

Appendix RF Test Data for 2.4GWIFI

Company : TATA CORPORATION

EUT : Kids'Walkie-Talkie

Model Number : TKTC-12

Report No. : CTA26032001801

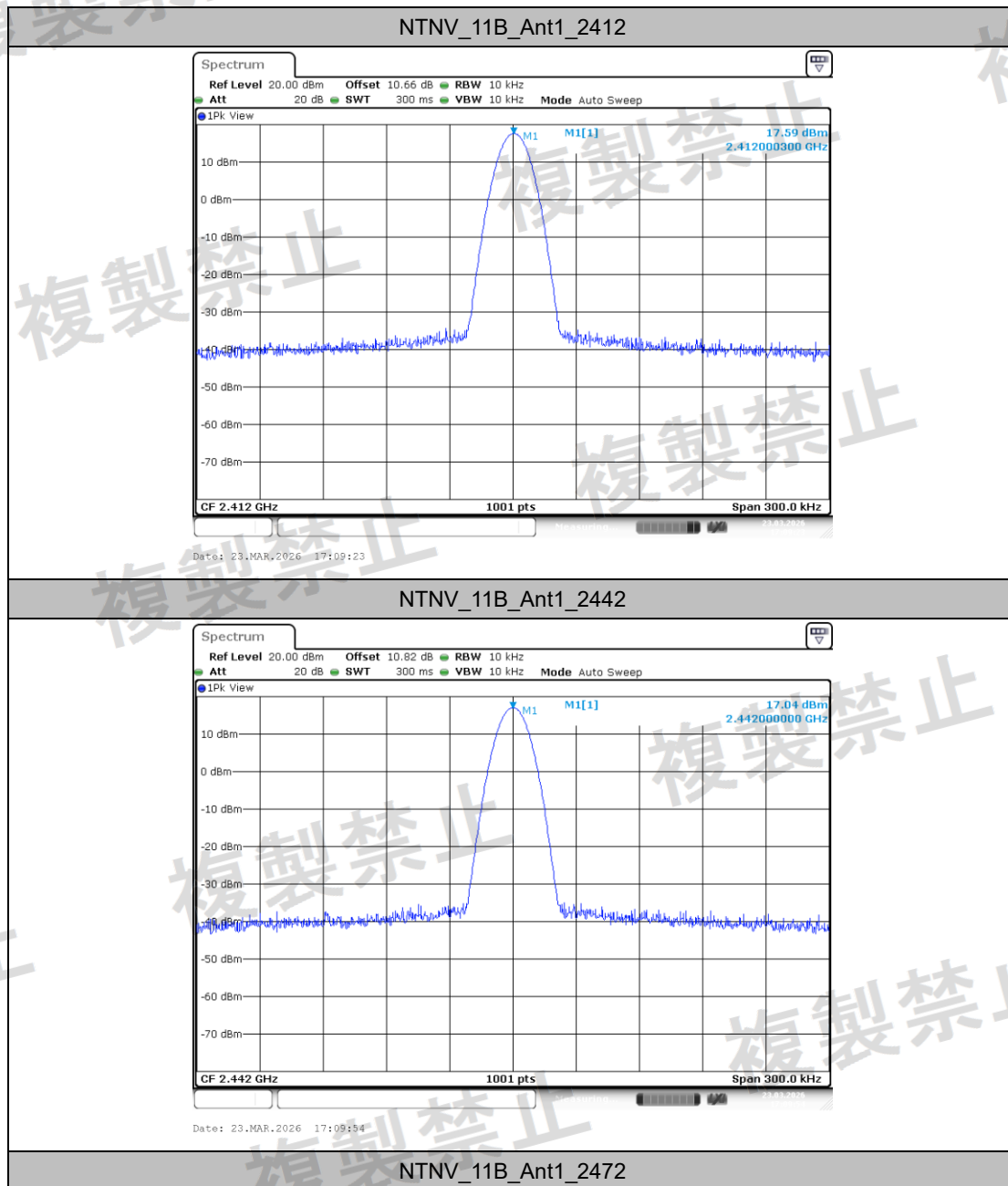
Reviewed By : Eric Wang

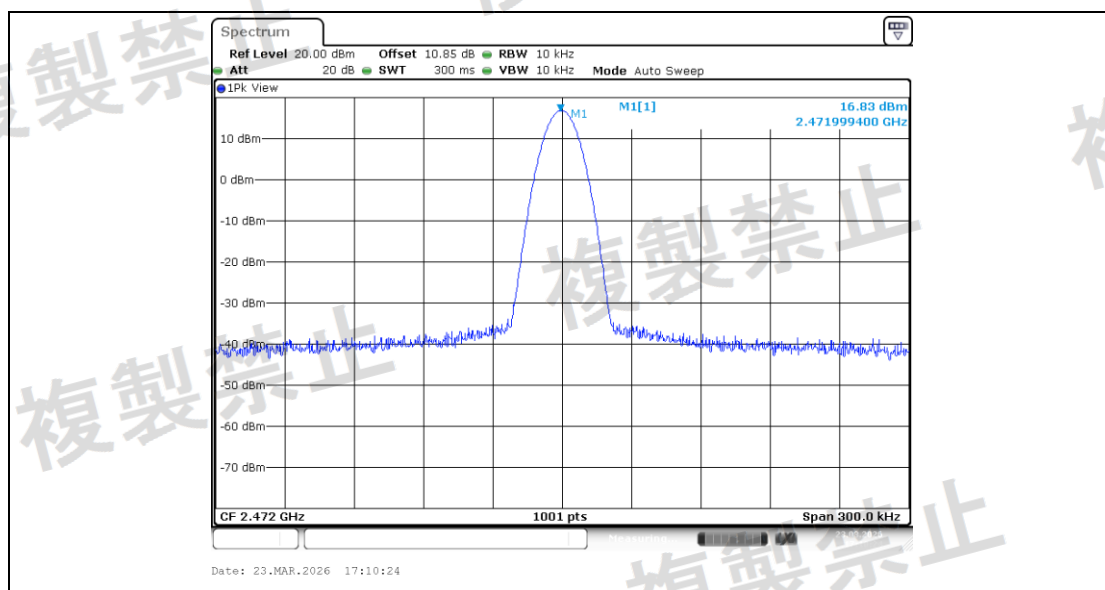
Appendix A: Frequency Error

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	CenterFrequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2412.0003	0.12438	±50	PASS
			2442	2442	0.00000	±50	PASS
			2472	2471.9994	-0.24272	±50	PASS

Test Graphs



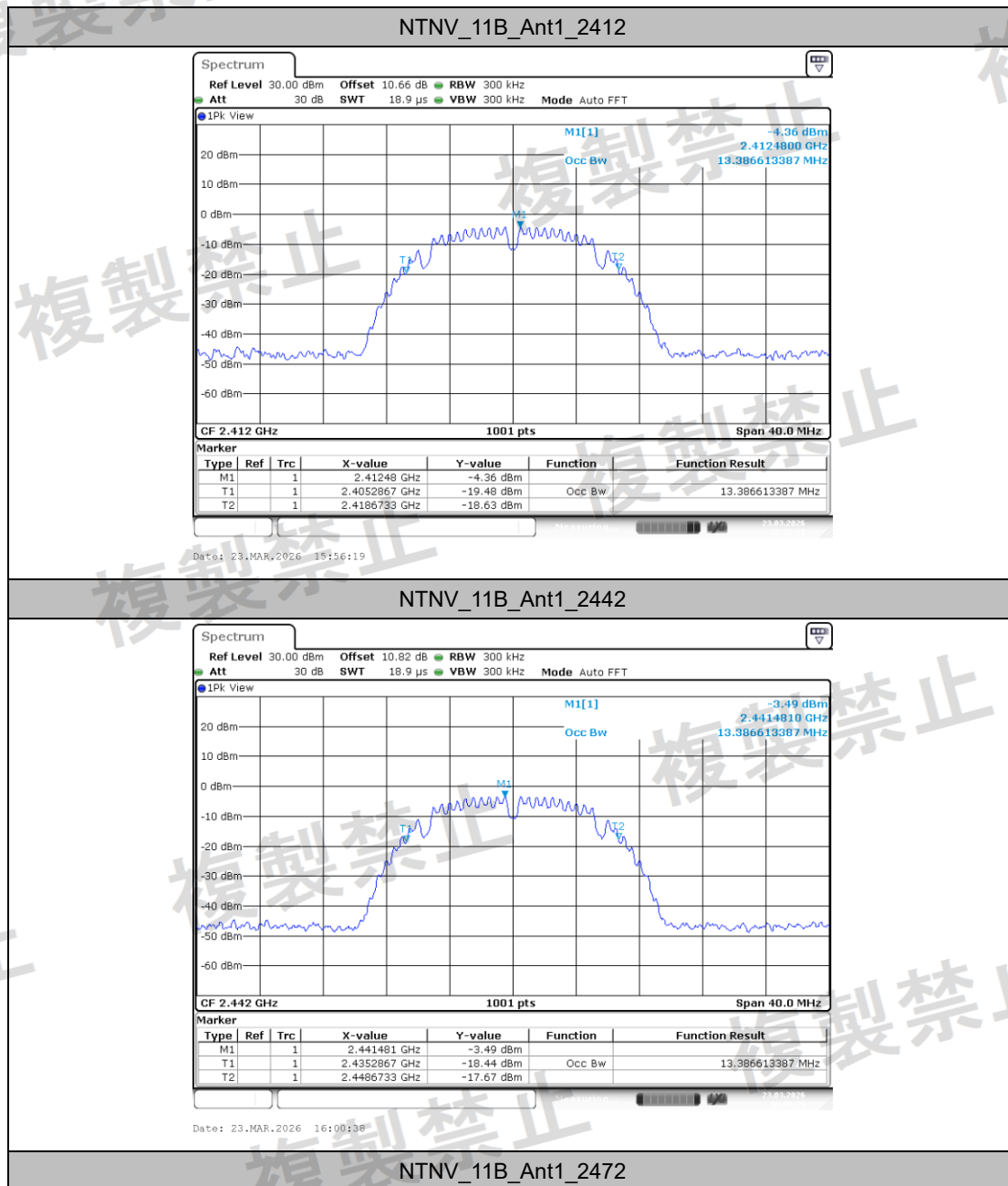


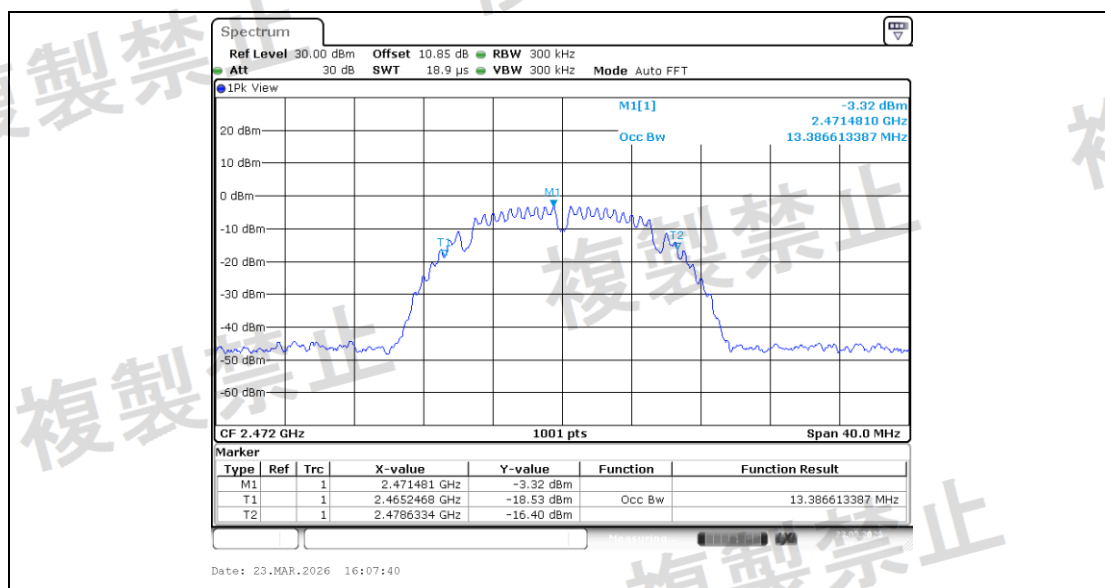
Appendix B: Occupied Bandwidth

Test Result

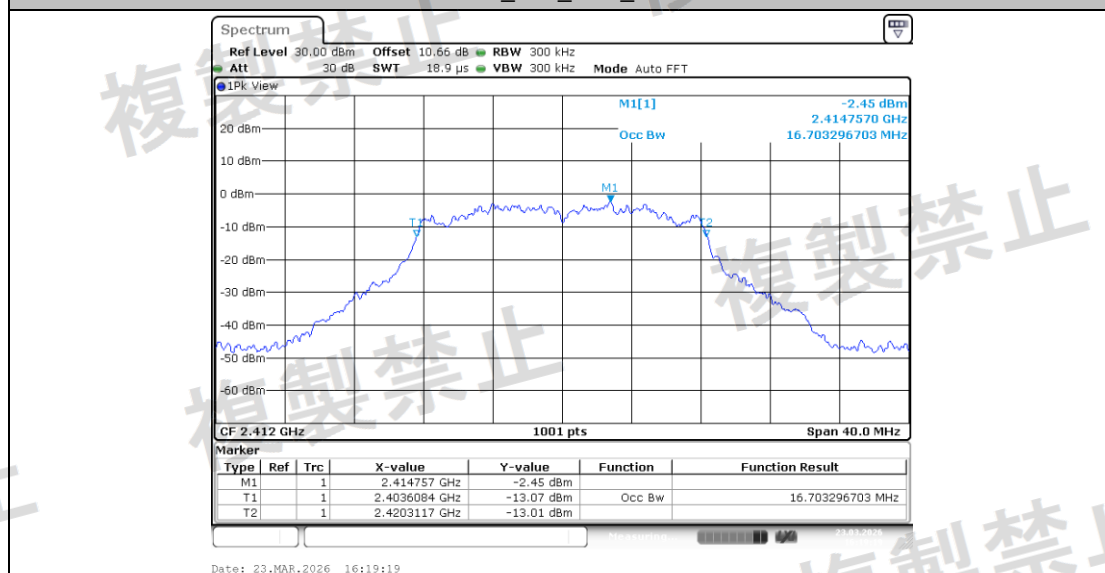
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	13.387	≤26	PASS
			2442	13.387	≤26	PASS
			2472	13.387	≤26	PASS
	11G	Ant1	2412	16.703	≤26	PASS
			2442	16.583	≤26	PASS
			2472	16.543	≤26	PASS
	11N20SI SO	Ant1	2412	17.782	≤26	PASS
			2442	17.822	≤26	PASS
			2472	17.662	≤26	PASS

Test Graphs

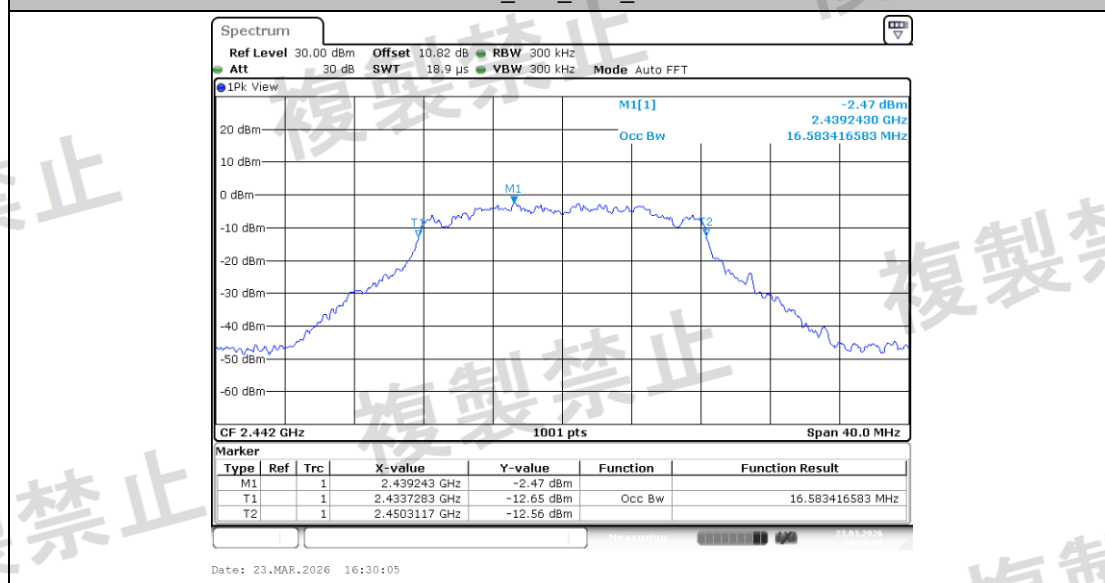


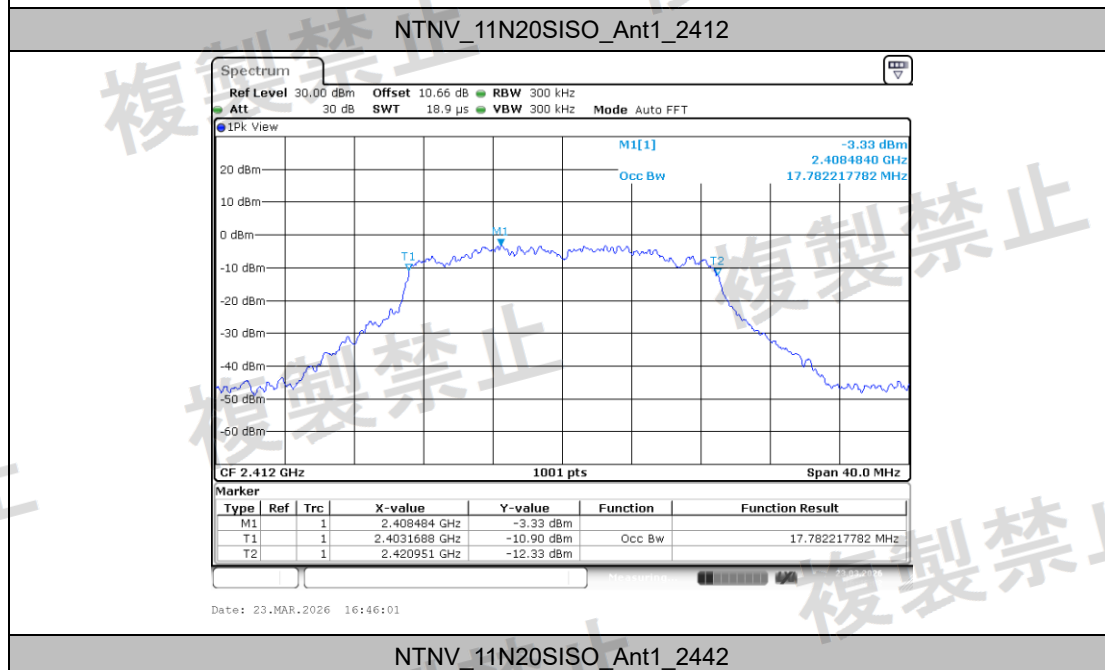
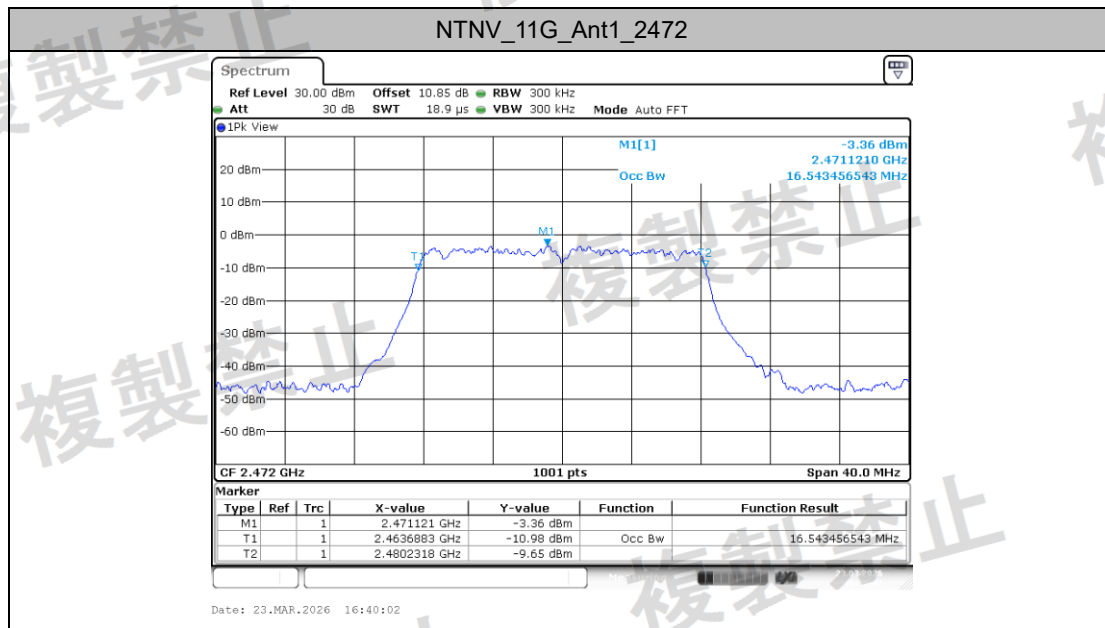


NTNV_11G_Ant1_2412

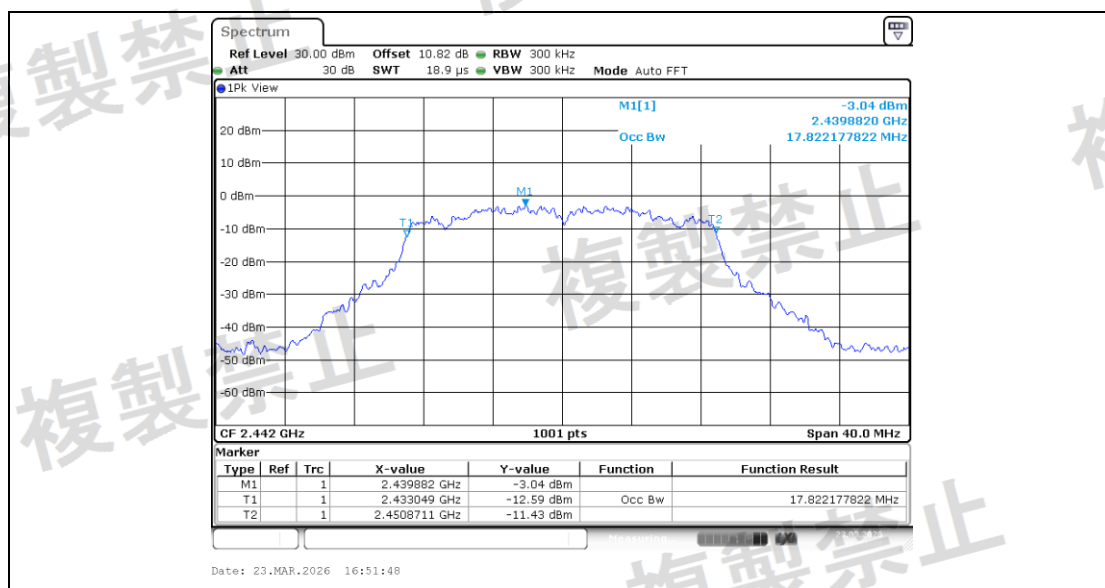


NTNV_11G_Ant1_2442

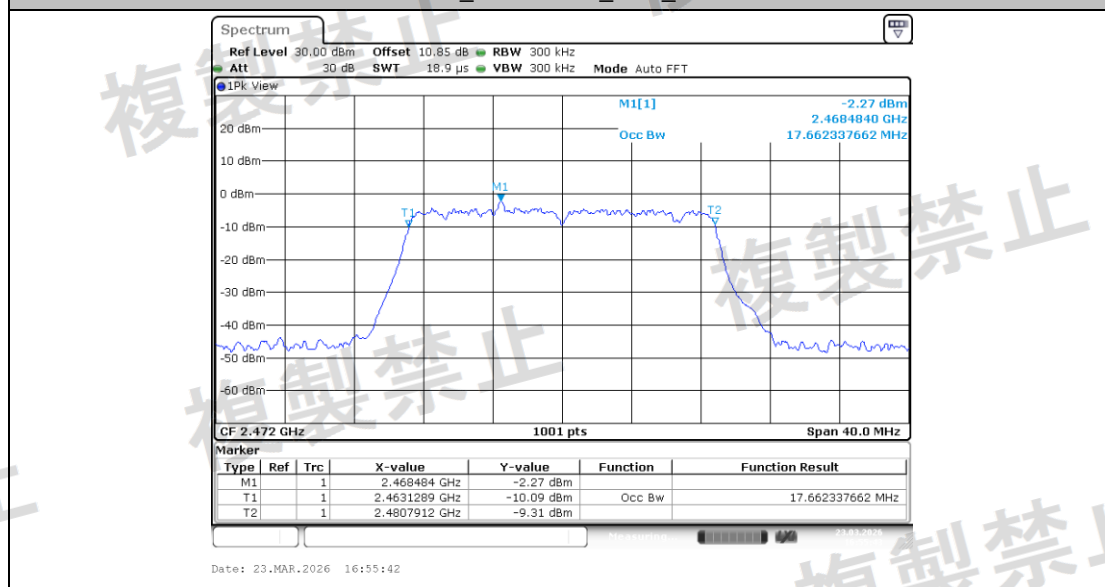




NTNV_11N20SISO_Ant1_2442



NTV_11N20SISO_Ant1_2472

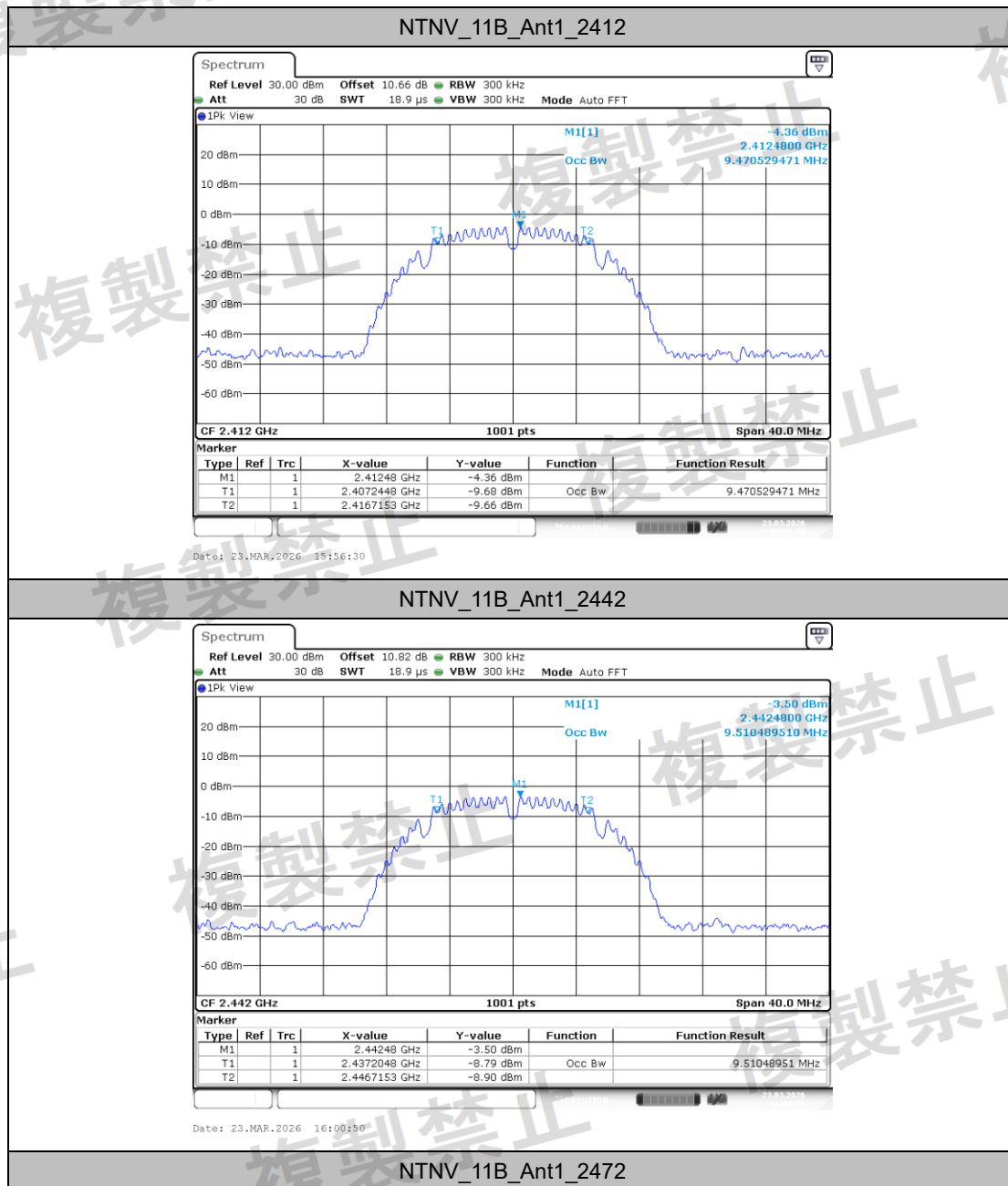


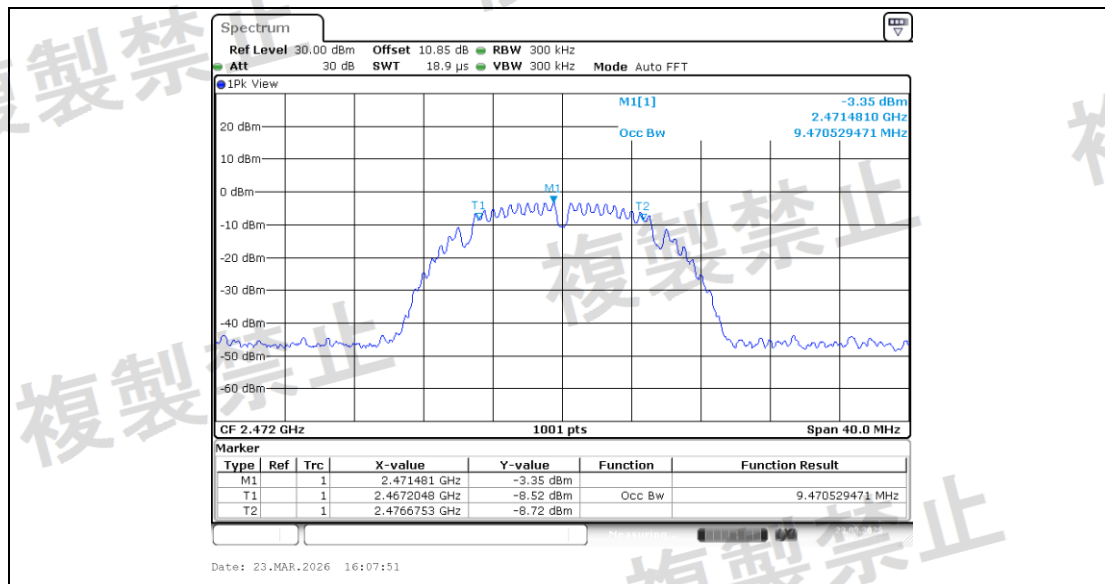
Appendix C: Spread Bandwidth

Test Result

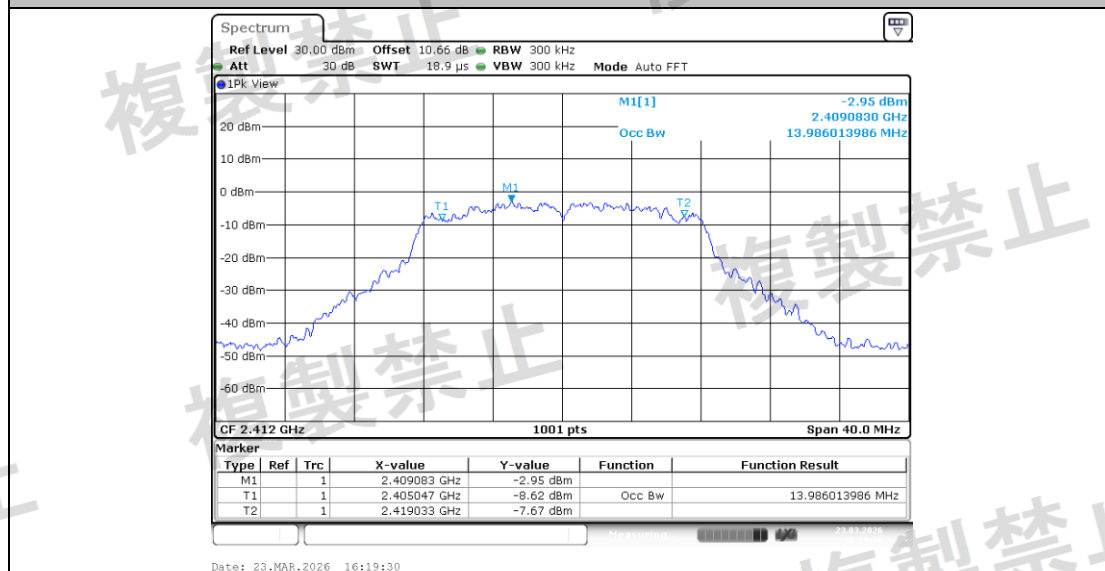
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	9.471	≥0.5	6.888	>5	PASS
			2442	9.510	≥0.5	6.916	>5	PASS
			2472	9.471	≥0.5	6.888	>5	PASS
	11G	Ant1	2412	13.986	≥0.5	---	---	PASS
			2442	14.106	≥0.5	---	---	PASS
			2472	14.785	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	14.905	≥0.5	---	---	PASS
			2442	14.825	≥0.5	---	---	PASS
			2472	15.824	≥0.5	---	---	PASS

Test Graphs

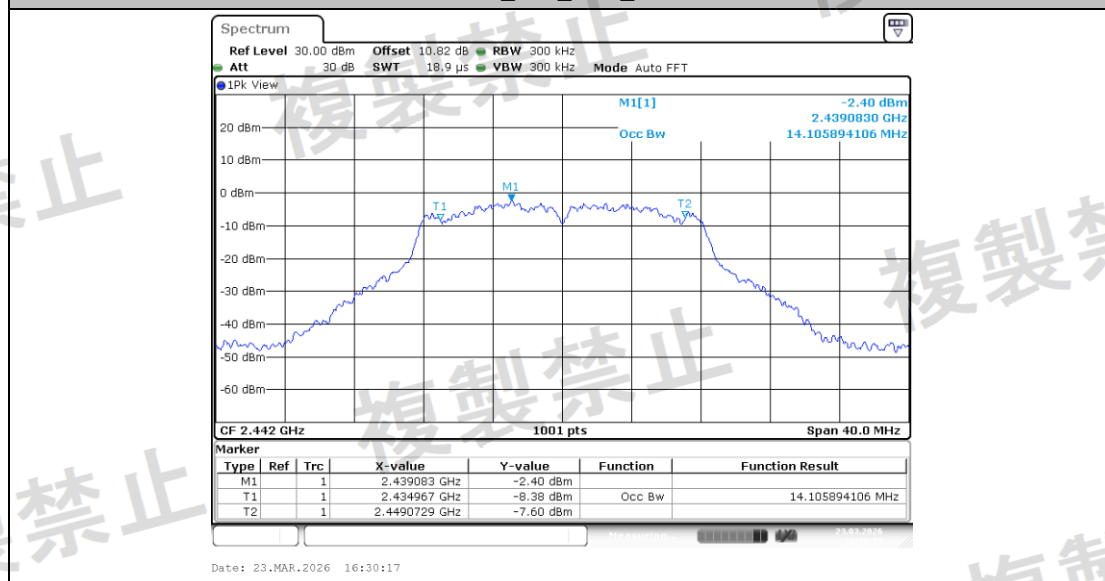


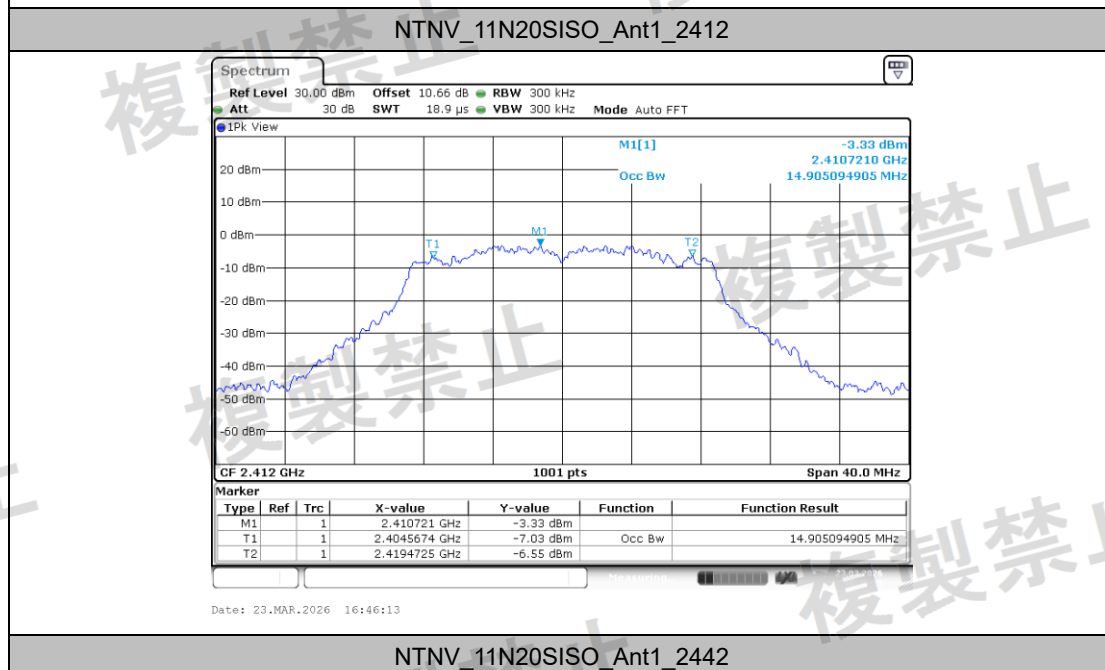
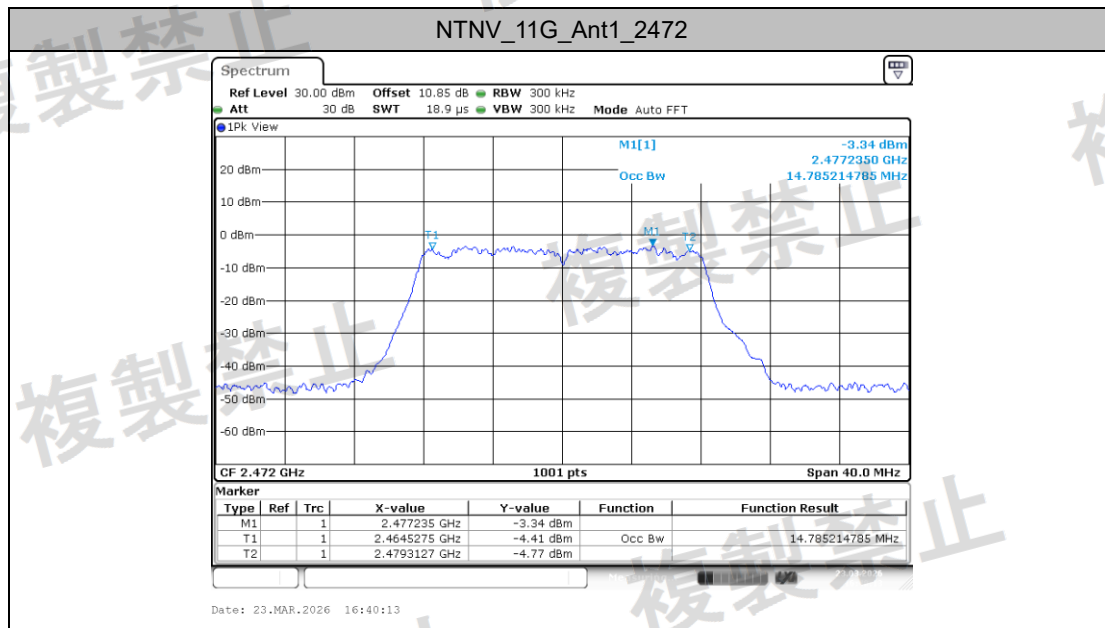


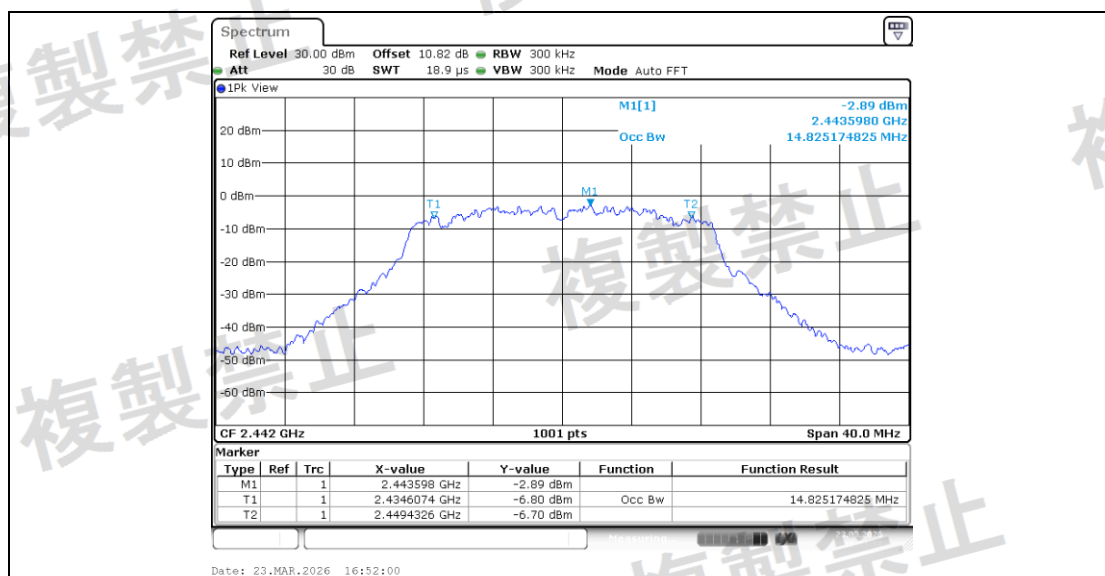
NTNV_11G_Ant1_2412



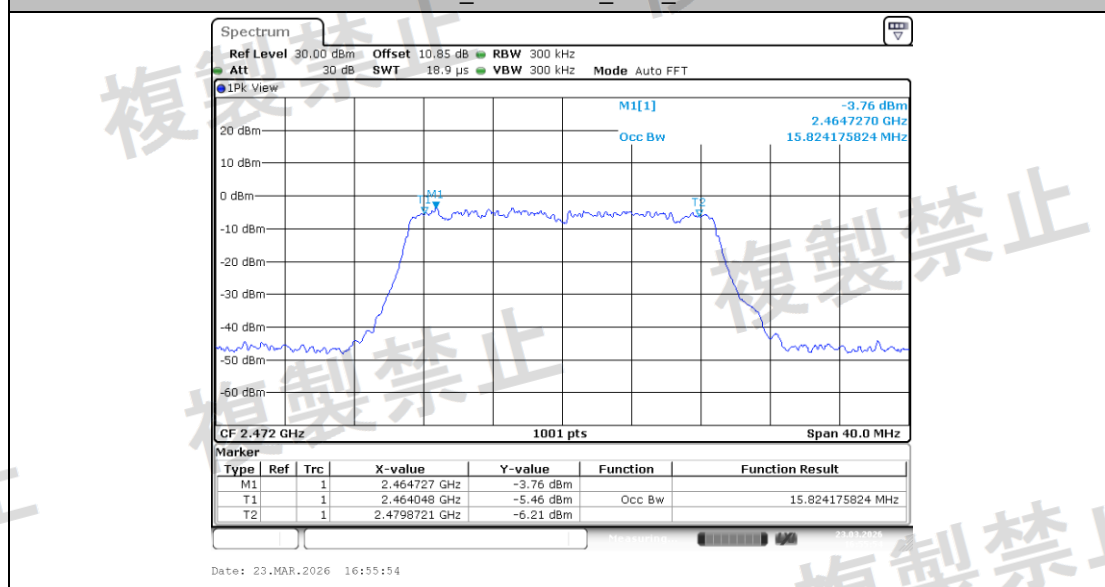
NTNV_11G_Ant1_2442







NTV_11N20SISO_Ant1_2472



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	239.52	-53.31	≤-26	0.00467	≤2.5	PASS
				1000~2387	1698.01	-53.37	≤-26	0.00460	≤2.5	PASS
				2387~2400	2397.50	-42.46	≤-16	0.05675	≤25	PASS
				2483.5~2496.5	2486.75	-43.15	≤-16	0.04842	≤25	PASS
				2496.5~13000	6916.37	-48.16	≤-26	0.01528	≤2.5	PASS
			2442	30~1000	644.25	-53.03	≤-26	0.00498	≤2.5	PASS
				1000~2387	2157.10	-53.40	≤-26	0.00457	≤2.5	PASS
				2387~2400	2391.62	-43.04	≤-16	0.04966	≤25	PASS
				2483.5~2496.5	2488.86	-42.96	≤-16	0.05058	≤25	PASS
				2496.5~13000	6945.26	-48.62	≤-26	0.01374	≤2.5	PASS
			2472	30~1000	960.96	-53.45	≤-26	0.00452	≤2.5	PASS
				1000~2387	2349.90	-52.35	≤-26	0.00582	≤2.5	PASS
				2387~2400	2393.32	-42.89	≤-16	0.05140	≤25	PASS
				2483.5~2496.5	2486.91	-42.22	≤-16	0.05998	≤25	PASS
				2496.5~13000	6636.98	-48.56	≤-26	0.01393	≤2.5	PASS
	11G	Ant1	2412	30~1000	880.69	-53.42	≤-26	0.00455	≤2.5	PASS
				1000~2387	2380.76	-52.54	≤-26	0.00557	≤2.5	PASS
				2387~2400	2399.98	-20.80	≤-16	8.31764	≤25	PASS
				2483.5~2496.5	2495.93	-43.27	≤-16	0.04710	≤25	PASS
				2496.5~13000	6917.42	-49.07	≤-26	0.01239	≤2.5	PASS
			2442	30~1000	979.15	-52.97	≤-26	0.00505	≤2.5	PASS
				1000~2387	2267.3	-52.91	≤-26	0.00512	≤2.5	PASS

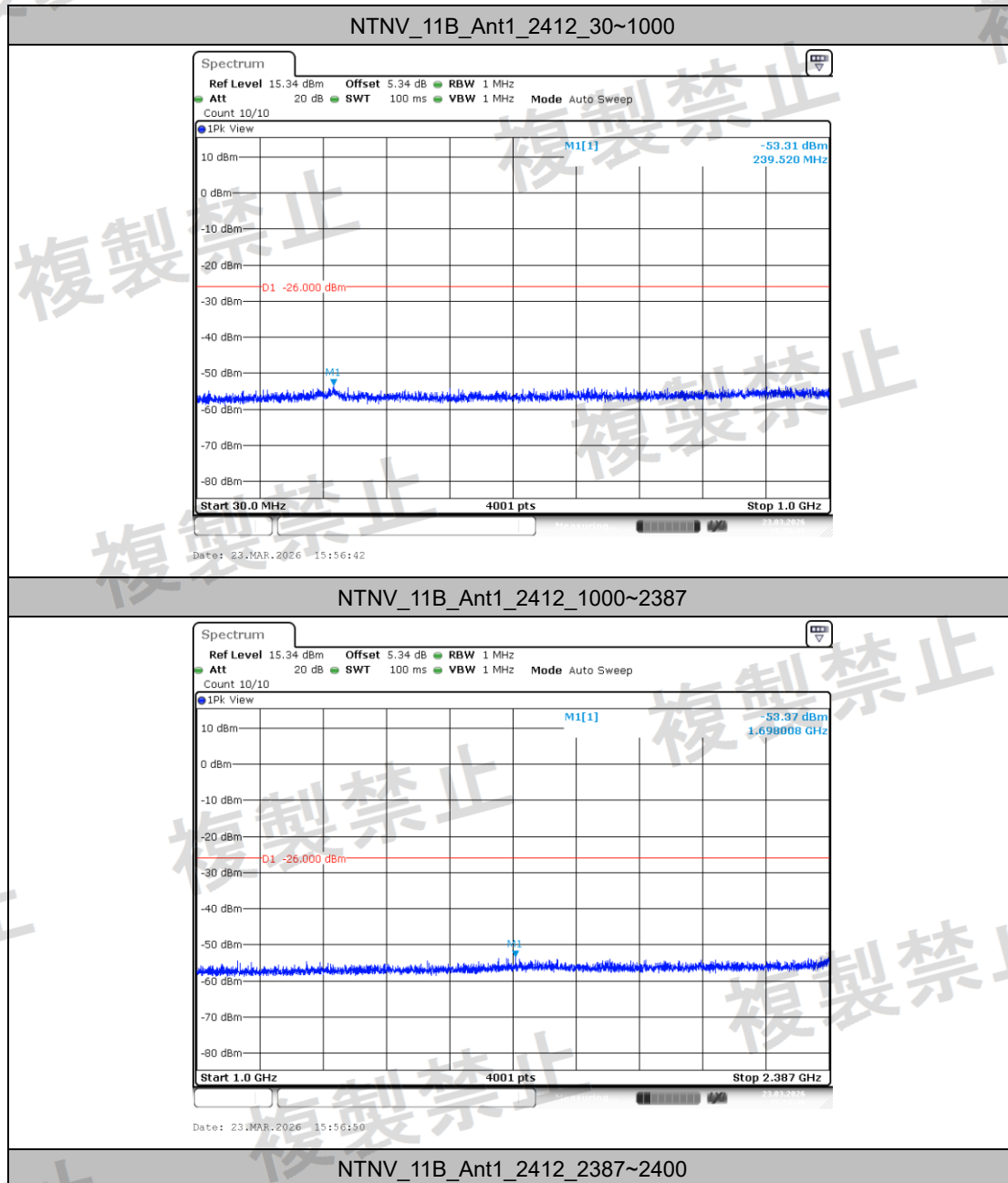
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				2387~2400	2393.2 3	-42.12	≤-16	0.06138	≤25	PASS
				2483.5~2496.5	2495.4 9	-42.71	≤-16	0.05358	≤25	PASS
				2496.5~13000	6962.5 9	-48.77	≤-26	0.01327	≤2.5	PASS
			2472	30~1000	929.68	-52.22	≤-26	0.00600	≤2.5	PASS
				1000~2387	1809.3 1	-53.10	≤-26	0.00490	≤2.5	PASS
				2387~2400	2387.4 9	-43.49	≤-16	0.04477	≤25	PASS
				2483.5~2496.5	2483.5 1	-27.20	≤-16	1.90546	≤25	PASS
				2496.5~13000	6727.3 1	-48.83	≤-26	0.01309	≤2.5	PASS
	11N20SI SO	Ant1	2412	30~1000	244.37	-51.98	≤-26	0.00634	≤2.5	PASS
				1000~2387	2380.0 7	-52.58	≤-26	0.00552	≤2.5	PASS
				2387~2400	2399.9 7	-18.83	≤-16	13.0918 2	≤25	See table below
				2483.5~2496.5	2492.8 9	-43.25	≤-16	0.04732	≤25	PASS
				2496.5~13000	6985.7 0	-49.17	≤-26	0.01211	≤2.5	PASS
			2442	30~1000	897.18	-52.92	≤-26	0.00511	≤2.5	PASS
				1000~2387	1923.4 0	-53.56	≤-26	0.00441	≤2.5	PASS
				2387~2400	2388.3 9	-42.98	≤-16	0.05035	≤25	PASS
				2483.5~2496.5	2495.9 6	-43.17	≤-16	0.04819	≤25	PASS
				2496.5~13000	6849.6 8	-48.43	≤-26	0.01435	≤2.5	PASS
			2472	30~1000	244.13	-53.09	≤-26	0.00491	≤2.5	PASS
				1000~2387	1373.1 0	-53.03	≤-26	0.00498	≤2.5	PASS
				2387~2400	2388.8 5	-43.09	≤-16	0.04909	≤25	PASS
				2483.5~2496.5	2483.5 0	-27.77	≤-16	1.67109	≤25	PASS
				2496.5~13000	6864.9	-49.23	≤-26	0.01194	≤2.5	PASS

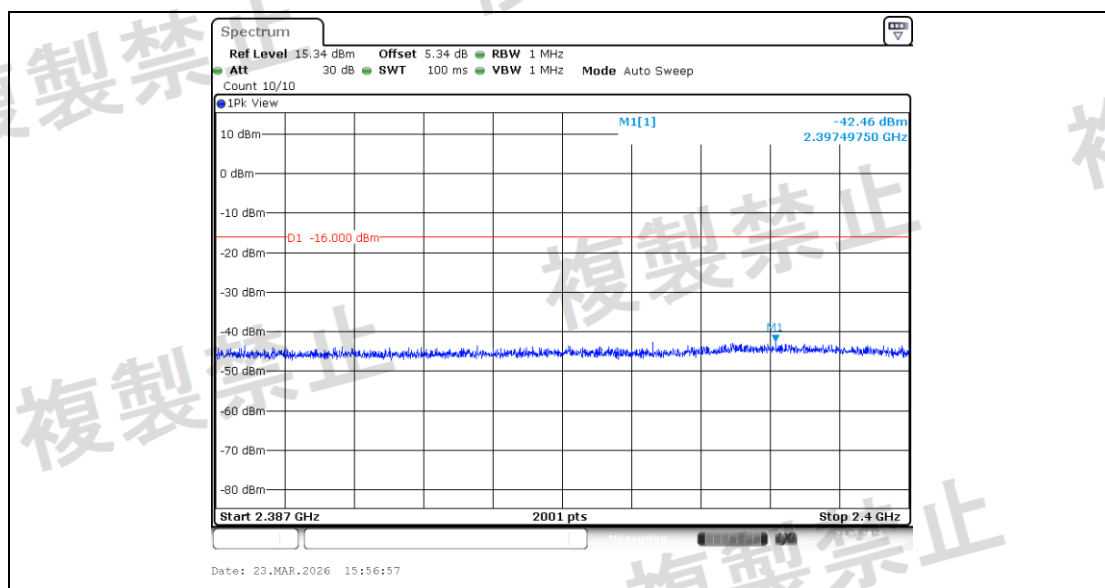
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Test Result_Step2

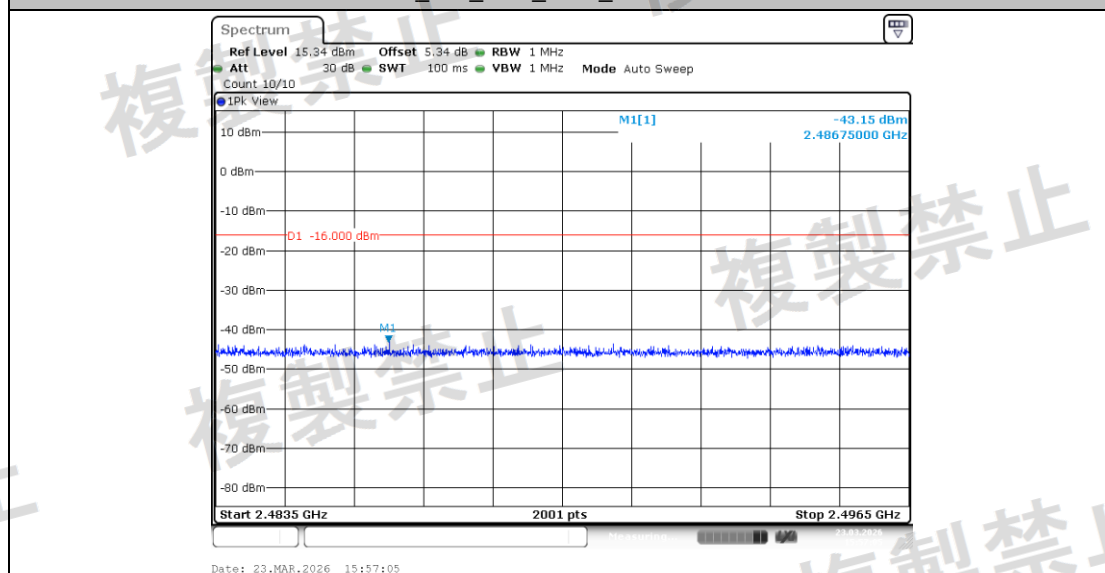
TestCondition	TestMode	PreScan In Ant	Channel	Ant	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11N20SI SO	Ant1	2412	Ant1	2399.98	-40.07	≤-16	0.09840	≤25	PASS

Test Graphs

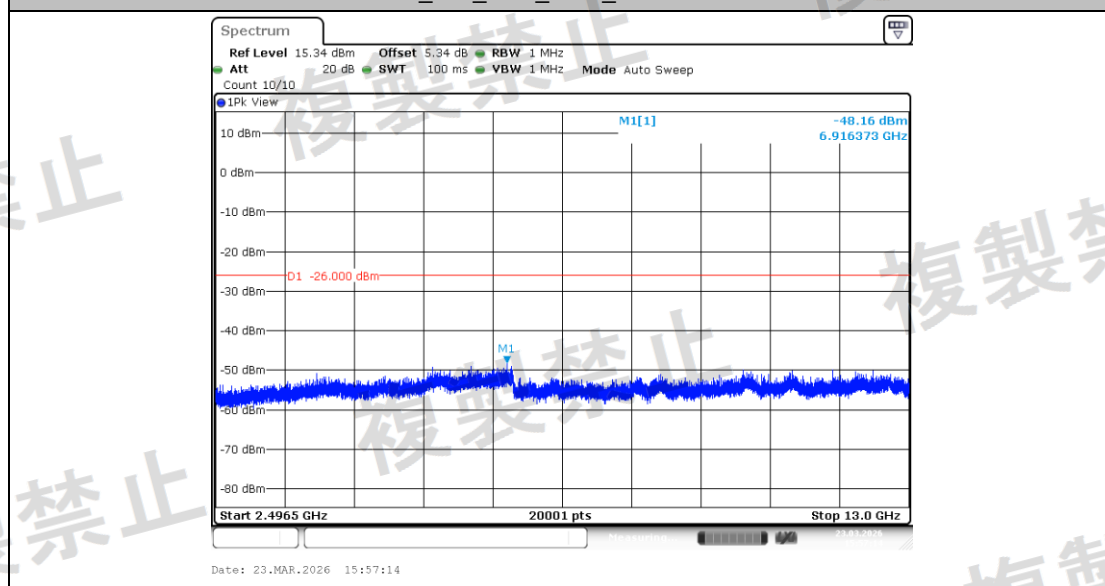


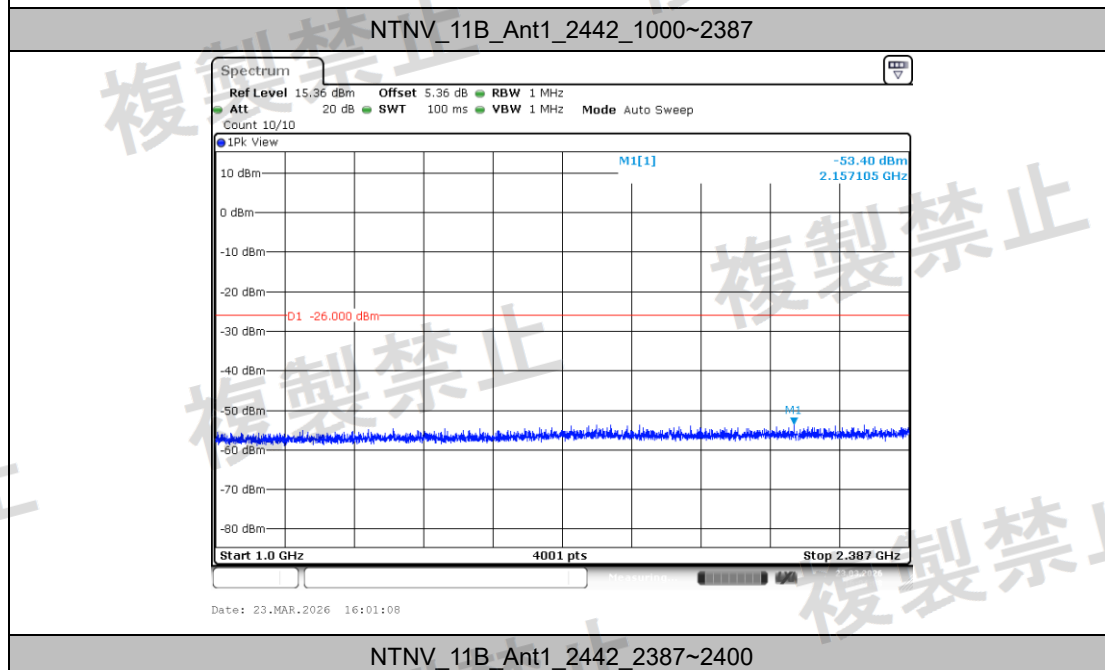
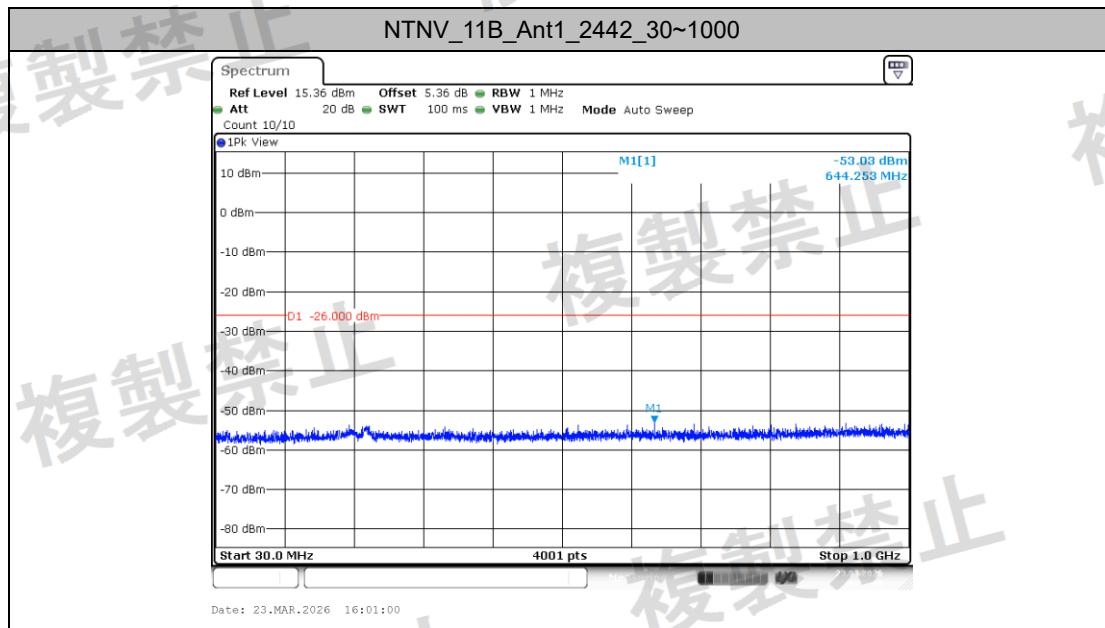


NTNV_11B_Ant1_2412_2483.5~2496.5

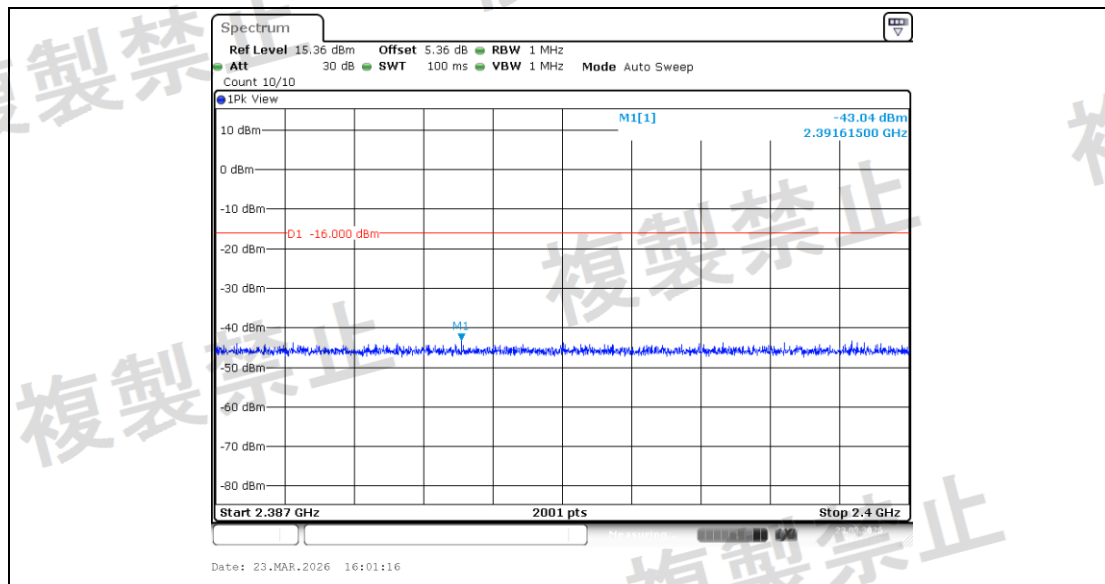


NTNV_11B_Ant1_2412_2496.5~13000

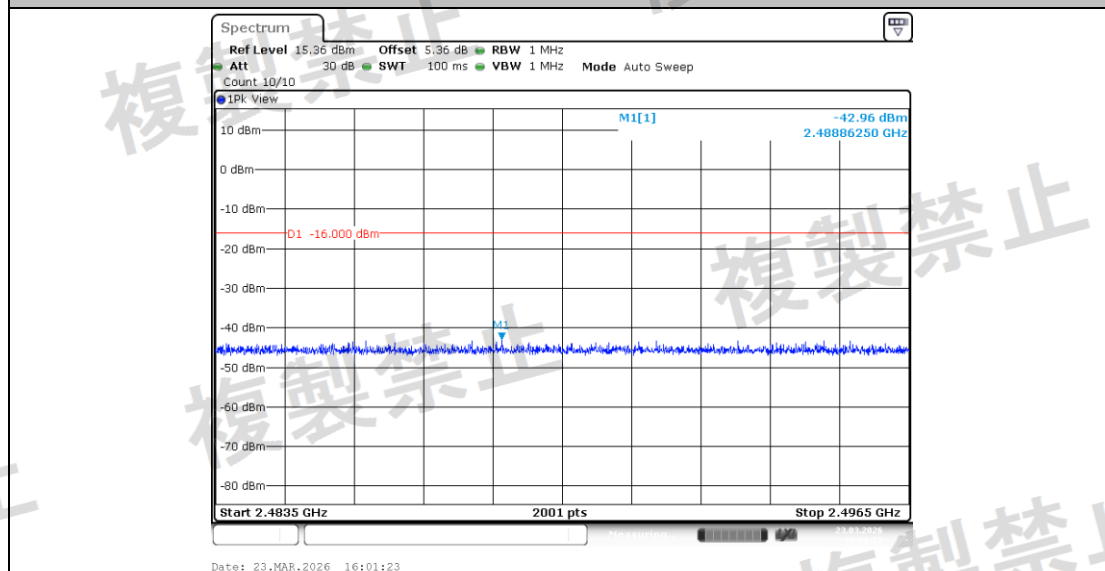




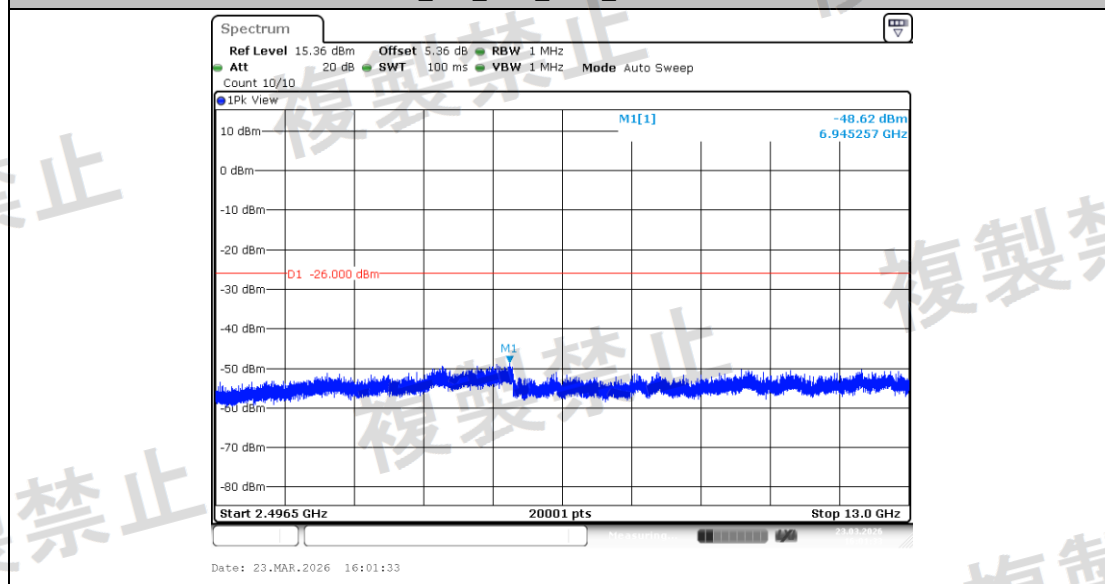
NTNV_11B_Ant1_2442_2387~2400

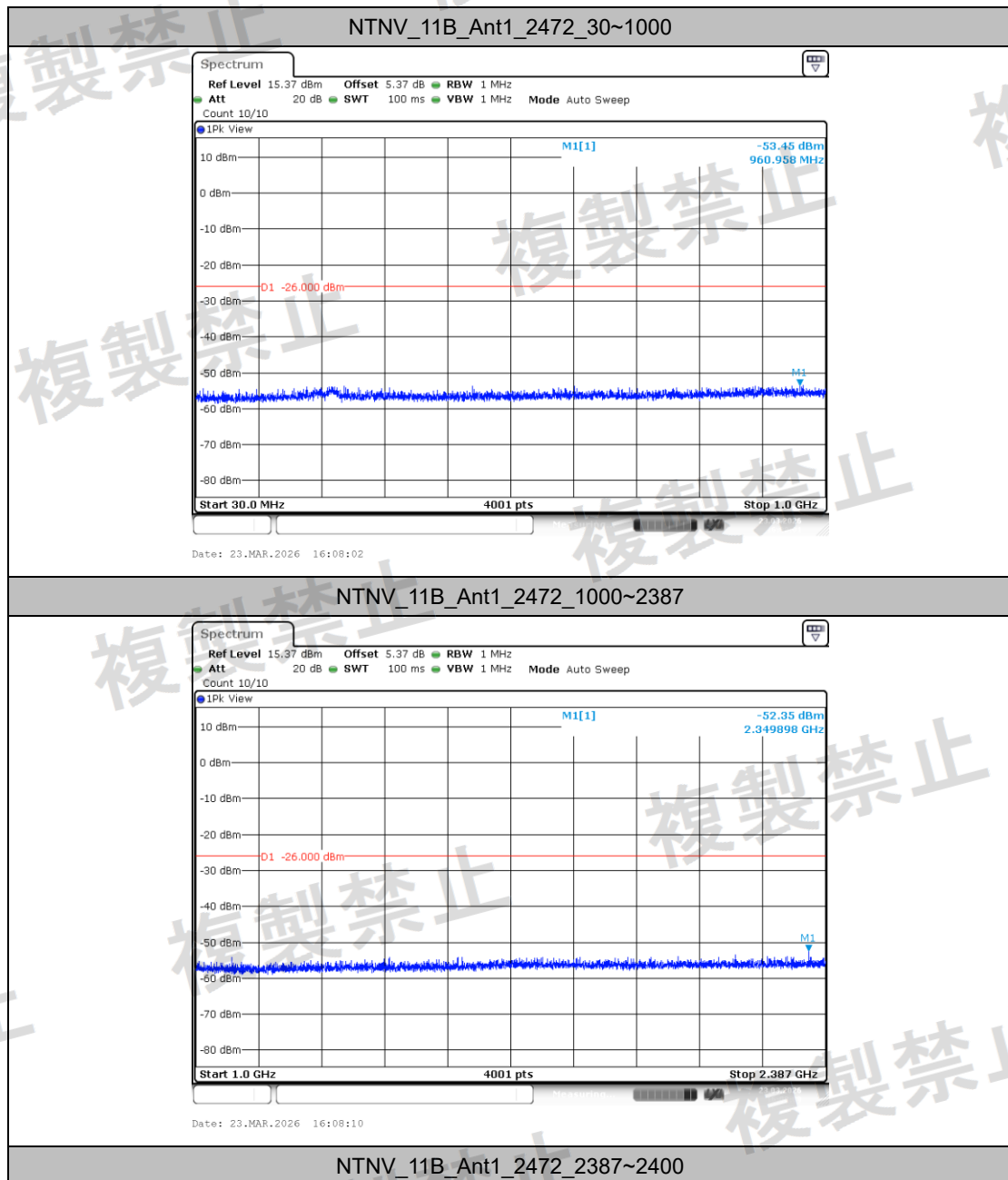


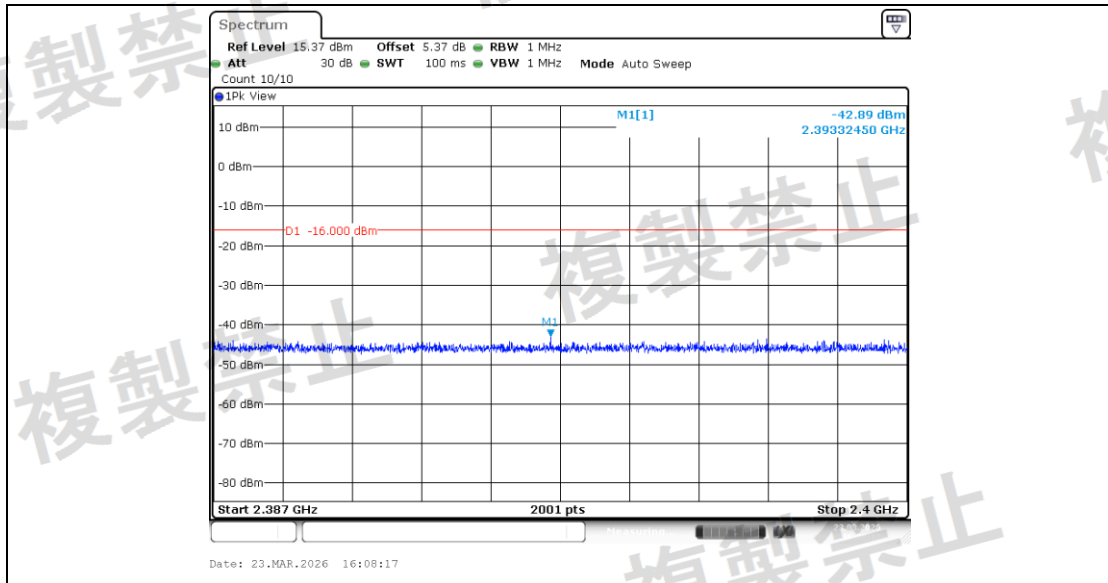
NTNV_11B_Ant1_2442_2483.5~2496.5



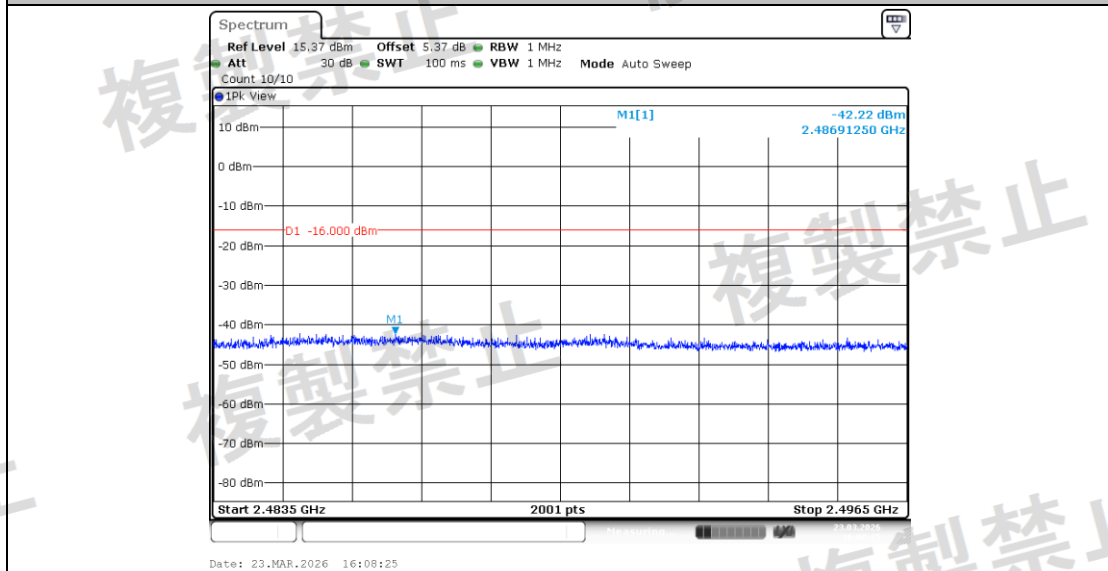
NTNV_11B_Ant1_2442_2496.5~13000



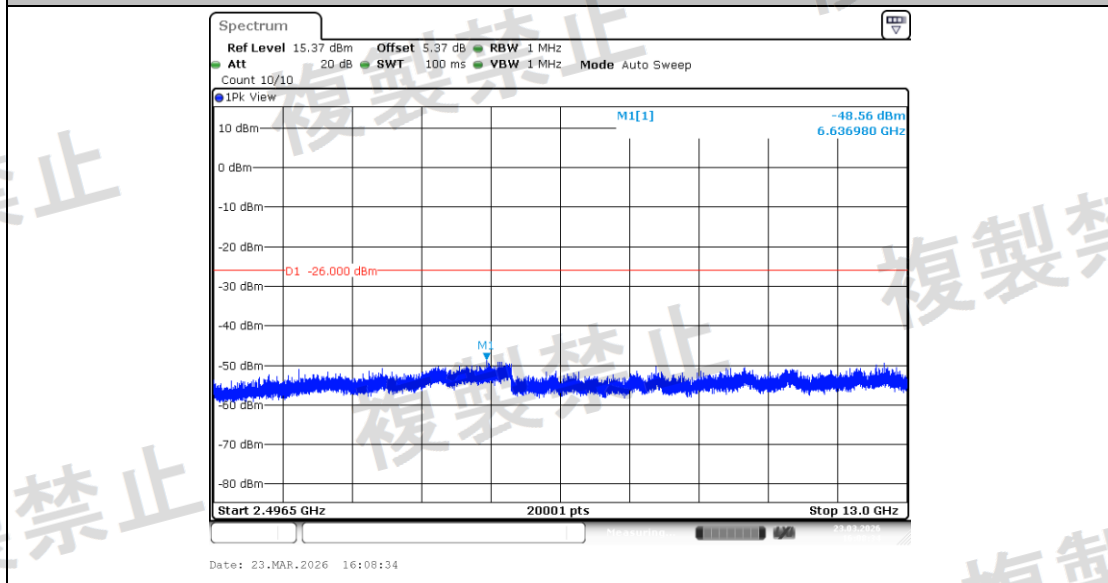


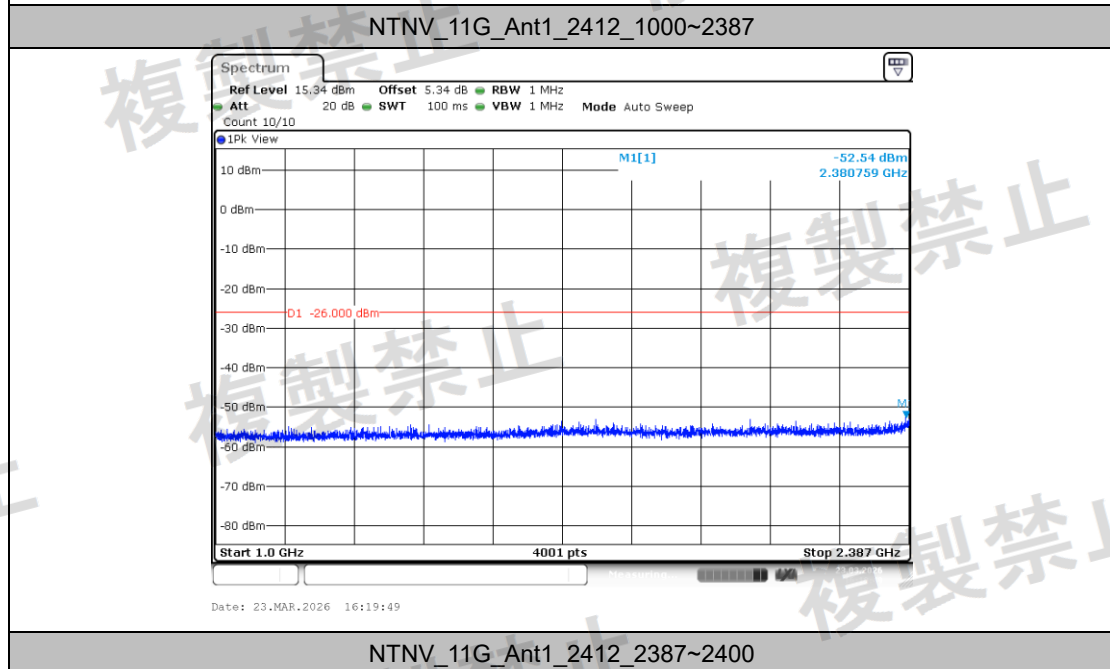
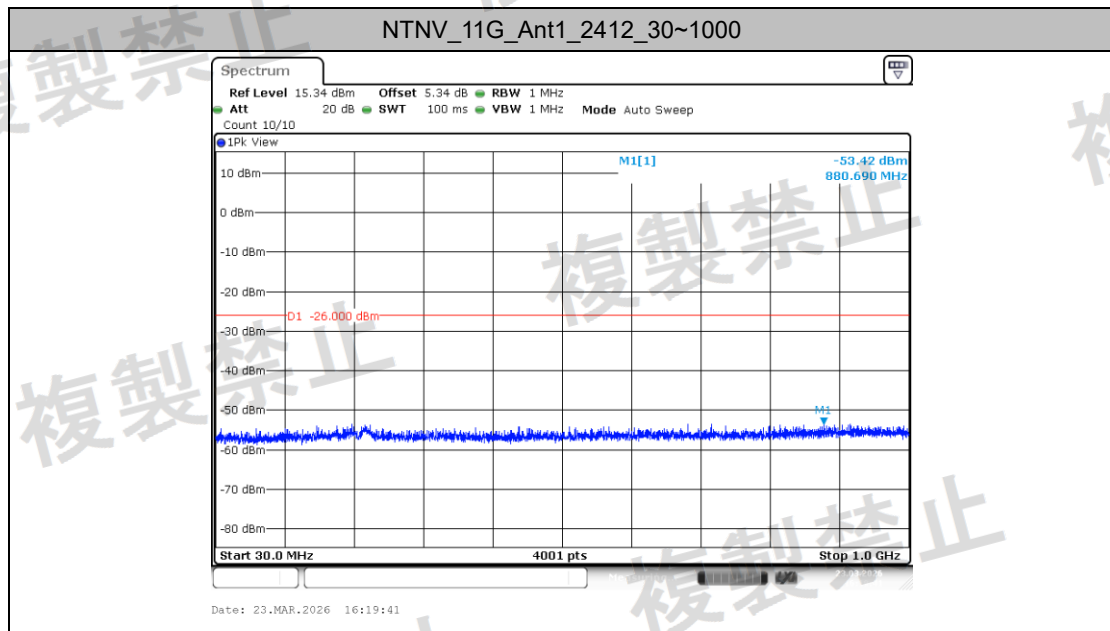


NTNV_11B_Ant1_2472_2483.5~2496.5

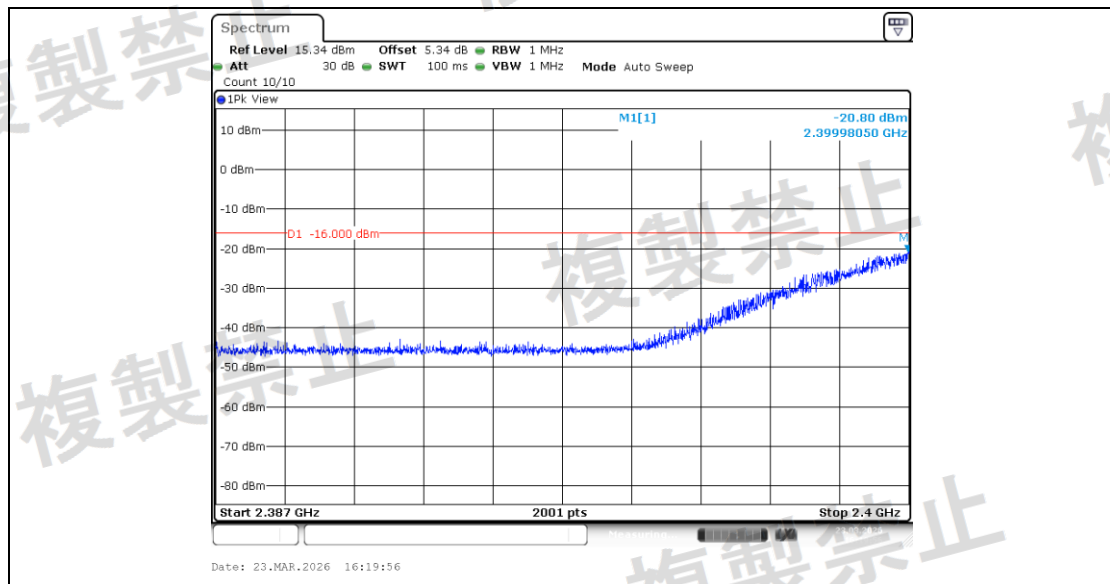


NTNV_11B_Ant1_2472_2496.5~13000

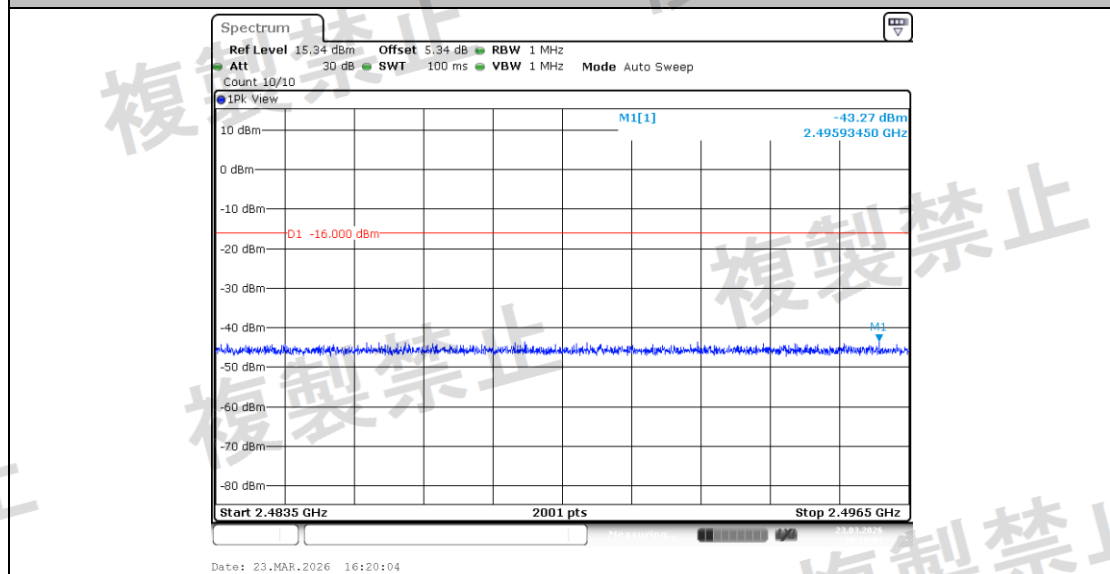




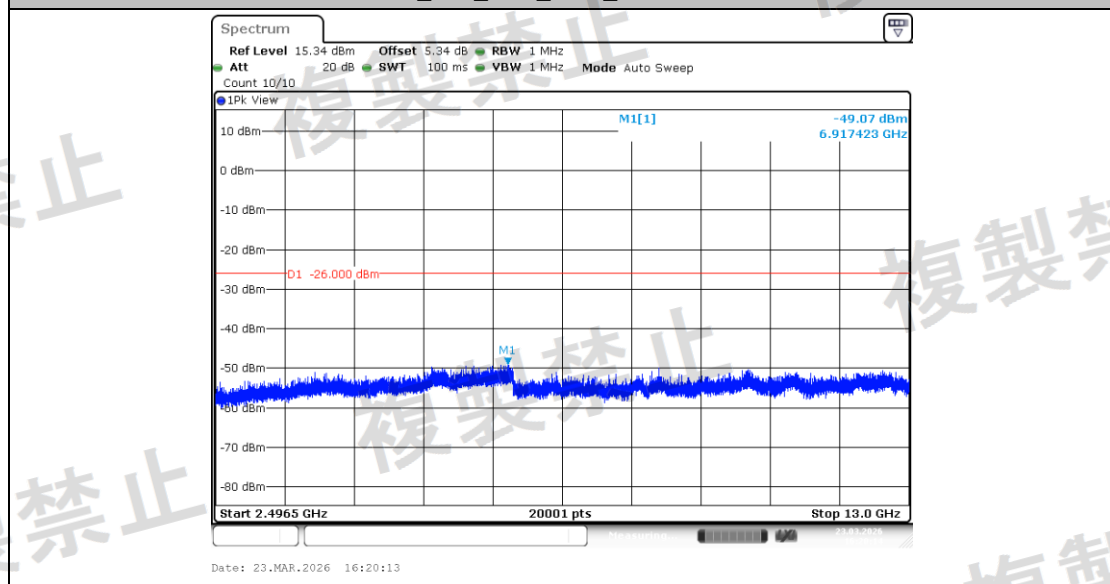
NTNV_11G_Ant1_2412_2387~2400

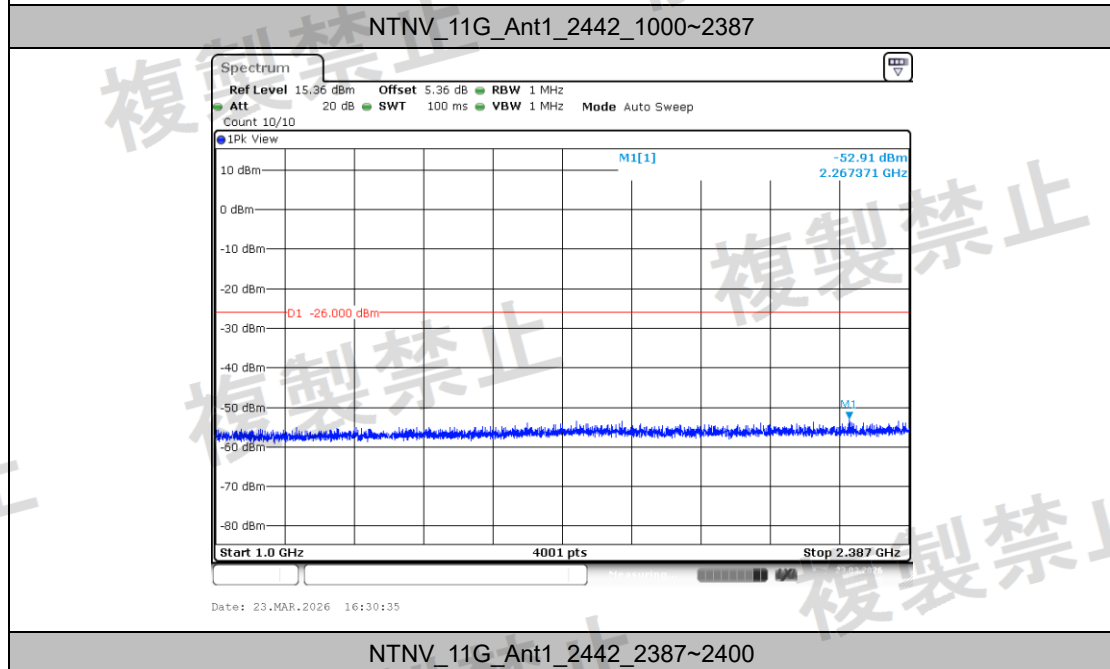
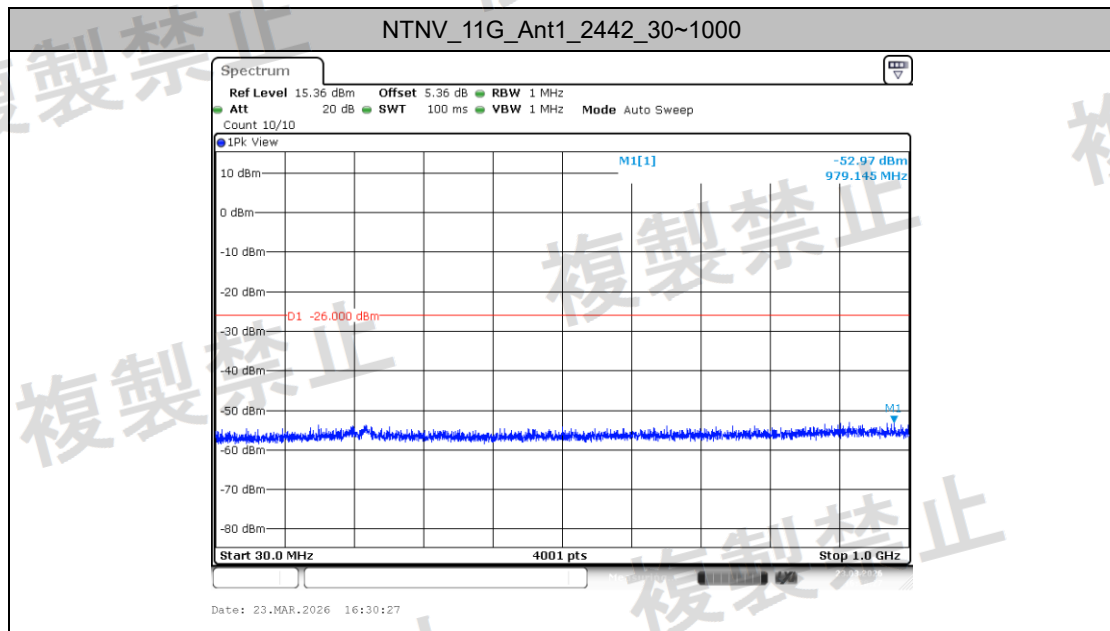


NTNV_11G_Ant1_2412_2483.5~2496.5

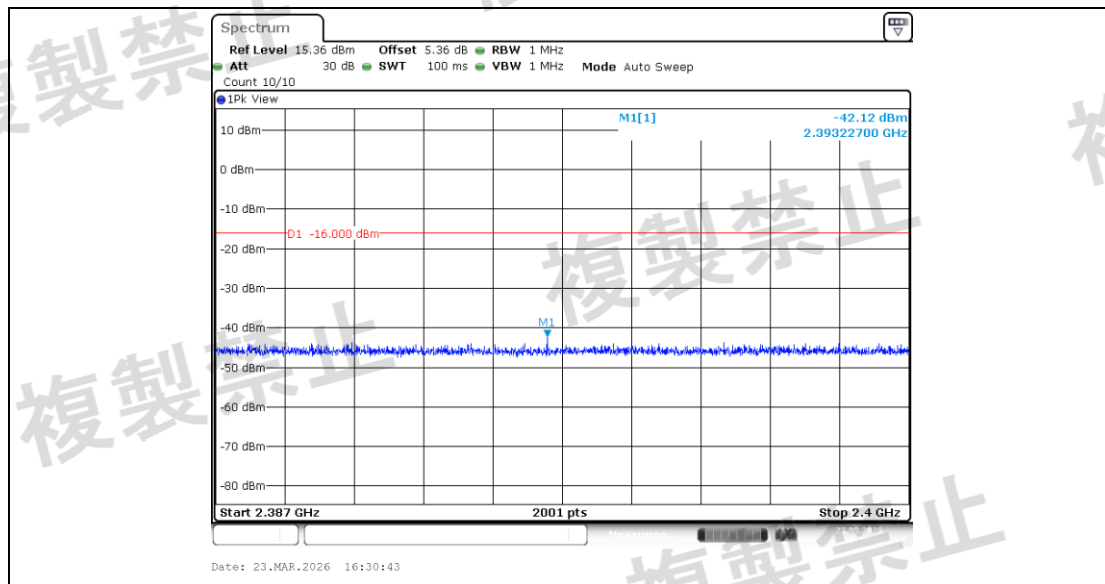


NTNV_11G_Ant1_2412_2496.5~13000

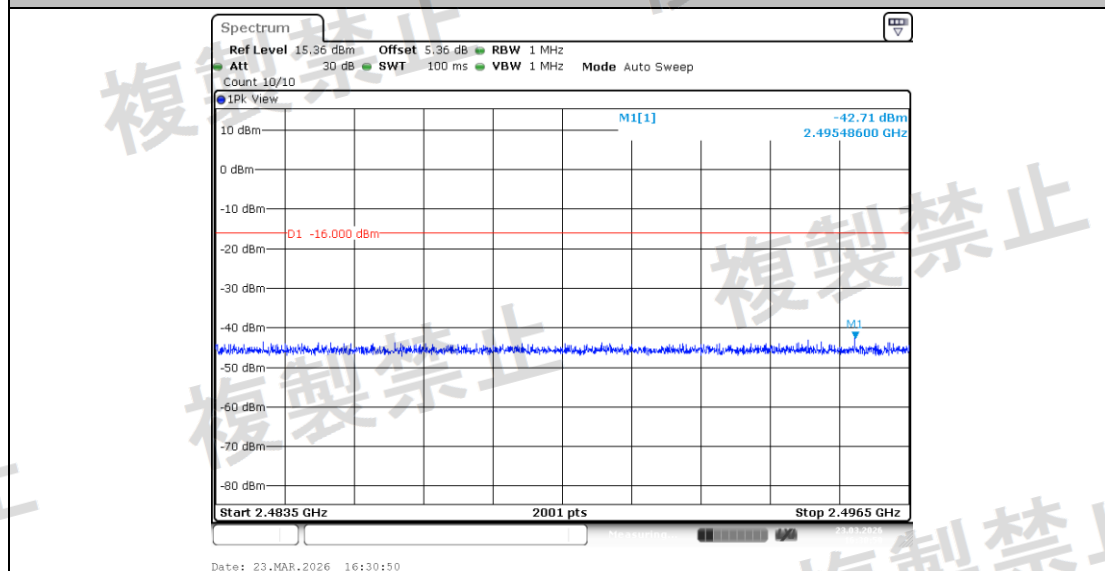




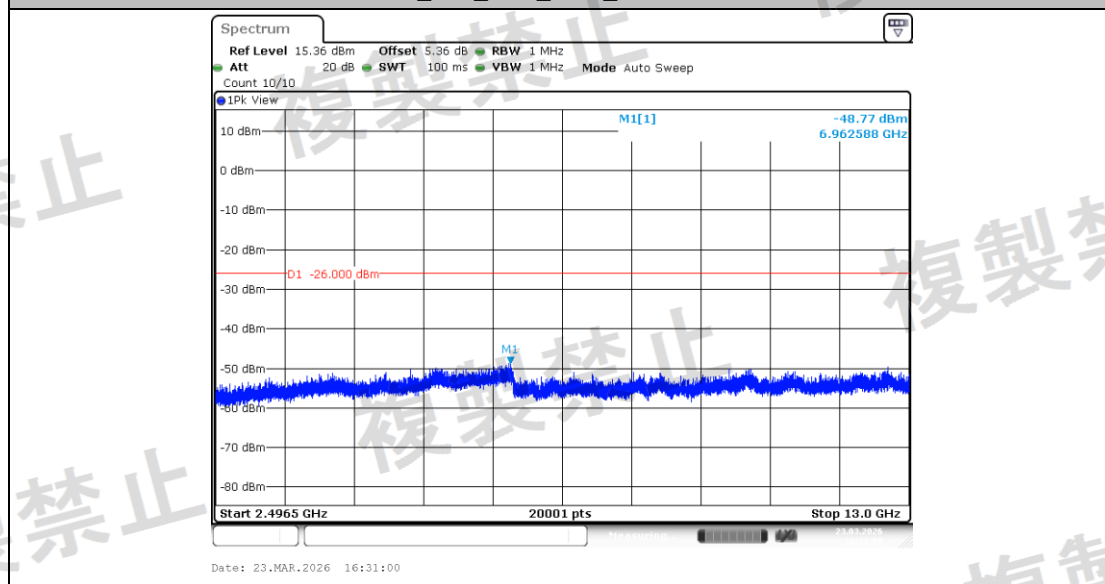
NTNV_11G_Ant1_2442_2387~2400

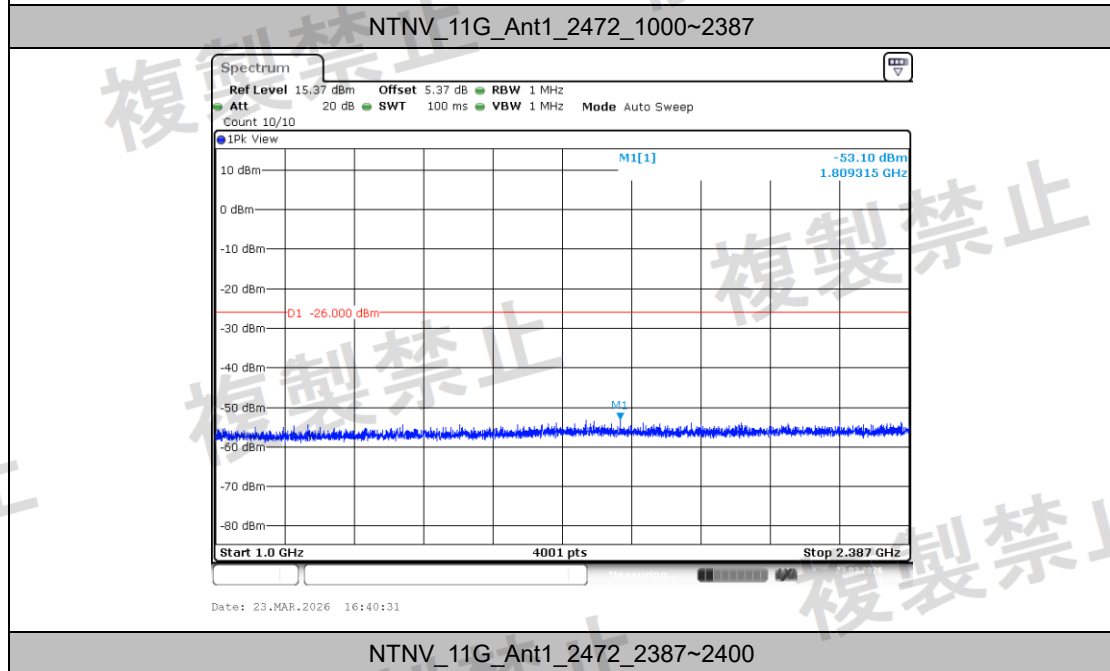
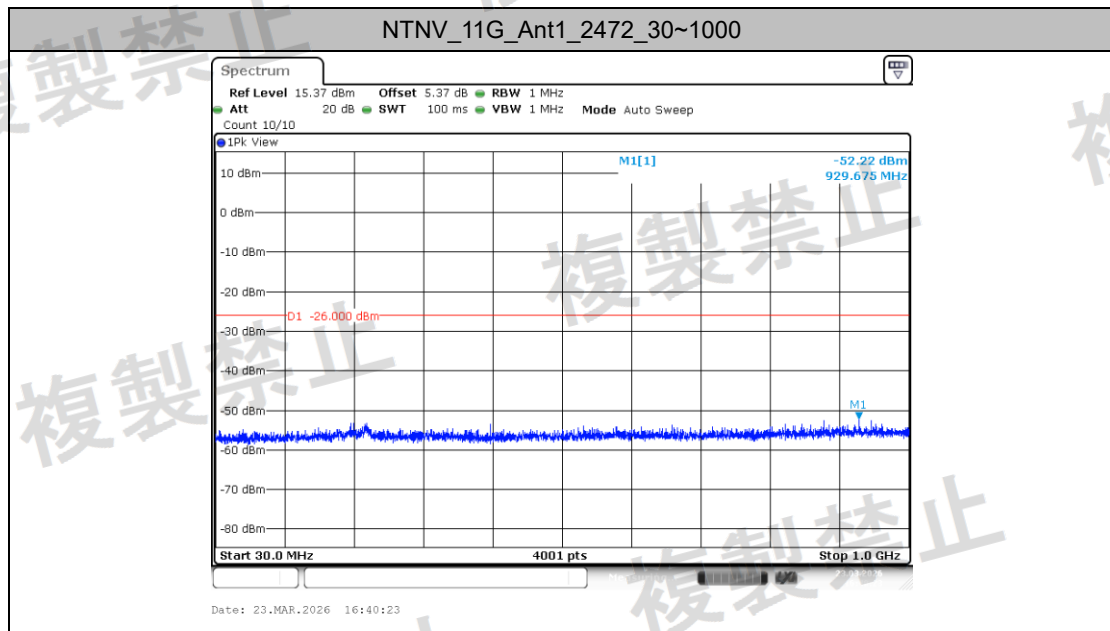


NTVN_11G_Ant1_2442_2483.5~2496.5

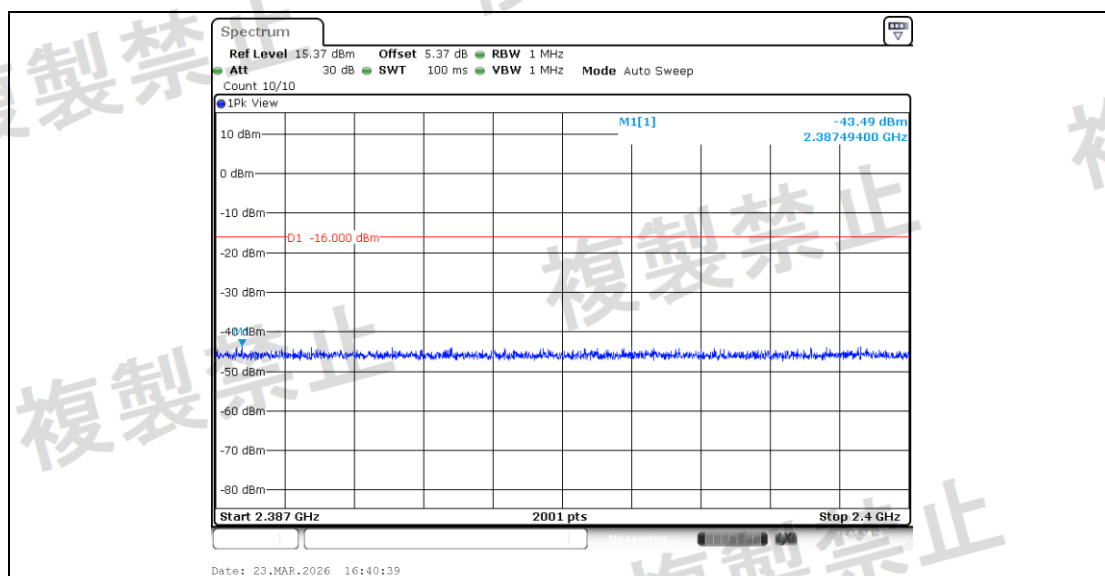


NTVN_11G_Ant1_2442_2496.5~13000

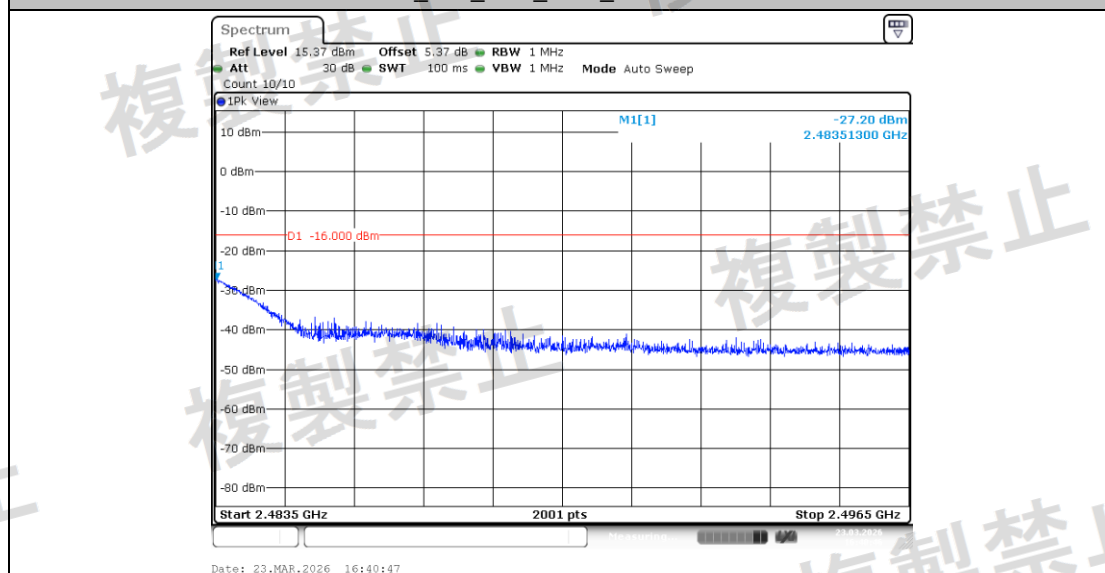




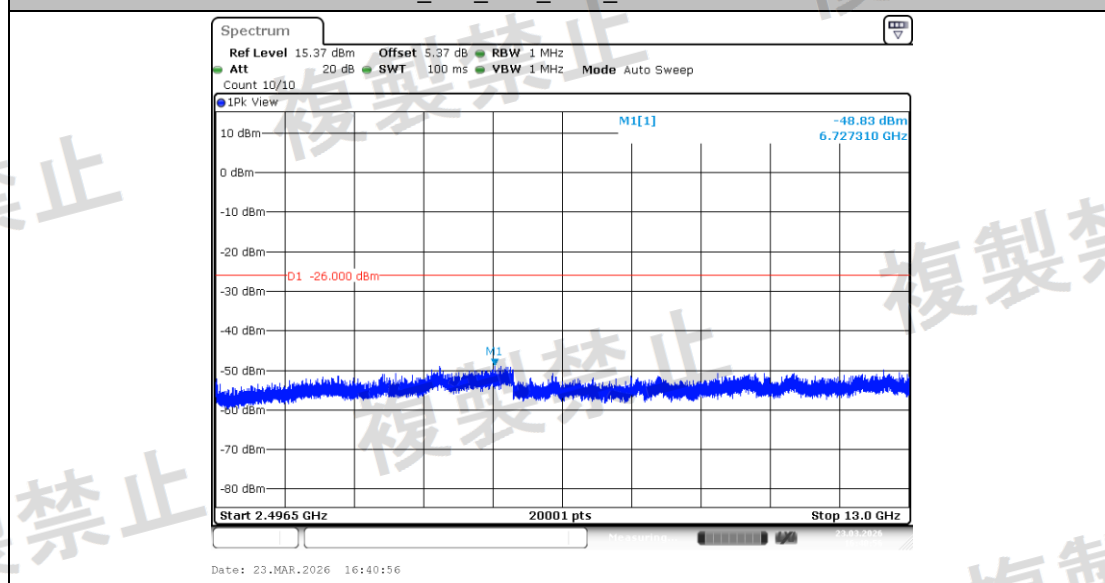
NTNV_11G_Ant1_2472_2387~2400

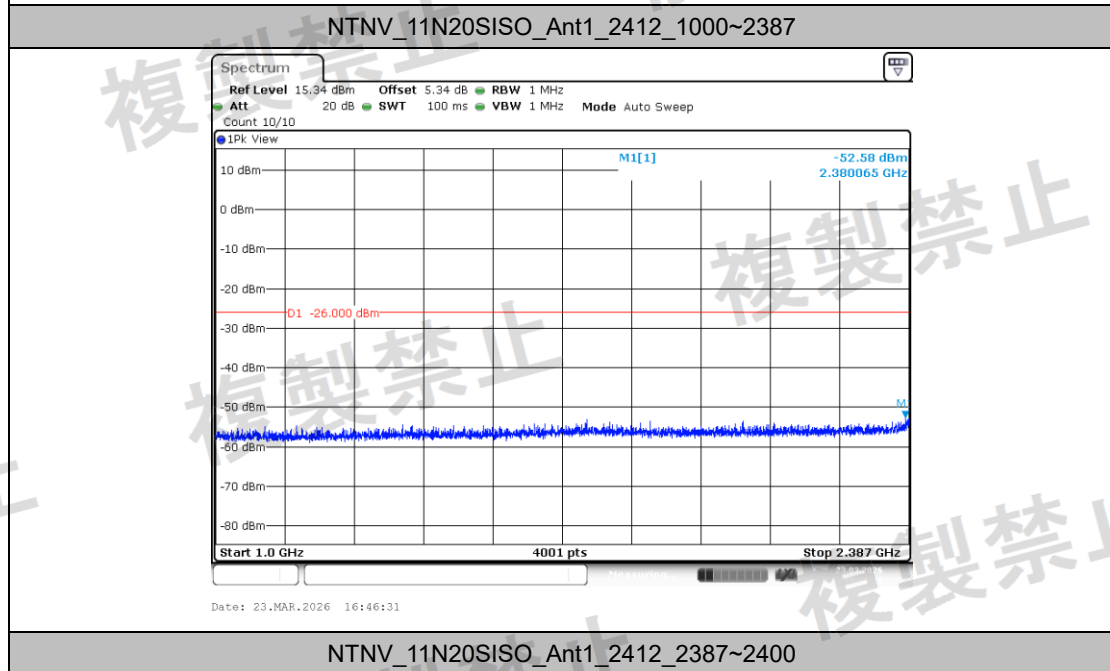
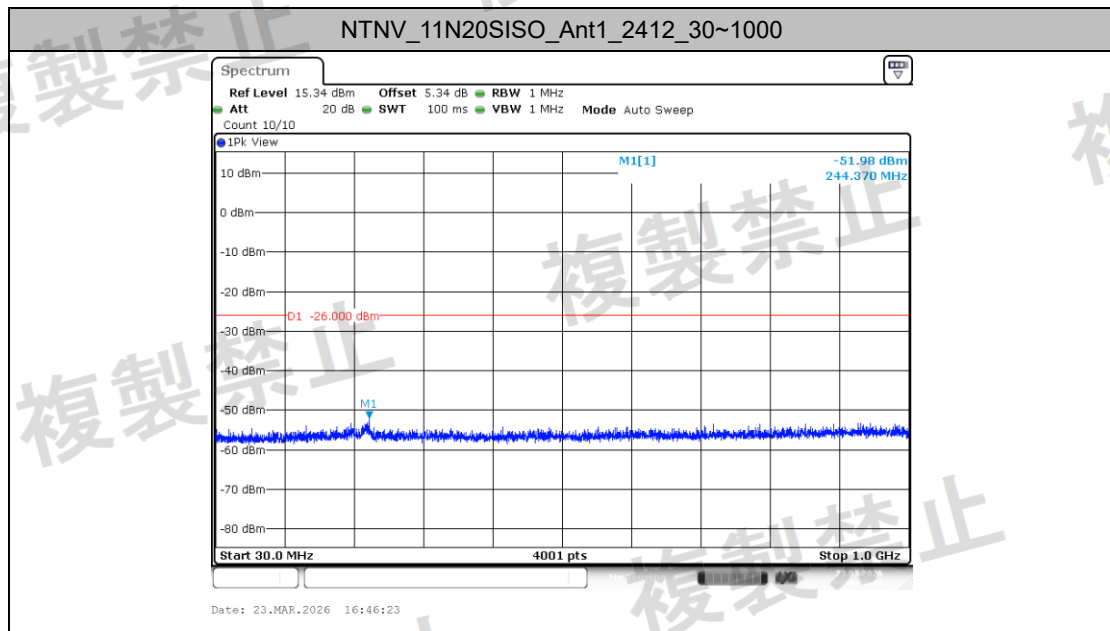


NTNV_11G_Ant1_2472_2483.5~2496.5

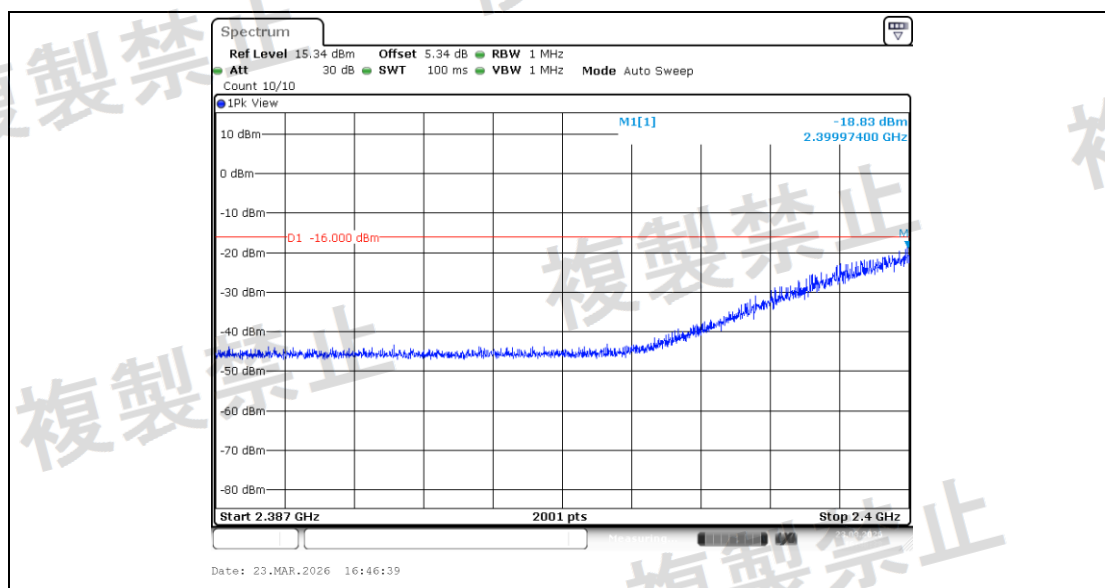


NTNV_11G_Ant1_2472_2496.5~13000

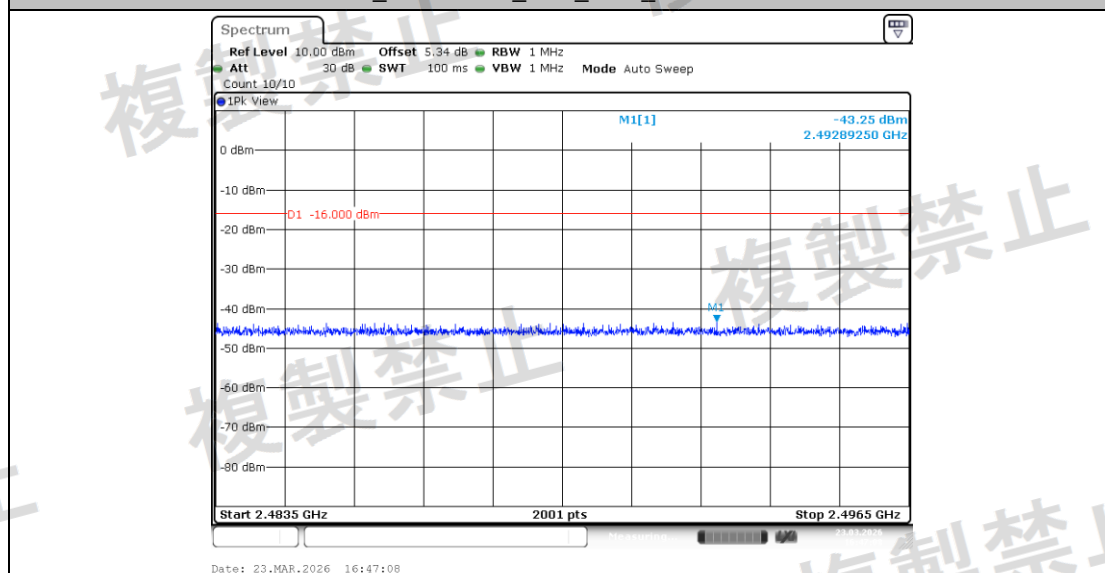




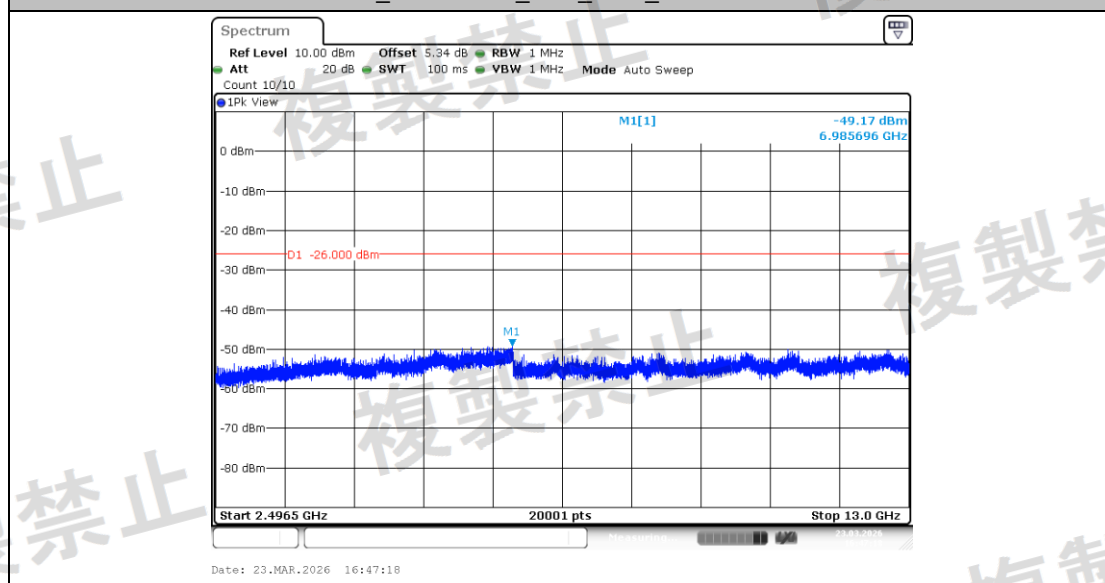
NTNV_11N20SISO_Ant1_2412_2387~2400

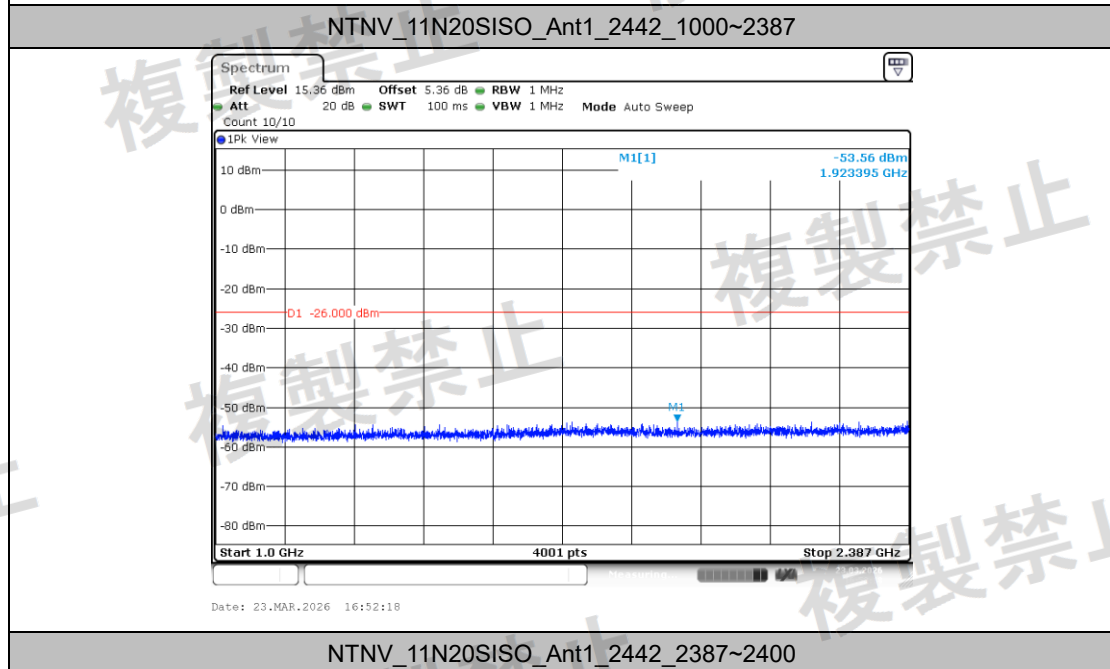
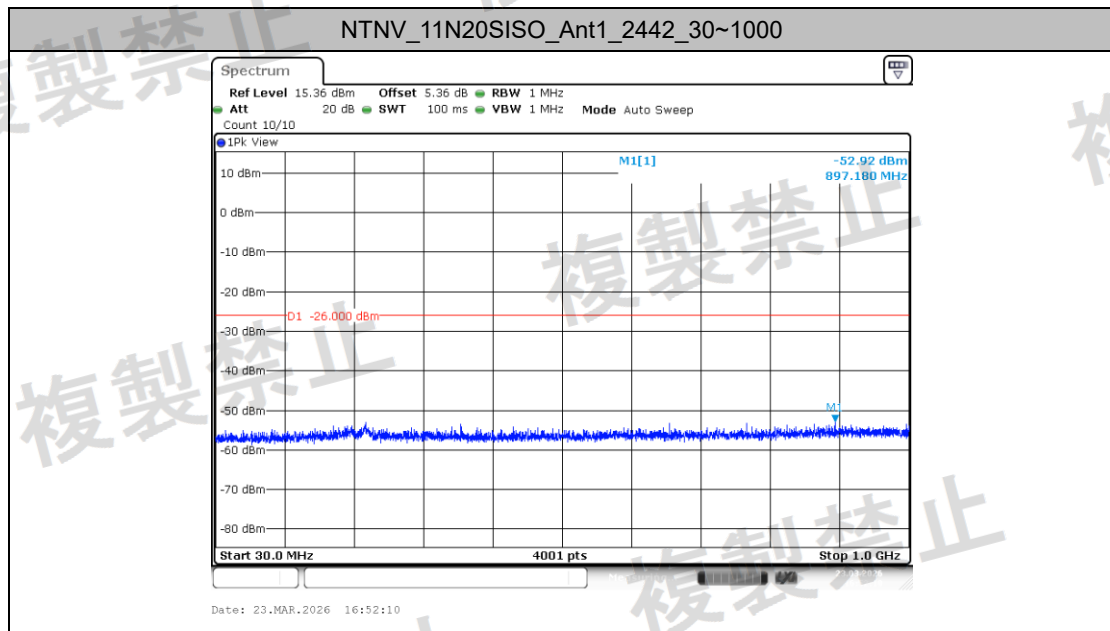


NTNV_11N20SISO_Ant1_2412_2483.5~2496.5

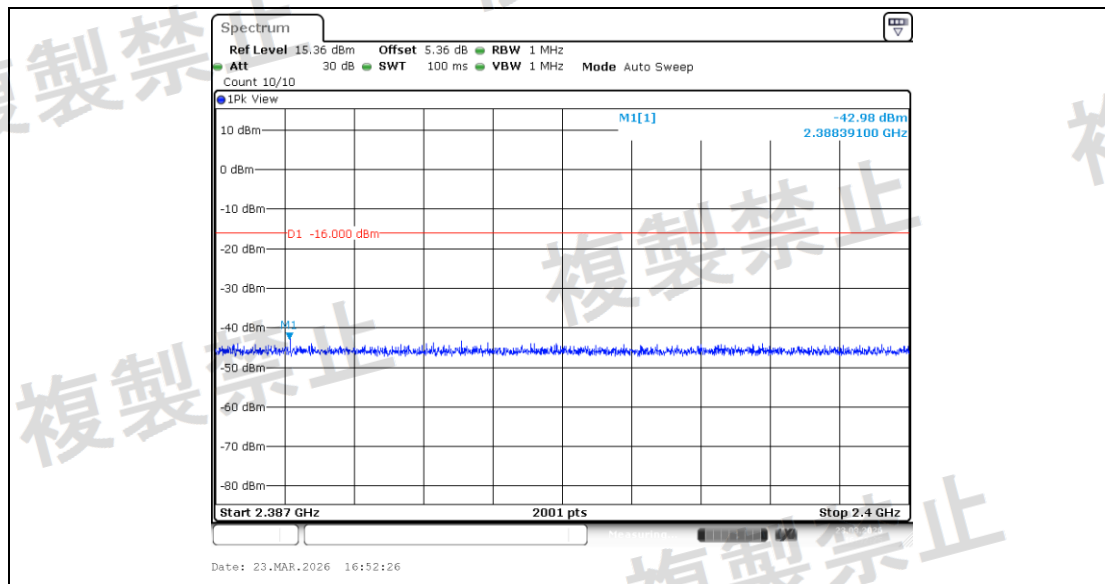


NTNV_11N20SISO_Ant1_2412_2496.5~13000

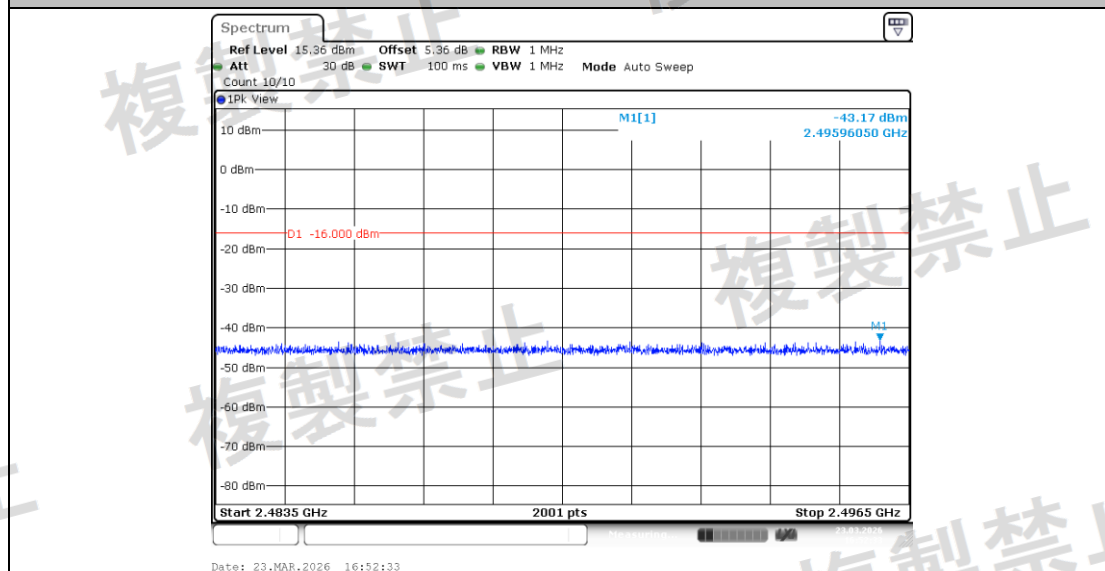




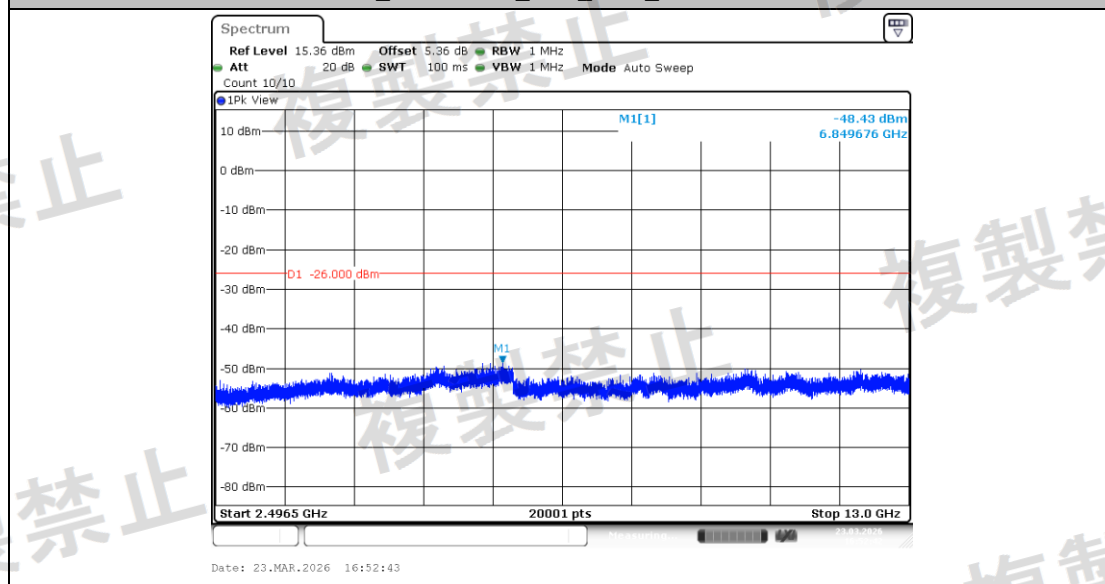
NTNV_11N20SISO_Ant1_2442_2387~2400

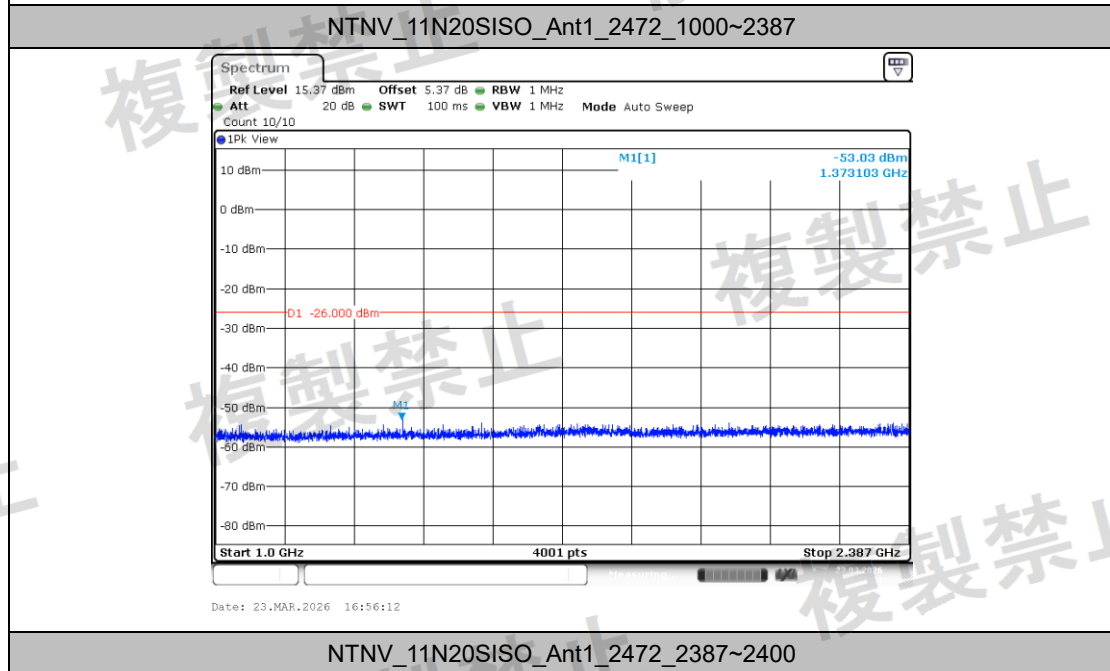
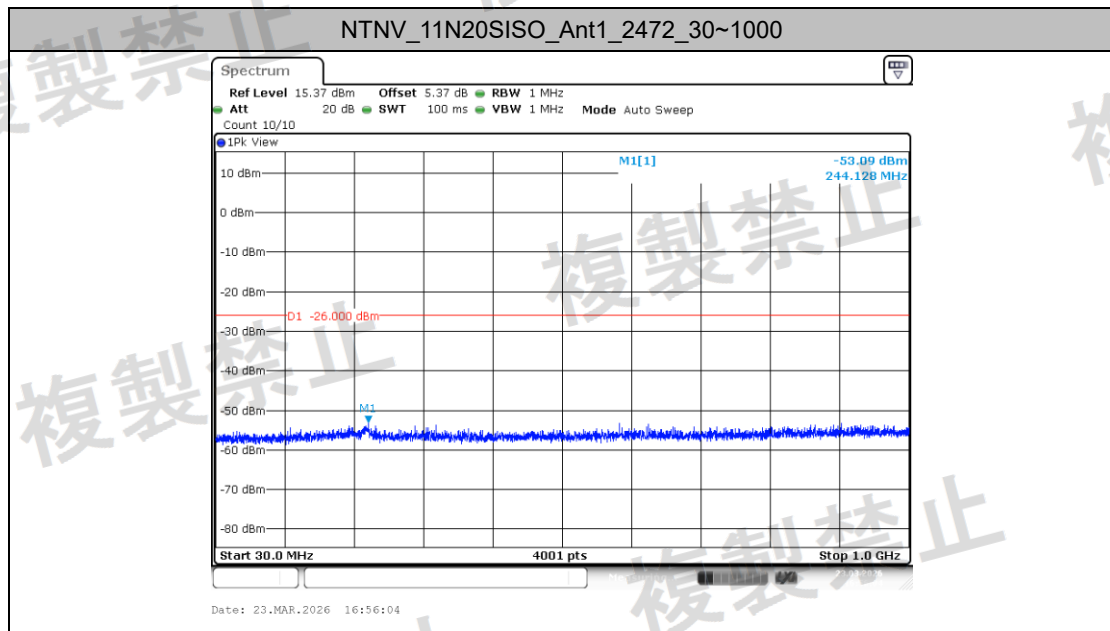


NTNV_11N20SISO_Ant1_2442_2483.5~2496.5

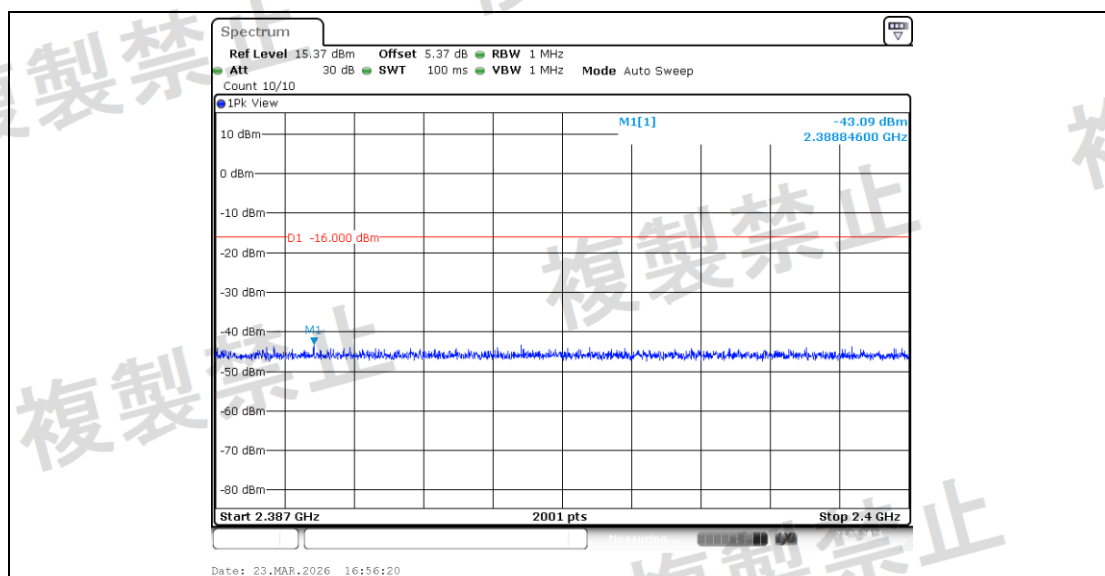


NTNV_11N20SISO_Ant1_2442_2496.5~13000

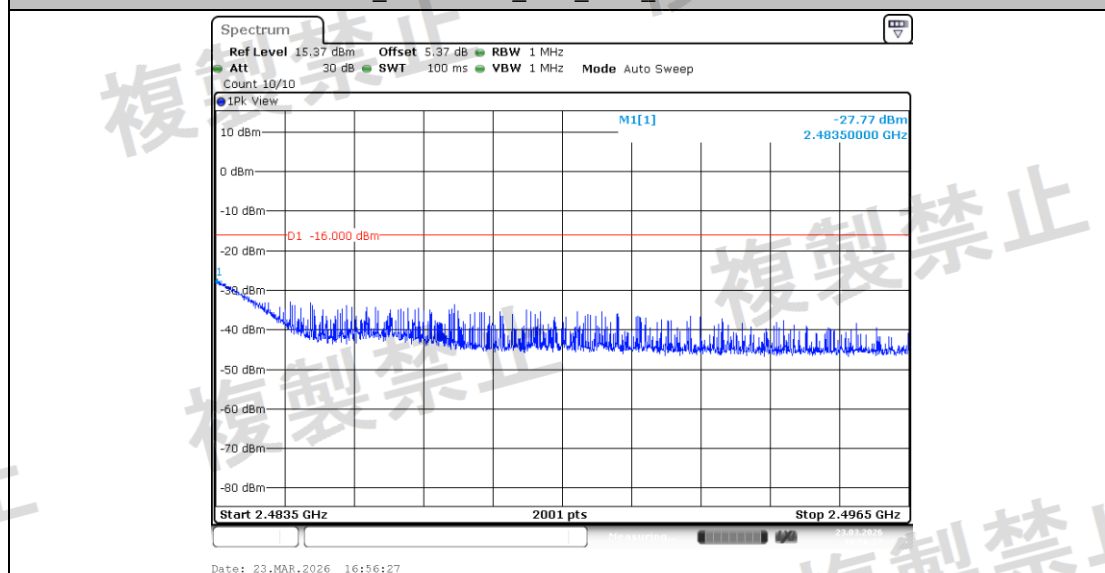




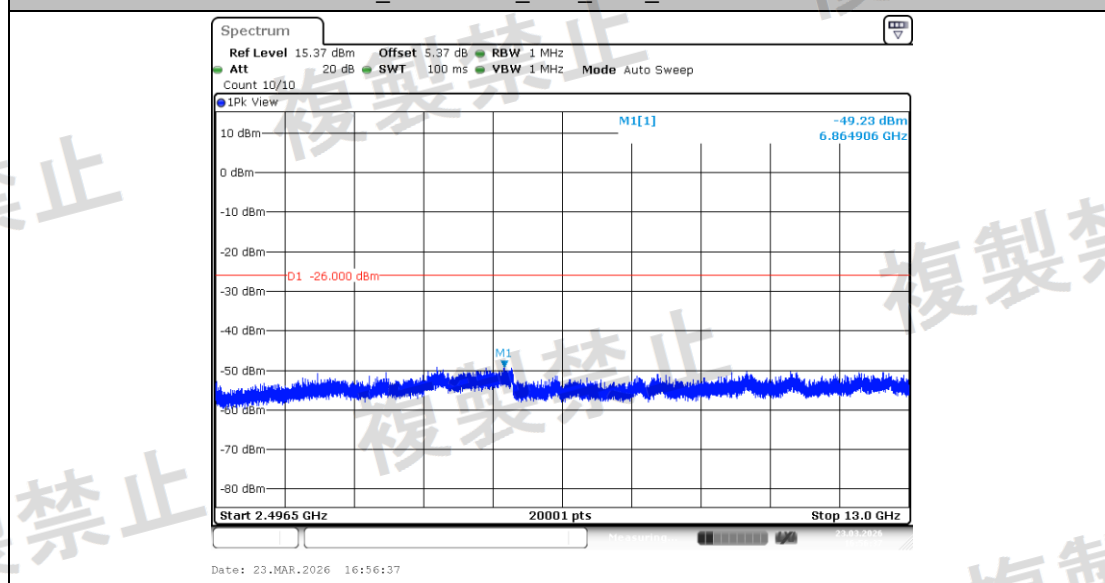
NTNV_11N20SISO_Ant1_2472_2387~2400



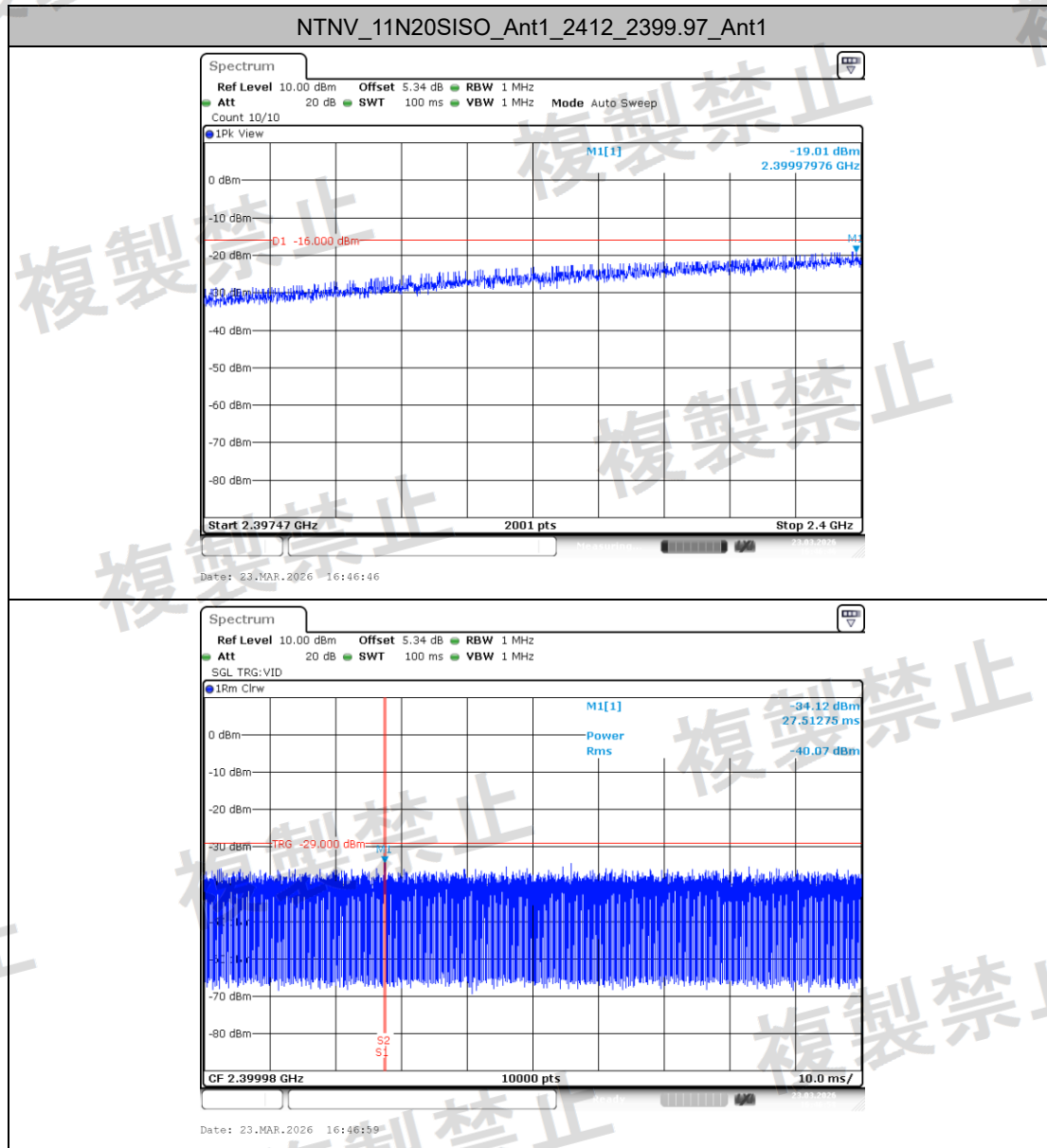
NTNV_11N20SISO_Ant1_2472_2483.5~2496.5



NTNV_11N20SISO_Ant1_2472_2496.5~13000



Test Graphs_Step2

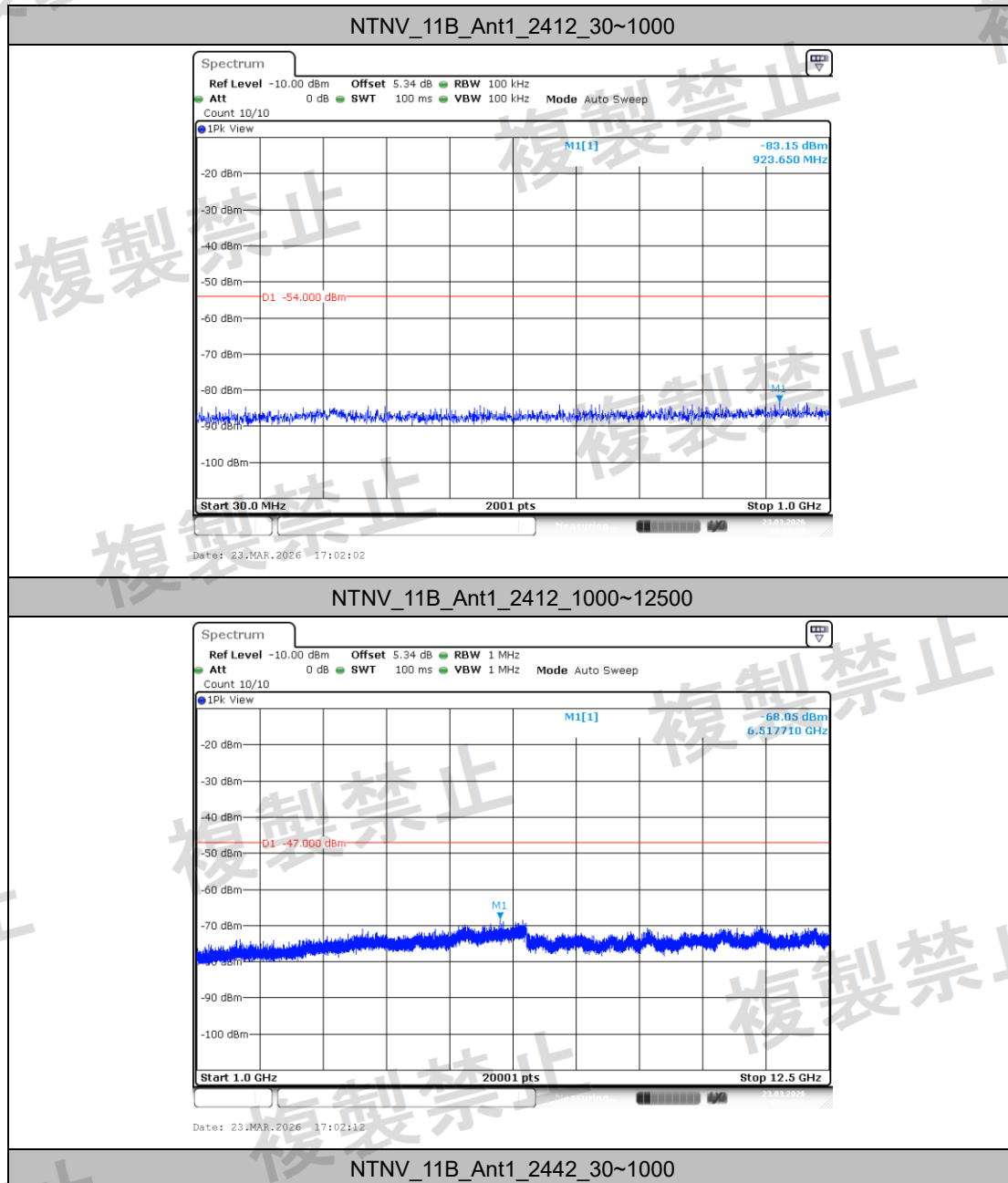


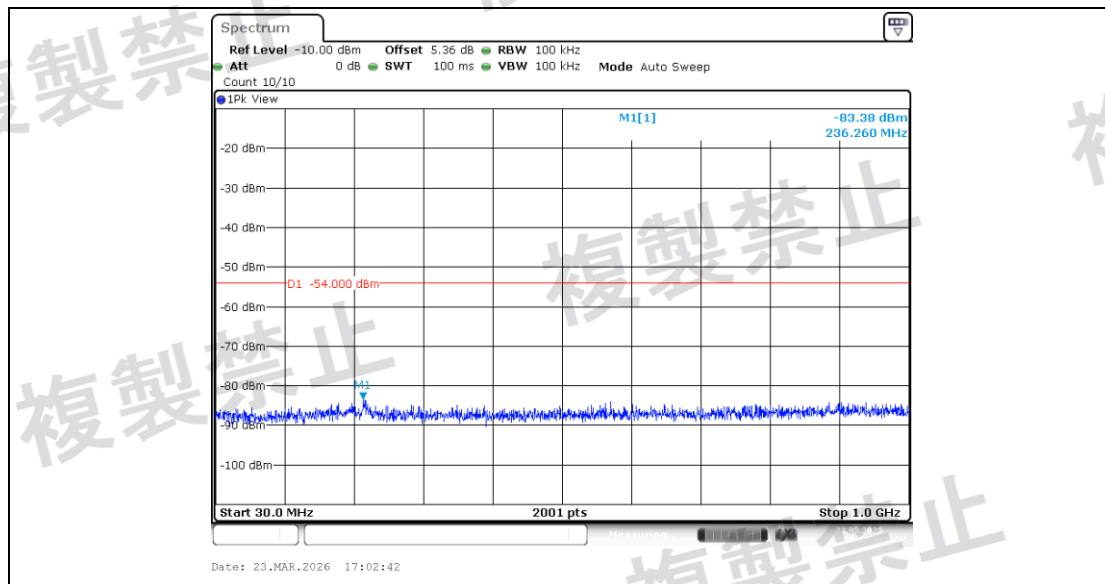
Appendix E: Spurious Emission of RX

Test Result

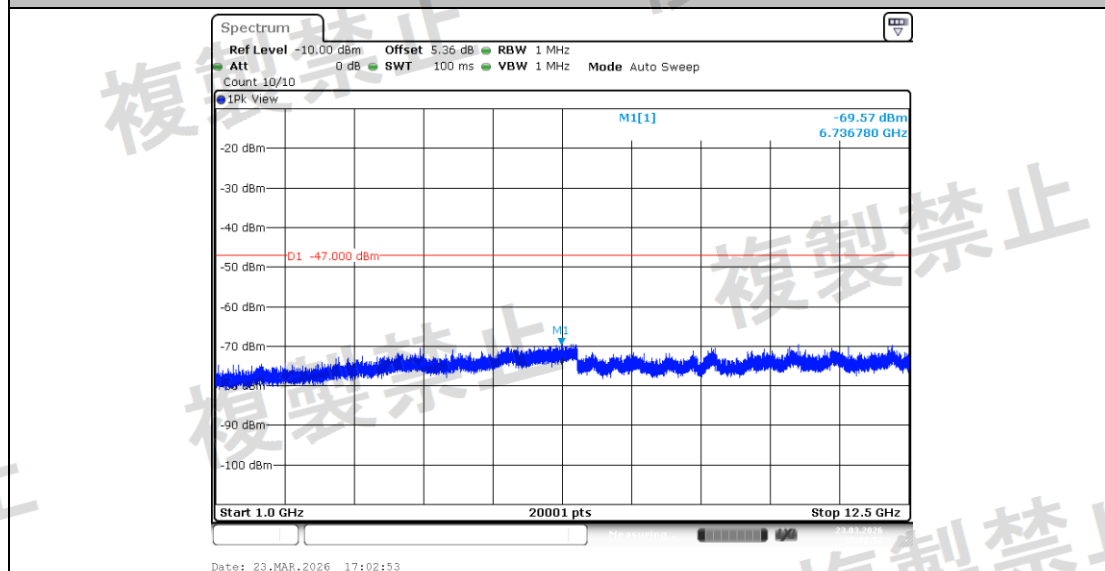
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	923.65	-83.15	≤-54	0.00484	≤4	PASS
				1000~12500	6517.71	-68.05	≤-47	0.15668	≤20	PASS
			2442	30~1000	236.26	-83.38	≤-54	0.00459	≤4	PASS
				1000~12500	6736.78	-69.57	≤-47	0.11041	≤20	PASS
			2472	30~1000	217.84	-83.94	≤-54	0.00404	≤4	PASS
				1000~12500	6993.79	-68.84	≤-47	0.13062	≤20	PASS
	11G	Ant1	2412	30~1000	628.43	-83.57	≤-54	0.00440	≤4	PASS
				1000~12500	6249.78	-68.65	≤-47	0.13646	≤20	PASS
			2442	30~1000	976.97	-83.61	≤-54	0.00436	≤4	PASS
				1000~12500	6887.99	-69.42	≤-47	0.11429	≤20	PASS
			2472	30~1000	970.67	-83.86	≤-54	0.00411	≤4	PASS
				1000~12500	6924.79	-68.74	≤-47	0.13366	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	222.69	-83.76	≤-54	0.00421	≤4	PASS
				1000~12500	5924.92	-69.40	≤-47	0.11482	≤20	PASS
			2442	30~1000	925.10	-82.92	≤-54	0.00511	≤4	PASS
				1000~12500	6969.06	-68.42	≤-47	0.14388	≤20	PASS
			2472	30~1000	983.28	-82.85	≤-54	0.00519	≤4	PASS
				1000~12500	6858.09	-69.31	≤-47	0.11722	≤20	PASS

Test Graphs

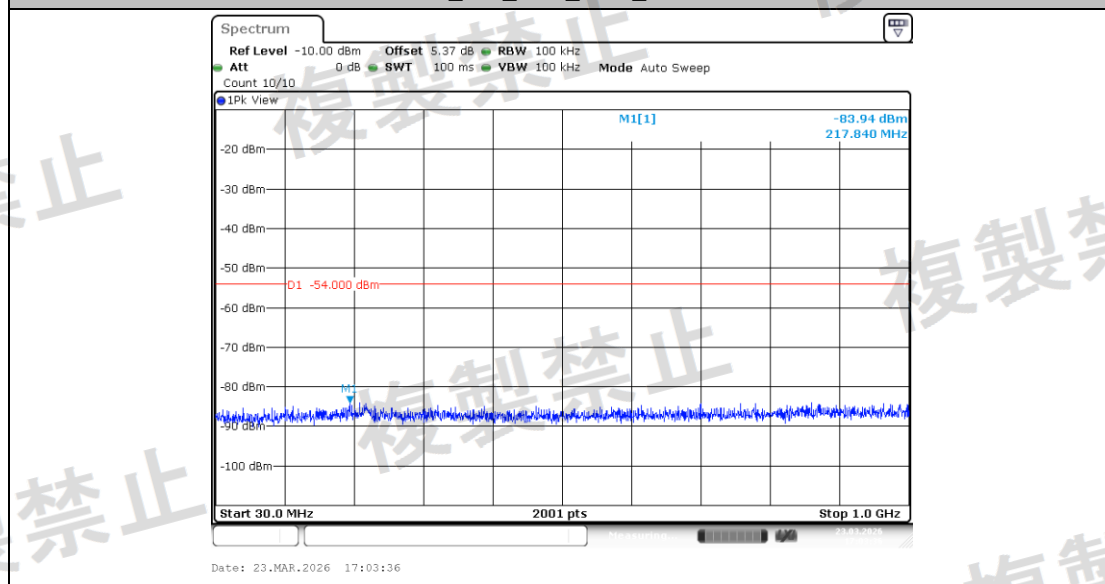


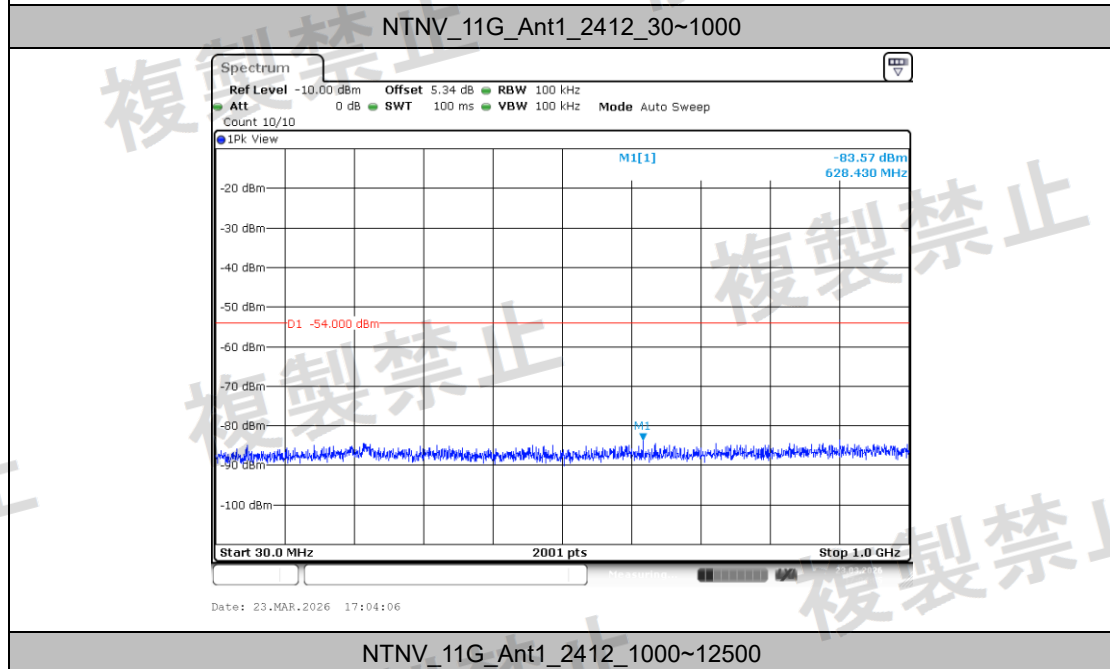
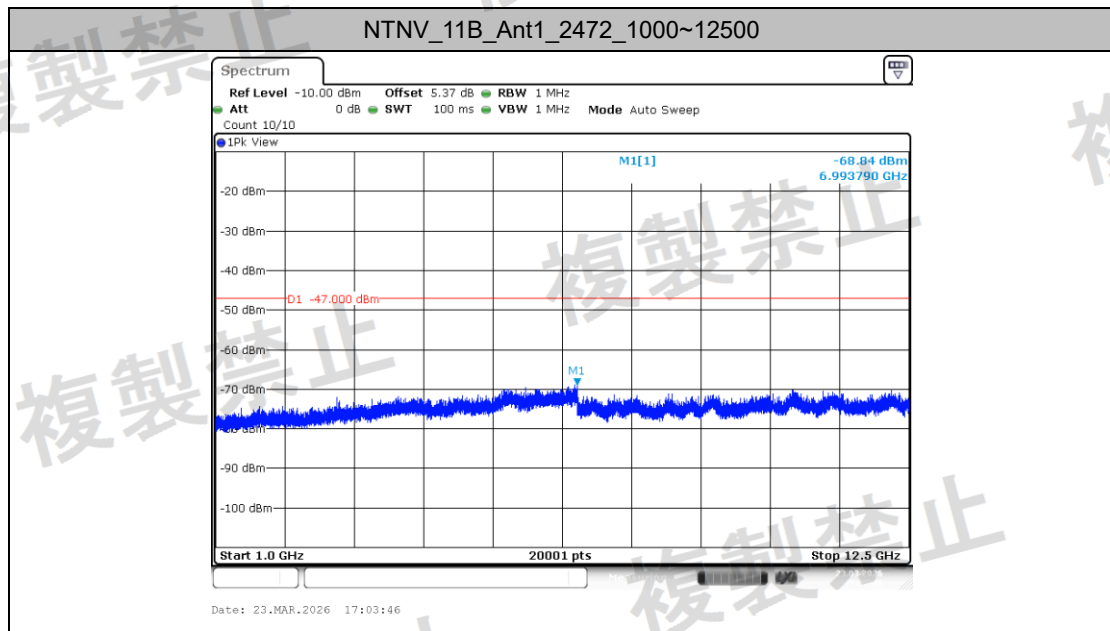


NTNV_11B_Ant1_2442_1000~12500

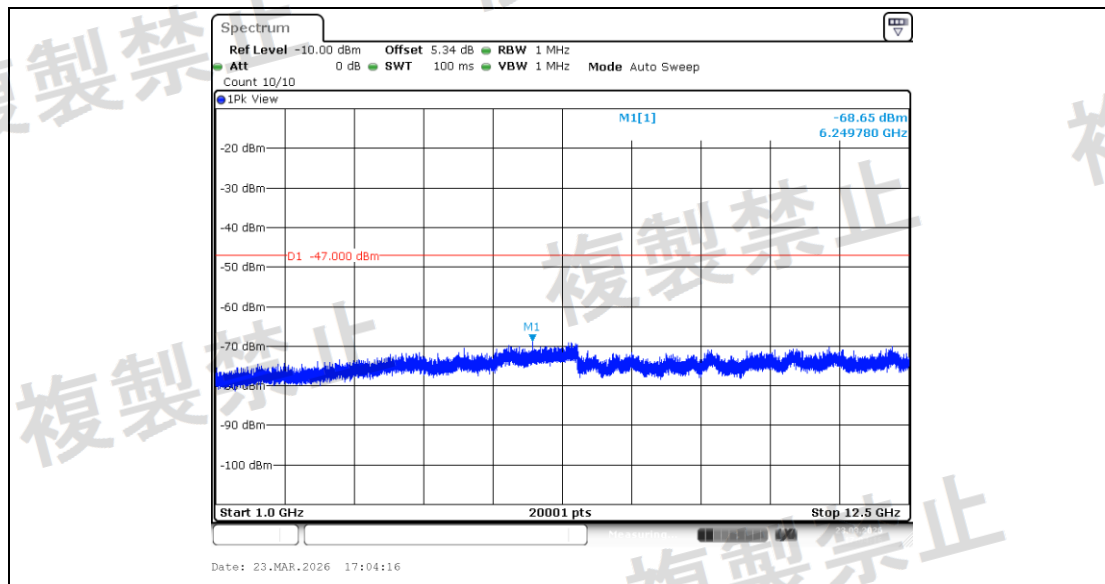


NTNV_11B_Ant1_2472_30~1000

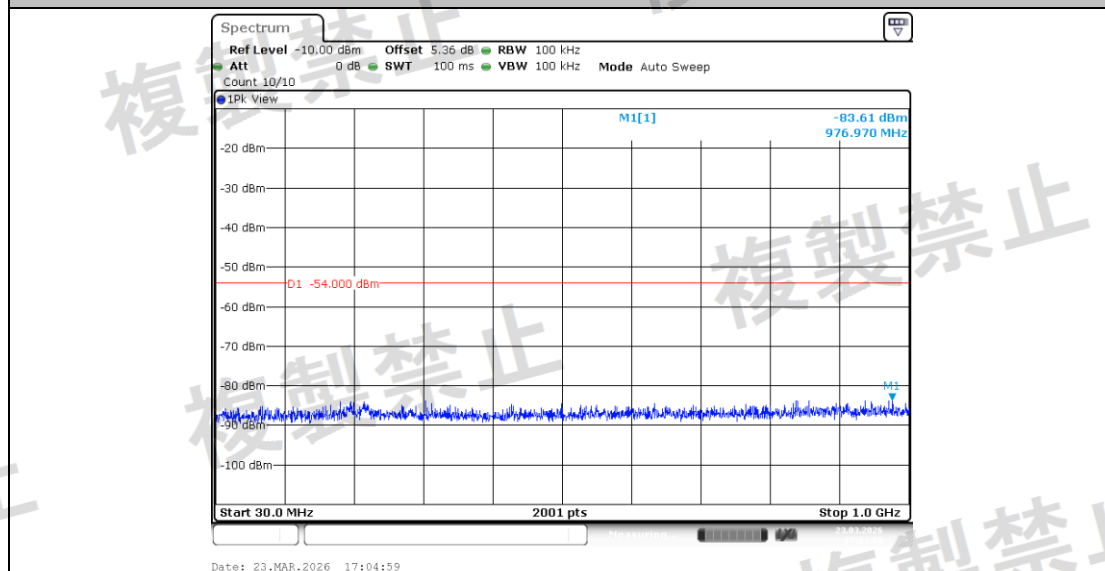




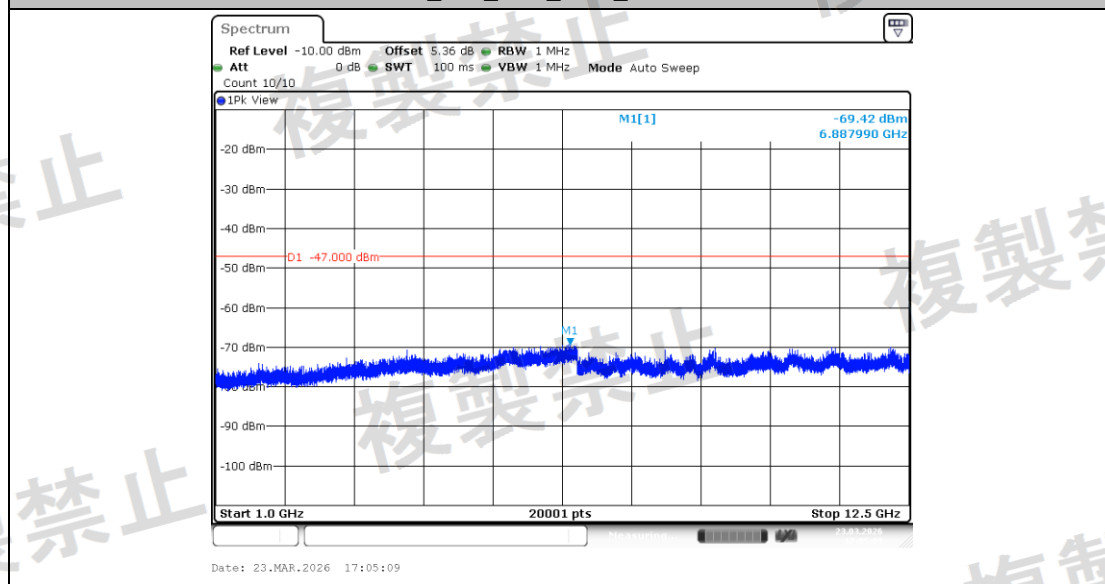
NTNV_11G_Ant1_2412_1000~12500

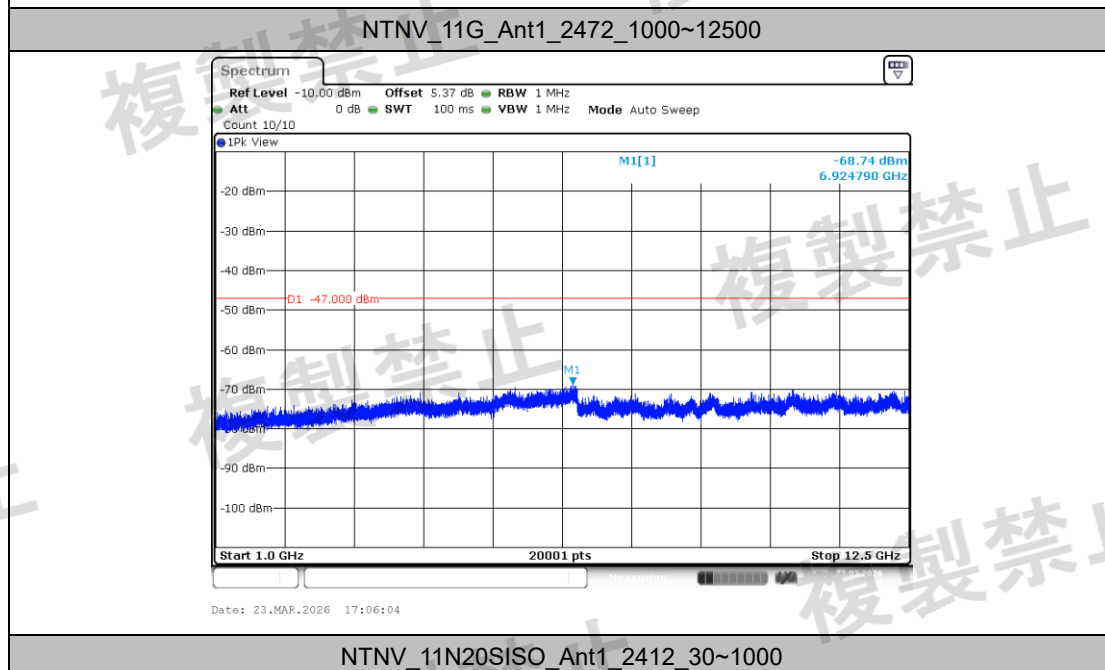
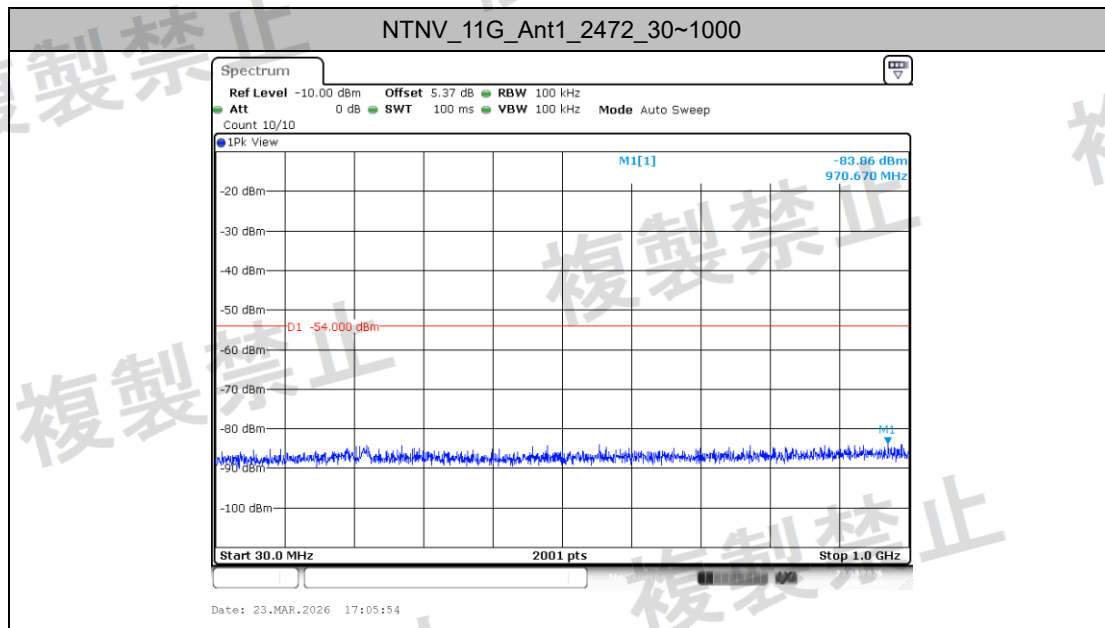


NTNV_11G_Ant1_2442_30~1000

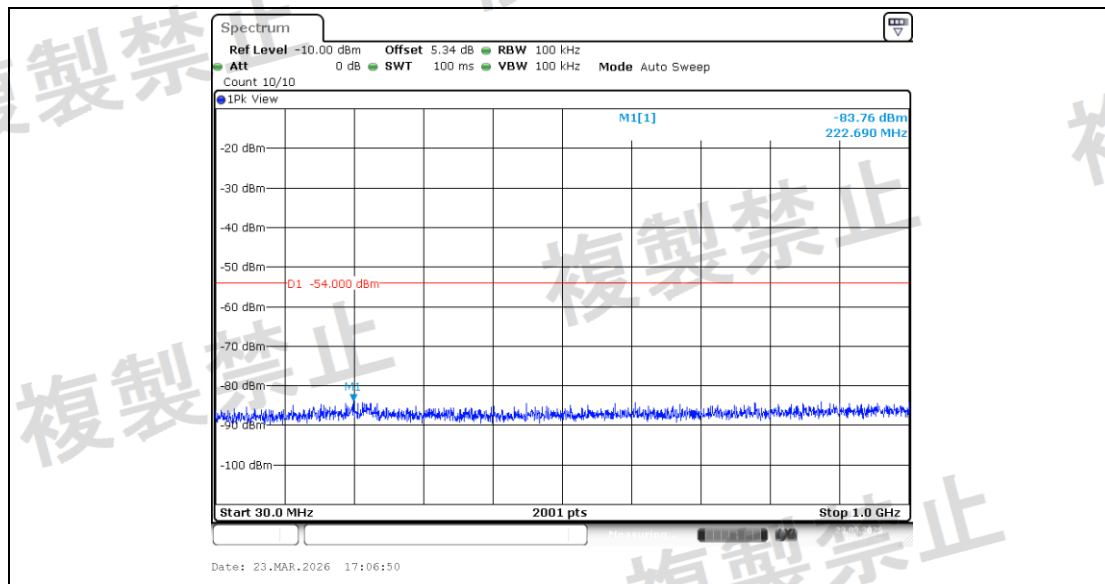


NTNV_11G_Ant1_2442_1000~12500

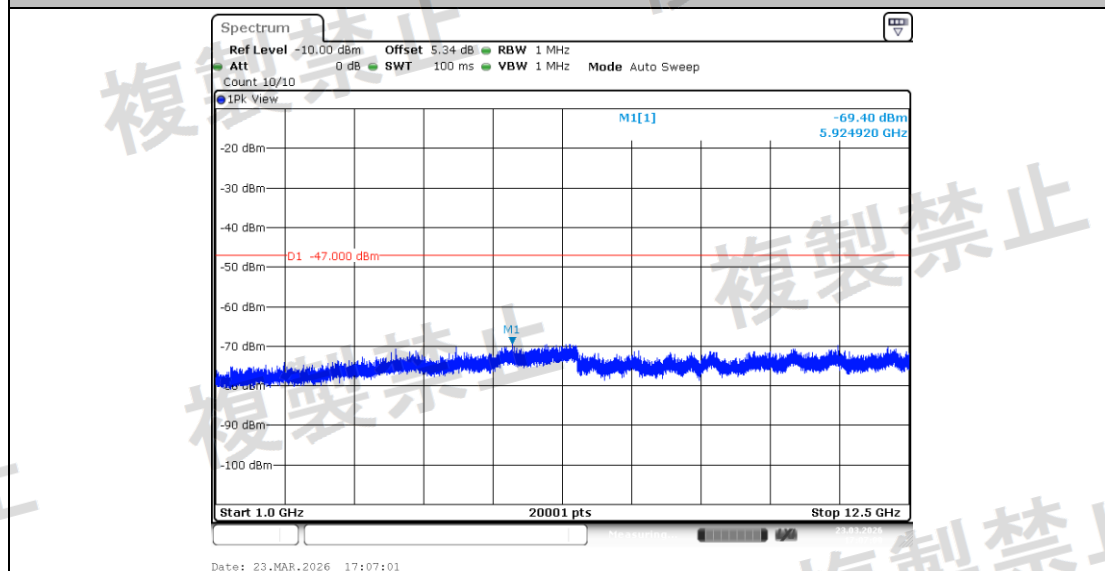




NTNV_11N20SISO_Ant1_2412_30~1000



NTNV_11N20SISO_Ant1_2412_1000~12500



NTNV_11N20SISO_Ant1_2442_30~1000

