

Appendix RF Test Data for BR-EDR

Company : EDION Corporation

会社 株式会社エディオン

EUT : Bluetooth Earphone

Model Number : ANGL-TWO13-A

Report No. : CTA25122500101

Reviewed By : Eric Wang

Appendix A: Frequency_Error

Test Result

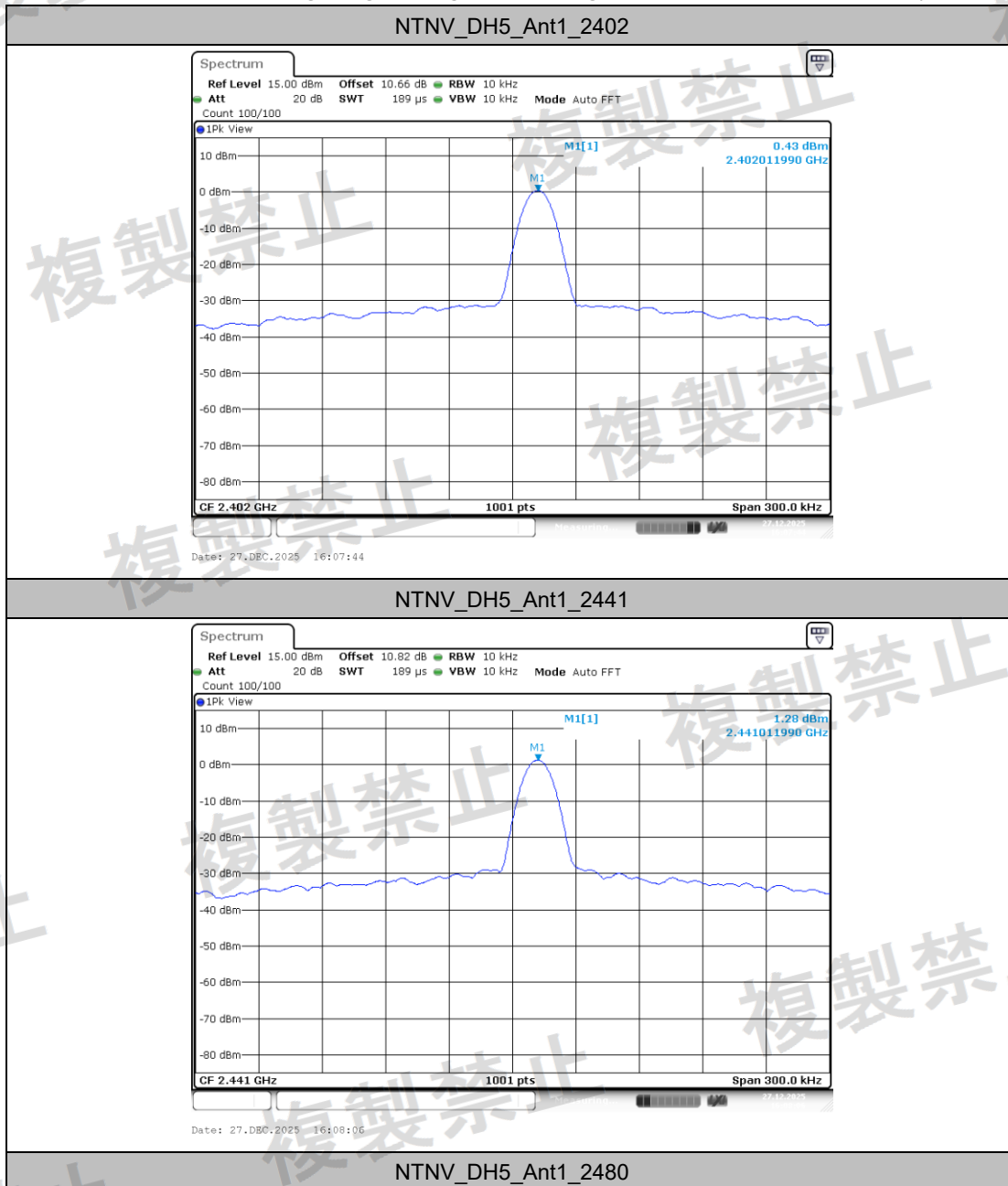
Test Condition	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	Ant1	2402	4.99167	±50	PASS
		2441	4.91192	±50	PASS
		2480	4.83468	±50	PASS

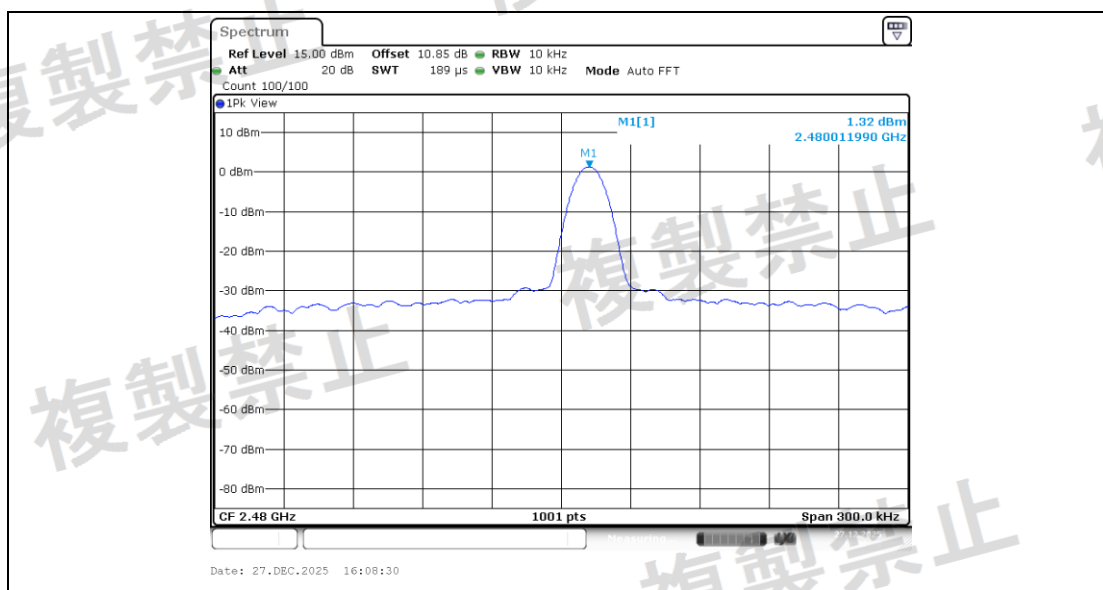
Test Condition	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTLV	Ant1	2402	4.97044	±50	PASS
		2441	4.88763	±50	PASS
		2480	4.81285	±50	PASS

Test Condition	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTHV	Ant1	2402	4.96837	±50	PASS
		2441	4.88690	±50	PASS
		2480	4.81174	±50	PASS

Test Graphs

Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.





Appendix B: Occupied Bandwidth

Test Result

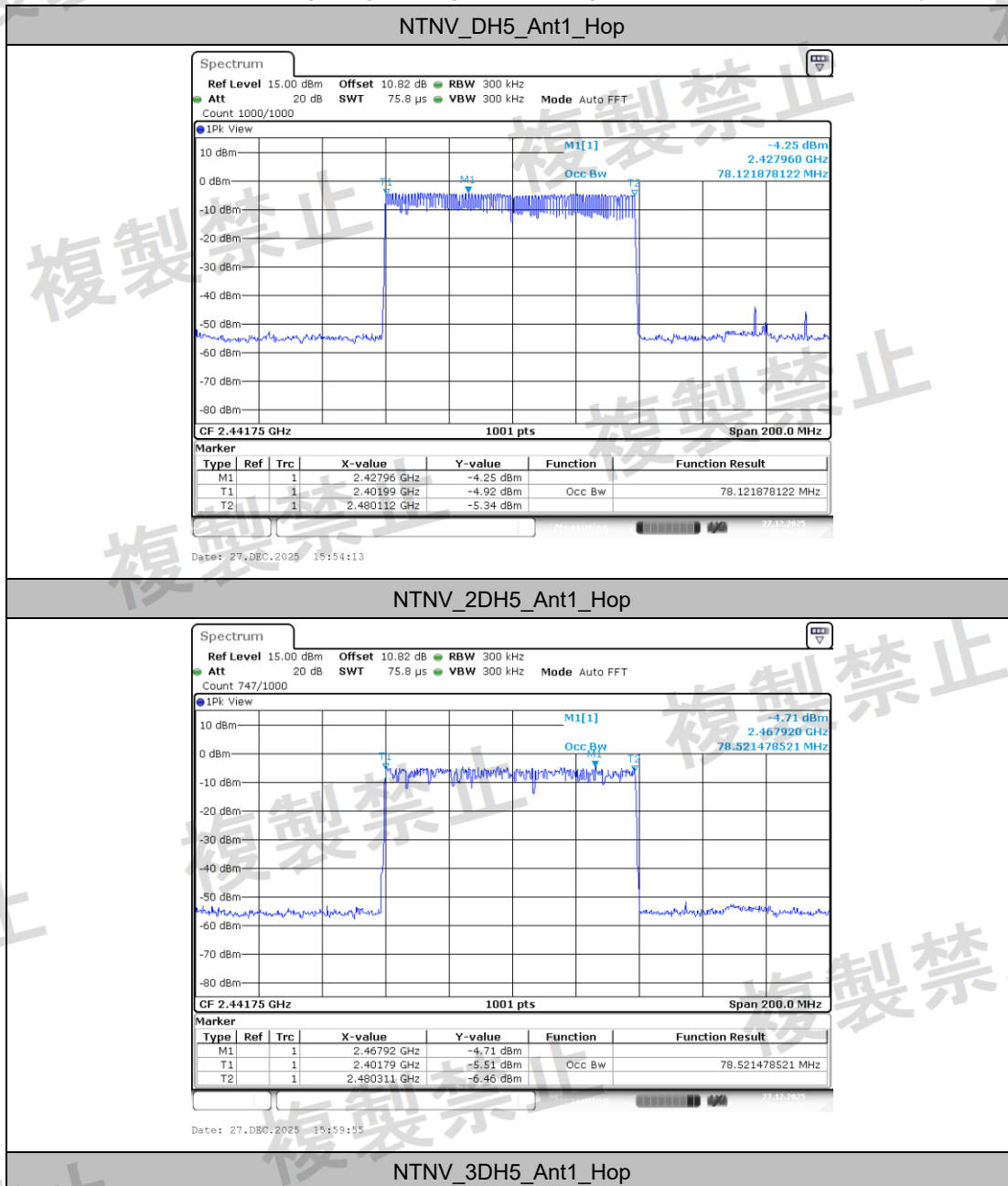
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.122	≤83.5	PASS
	2DH5	Ant1	Hop	78.521	≤83.5	PASS
	3DH5	Ant1	Hop	78.322	≤83.5	PASS

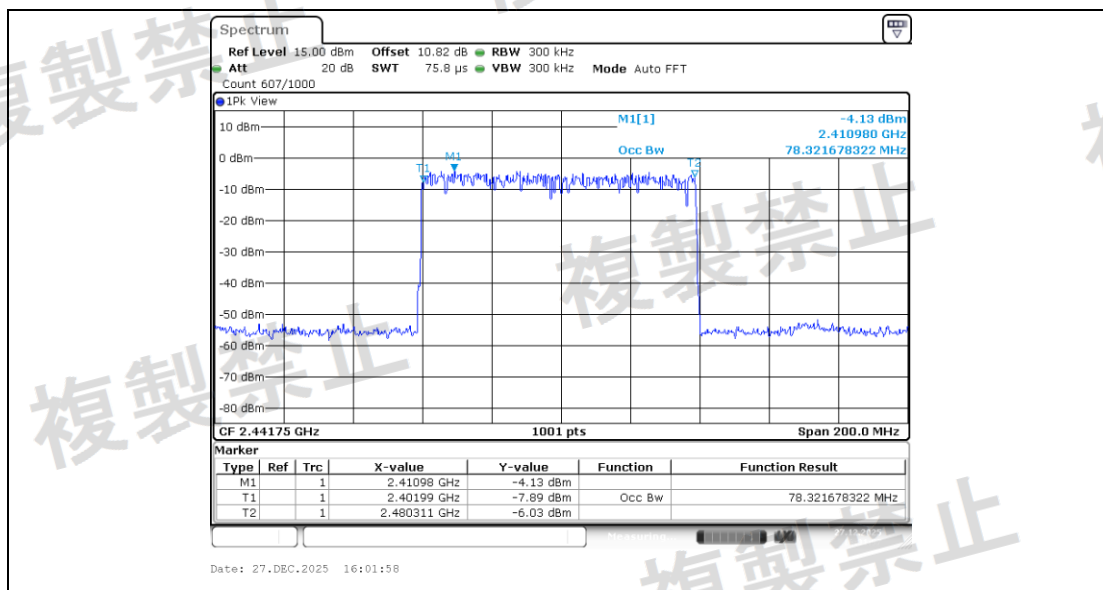
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTLV	DH5	Ant1	Hop	78.120	≤83.5	PASS
	2DH5	Ant1	Hop	78.517	≤83.5	PASS
	3DH5	Ant1	Hop	78.319	≤83.5	PASS

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTHV	DH5	Ant1	Hop	78.118	≤83.5	PASS
	2DH5	Ant1	Hop	78.518	≤83.5	PASS
	3DH5	Ant1	Hop	78.319	≤83.5	PASS

Test Graphs

Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.





Appendix C: Spread Bandwidth

Test Result

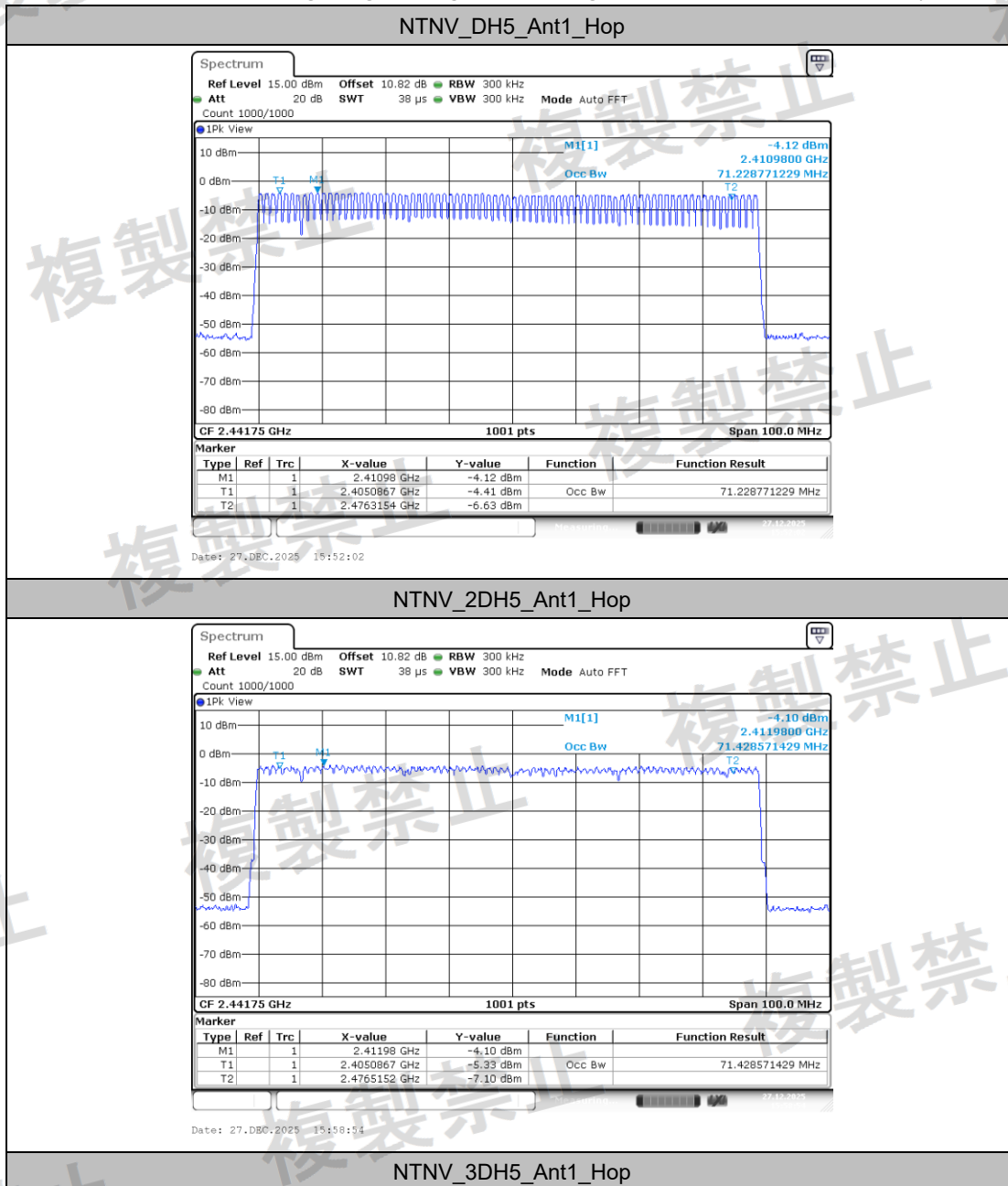
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	DH5	Ant1	Hop	71.229	≥0.5	71.229	>5	PASS
	2DH5	Ant1	Hop	71.429	≥0.5	71.429	>5	PASS
	3DH5	Ant1	Hop	71.429	≥0.5	71.429	>5	PASS

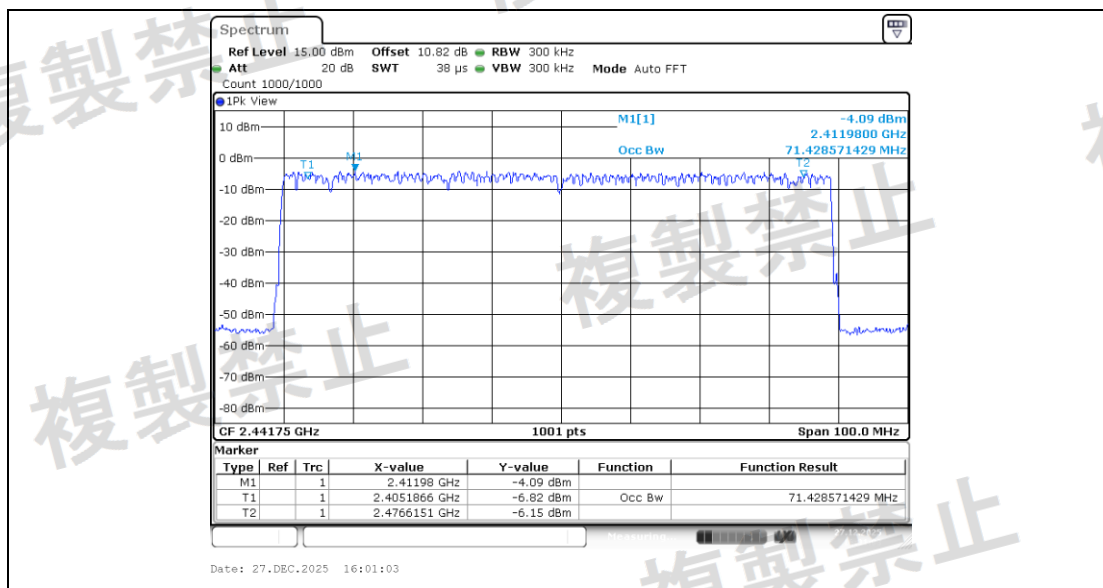
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	SpreadFactor	Limit	Verdict
NTLV	DH5	Ant1	Hop	71.226	≥0.5	71.226	>5	PASS
	2DH5	Ant1	Hop	71.427	≥0.5	71.427	>5	PASS
	3DH5	Ant1	Hop	71.424	≥0.5	71.424	>5	PASS

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	SpreadFactor	Limit	Verdict
NTHV	DH5	Ant1	Hop	71.224	≥0.5	71.224	>5	PASS
	2DH5	Ant1	Hop	71.422	≥0.5	71.422	>5	PASS
	3DH5	Ant1	Hop	71.420	≥0.5	71.420	>5	PASS

Test Graphs

Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.





Appendix D: Spurious Emission of TX

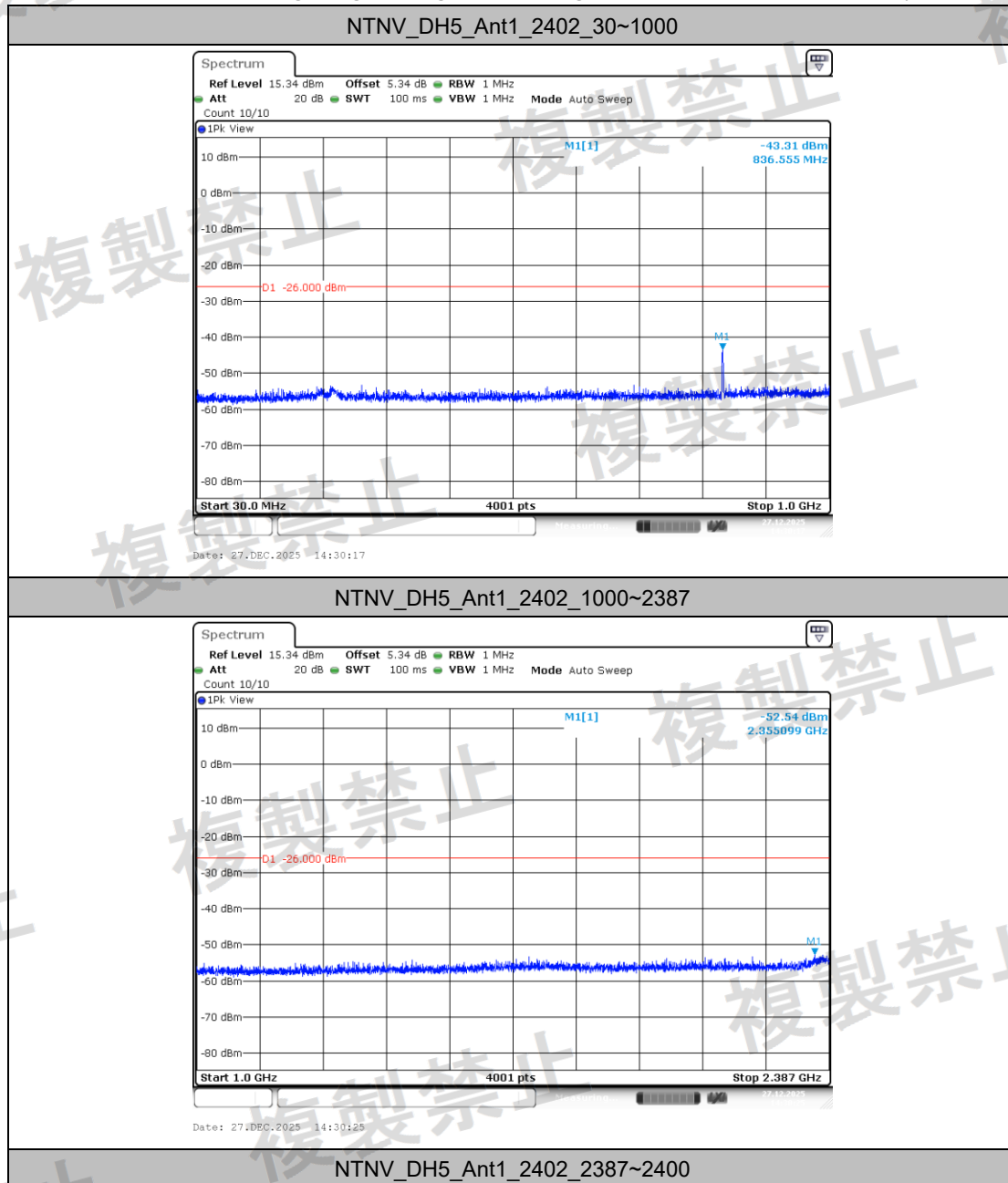
Test Result

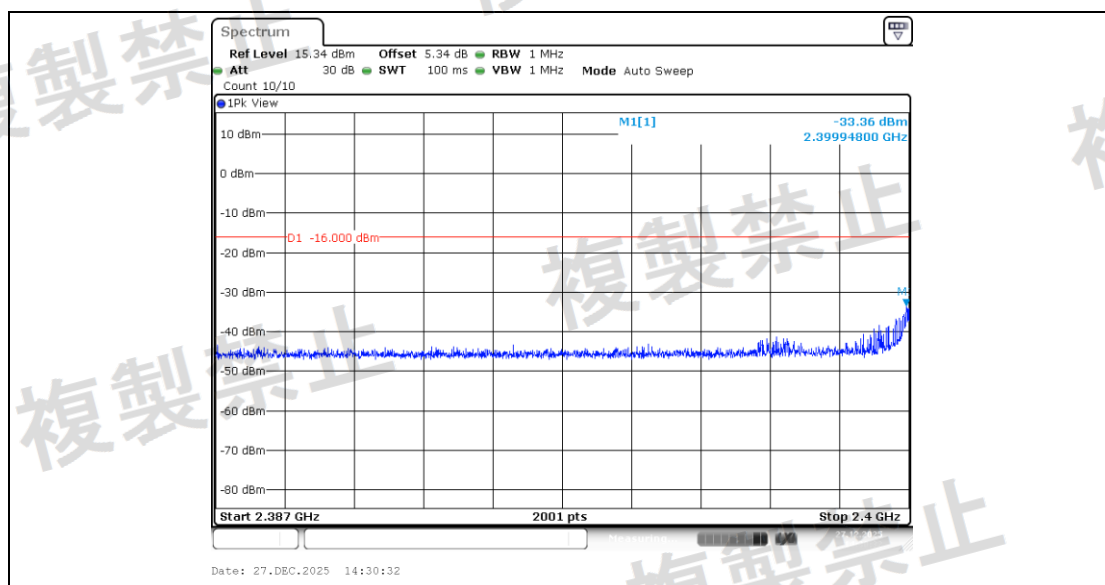
Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	836.56	-43.31	≤-26	0.04667	≤2.5	PASS
				1000~2387	2355.10	-52.54	≤-26	0.00557	≤2.5	PASS
				2387~2400	2399.95	-33.36	≤-16	0.46132	≤25	PASS
				2483.5~2496.5	2487.87	-43.26	≤-16	0.04721	≤25	PASS
				2496.5~13000	4804.12	-41.92	≤-26	0.06427	≤2.5	PASS
			2441	30~1000	847.71	-47.99	≤-26	0.01589	≤2.5	PASS
				1000~2387	2371.74	-52.86	≤-26	0.00518	≤2.5	PASS
				2387~2400	2391.95	-42.77	≤-16	0.05284	≤25	PASS
				2483.5~2496.5	2496.31	-43.04	≤-16	0.04966	≤25	PASS
				2496.5~13000	4882.37	-41.43	≤-26	0.07194	≤2.5	PASS
			2480	30~1000	848.68	-51.79	≤-26	0.00662	≤2.5	PASS
				1000~2387	2383.53	-53.29	≤-26	0.00469	≤2.5	PASS
				2387~2400	2393.32	-43.62	≤-16	0.04345	≤25	PASS
				2483.5~2496.5	2484.29	-40.21	≤-16	0.09528	≤25	PASS
				2496.5~13000	4960.10	-41.52	≤-26	0.07047	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	848.68	-50.34	≤-26	0.00925	≤2.5	PASS
				1000~2387	2364.81	-52.57	≤-26	0.00553	≤2.5	PASS
				2387~2400	2400.00	-30.55	≤-16	0.88105	≤25	PASS
				2483.5~2496.5	2487.98	-43.17	≤-16	0.04819	≤25	PASS
				2496.5~13000	4804.12	-44.73	≤-26	0.03365	≤2.5	PASS
			2441	30~1000	848.44	-47.68	≤-26	0.01706	≤2.5	PASS
				1000~2387	2233.74	-52.88	≤-26	0.00515	≤2.5	PASS
				2387~2400	2390.20	-43.11	≤-16	0.04887	≤25	PASS
				2483.5~2496.5	2486.80	-42.97	≤-16	0.05047	≤25	PASS
				2496.5~13000	4881.84	-44.07	≤-26	0.03917	≤2.5	PASS
			2480	30~1000	824.43	-43.27	≤-26	0.04710	≤2.5	PASS
				1000~2387	1989.97	-53.67	≤-26	0.00430	≤2.5	PASS
				2387~2400	2392.95	-43.64	≤-16	0.04325	≤25	PASS
				2483.5~2496.5	2484.52	-42.84	≤-16	0.05200	≤25	PASS
				2496.5~13000	4960.62	-44.14	≤-26	0.03855	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	844.32	-45.17	≤-26	0.03041	≤2.5	PASS
				1000~2387	2367.93	-52.99	≤-26	0.00502	≤2.5	PASS
				2387~2400	2400.00	-30.60	≤-16	0.87096	≤25	PASS
				2483.5~2496.5	2486.70	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	4804.12	-44.20	≤-26	0.03802	≤2.5	PASS
			2441	30~1000	832.19	-40.07	≤-26	0.09840	≤2.5	PASS
				1000~2387	2024.65	-53.45	≤-26	0.00452	≤2.5	PASS

			2387~2400	2394.76	-42.89	≤-16	0.05140	≤25	PASS
			2483.5~2496.5	2495.39	-42.48	≤-16	0.05649	≤25	PASS
			2496.5~13000	4881.84	-44.03	≤-26	0.03954	≤2.5	PASS
		2480	30~1000	848.44	-44.01	≤-26	0.03972	≤2.5	PASS
			1000~2387	1739.96	-53.59	≤-26	0.00438	≤2.5	PASS
			2387~2400	2396.22	-43.30	≤-16	0.04677	≤25	PASS
			2483.5~2496.5	2485.40	-42.84	≤-16	0.05200	≤25	PASS
			2496.5~13000	4960.10	-44.26	≤-26	0.03750	≤2.5	PASS

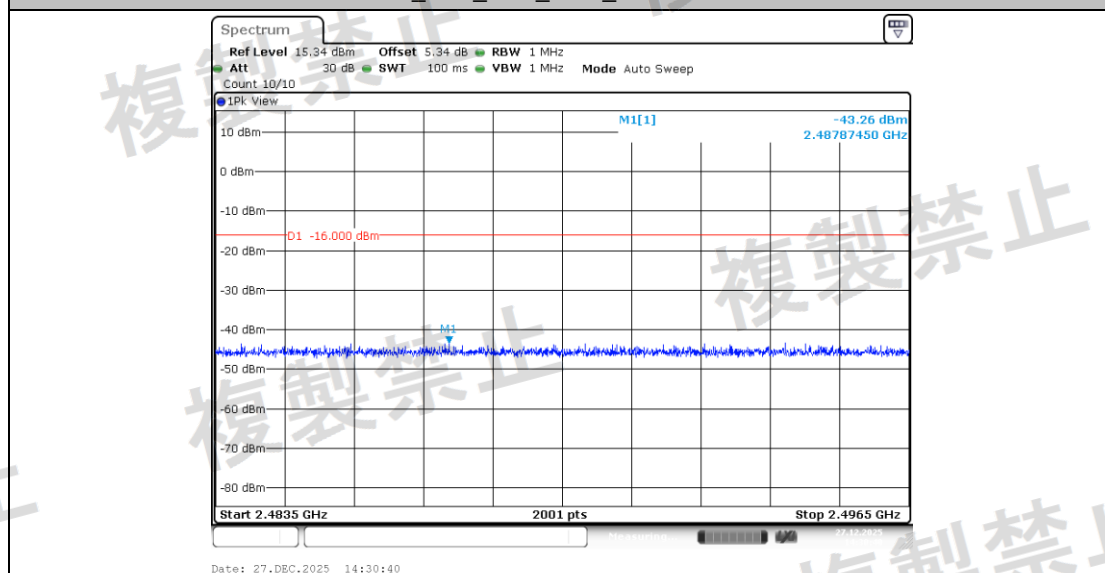
Test Graphs

Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.

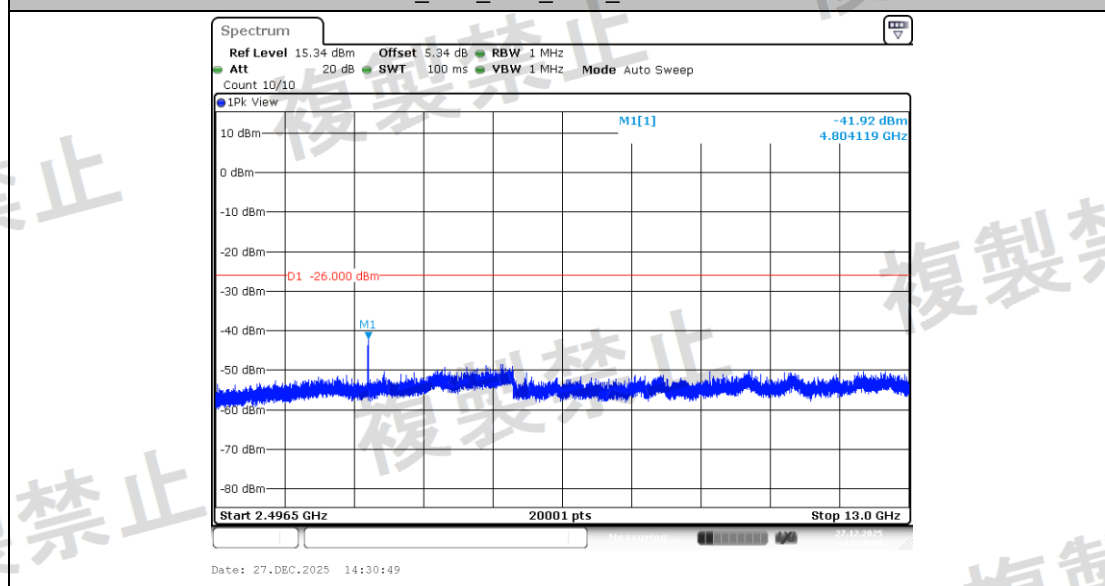


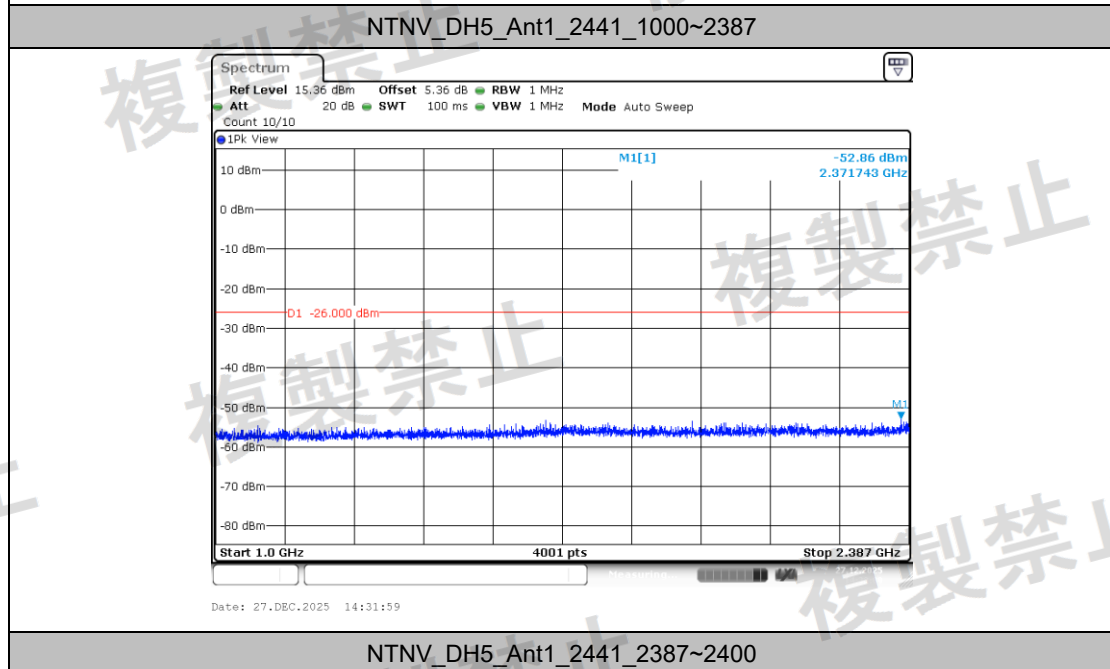
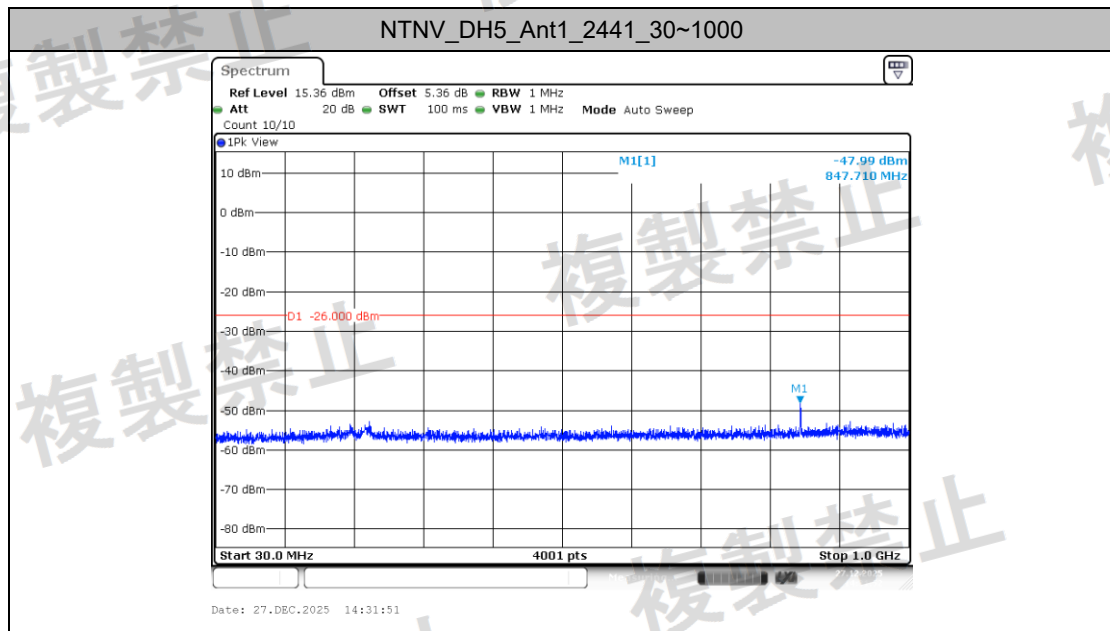


NTNV_DH5_Ant1_2402_2483.5~2496.5

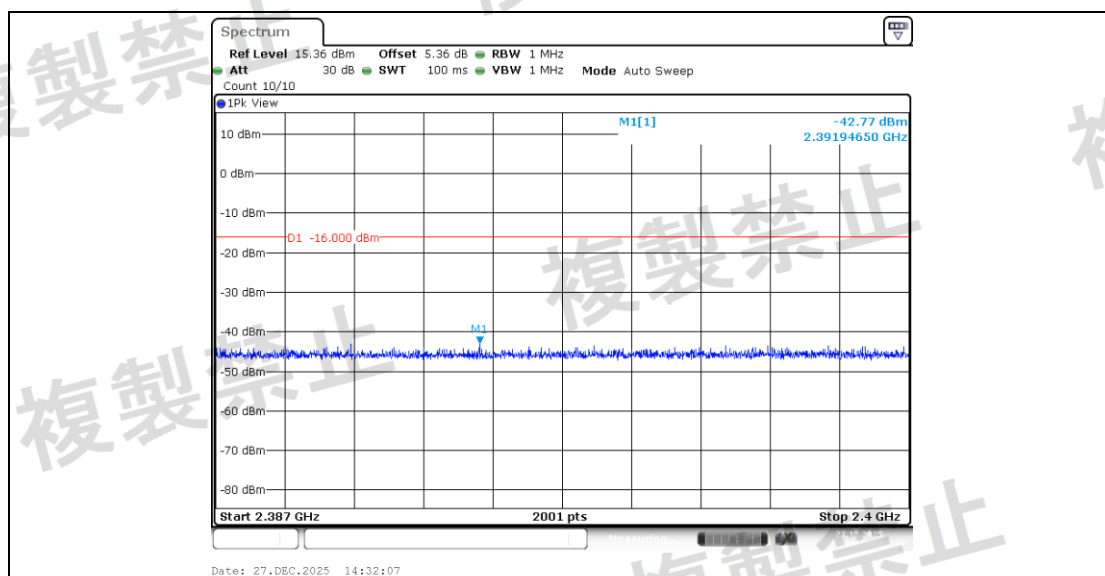


NTNV_DH5_Ant1_2402_2496.5~13000

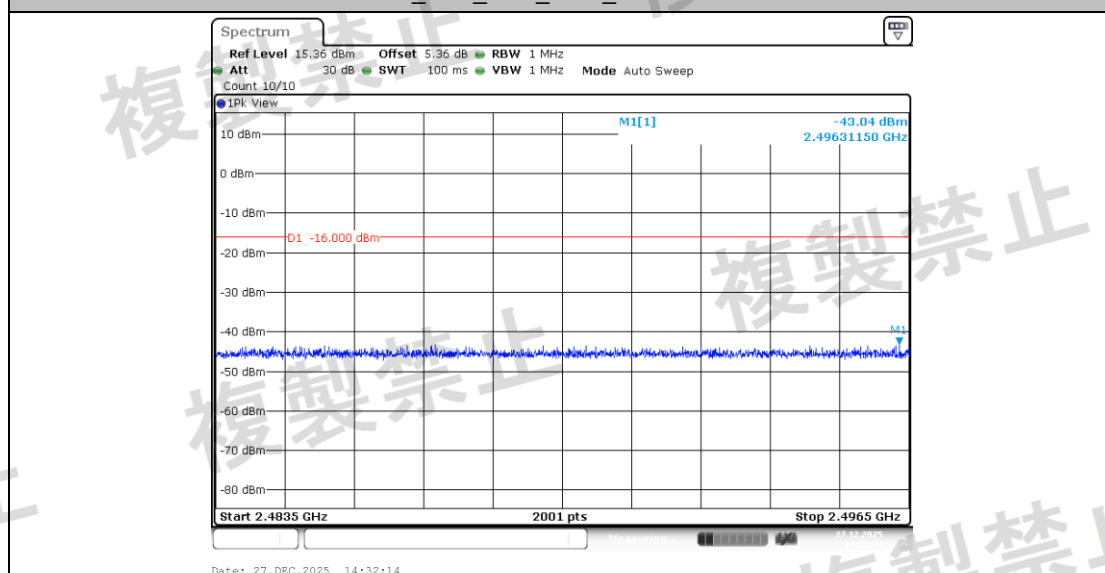




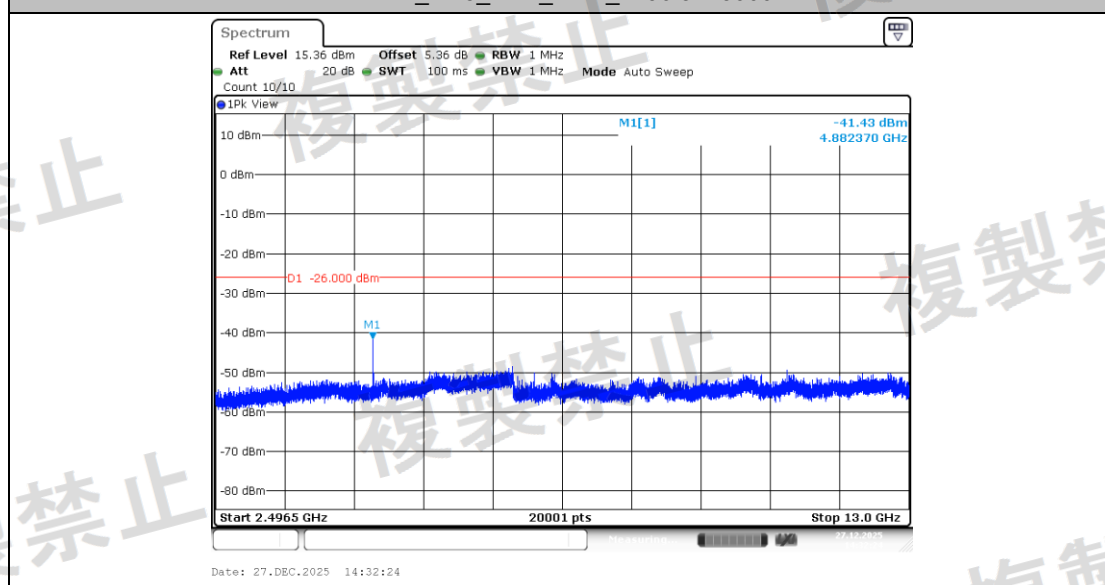
NTNV_DH5_Ant1_2441_2387~2400

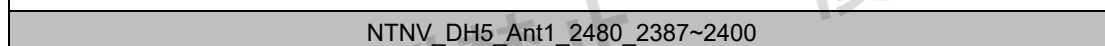
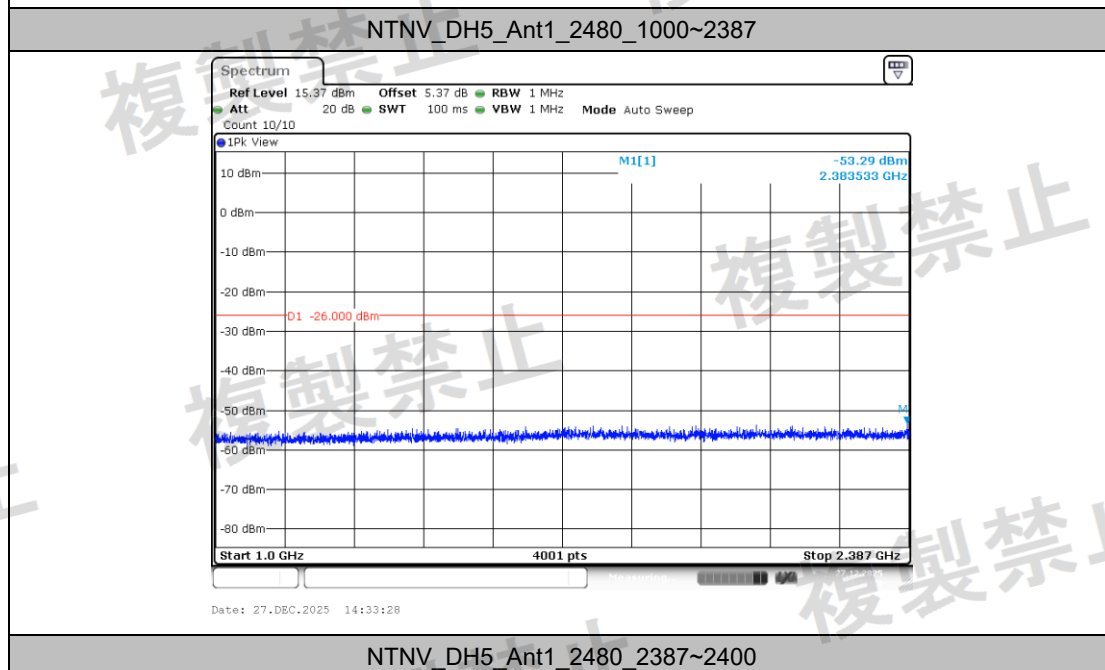
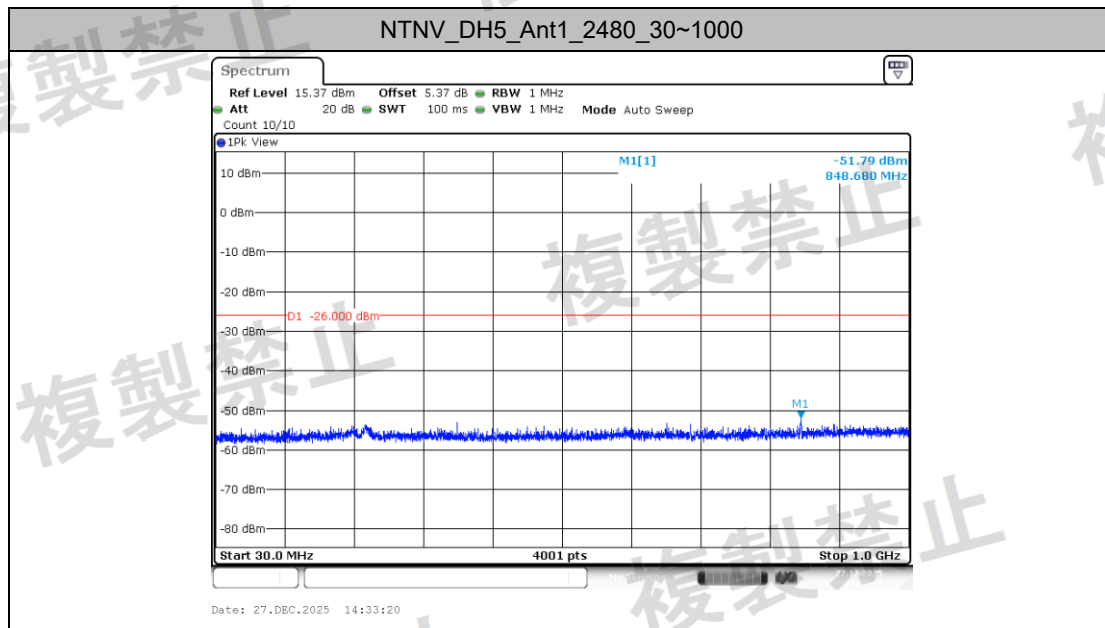


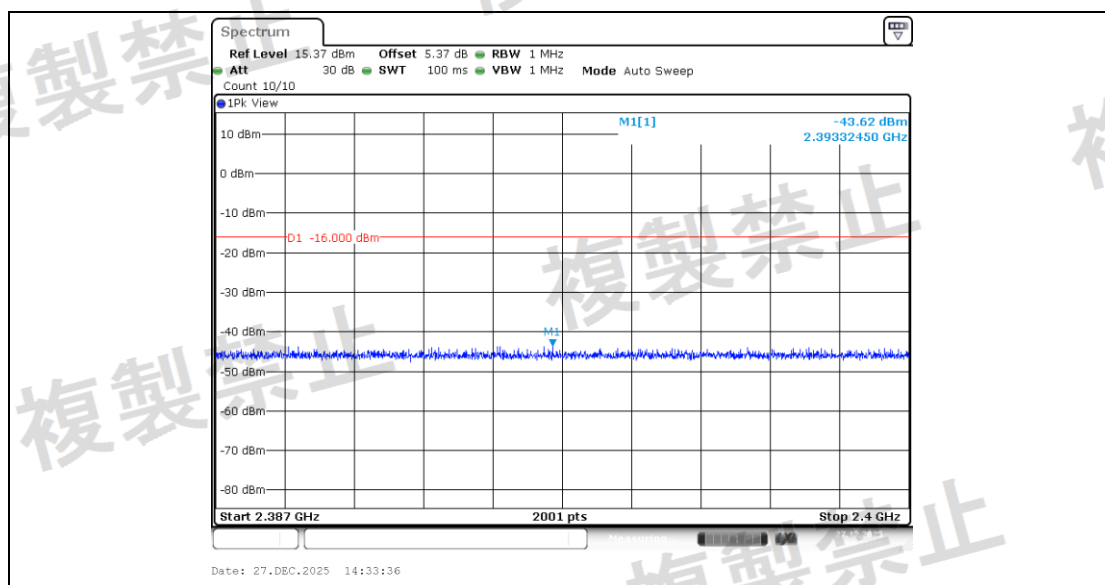
NTNV_DH5_Ant1_2441_2483.5~2496.5



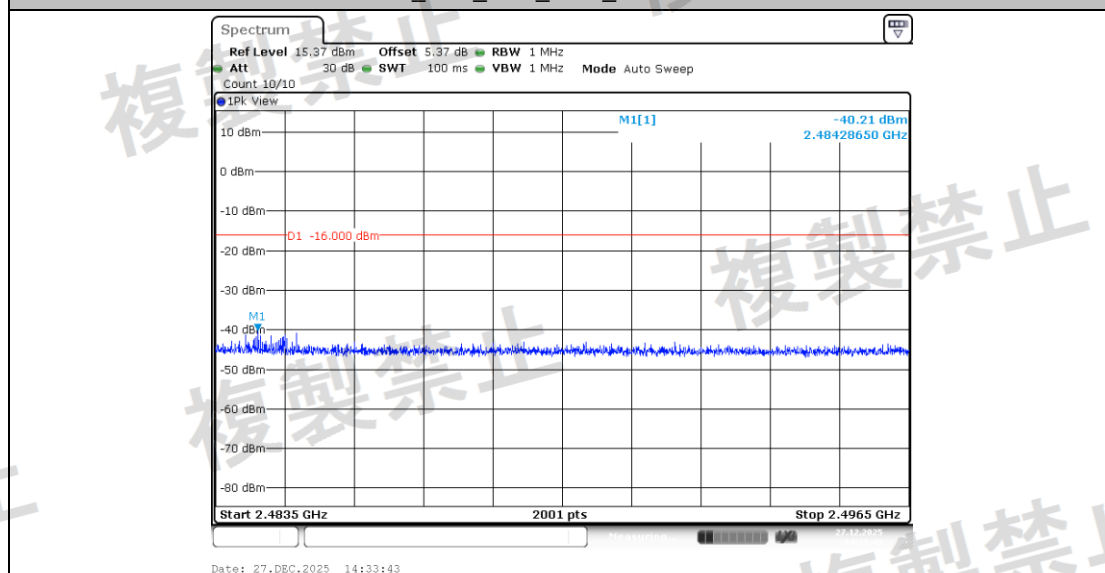
NTNV_DH5_Ant1_2441_2496.5~13000



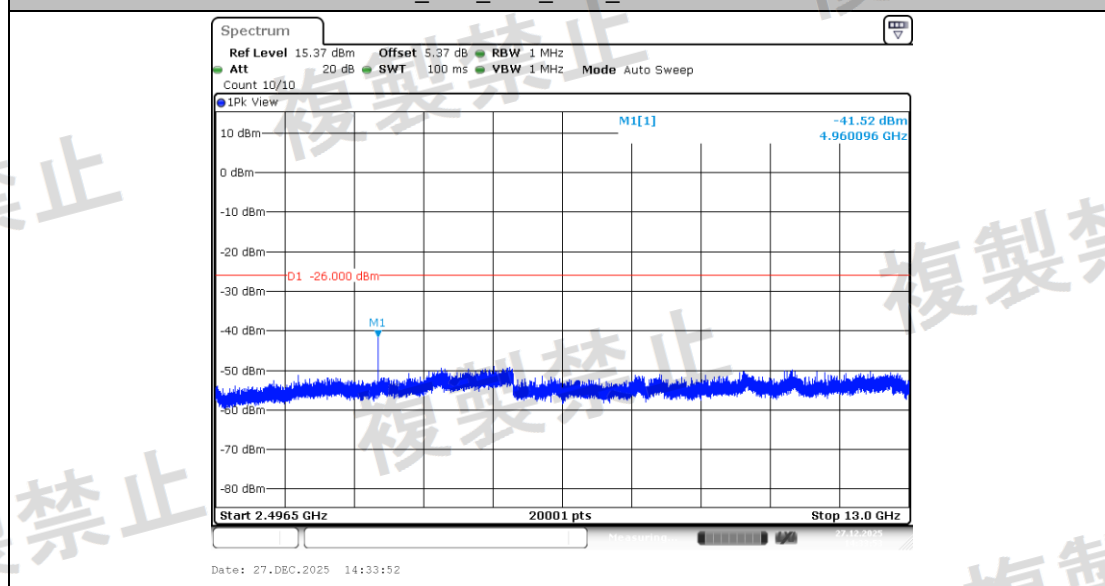


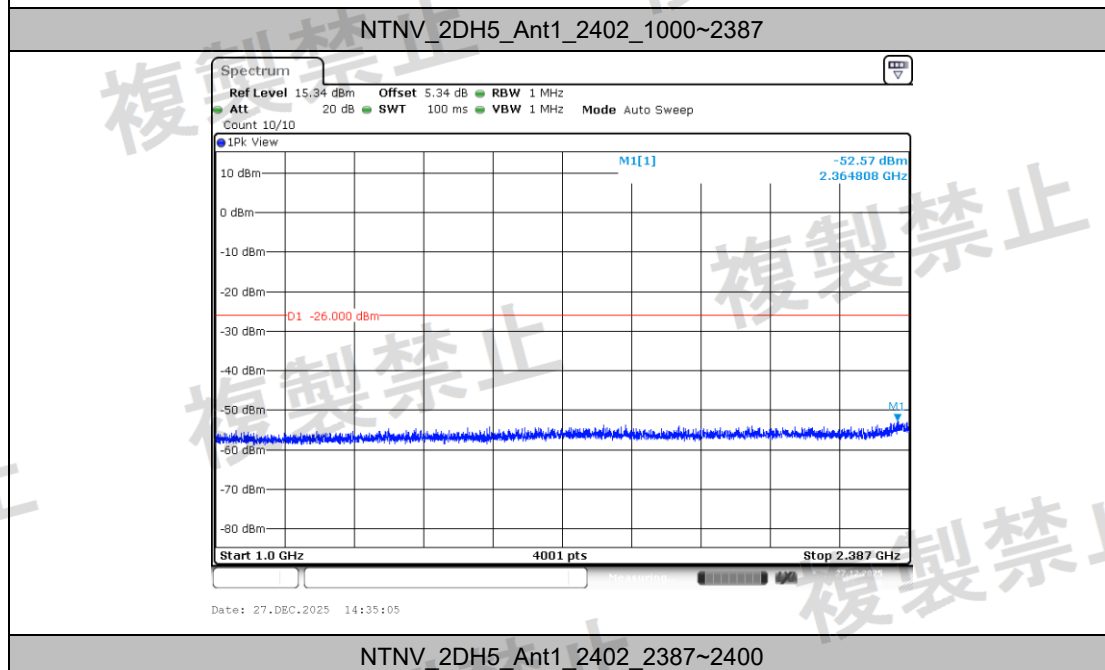
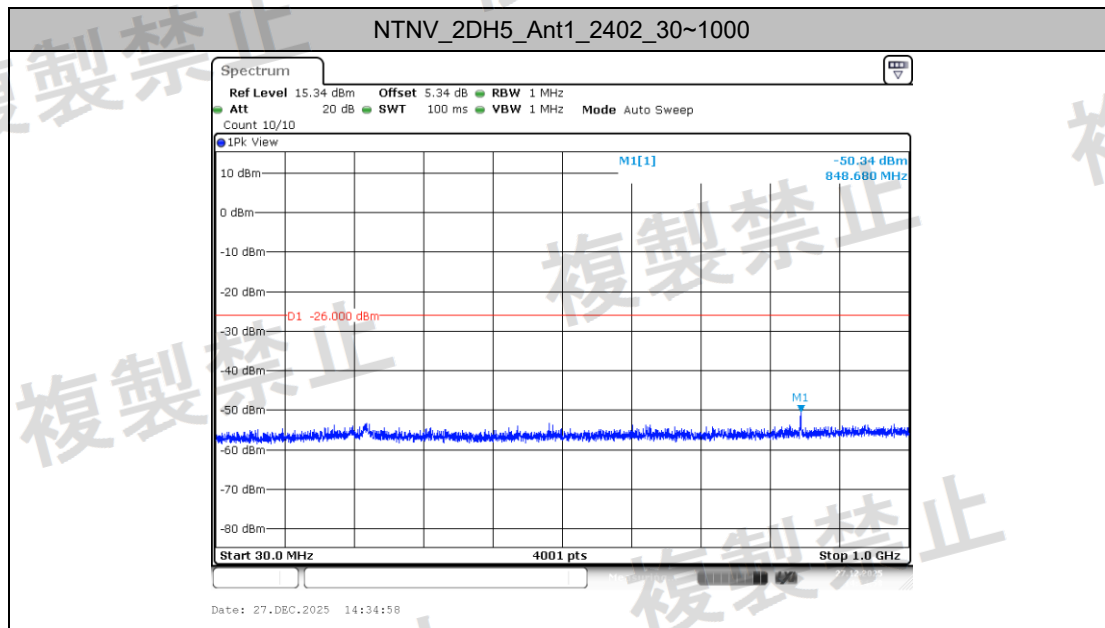


NTNV_DH5_Ant1_2480_2483.5~2496.5

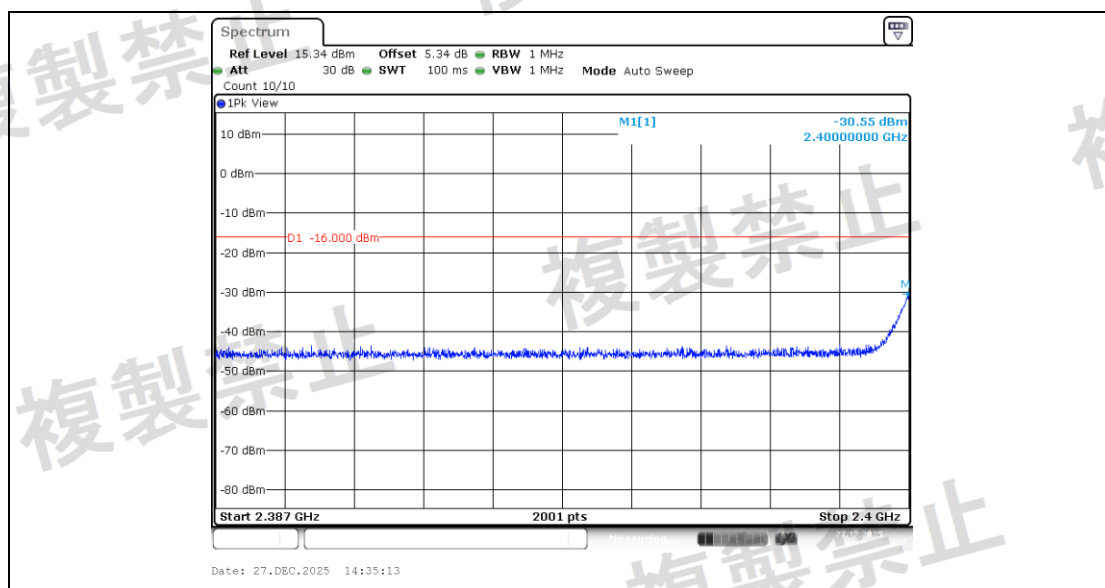


NTNV_DH5_Ant1_2480_2496.5~13000

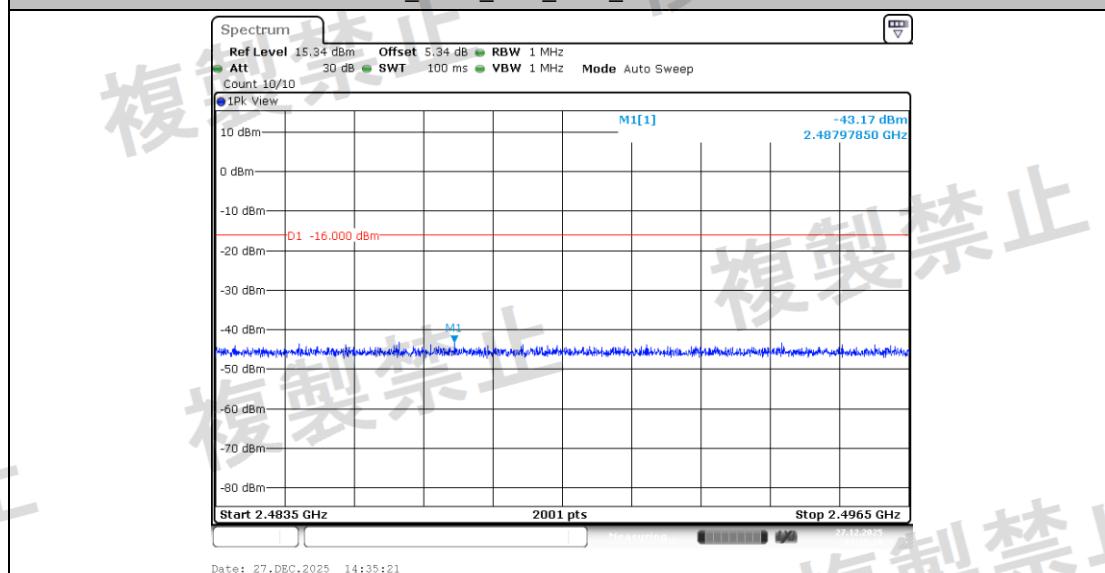




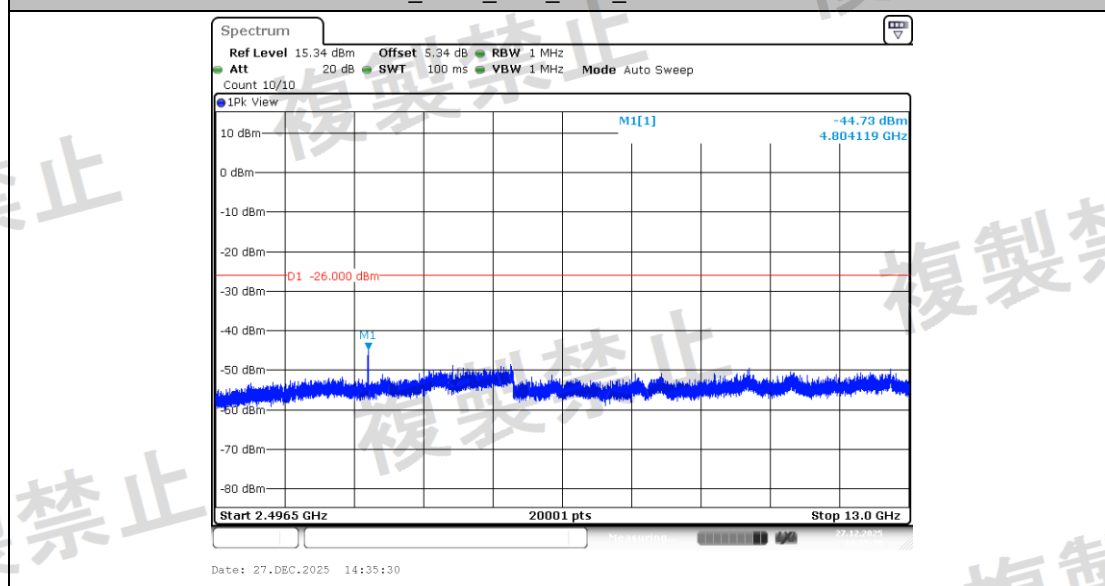
NTNV_2DH5_Ant1_2402_2387~2400

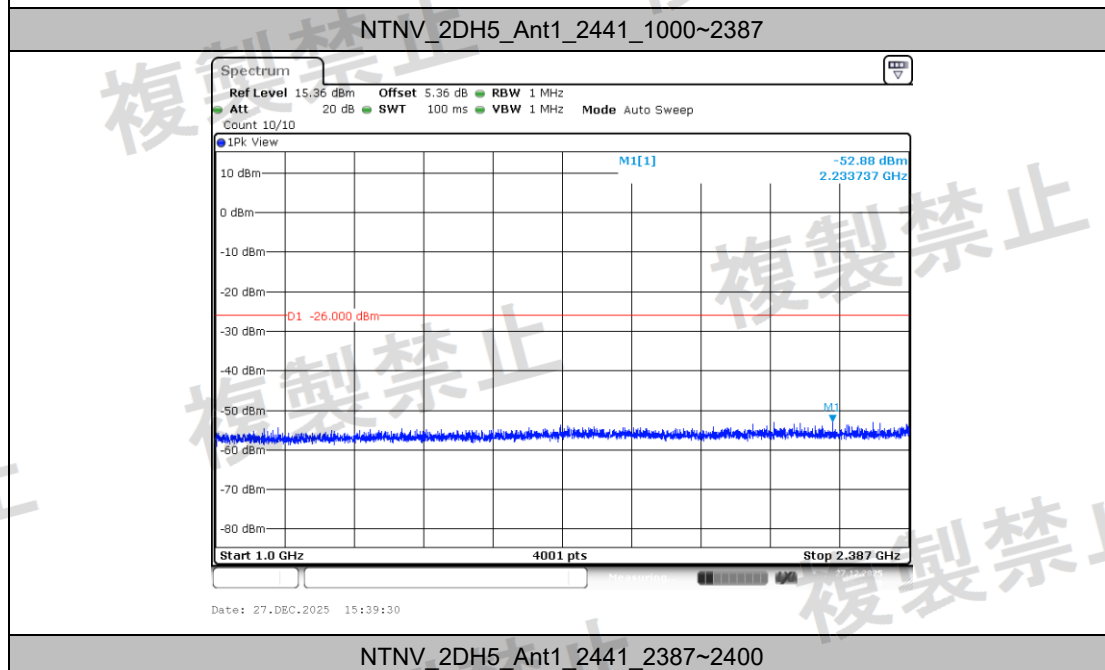
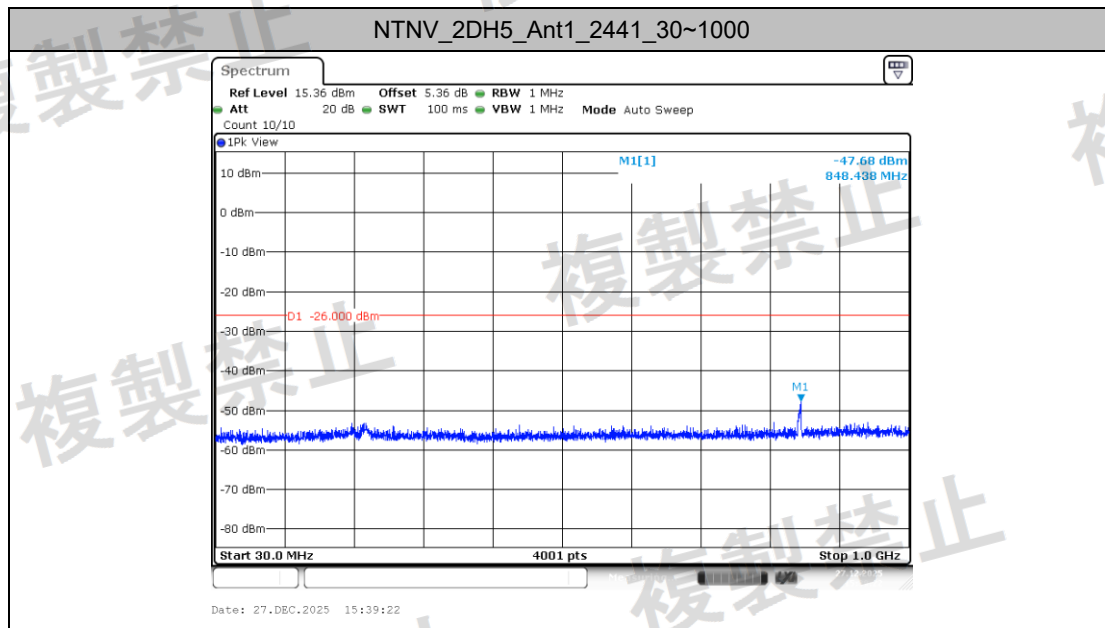


NTNV_2DH5_Ant1_2402_2483.5~2496.5

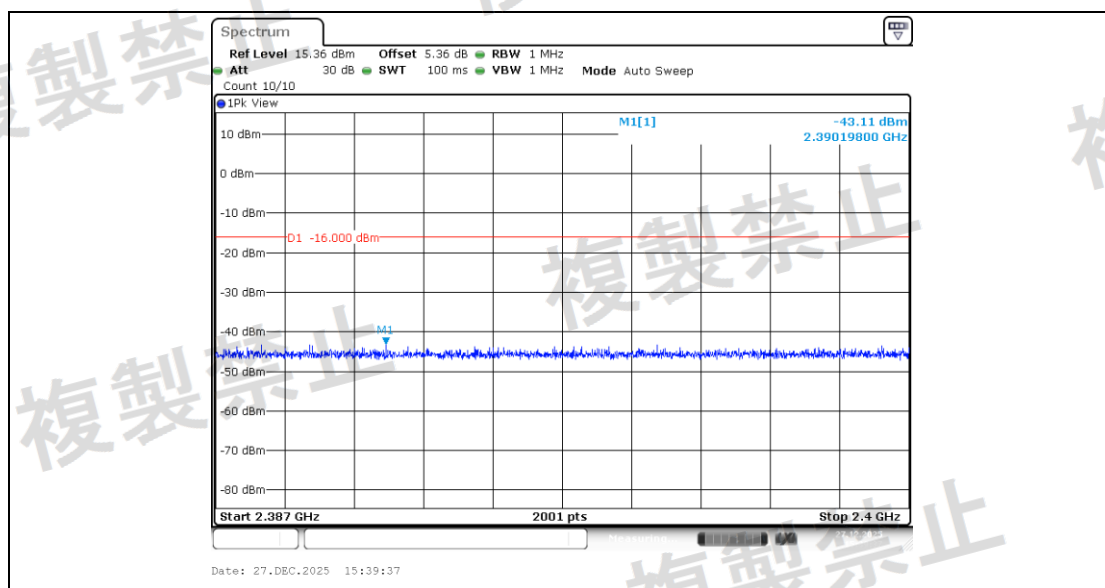


NTNV_2DH5_Ant1_2402_2496.5~13000

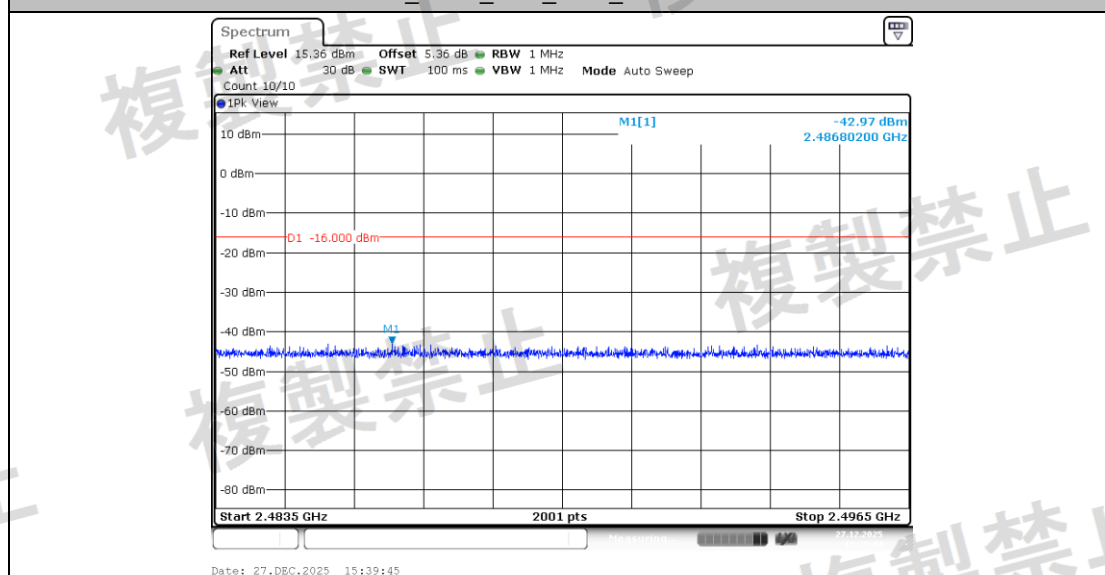




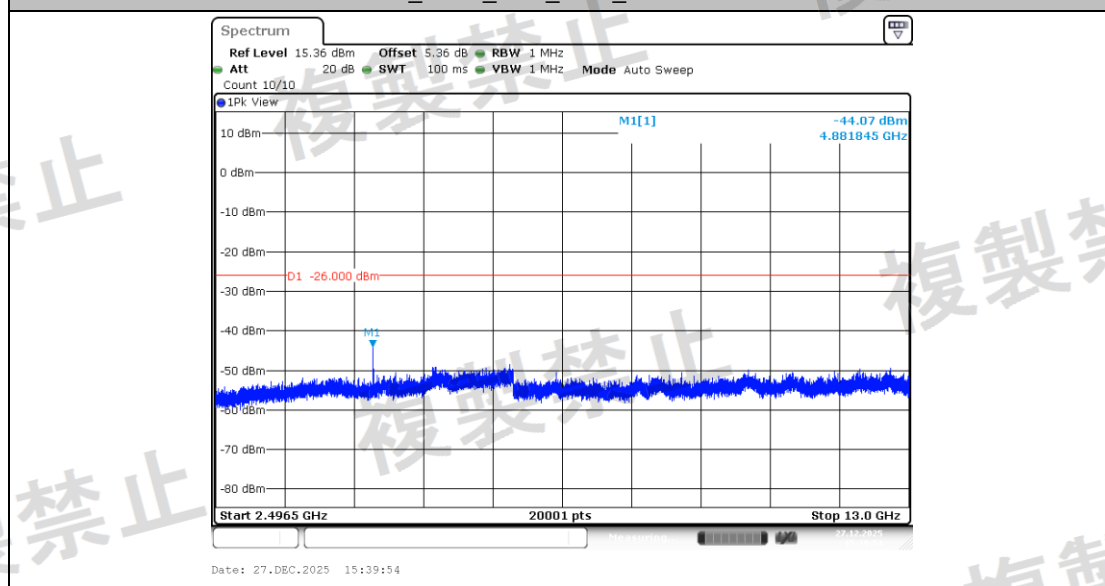
NTNV_2DH5_Ant1_2441_2387~2400

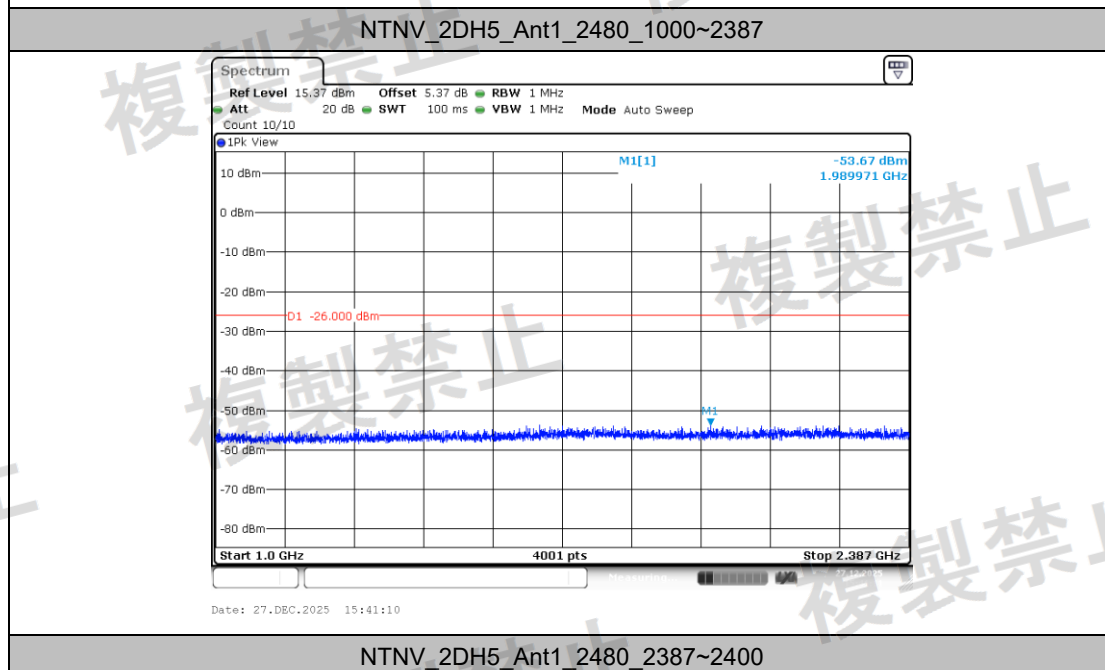
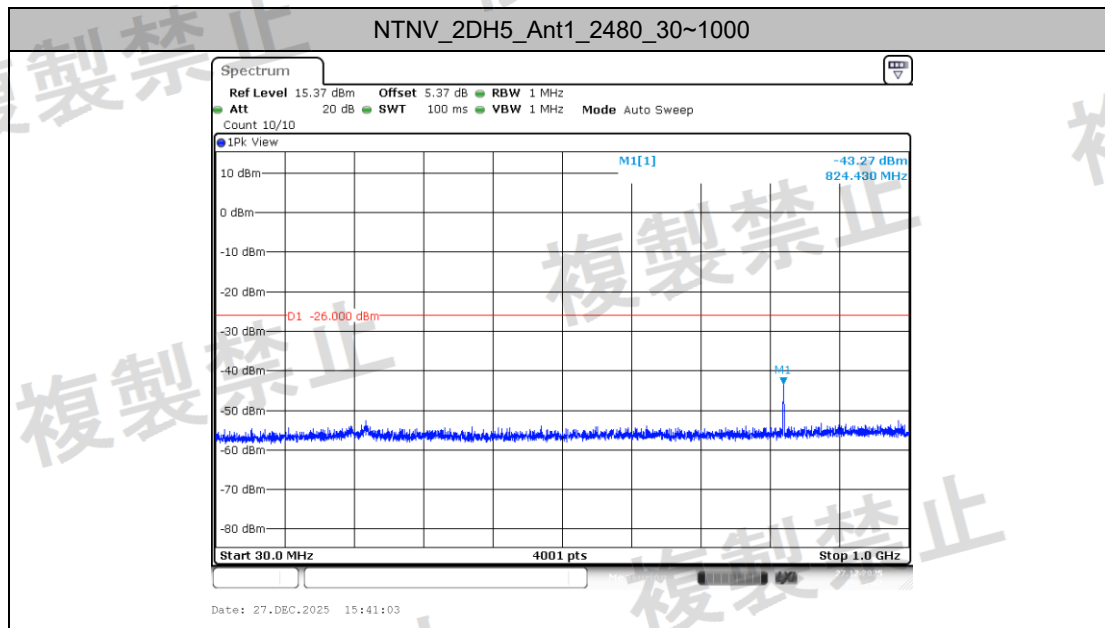


NTVN_2DH5_Ant1_2441_2483.5~2496.5

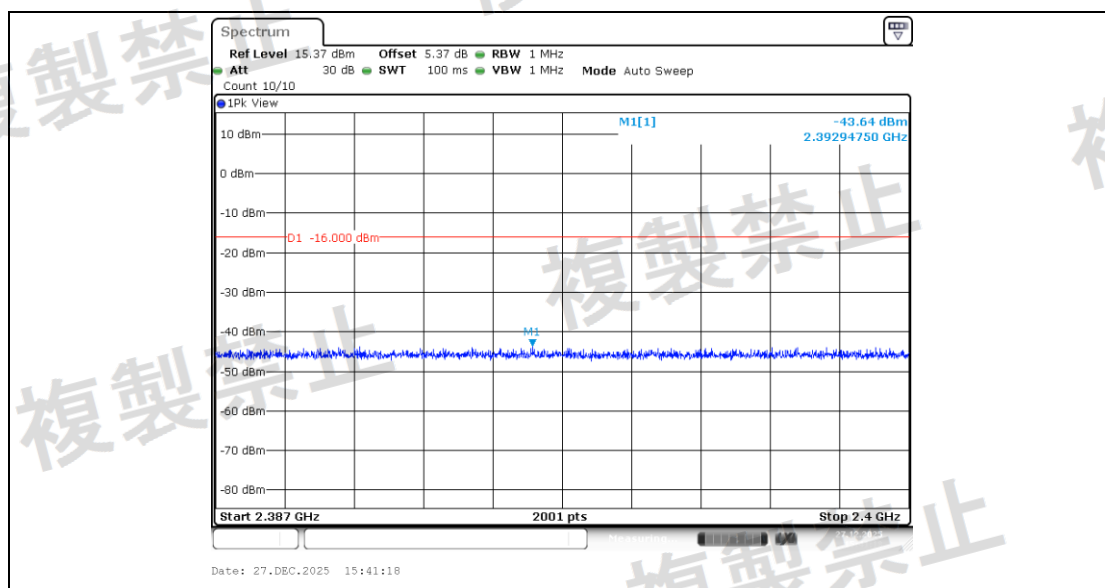


NTVN_2DH5_Ant1_2441_2496.5~13000

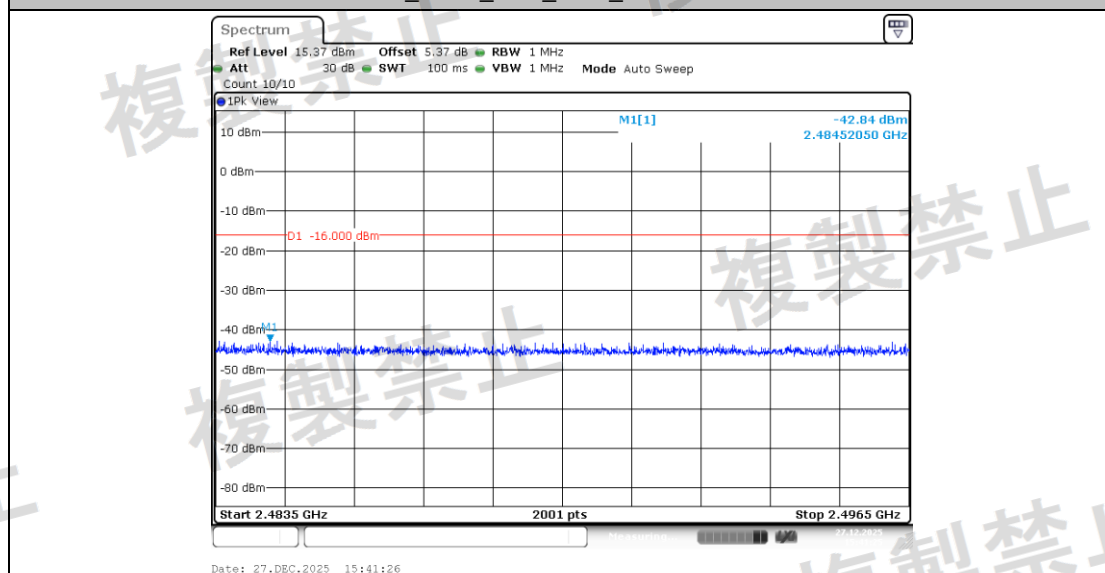




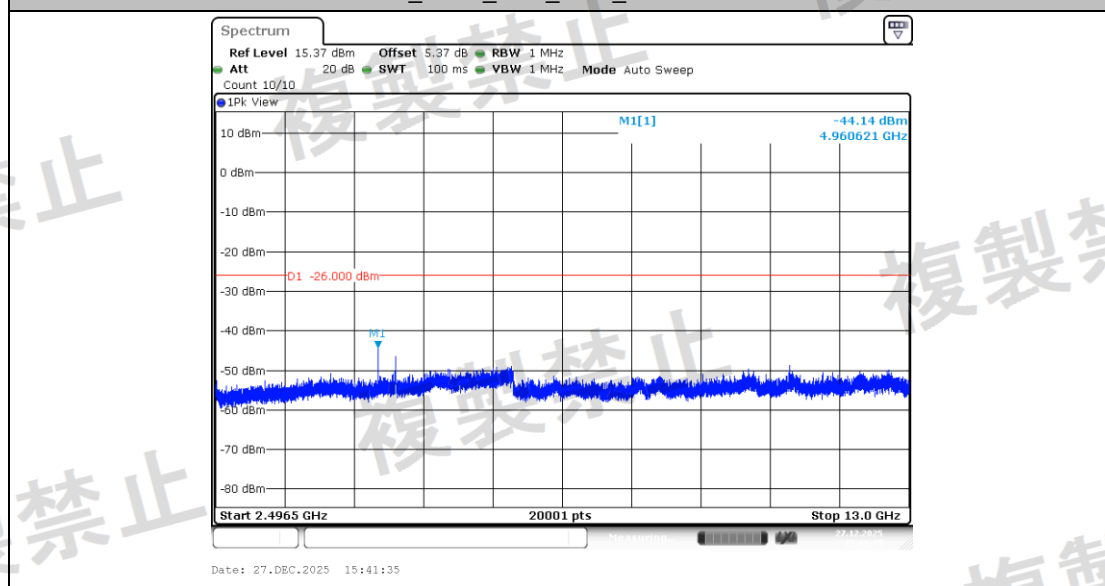
NTNV_2DH5_Ant1_2480_2387~2400

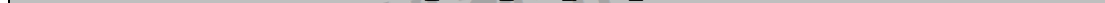
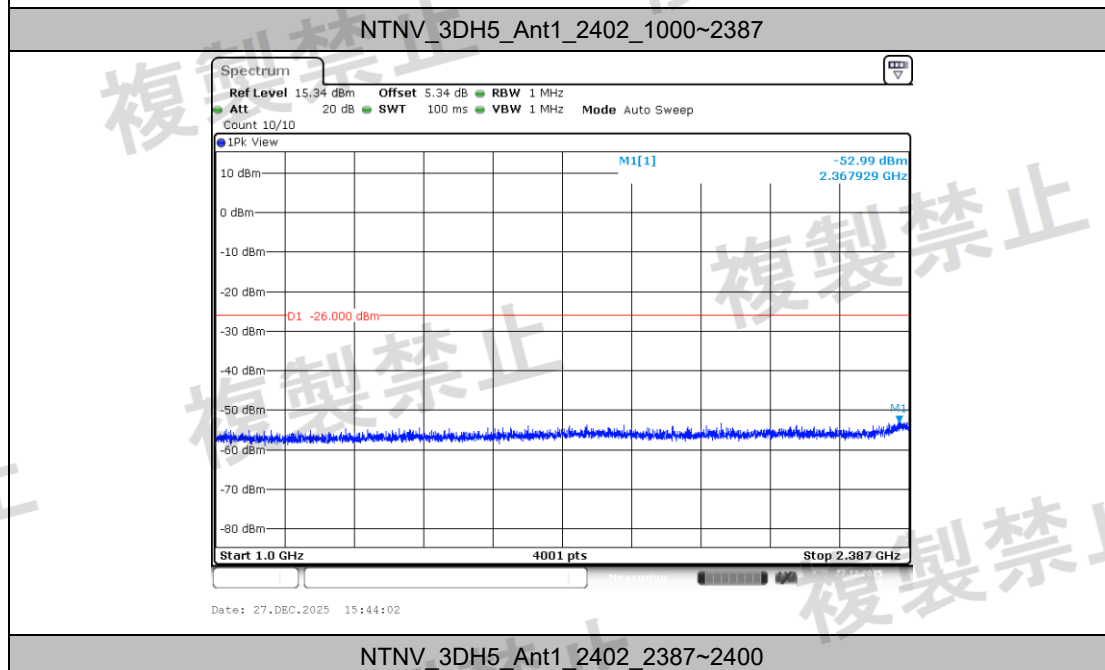
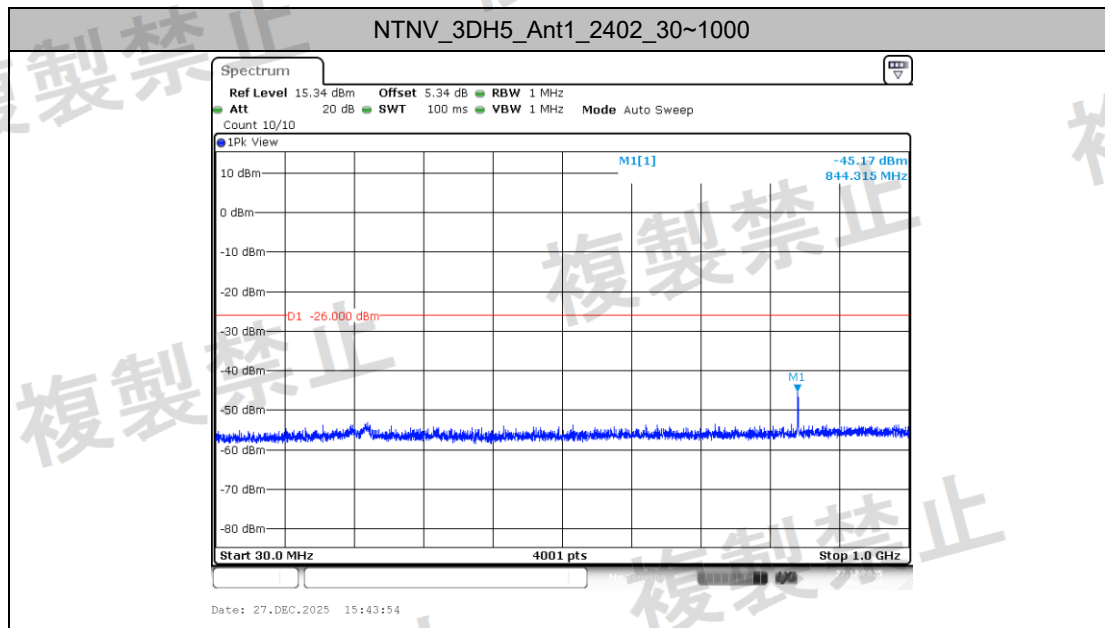


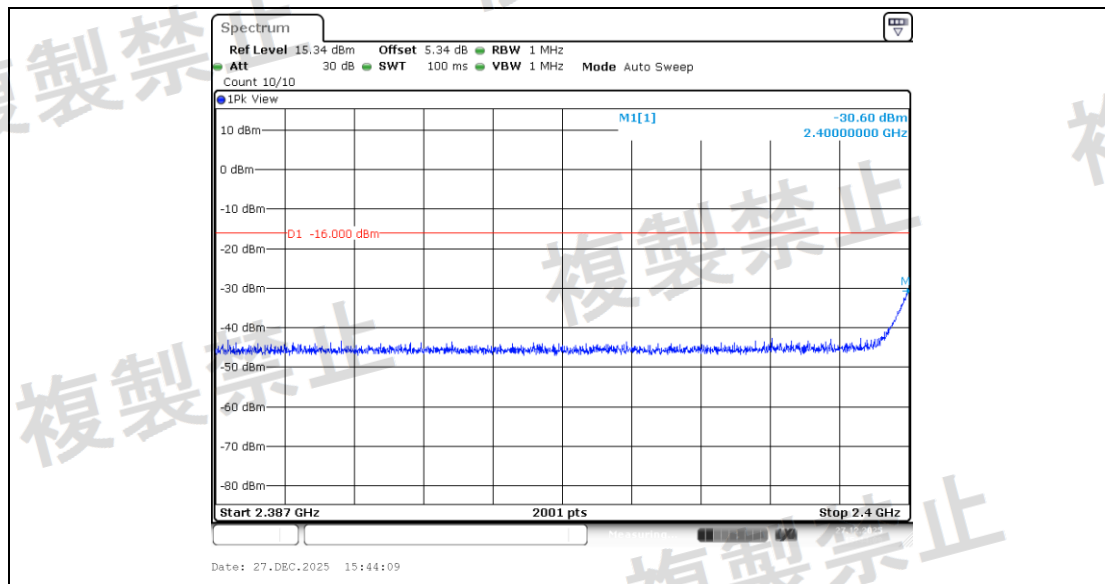
NTVN_2DH5_Ant1_2480_2483.5~2496.5



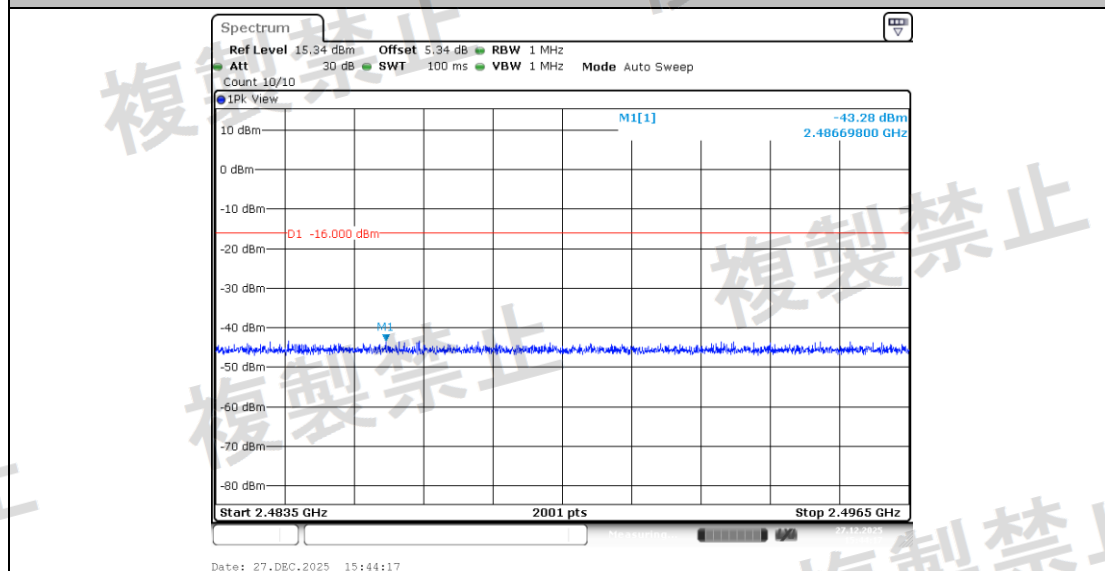
NTVN_2DH5_Ant1_2480_2496.5~13000



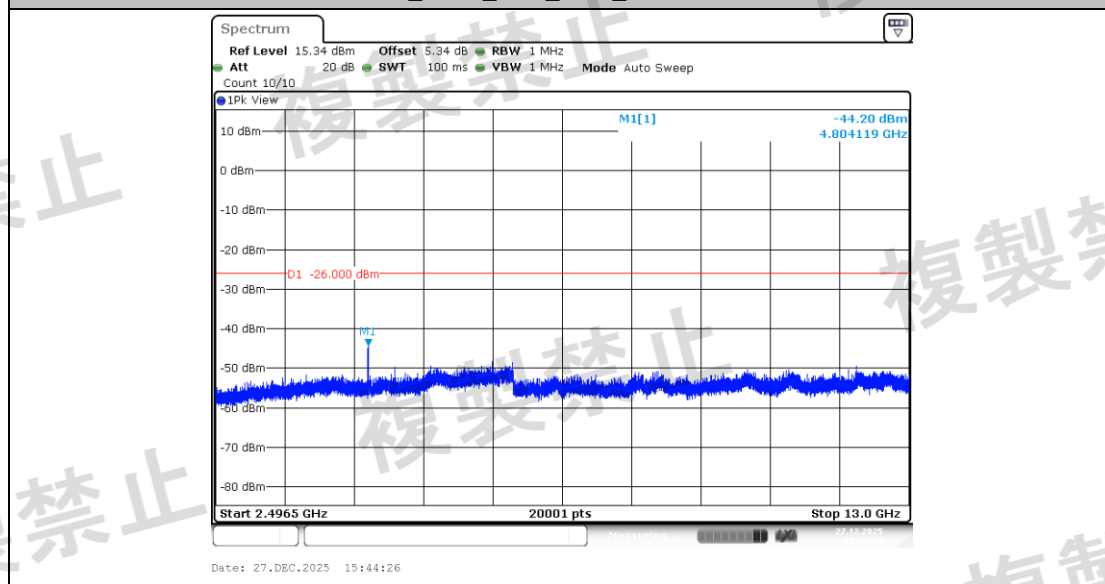


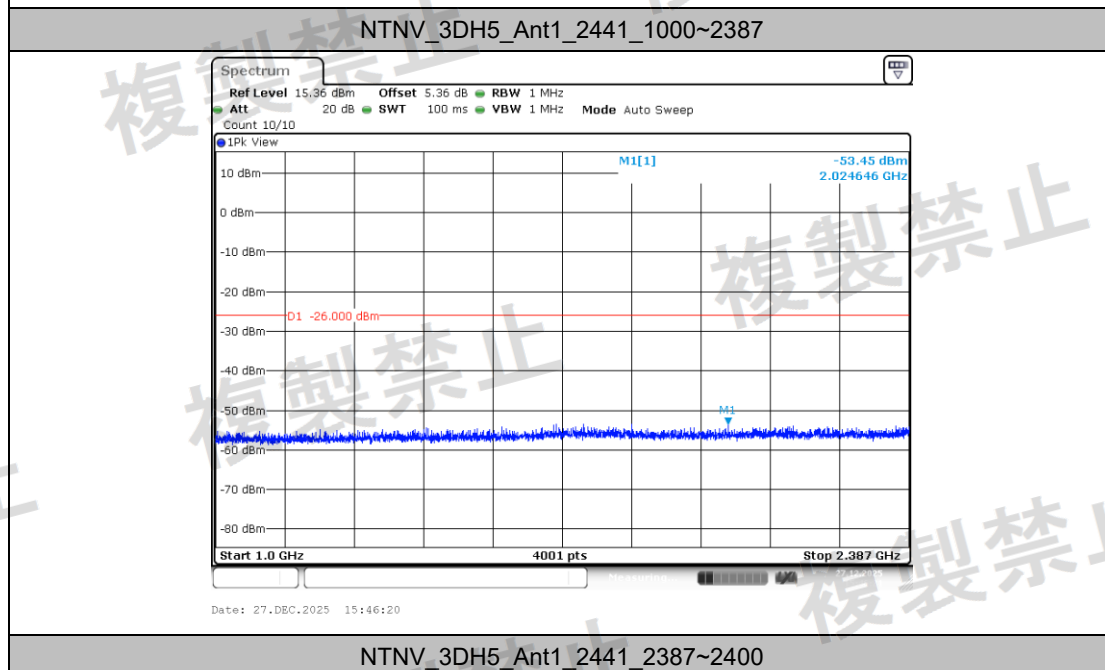
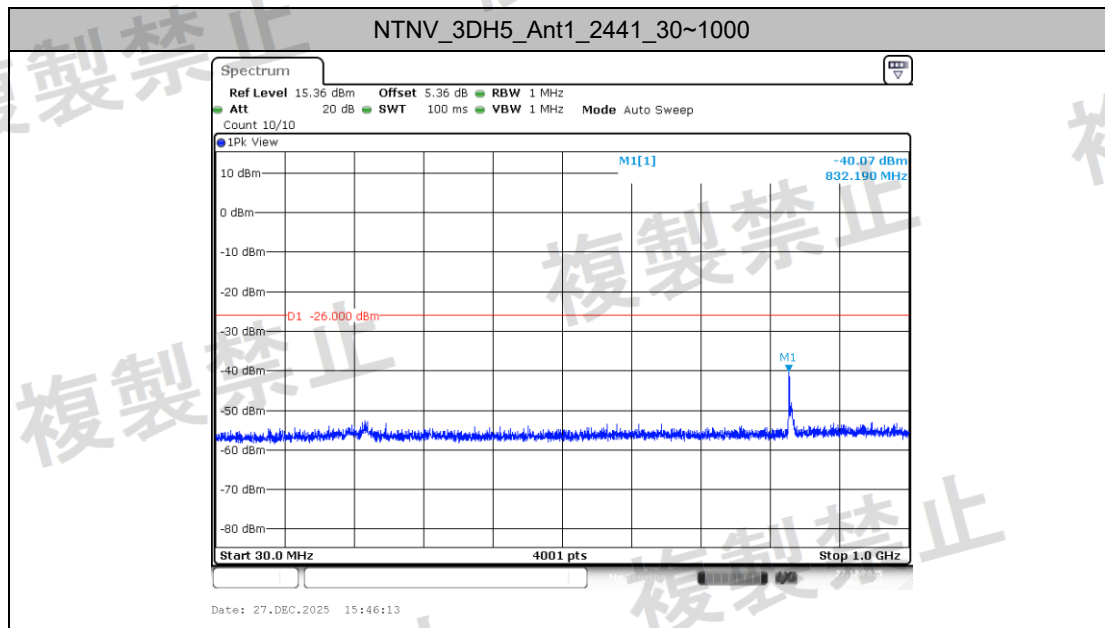


NTNV_3DH5_Ant1_2402_2483.5~2496.5

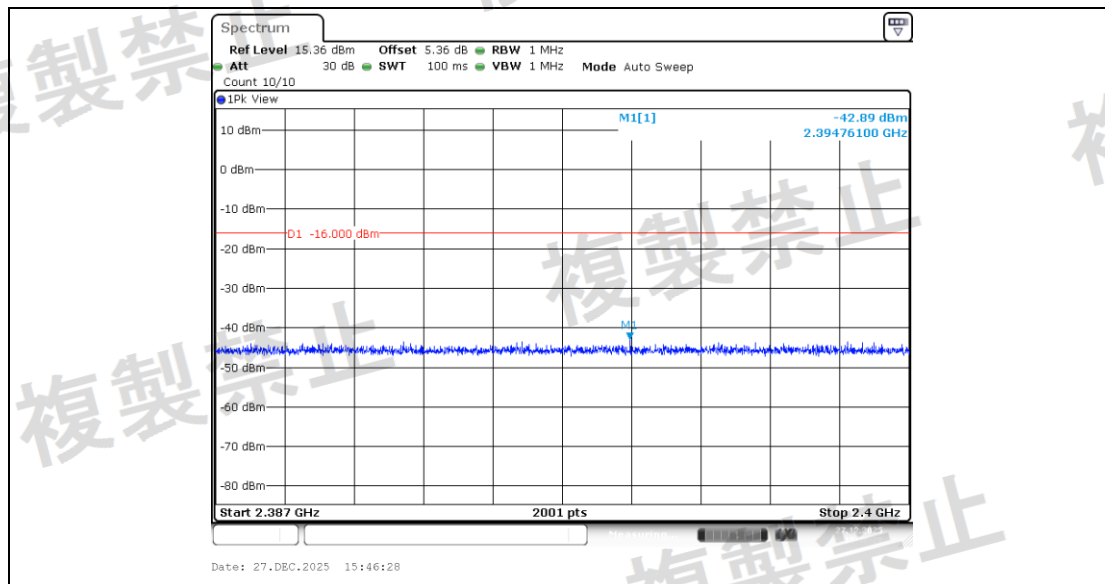


NTNV_3DH5_Ant1_2402_2496.5~13000

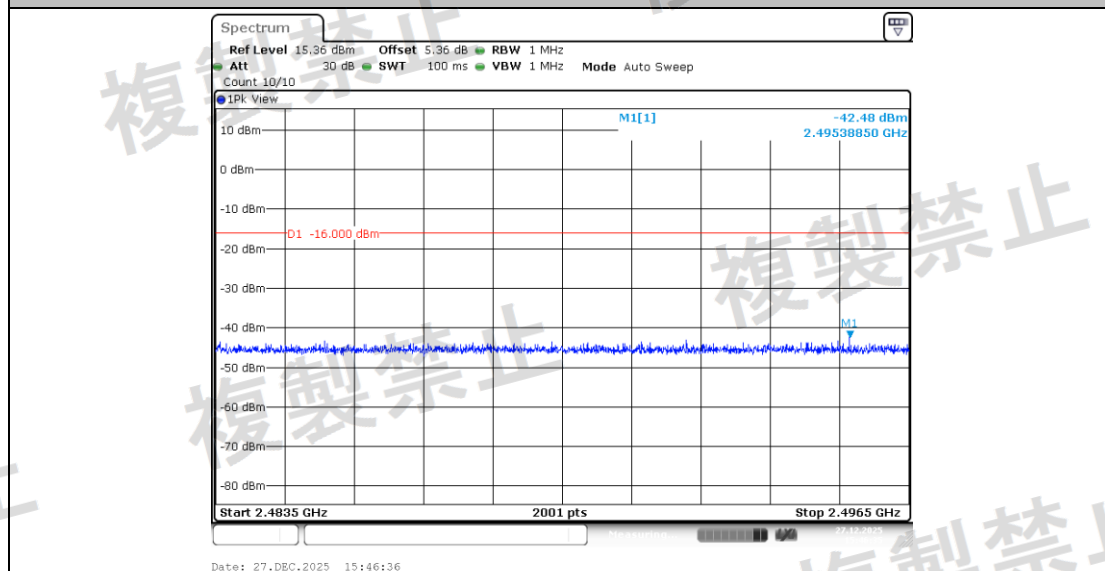




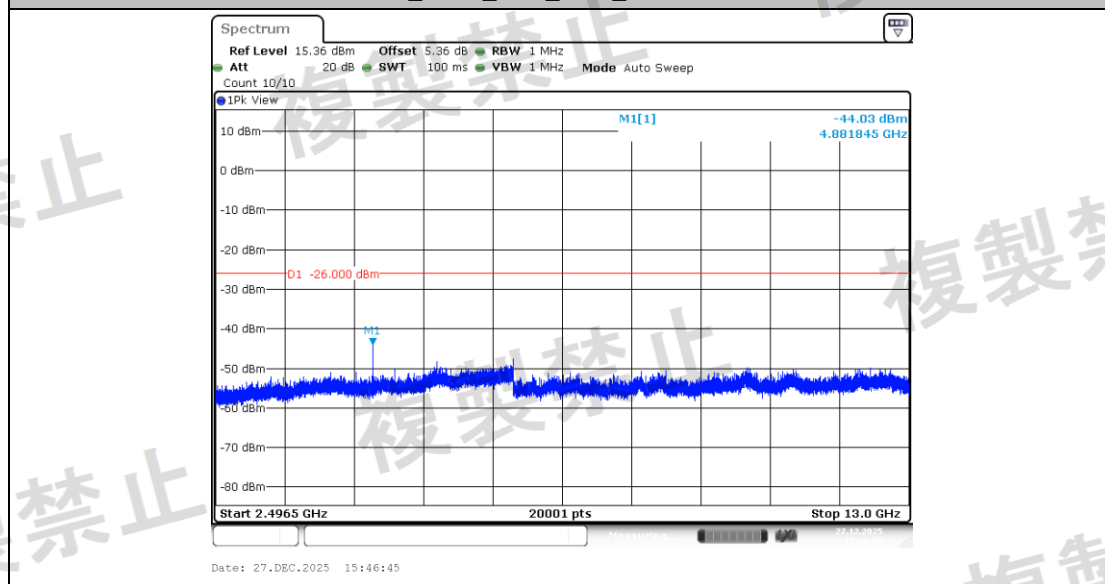
NTNV_3DH5_Ant1_2441_2387~2400

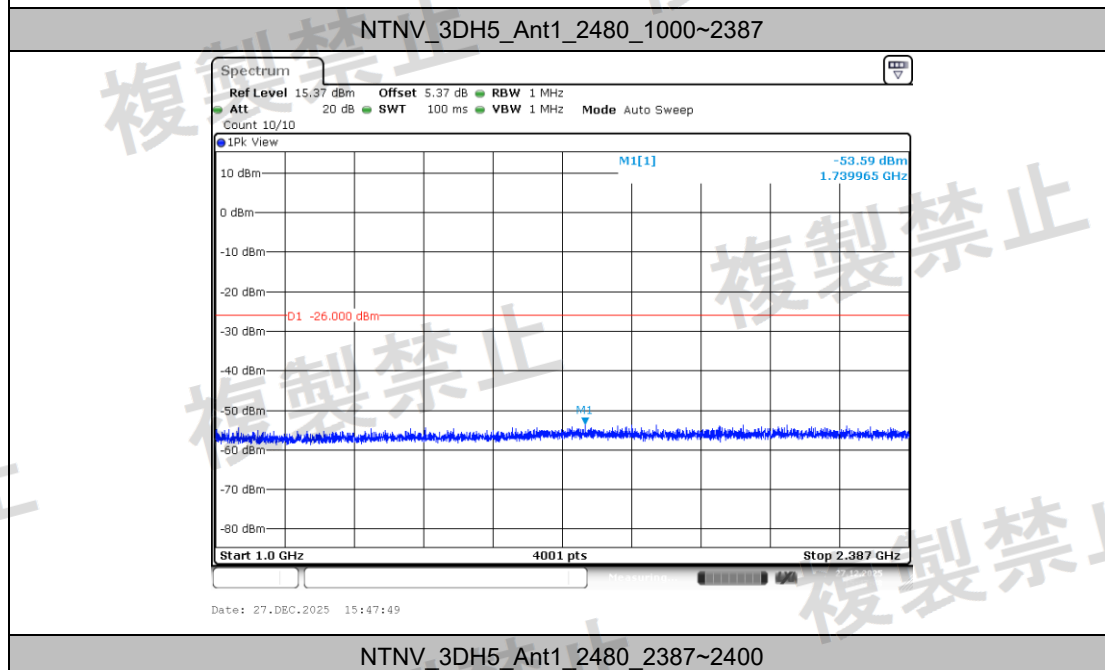
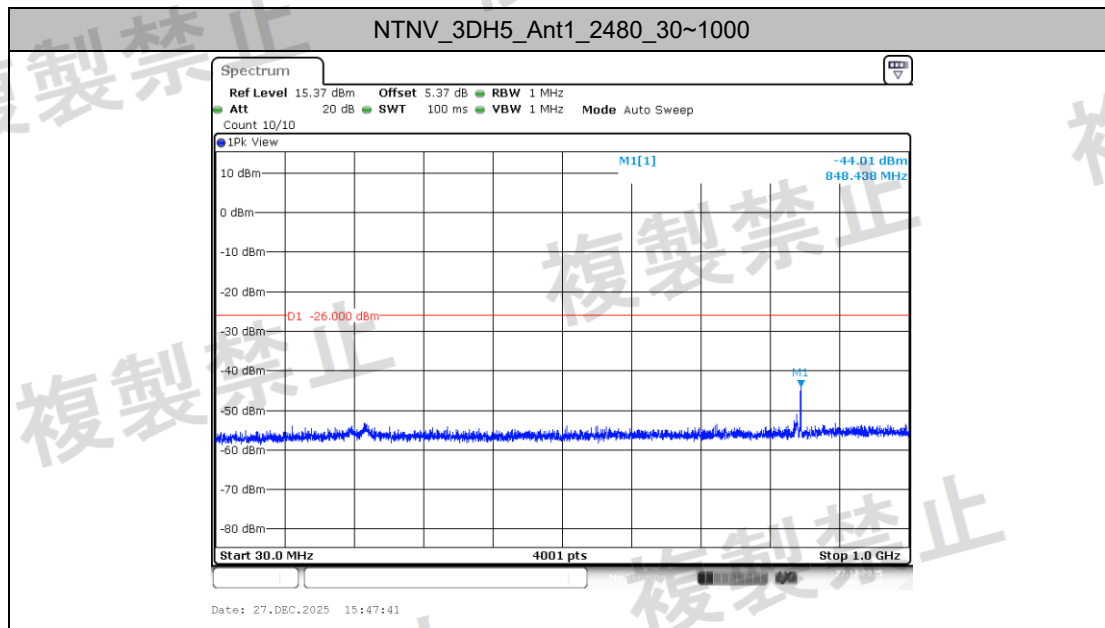


NTNV_3DH5_Ant1_2441_2483.5~2496.5

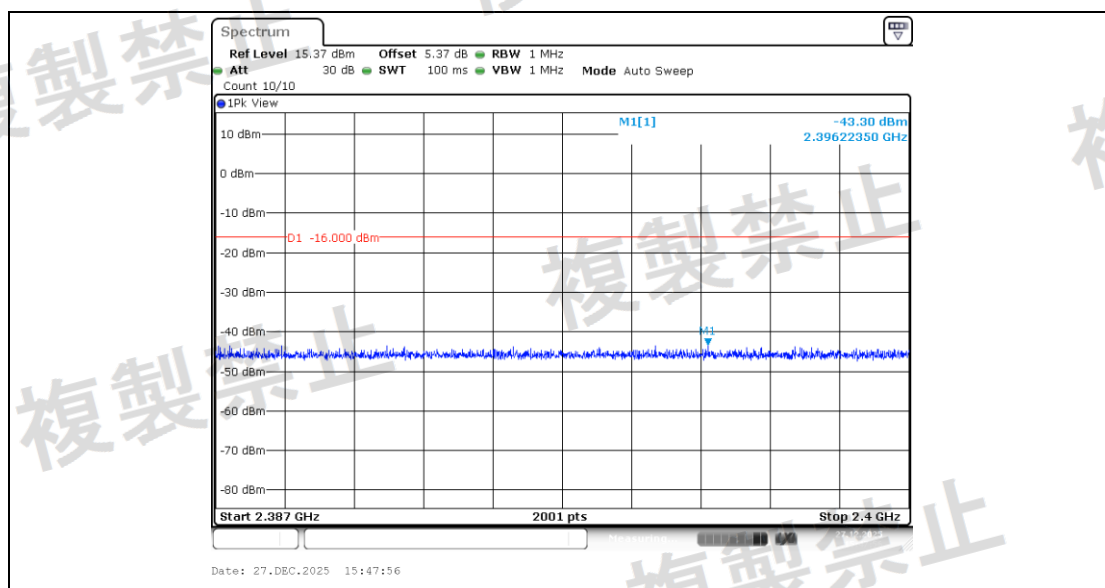


NTNV_3DH5_Ant1_2441_2496.5~13000

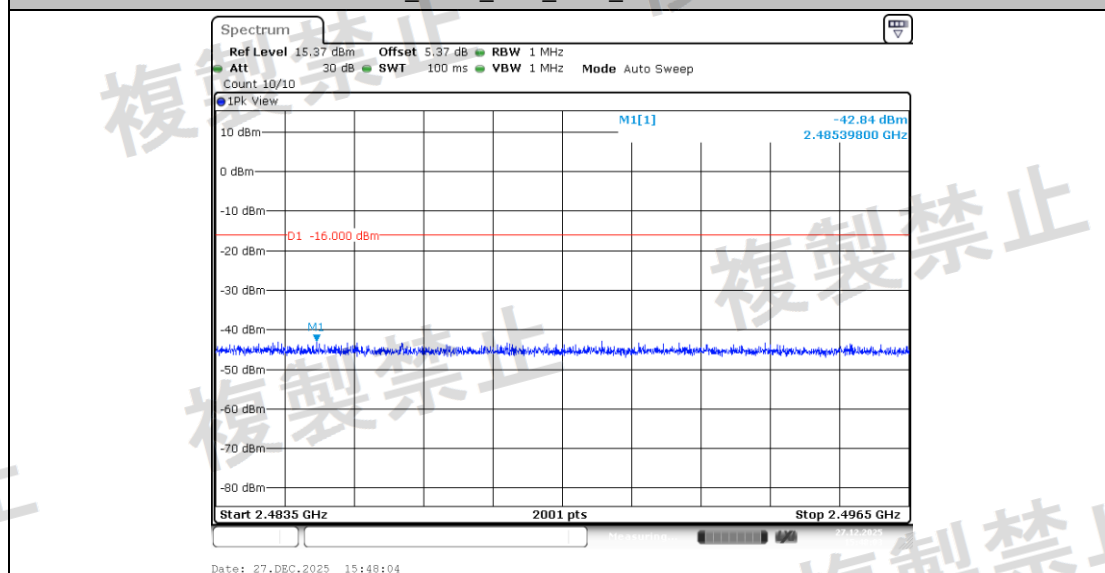




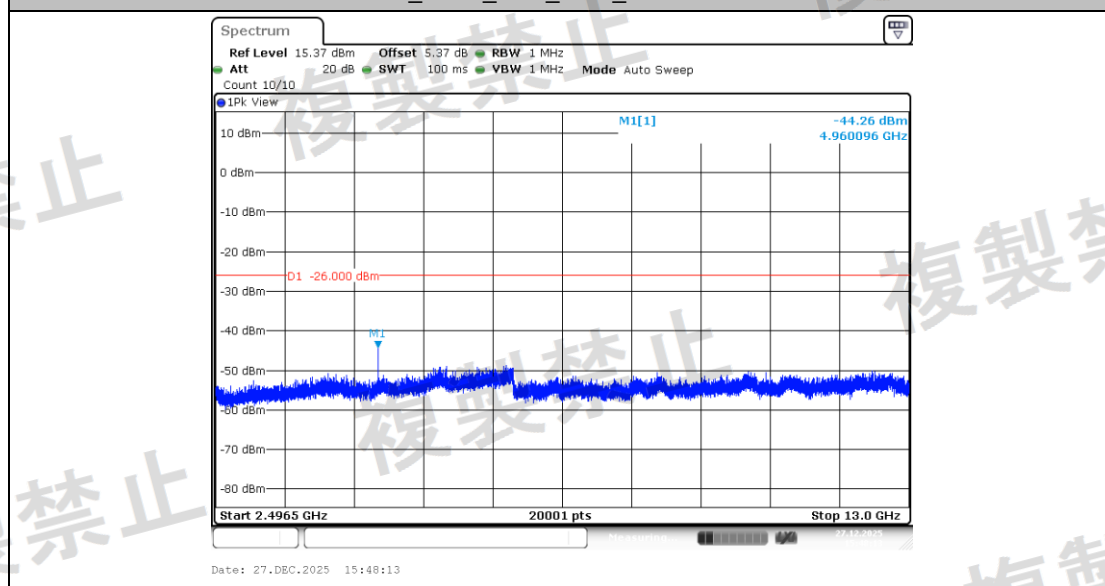
NTNV_3DH5_Ant1_2480_2387~2400



NTNV_3DH5_Ant1_2480_2483.5~2496.5



NTNV_3DH5_Ant1_2480_2496.5~13000



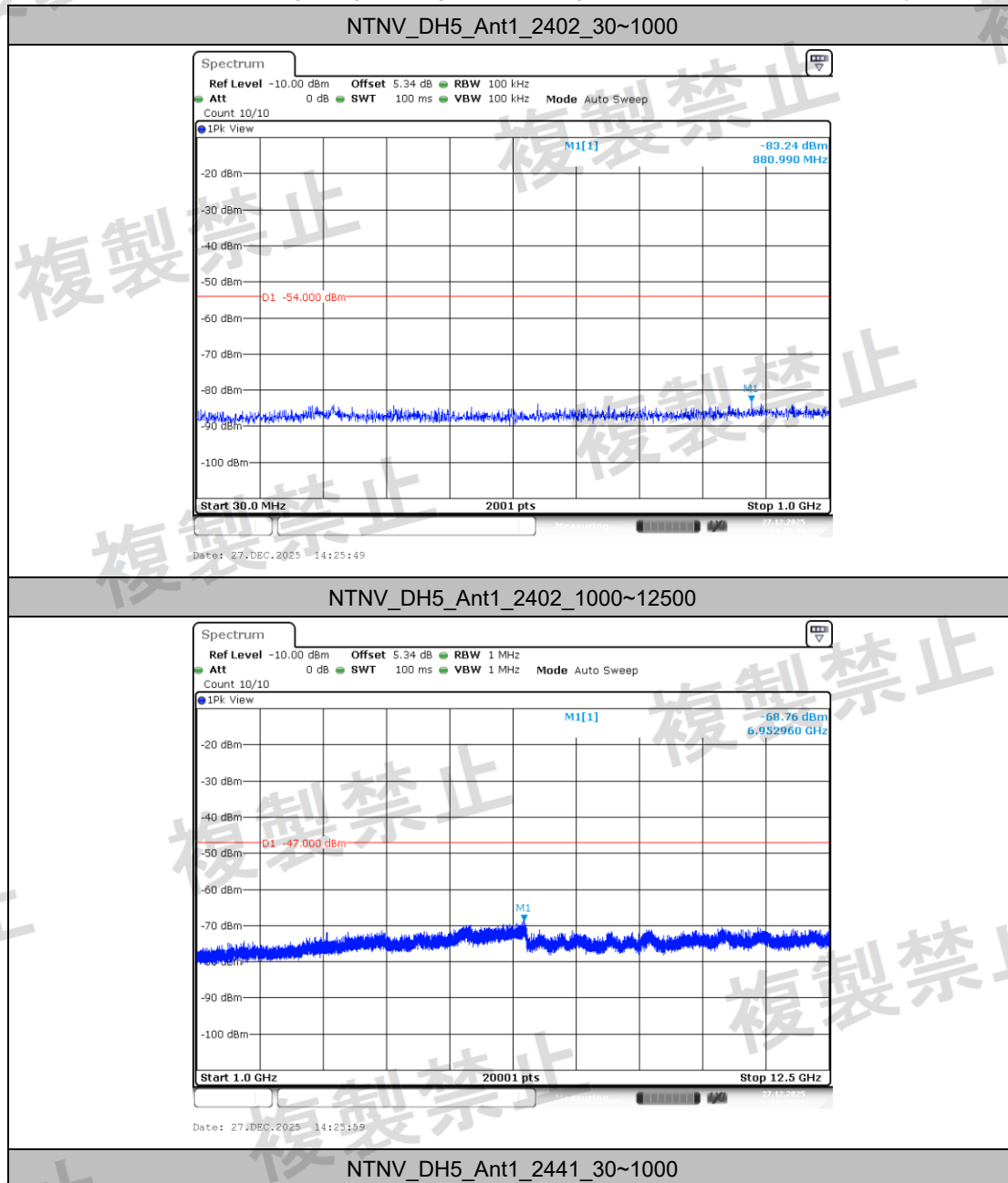
Appendix E: Spurious Emission of RX

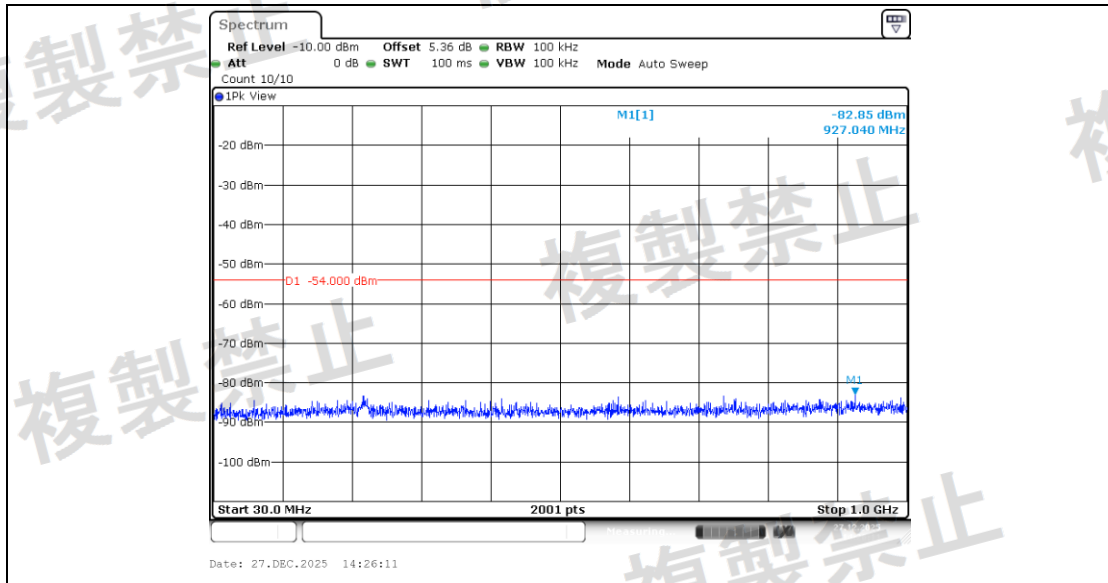
Test Result

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	880.99	-83.24	≤-54	0.00474	≤4	PASS
				1000~12500	6952.96	-68.76	≤-47	0.13305	≤20	PASS
			2441	30~1000	927.04	-82.85	≤-54	0.00519	≤4	PASS
				1000~12500	6852.34	-68.67	≤-47	0.13583	≤20	PASS
			2480	30~1000	886.81	-83.25	≤-54	0.00473	≤4	PASS
				1000~12500	6912.14	-68.43	≤-47	0.14355	≤20	PASS
	2DH5	Ant1	2402	30~1000	239.66	-82.44	≤-54	0.00570	≤4	PASS
				1000~12500	6964.46	-68.70	≤-47	0.13490	≤20	PASS
			2441	30~1000	880.51	-83.76	≤-54	0.00421	≤4	PASS
				1000~12500	6970.21	-68.92	≤-47	0.12823	≤20	PASS
			2480	30~1000	835.91	-83.15	≤-54	0.00484	≤4	PASS
				1000~12500	6806.35	-67.93	≤-47	0.16106	≤20	PASS
	3DH5	Ant1	2402	30~1000	630.86	-82.92	≤-54	0.00511	≤4	PASS
				1000~12500	6955.84	-68.94	≤-47	0.12764	≤20	PASS
			2441	30~1000	239.66	-83.46	≤-54	0.00451	≤4	PASS
				1000~12500	6998.39	-68.96	≤-47	0.12706	≤20	PASS
			2480	30~1000	237.23	-83.19	≤-54	0.00480	≤4	PASS
				1000~12500	6606.83	-68.91	≤-47	0.12853	≤20	PASS

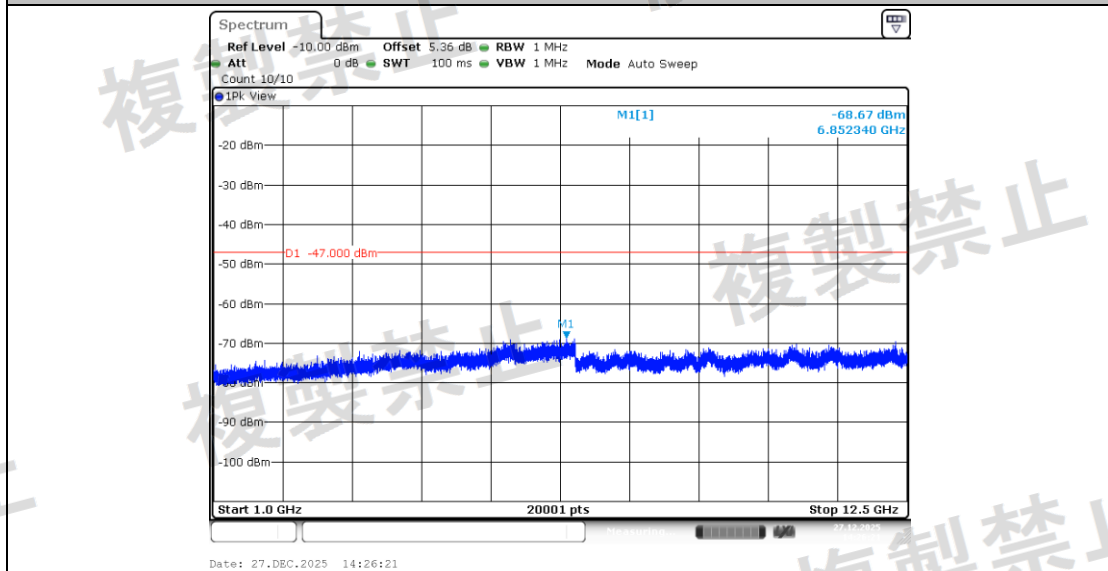
Test Graphs

Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.

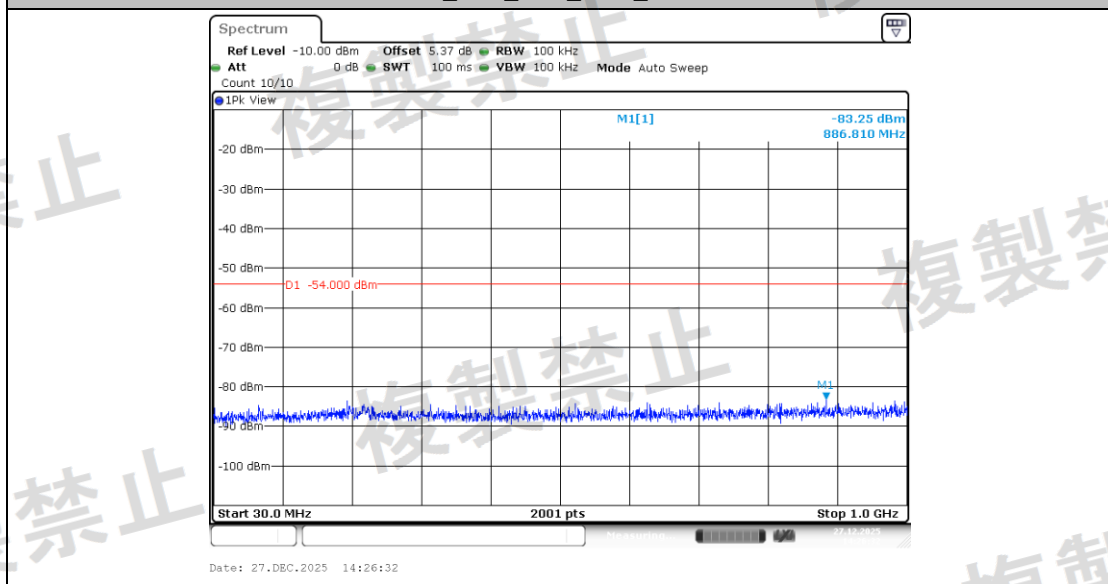


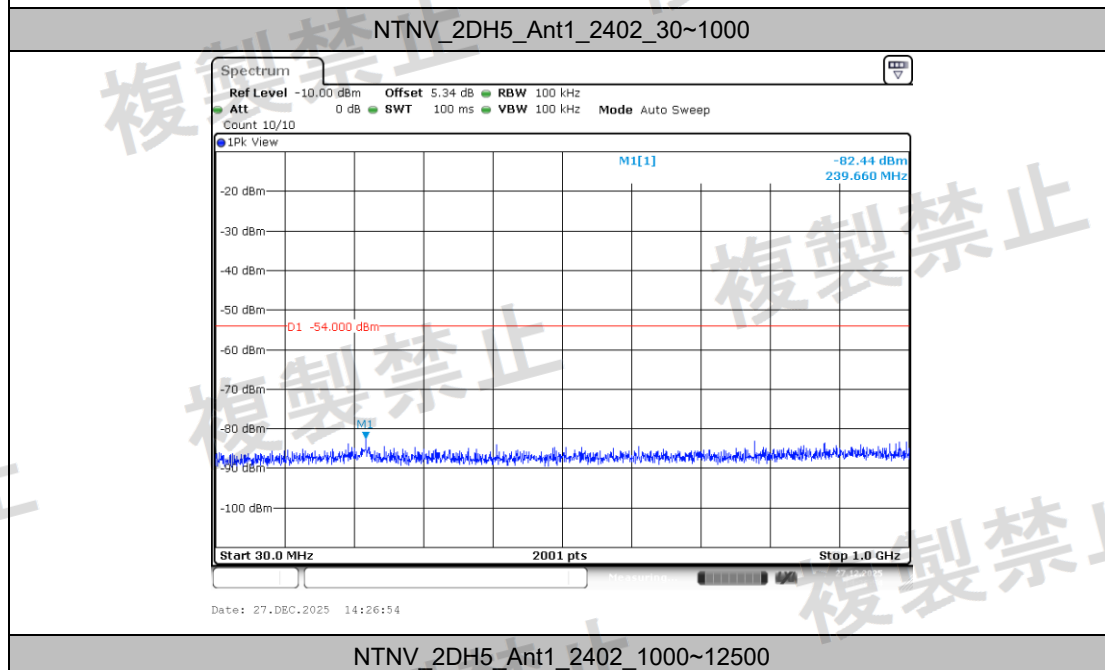
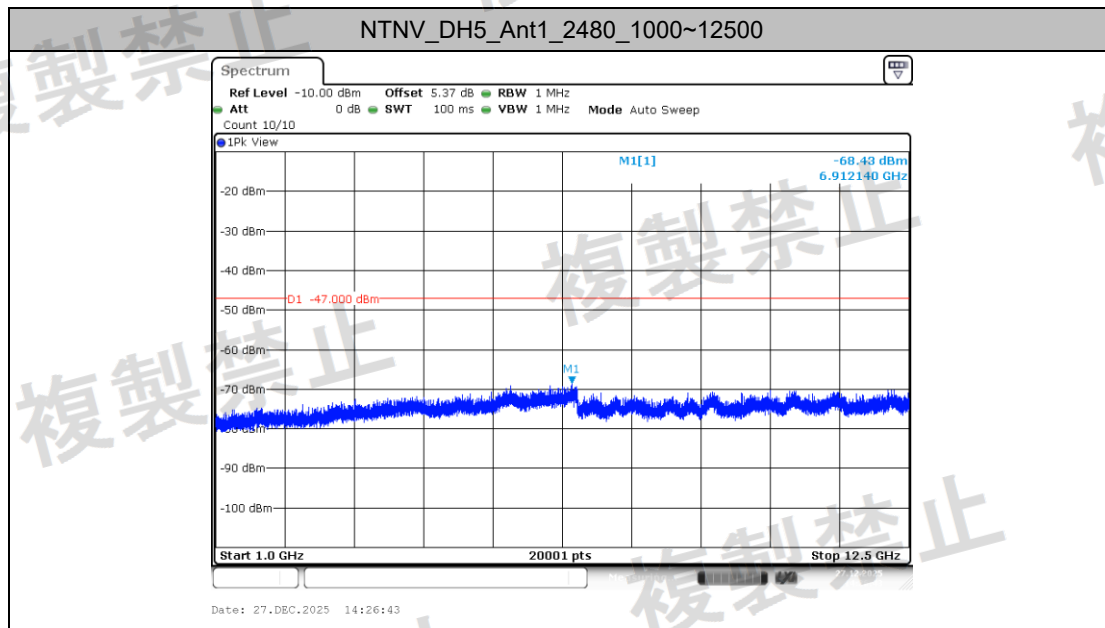


NTNV_DH5_Ant1_2441_1000~12500

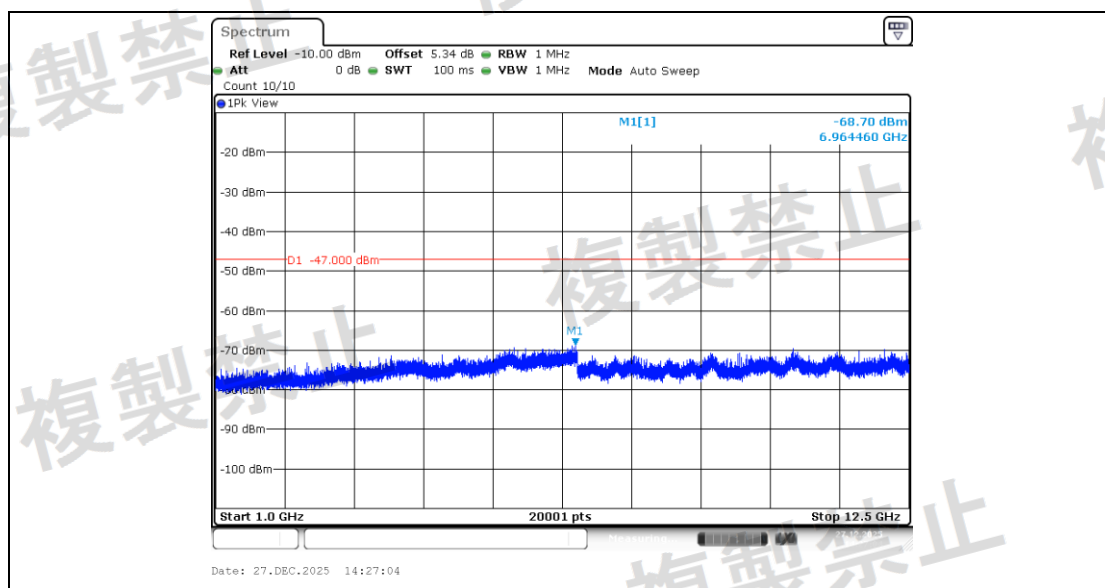


NTNV_DH5_Ant1_2480_30~1000

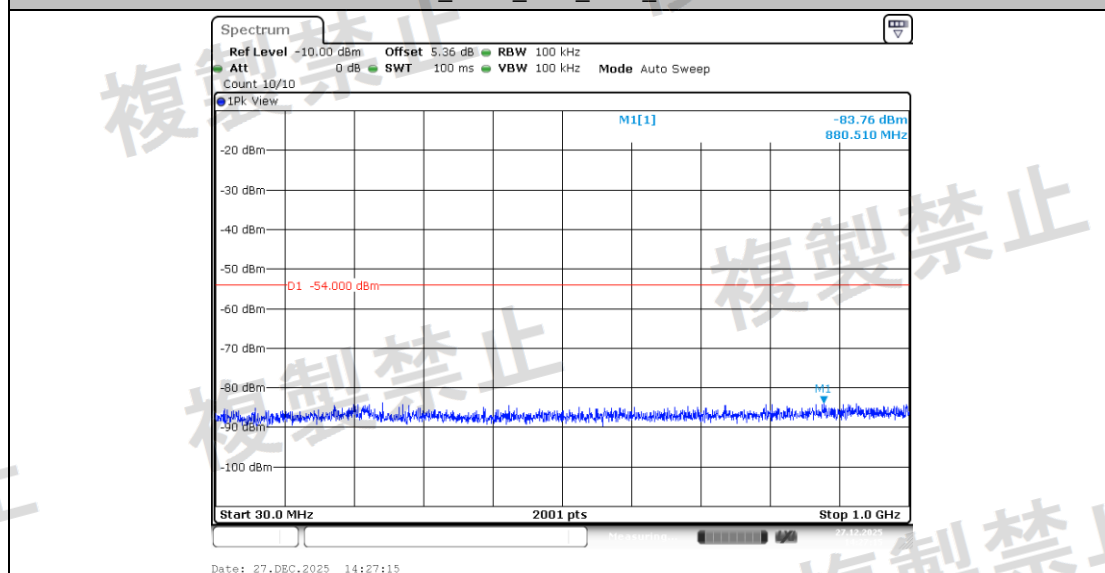




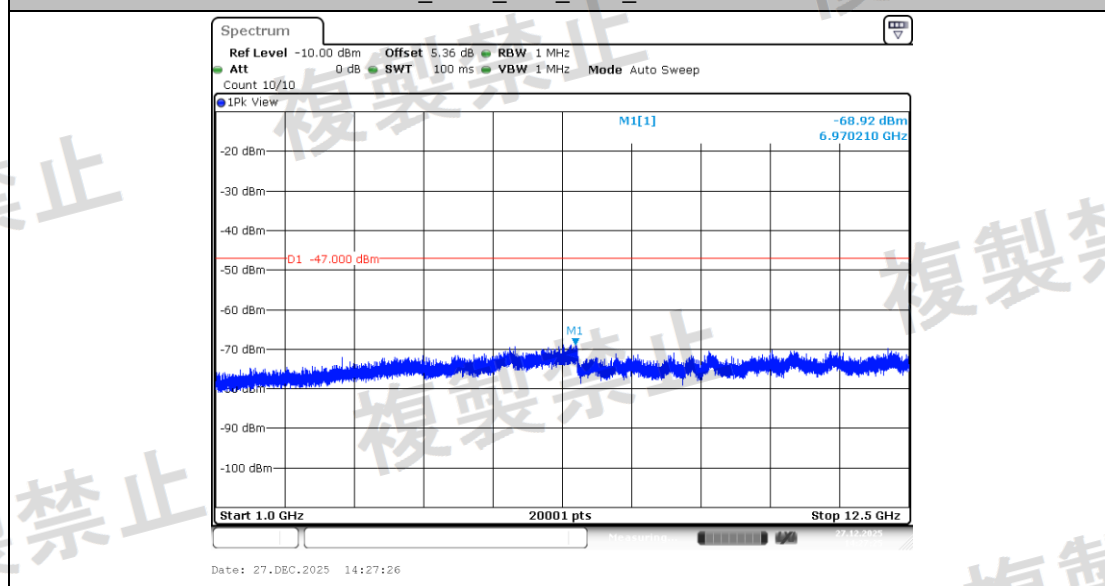
NTNV_2DH5_Ant1_2402_1000~12500

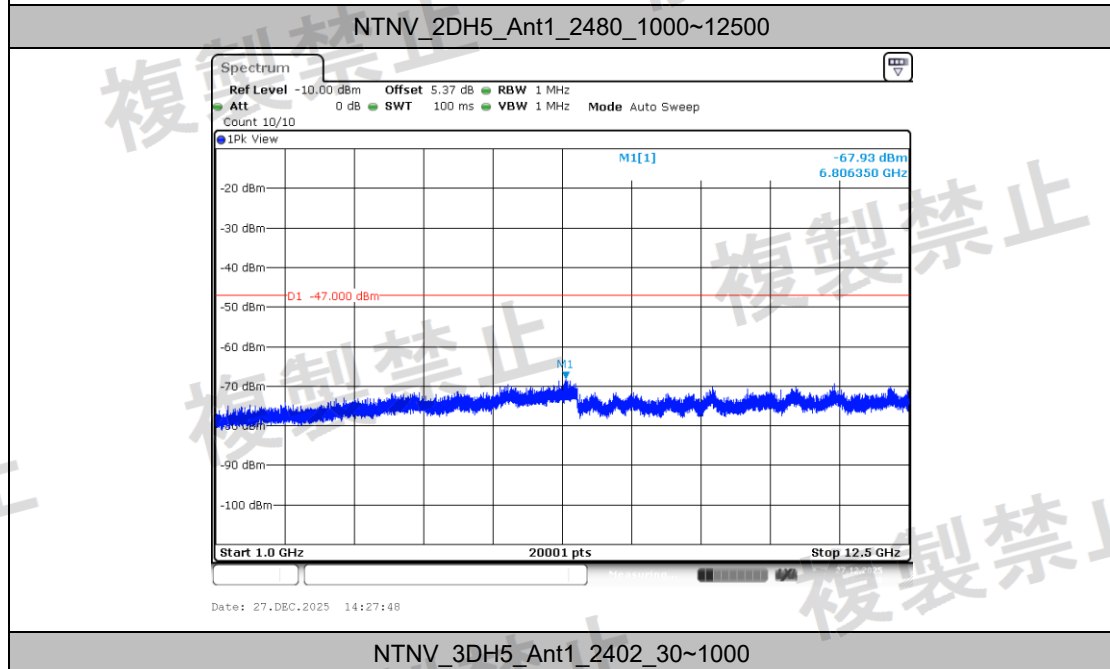
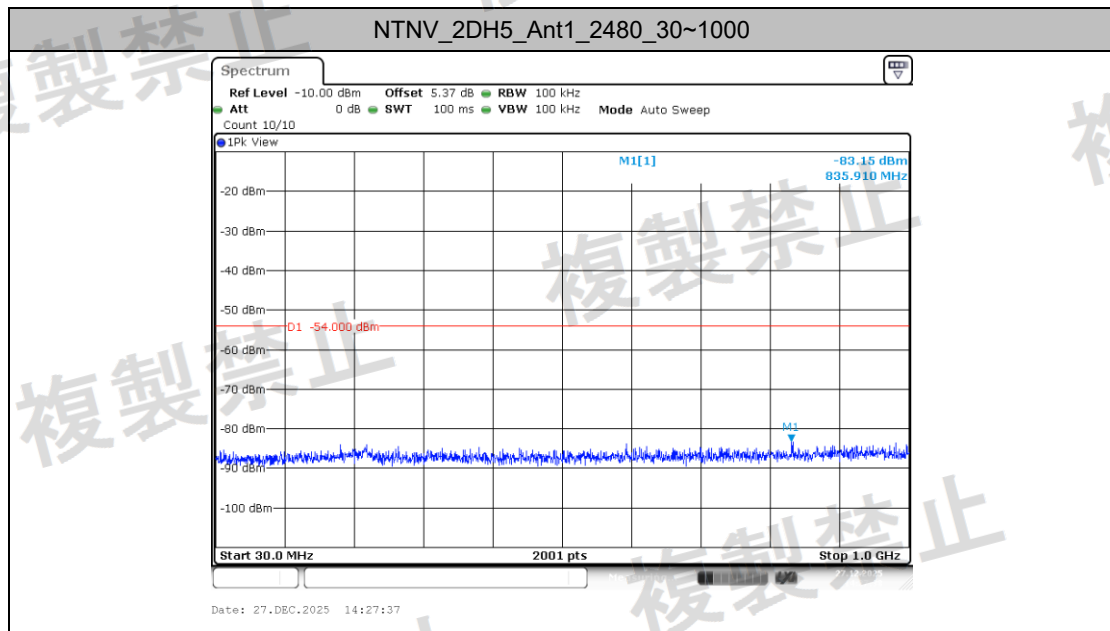


NTNV_2DH5_Ant1_2441_30~1000

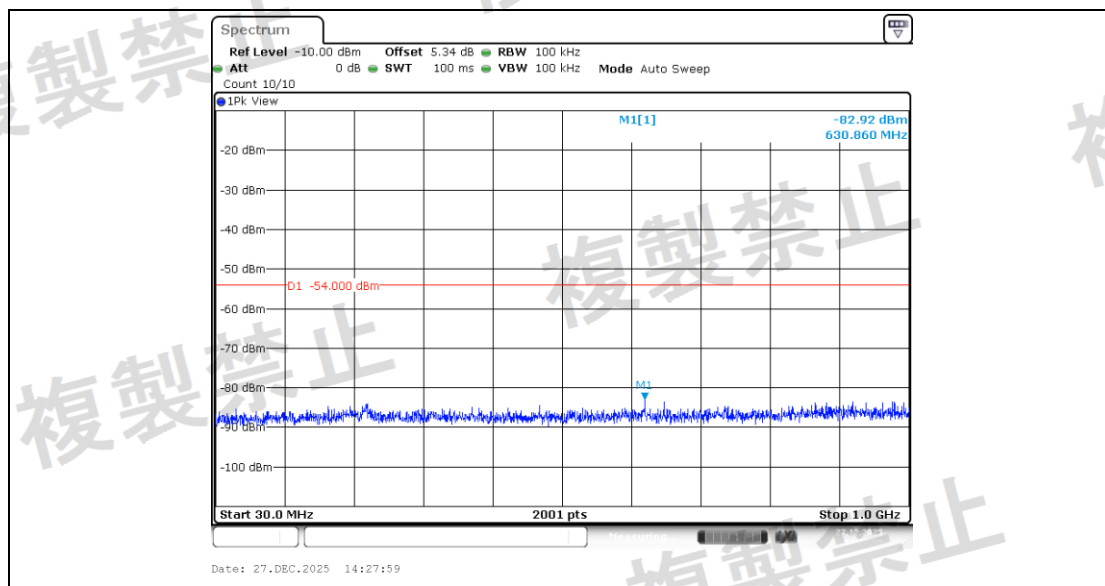


NTNV_2DH5_Ant1_2441_1000~12500

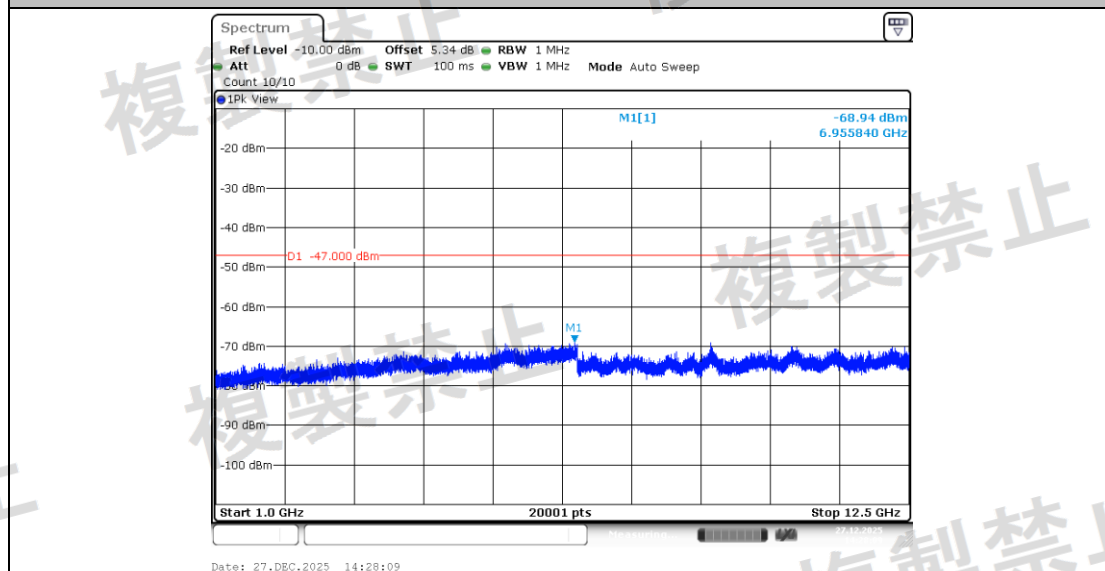




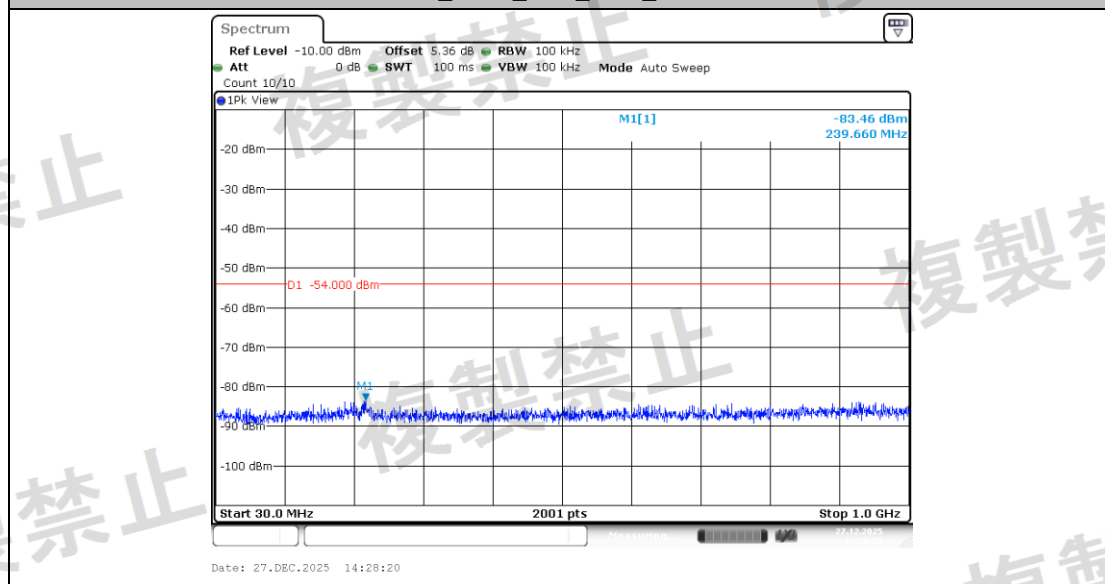
NTNV_3DH5_Ant1_2402_30~1000

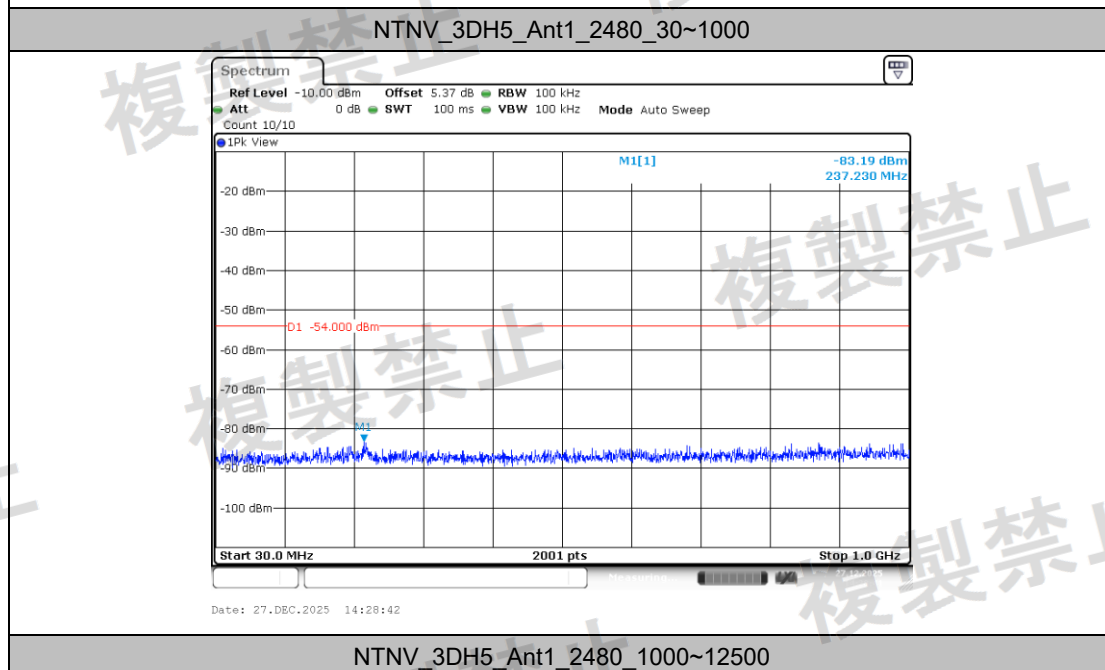
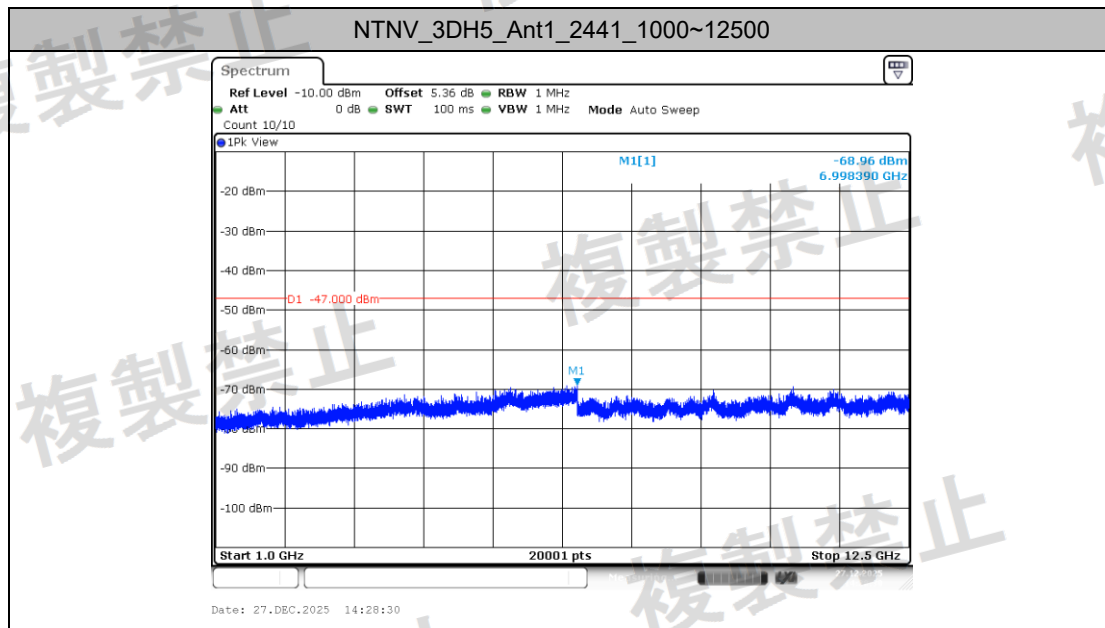


NTNV_3DH5_Ant1_2402_1000~12500

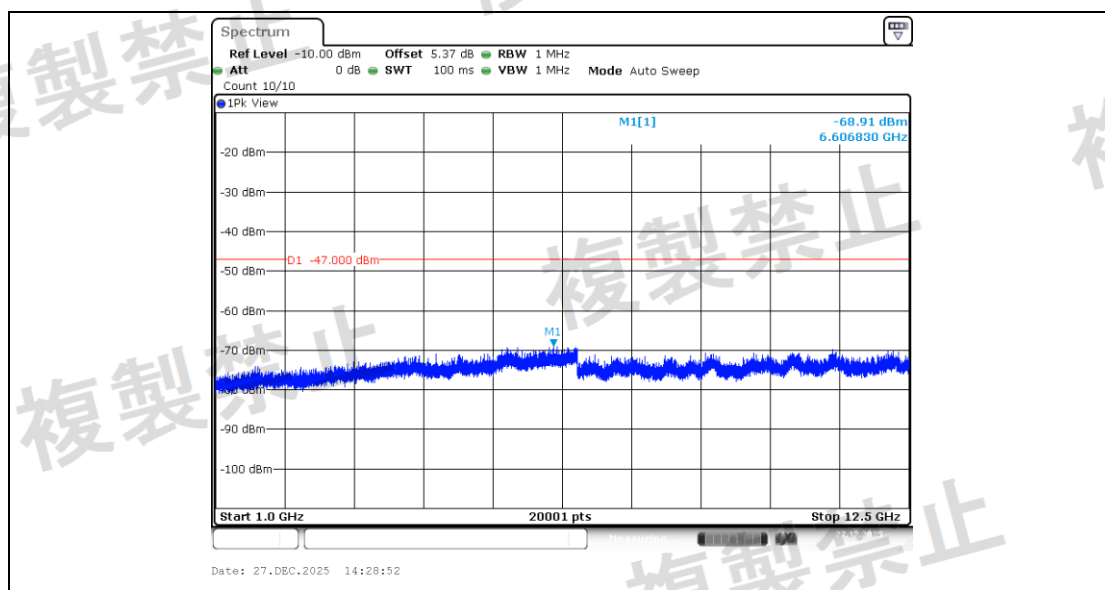


NTNV_3DH5_Ant1_2441_30~1000





NTNV_3DH5_Ant1_2480_1000~12500



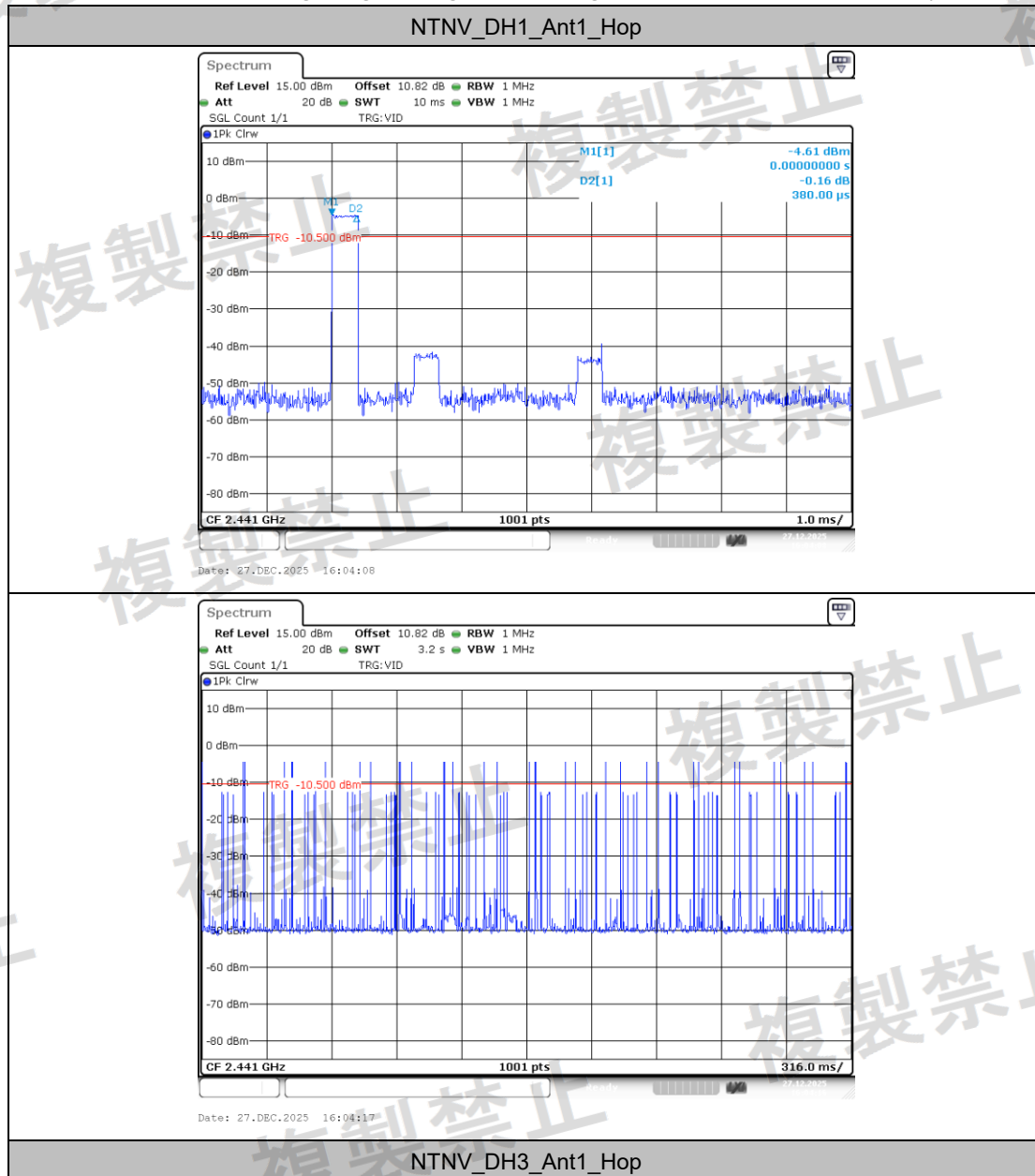
Appendix F: Dwell Time

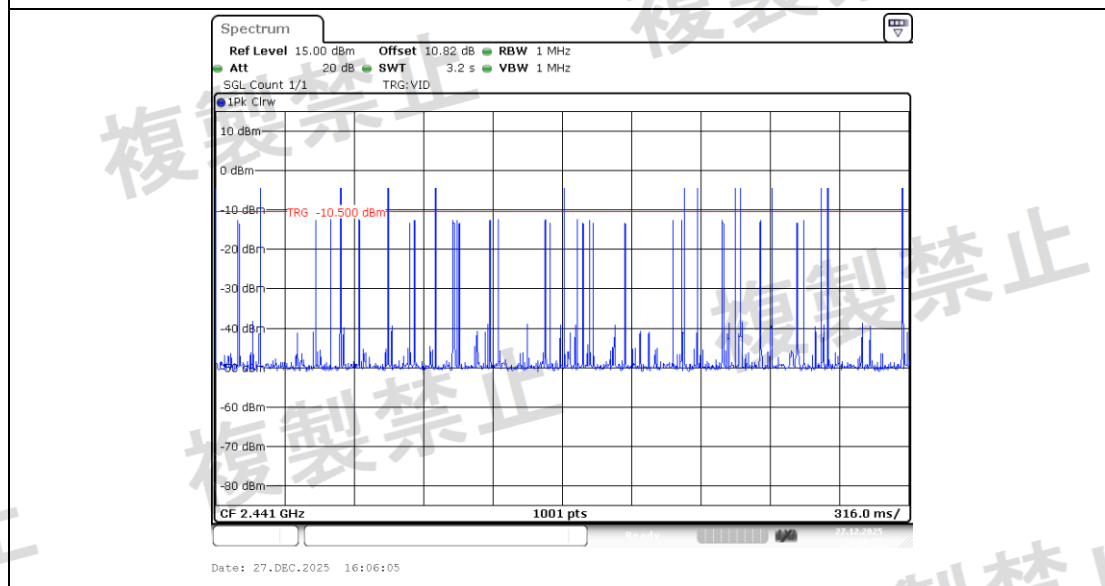
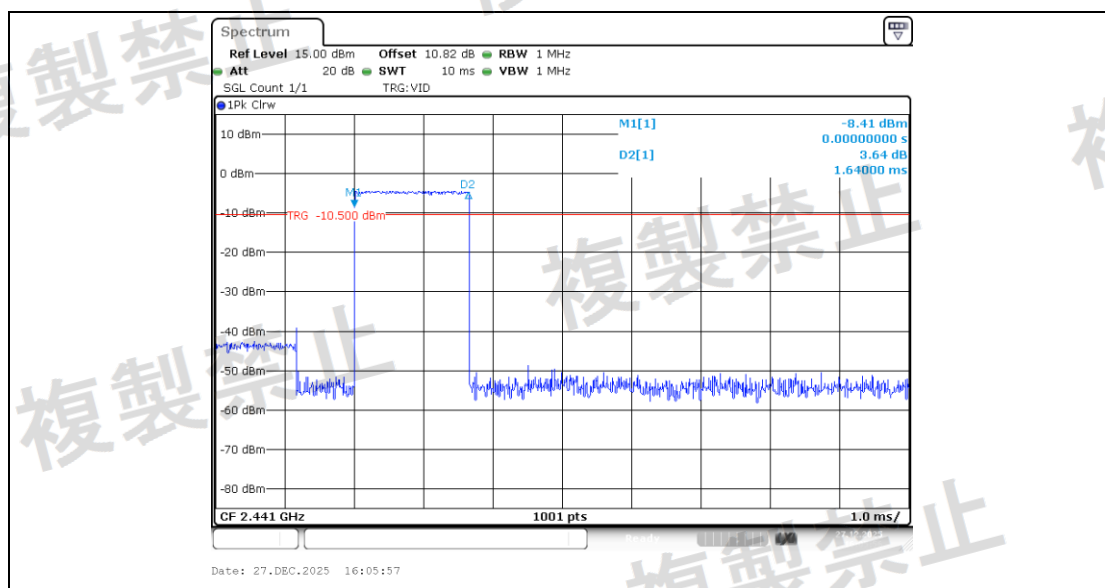
Test Result

Test Condition	Test Mode	Antenna	Freq(M Hz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.38	300	0.114	≤0.4	PASS
	DH3	Ant1	Hop	1.64	140	0.23	≤0.4	PASS
	DH5	Ant1	Hop	2.90	120	0.348	≤0.4	PASS
	2DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
	2DH3	Ant1	Hop	1.64	190	0.312	≤0.4	PASS
	2DH5	Ant1	Hop	2.90	130	0.377	≤0.4	PASS
	3DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
	3DH3	Ant1	Hop	1.65	190	0.314	≤0.4	PASS
	3DH5	Ant1	Hop	2.90	100	0.29	≤0.4	PASS

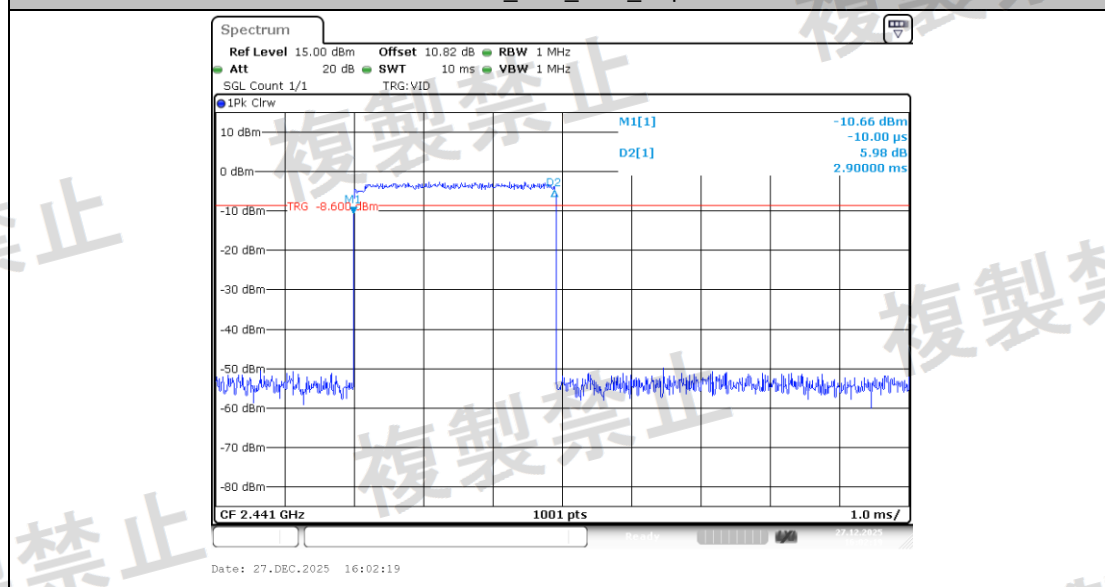
Test Graphs

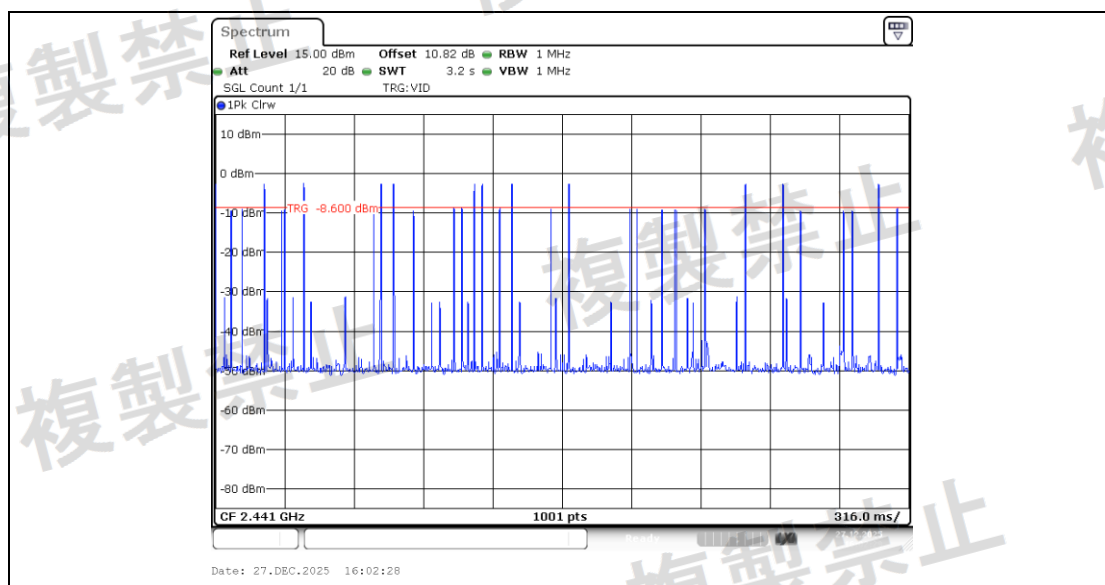
Note: We test Normal Voltage, High Voltage, Low Voltage, and recorded the worst test plot.



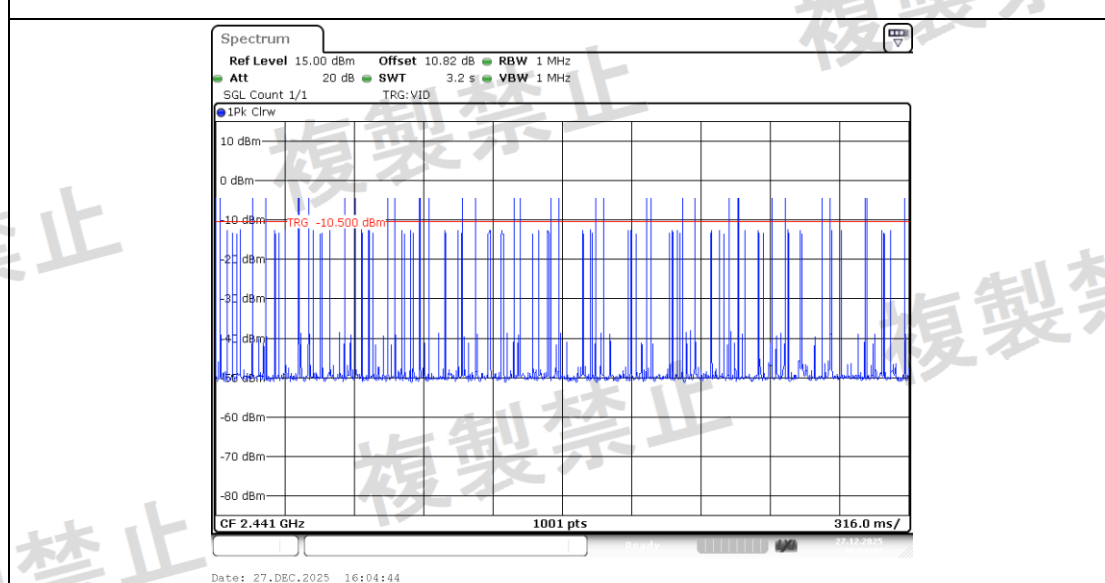
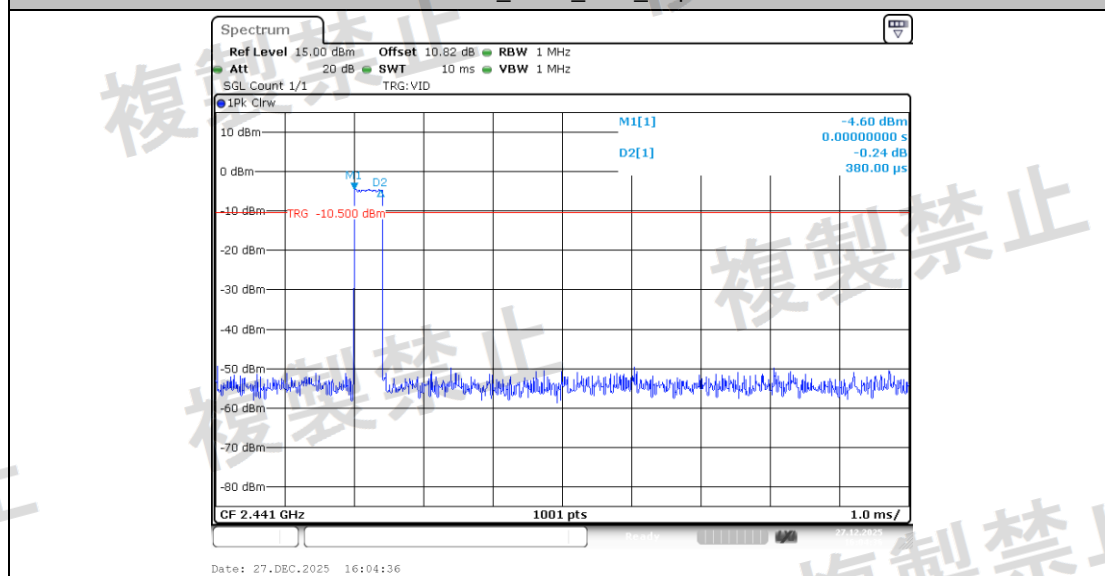


NTNV_DH5_Ant1_Hop

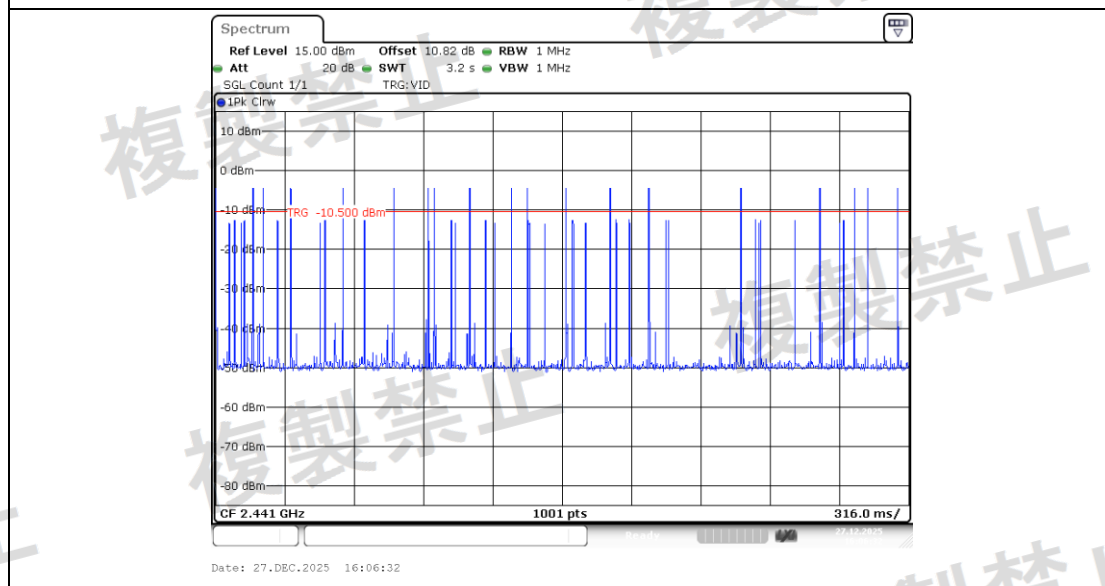
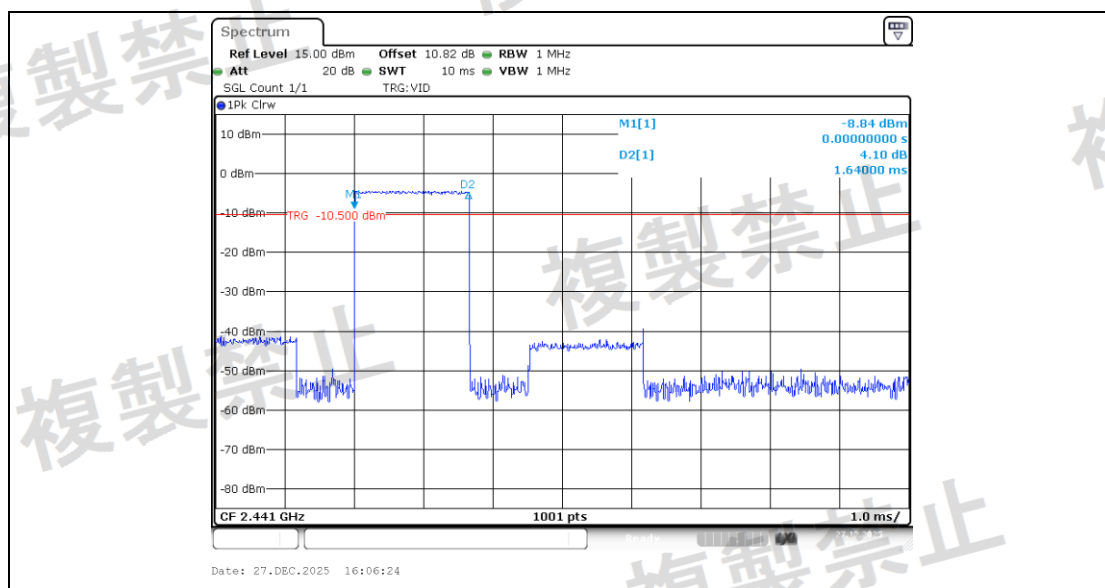




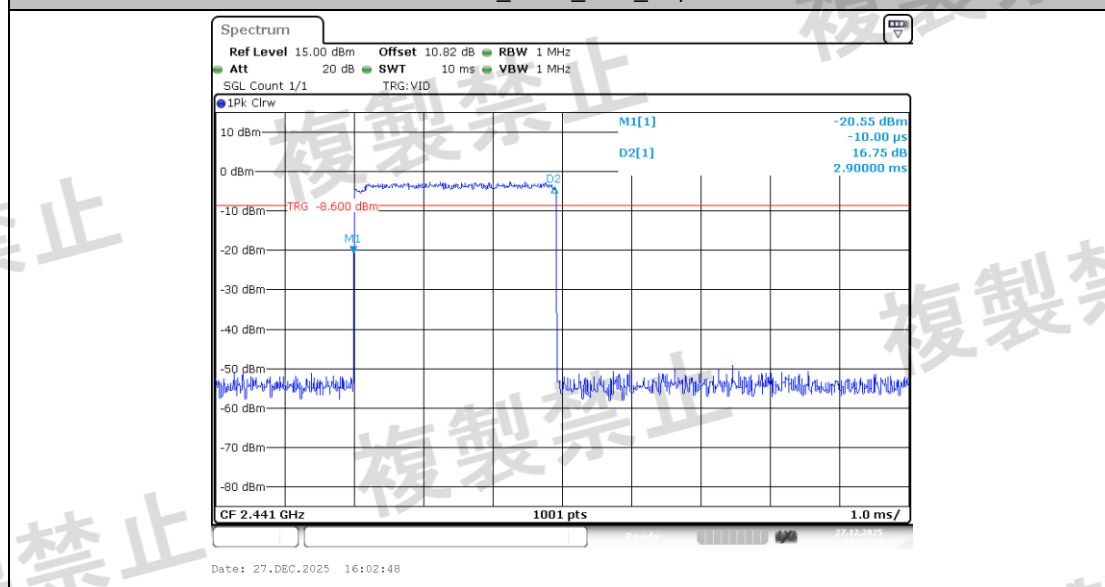
NTNV_2DH1_Ant1_Hop

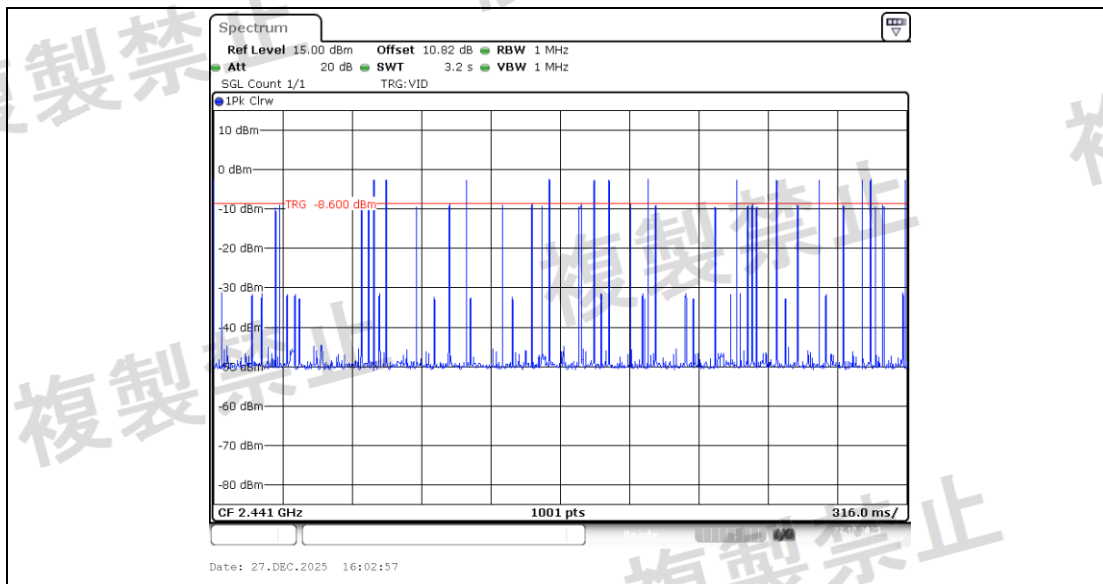


NTNV_2DH3_Ant1_Hop

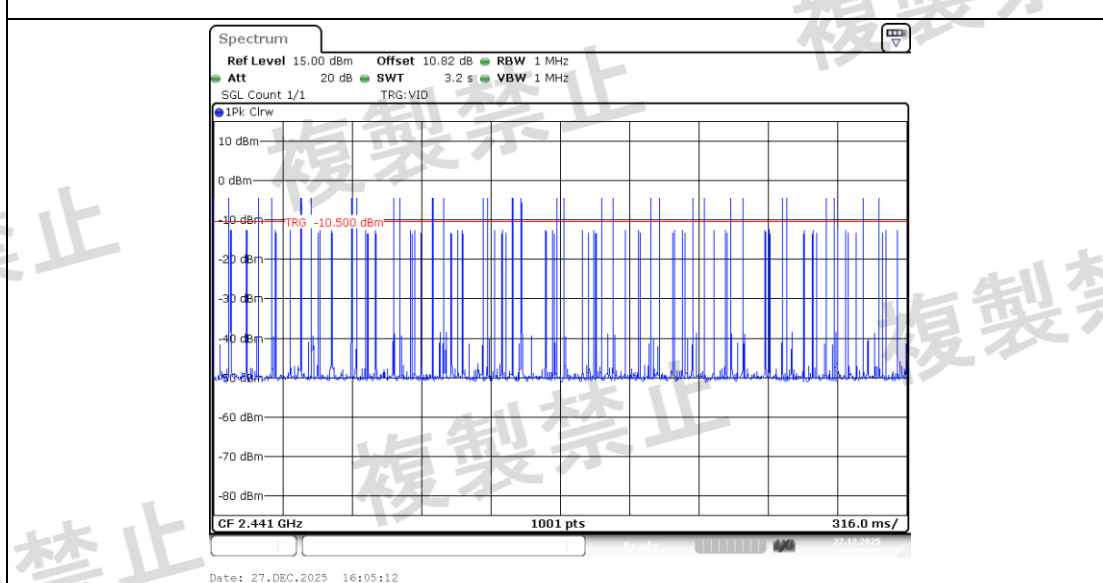
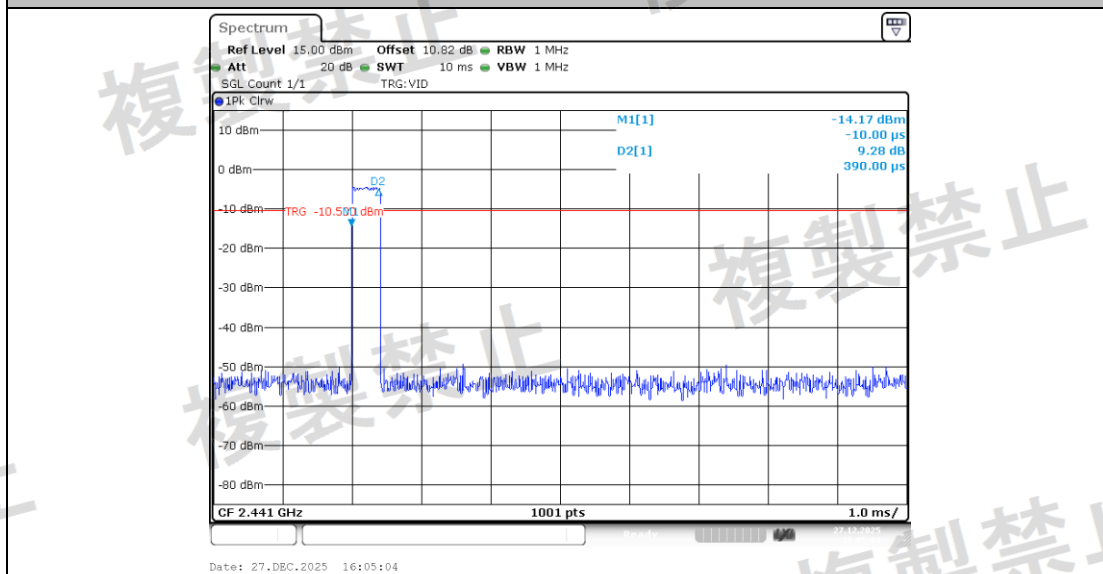


NTNV_2DH5_Ant1_Hop

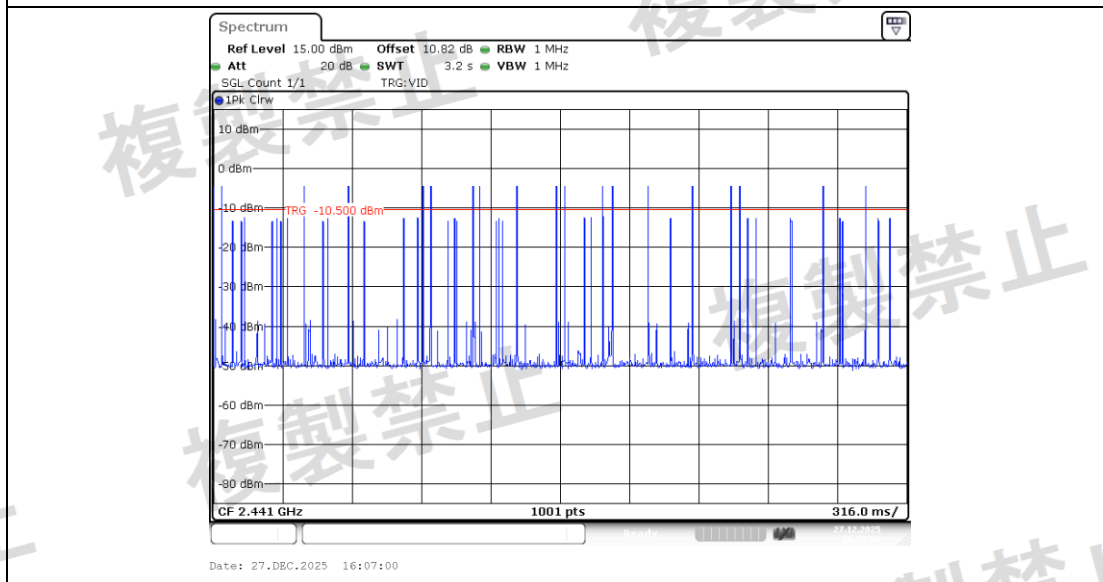
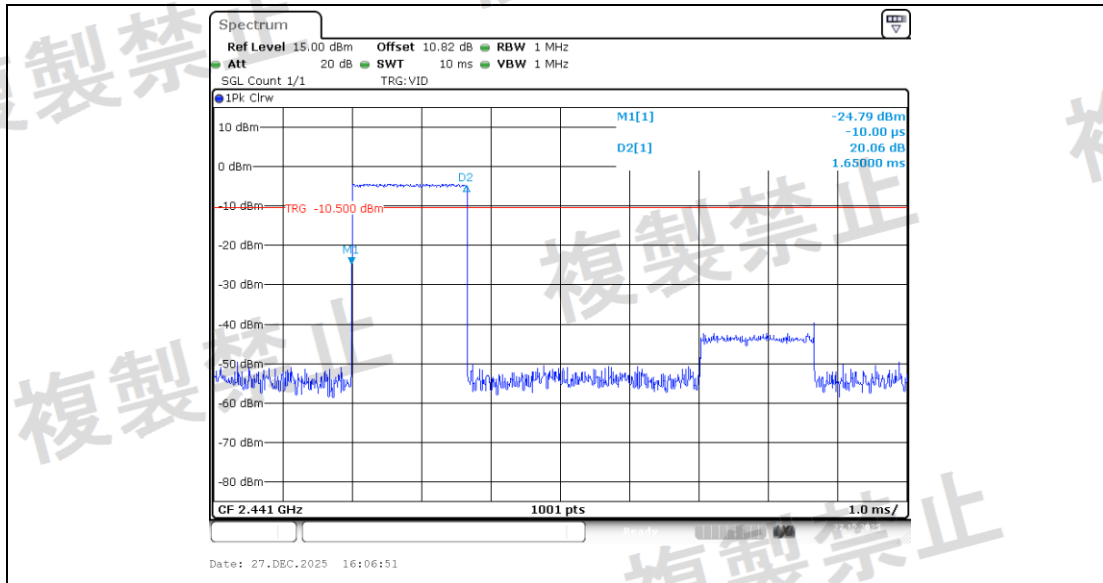




NTNV_3DH1_Ant1_Hop



NTNV_3DH3_Ant1_Hop



NTNV_3DH5_Ant1_Hop

