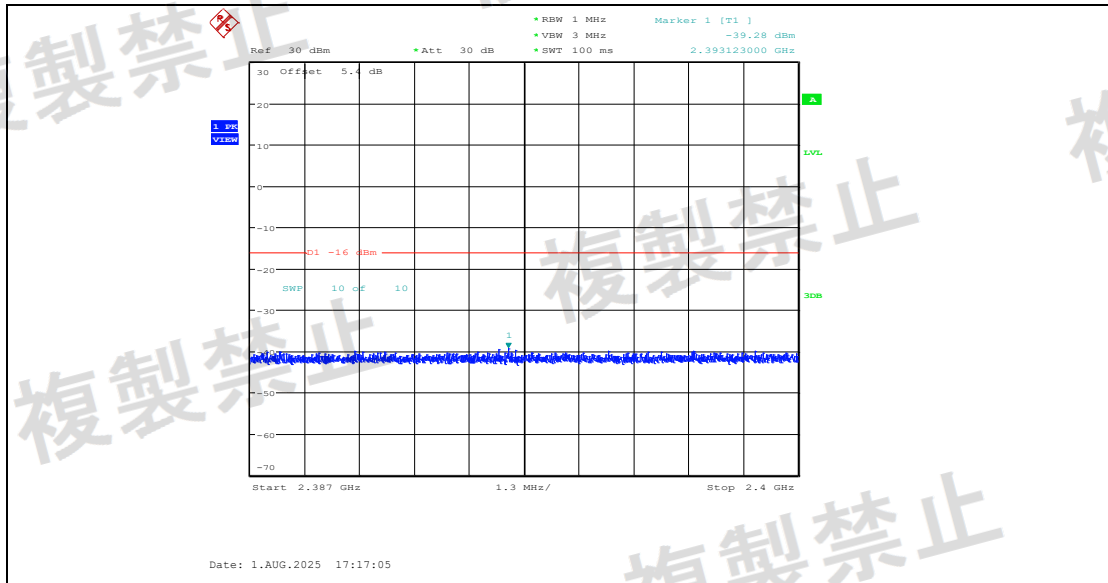
NTNV_11N20SISO_Ant1_2442_2483.5~2496.5



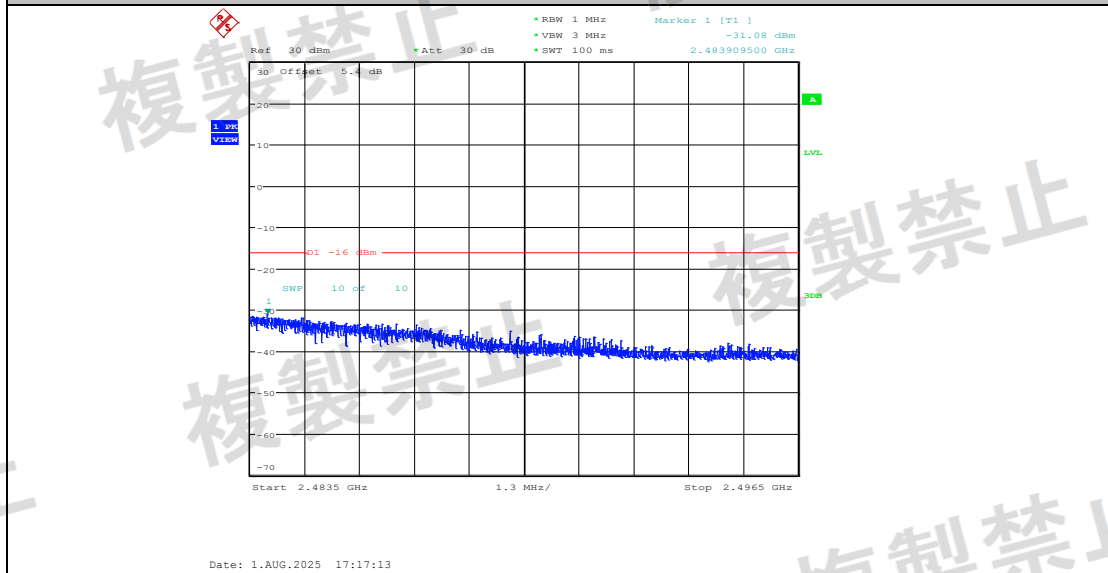
NTNV_11N20SISO_Ant1_2442_2496.5~13000



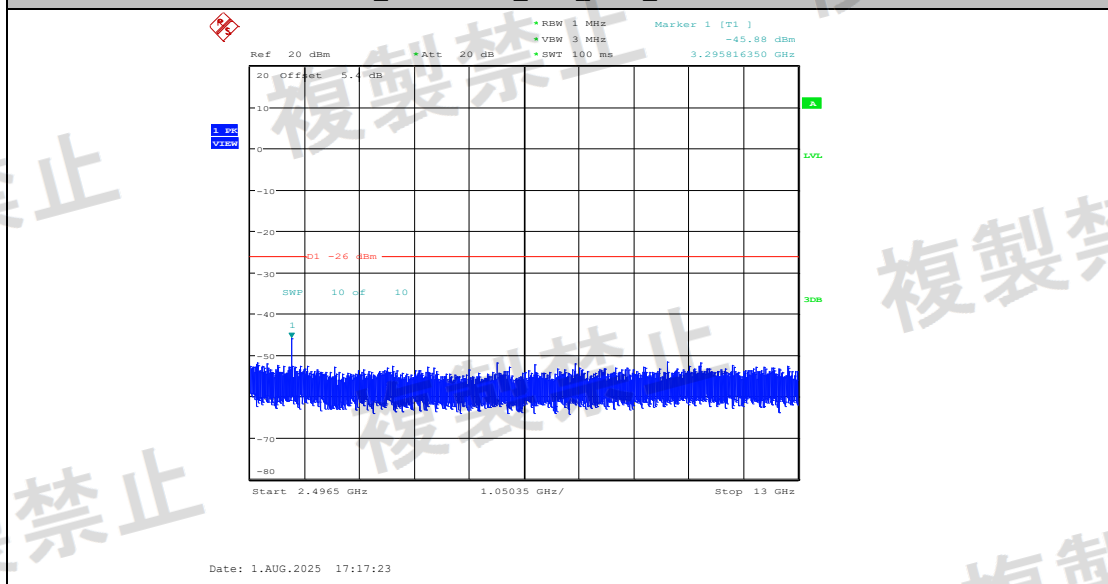


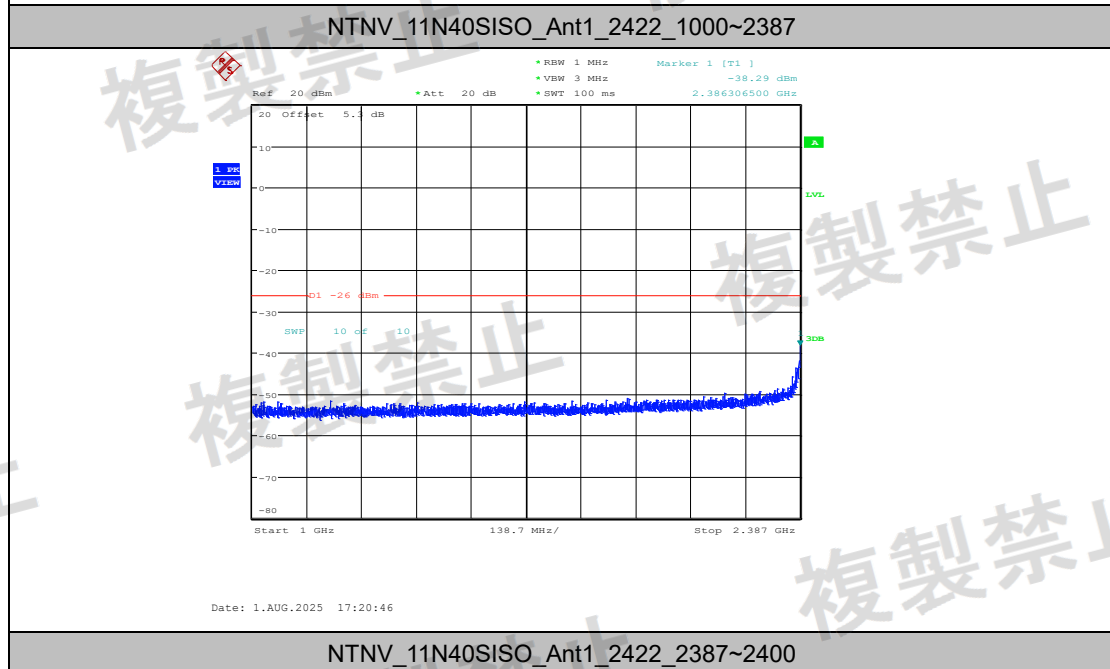
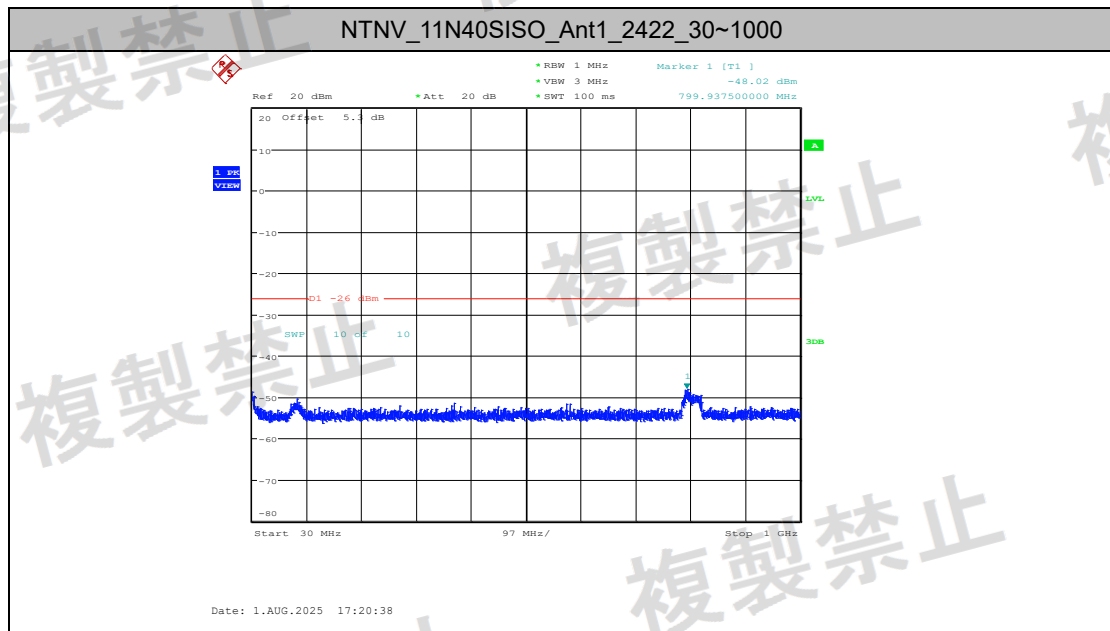


NTNV_11N20SISO_Ant1_2472_2483.5~2496.5

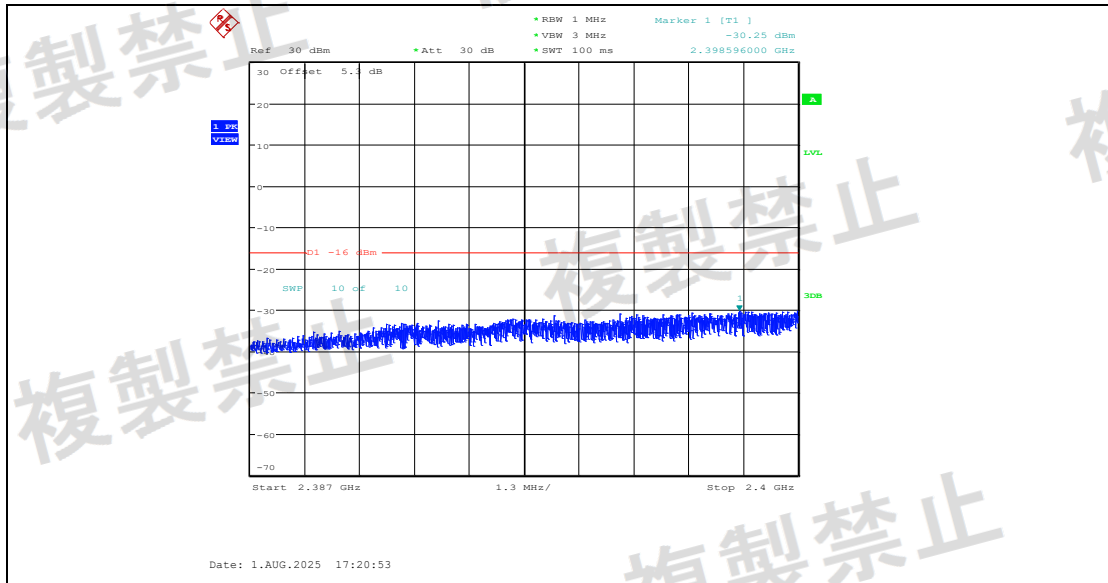


NTNV_11N20SISO_Ant1_2472_2496.5~13000

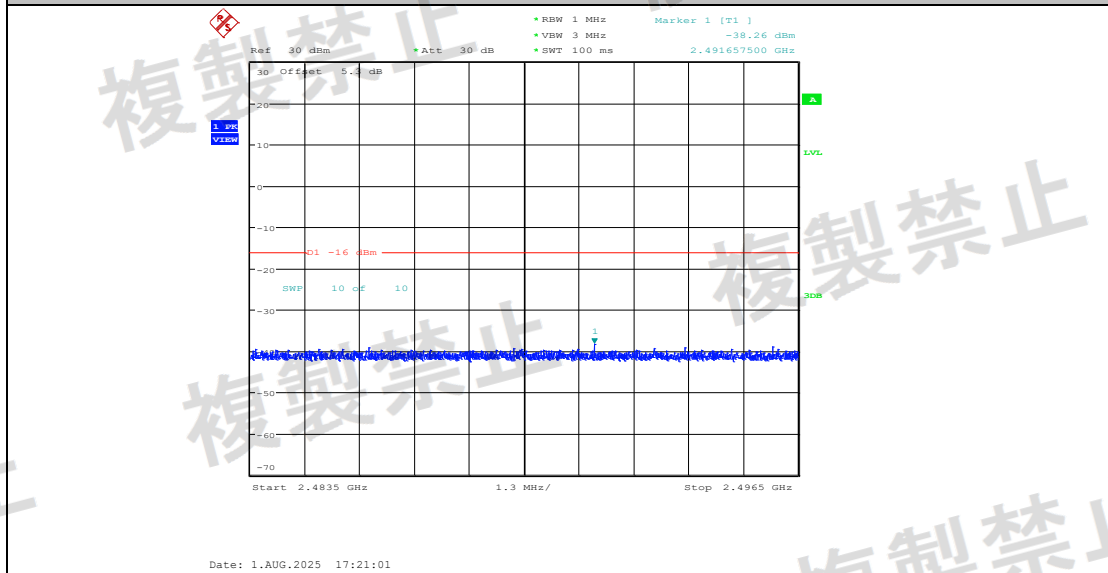




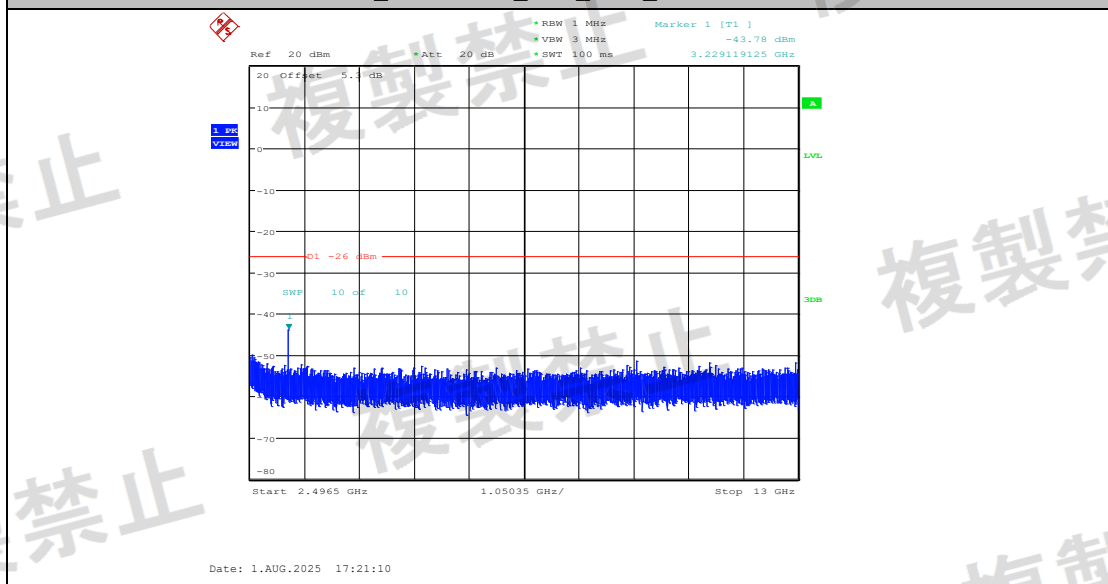
NTNV_11N40SISO_Ant1_2422_2387~2400

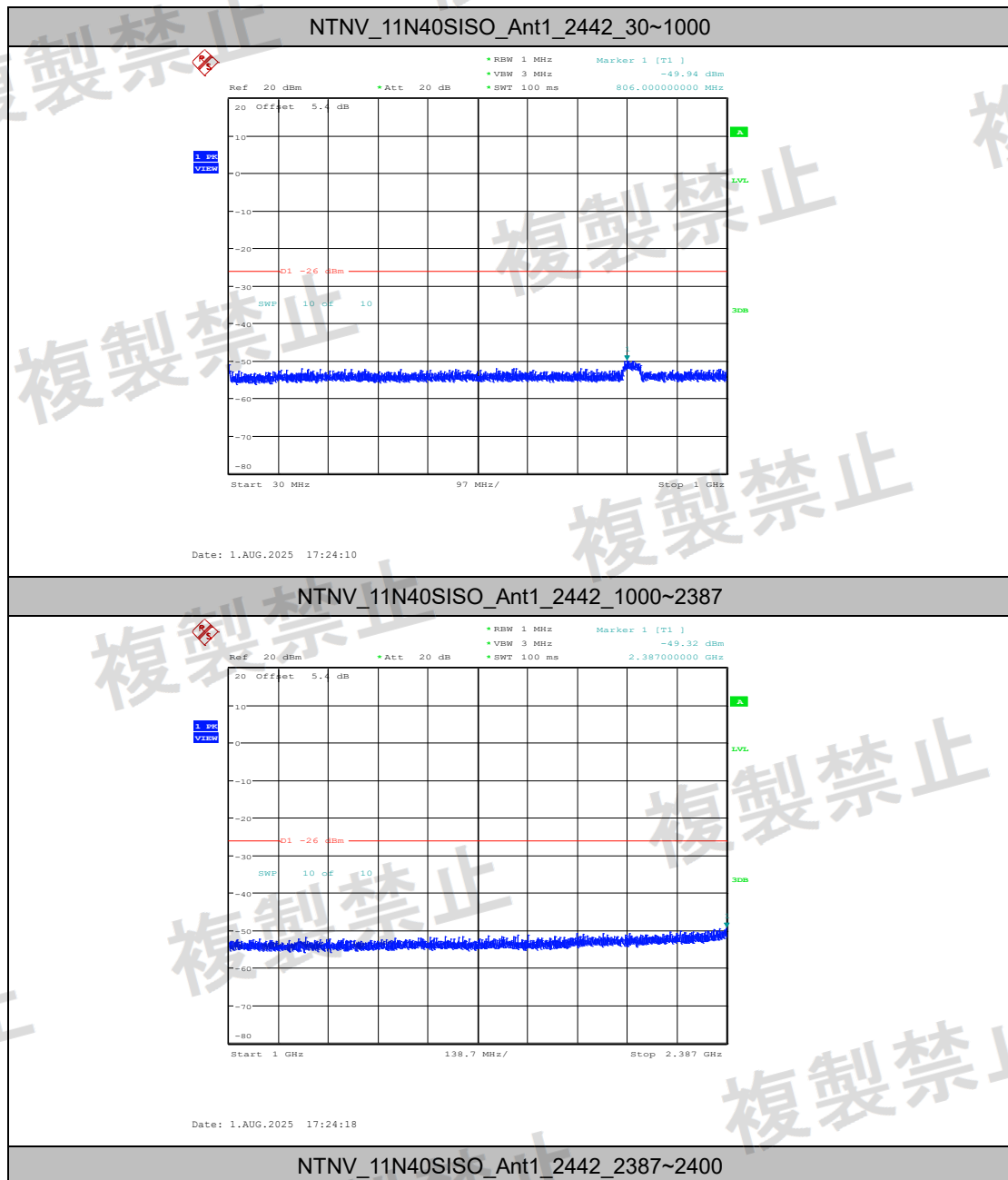


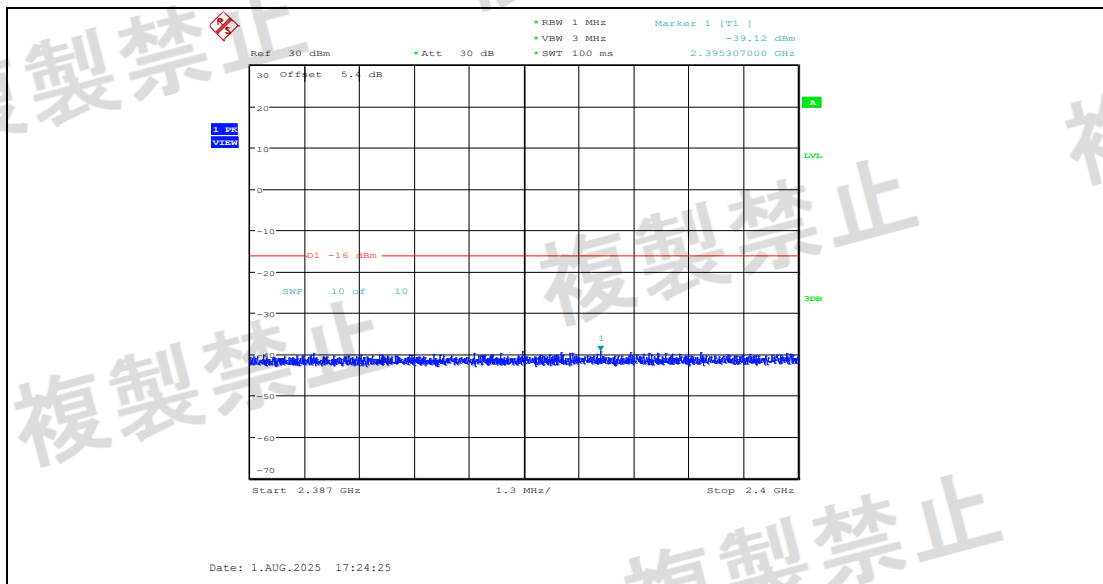
NTNV_11N40SISO_Ant1_2422_2483.5~2496.5



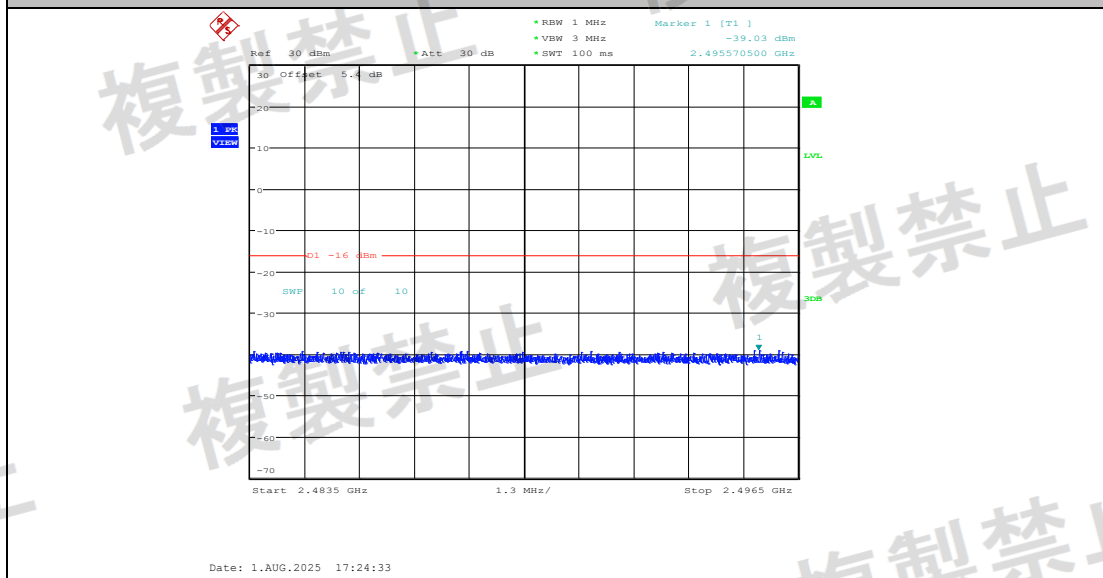
NTNV_11N40SISO_Ant1_2422_2496.5~13000



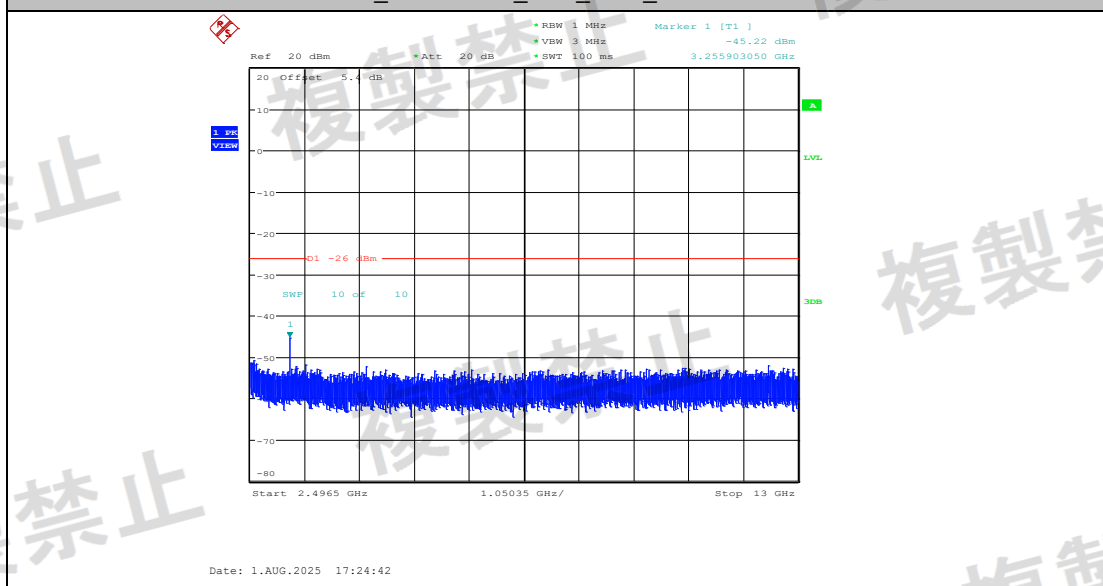


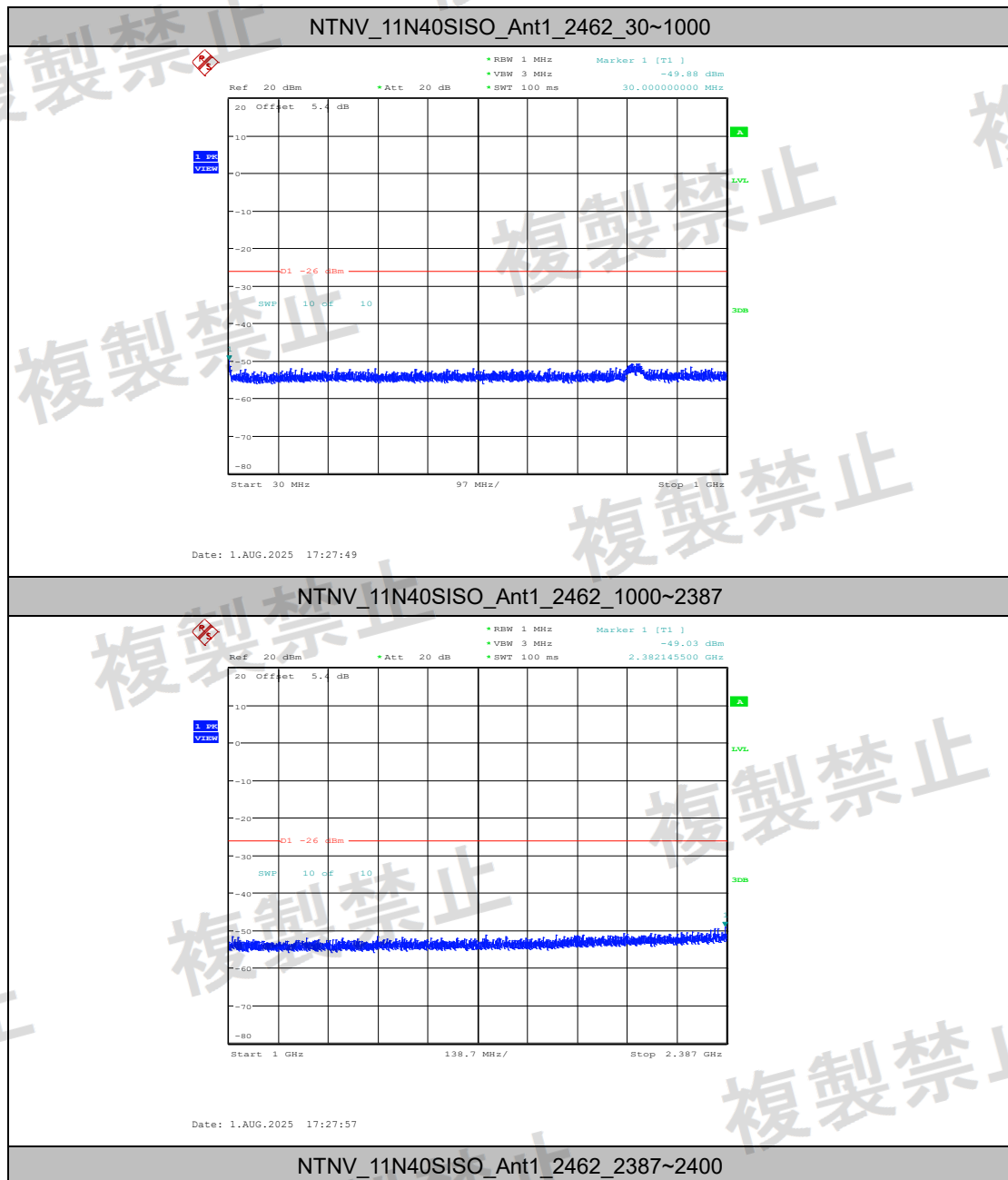


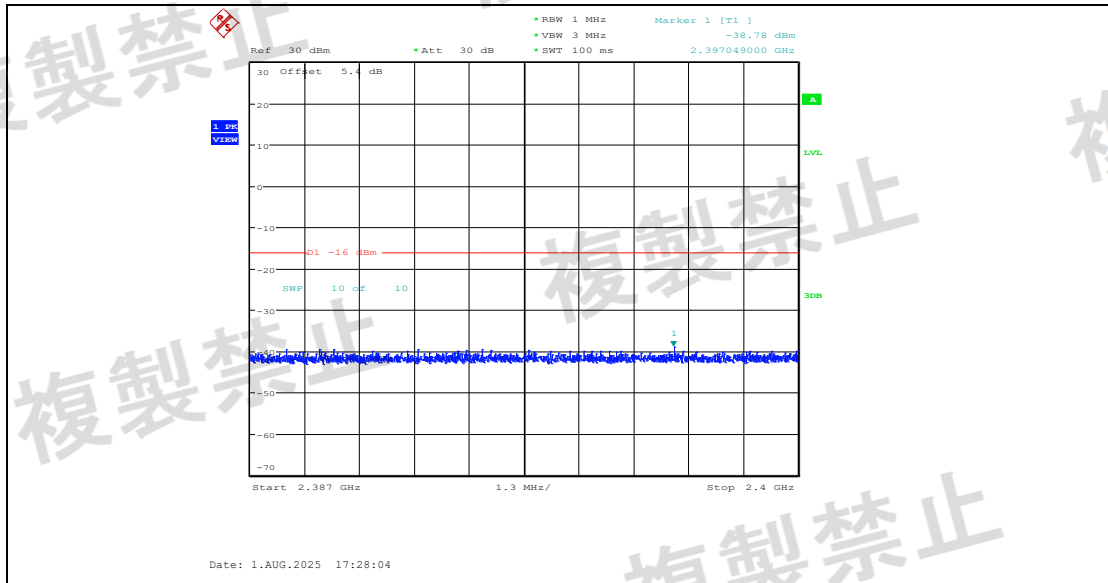
NTNV_11N40SISO_Ant1_2442_2483.5~2496.5



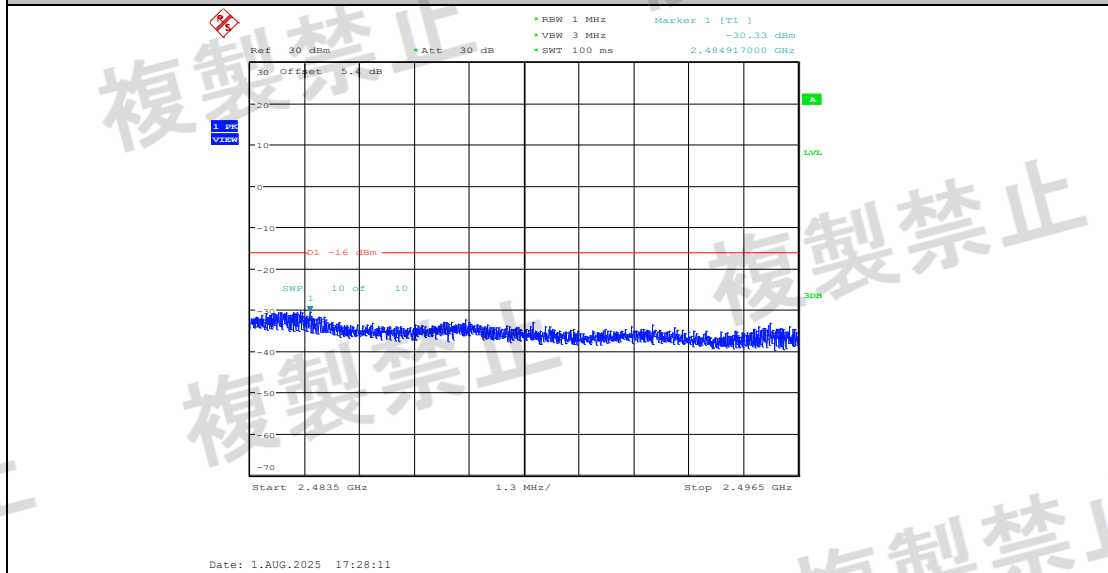
NTNV_11N40SISO_Ant1_2442_2496.5~13000



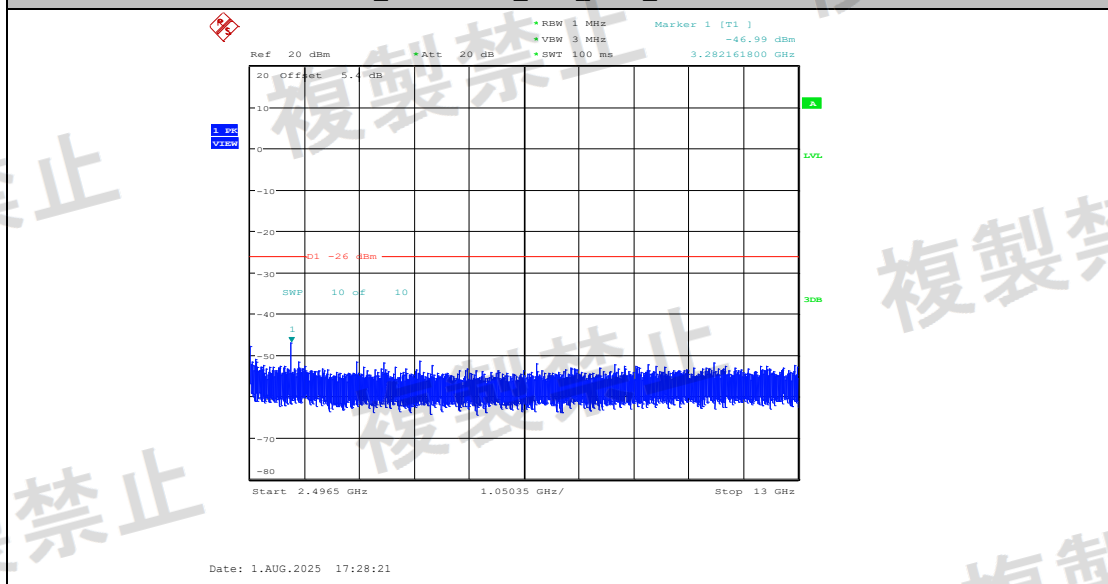




NTNV_11N40SISO_Ant1_2462_2483.5~2496.5



NTNV_11N40SISO_Ant1_2462_2496.5~13000

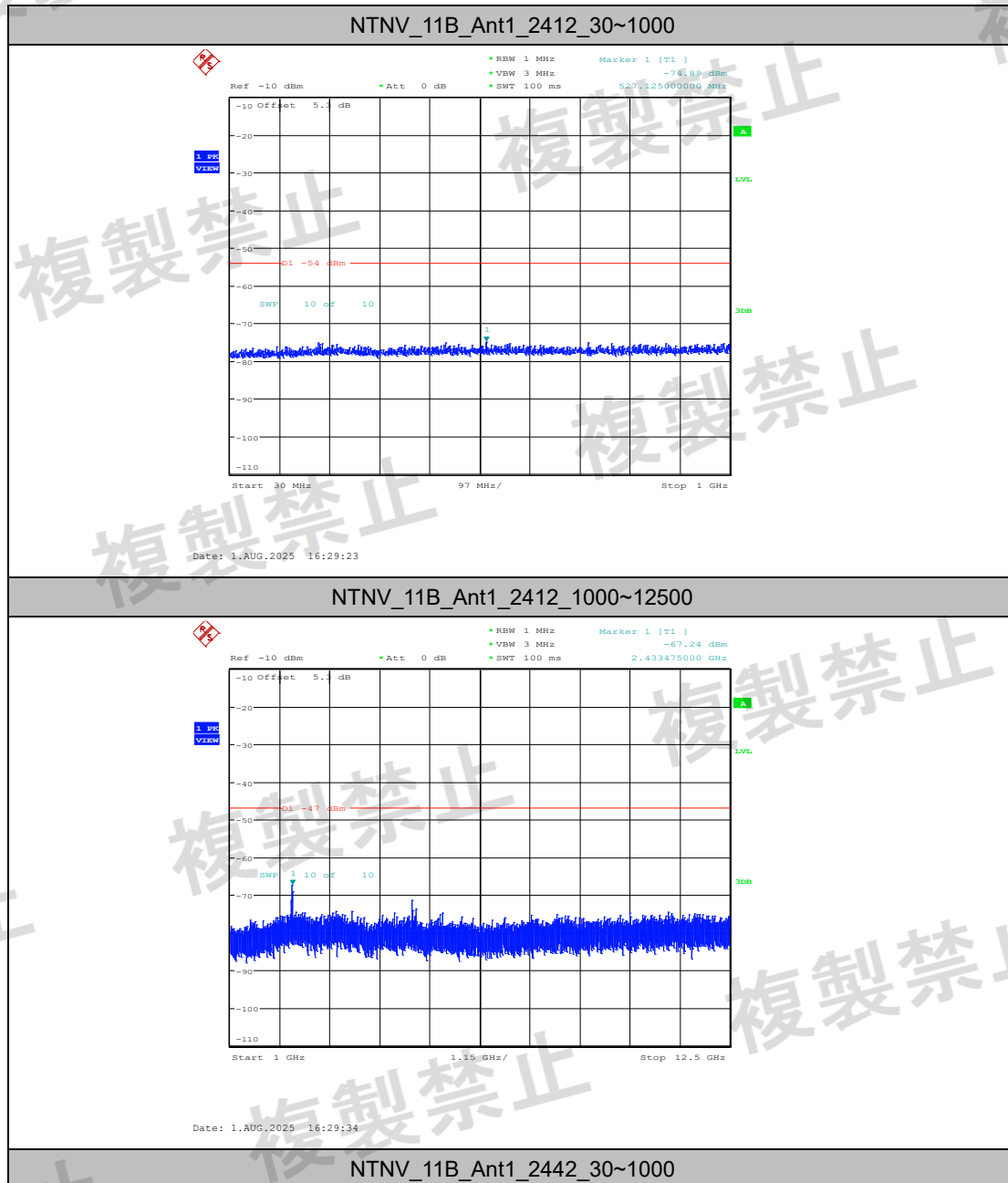


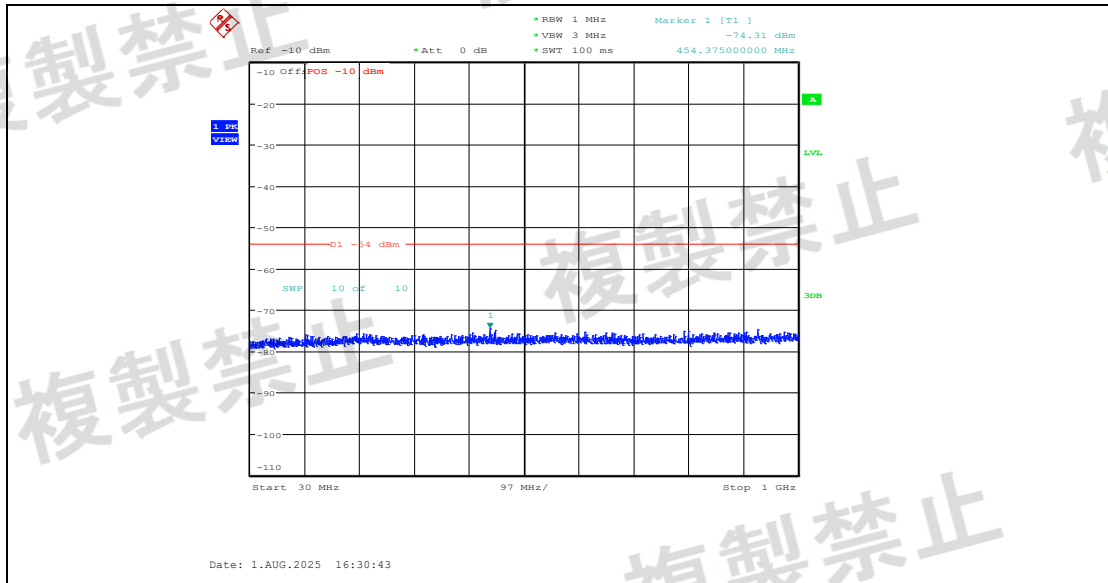
Appendix F: Spurious Emission of RX

Test Result

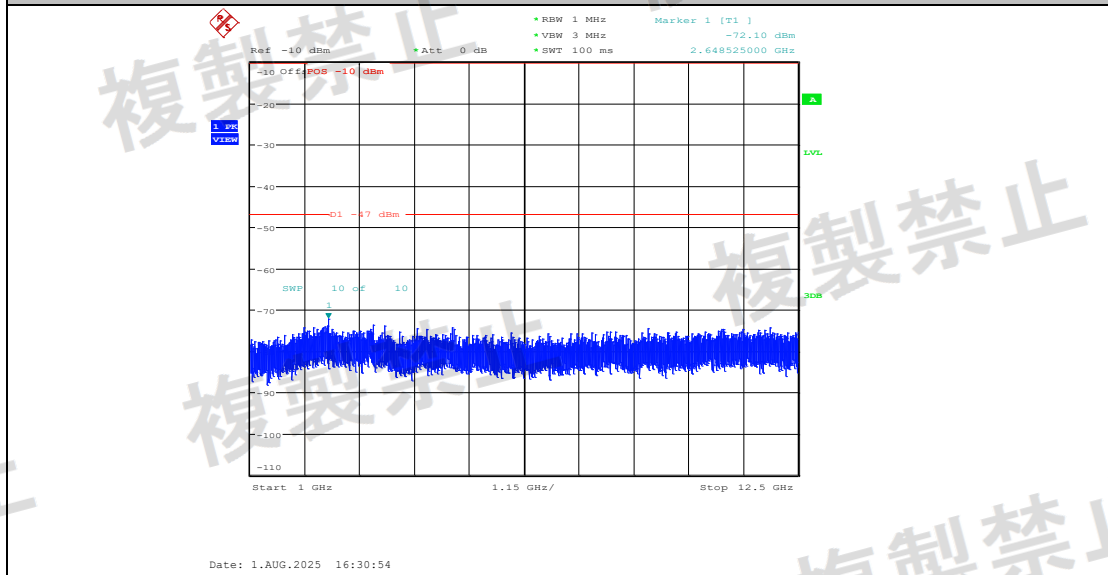
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	527.13	-74.89	≤-54	0.03243	≤4	PASS
				1000~12500	2433.48	-67.24	≤-47	0.18880	≤20	PASS
			2442	30~1000	454.38	-74.31	≤-54	0.03707	≤4	PASS
				1000~12500	2648.53	-72.10	≤-47	0.06166	≤20	PASS
			2472	30~1000	978.66	-74.58	≤-54	0.03483	≤4	PASS
				1000~12500	2438.65	-60.96	≤-47	0.80168	≤20	PASS
	11G	Ant1	2412	30~1000	686.21	-74.59	≤-54	0.03475	≤4	PASS
				1000~12500	2423.70	-61.98	≤-47	0.63387	≤20	PASS
			2442	30~1000	988.36	-74.59	≤-54	0.03475	≤4	PASS
				1000~12500	2435.20	-62.14	≤-47	0.61094	≤20	PASS
			2472	30~1000	827.83	-73.14	≤-54	0.04853	≤4	PASS
				1000~12500	2440.38	-58.30	≤-47	1.47911	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	564.47	-74.56	≤-54	0.03499	≤4	PASS
				1000~12500	2435.78	-58.62	≤-47	1.37404	≤20	PASS
			2442	30~1000	828.31	-74.61	≤-54	0.03459	≤4	PASS
				1000~12500	2441.53	-58.84	≤-47	1.30617	≤20	PASS
			2472	30~1000	975.75	-74.43	≤-54	0.03606	≤4	PASS
				1000~12500	2441.53	-60.97	≤-47	0.79983	≤20	PASS
	11N40SI SO	Ant1	2422	30~1000	827.83	-68.22	≤-54	0.15066	≤4	PASS
				1000~12500	5200.38	-67.34	≤-47	0.18450	≤20	PASS
			2442	30~1000	68.80	-74.31	≤-54	0.03707	≤4	PASS
				1000~12500	2439.23	-67.18	≤-47	0.19143	≤20	PASS
			2462	30~1000	974.78	-74.56	≤-54	0.03499	≤4	PASS
				1000~12500	2438.08	-59.71	≤-47	1.06905	≤20	PASS

Test Graphs

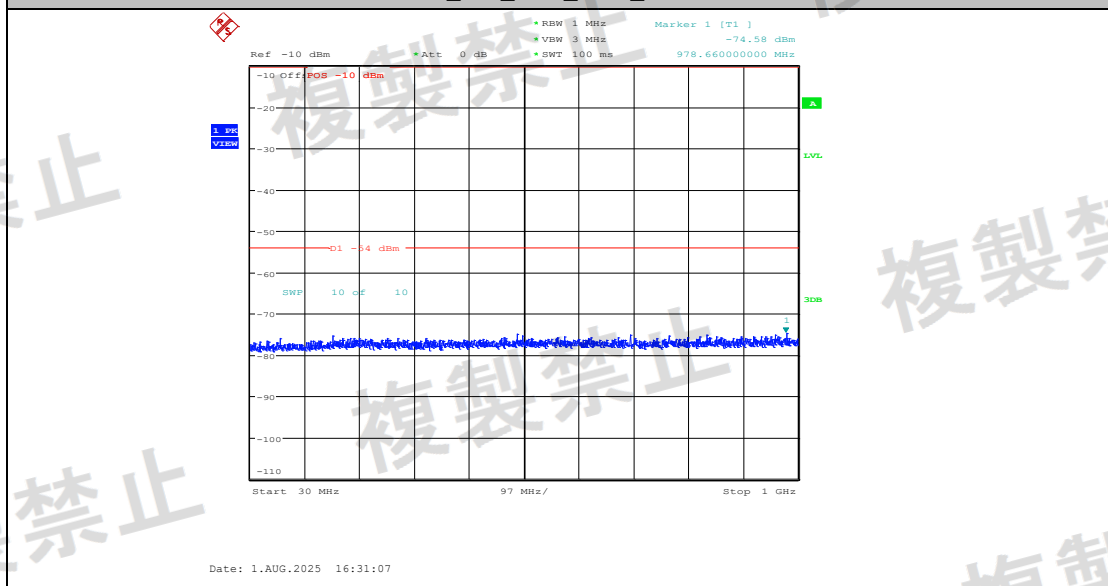


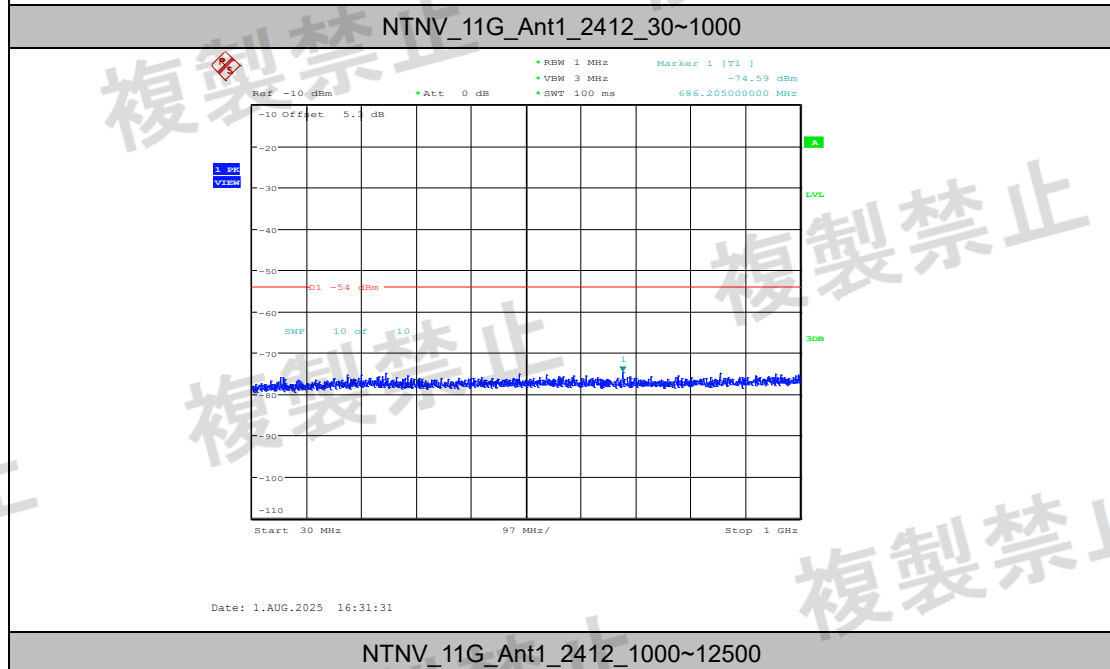
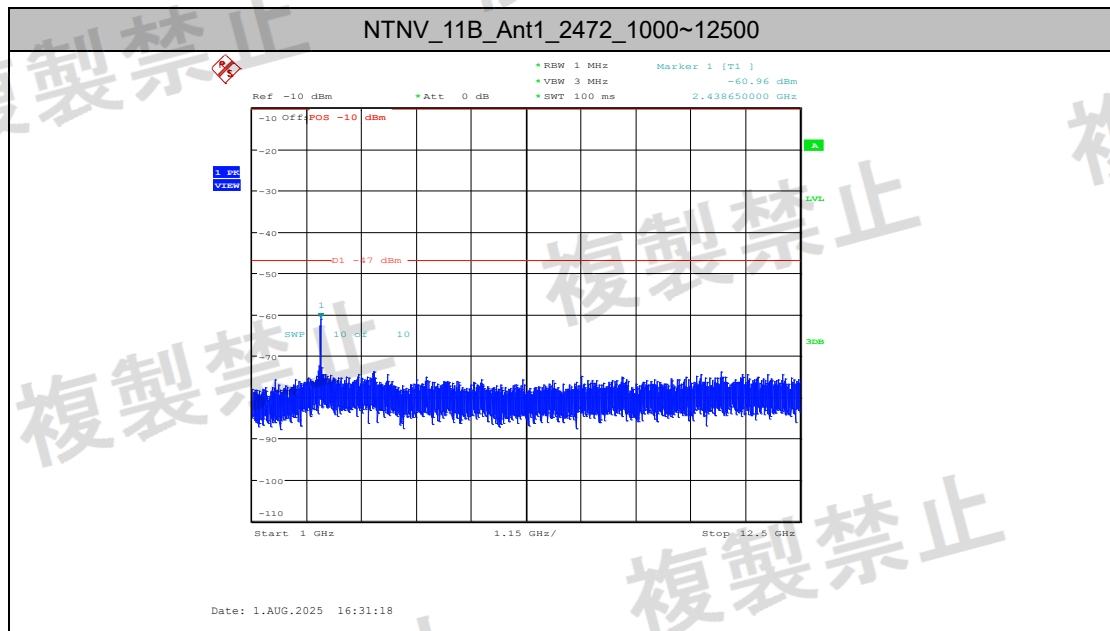


NTVN_11B_Ant1_2442_1000~12500

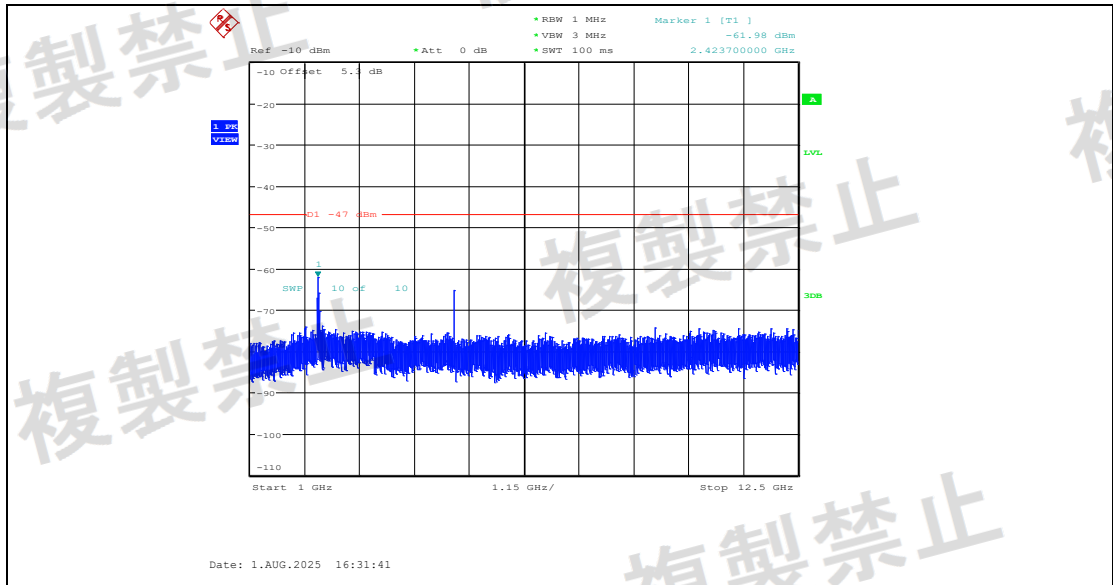


NTVN_11B_Ant1_2472_30~1000

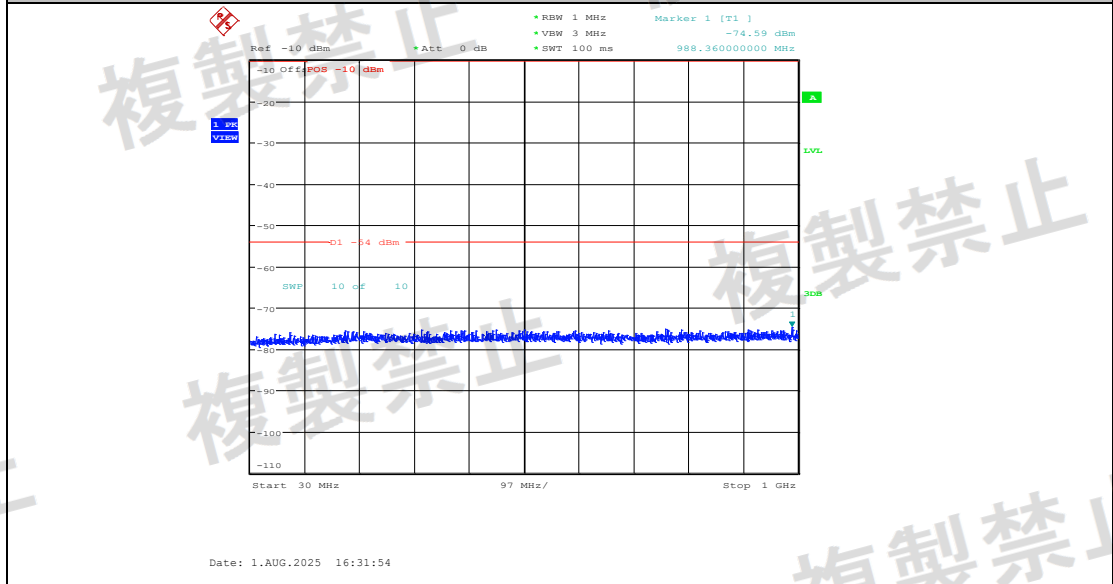




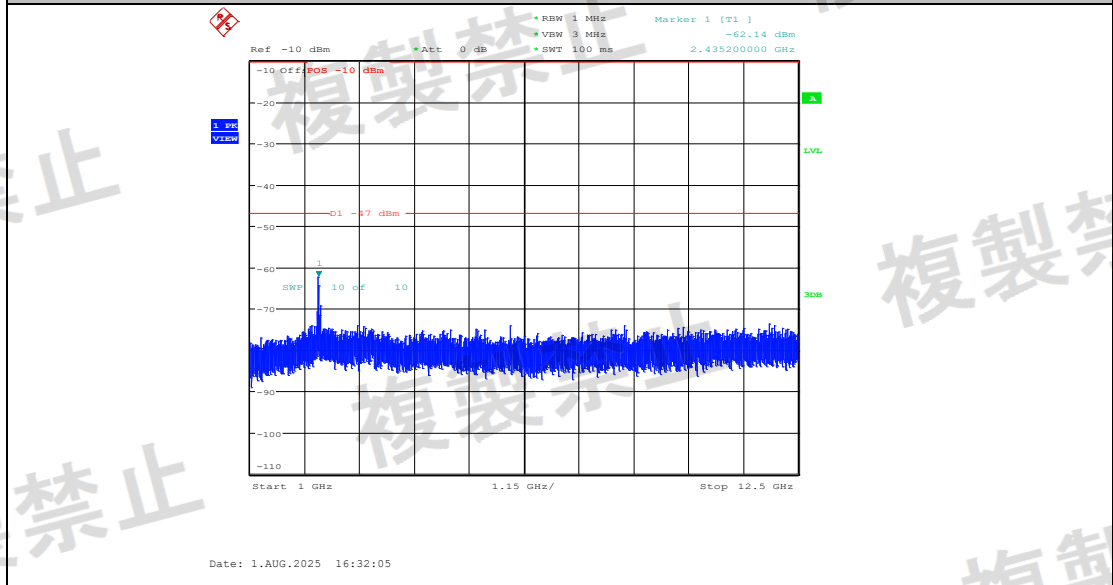
NTNV_11G_Ant1_2412_1000~12500

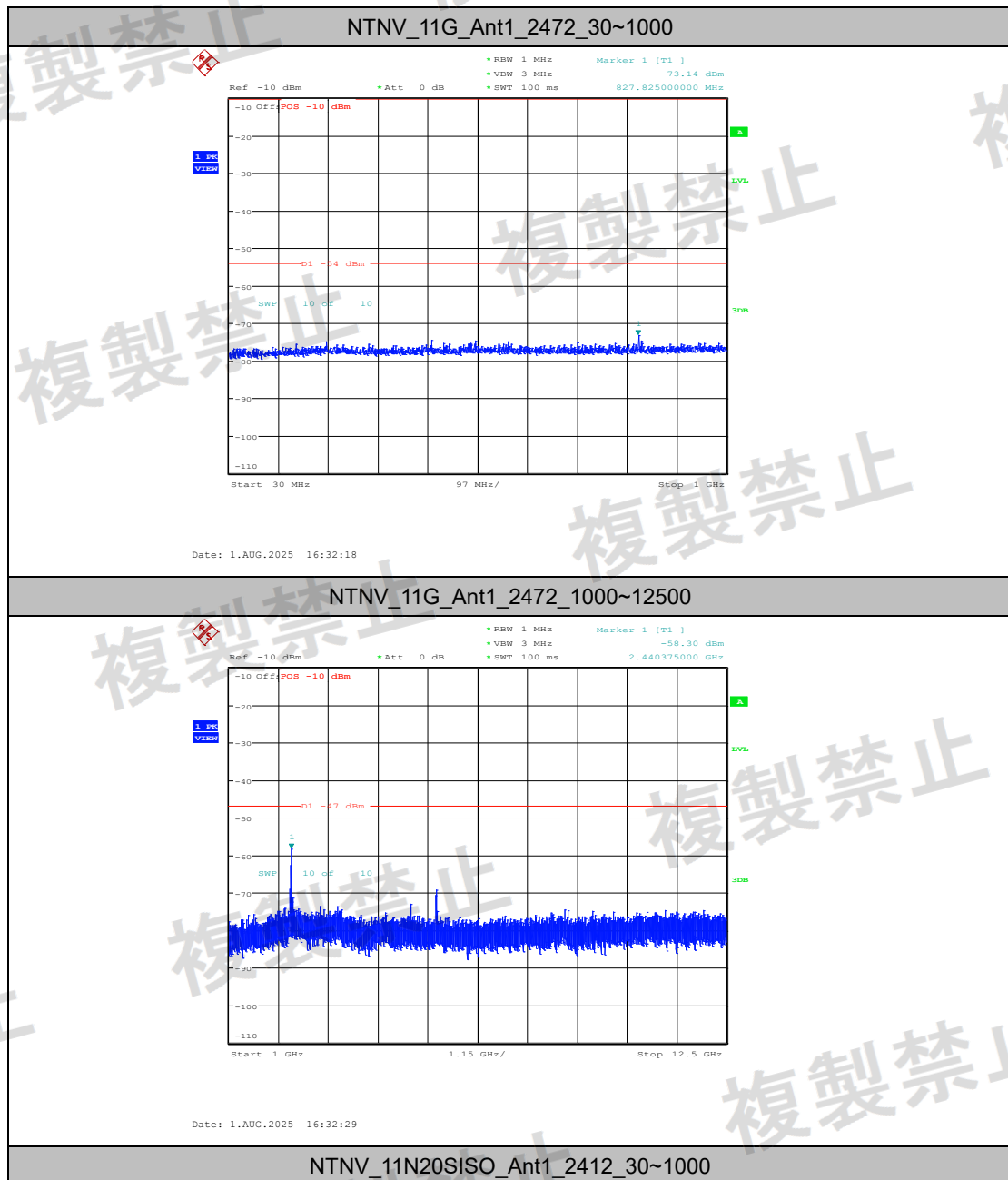


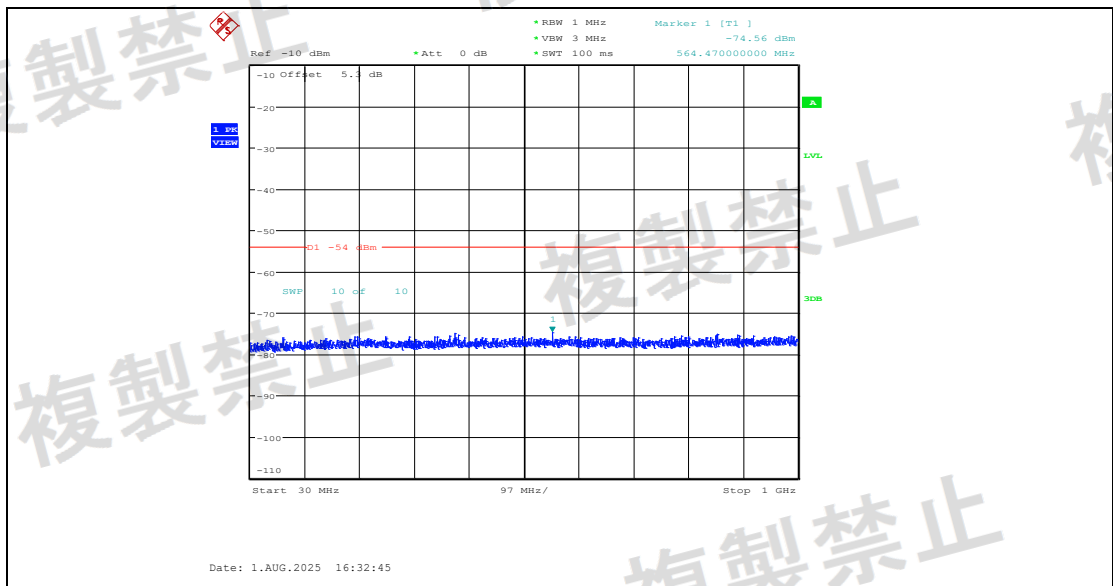
NTNV_11G_Ant1_2442_30~1000



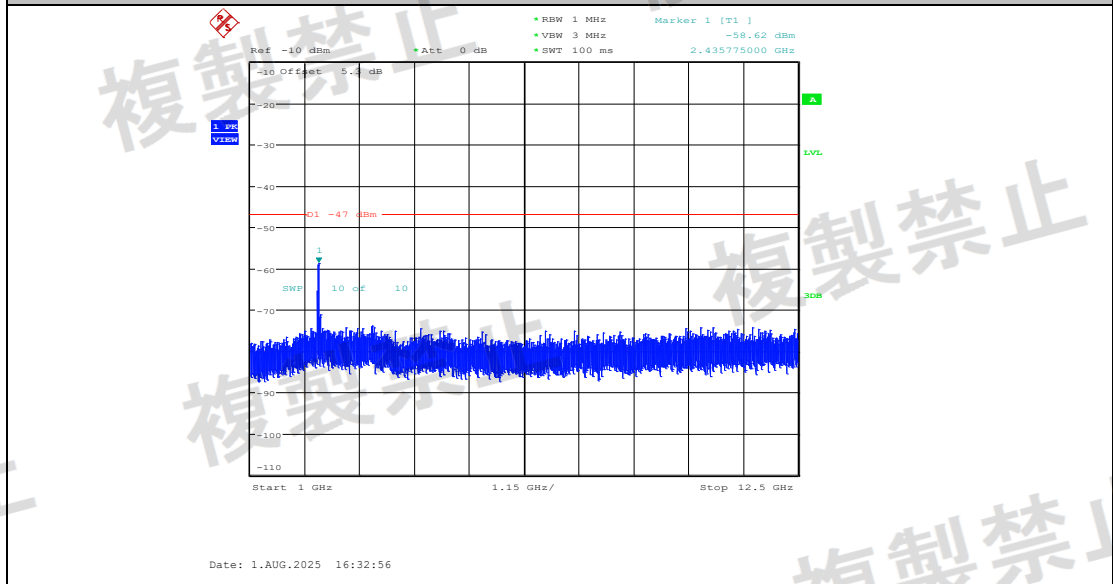
NTNV_11G_Ant1_2442_1000~12500



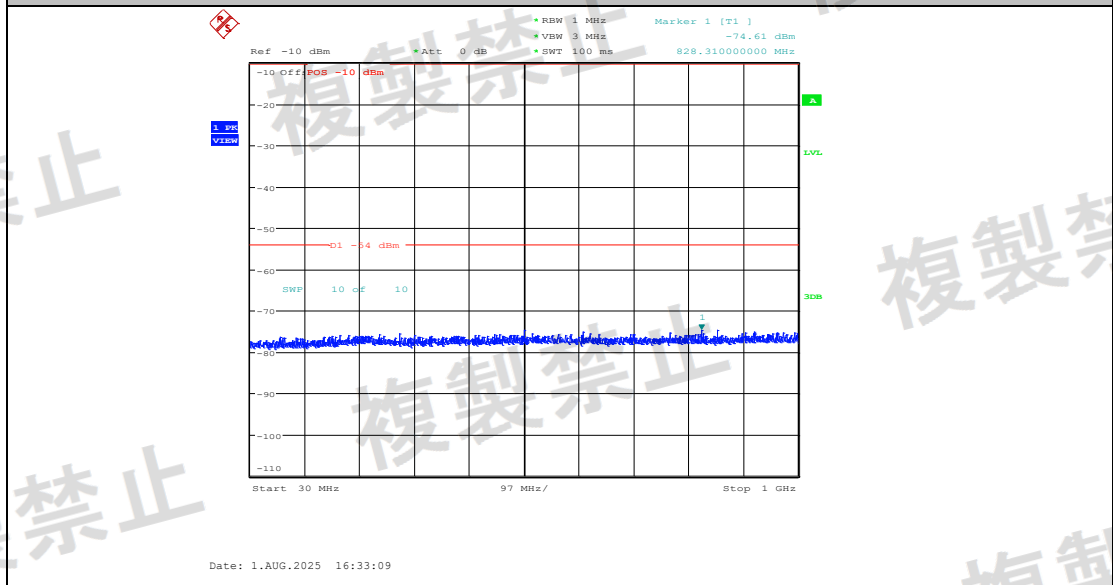


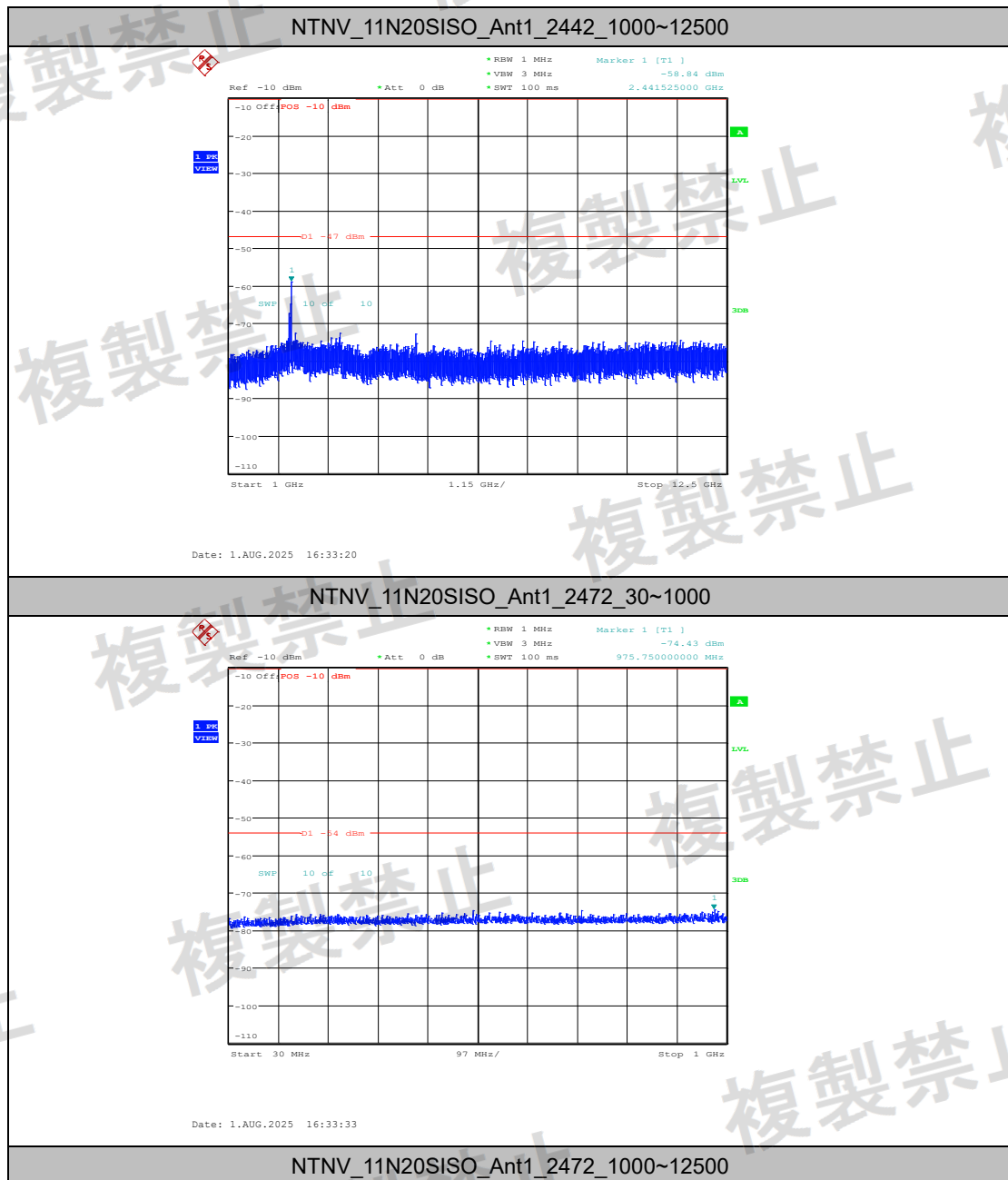


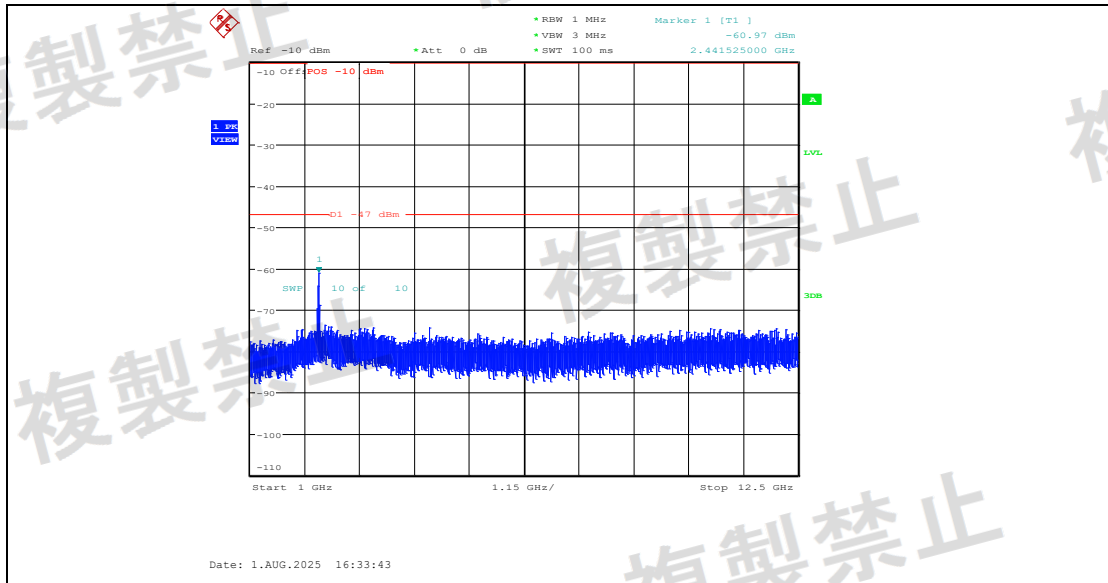
NTNV_11N20SISO_Ant1_2412_1000~12500



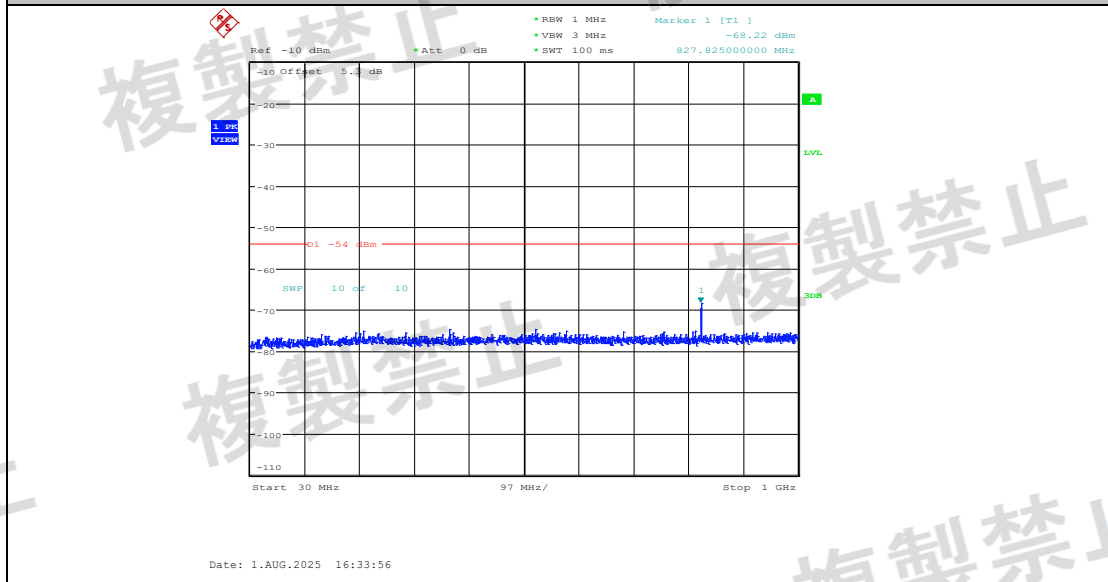
NTNV_11N20SISO_Ant1_2442_30~1000







NTNV_11N40SISO_Ant1_2422_30~1000



NTNV_11N40SISO_Ant1_2422_1000~12500

