

Appendix RF Test Data for BR-EDR

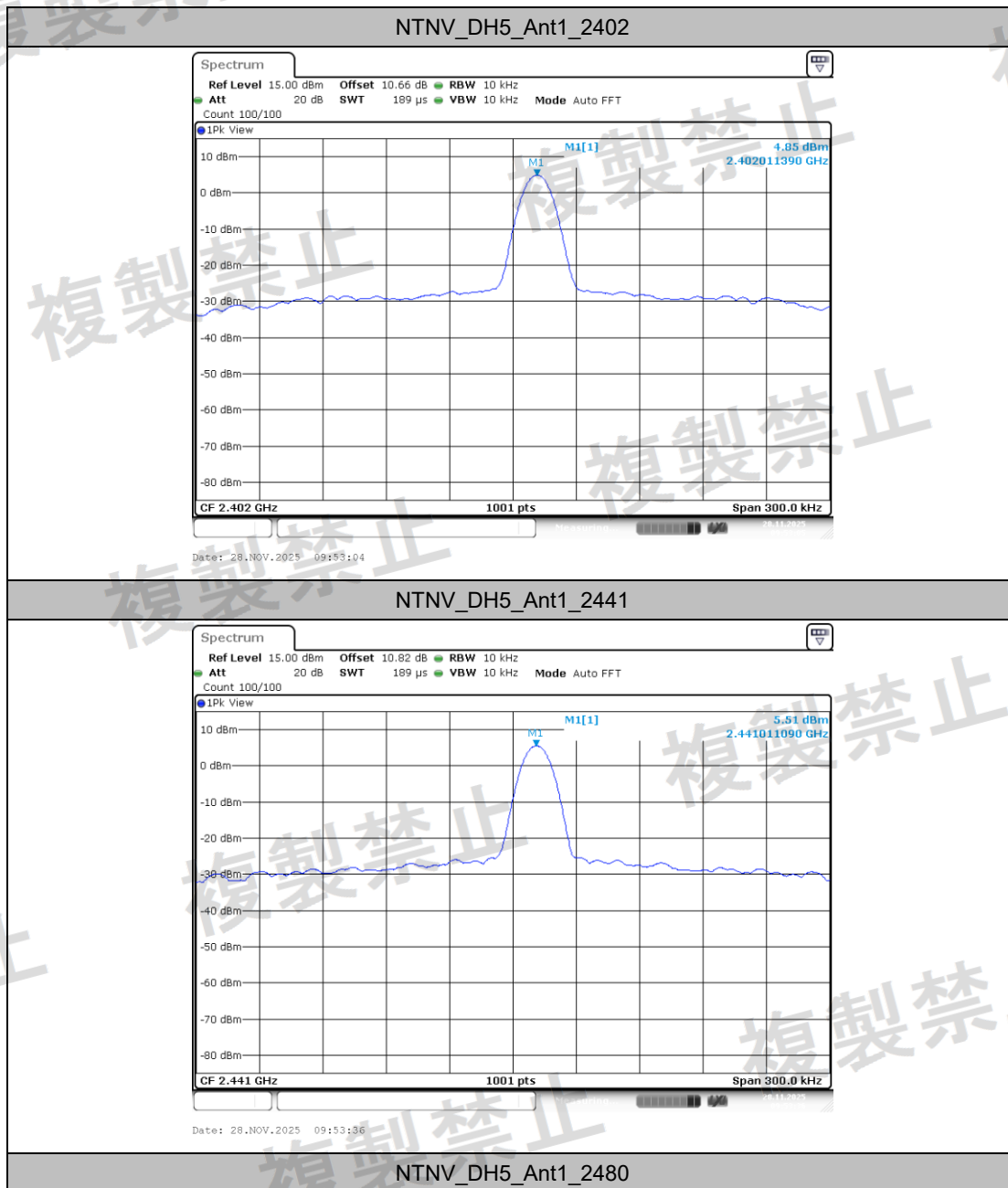
Company : PROEL SPA
EUT : MIXER
Model Number : MQ1642X
Report No. : CTA25112502401
Reviewed By : Eric Wang

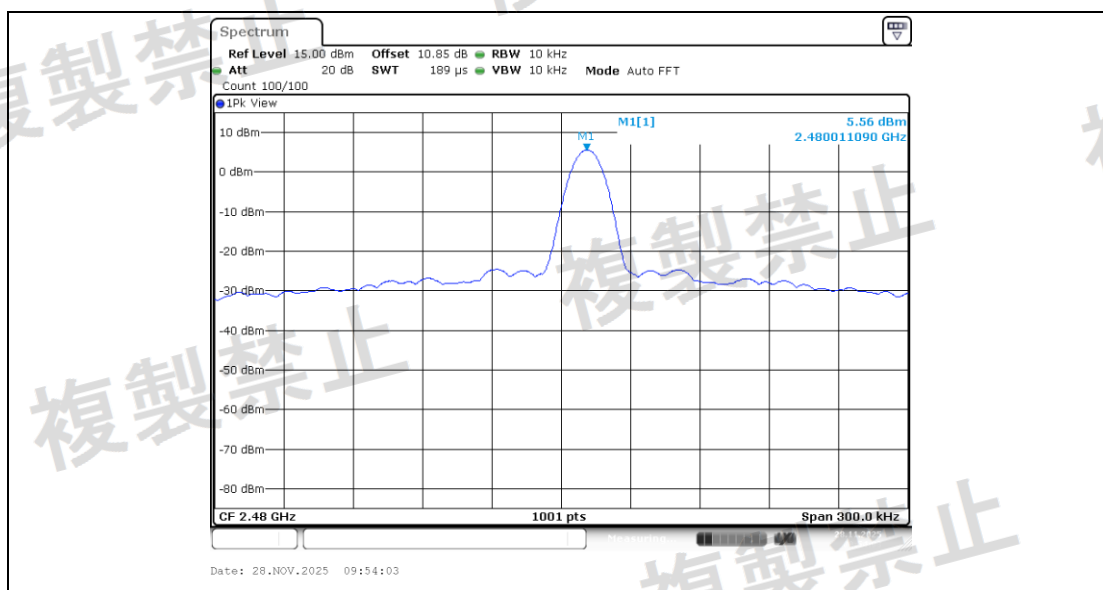
Appendix A: Frequency_Error

Test Result

Test Condition	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	Ant1	2402	4.74188	±50	PASS
		2441	4.54322	±50	PASS
		2480	4.47177	±50	PASS

Test Graphs



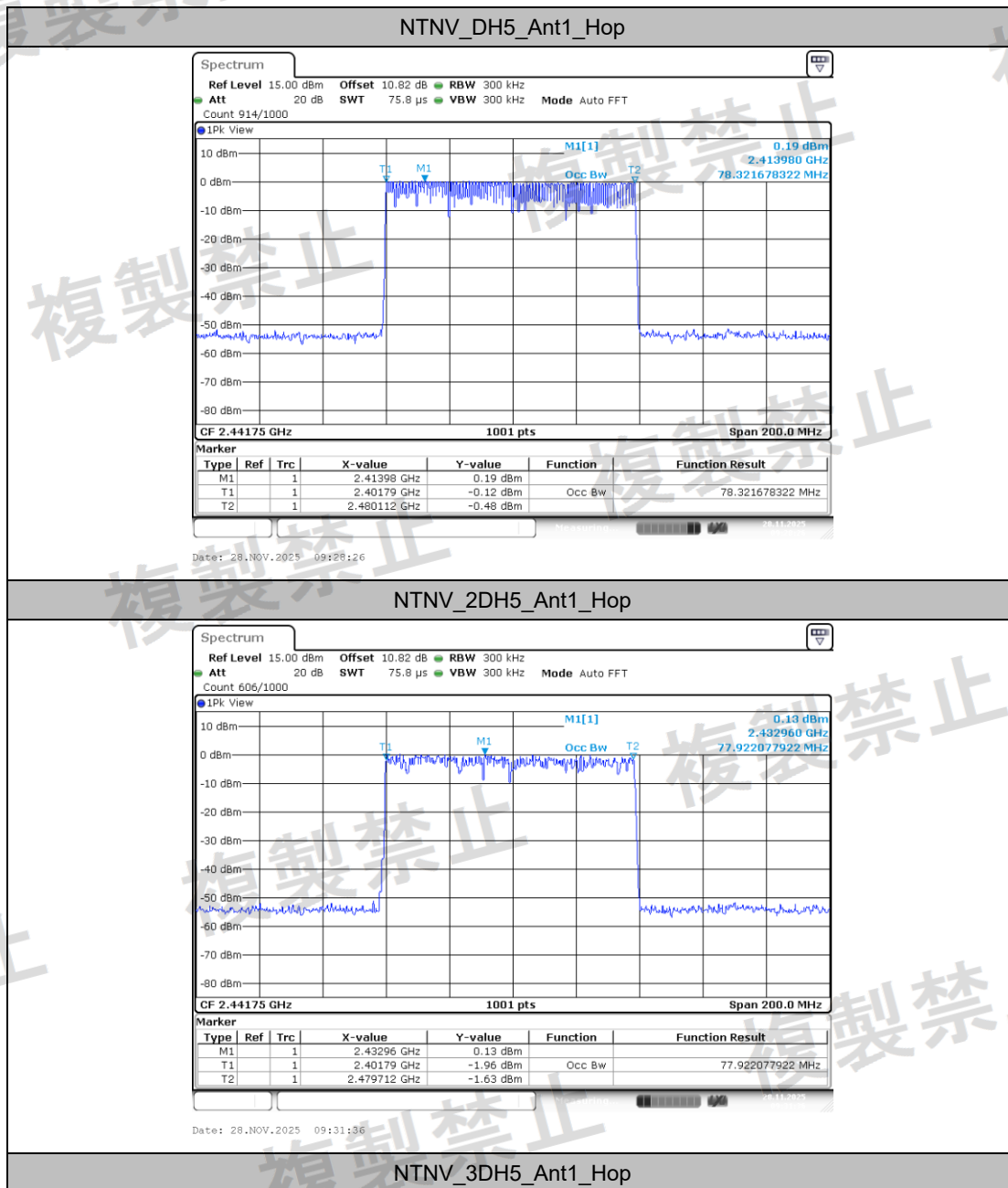


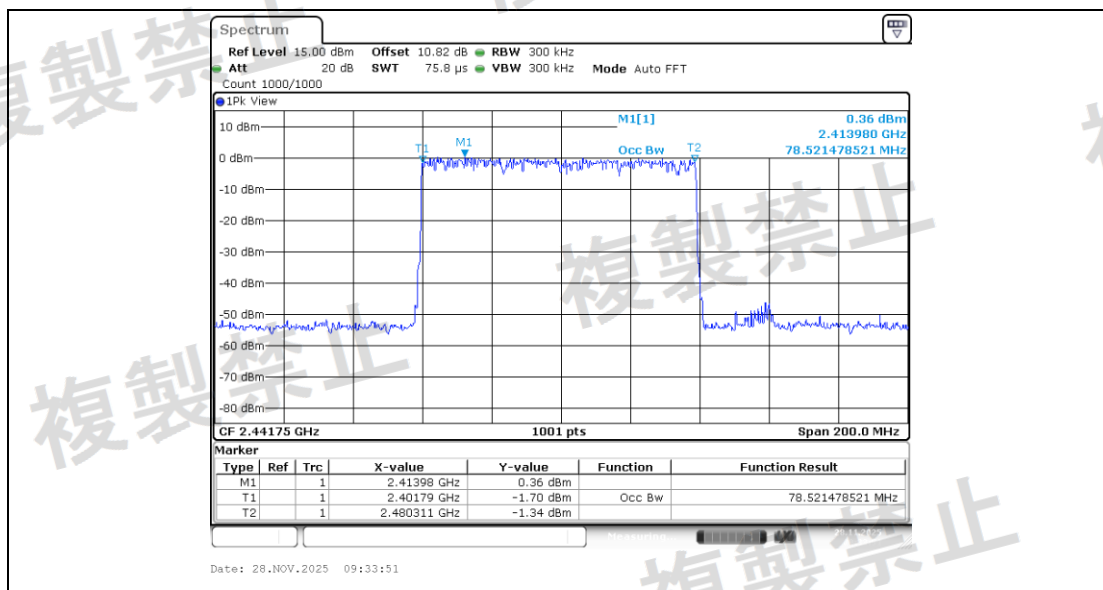
Appendix B: Occupied Bandwidth

Test Result

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.322	≤83.5	PASS
	2DH5	Ant1	Hop	77.922	≤83.5	PASS
	3DH5	Ant1	Hop	78.521	≤83.5	PASS

Test Graphs



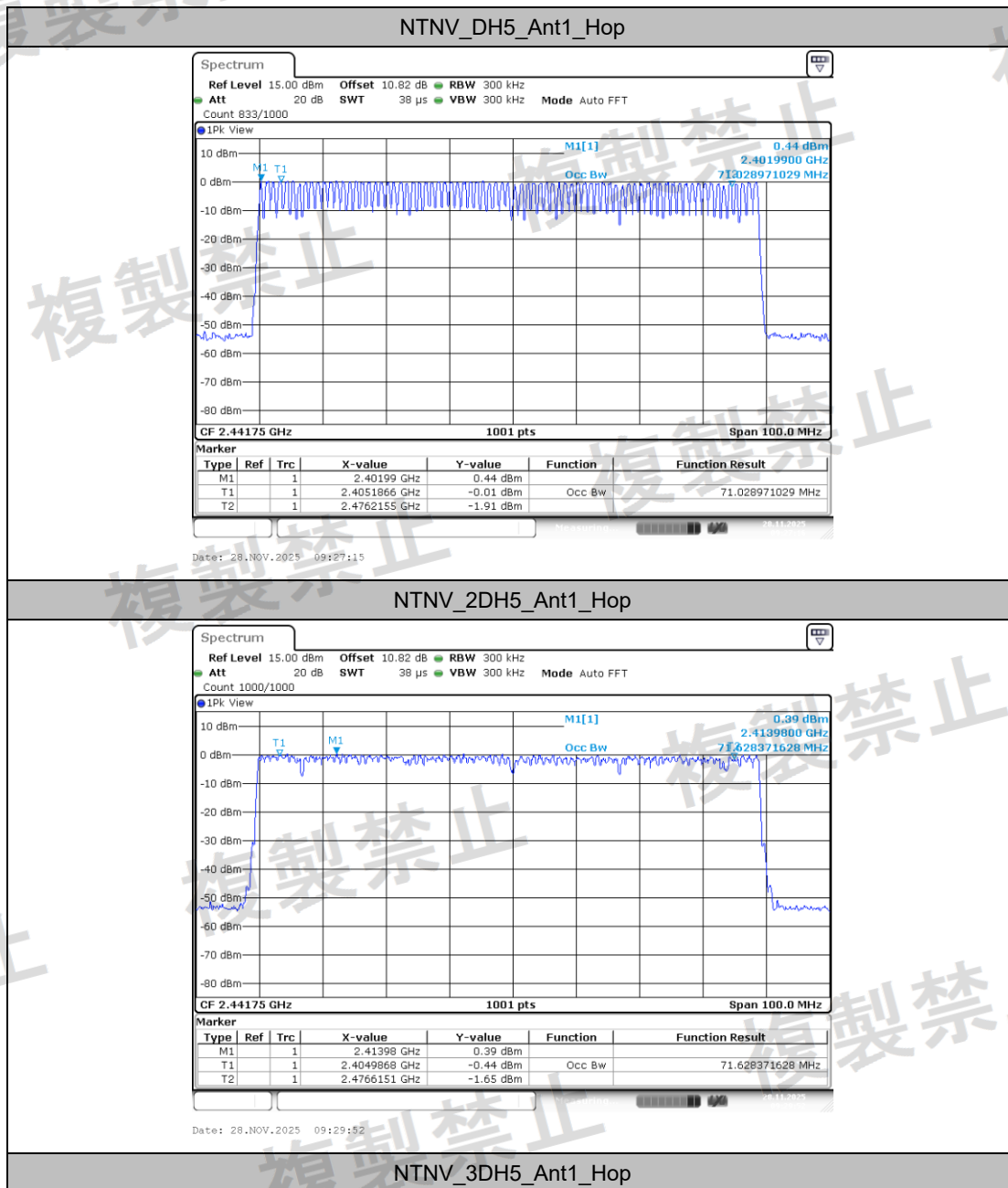


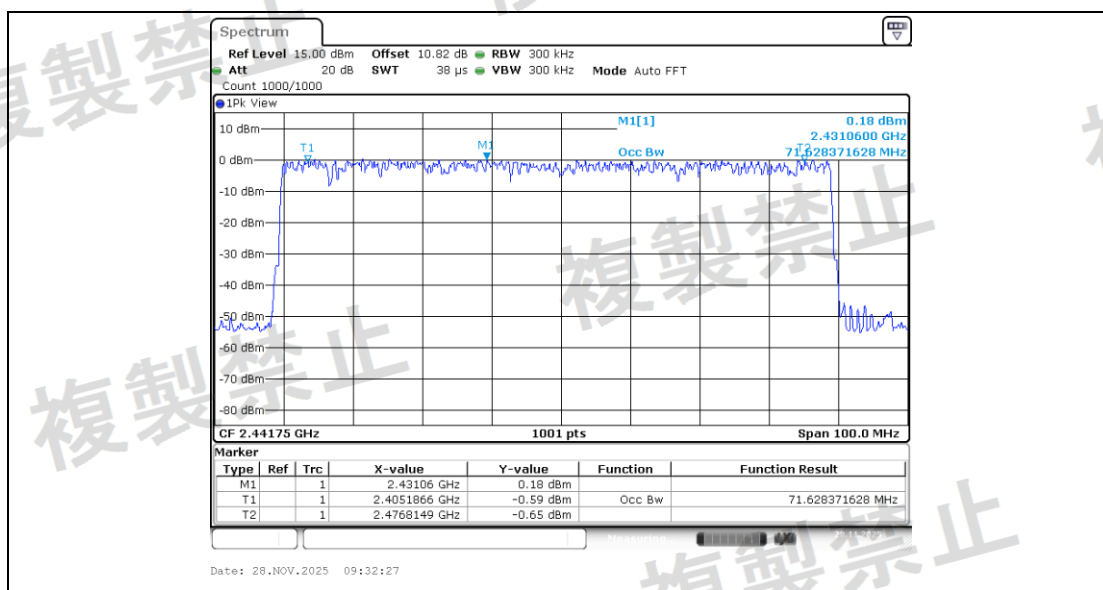
Appendix C: Spread Bandwidth

Test Result

Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	DH5	Ant1	Hop	71.029	≥ 0.5	71.029	>5	PASS
	2DH5	Ant1	Hop	71.628	≥ 0.5	71.628	>5	PASS
	3DH5	Ant1	Hop	71.628	≥ 0.5	71.628	>5	PASS

Test Graphs





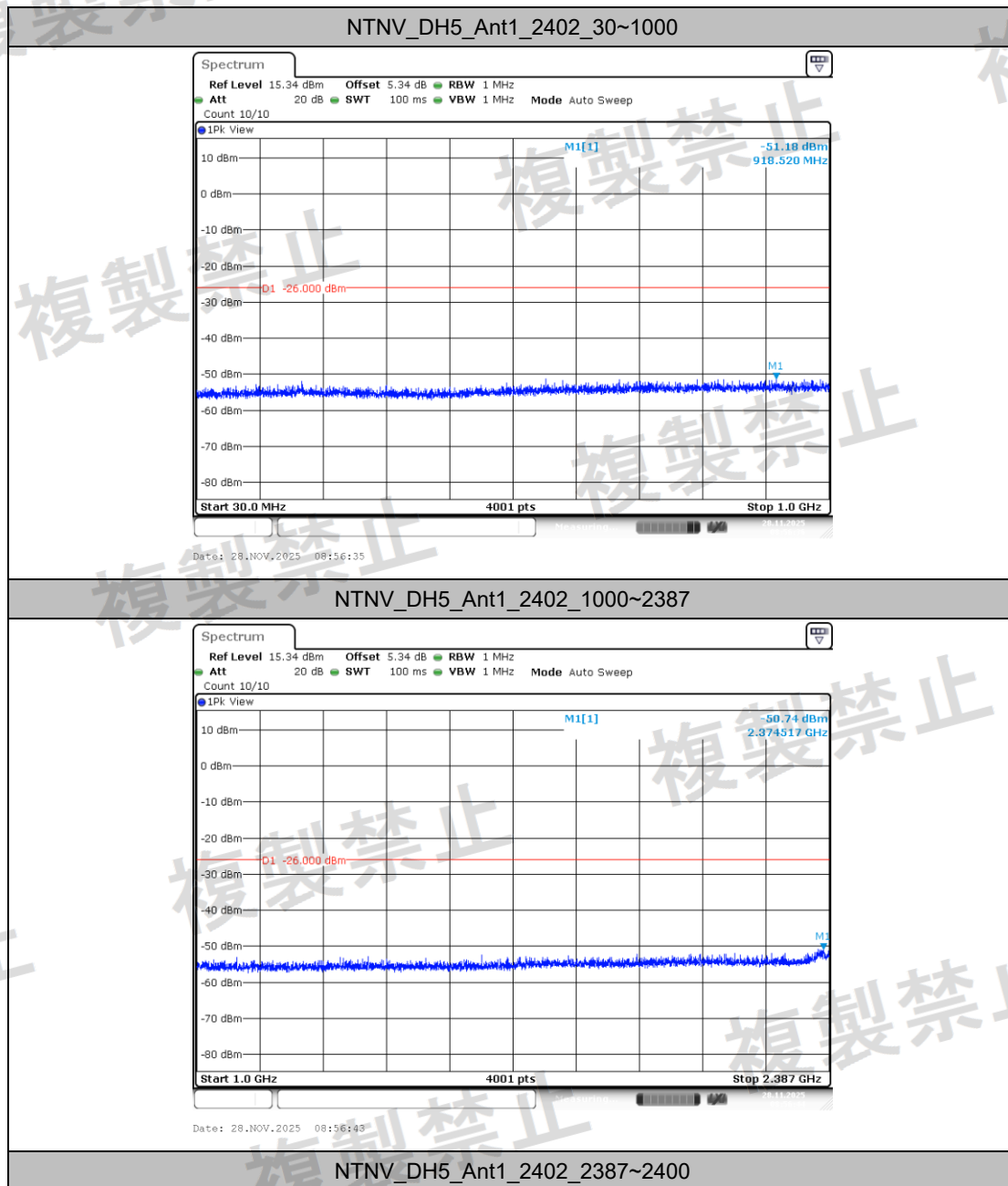
Appendix D: Spurious Emission of TX

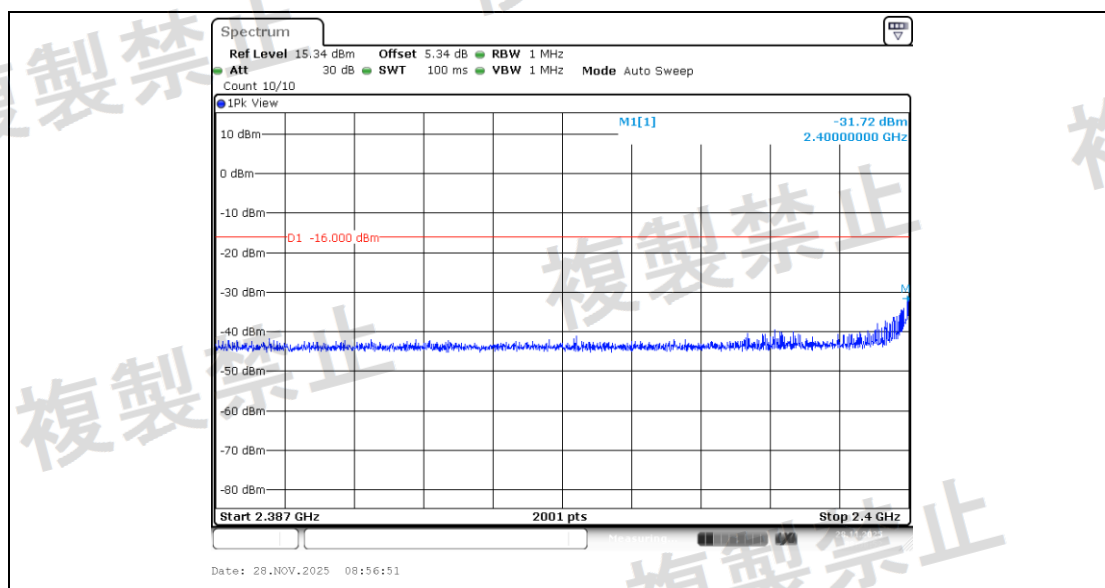
Test Result

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	918.52	-51.18	≤-26	0.00762	≤2.5	PASS
				1000~2387	2374.52	-50.74	≤-26	0.00843	≤2.5	PASS
				2387~2400	2400.00	-31.72	≤-16	0.67298	≤25	PASS
				2483.5~2496.5	2489.67	-40.65	≤-16	0.08610	≤25	PASS
				2496.5~13000	4804.12	-41.82	≤-26	0.06577	≤2.5	PASS
			2441	30~1000	799.70	-50.41	≤-26	0.00910	≤2.5	PASS
				1000~2387	1913.34	-51.86	≤-26	0.00652	≤2.5	PASS
				2387~2400	2396.68	-41.55	≤-16	0.06998	≤25	PASS
				2483.5~2496.5	2484.85	-41.15	≤-16	0.07674	≤25	PASS
				2496.5~13000	4882.37	-41.83	≤-26	0.06561	≤2.5	PASS
			2480	30~1000	923.13	-51.38	≤-26	0.00728	≤2.5	PASS
				1000~2387	2031.58	-51.71	≤-26	0.00675	≤2.5	PASS
				2387~2400	2391.72	-41.08	≤-16	0.07798	≤25	PASS
				2483.5~2496.5	2483.92	-38.68	≤-16	0.13552	≤25	PASS
				2496.5~13000	5226.36	-40.88	≤-26	0.08166	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	975.75	-50.95	≤-26	0.00804	≤2.5	PASS
				1000~2387	2372.78	-50.66	≤-26	0.00859	≤2.5	PASS
				2387~2400	2400.00	-25.15	≤-16	3.05492	≤25	PASS
				2483.5~2496.5	2489.73	-40.96	≤-16	0.08017	≤25	PASS
				2496.5~13000	4804.12	-40.51	≤-26	0.08892	≤2.5	PASS
			2441	30~1000	733.74	-50.87	≤-26	0.00818	≤2.5	PASS
				1000~2387	2351.63	-51.88	≤-26	0.00649	≤2.5	PASS
				2387~2400	2395.02	-41.23	≤-16	0.07534	≤25	PASS
				2483.5~2496.5	2494.60	-41.49	≤-16	0.07096	≤25	PASS
				2496.5~13000	4881.84	-41.36	≤-26	0.07311	≤2.5	PASS
			2480	30~1000	798.97	-50.91	≤-26	0.00811	≤2.5	PASS
				1000~2387	2134.91	-52.29	≤-26	0.00590	≤2.5	PASS
				2387~2400	2397.58	-41.60	≤-16	0.06918	≤25	PASS
				2483.5~2496.5	2484.52	-39.44	≤-16	0.11376	≤25	PASS
				2496.5~13000	4959.57	-40.08	≤-26	0.09817	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	942.53	-50.88	≤-26	0.00817	≤2.5	PASS
				1000~2387	2372.78	-50.66	≤-26	0.00859	≤2.5	PASS
				2387~2400	2400.00	-25.17	≤-16	3.04089	≤25	PASS
				2483.5~2496.5	2496.19	-41.74	≤-16	0.06699	≤25	PASS
				2496.5~13000	4803.59	-40.56	≤-26	0.08790	≤2.5	PASS
			2441	30~1000	808.67	-51.30	≤-26	0.00741	≤2.5	PASS
				1000~2387	2020.83	-51.83	≤-26	0.00656	≤2.5	PASS

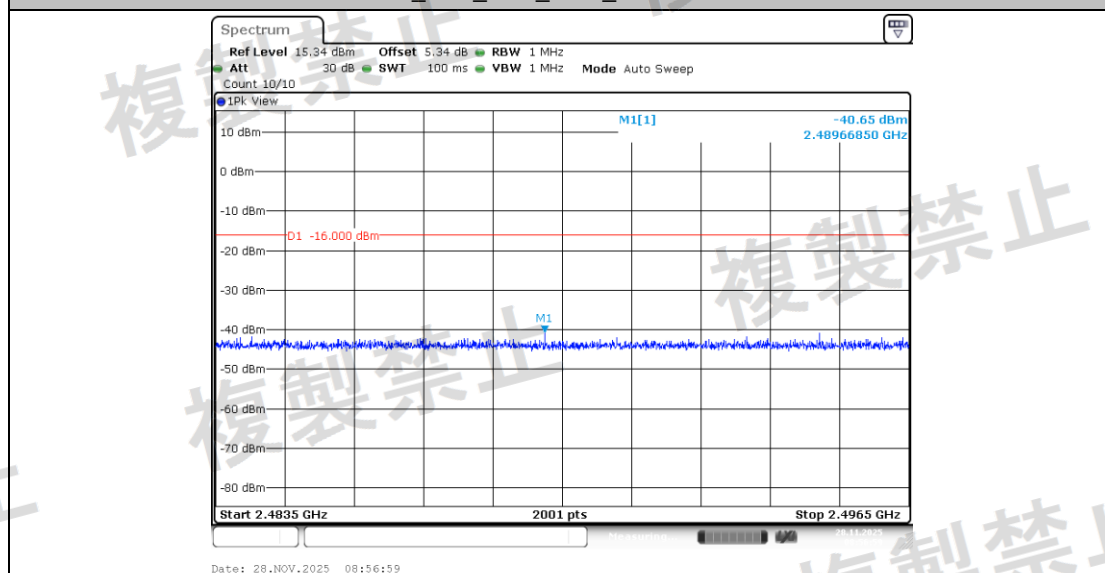
			2387~2400	2387.14	-41.52	≤-16	0.07047	≤25	PASS
			2483.5~2496.5	2491.94	-41.10	≤-16	0.07762	≤25	PASS
			2496.5~13000	4881.84	-40.14	≤-26	0.09683	≤2.5	PASS
		2480	30~1000	934.77	-50.61	≤-26	0.00869	≤2.5	PASS
			1000~2387	2019.79	-52.19	≤-26	0.00604	≤2.5	PASS
			2387~2400	2390.71	-41.52	≤-16	0.07047	≤25	PASS
			2483.5~2496.5	2494.13	-37.97	≤-16	0.15959	≤25	PASS
			2496.5~13000	4959.57	-39.97	≤-26	0.10069	≤2.5	PASS

Test Graphs

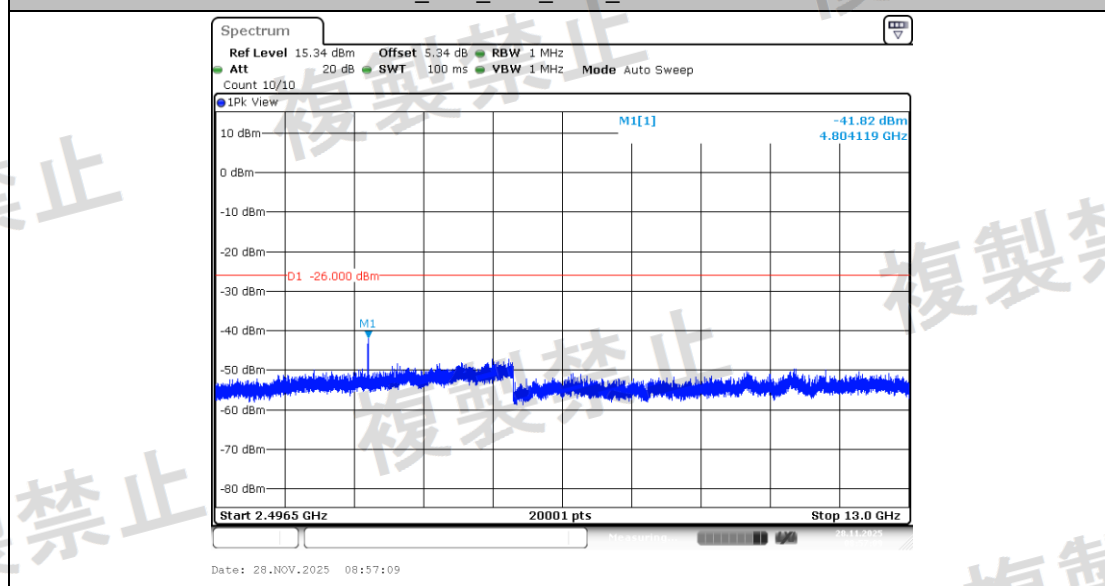


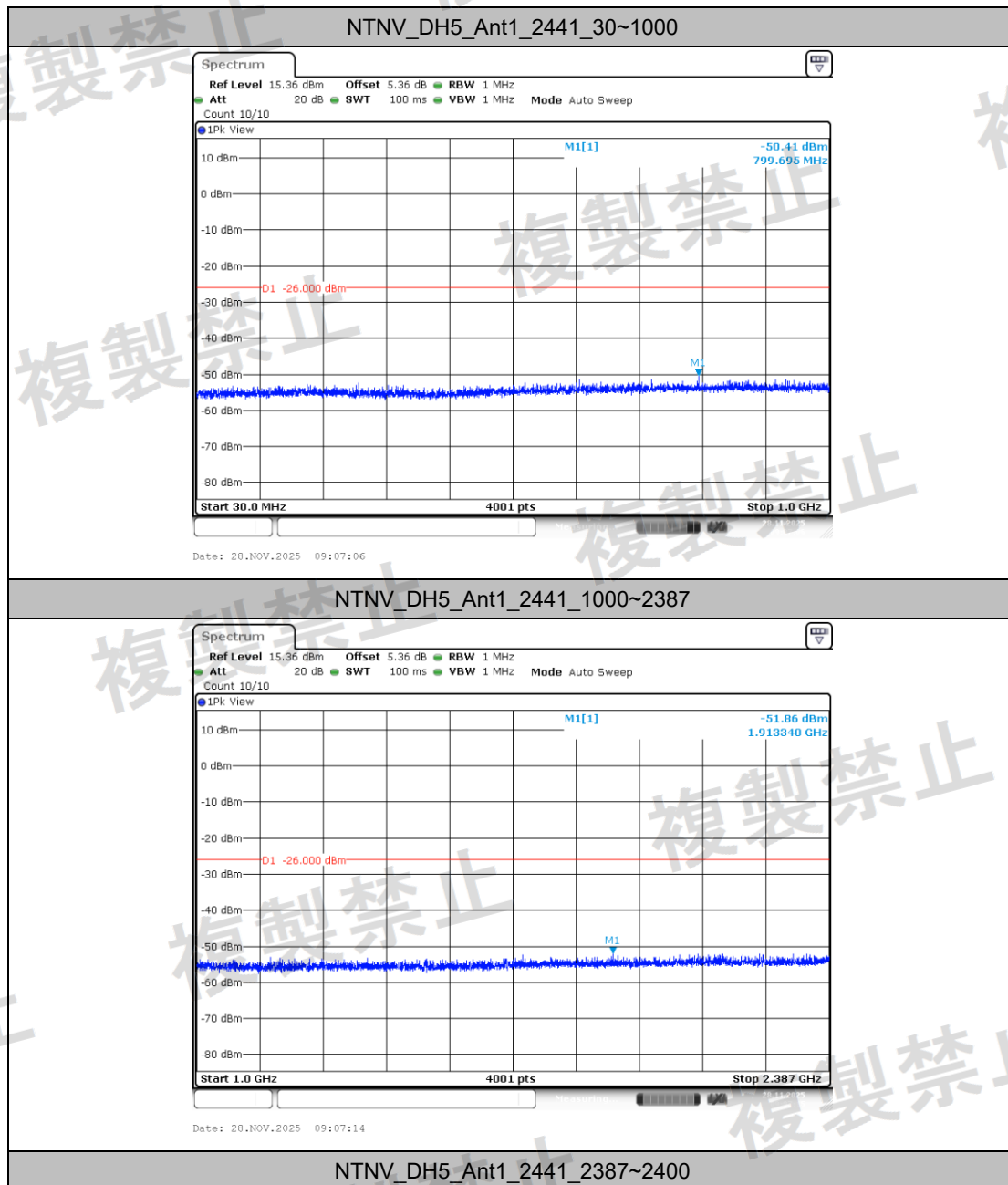


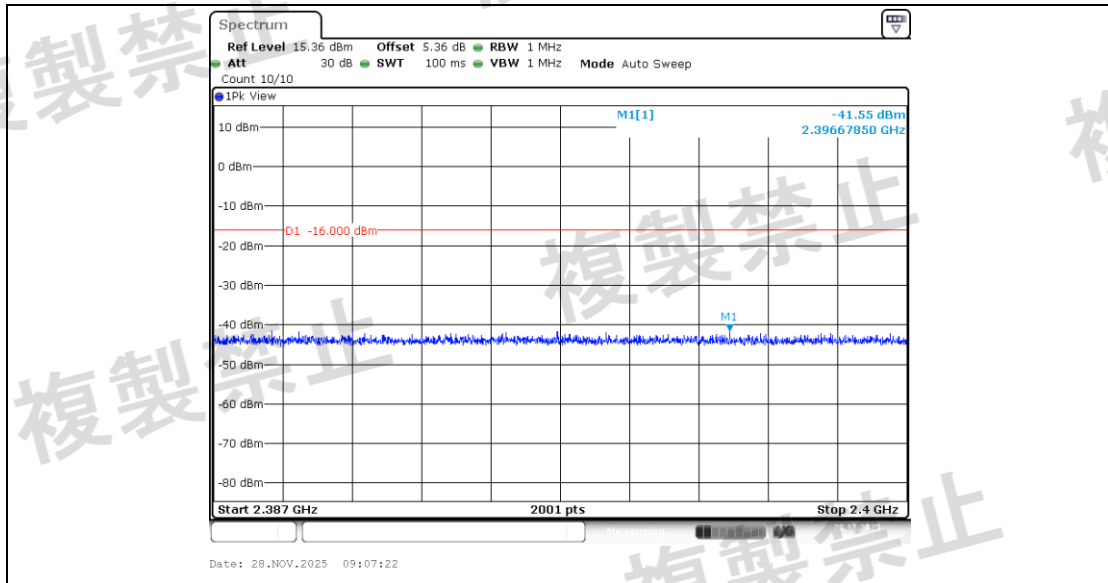
NTNV_DH5_Ant1_2402_2483.5~2496.5



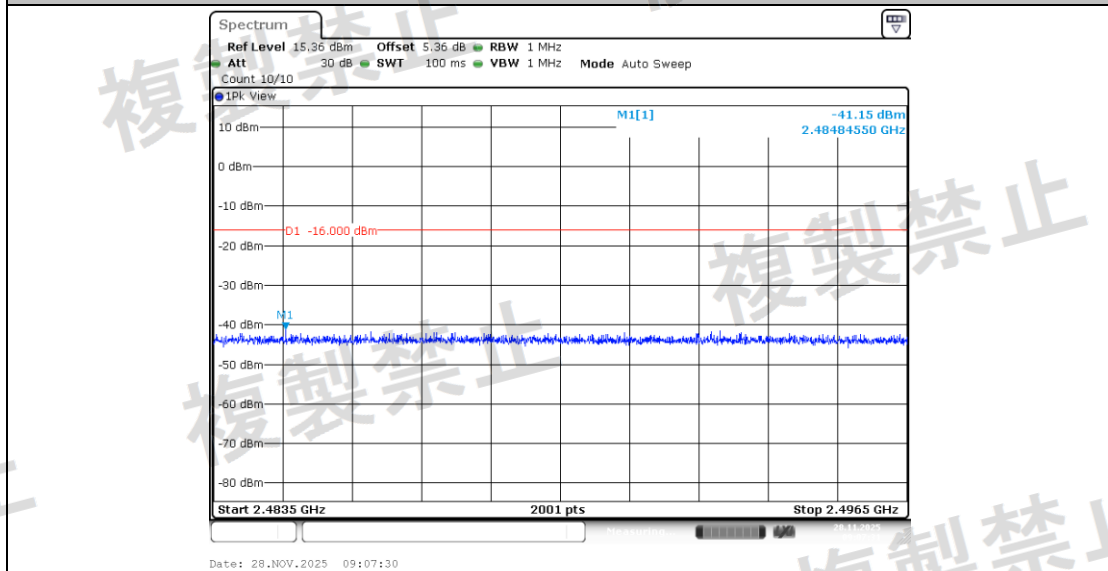
NTNV_DH5_Ant1_2402_2496.5~13000



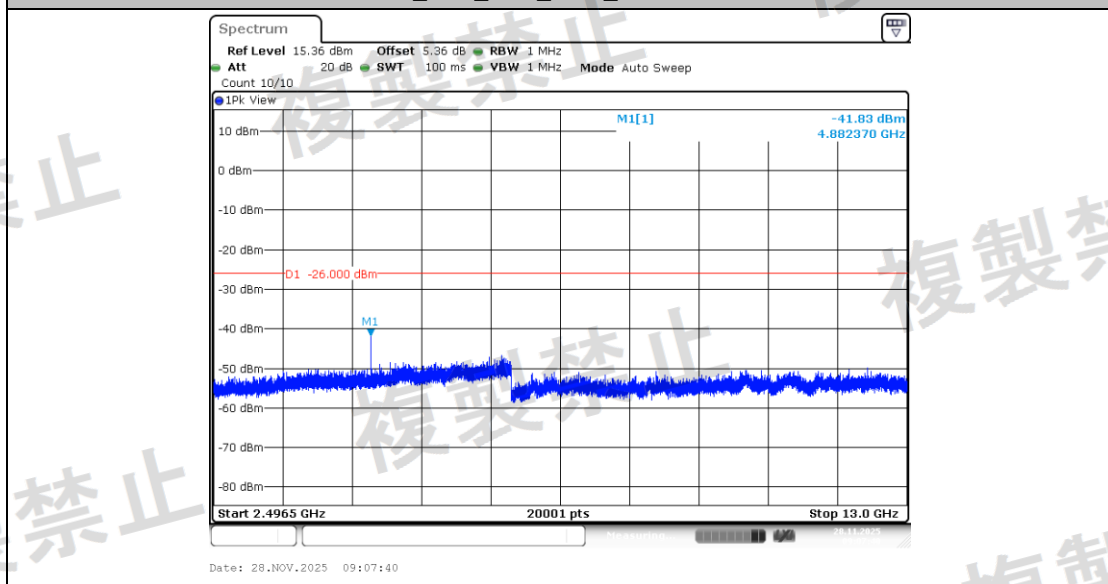


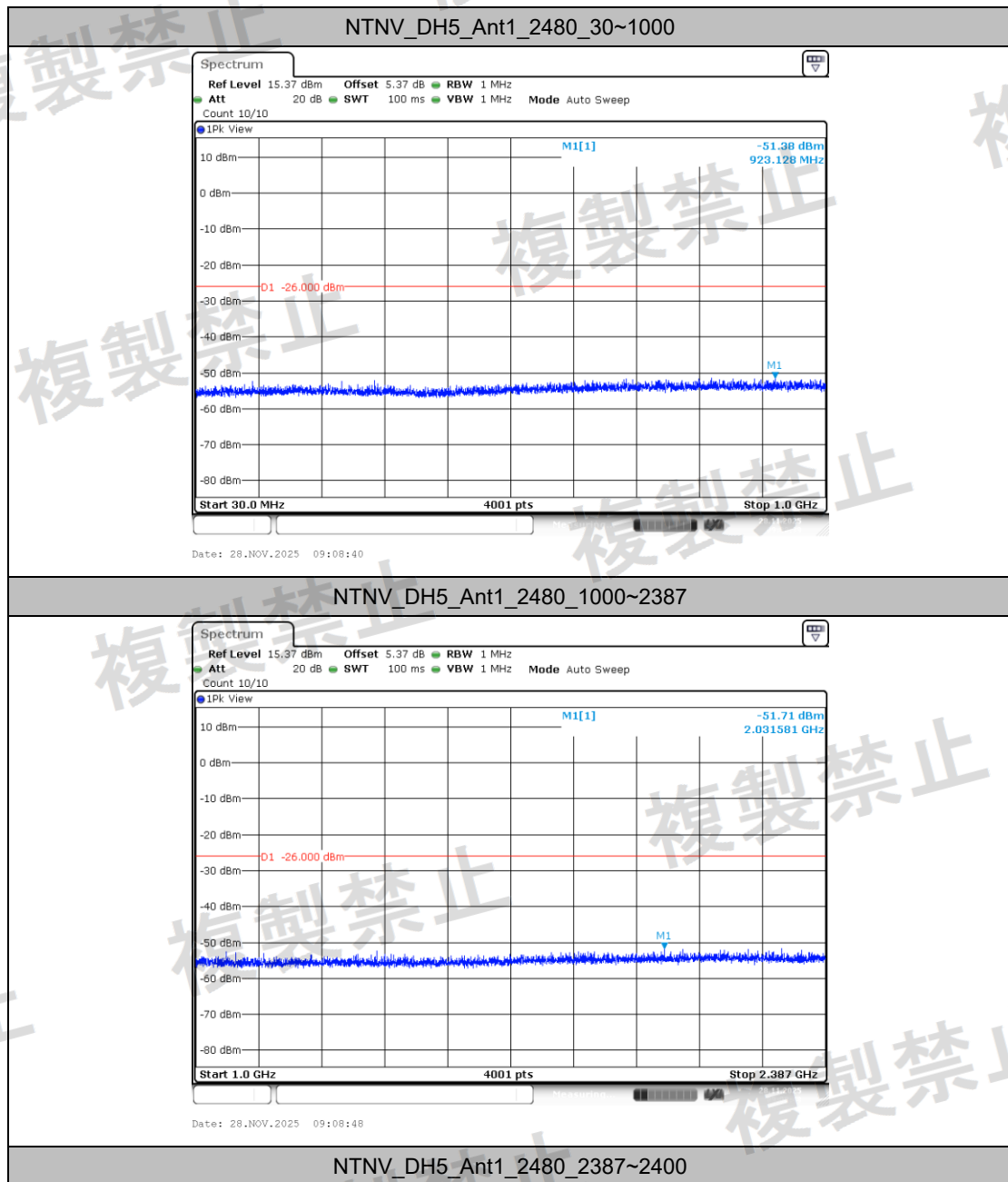


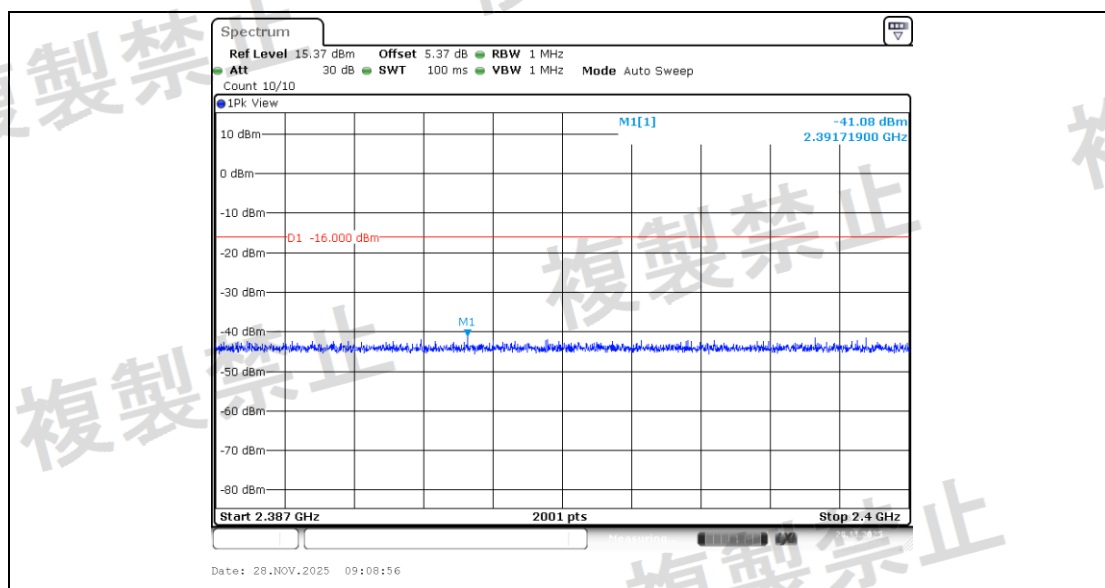
NTNV_DH5_Ant1_2441_2483.5~2496.5



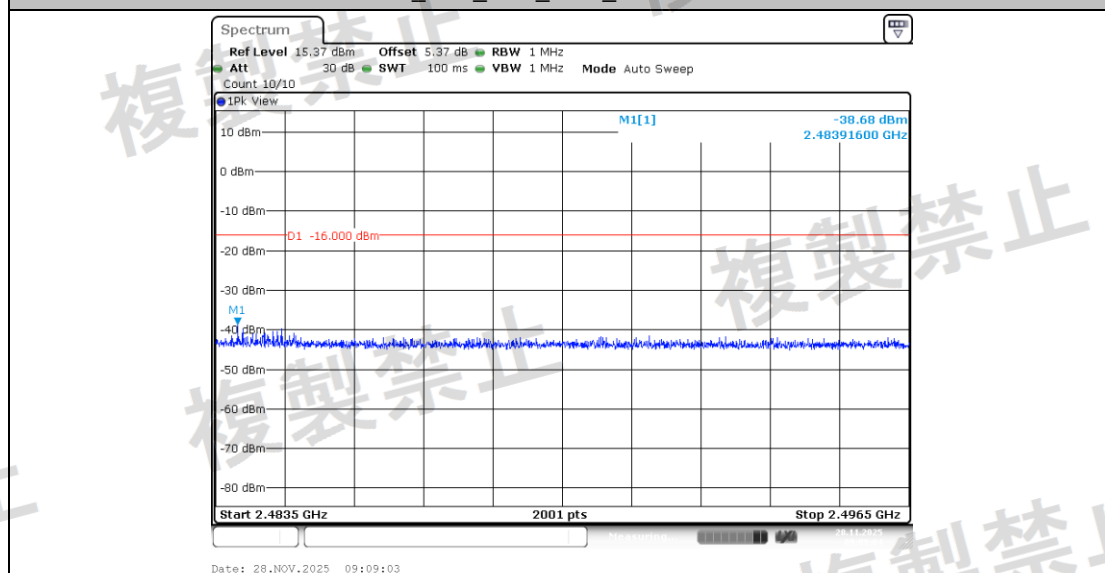
NTNV_DH5_Ant1_2441_2496.5~13000



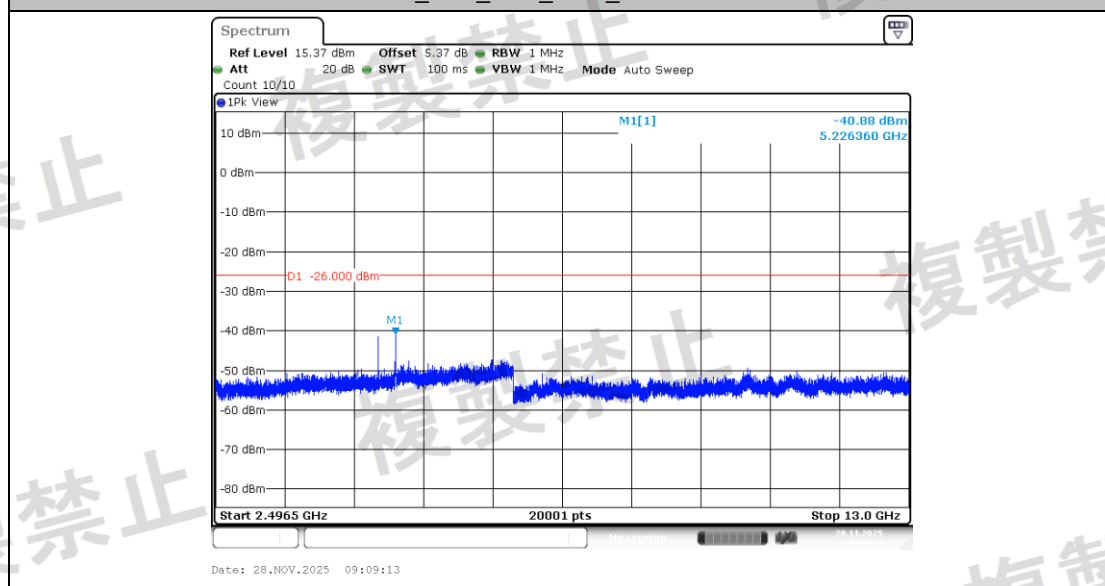


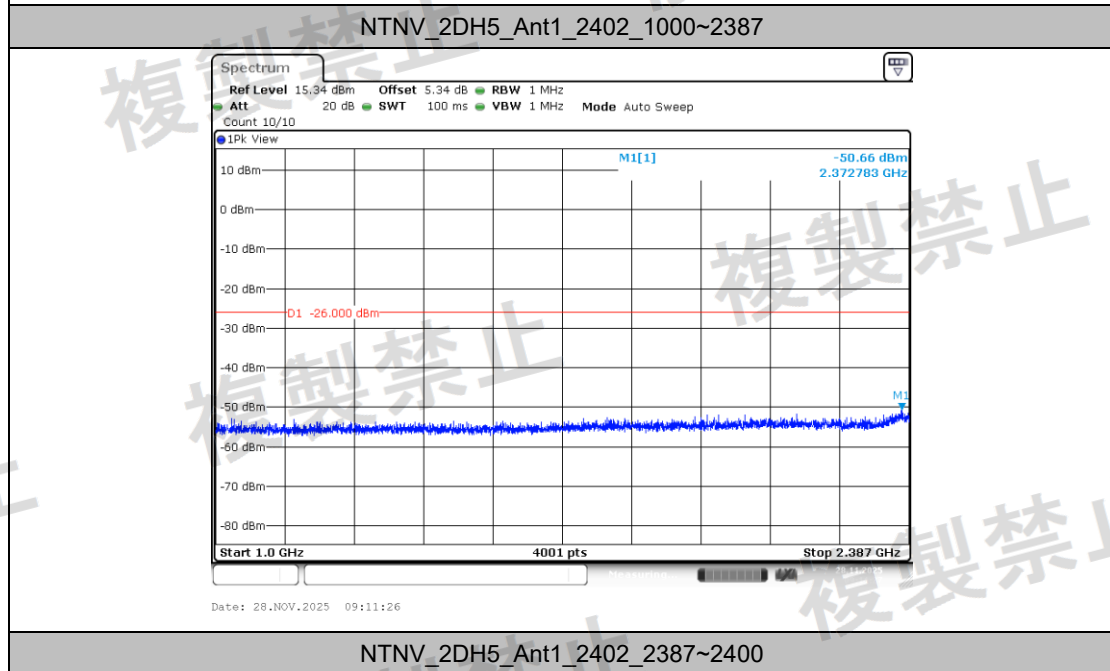
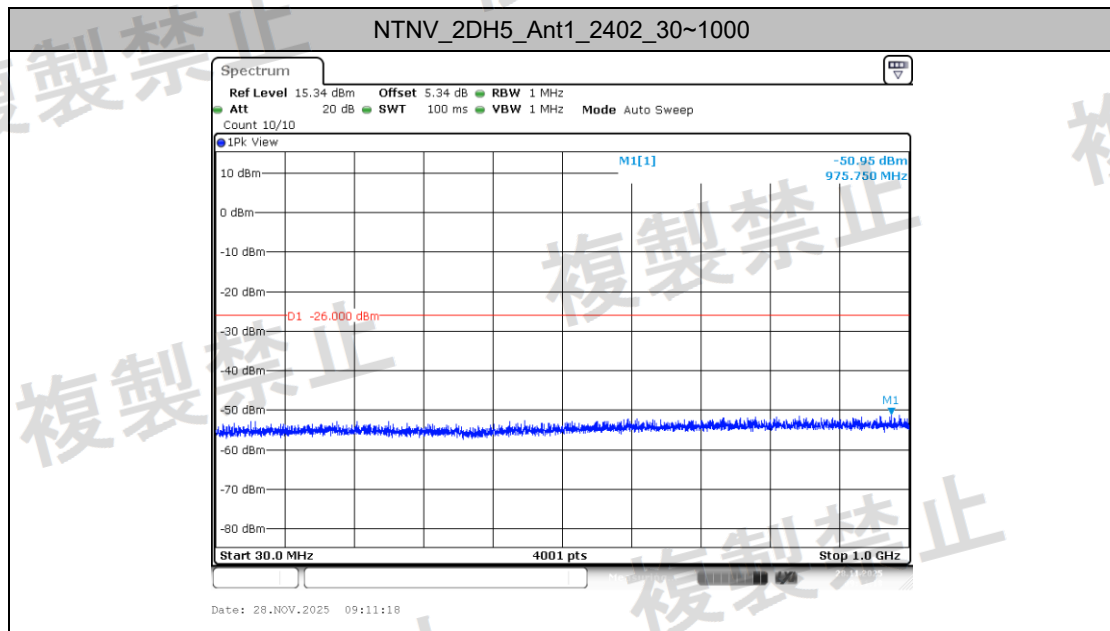


NTNV_DH5_Ant1_2480_2483.5~2496.5

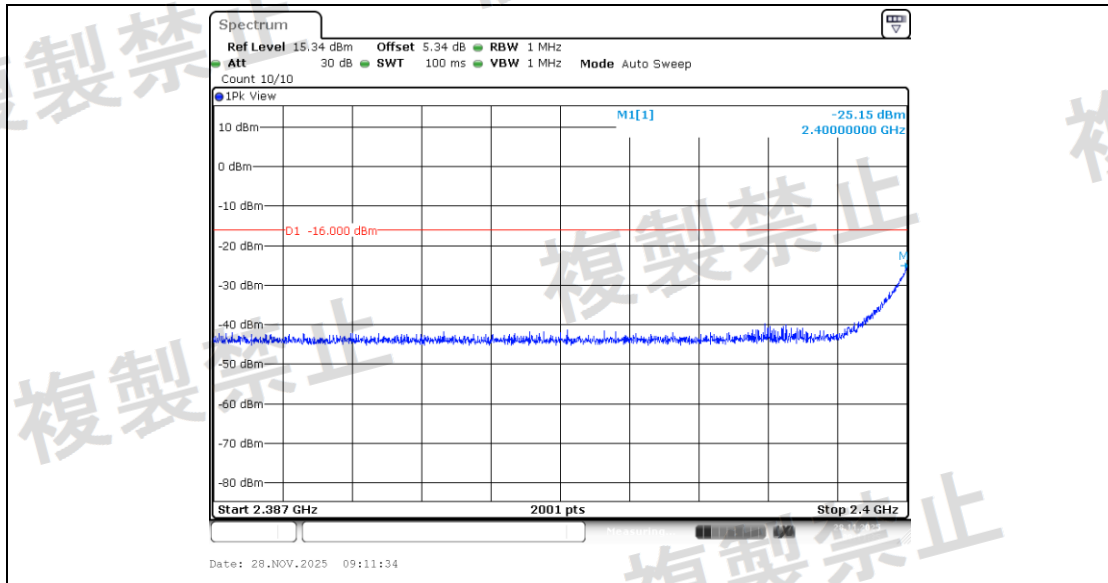


NTNV_DH5_Ant1_2480_2496.5~13000

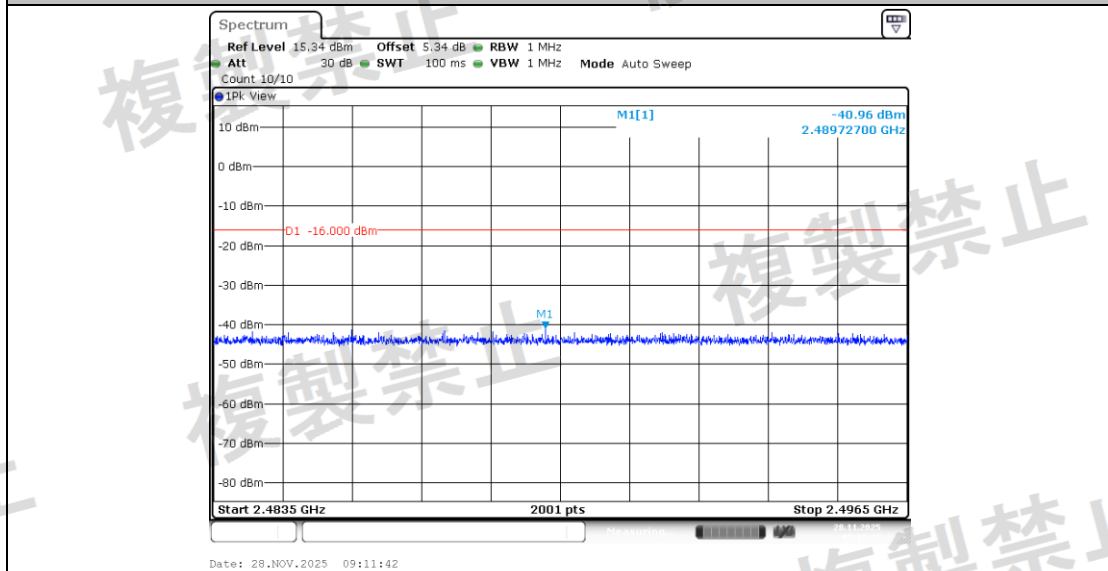




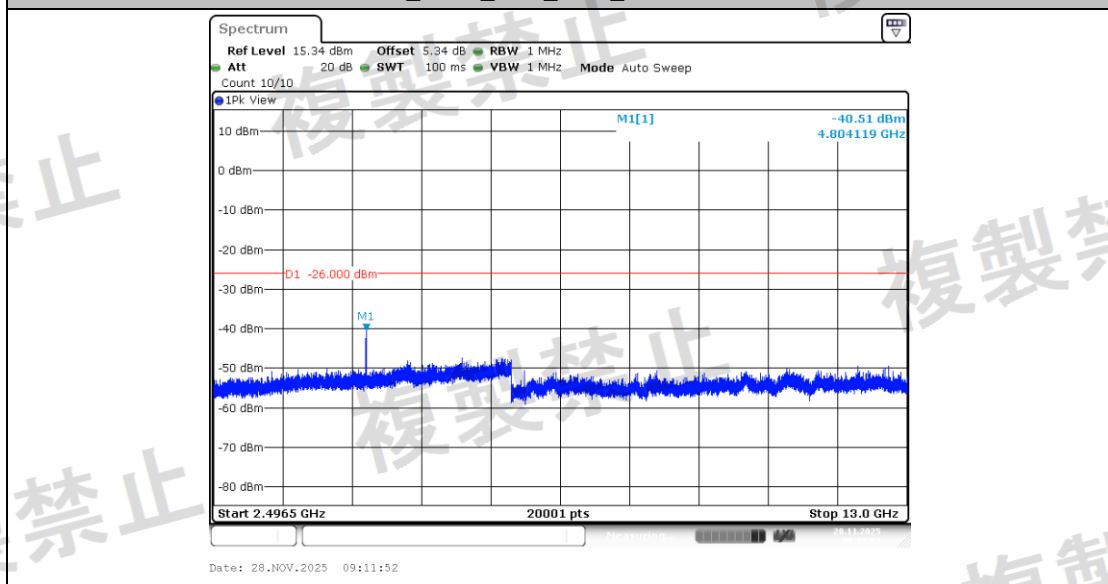
NTNV_2DH5_Ant1_2402_2387~2400

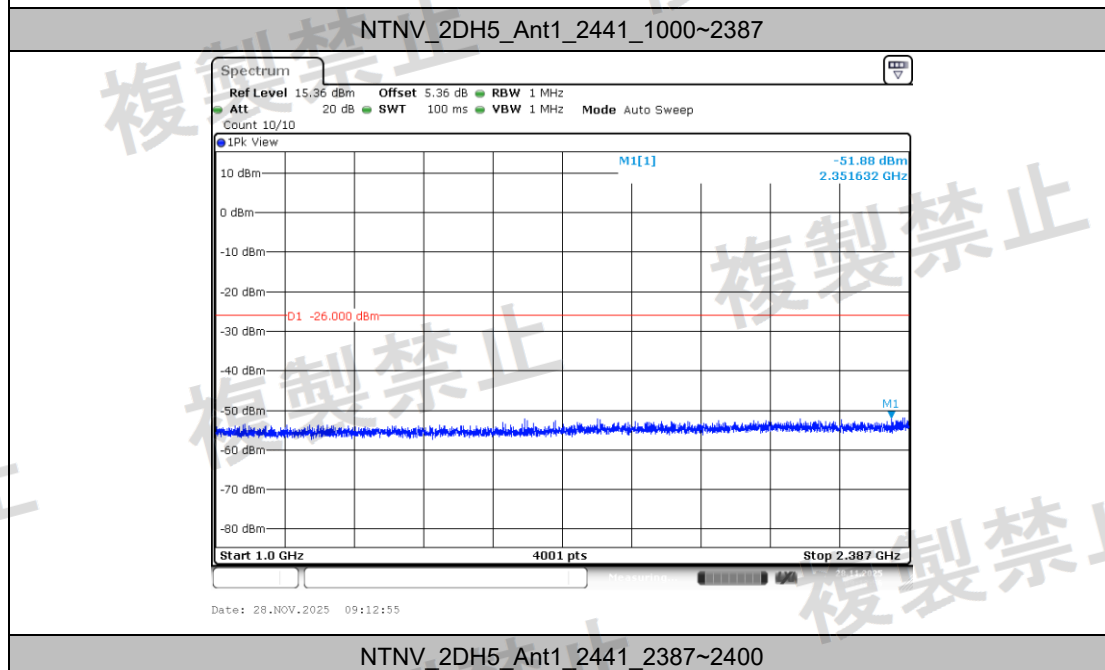
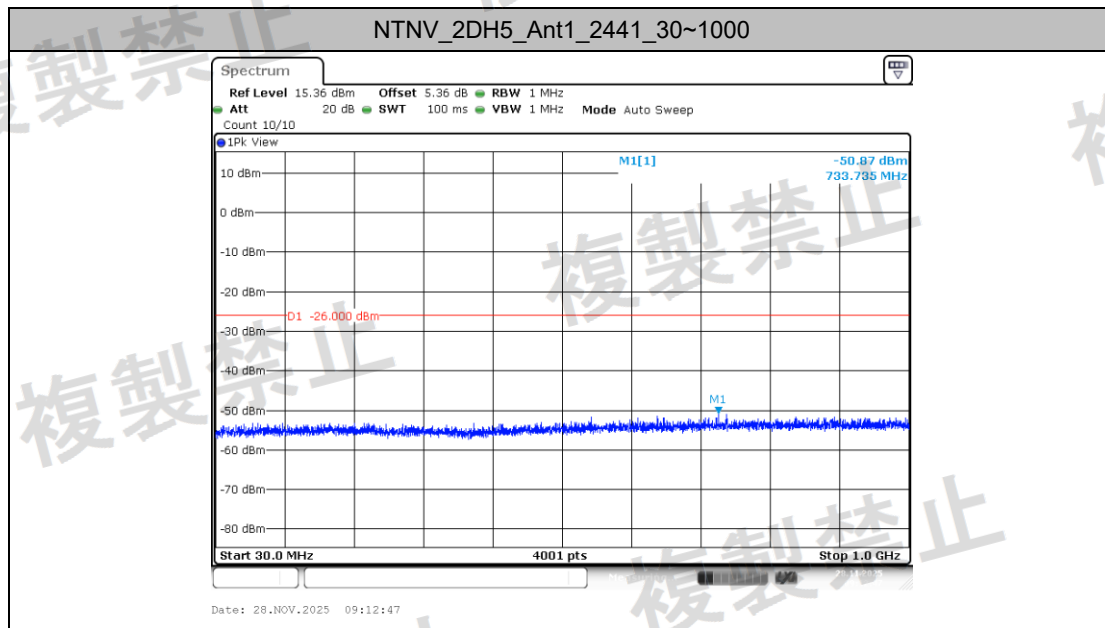


NTNV_2DH5_Ant1_2402_2483.5~2496.5

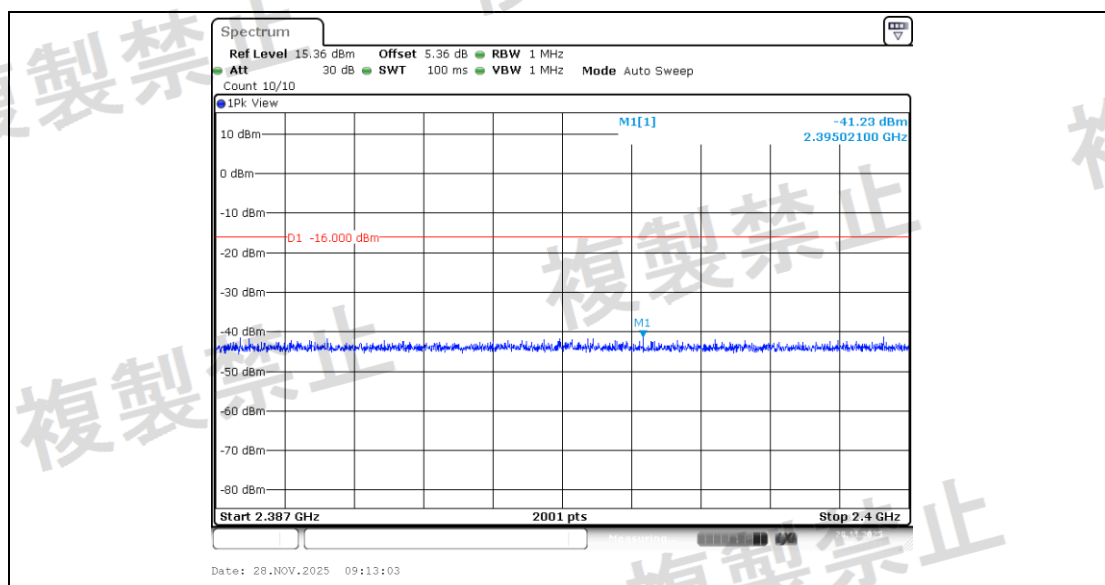


NTNV_2DH5_Ant1_2402_2496.5~13000

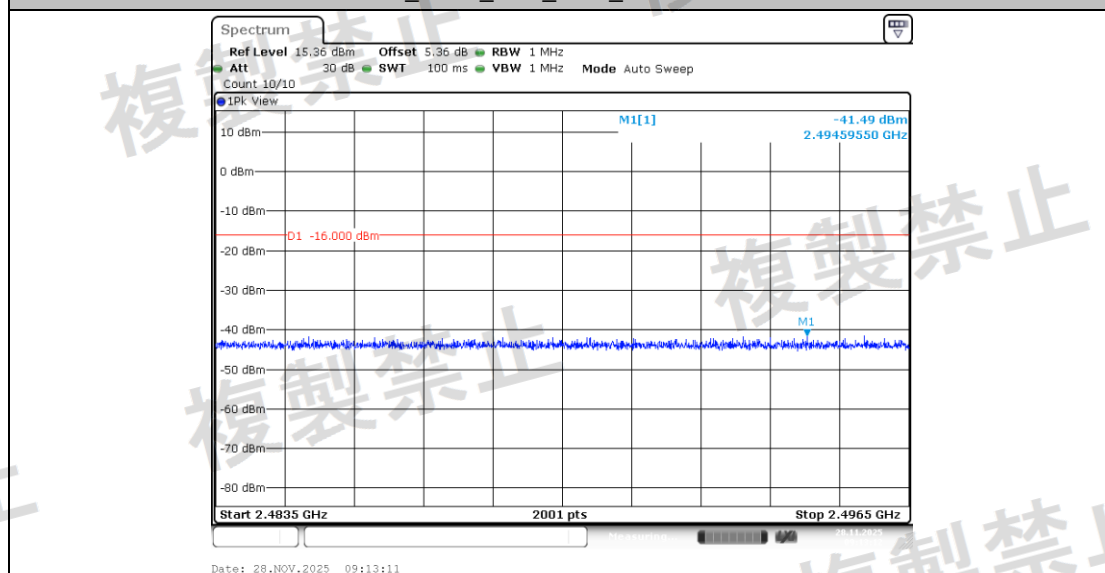




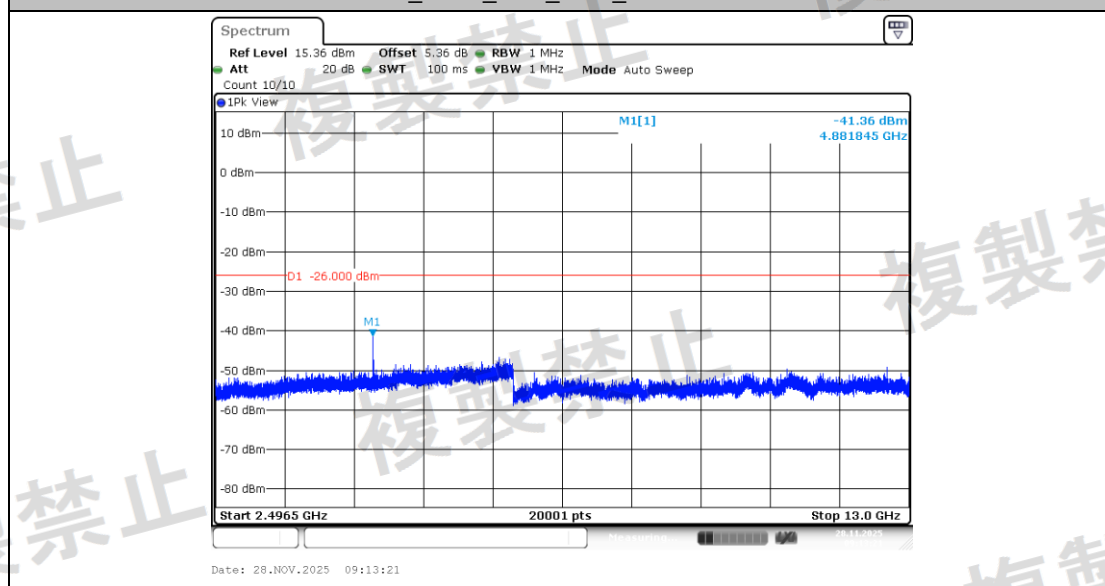
NTNV_2DH5_Ant1_2441_2387~2400

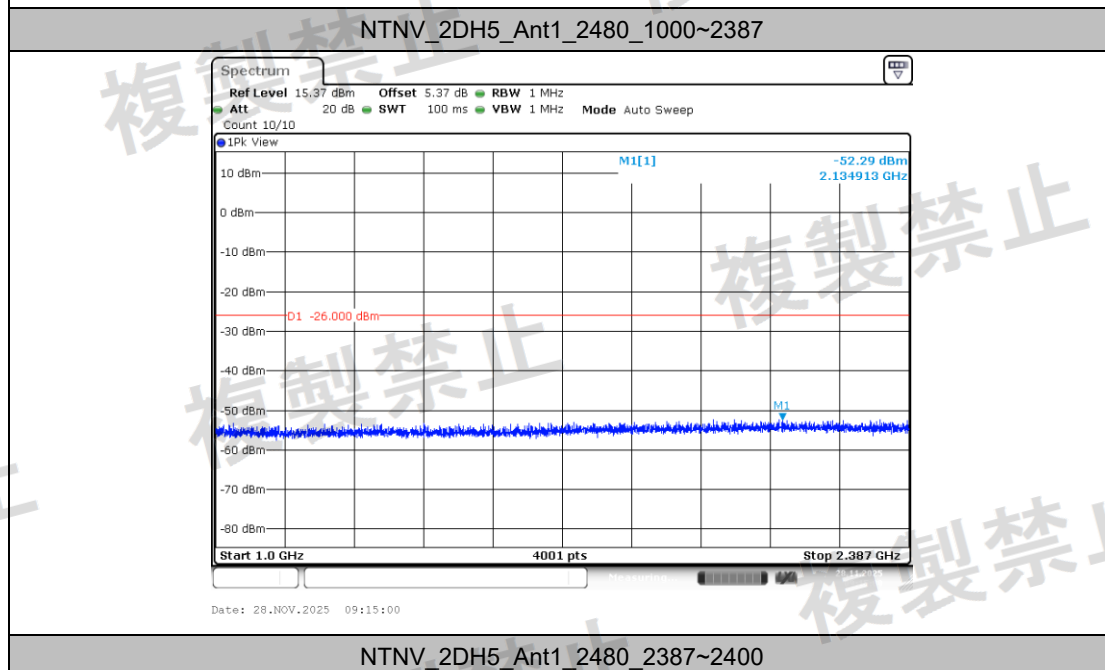
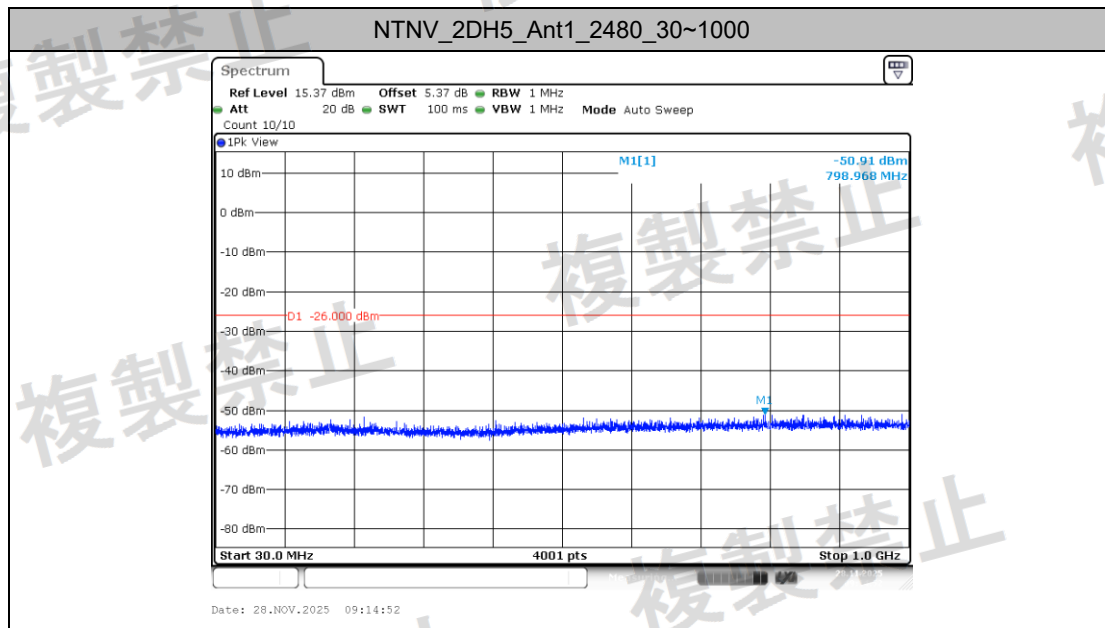


NTVN_2DH5_Ant1_2441_2483.5~2496.5

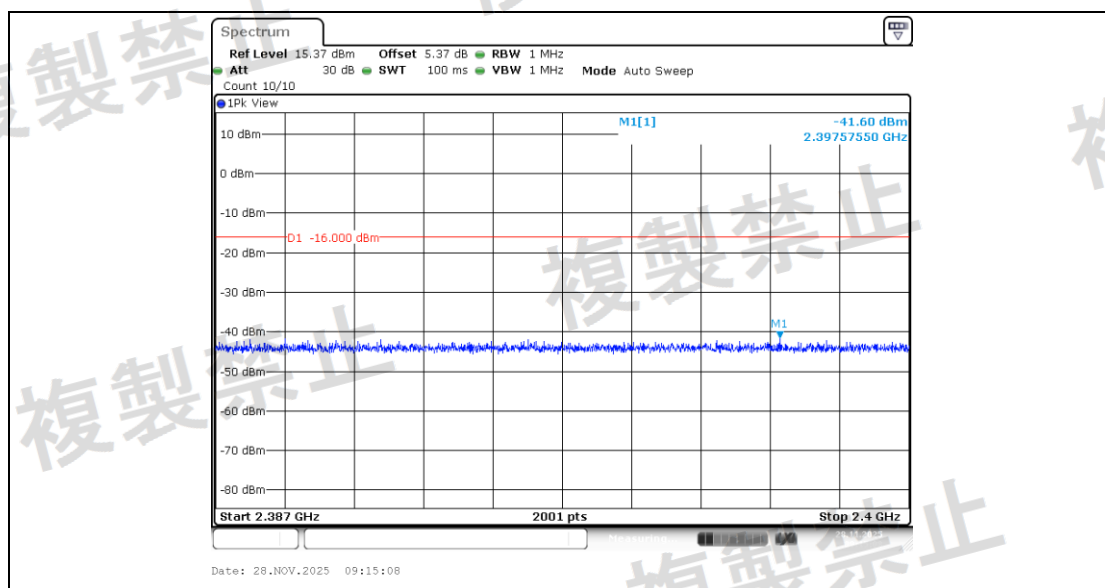


NTVN_2DH5_Ant1_2441_2496.5~13000

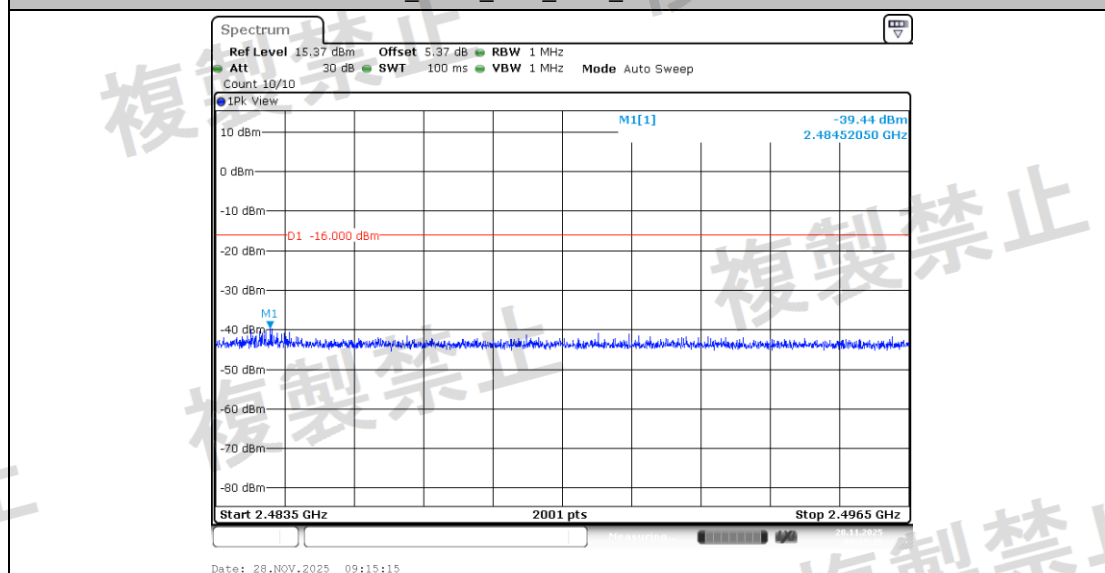




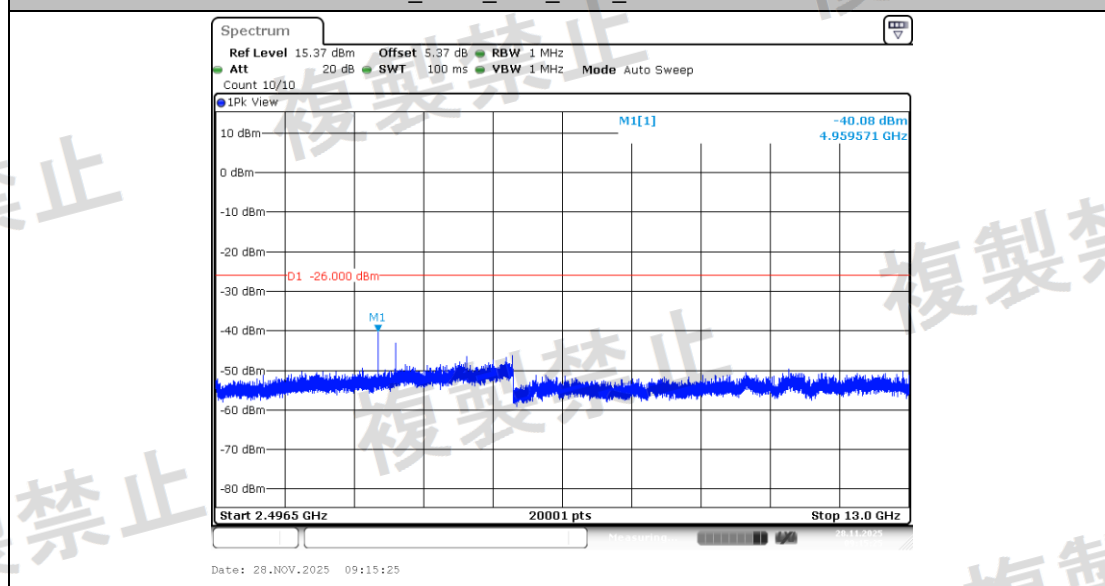
NTNV_2DH5_Ant1_2480_2387~2400

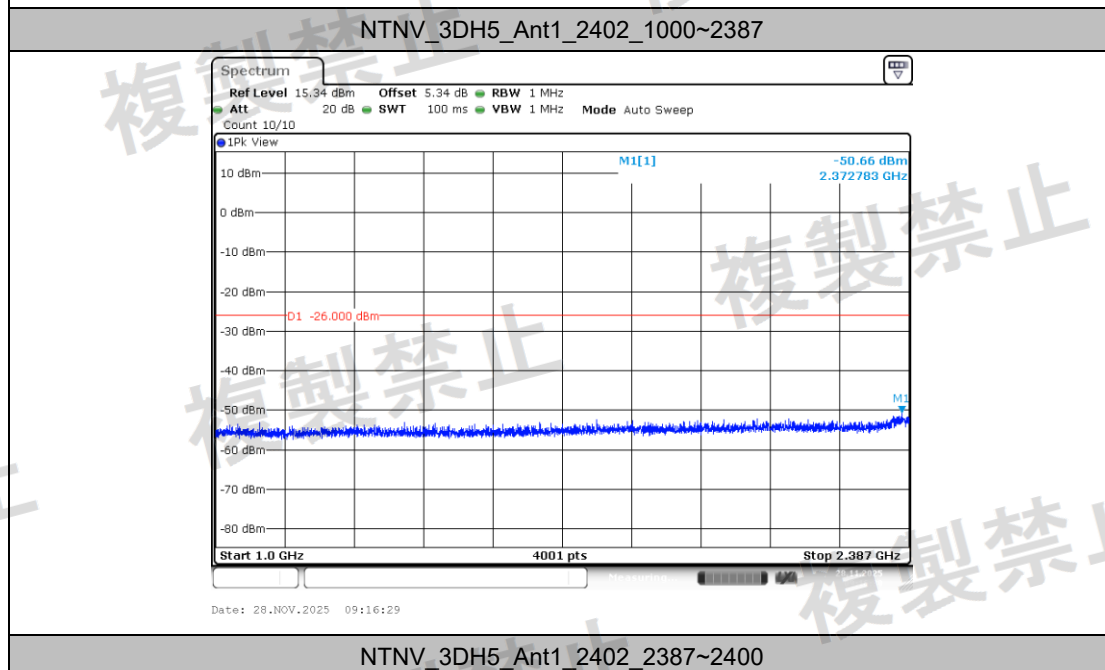
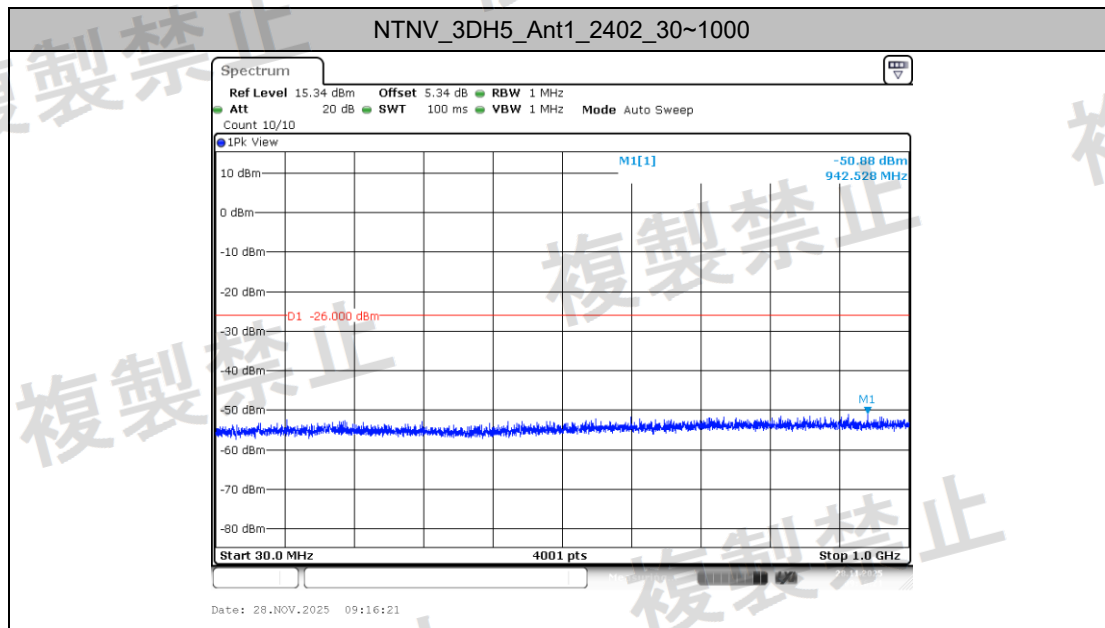


NTNV_2DH5_Ant1_2480_2483.5~2496.5

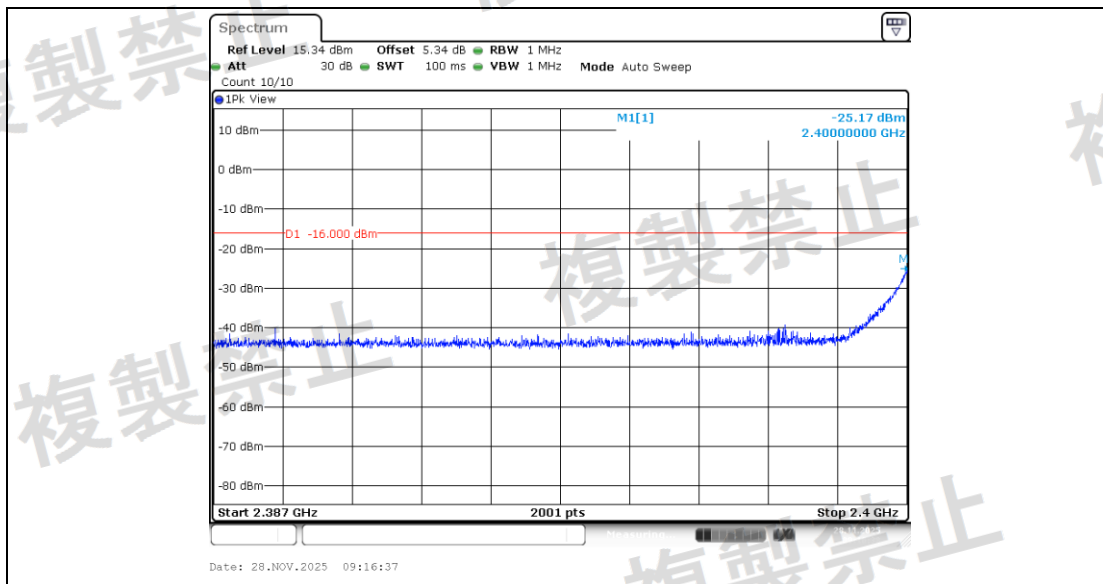


NTNV_2DH5_Ant1_2480_2496.5~13000

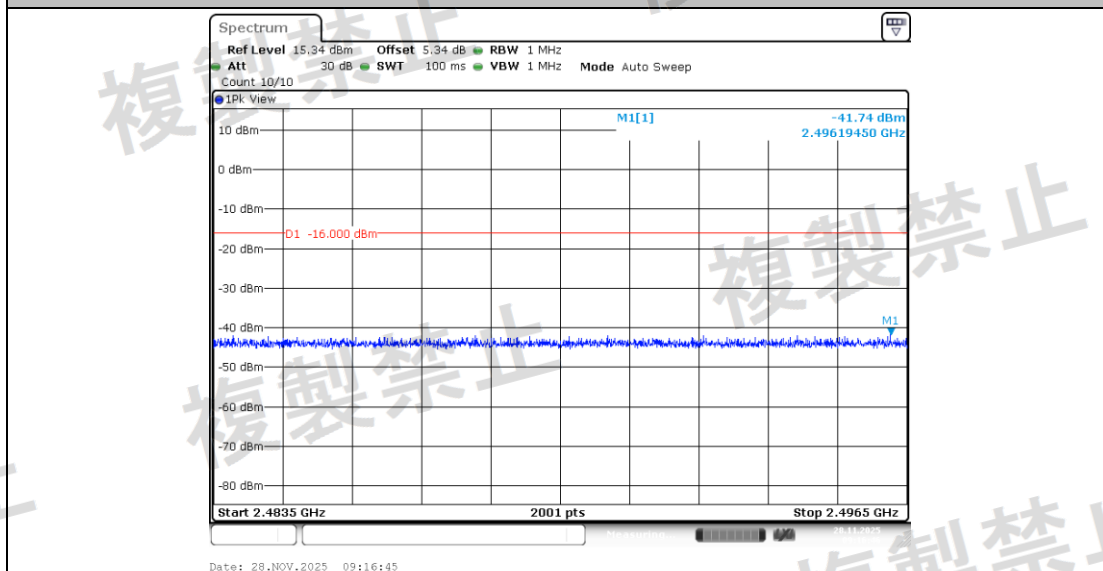




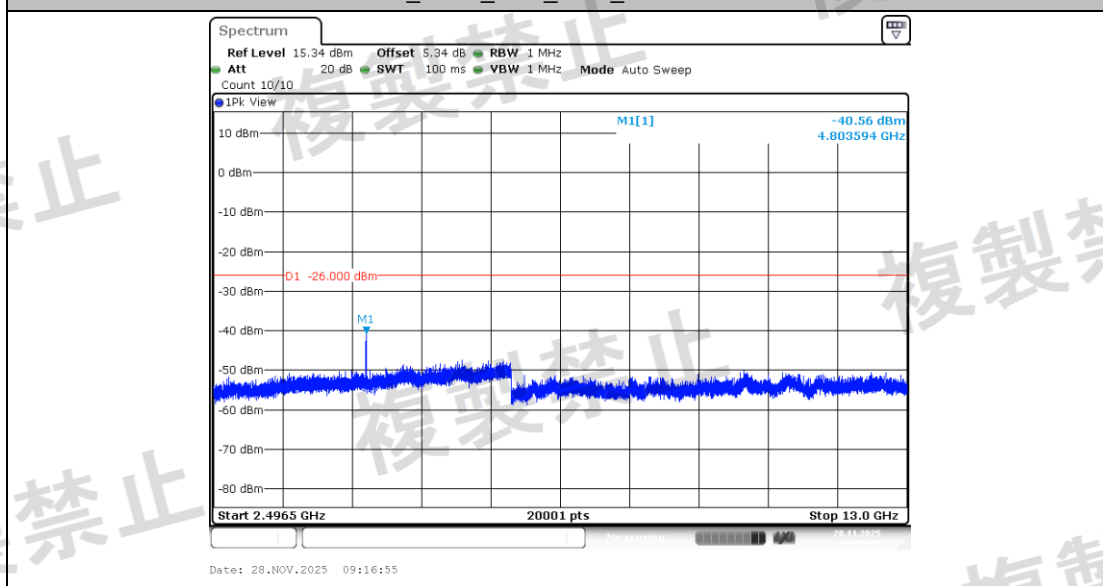
NTNV_3DH5_Ant1_2402_2387~2400

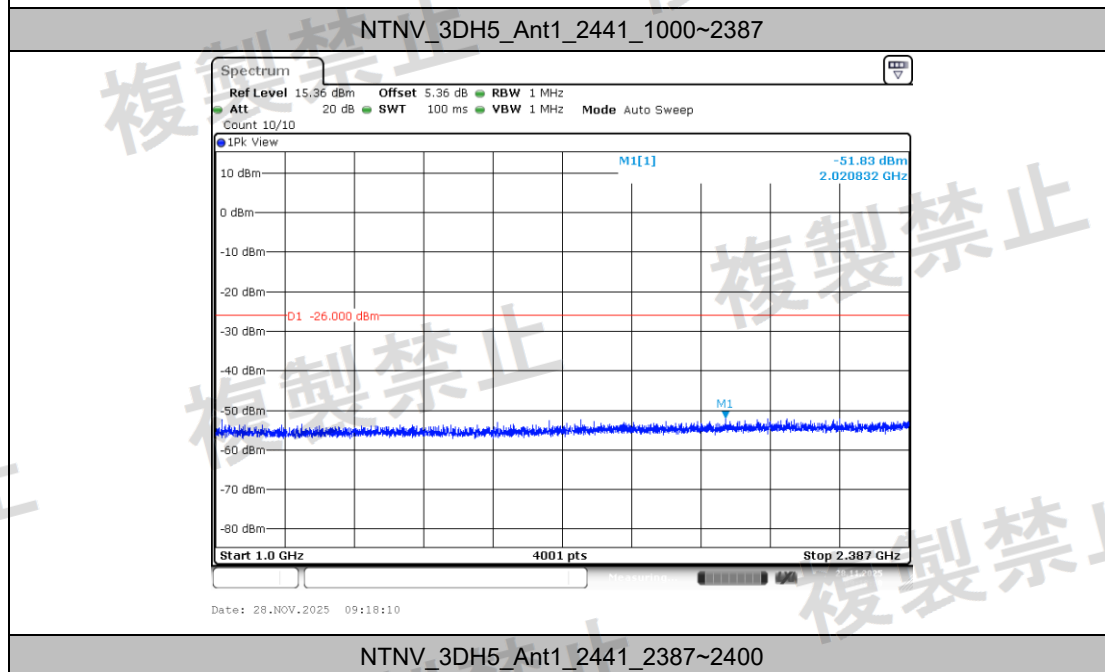
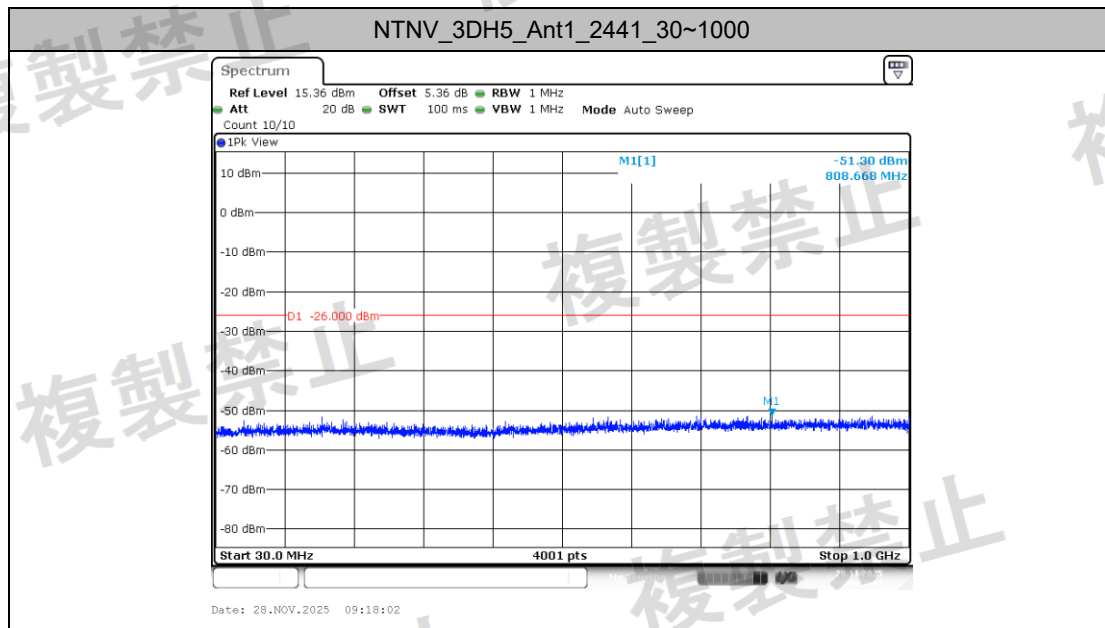


NTNV_3DH5_Ant1_2402_2483.5~2496.5

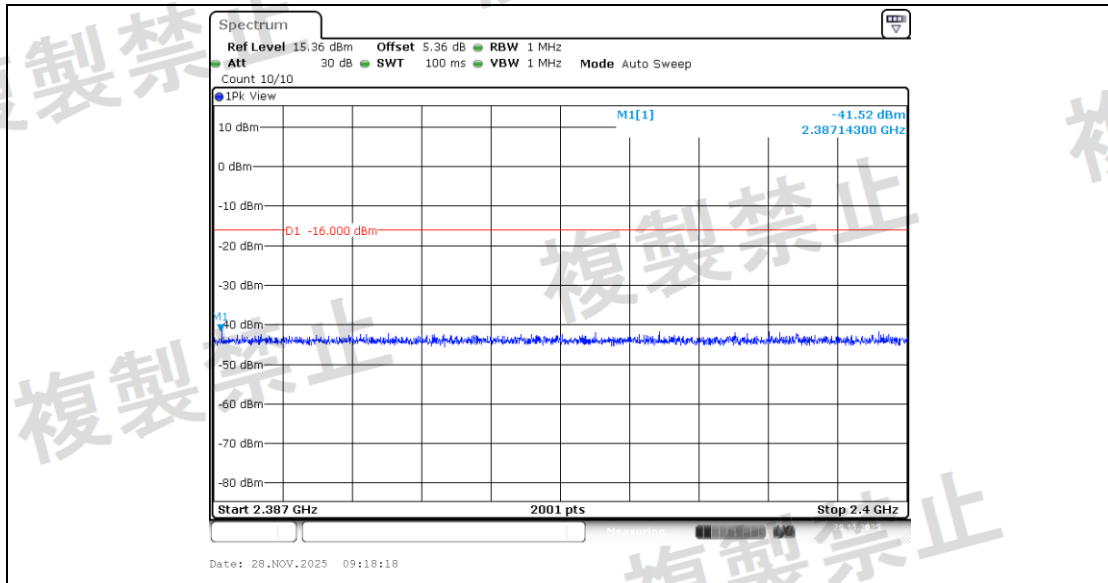


NTNV_3DH5_Ant1_2402_2496.5~13000

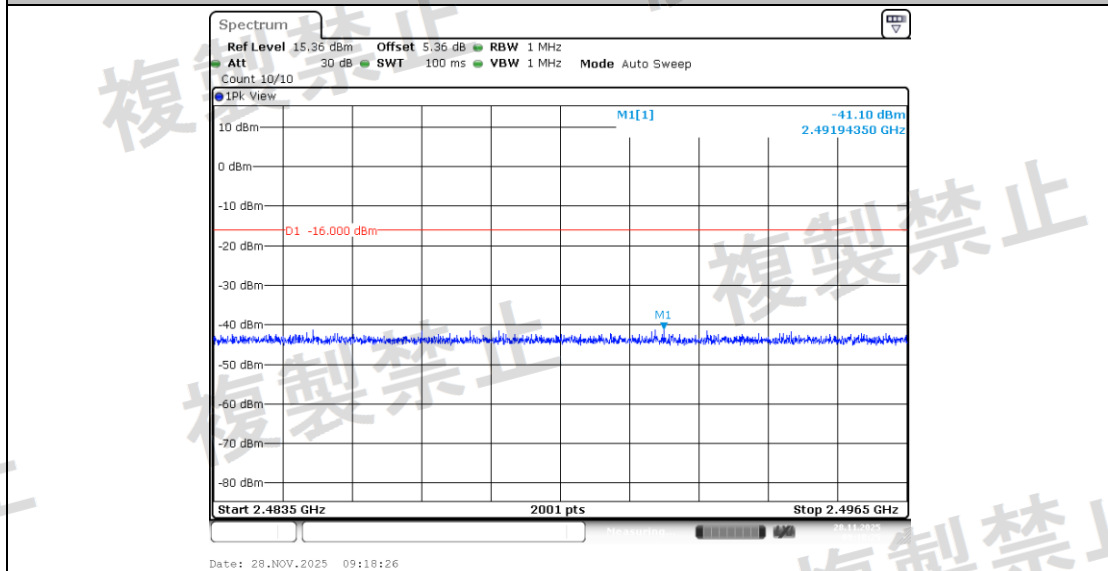




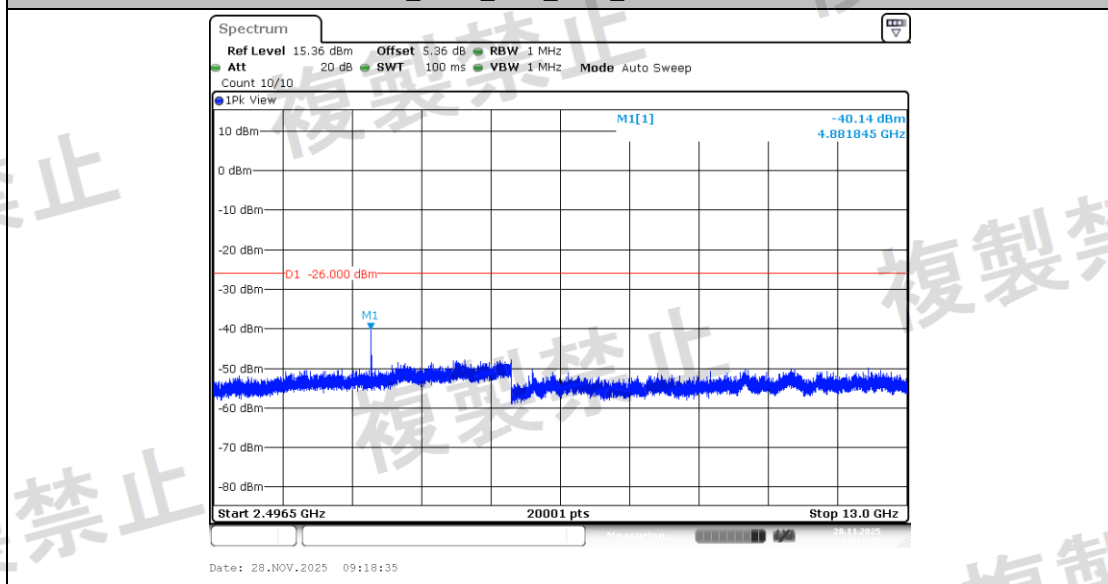
NTNV_3DH5_Ant1_2441_2387~2400

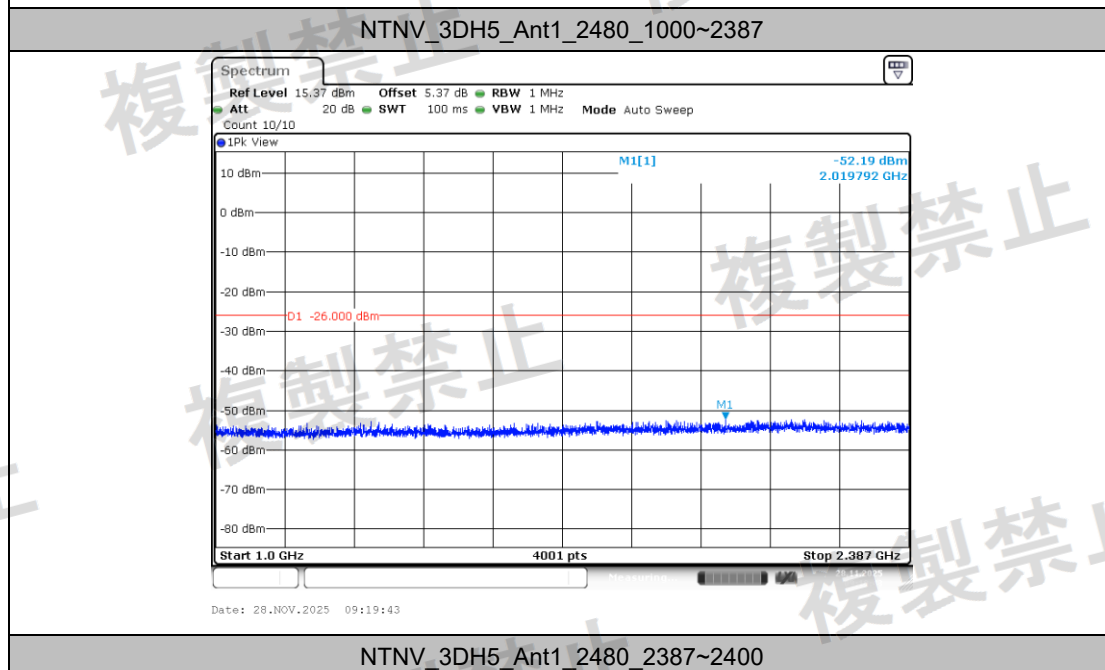
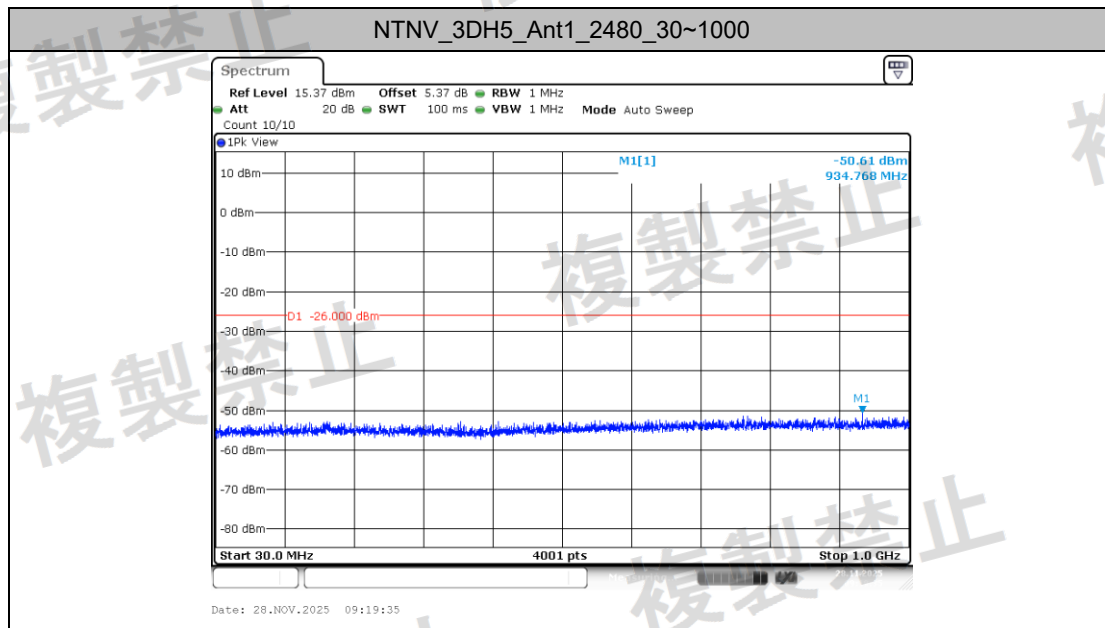


NTVN_3DH5_Ant1_2441_2483.5~2496.5

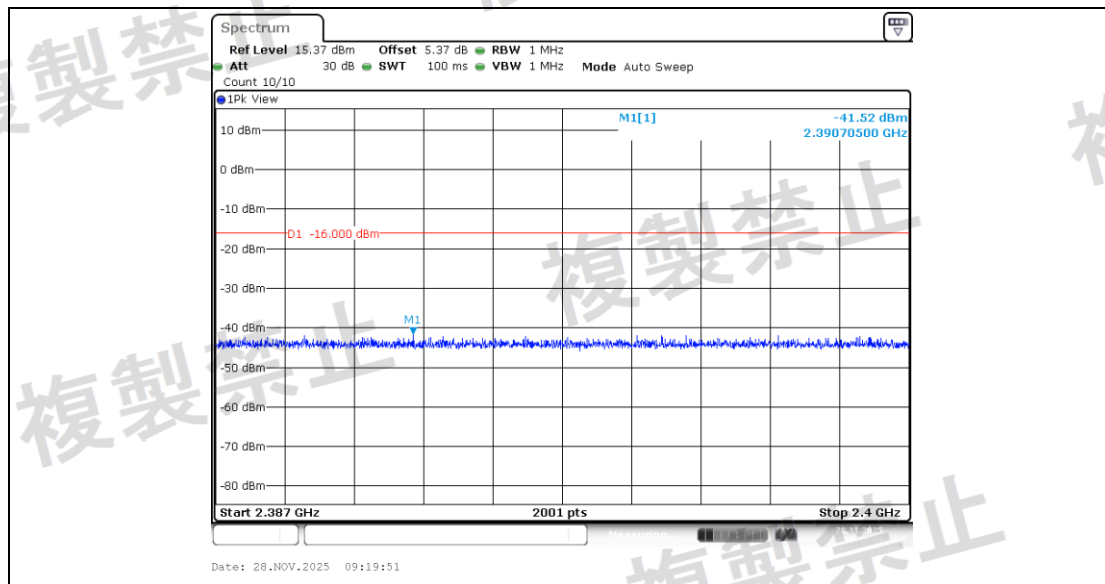


NTVN_3DH5_Ant1_2441_2496.5~13000

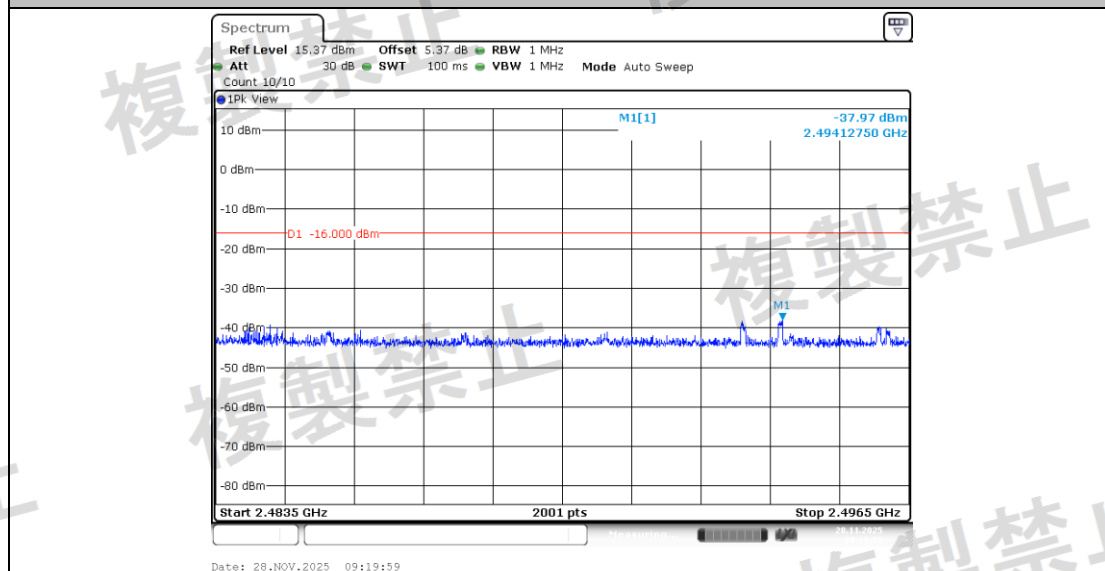




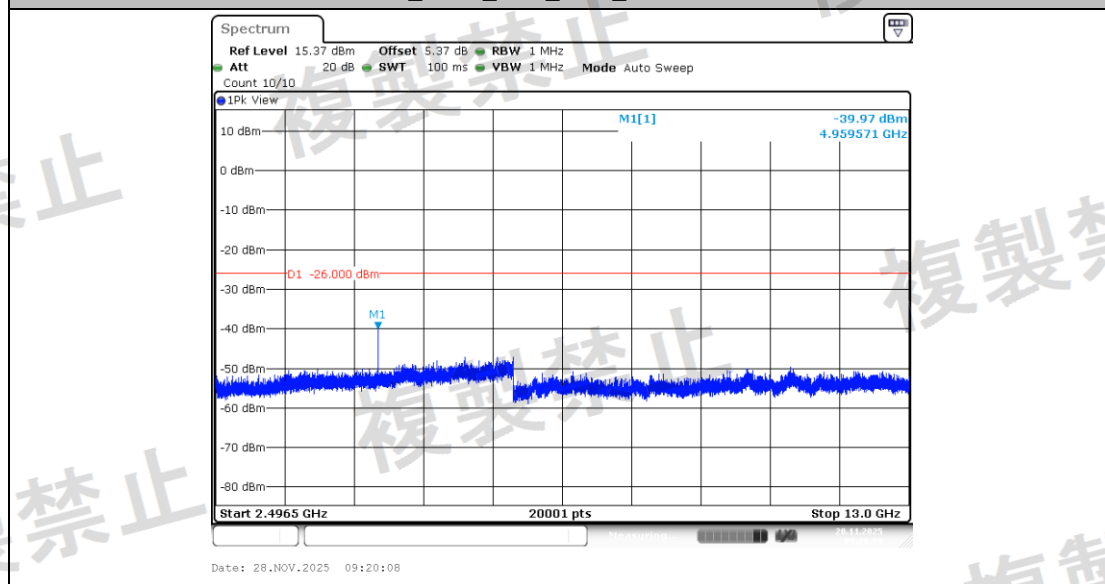
NTNV_3DH5_Ant1_2480_2387~2400



NTNV_3DH5_Ant1_2480_2483.5~2496.5



NTNV_3DH5_Ant1_2480_2496.5~13000

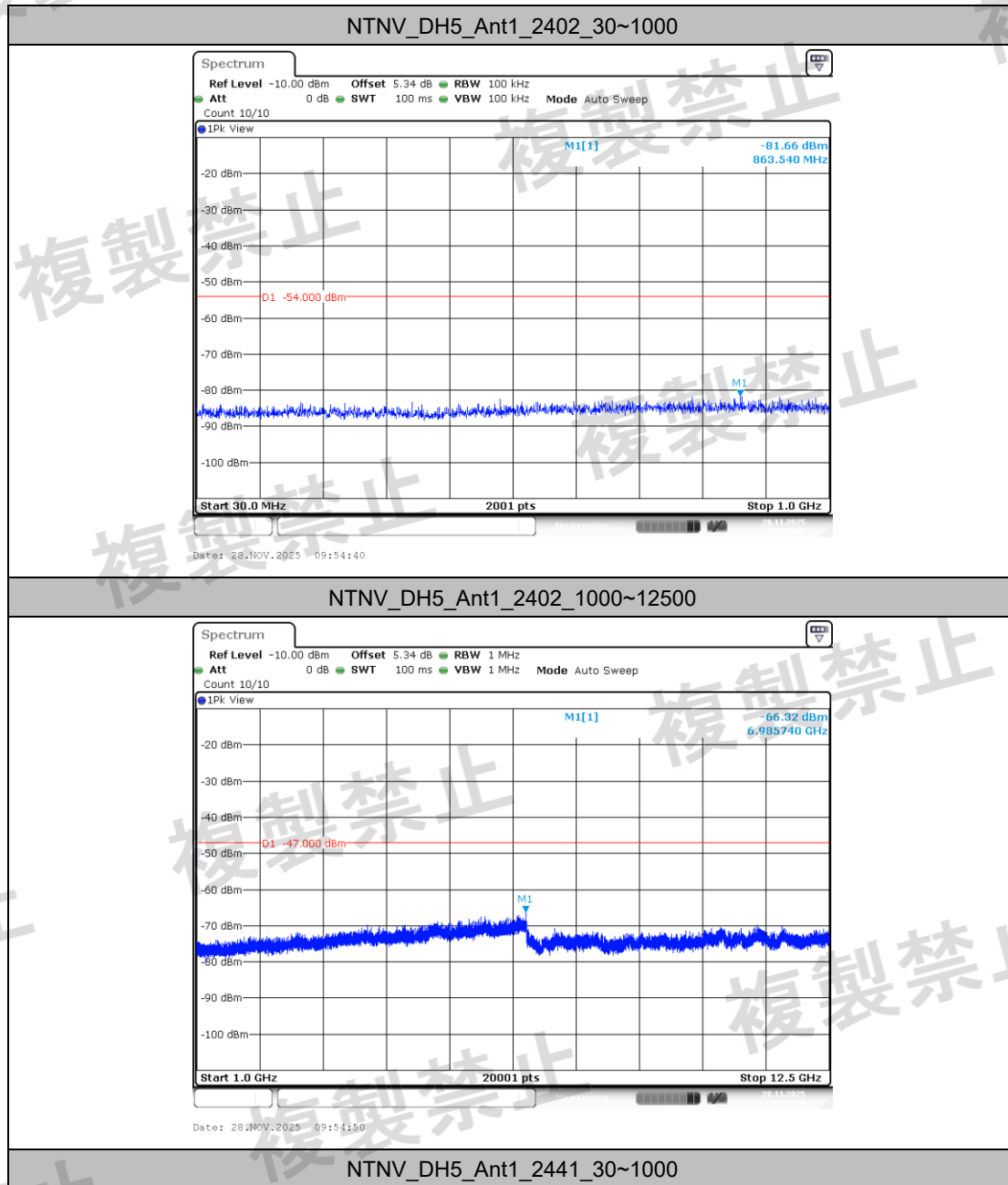


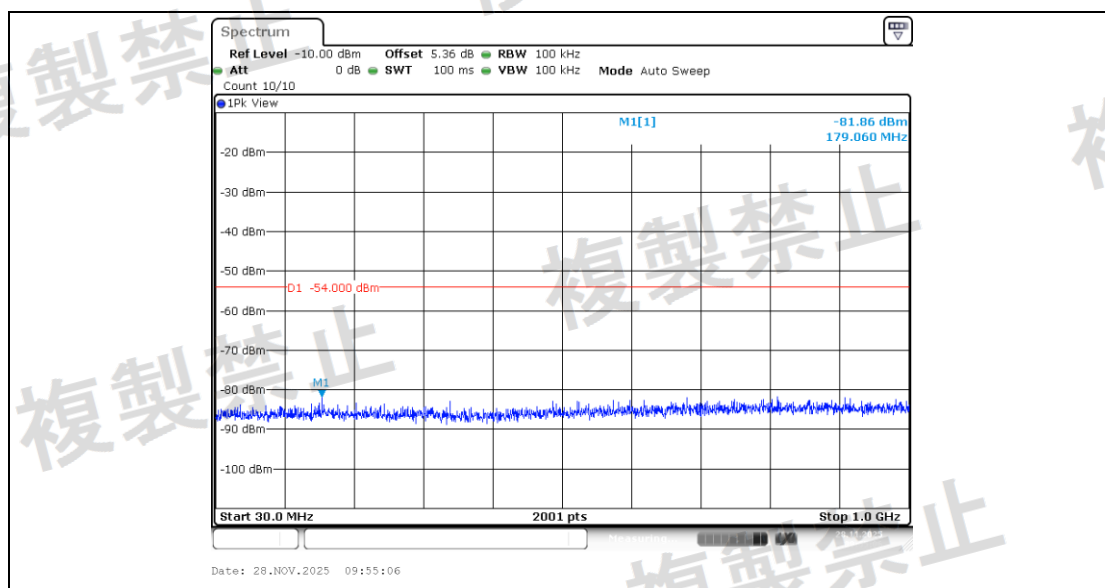
Appendix E: Spurious Emission of RX

Test Result

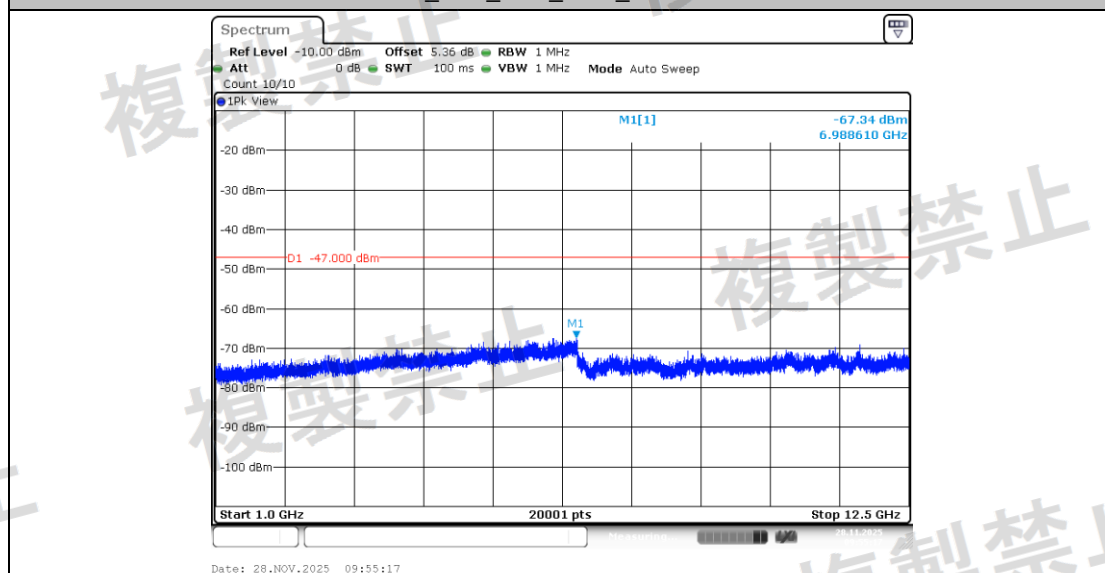
Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	863.54	-81.66	≤-54	0.00682	≤4	PASS
				1000~12500	6985.74	-66.32	≤-47	0.23335	≤20	PASS
			2441	30~1000	179.06	-81.86	≤-54	0.00652	≤4	PASS
				1000~12500	6988.61	-67.34	≤-47	0.18450	≤20	PASS
			2480	30~1000	972.61	-80.66	≤-54	0.00859	≤4	PASS
				1000~12500	6690.20	-67.75	≤-47	0.16788	≤20	PASS
	2DH5	Ant1	2402	30~1000	979.40	-81.91	≤-54	0.00644	≤4	PASS
				1000~12500	6938.02	-66.86	≤-47	0.20606	≤20	PASS
			2441	30~1000	990.55	-82.03	≤-54	0.00627	≤4	PASS
				1000~12500	6932.27	-67.32	≤-47	0.18535	≤20	PASS
			2480	30~1000	580.93	-81.88	≤-54	0.00649	≤4	PASS
				1000~12500	6192.85	-66.18	≤-47	0.24099	≤20	PASS
	3DH5	Ant1	2402	30~1000	924.62	-82.10	≤-54	0.00617	≤4	PASS
				1000~12500	6965.61	-67.10	≤-47	0.19498	≤20	PASS
			2441	30~1000	176.64	-82.11	≤-54	0.00615	≤4	PASS
				1000~12500	6886.27	-67.11	≤-47	0.19454	≤20	PASS
			2480	30~1000	784.53	-81.99	≤-54	0.00632	≤4	PASS
				1000~12500	6982.86	-67.17	≤-47	0.19187	≤20	PASS

Test Graphs

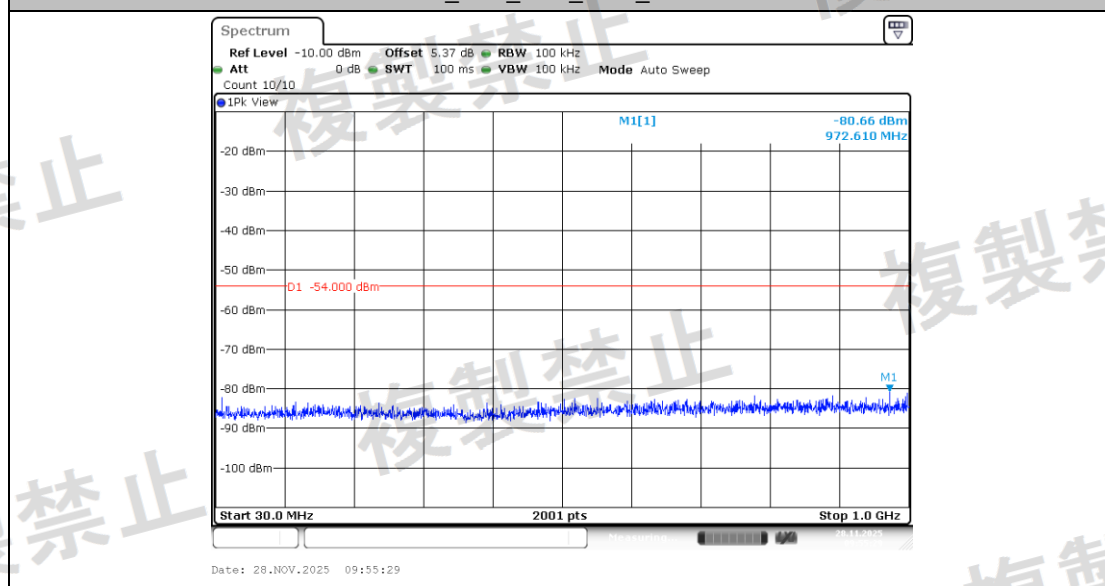


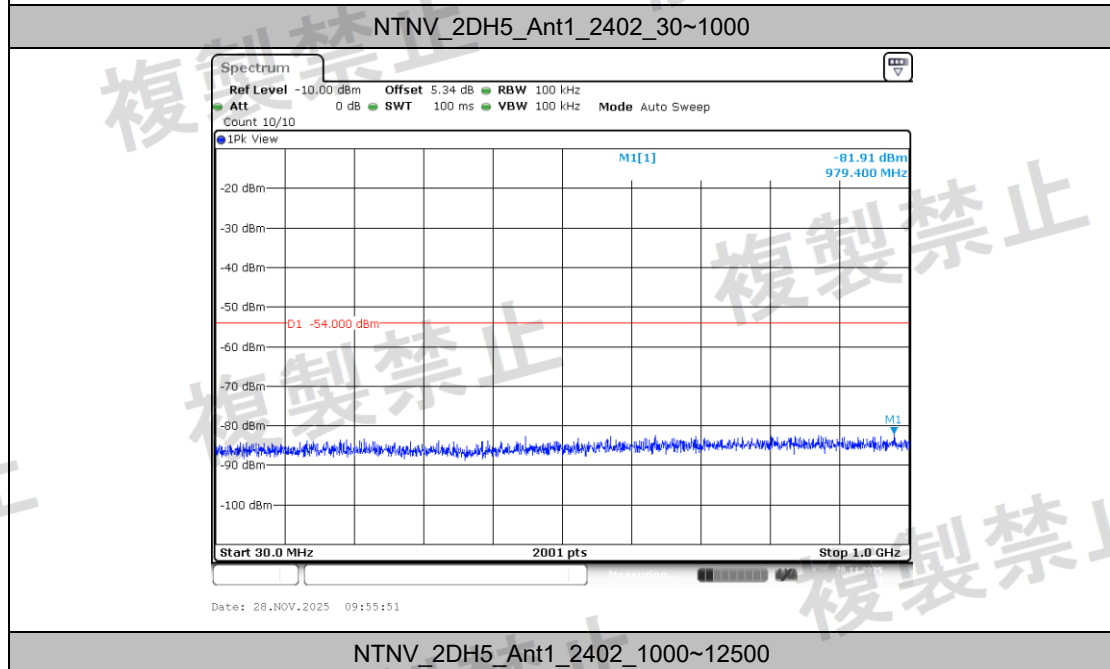
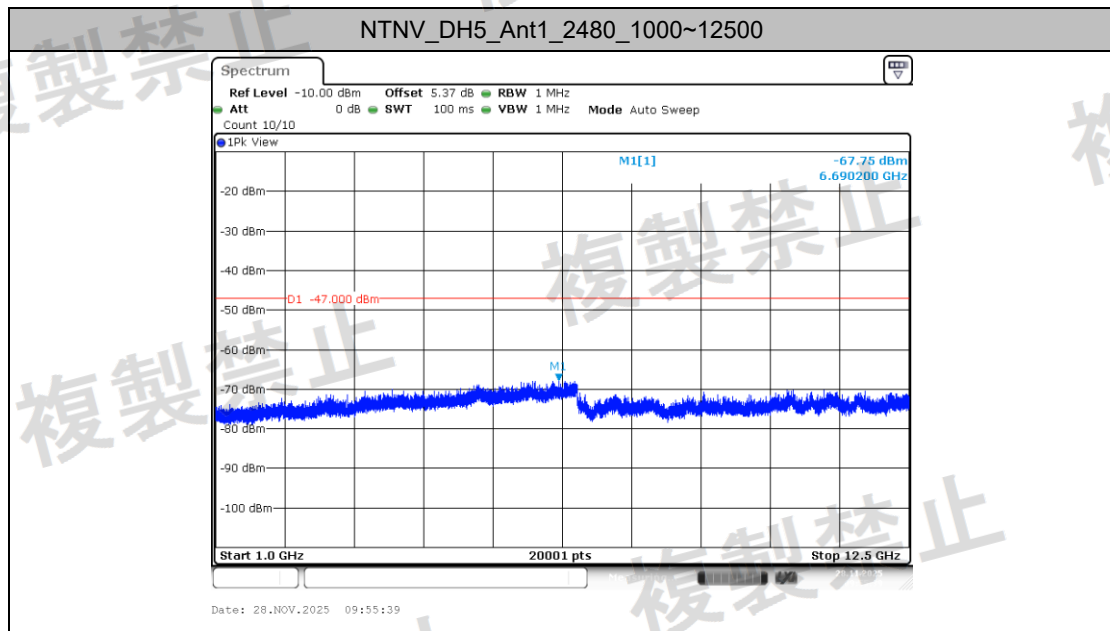


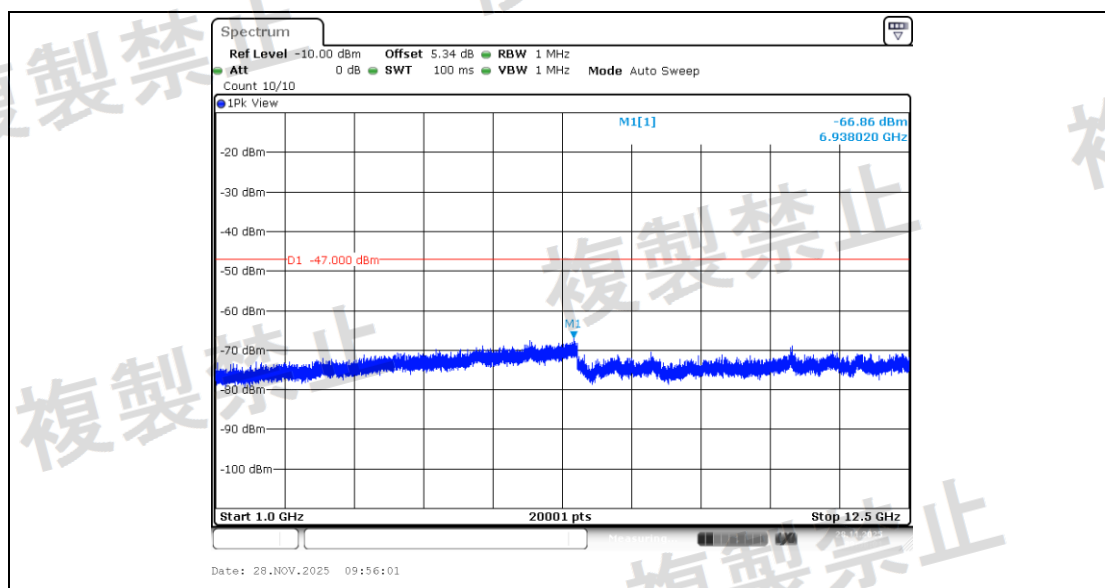
NTNV_DH5_Ant1_2441_1000~12500



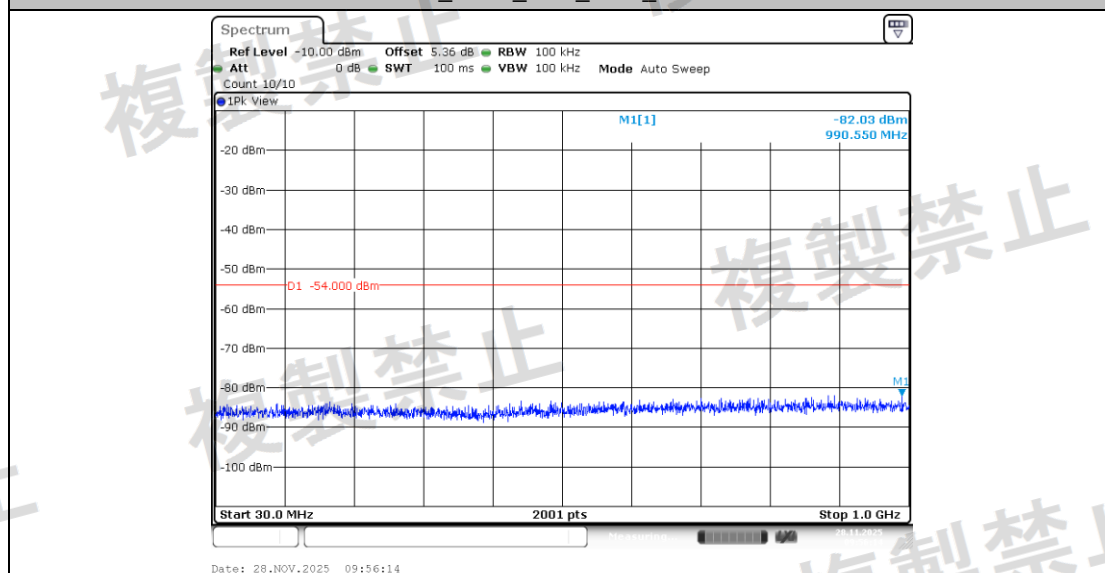
NTNV_DH5_Ant1_2480_30~1000



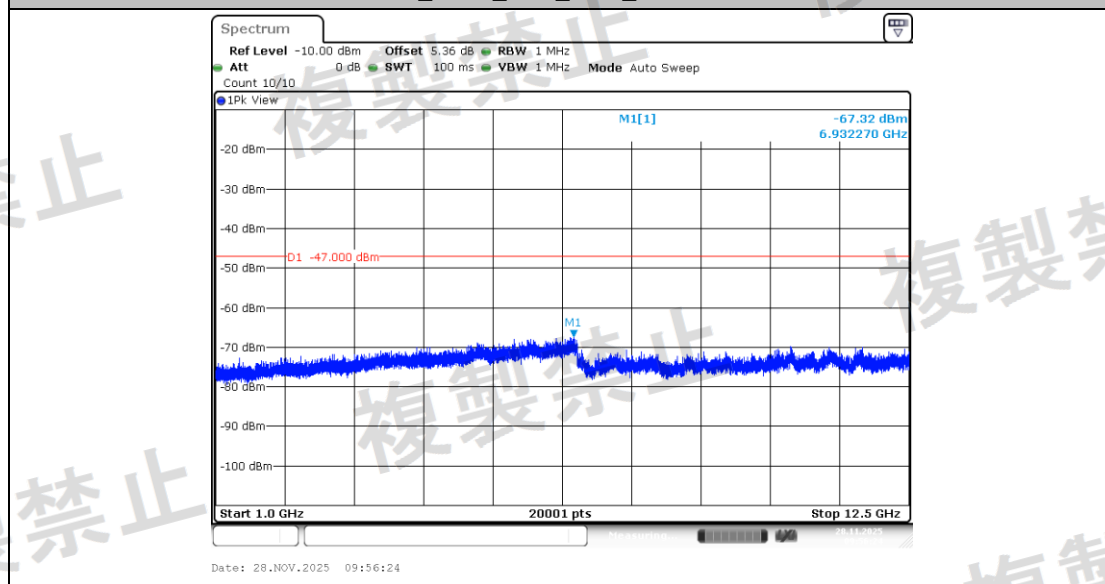


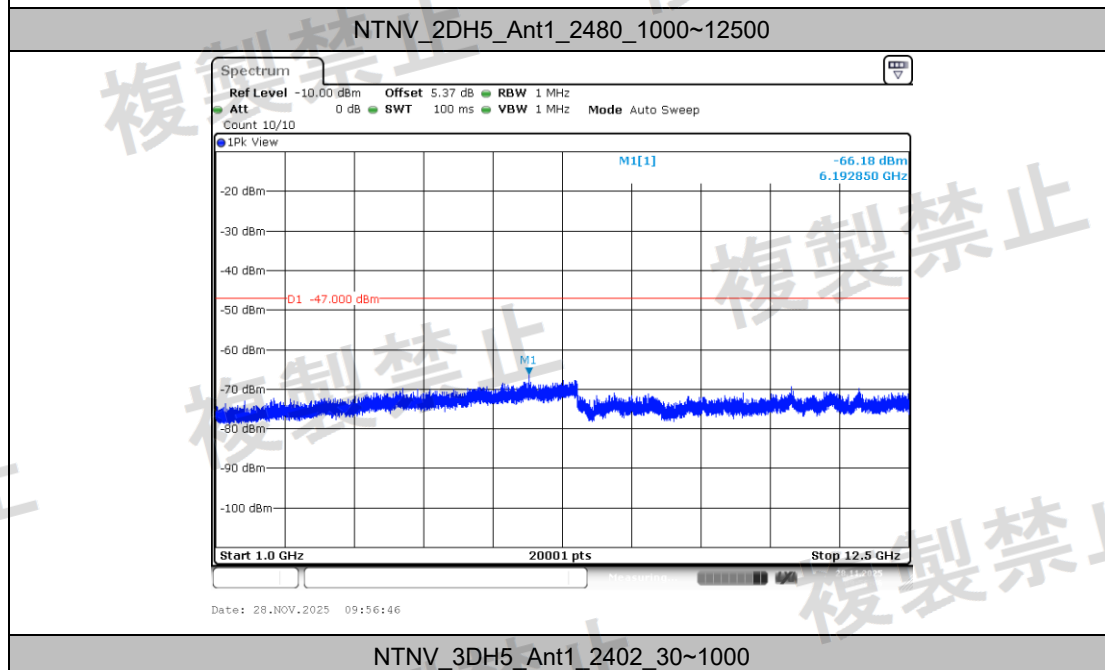
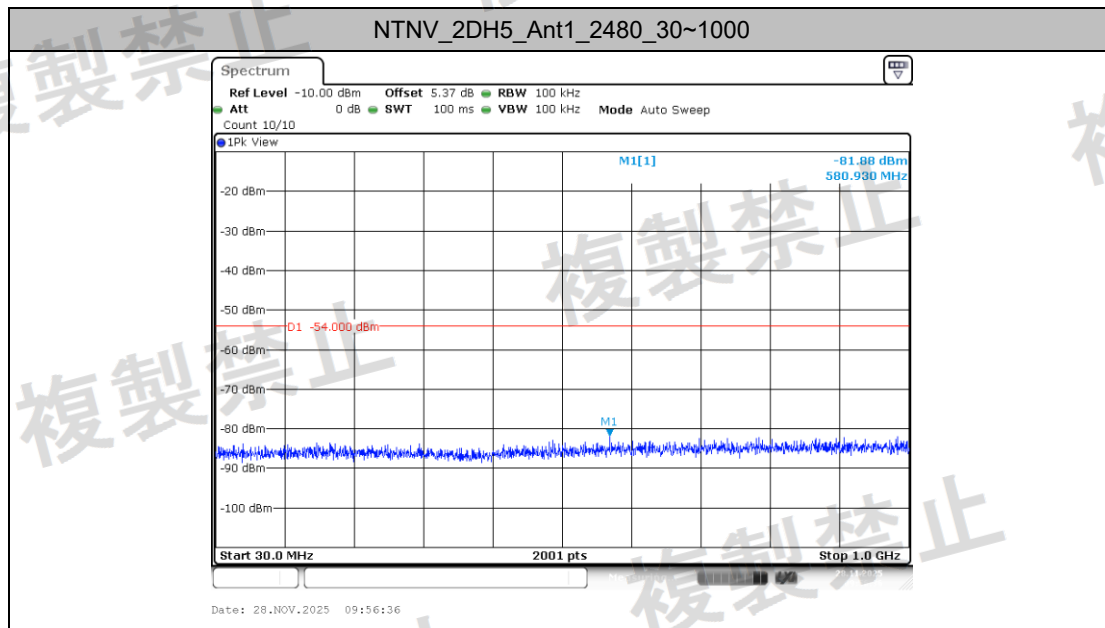


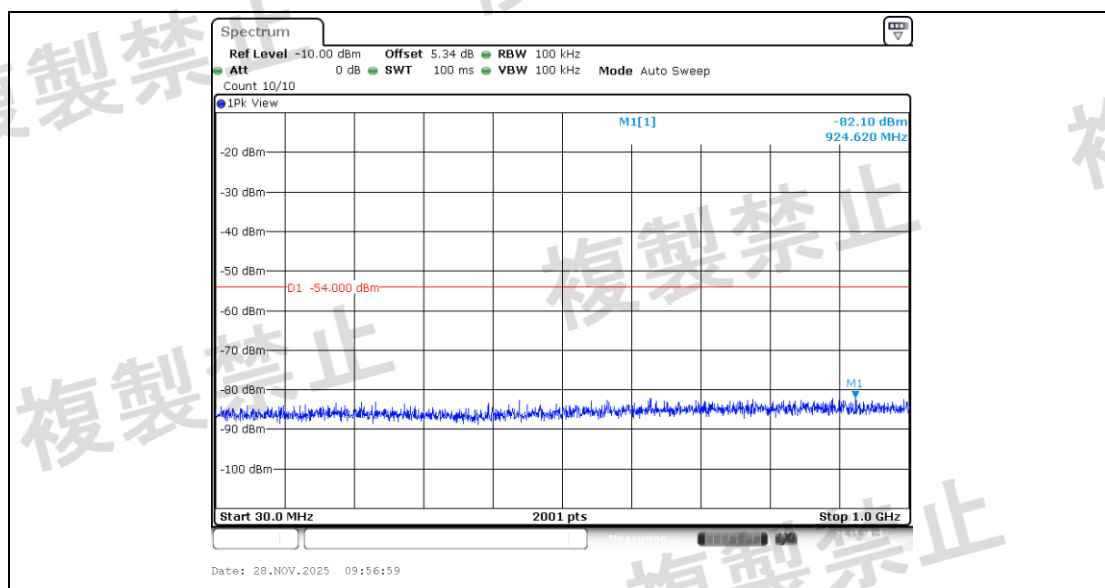
NTNV_2DH5_Ant1_2441_30~1000



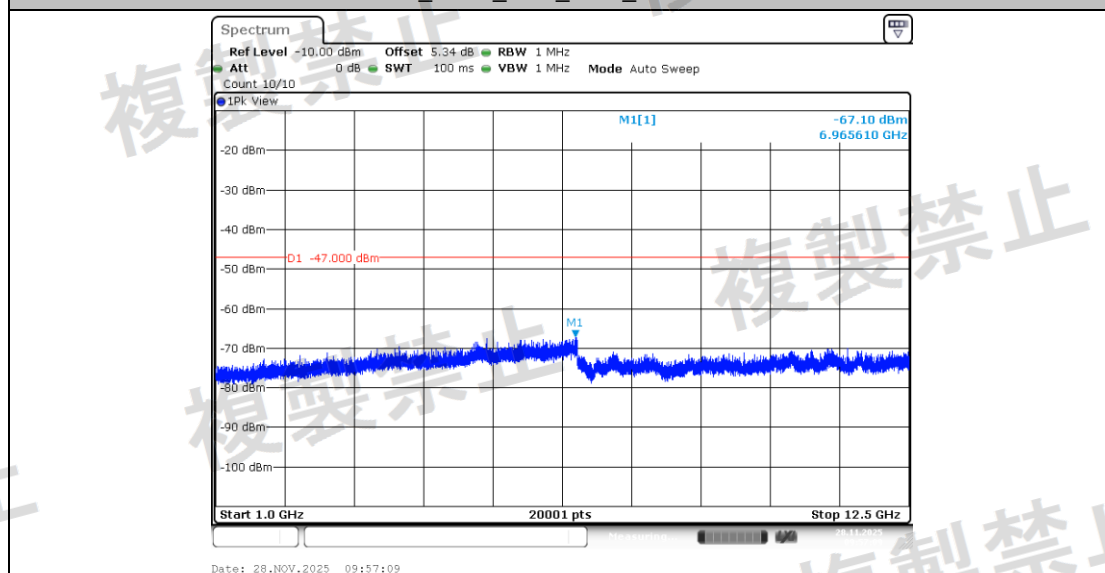
NTNV_2DH5_Ant1_2441_1000~12500



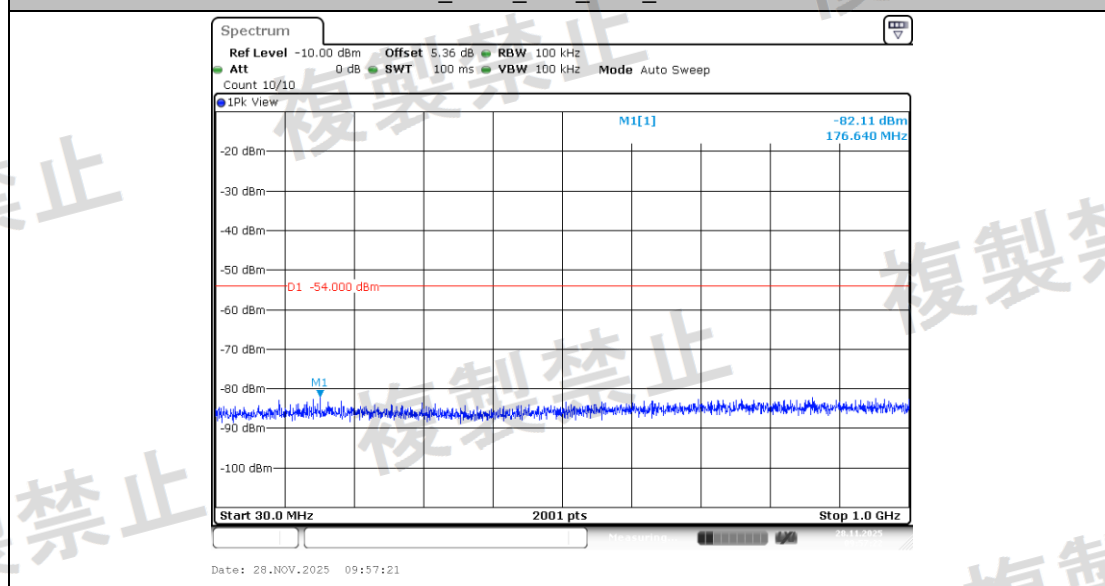


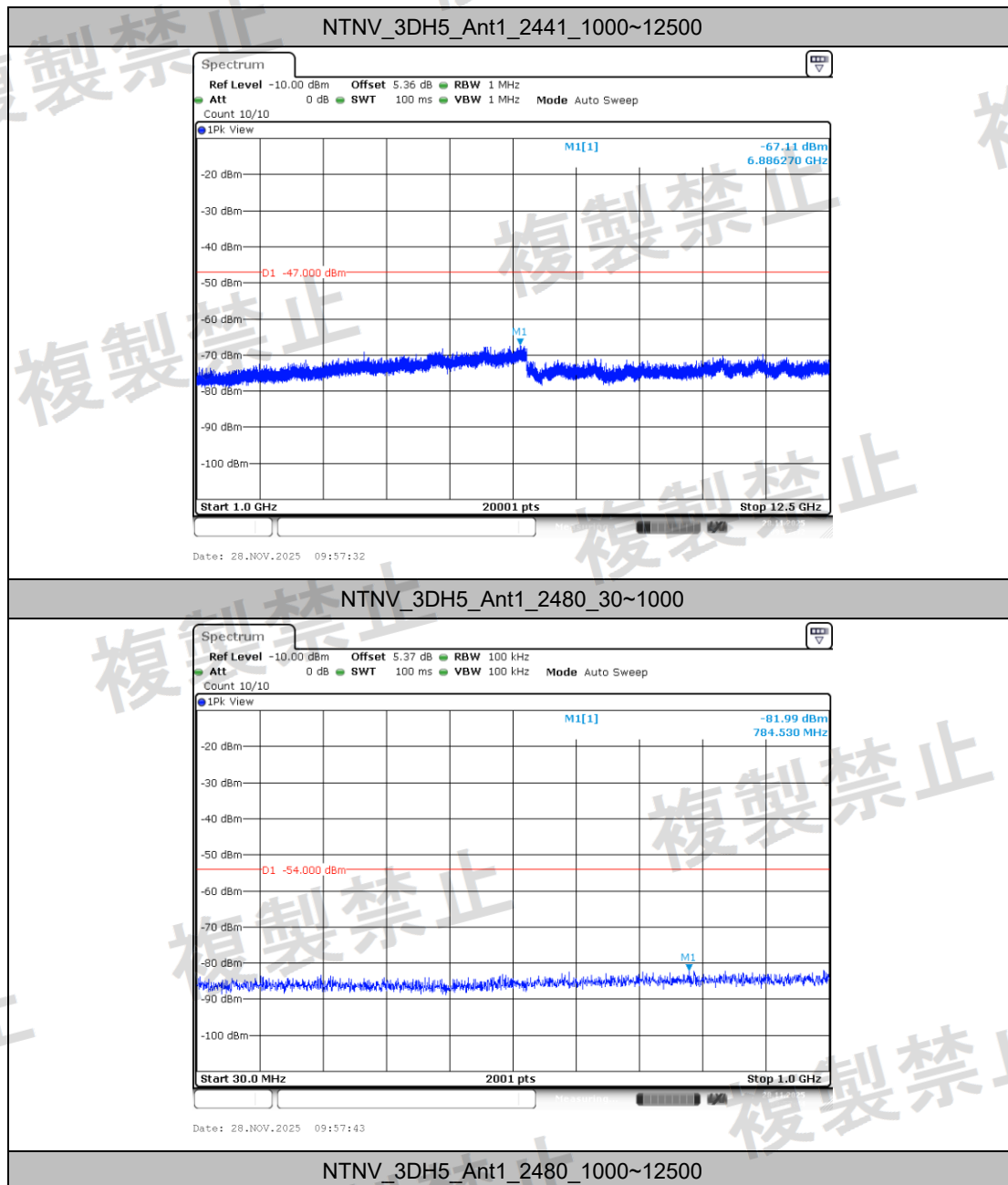


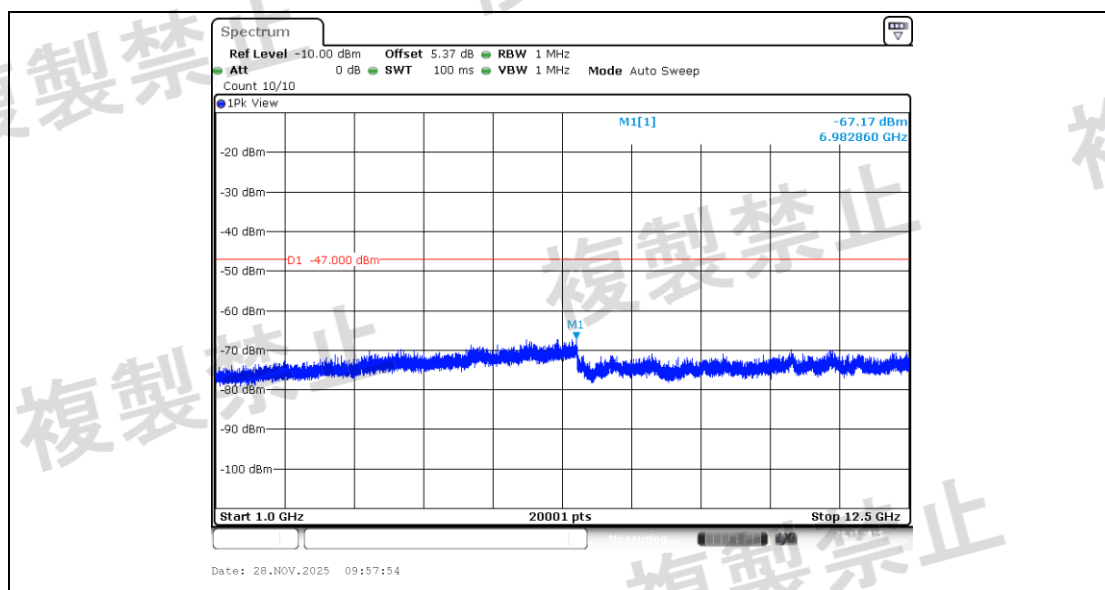
NTNV_3DH5_Ant1_2402_1000~12500



NTNV_3DH5_Ant1_2441_30~1000





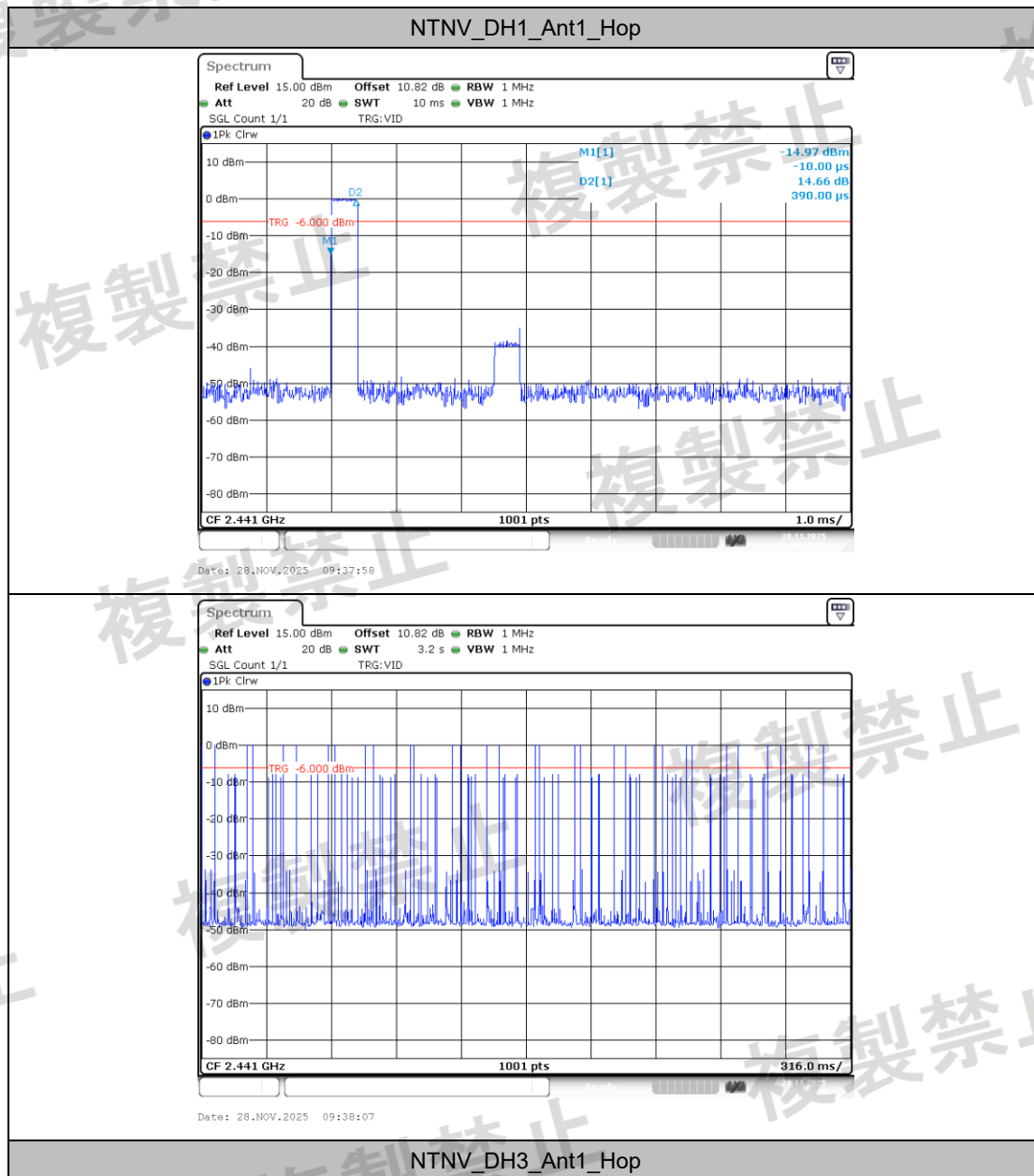


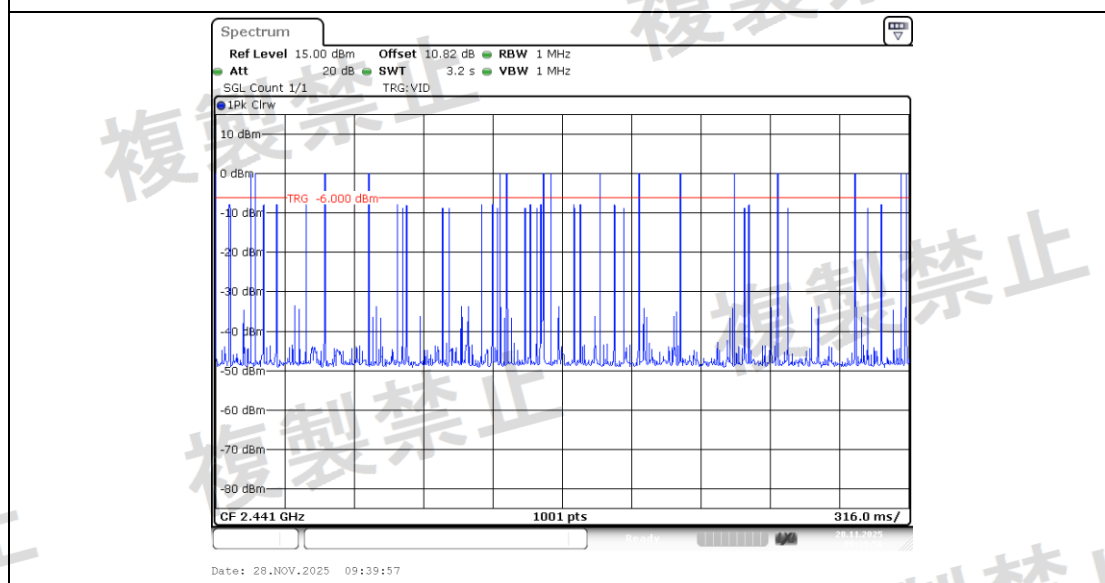
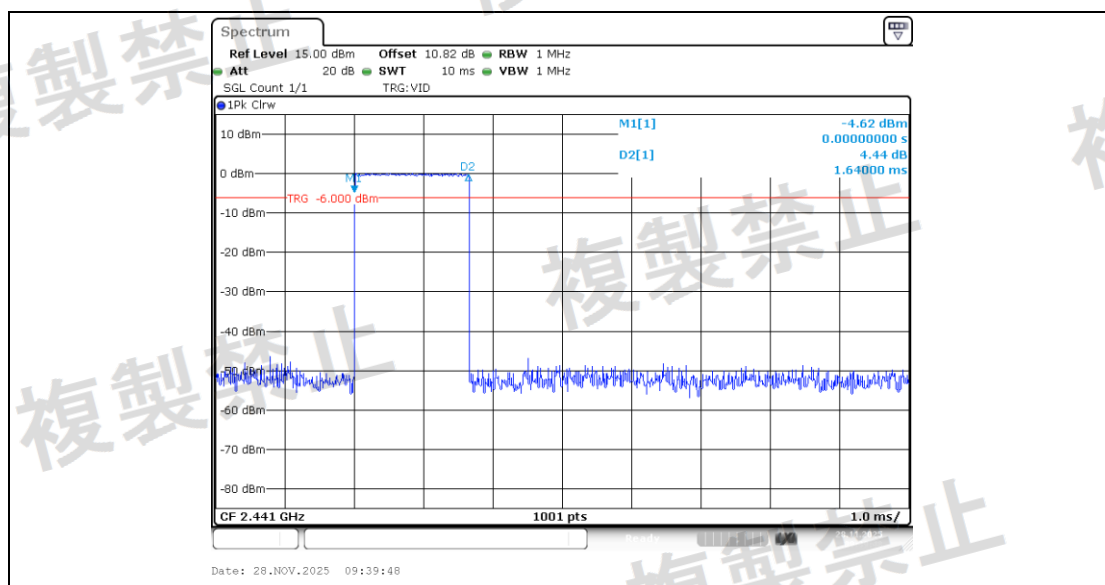
Appendix F: Dwell Time

Test Result

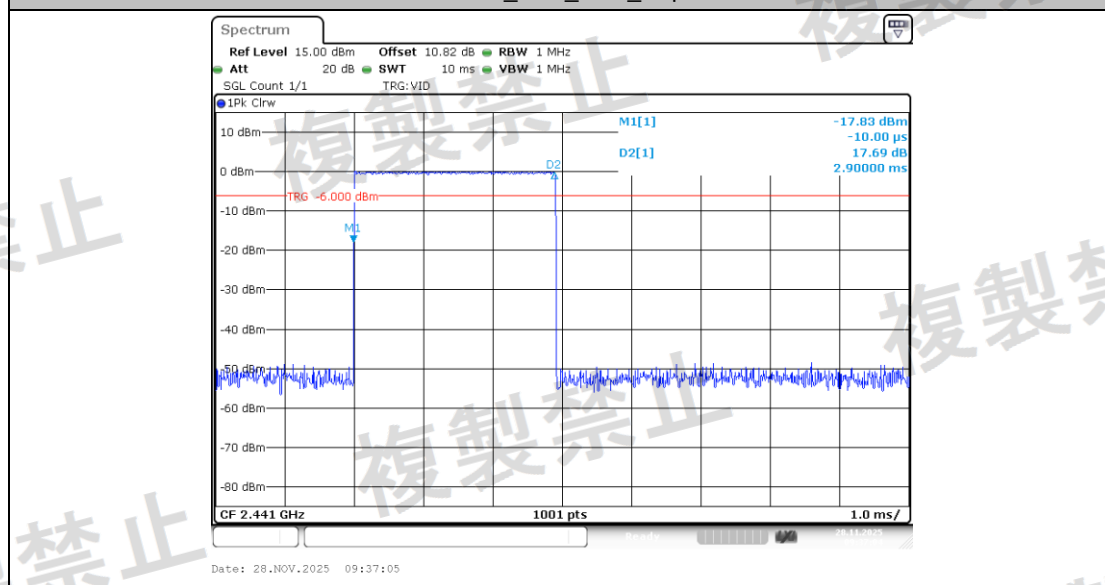
Test Condition	Test Mode	Antenna	Freq(M Hz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
	DH3	Ant1	Hop	1.64	160	0.262	≤0.4	PASS
	DH5	Ant1	Hop	2.90	90	0.261	≤0.4	PASS
	2DH1	Ant1	Hop	0.39	300	0.117	≤0.4	PASS
	2DH3	Ant1	Hop	1.64	180	0.295	≤0.4	PASS
	2DH5	Ant1	Hop	2.90	120	0.348	≤0.4	PASS
	3DH1	Ant1	Hop	0.39	300	0.117	≤0.4	PASS
	3DH3	Ant1	Hop	1.65	170	0.281	≤0.4	PASS
	3DH5	Ant1	Hop	2.89	70	0.202	≤0.4	PASS

Test Graphs



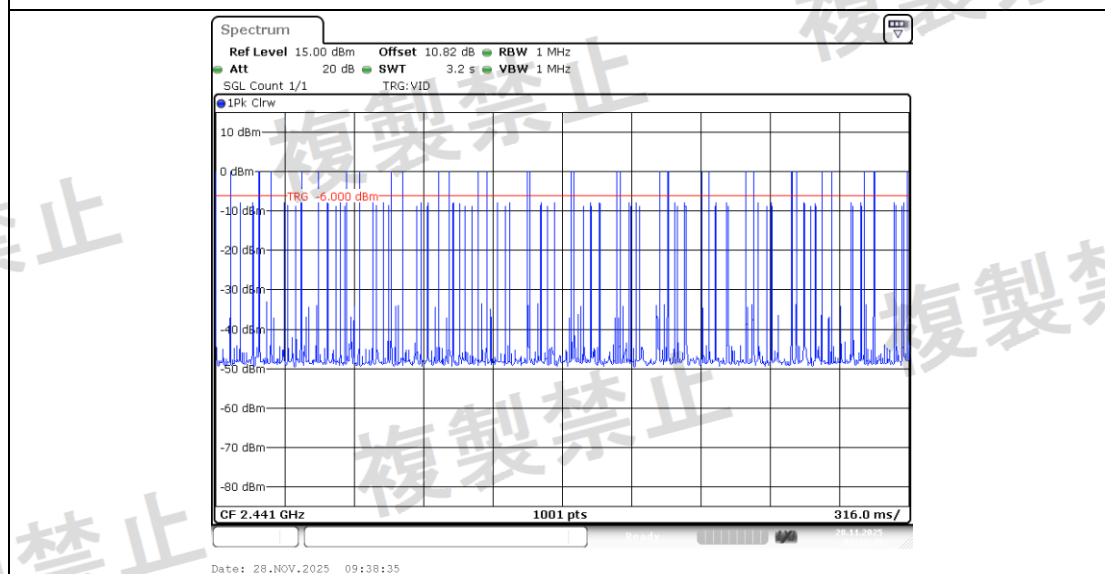
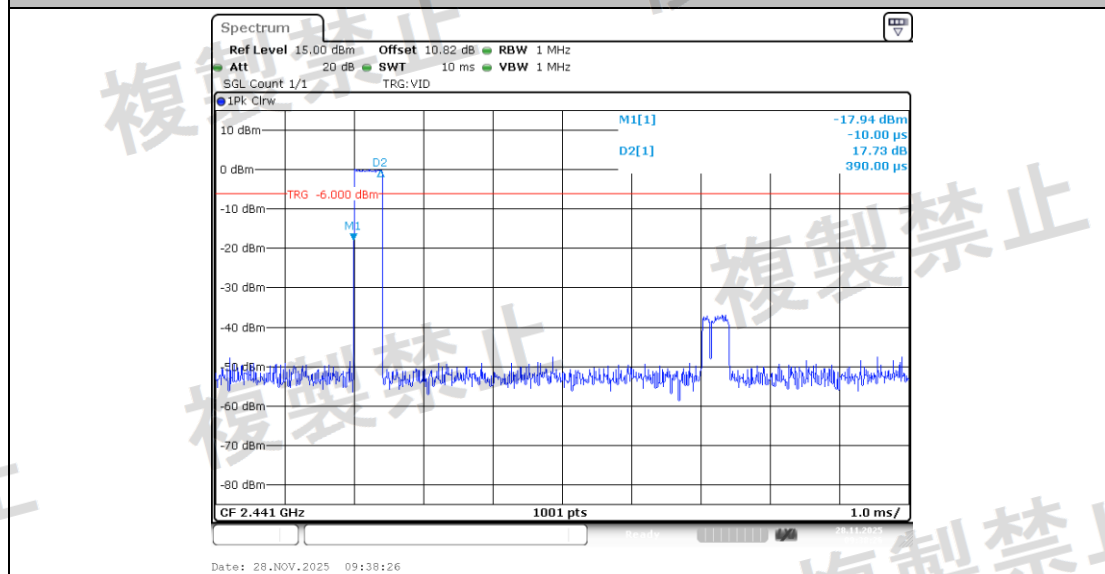


NTNV_DH5_Ant1_Hop

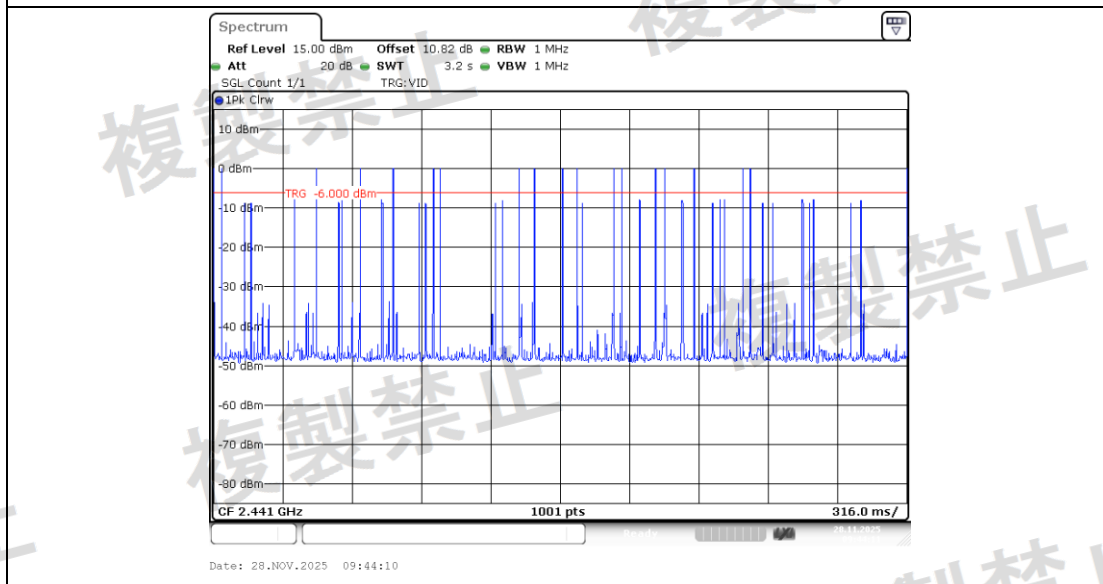
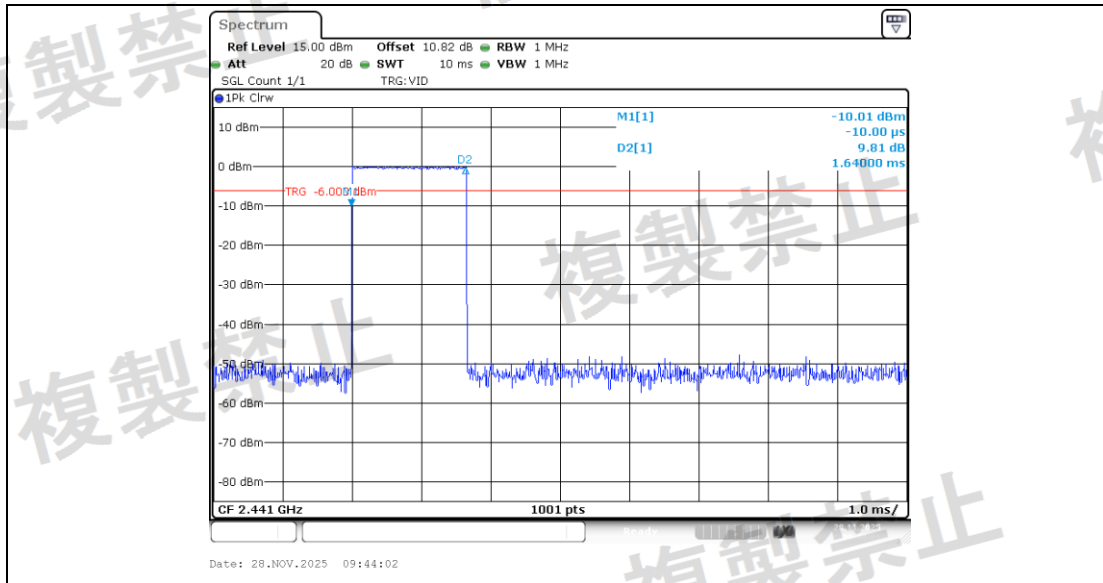




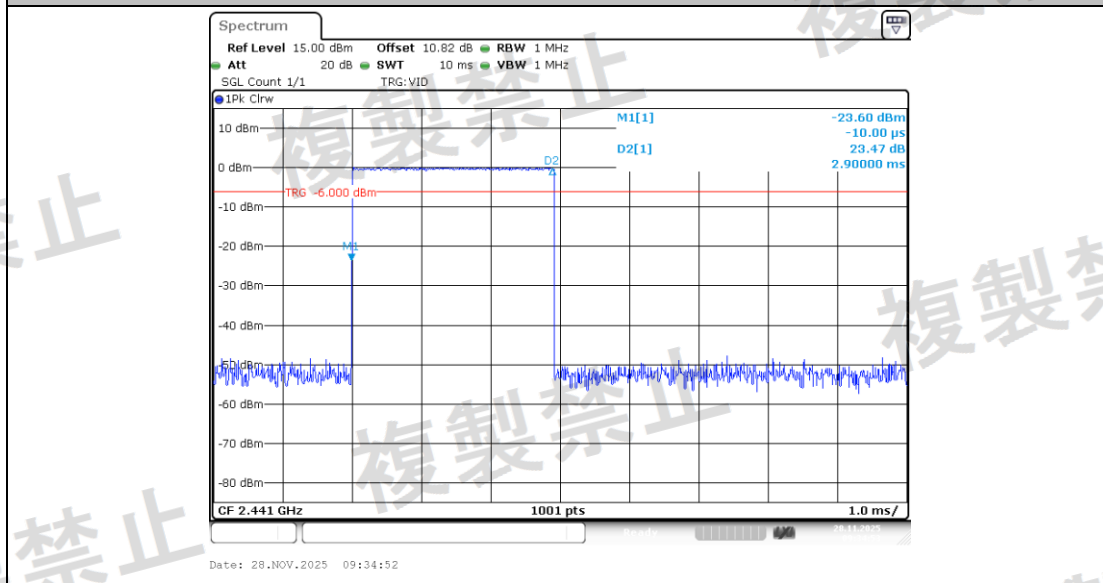
NTNV_2DH1_Ant1_Hop



NTNV_2DH3_Ant1_Hop

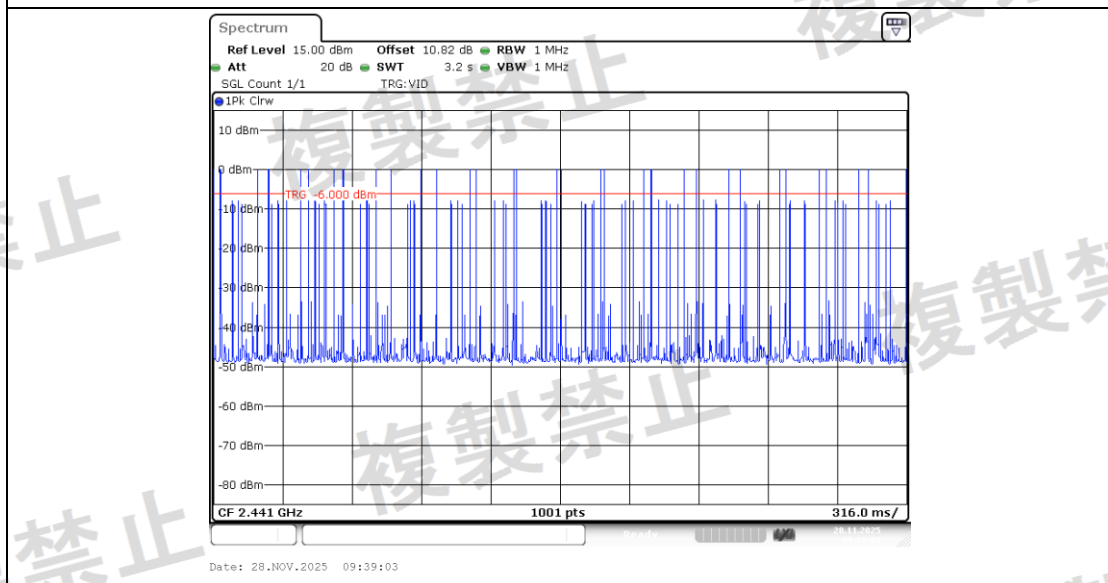
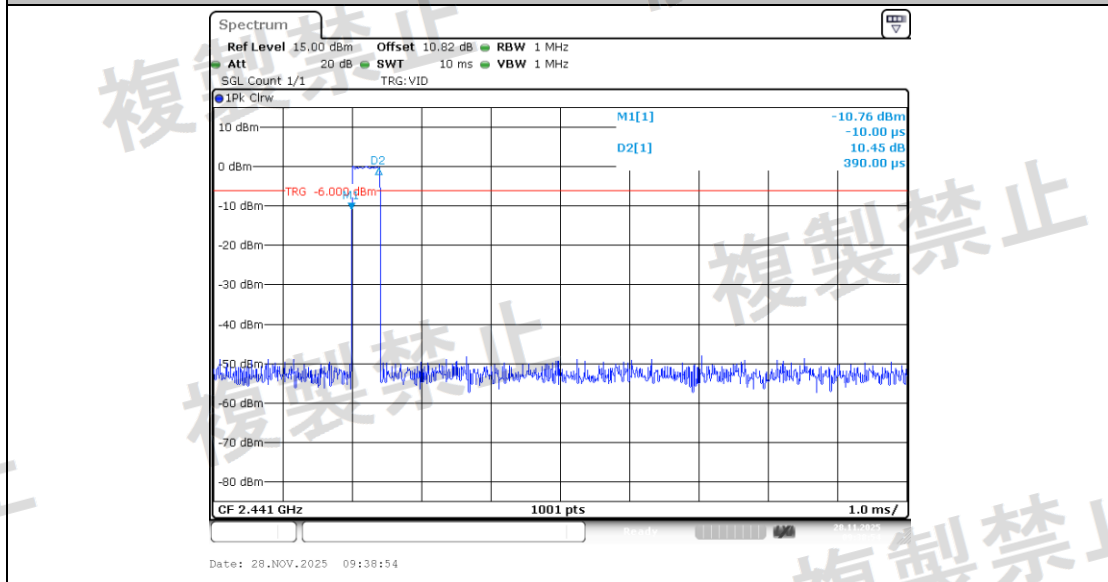


NTNV_2DH5_Ant1_Hop

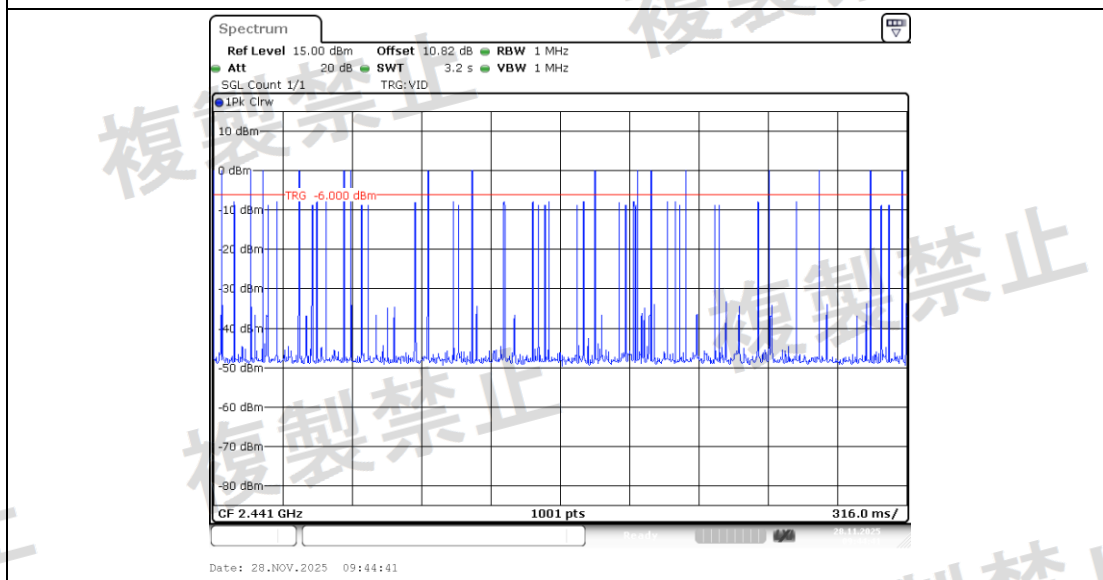
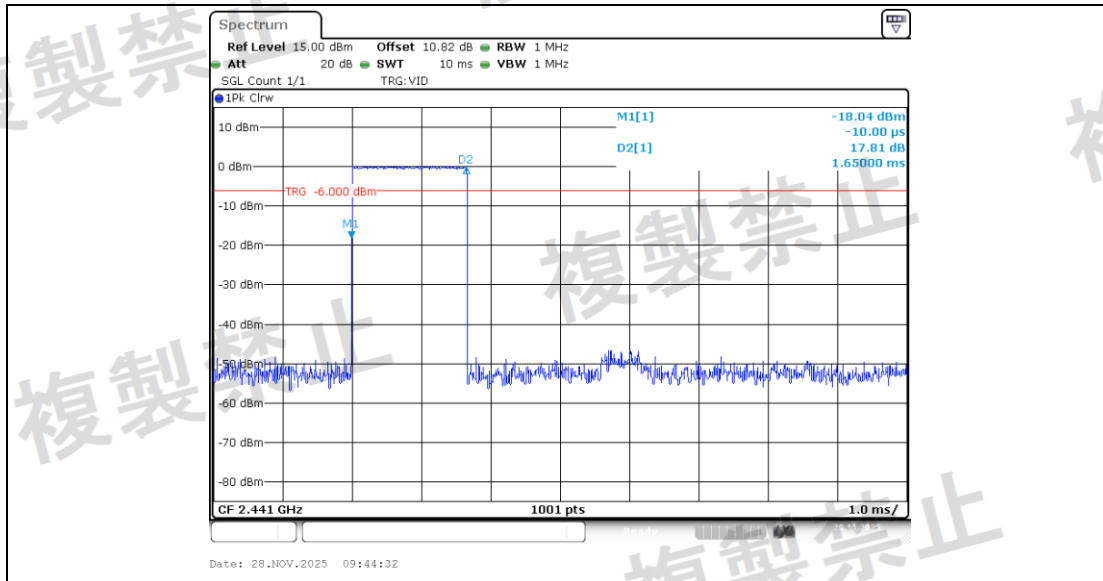




NTNV_3DH1_Ant1_Hop



NTNV_3DH3_Ant1_Hop



NTNV_3DH5_Ant1_Hop

