

Appendix RF Test Data for BR-EDR

Company : Shanghai Jingyin Intelligent Technology Co., Ltd.

EUT : Bluetooth Amplifier Module

Model Number : TLS-BL-BXFS

Report No. : CTA26032500101

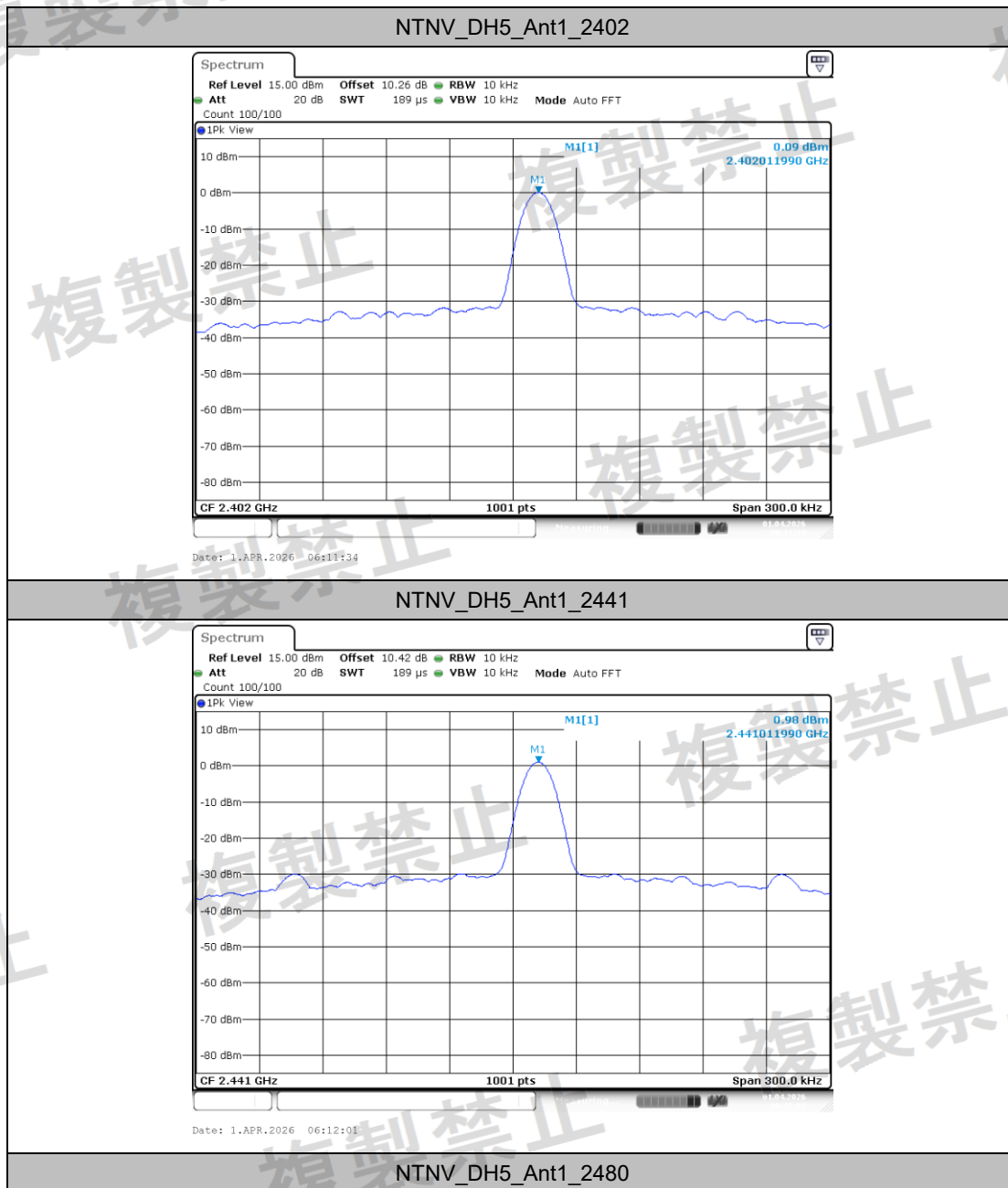
Reviewed By : Eric Wang

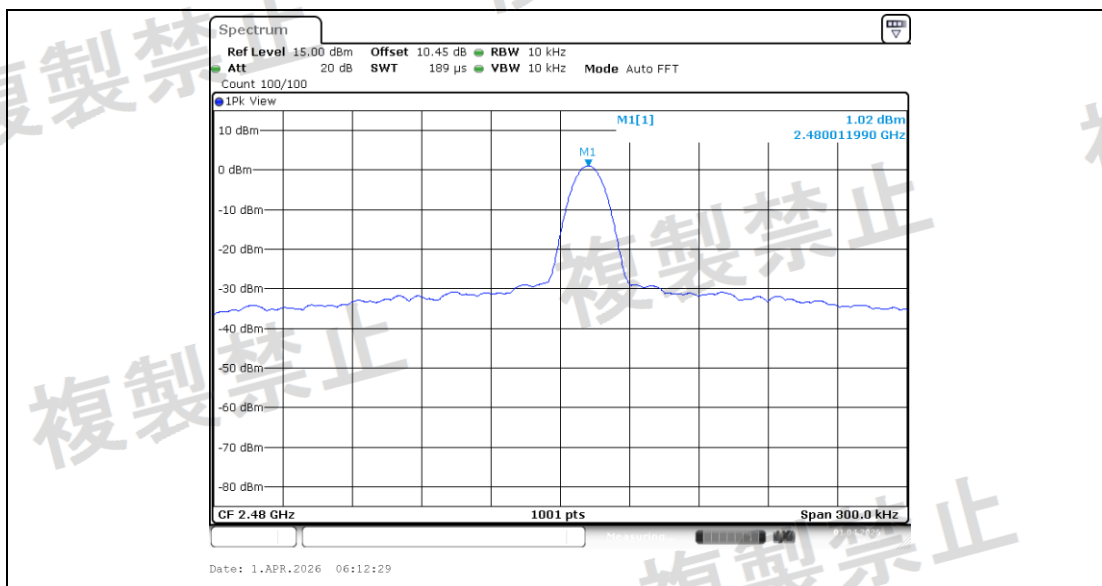
Appendix A: Frequency_Error

Test Result

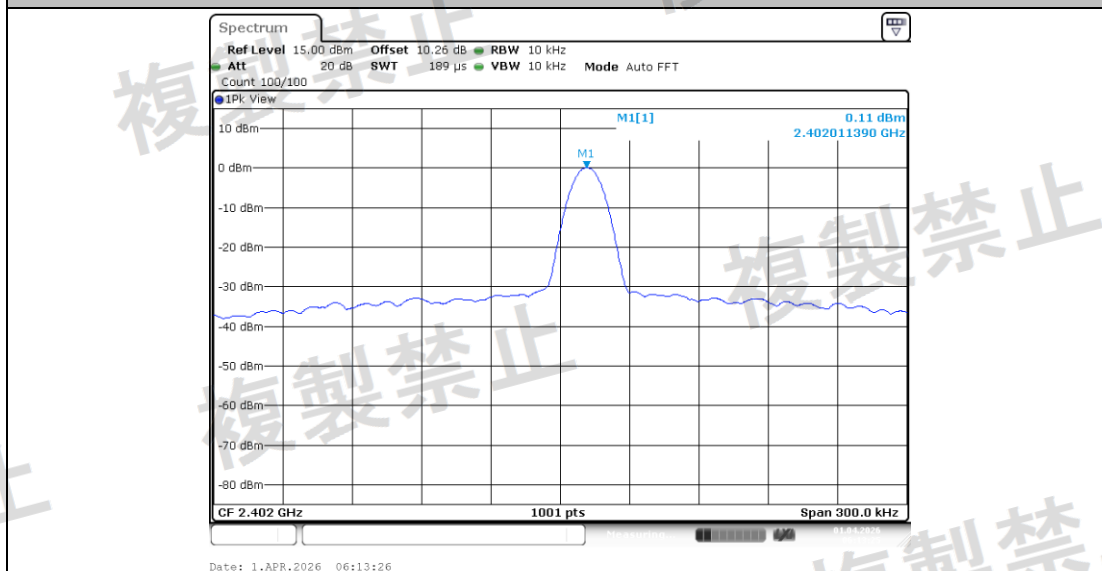
Test Condition	Test Mode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	DH5	Ant1	2402	4.99167	±50	PASS
			2441	4.91192	±50	PASS
			2480	4.83468	±50	PASS
	2DH5	Ant1	2402	4.74188	±50	PASS
			2441	4.91192	±50	PASS
			2480	4.71371	±50	PASS
	3DH5	Ant1	2402	4.49209	±50	PASS
			2441	4.78902	±50	PASS
			2480	4.71371	±50	PASS

Test Graphs

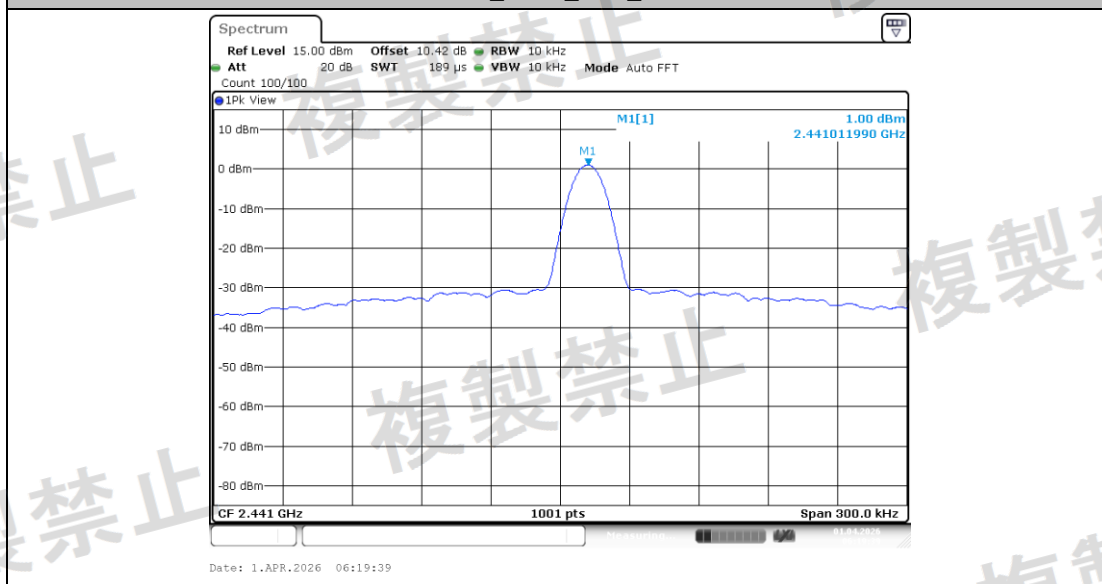


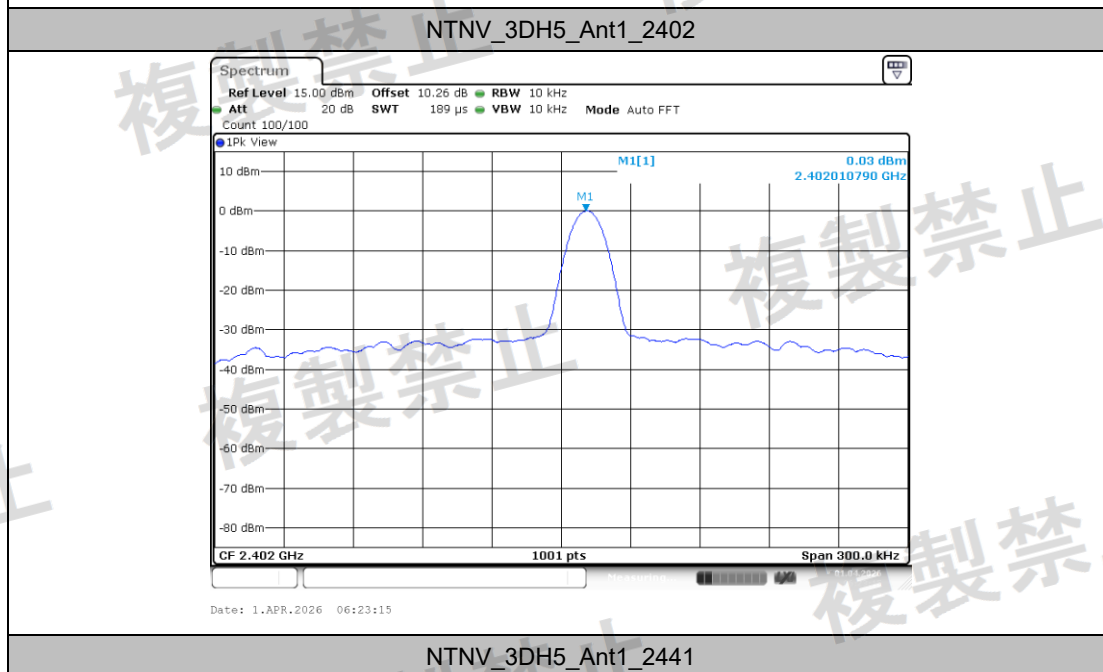
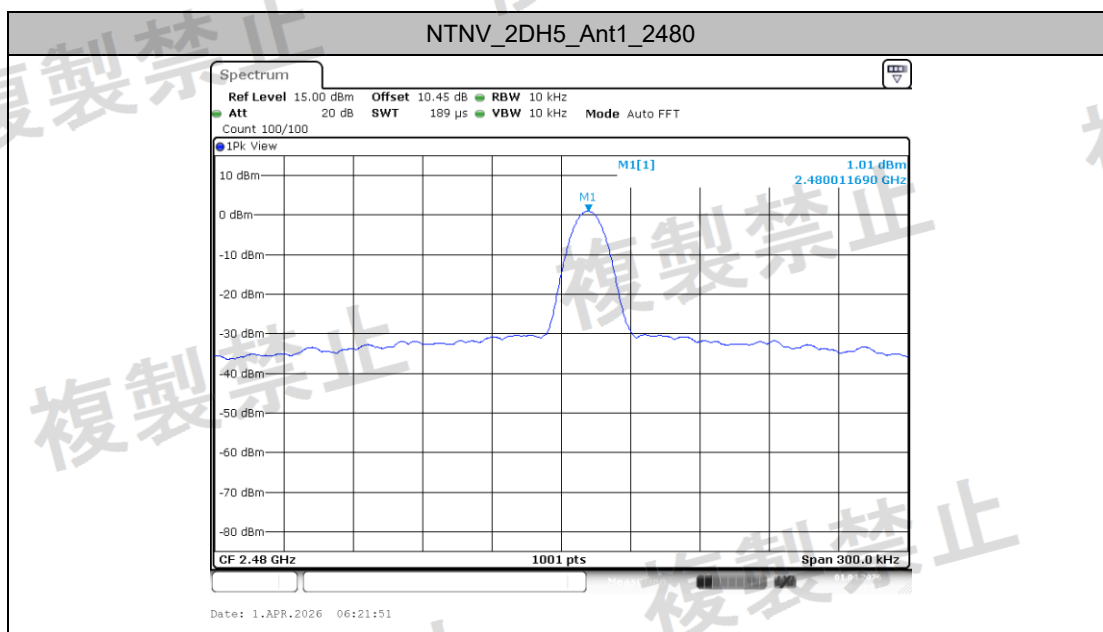


NTNV_2DH5_Ant1_2402

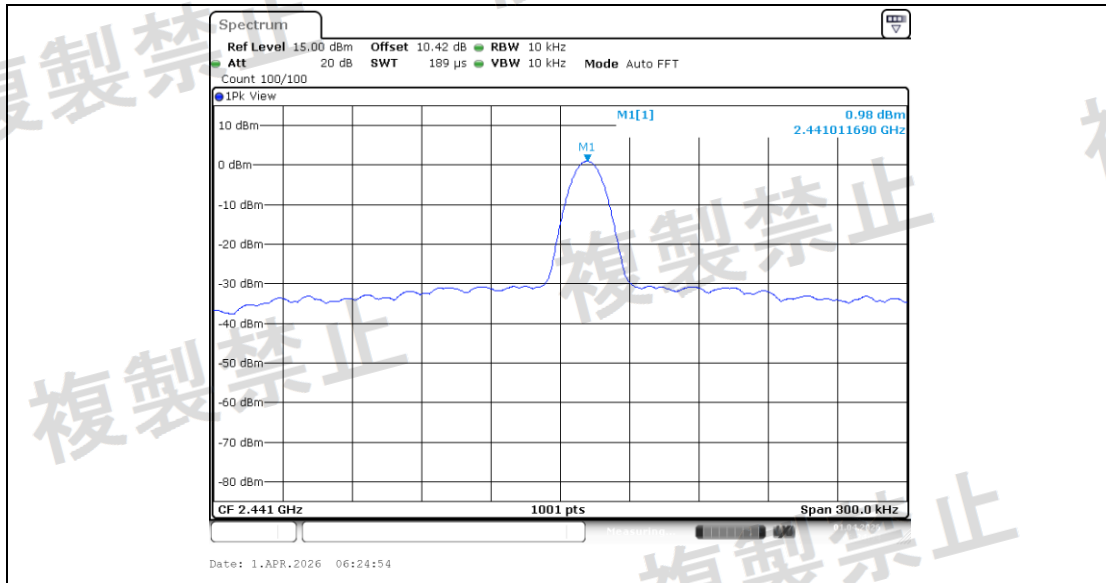


NTNV_2DH5_Ant1_2441

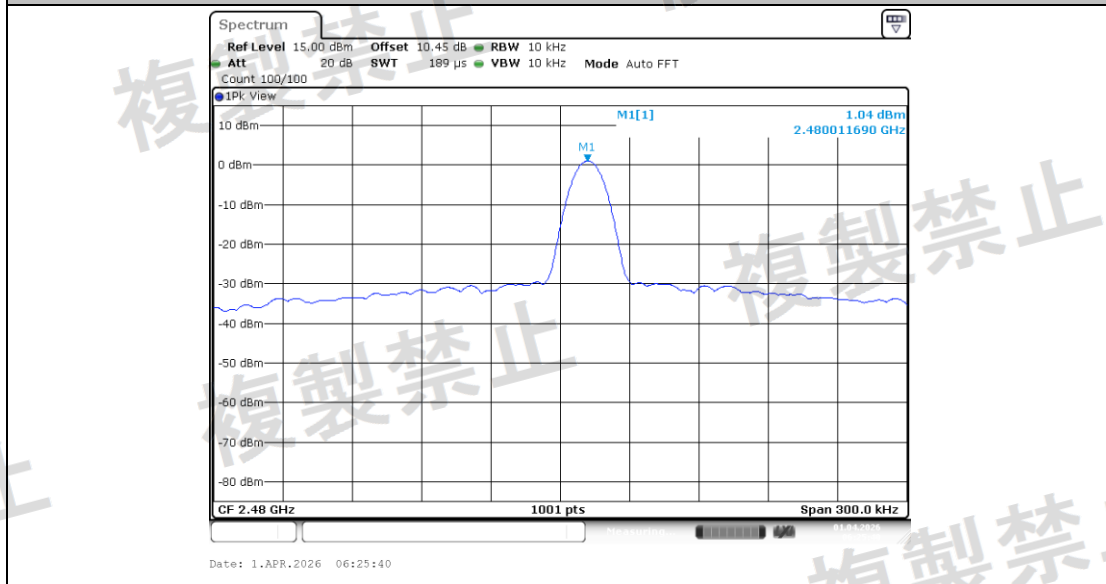




NTNV_3DH5_Ant1_2441



NTNV_3DH5_Ant1_2480

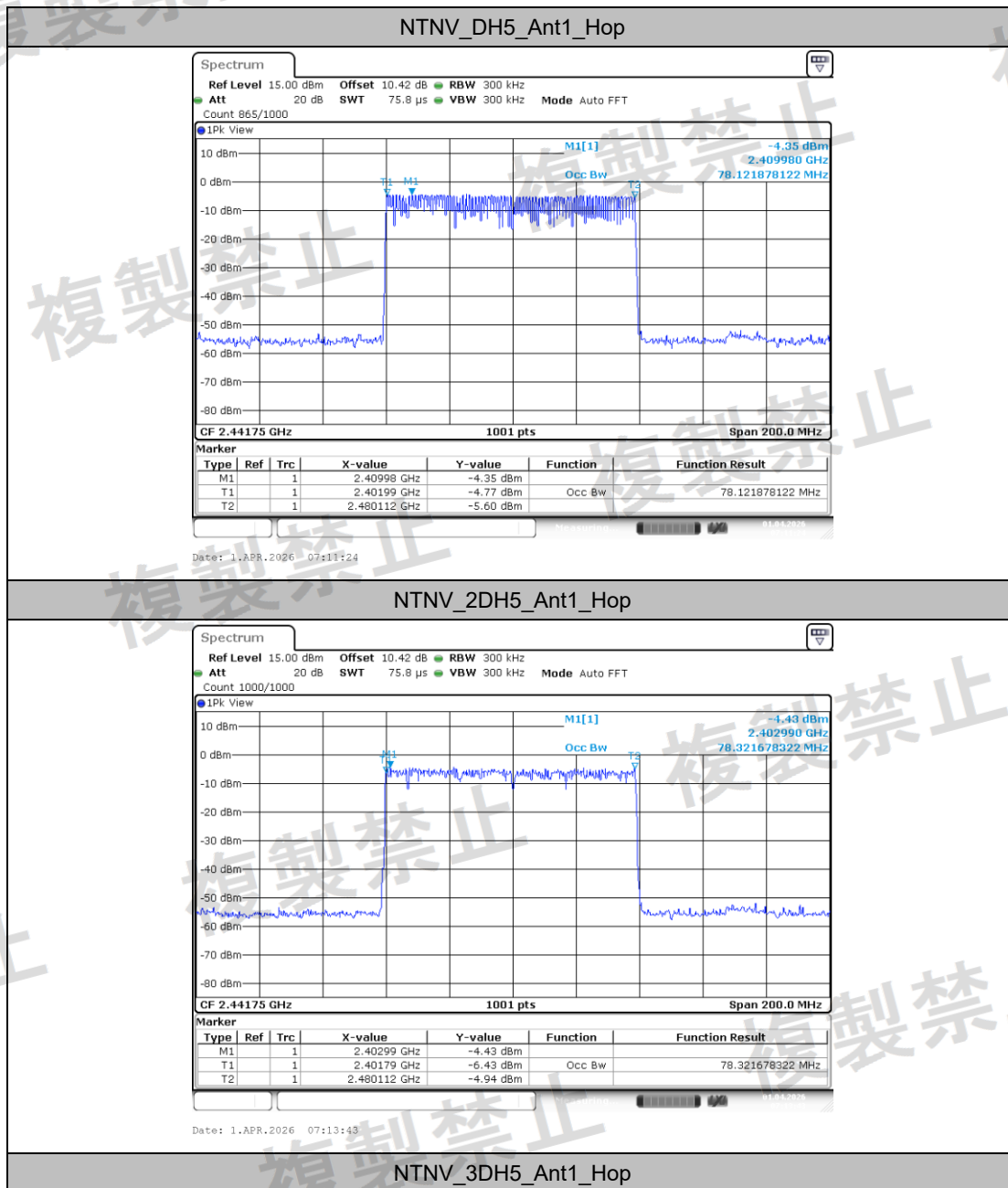


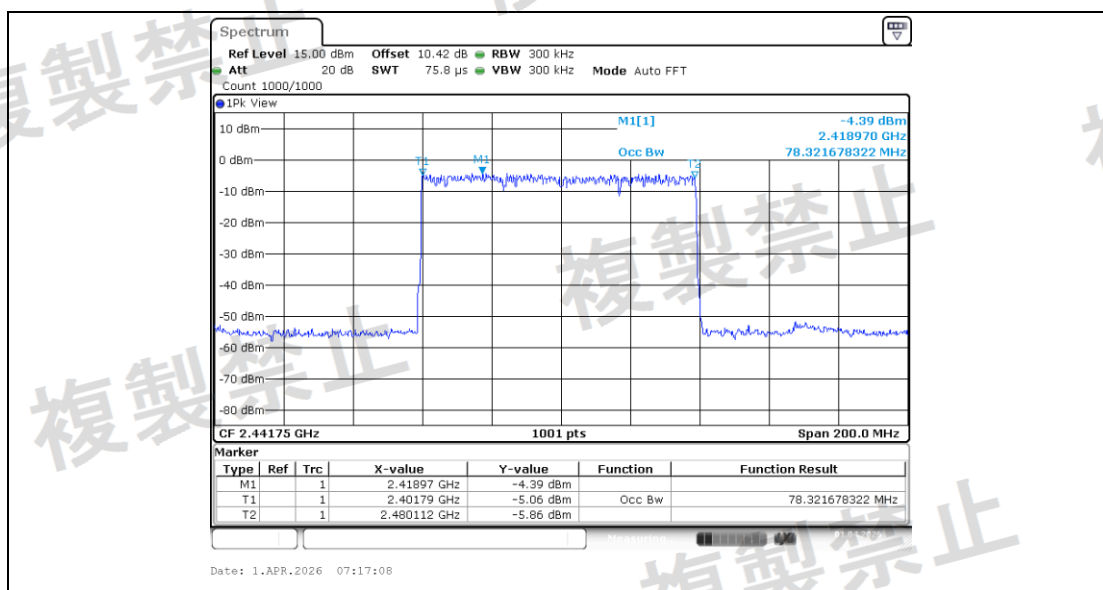
Appendix B: Occupied Bandwidth

Test Result

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.122	≤83.5	PASS
	2DH5	Ant1	Hop	78.322	≤83.5	PASS
	3DH5	Ant1	Hop	78.322	≤83.5	PASS

Test Graphs



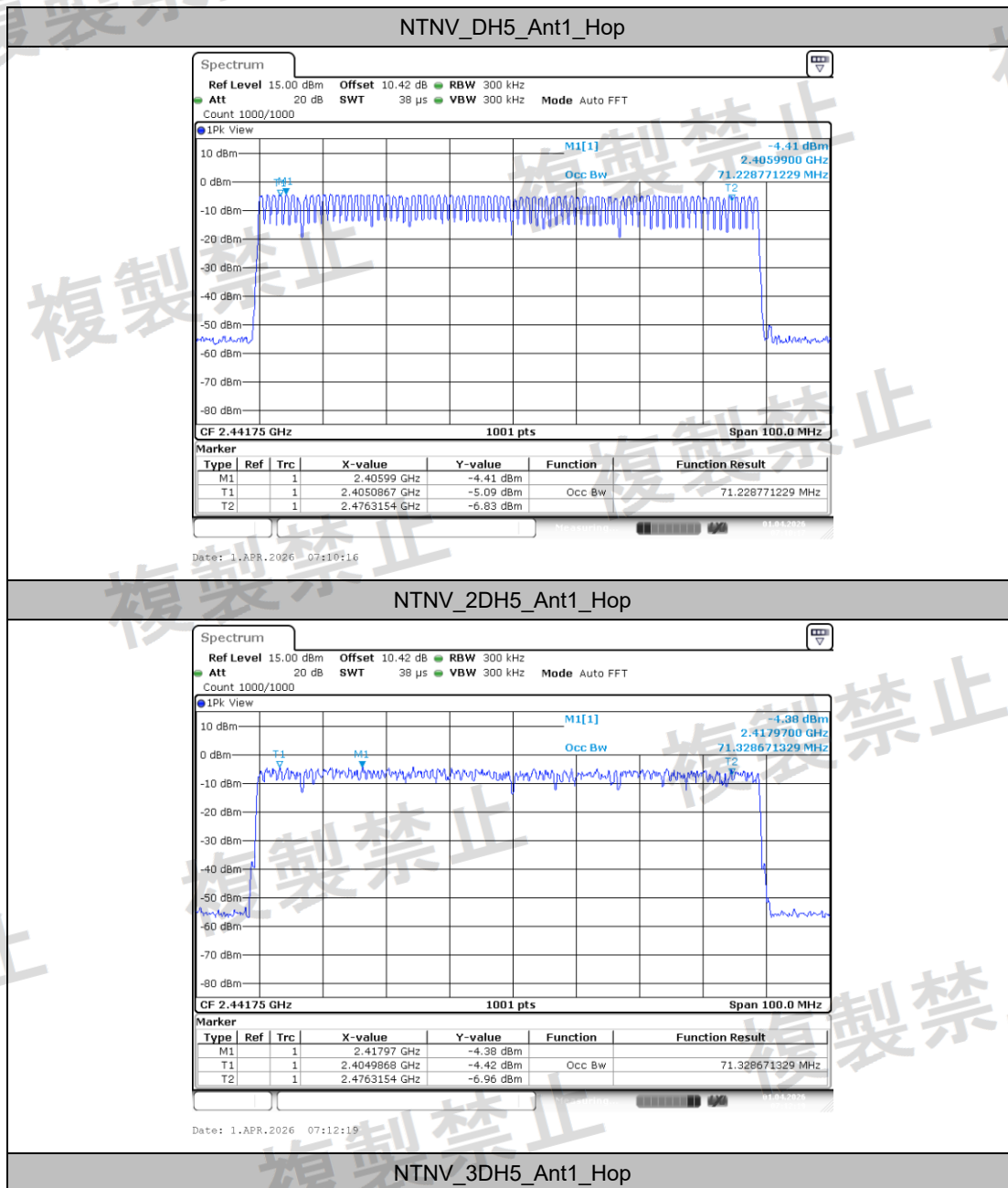


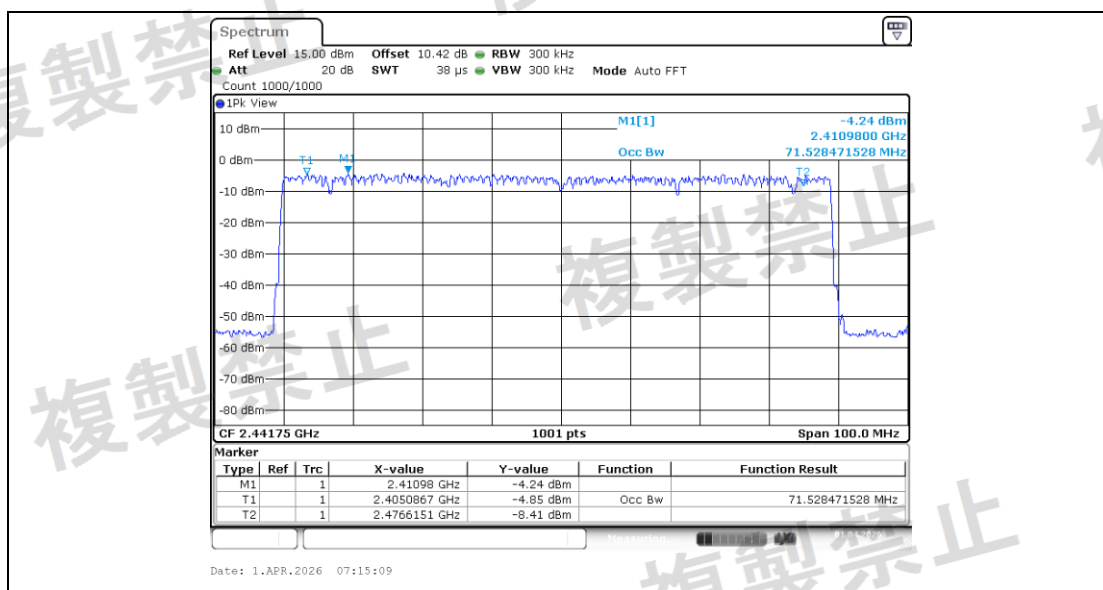
Appendix C: Spread Bandwidth

Test Result

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	DH5	Ant1	Hop	71.229	≥ 0.5	71.229	>5	PASS
	2DH5	Ant1	Hop	71.329	≥ 0.5	71.329	>5	PASS
	3DH5	Ant1	Hop	71.528	≥ 0.5	71.528	>5	PASS

Test Graphs





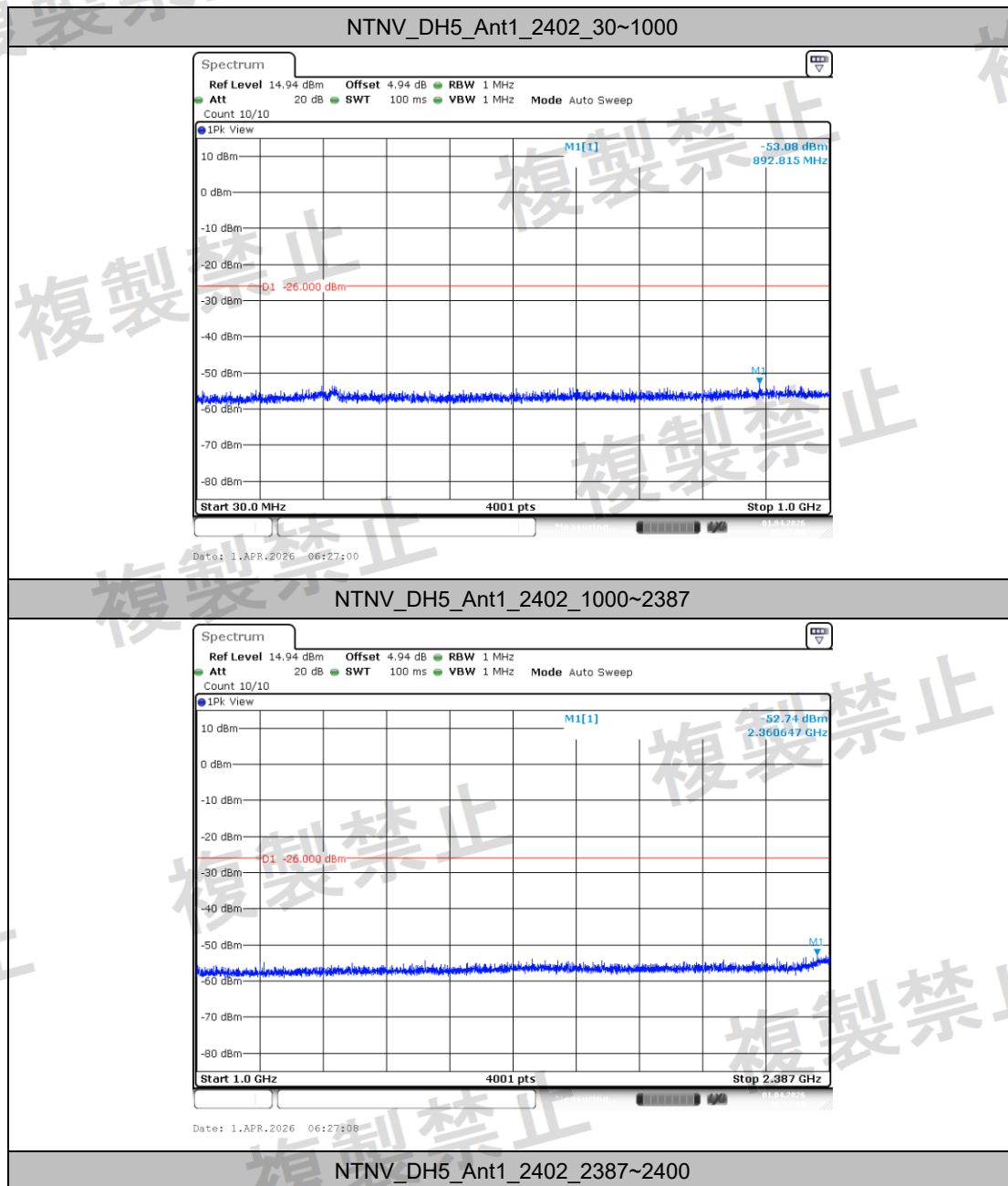
Appendix D: Spurious Emission of TX

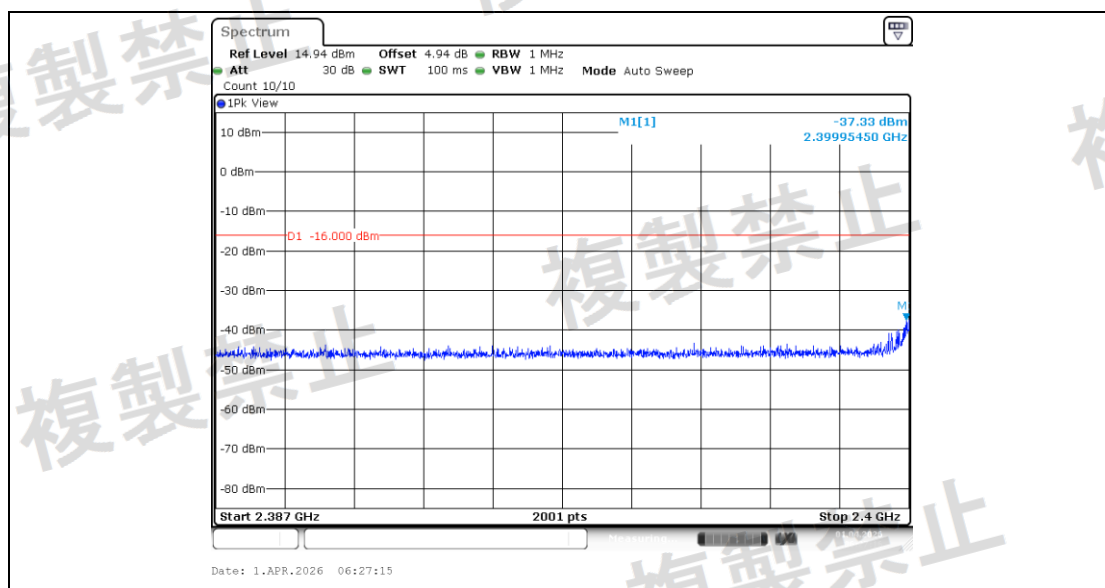
Test Result

Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	892.82	-53.08	≤-26	0.00492	≤2.5	PASS
				1000~2387	2360.65	-52.74	≤-26	0.00532	≤2.5	PASS
				2387~2400	2399.95	-37.33	≤-16	0.18493	≤25	PASS
				2483.5~2496.5	2487.04	-43.72	≤-16	0.04246	≤25	PASS
				2496.5~13000	4803.59	-45.71	≤-26	0.02685	≤2.5	PASS
			2441	30~1000	908.58	-53.59	≤-26	0.00438	≤2.5	PASS
				1000~2387	2121.04	-52.95	≤-26	0.00507	≤2.5	PASS
				2387~2400	2390.32	-43.56	≤-16	0.04406	≤25	PASS
				2483.5~2496.5	2489.73	-43.11	≤-16	0.04887	≤25	PASS
				2496.5~13000	4881.32	-46.15	≤-26	0.02427	≤2.5	PASS
			2480	30~1000	237.58	-53.16	≤-26	0.00483	≤2.5	PASS
				1000~2387	2310.02	-54.01	≤-26	0.00397	≤2.5	PASS
				2387~2400	2398.23	-43.99	≤-16	0.03990	≤25	PASS
				2483.5~2496.5	2485.20	-42.98	≤-16	0.05035	≤25	PASS
				2496.5~13000	4960.10	-45.23	≤-26	0.02999	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	238.79	-53.64	≤-26	0.00433	≤2.5	PASS
				1000~2387	1883.17	-52.93	≤-26	0.00509	≤2.5	PASS
				2387~2400	2399.99	-30.41	≤-16	0.90991	≤25	PASS
				2483.5~2496.5	2486.78	-42.98	≤-16	0.05035	≤25	PASS
				2496.5~13000	4803.59	-45.28	≤-26	0.02965	≤2.5	PASS
			2441	30~1000	239.52	-53.05	≤-26	0.00495	≤2.5	PASS
				1000~2387	2294.07	-53.01	≤-26	0.00500	≤2.5	PASS
				2387~2400	2388.45	-43.83	≤-16	0.04140	≤25	PASS
				2483.5~2496.5	2489.94	-43.35	≤-16	0.04624	≤25	PASS
				2496.5~13000	4881.84	-44.32	≤-26	0.03698	≤2.5	PASS
			2480	30~1000	239.52	-53.12	≤-26	0.00488	≤2.5	PASS
				1000~2387	2305.17	-53.01	≤-26	0.00500	≤2.5	PASS
				2387~2400	2389.25	-43.20	≤-16	0.04786	≤25	PASS
				2483.5~2496.5	2489.14	-42.94	≤-16	0.05082	≤25	PASS
				2496.5~13000	4960.62	-44.96	≤-26	0.03192	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	887.00	-52.77	≤-26	0.00528	≤2.5	PASS
				1000~2387	2356.14	-52.81	≤-26	0.00524	≤2.5	PASS
				2387~2400	2399.99	-29.88	≤-16	1.02802	≤25	PASS
				2483.5~2496.5	2494.77	-43.58	≤-16	0.04385	≤25	PASS
				2496.5~13000	4803.07	-45.14	≤-26	0.03062	≤2.5	PASS
			2441	30~1000	240.25	-51.82	≤-26	0.00658	≤2.5	PASS
				1000~2387	2385.27	-53.99	≤-26	0.00399	≤2.5	PASS

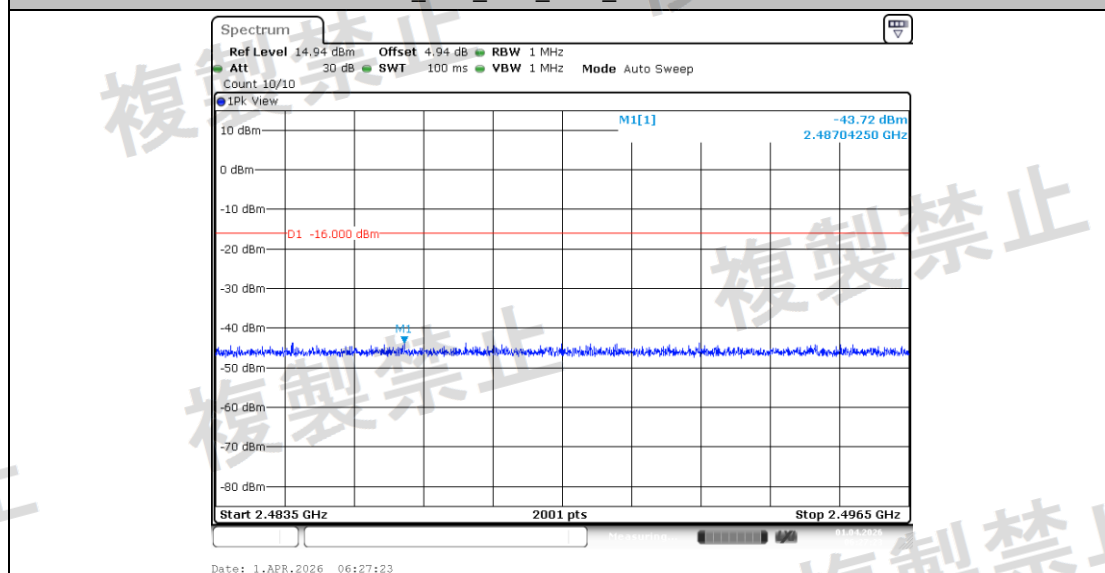
			2387~2400	2396.67	-43.14	≤-16	0.04853	≤25	PASS
			2483.5~2496.5	2485.20	-42.72	≤-16	0.05346	≤25	PASS
			2496.5~13000	4882.37	-44.09	≤-26	0.03899	≤2.5	PASS
		2480	30~1000	241.22	-53.13	≤-26	0.00486	≤2.5	PASS
			1000~2387	2012.51	-54.04	≤-26	0.00394	≤2.5	PASS
			2387~2400	2399.96	-43.02	≤-16	0.04989	≤25	PASS
			2483.5~2496.5	2484.44	-42.94	≤-16	0.05082	≤25	PASS
			2496.5~13000	4960.10	-43.08	≤-26	0.04920	≤2.5	PASS

Test Graphs

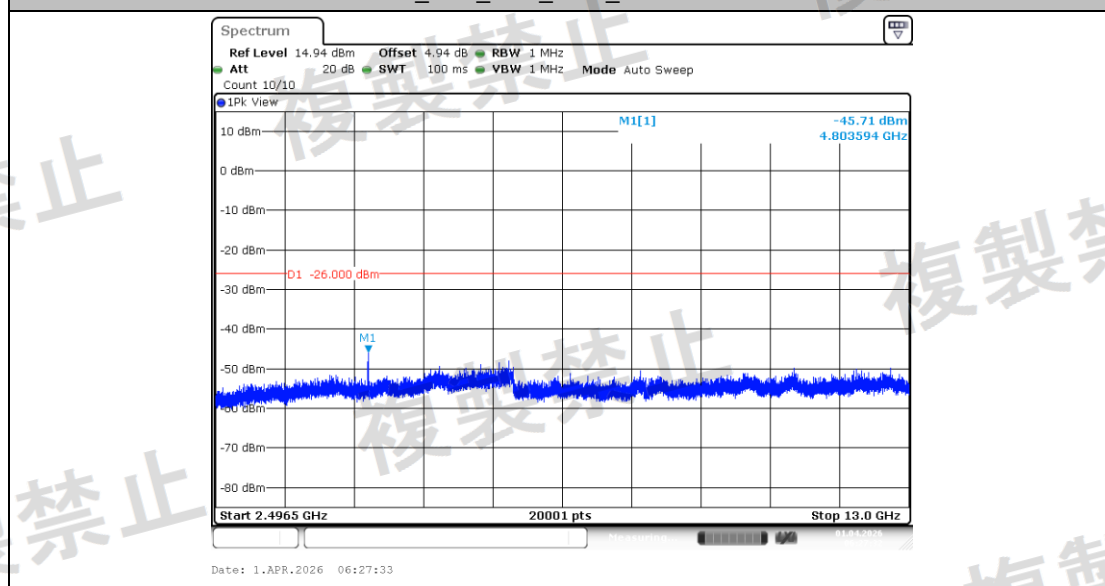


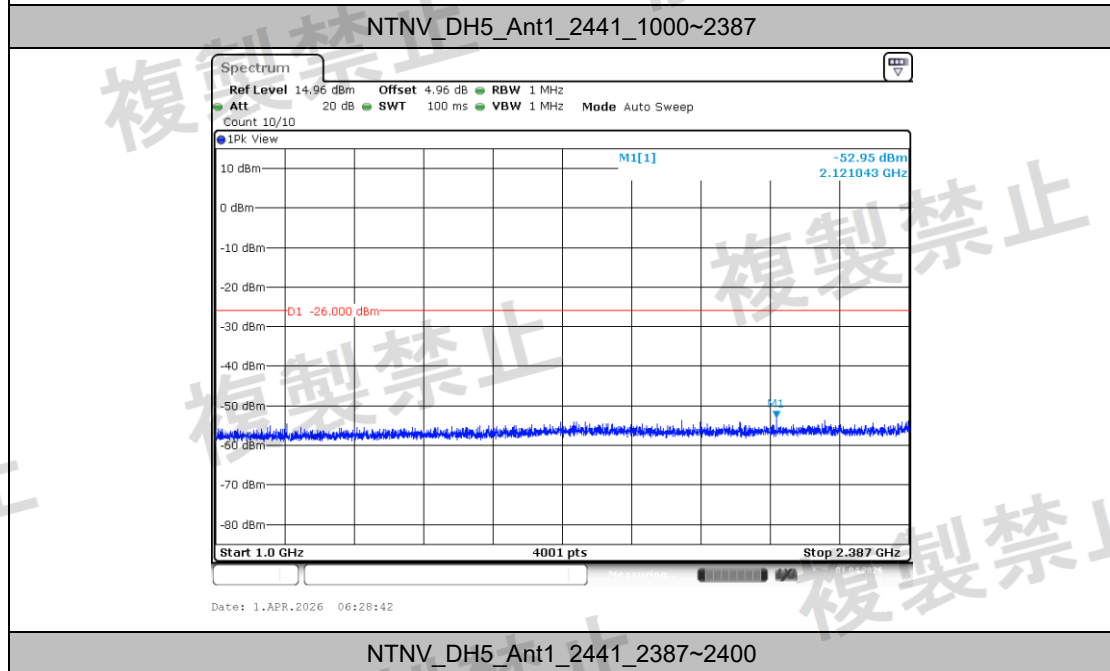
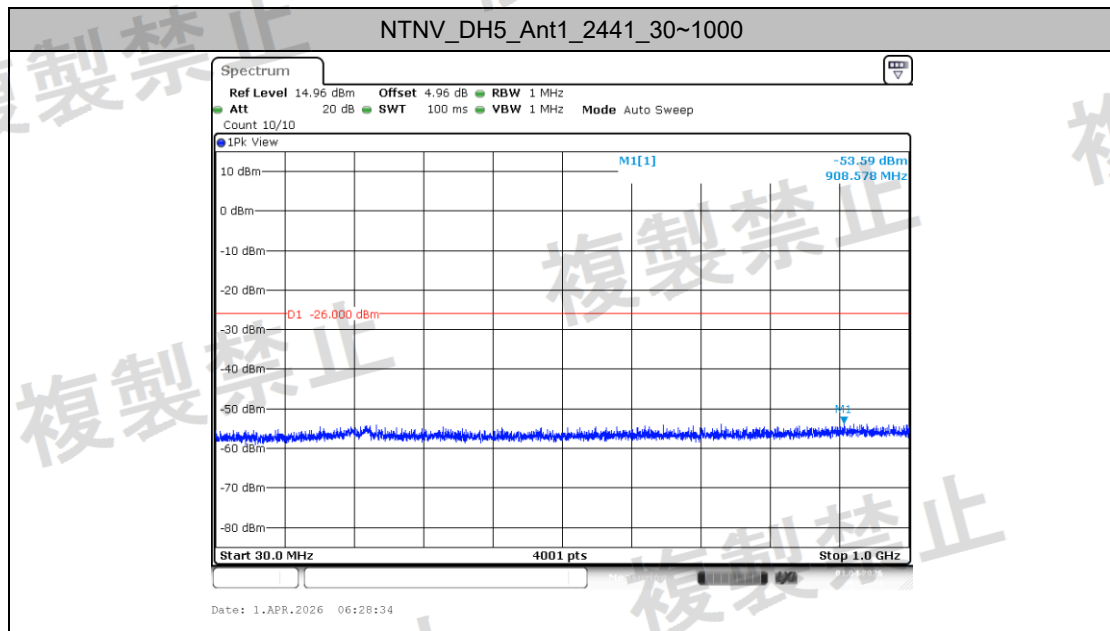


NTNV_DH5_Ant1_2402_2483.5~2496.5

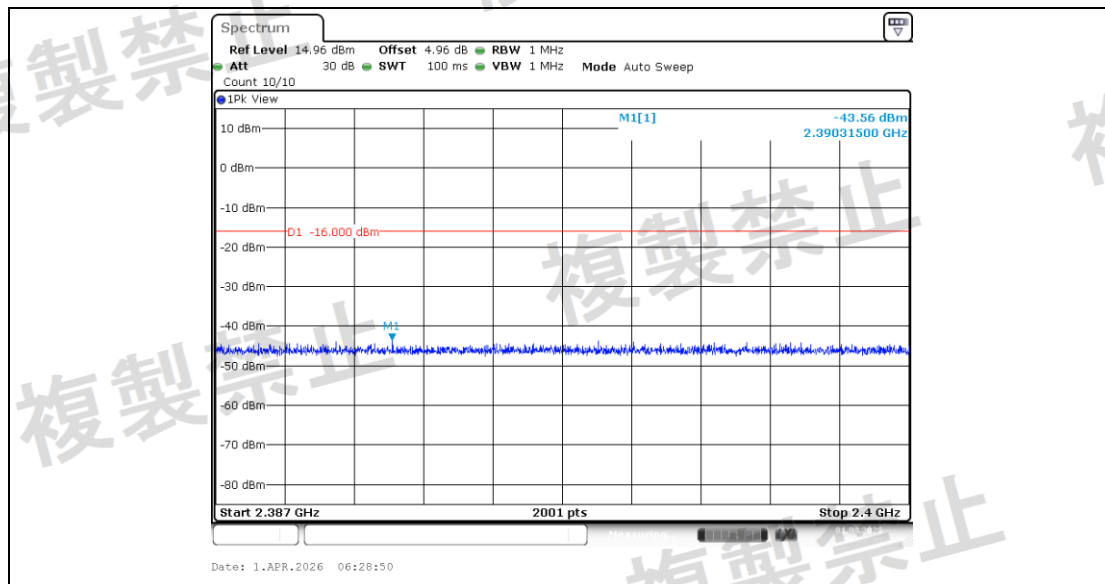


NTNV_DH5_Ant1_2402_2496.5~13000

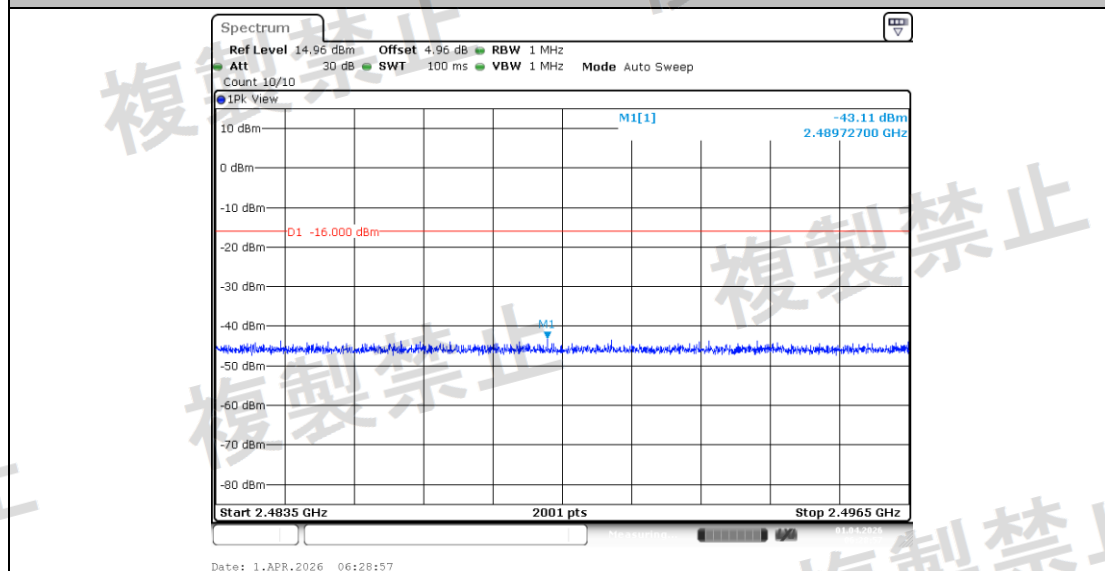




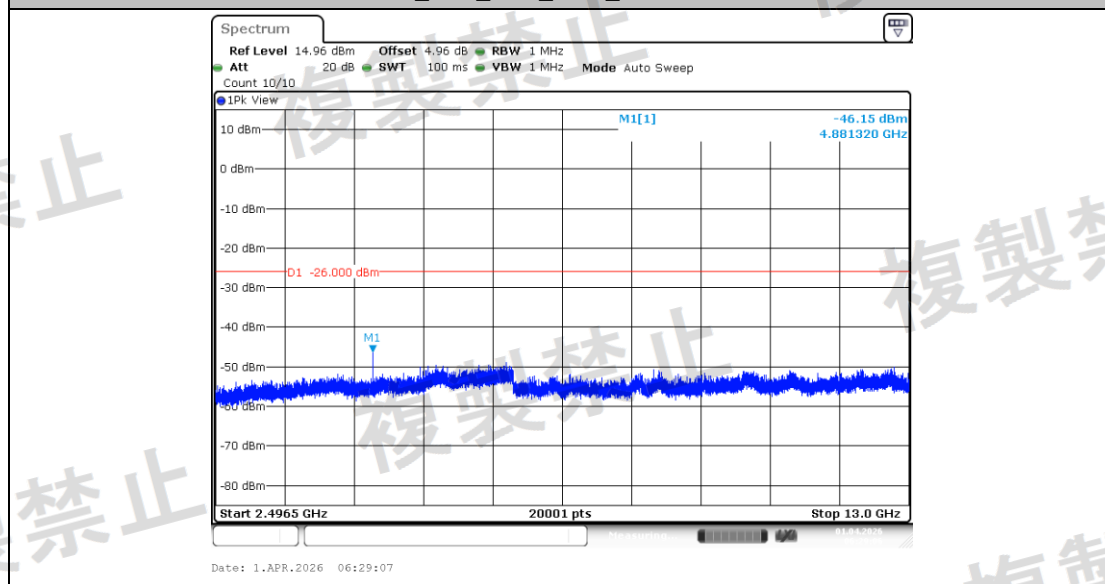
NTNV_DH5_Ant1_2441_2387~2400

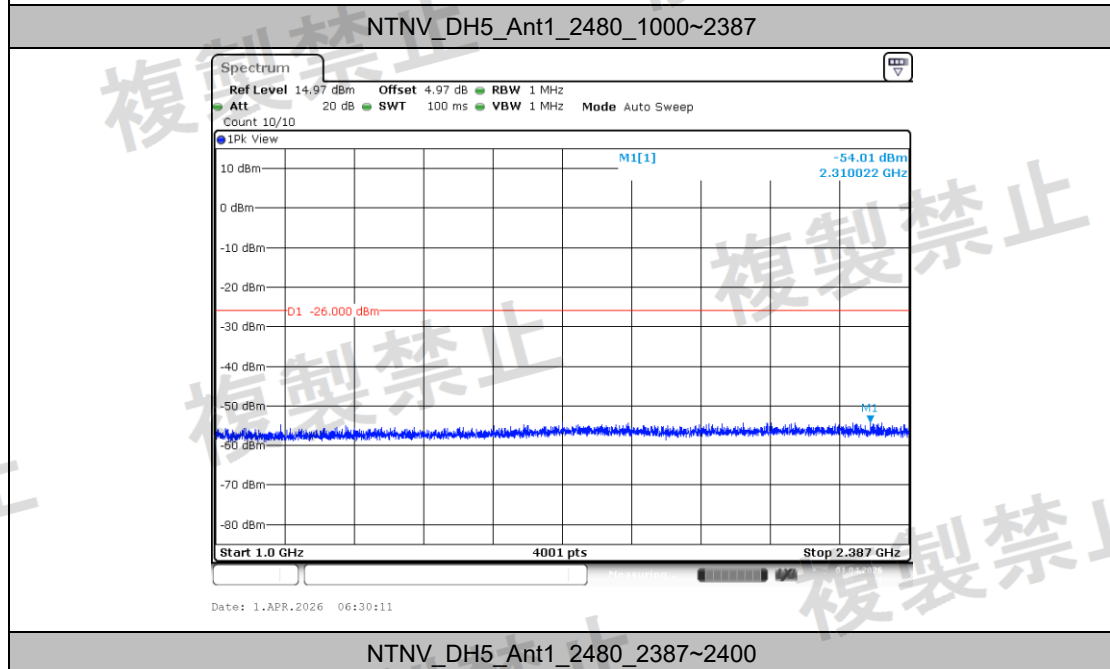
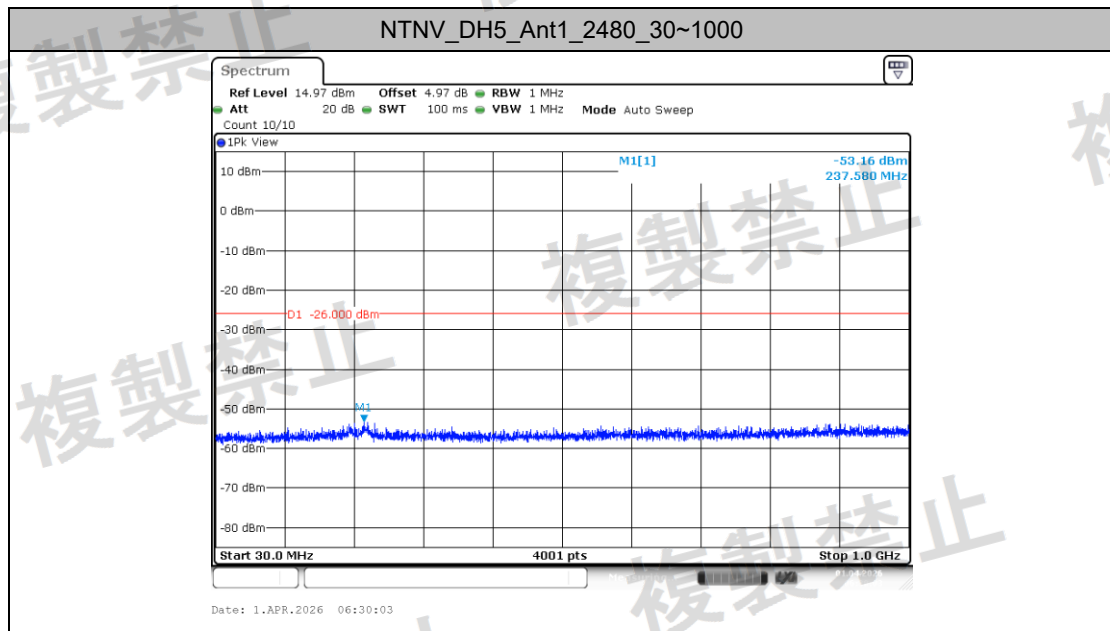


NTNV_DH5_Ant1_2441_2483.5~2496.5

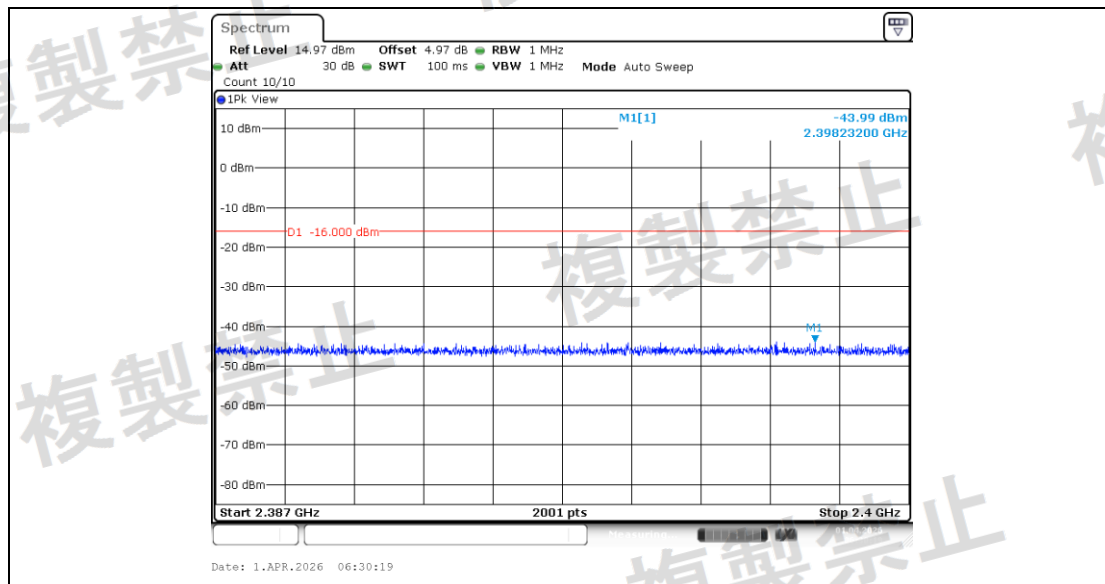


NTNV_DH5_Ant1_2441_2496.5~13000

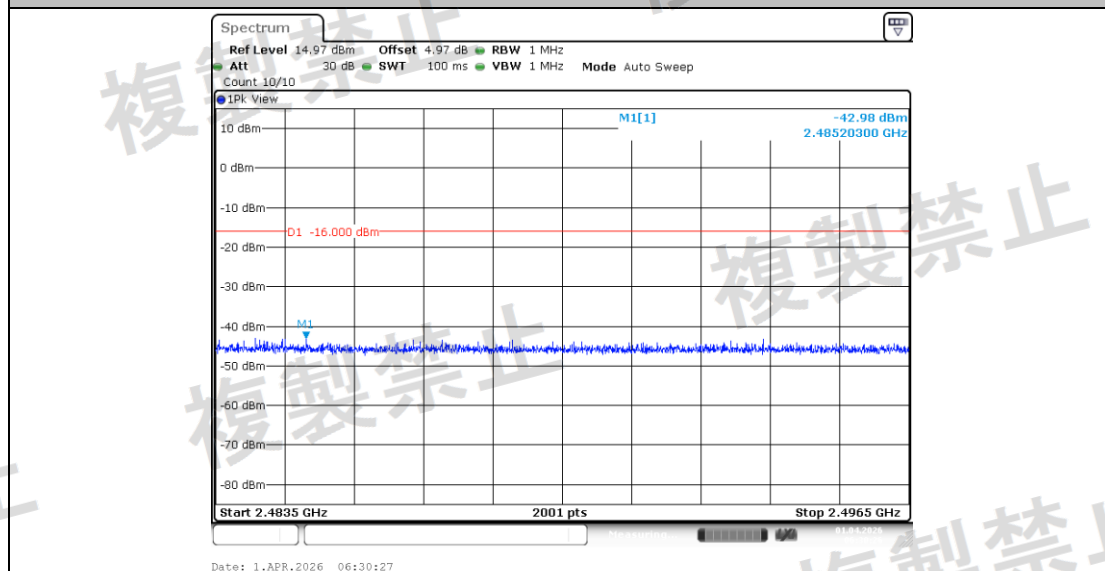




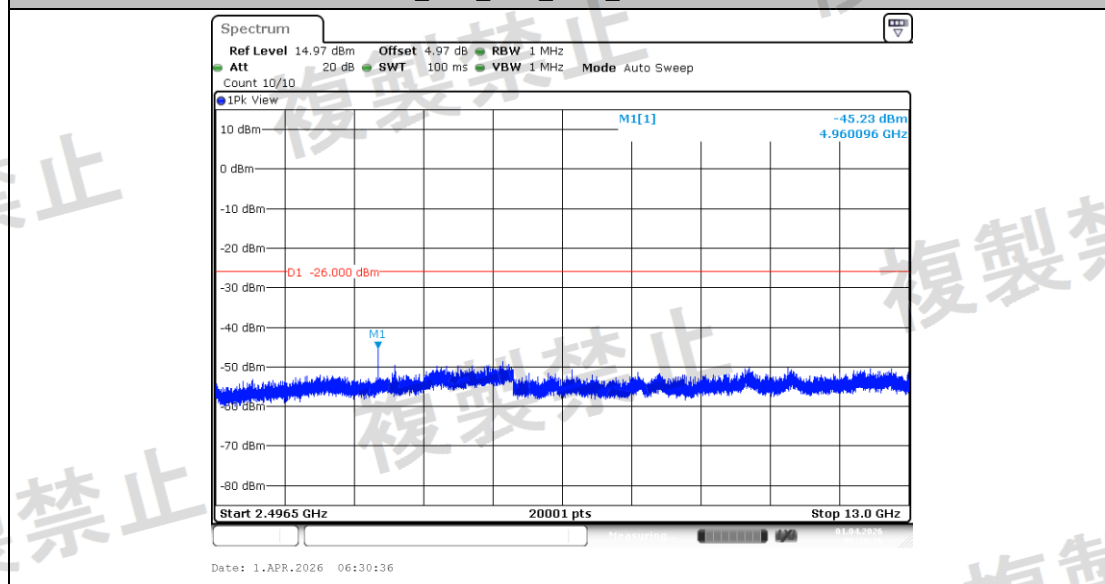
NTNV_DH5_Ant1_2480_2387~2400

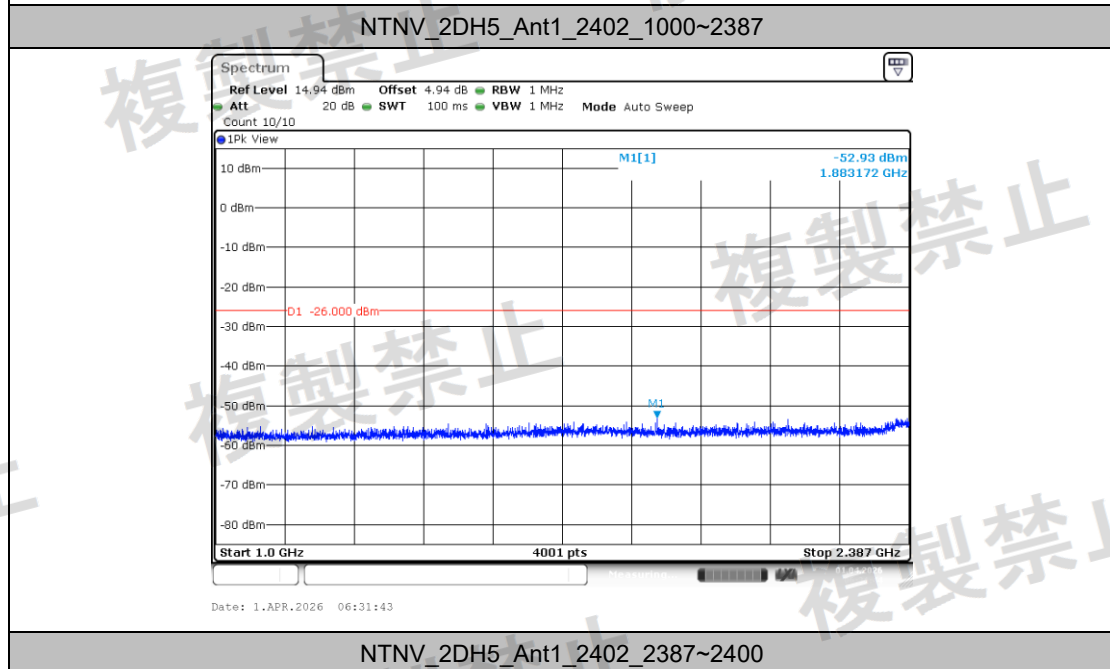
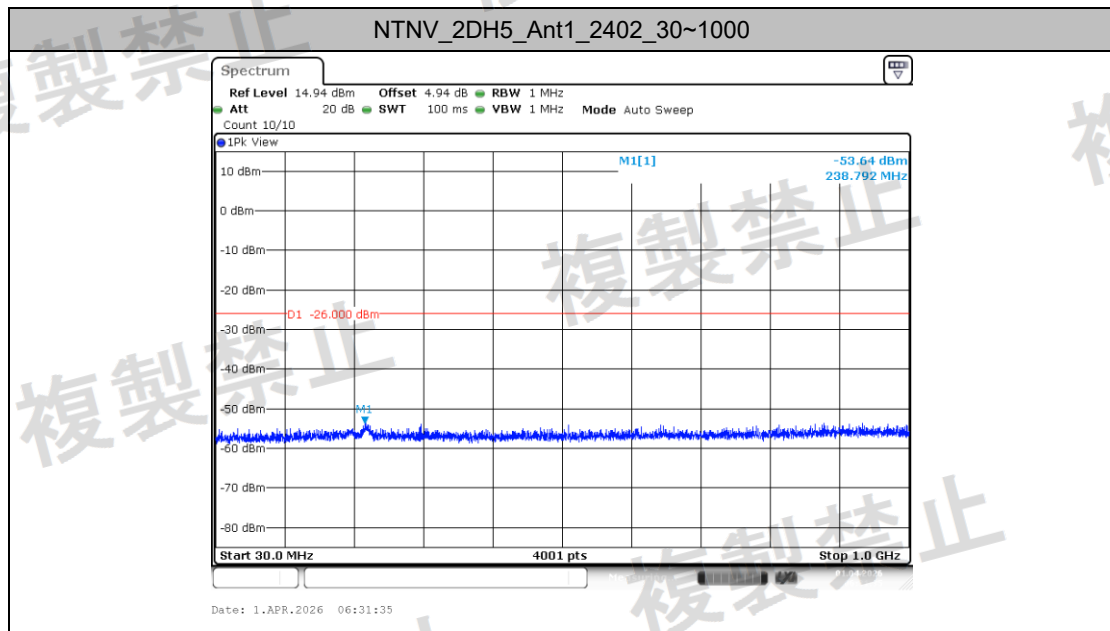


NTNV_DH5_Ant1_2480_2483.5~2496.5

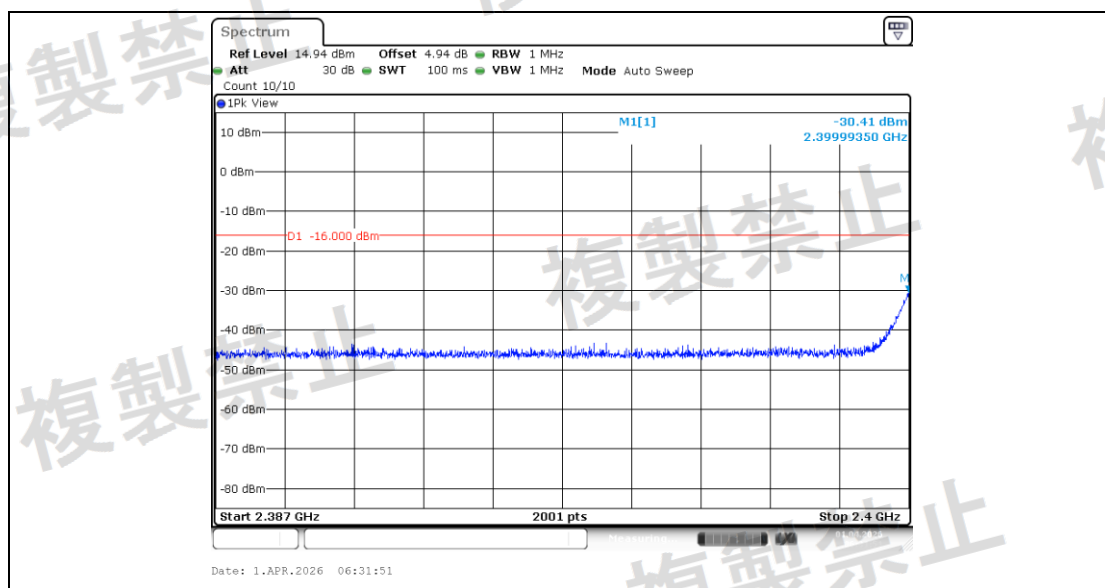


NTNV_DH5_Ant1_2480_2496.5~13000

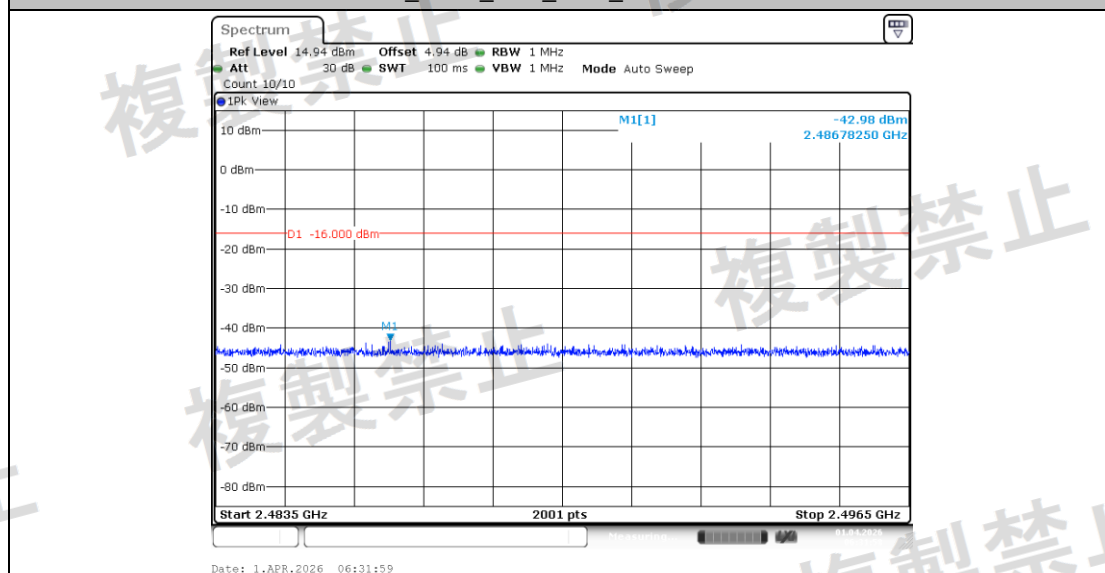




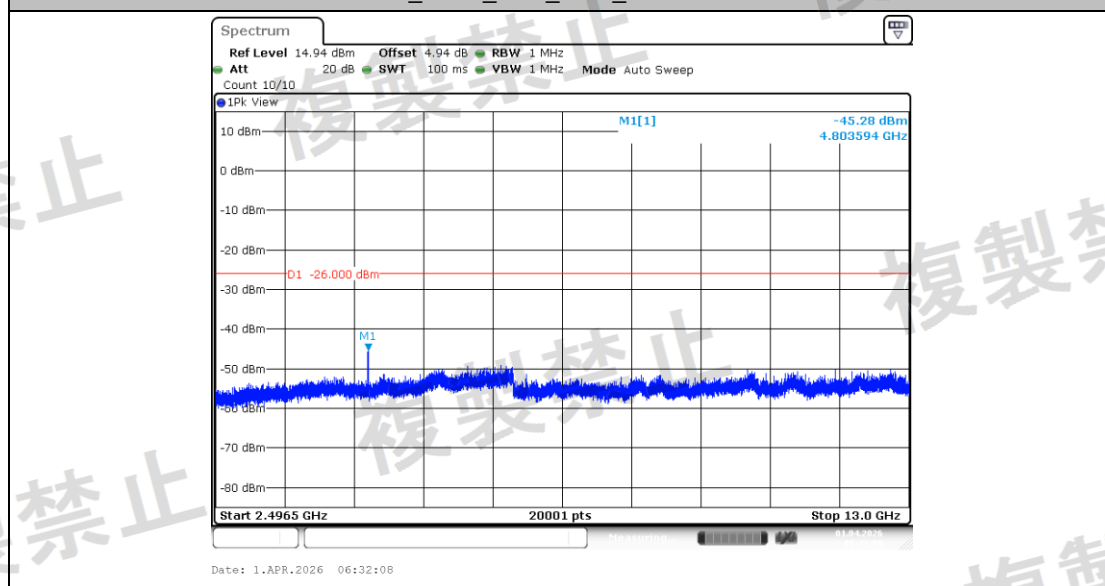
NTNV_2DH5_Ant1_2402_2387~2400

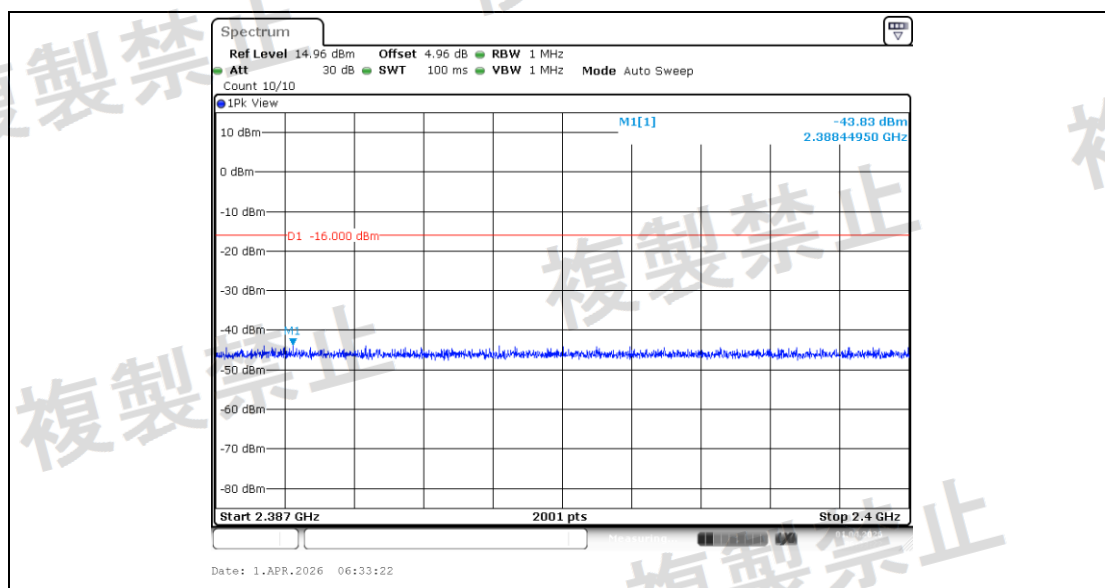


NTVN_2DH5_Ant1_2402_2483.5~2496.5

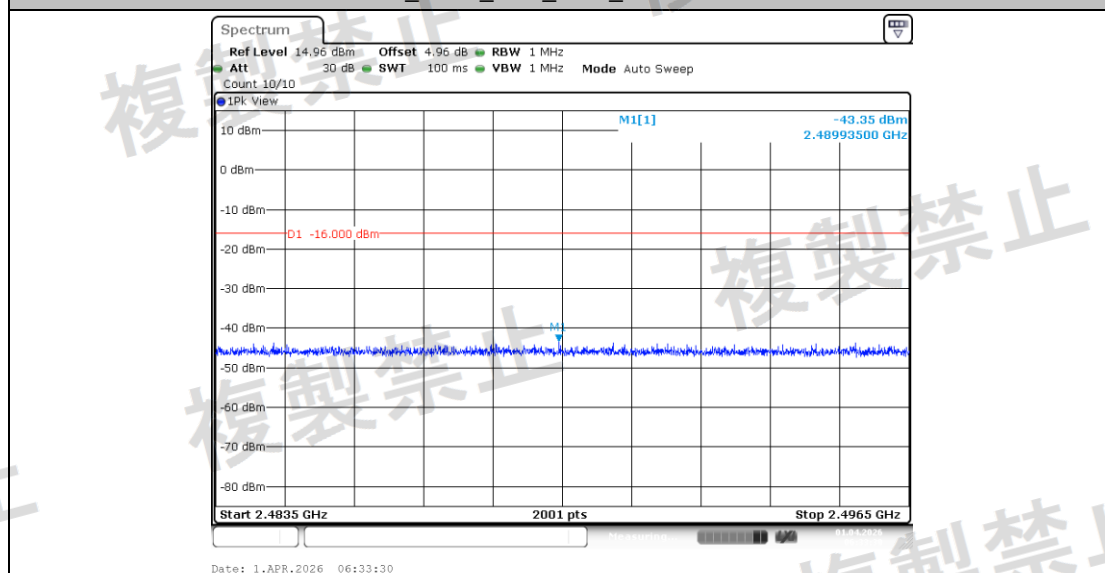


NTVN_2DH5_Ant1_2402_2496.5~13000

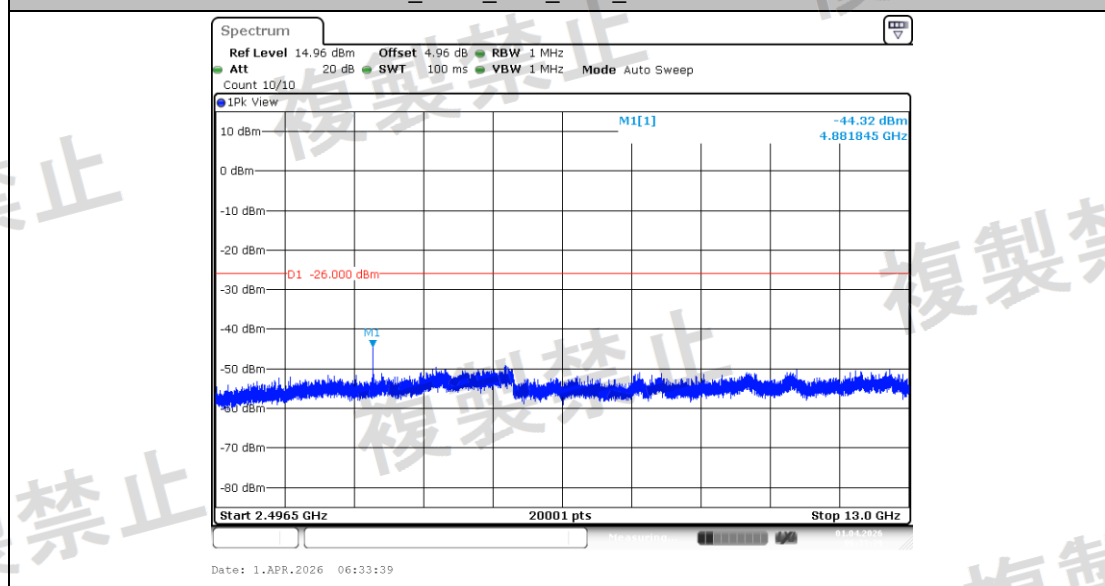


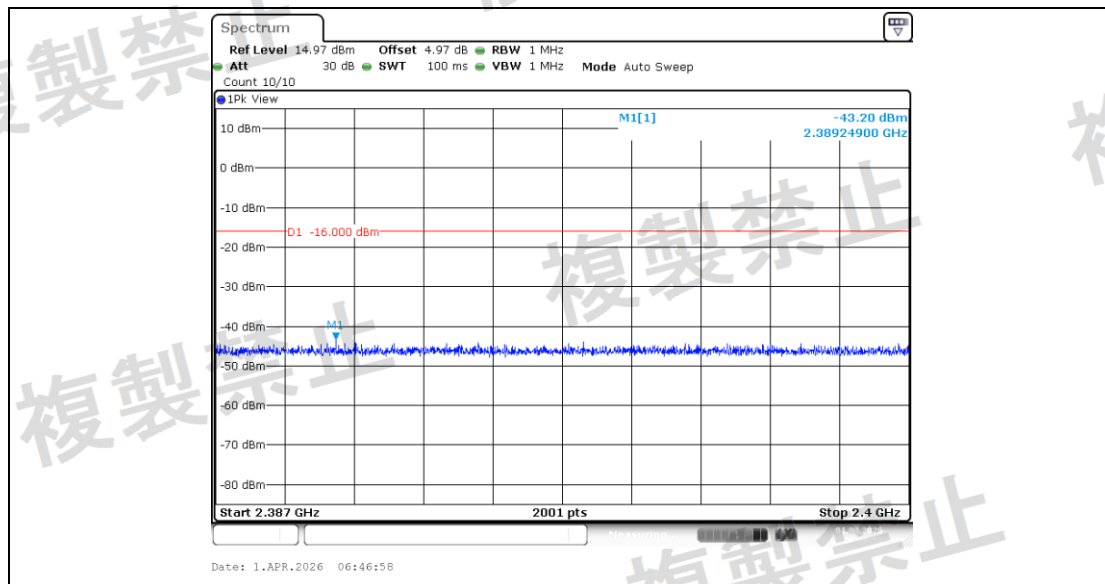


NTNV_2DH5_Ant1_2441_2483.5~2496.5

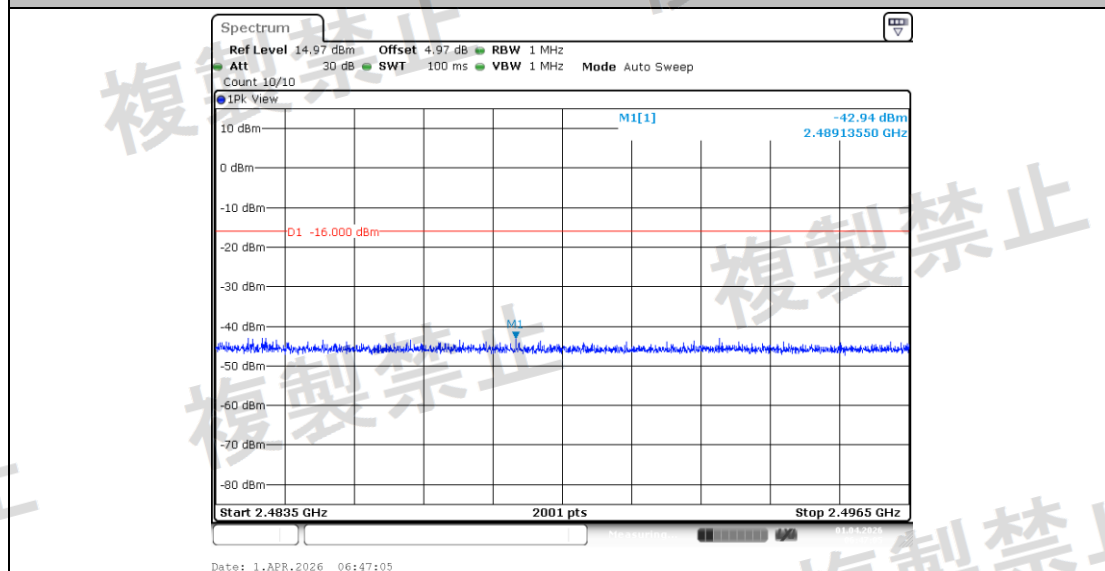


NTNV_2DH5_Ant1_2441_2496.5~13000

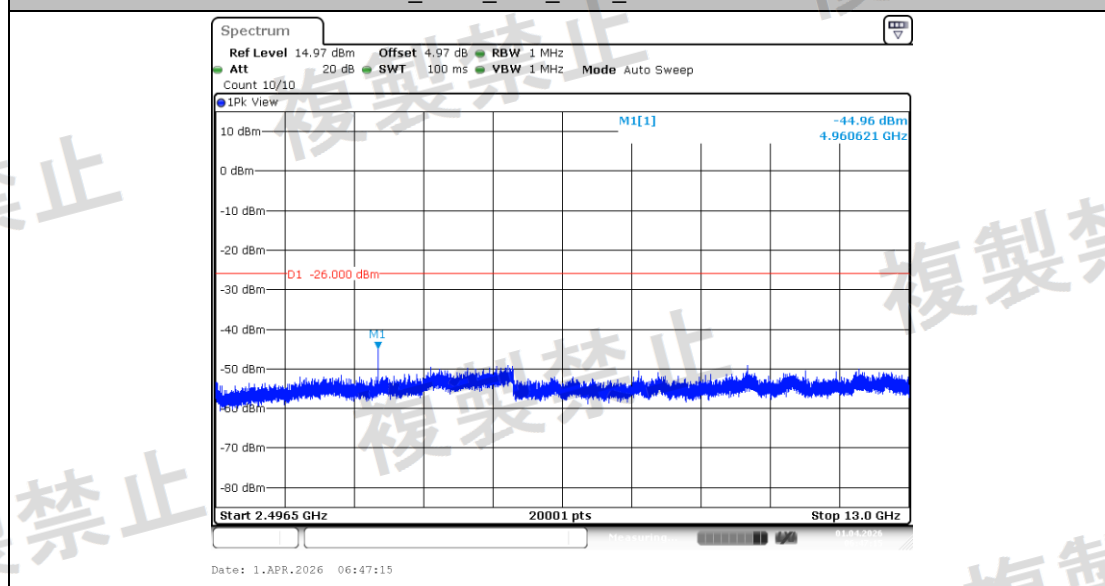


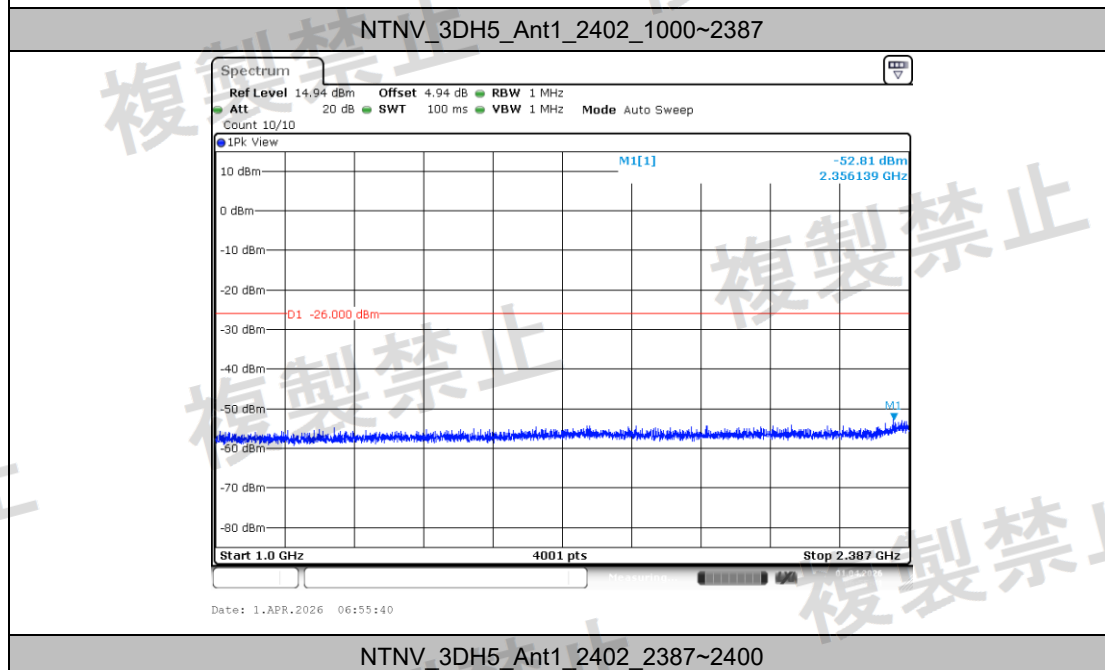
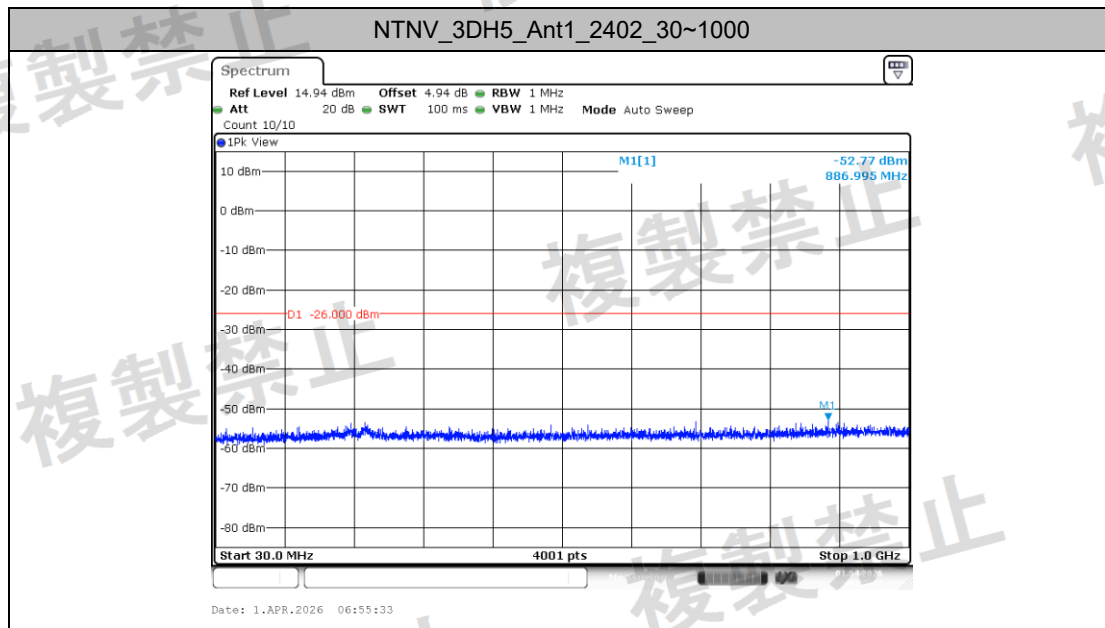


NTVN_2DH5_Ant1_2480_2483.5~2496.5

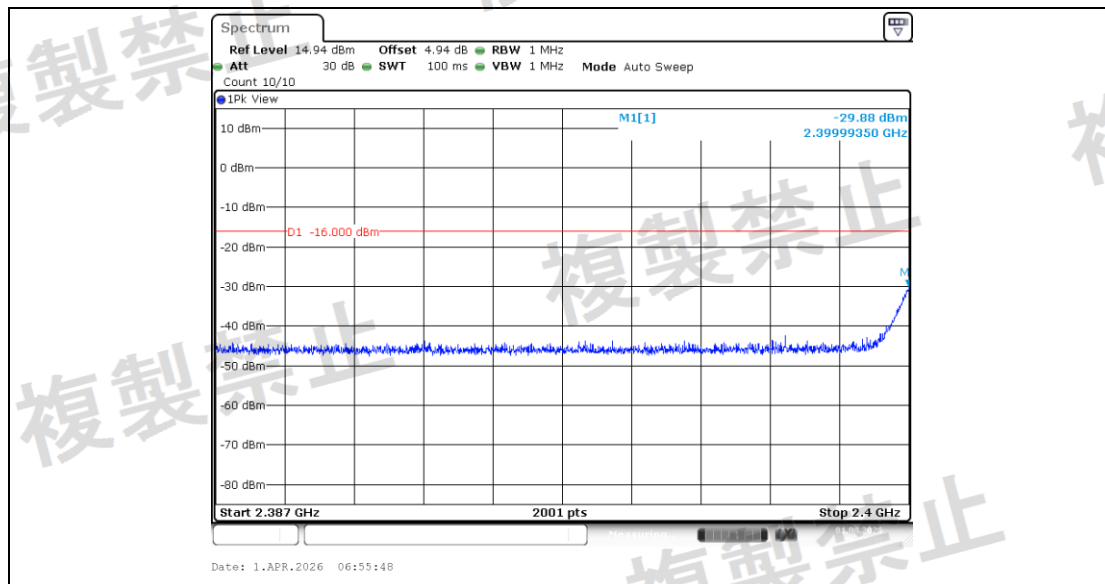


NTVN_2DH5_Ant1_2480_2496.5~13000

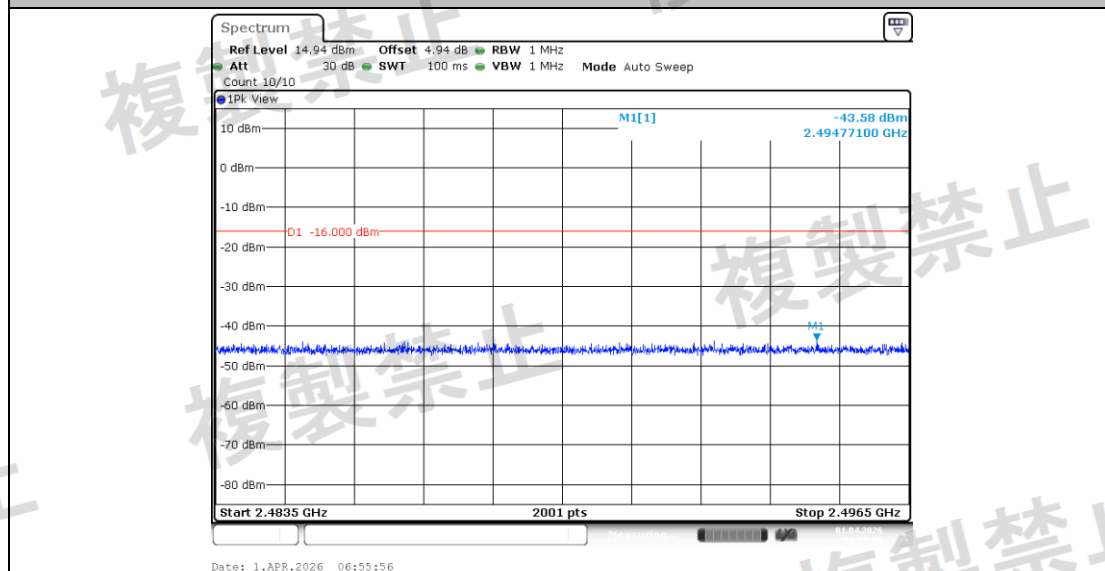




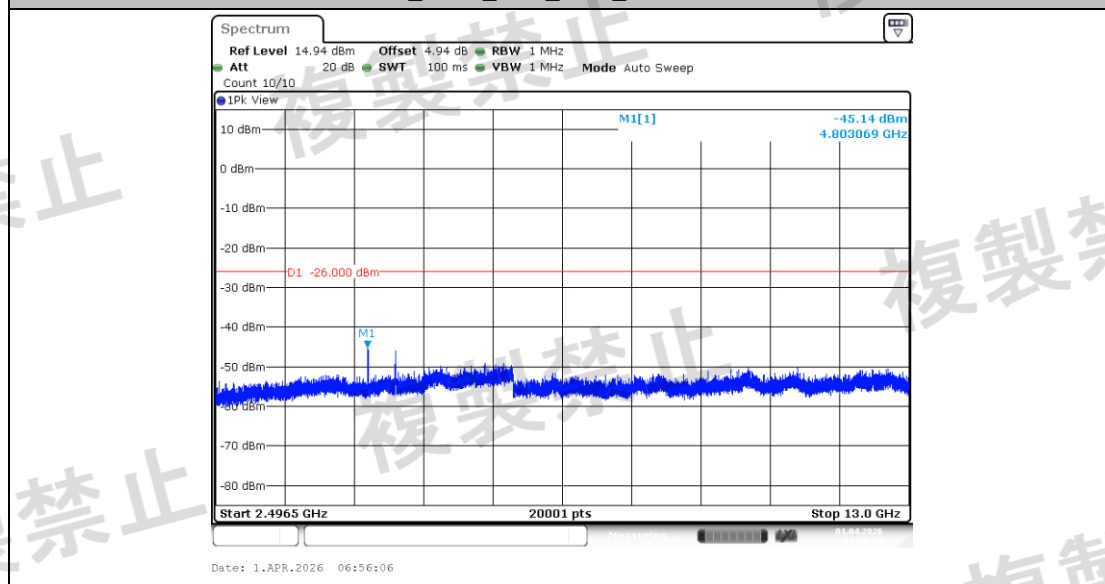
NTNV_3DH5_Ant1_2402_2387~2400

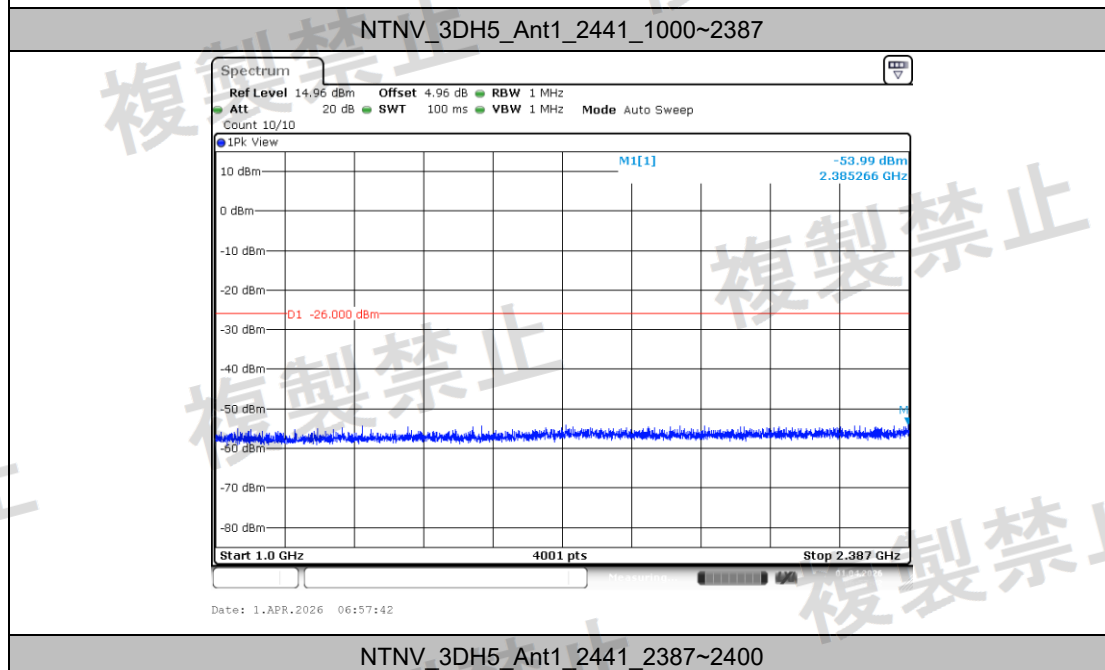
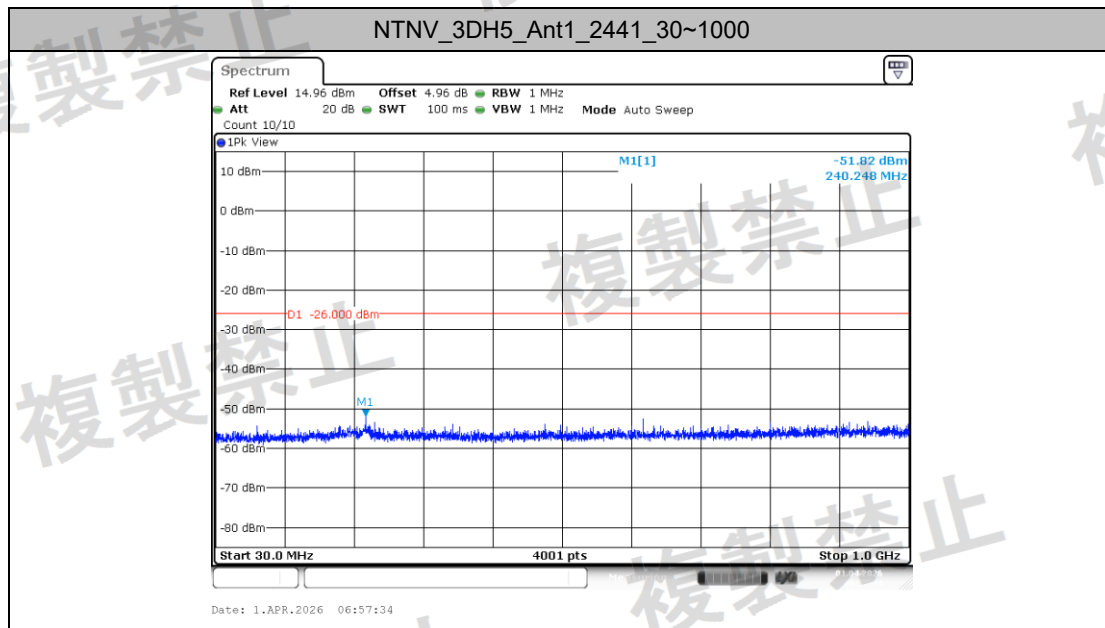


NTVN_3DH5_Ant1_2402_2483.5~2496.5

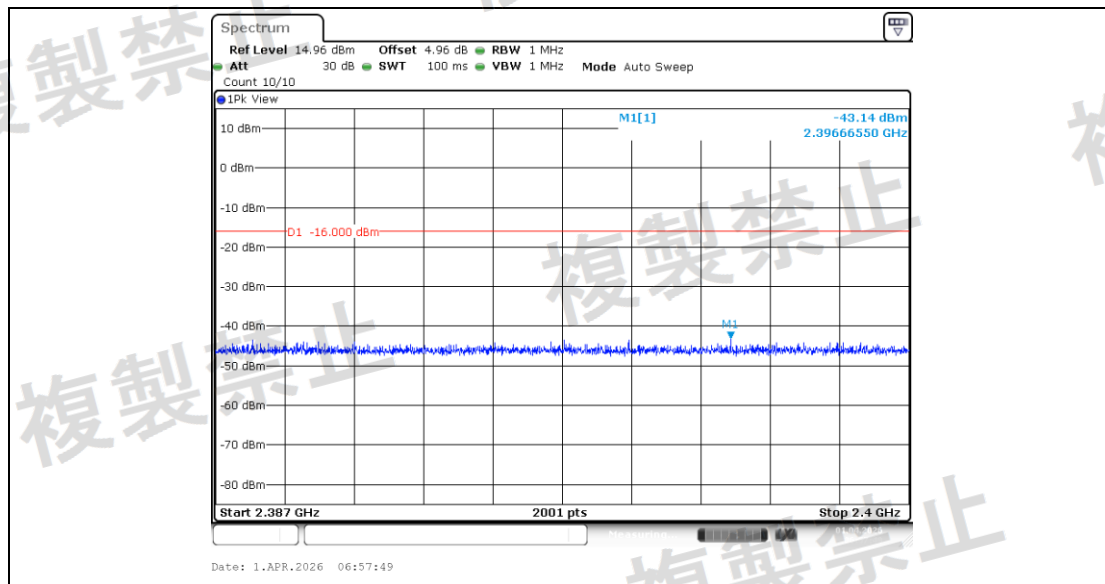


NTVN_3DH5_Ant1_2402_2496.5~13000

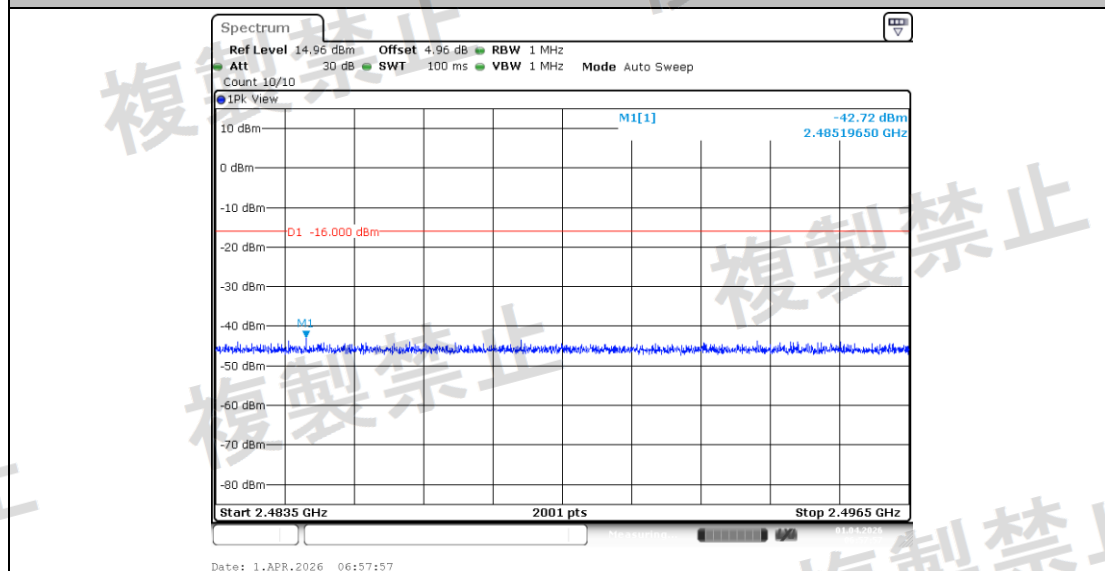




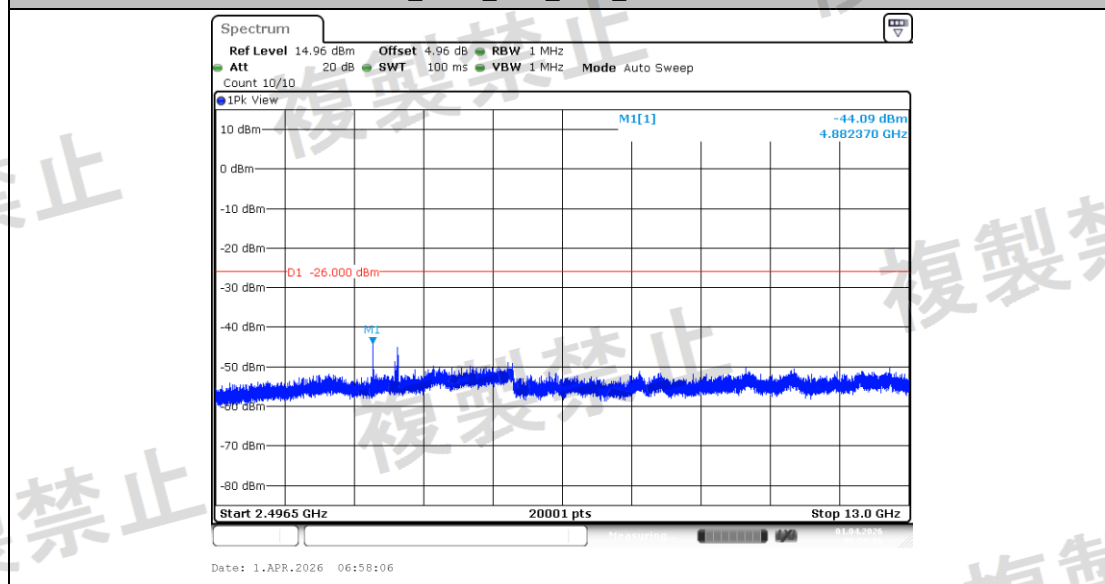
NTNV_3DH5_Ant1_2441_2387~2400

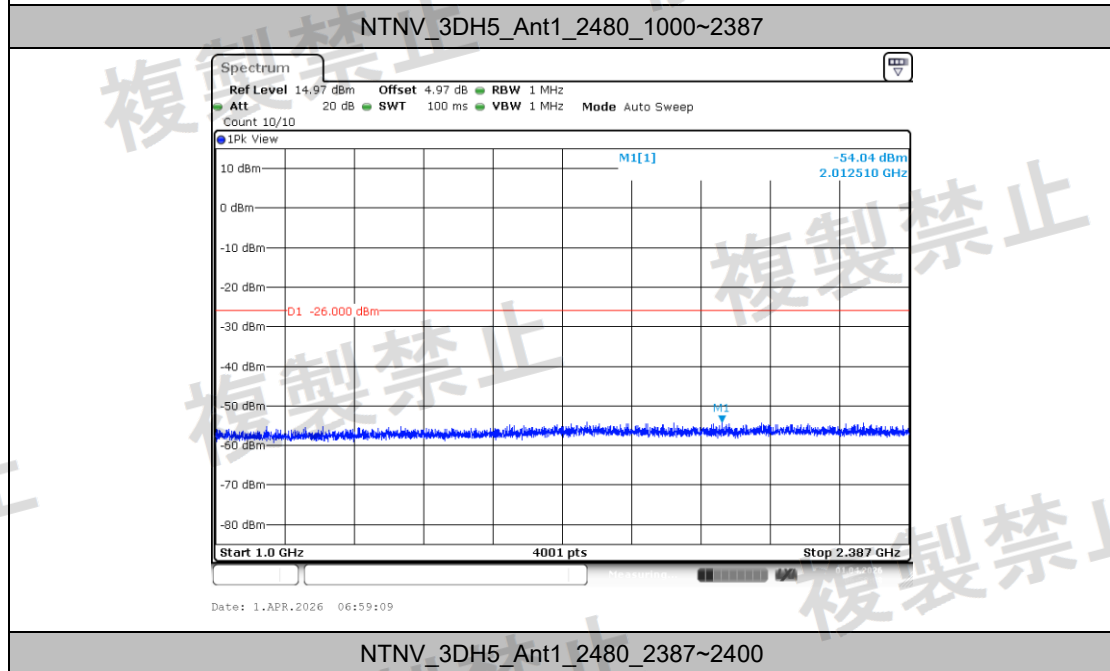
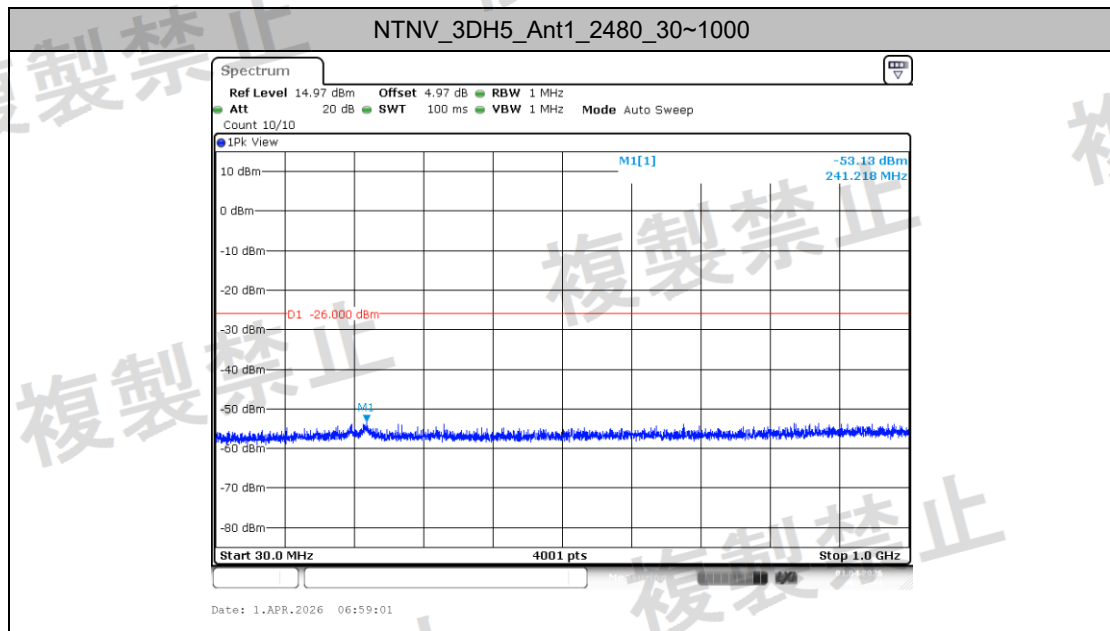


NTVN_3DH5_Ant1_2441_2483.5~2496.5

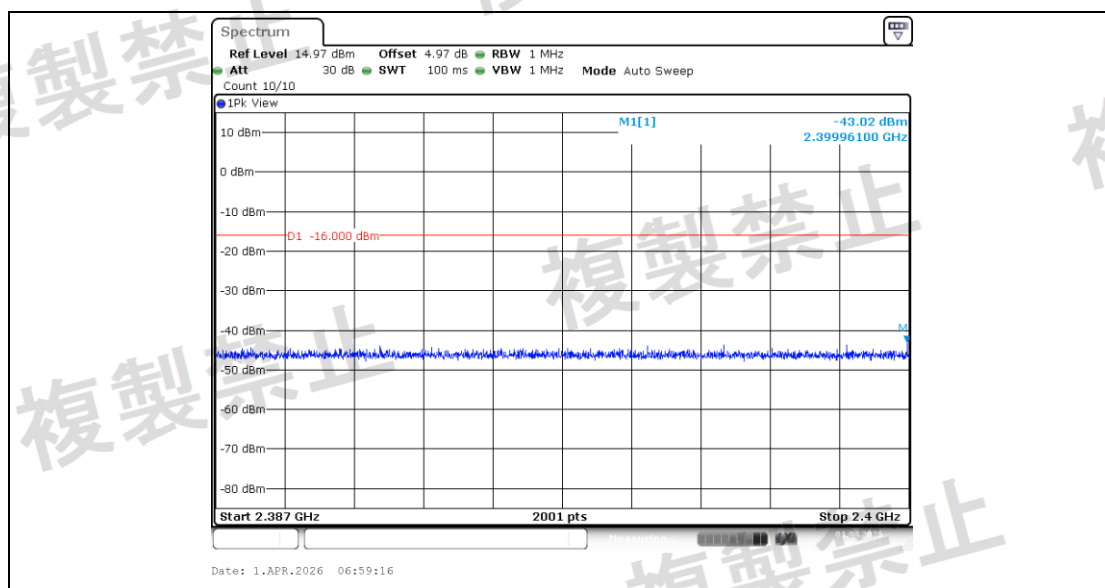


NTVN_3DH5_Ant1_2441_2496.5~13000

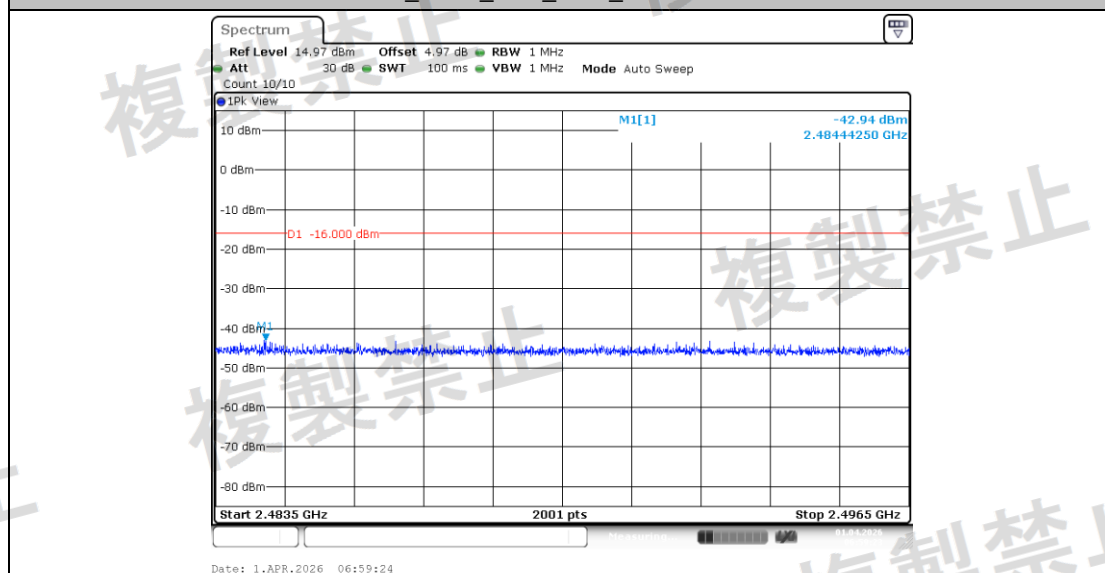




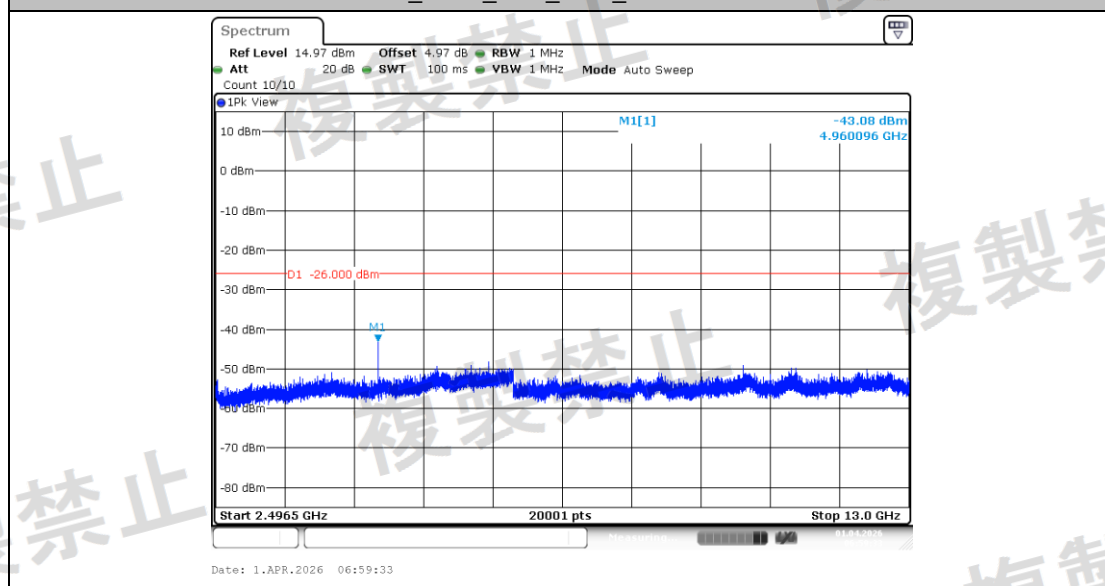
NTNV_3DH5_Ant1_2480_2387~2400



NTNV_3DH5_Ant1_2480_2483.5~2496.5



NTNV_3DH5_Ant1_2480_2496.5~13000

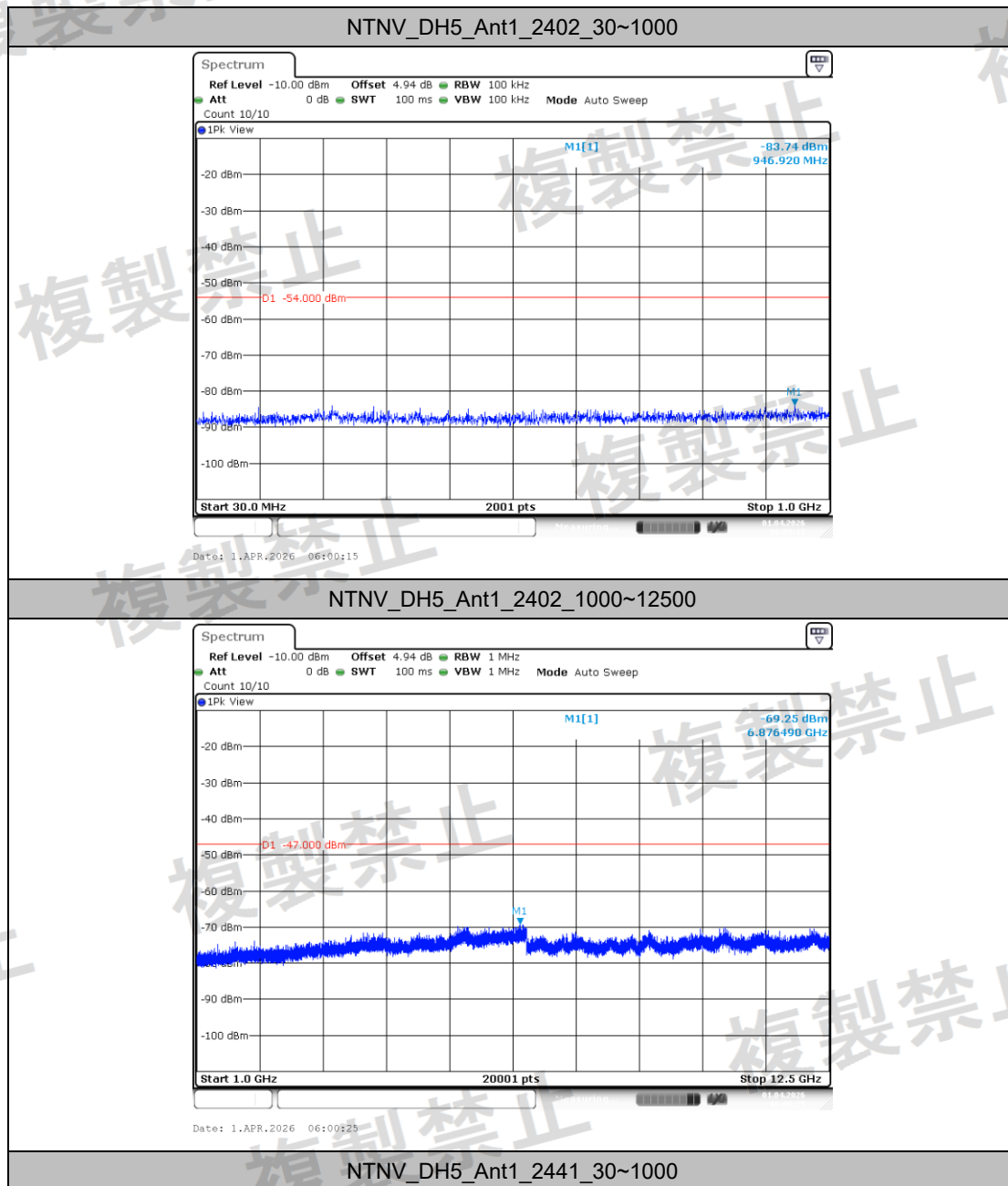


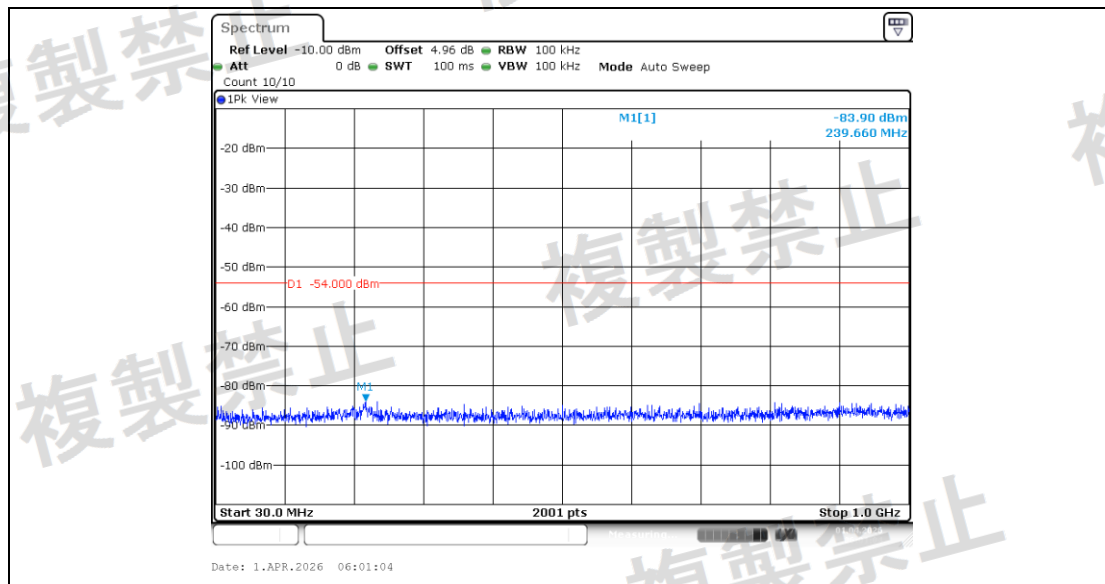
Appendix E: Spurious Emission of RX

Test Result

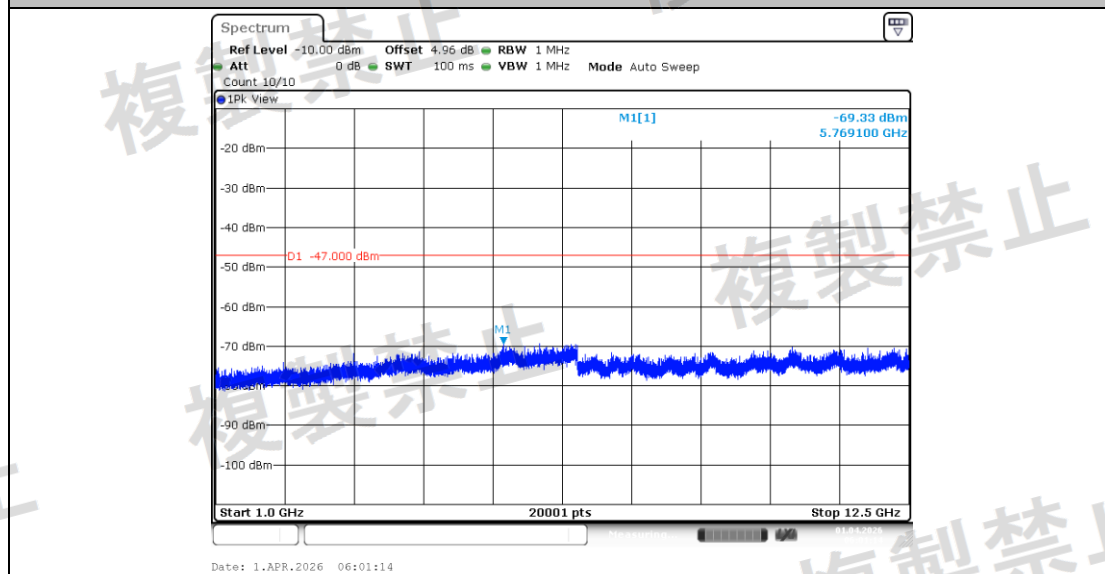
Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	946.92	-83.74	≤-54	0.00423	≤4	PASS
				1000~12500	6876.49	-69.25	≤-47	0.11885	≤20	PASS
			2441	30~1000	239.66	-83.90	≤-54	0.00407	≤4	PASS
				1000~12500	5769.10	-69.33	≤-47	0.11668	≤20	PASS
			2480	30~1000	896.02	-83.92	≤-54	0.00406	≤4	PASS
				1000~12500	6876.49	-69.49	≤-47	0.11246	≤20	PASS
	2DH5	Ant1	2402	30~1000	989.09	-84.29	≤-54	0.00372	≤4	PASS
				1000~12500	6920.19	-68.48	≤-47	0.14191	≤20	PASS
			2441	30~1000	243.05	-82.81	≤-54	0.00524	≤4	PASS
				1000~12500	6416.52	-69.17	≤-47	0.12106	≤20	PASS
			2480	30~1000	842.21	-83.55	≤-54	0.00442	≤4	PASS
				1000~12500	6887.42	-69.55	≤-47	0.11092	≤20	PASS
	3DH5	Ant1	2402	30~1000	933.83	-83.72	≤-54	0.00425	≤4	PASS
				1000~12500	5876.62	-69.17	≤-47	0.12106	≤20	PASS
			2441	30~1000	944.01	-83.71	≤-54	0.00426	≤4	PASS
				1000~12500	6651.68	-69.07	≤-47	0.12388	≤20	PASS
			2480	30~1000	538.75	-83.67	≤-54	0.00430	≤4	PASS
				1000~12500	5923.77	-69.64	≤-47	0.10864	≤20	PASS

Test Graphs

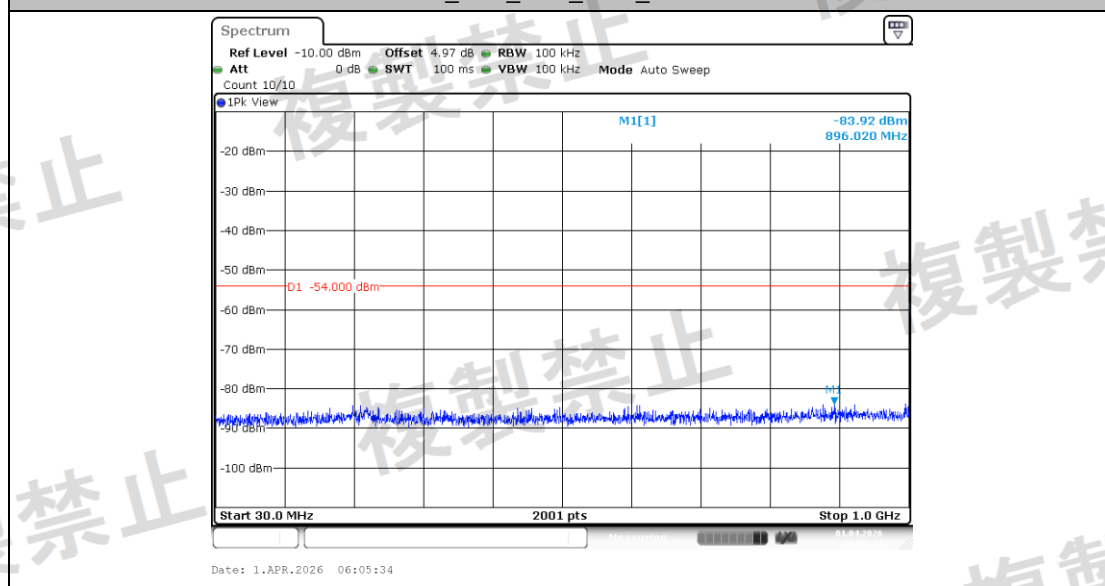


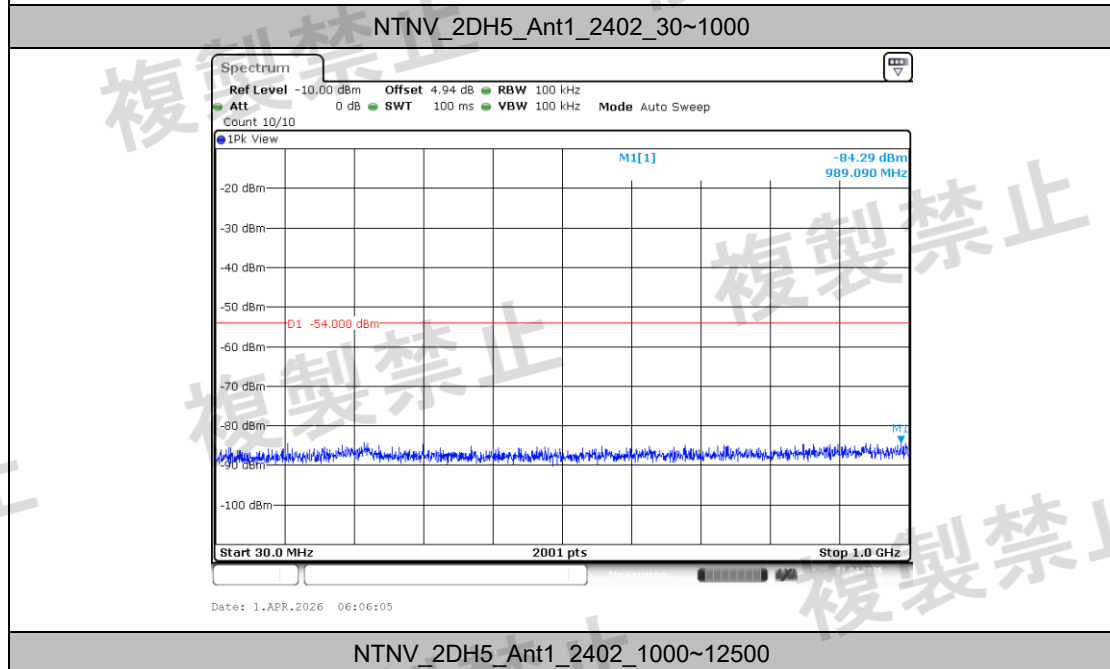
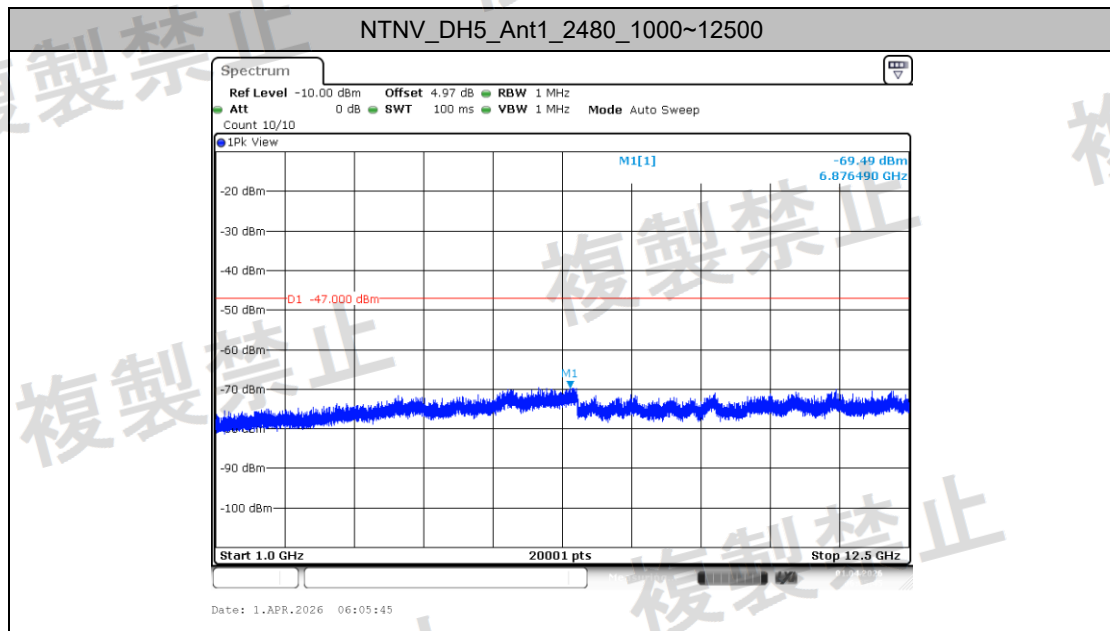


NTNV_DH5_Ant1_2441_1000~12500

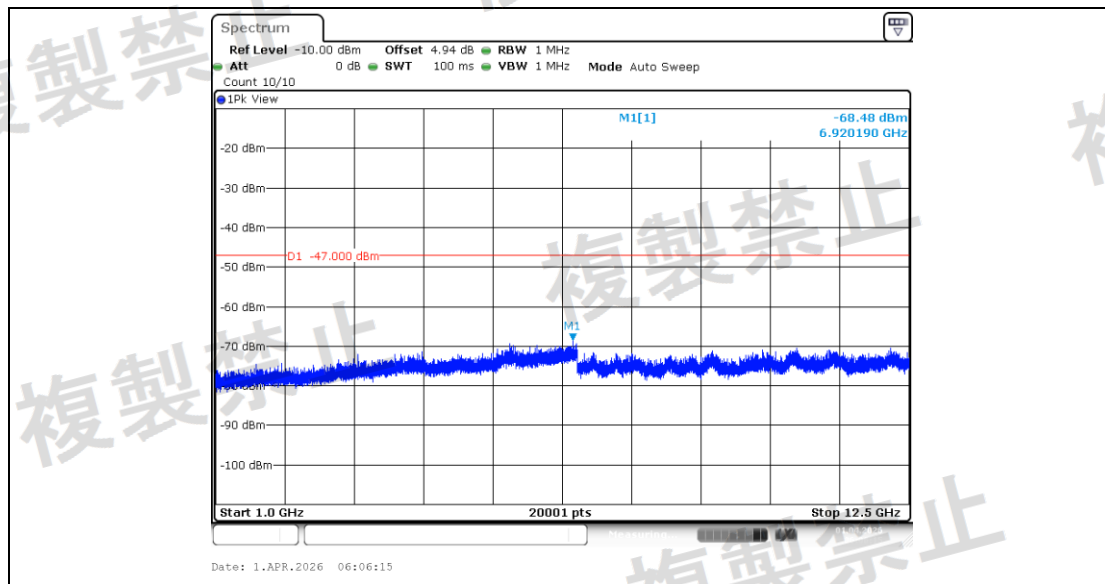


NTNV_DH5_Ant1_2480_30~1000

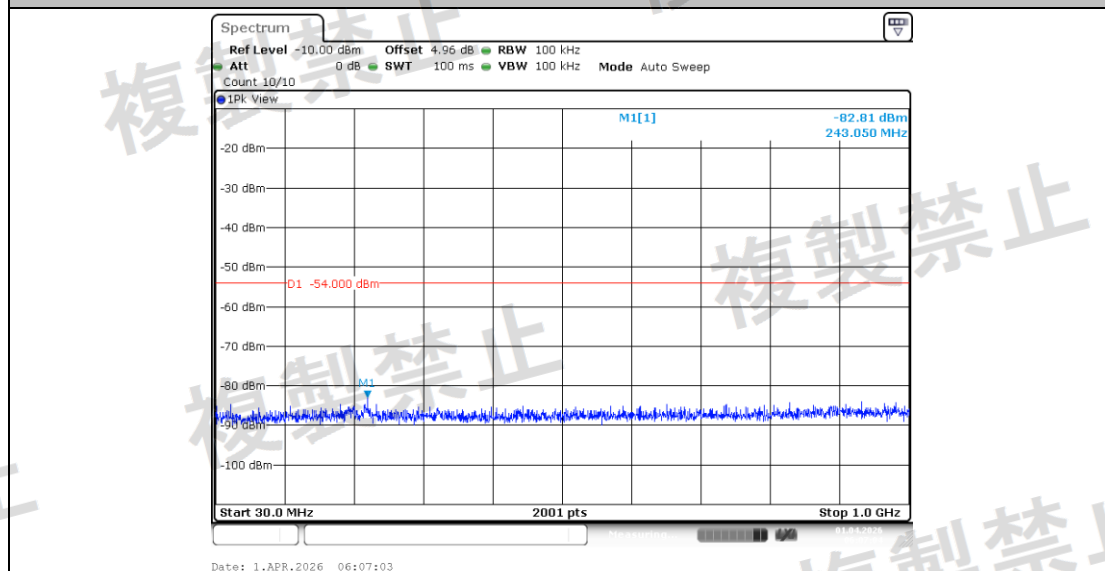




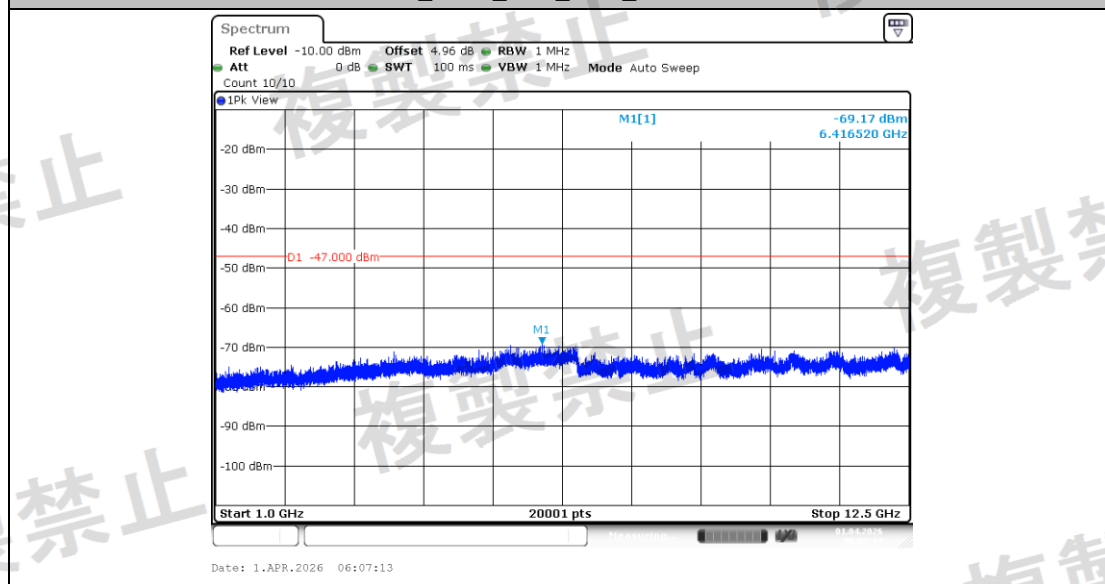
NTNV_2DH5_Ant1_2402_1000~12500

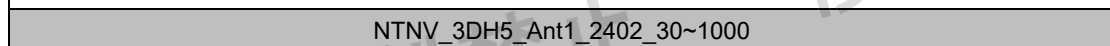
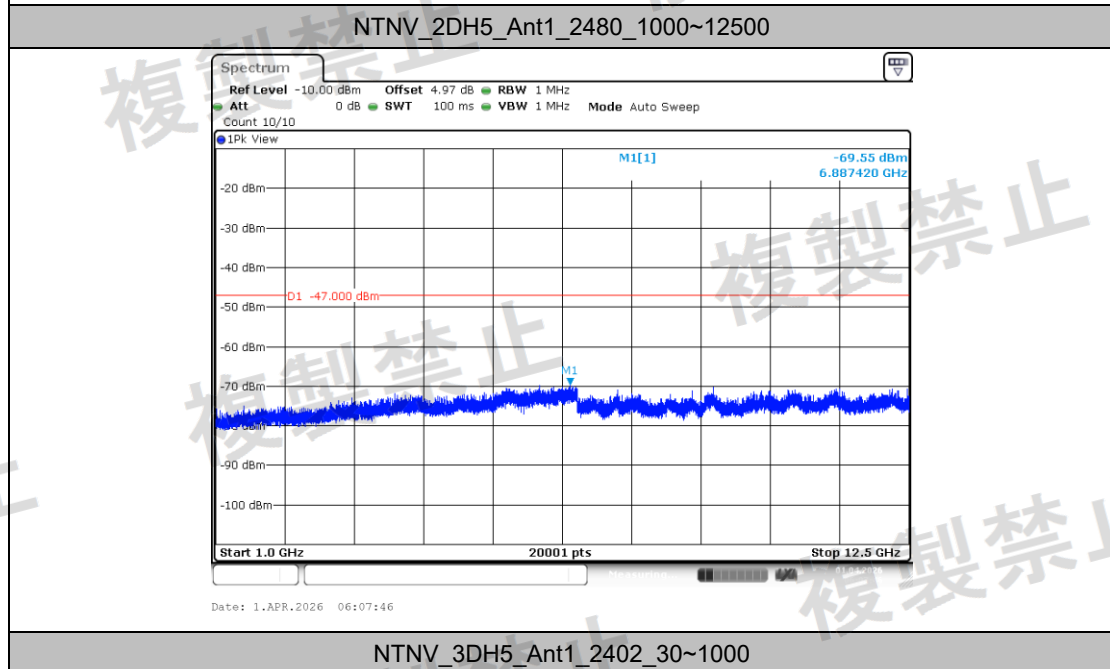
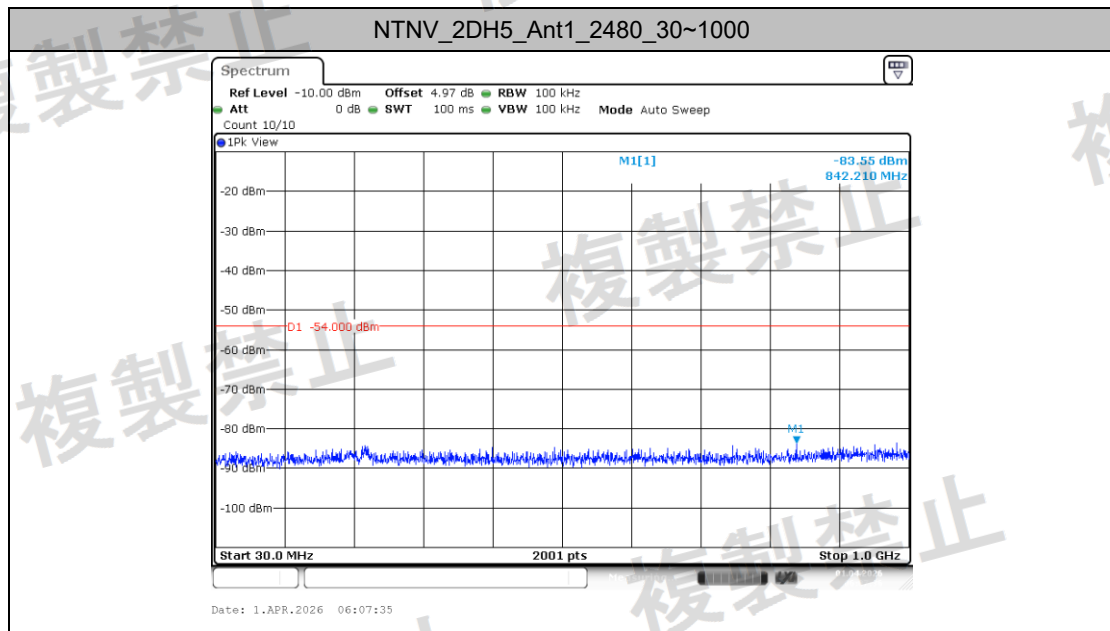


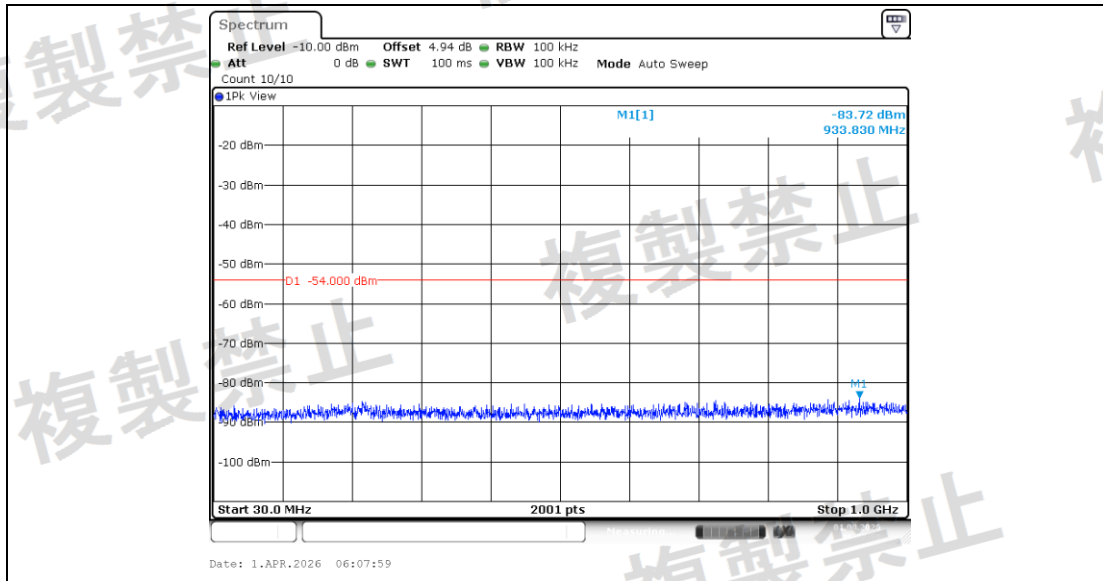
NTNV_2DH5_Ant1_2441_30~1000



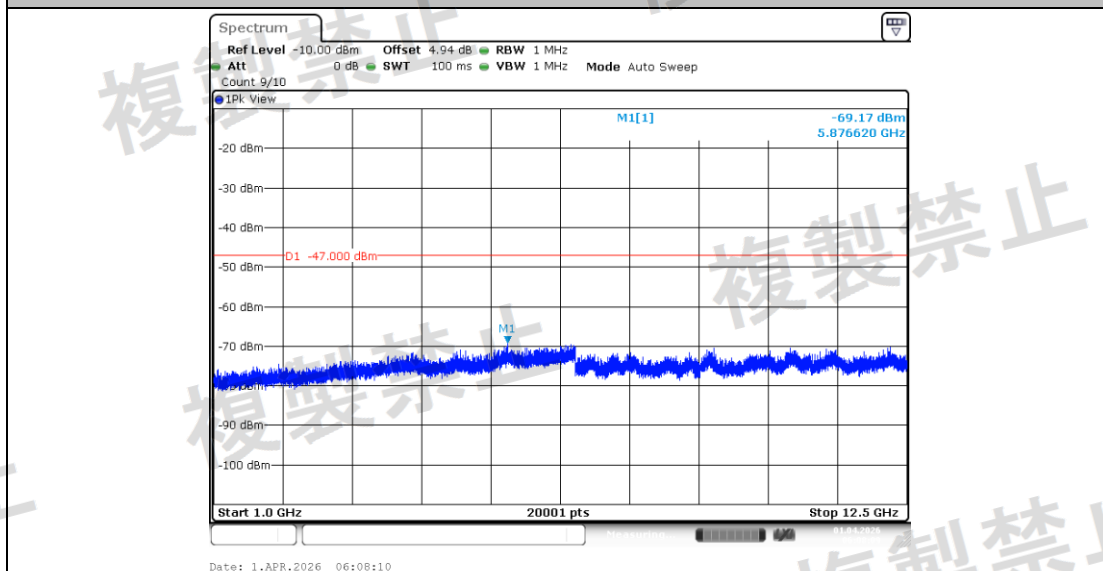
NTNV_2DH5_Ant1_2441_1000~12500



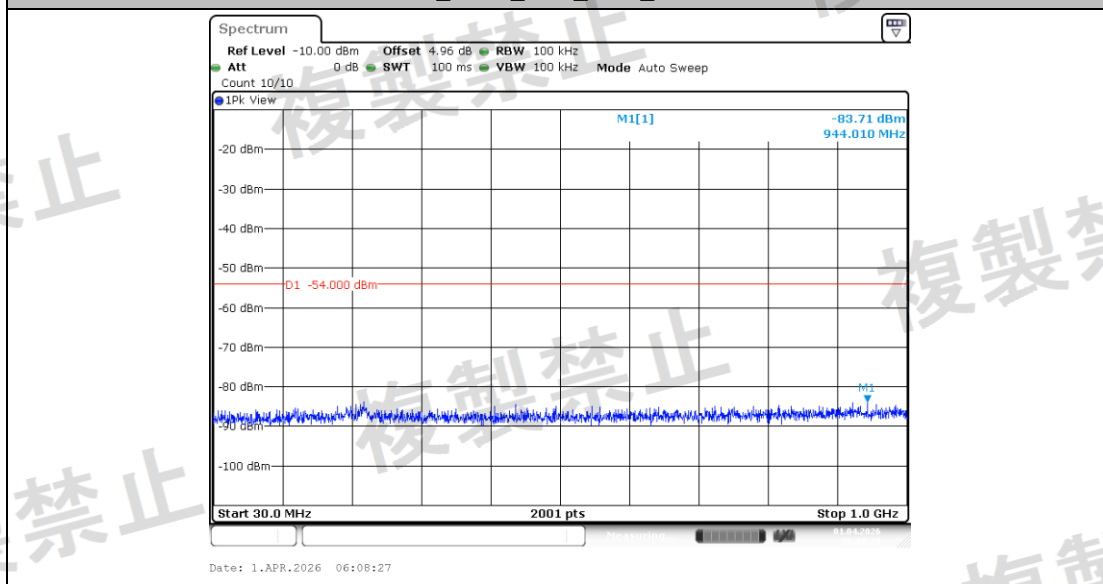


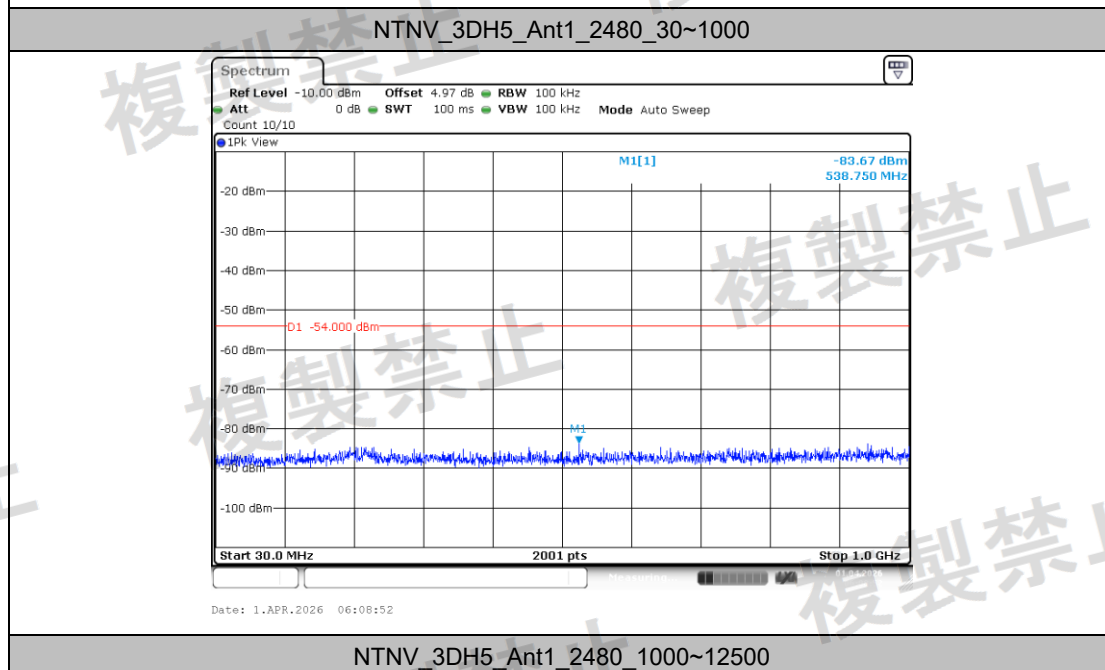
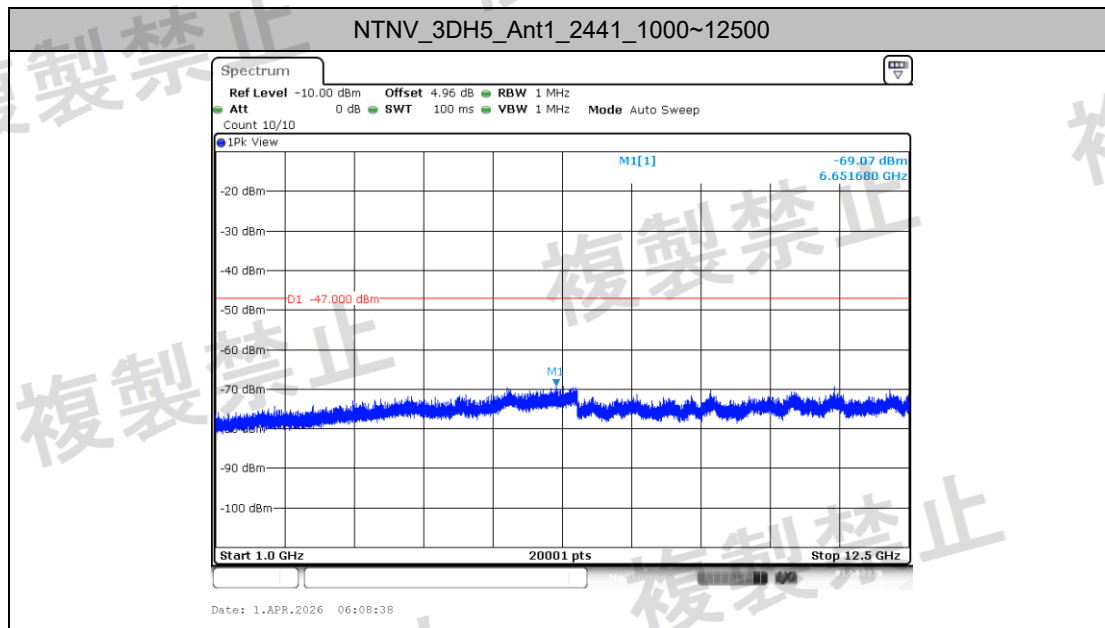


NTNV_3DH5_Ant1_2402_1000~12500

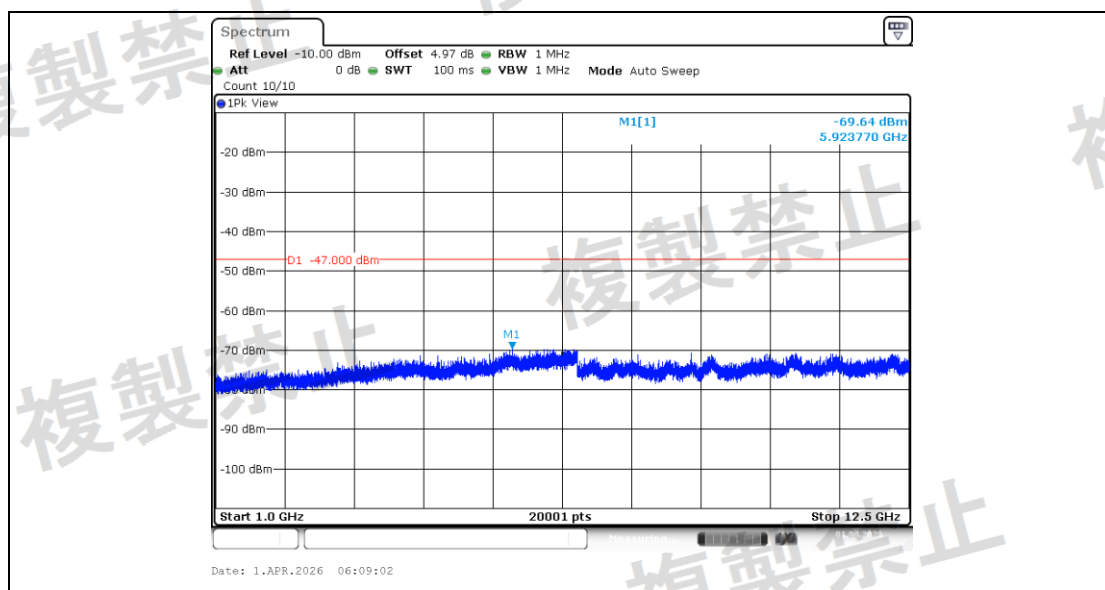


NTNV_3DH5_Ant1_2441_30~1000





NTNV_3DH5_Ant1_2480_1000~12500

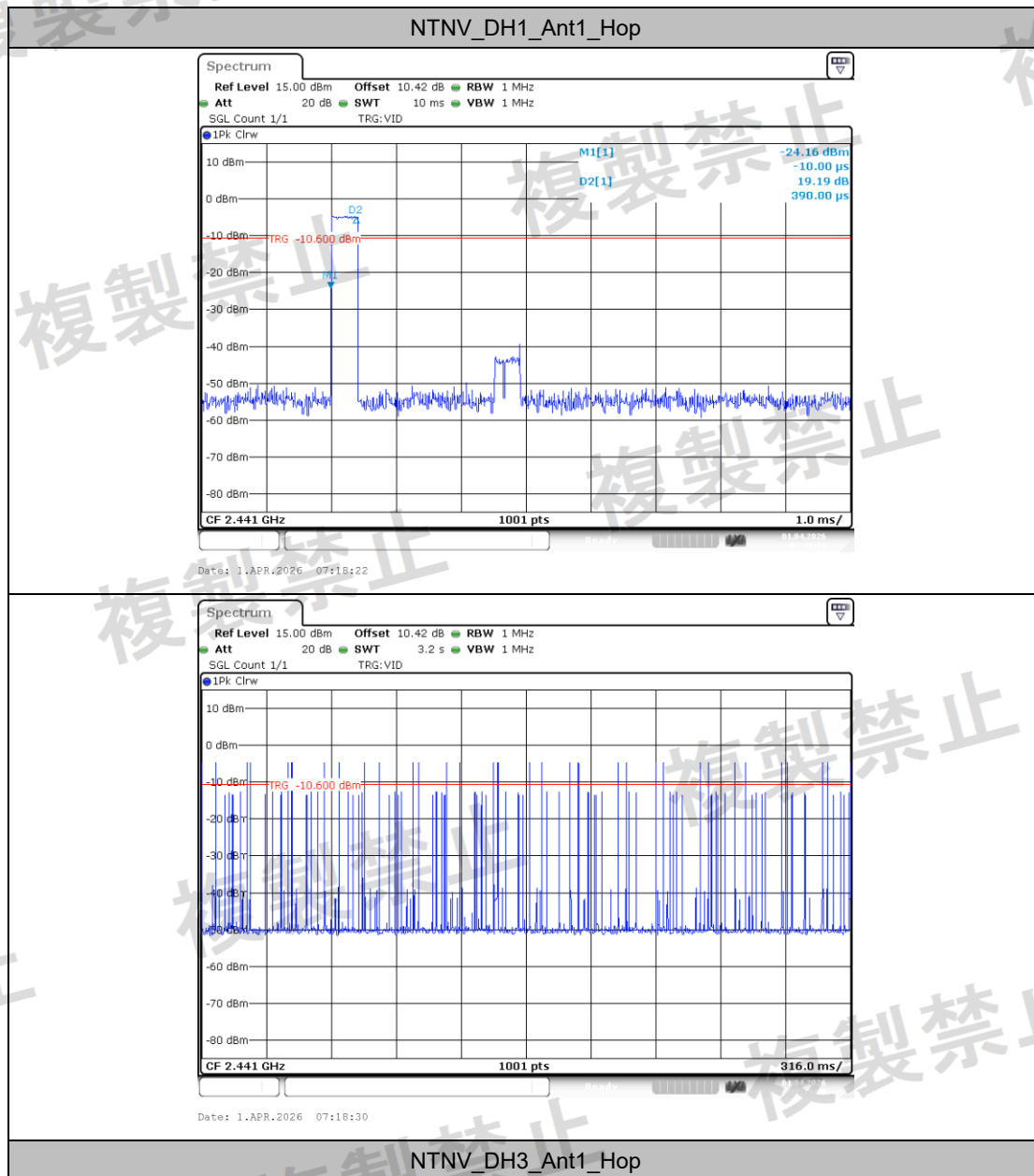


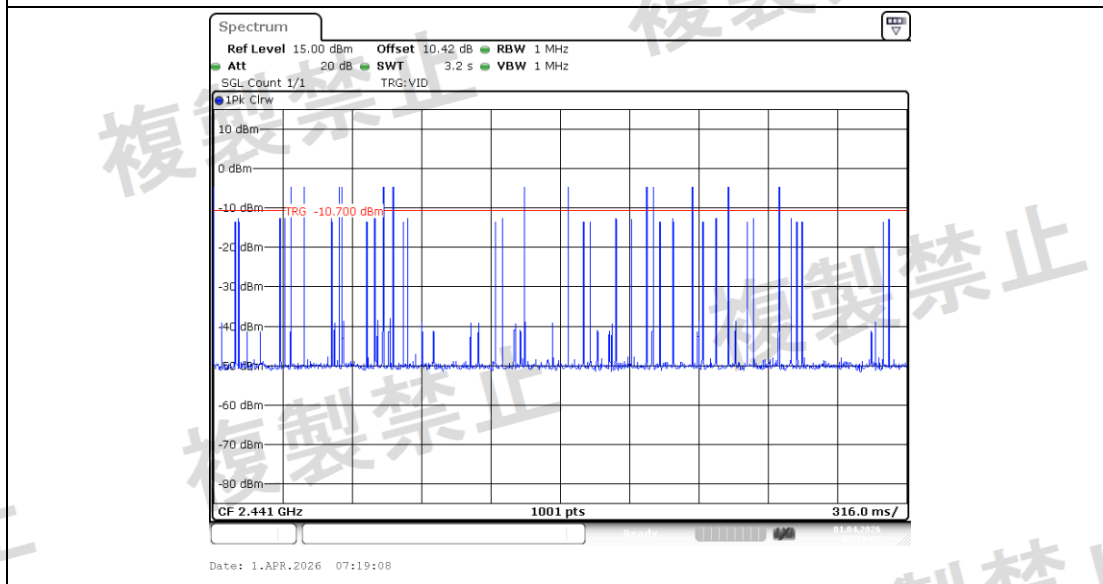
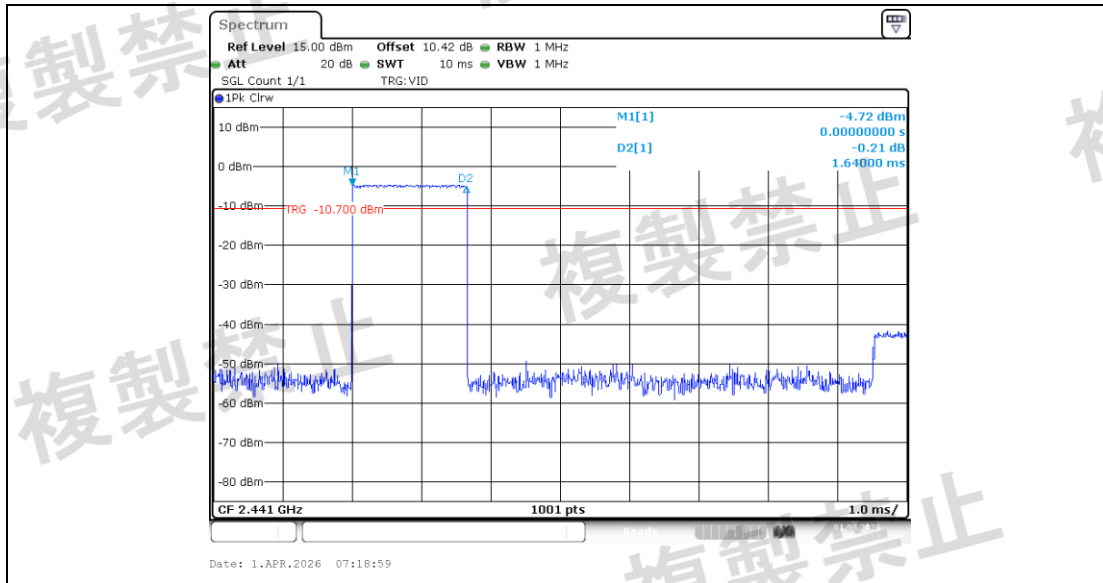
Appendix F: Dwell Time

Test Result

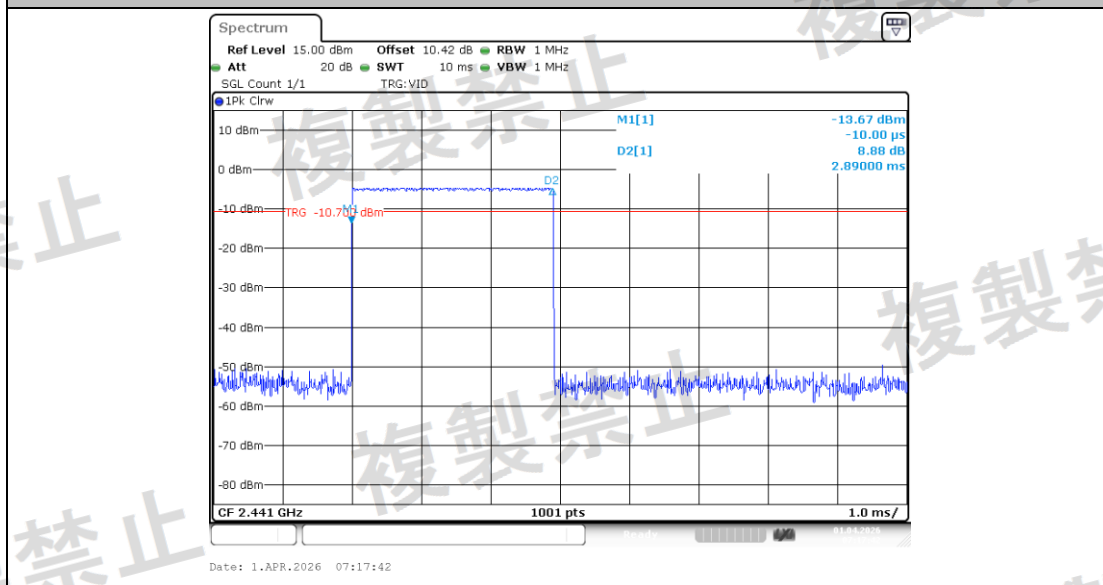
Test Condition	Test Mode	Antenna	Freq(M Hz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.39	310	0.121	≤0.4	PASS
	DH3	Ant1	Hop	1.64	130	0.213	≤0.4	PASS
	DH5	Ant1	Hop	2.89	90	0.26	≤0.4	PASS
	2DH1	Ant1	Hop	0.39	290	0.113	≤0.4	PASS
	2DH3	Ant1	Hop	1.65	160	0.264	≤0.4	PASS
	2DH5	Ant1	Hop	2.90	60	0.174	≤0.4	PASS
	3DH1	Ant1	Hop	0.40	310	0.124	≤0.4	PASS
	3DH3	Ant1	Hop	1.65	180	0.297	≤0.4	PASS
	3DH5	Ant1	Hop	2.90	70	0.203	≤0.4	PASS

Test Graphs



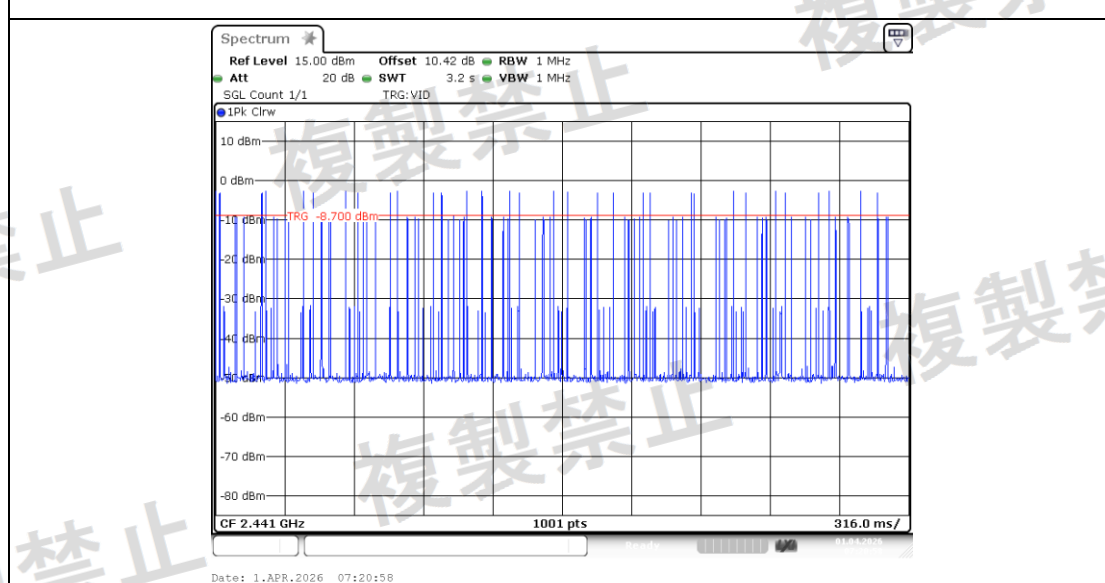
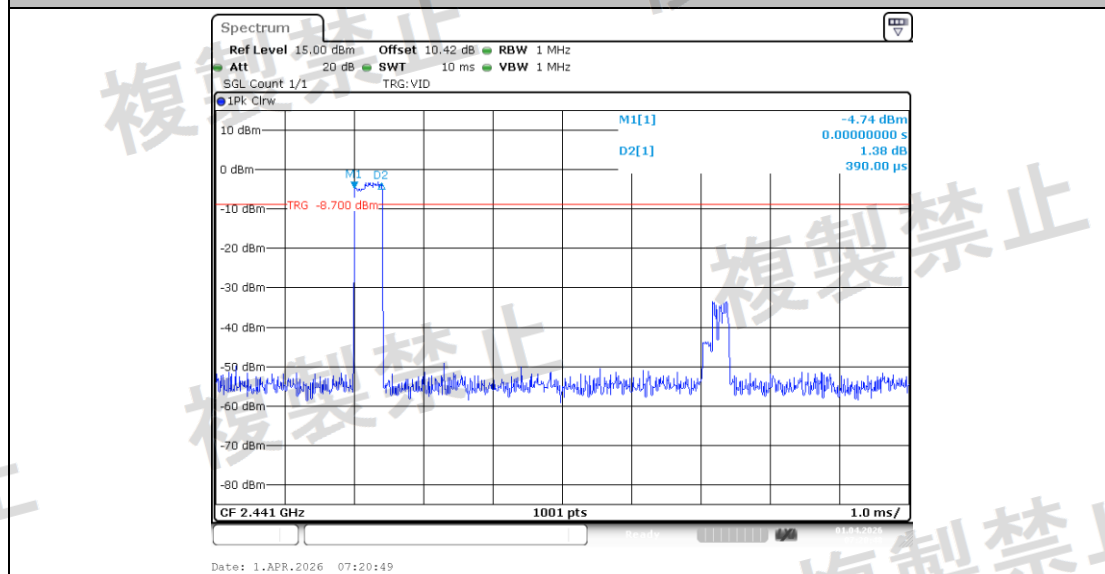


NTNV_DH5_Ant1_Hop

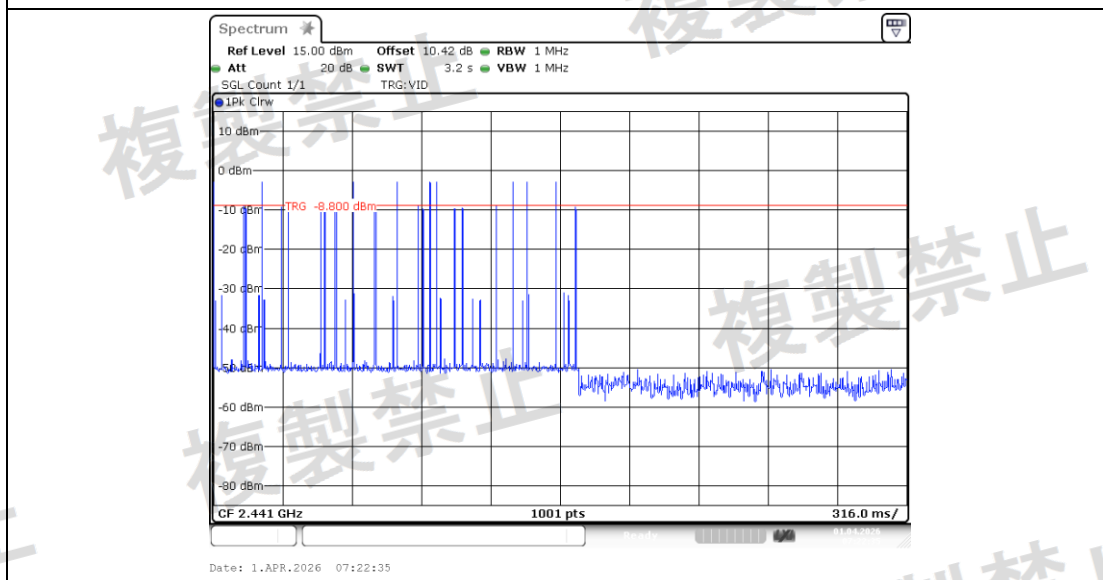
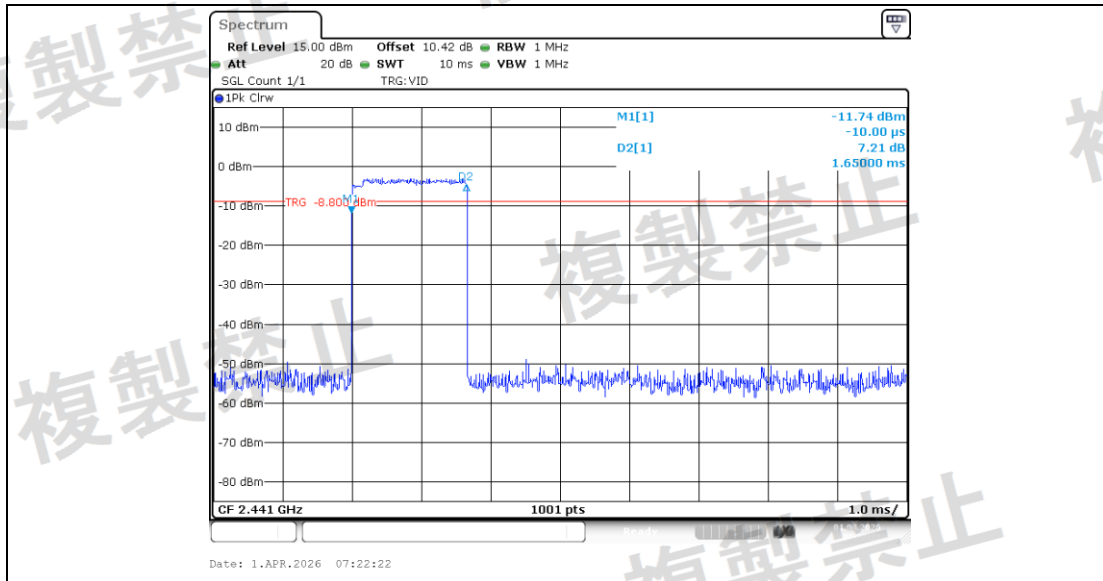




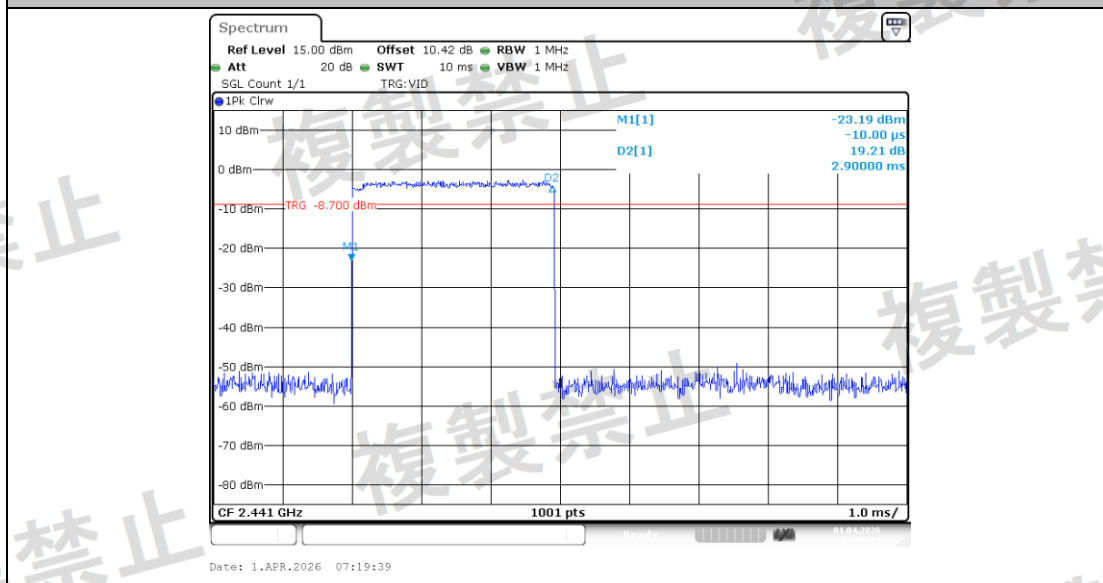
NTNV_2DH1_Ant1_Hop



NTNV_2DH3_Ant1_Hop

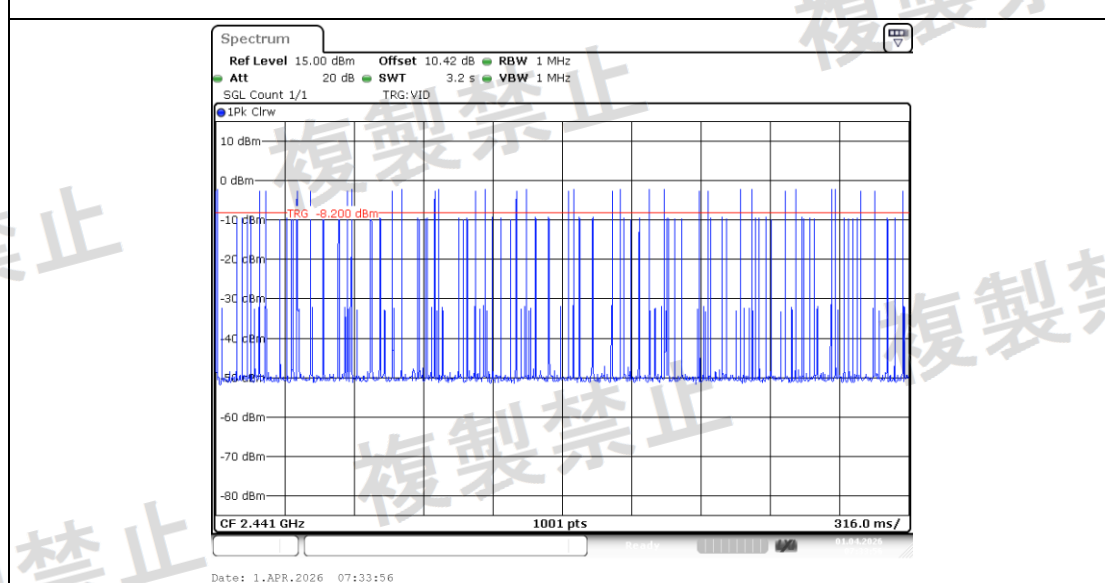
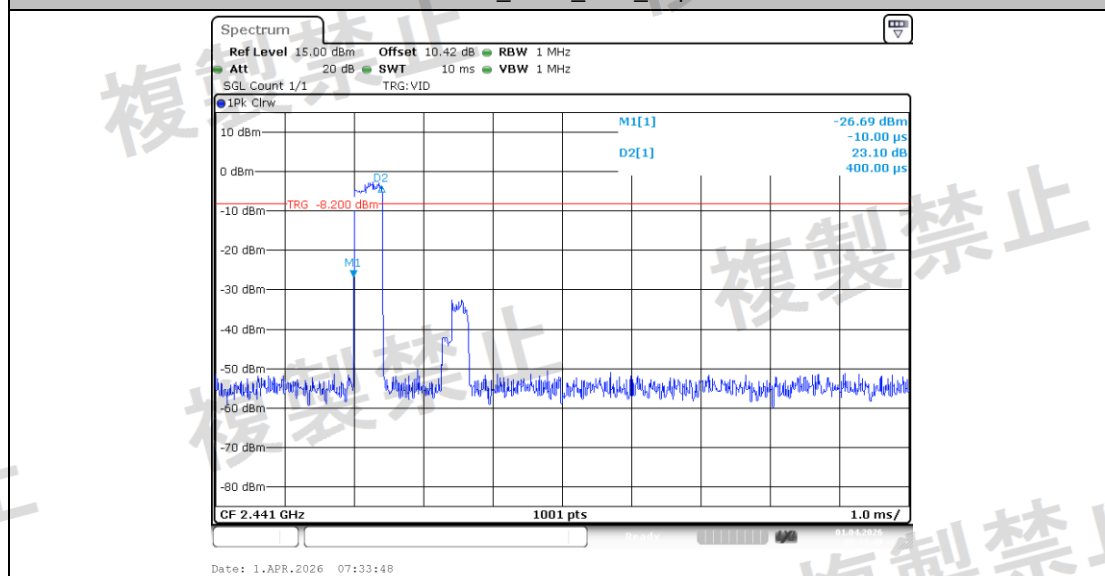


NTNV_2DH5_Ant1_Hop

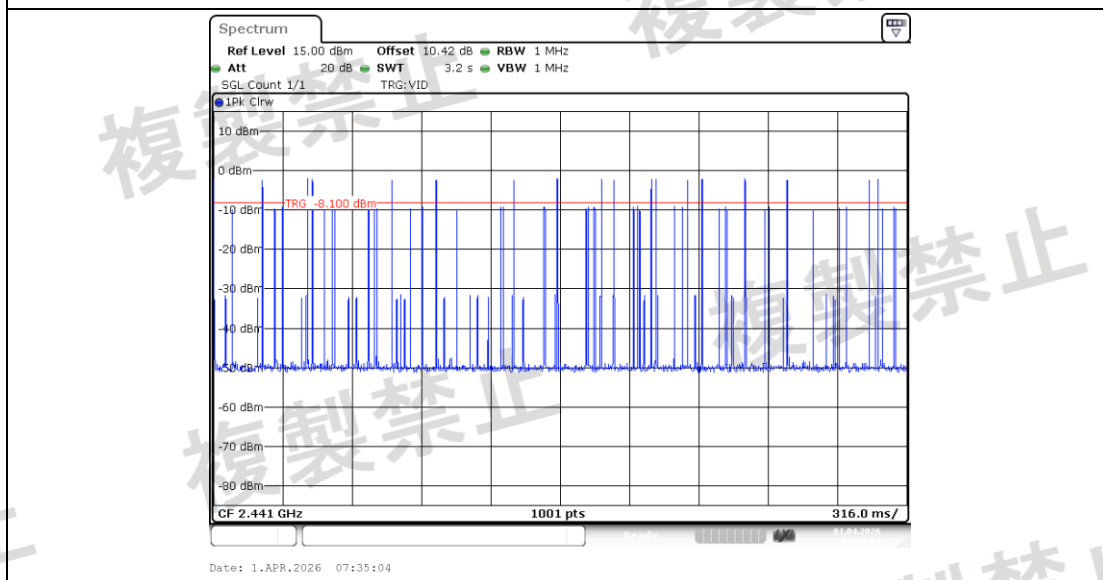
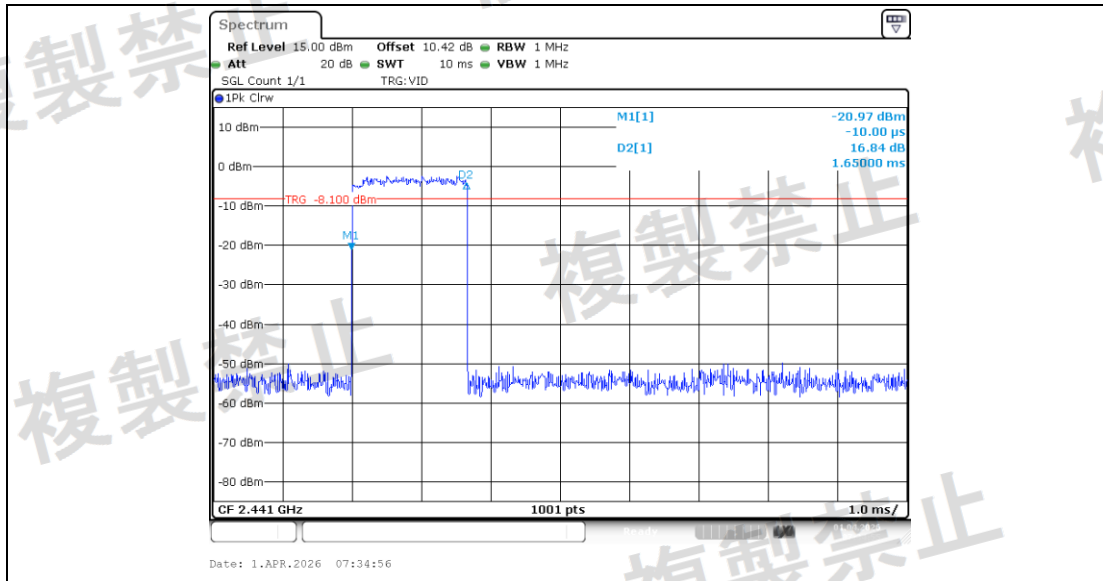




NTNV_3DH1_Ant1_Hop



NTNV_3DH3_Ant1_Hop



NTNV_3DH5_Ant1_Hop

