

Appendix RF Test Data for BLE

Company : COOPERS CO.,LTD

会社 : COOPERS 株式会社

EUT : tablet PC

Model Number : P10

Report No. : CTA26031200203

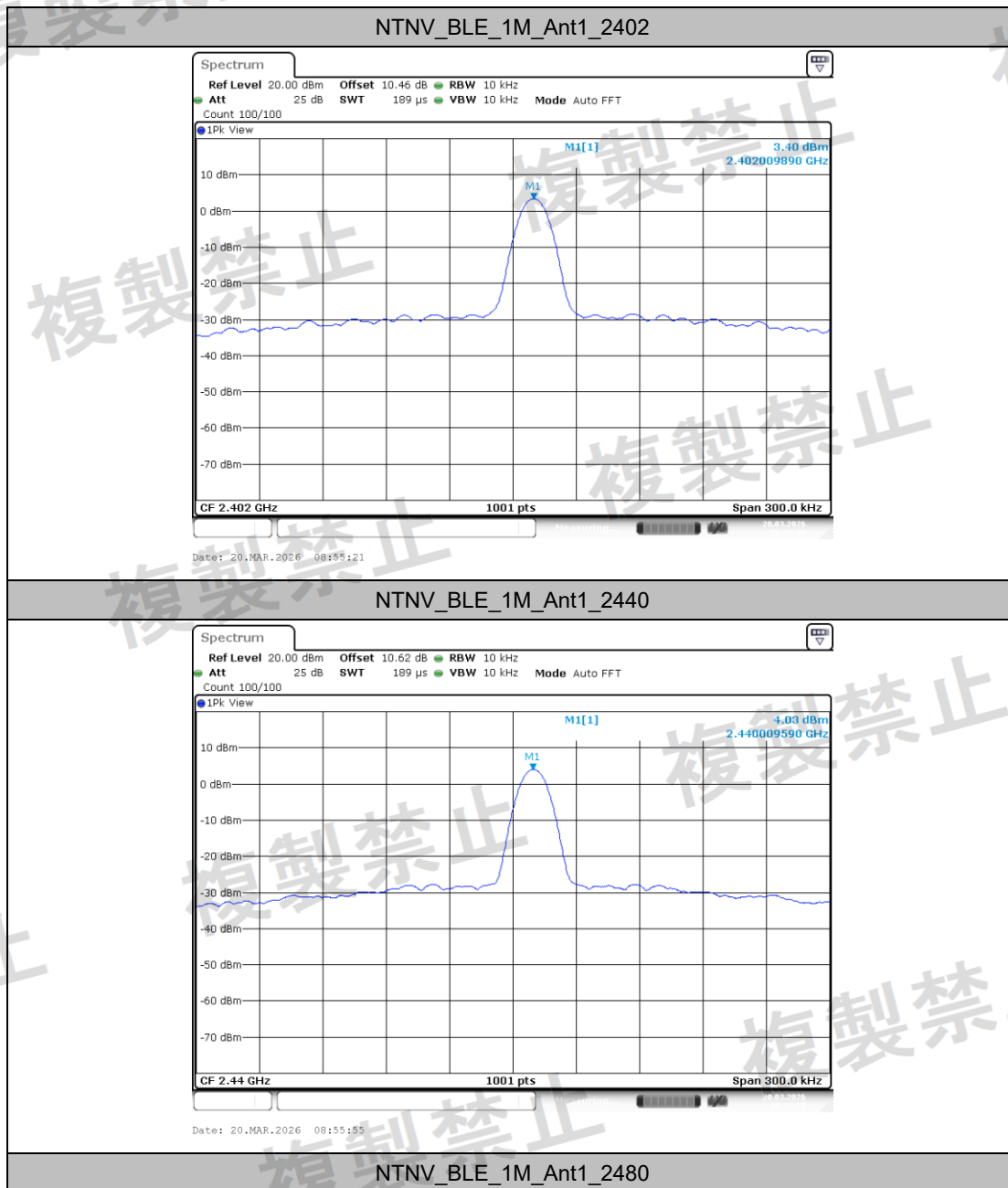
Reviewed By : Eric Wang

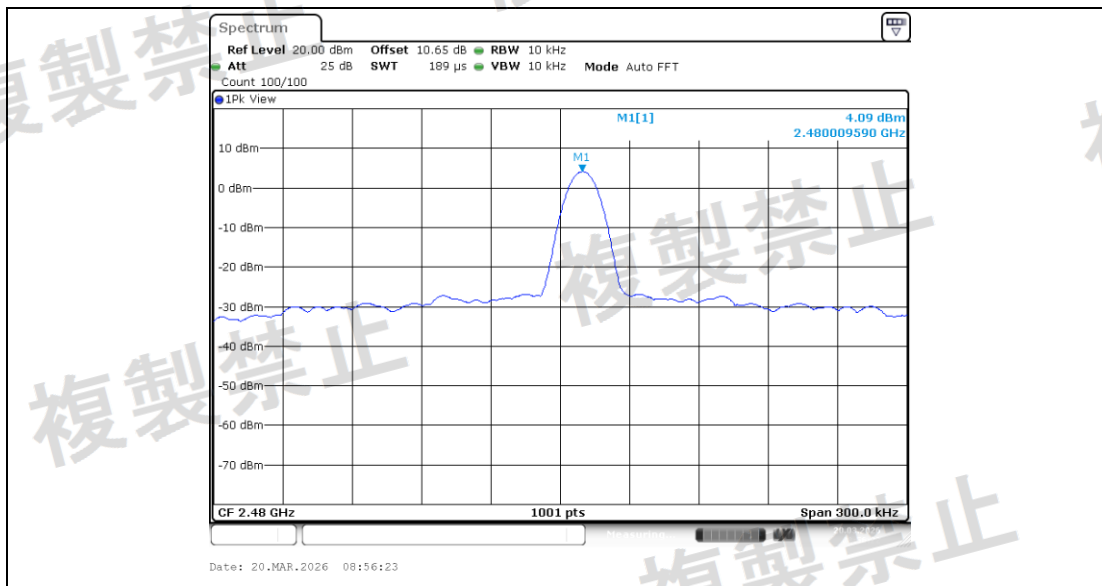
Appendix A: Frequency Error

Test Result

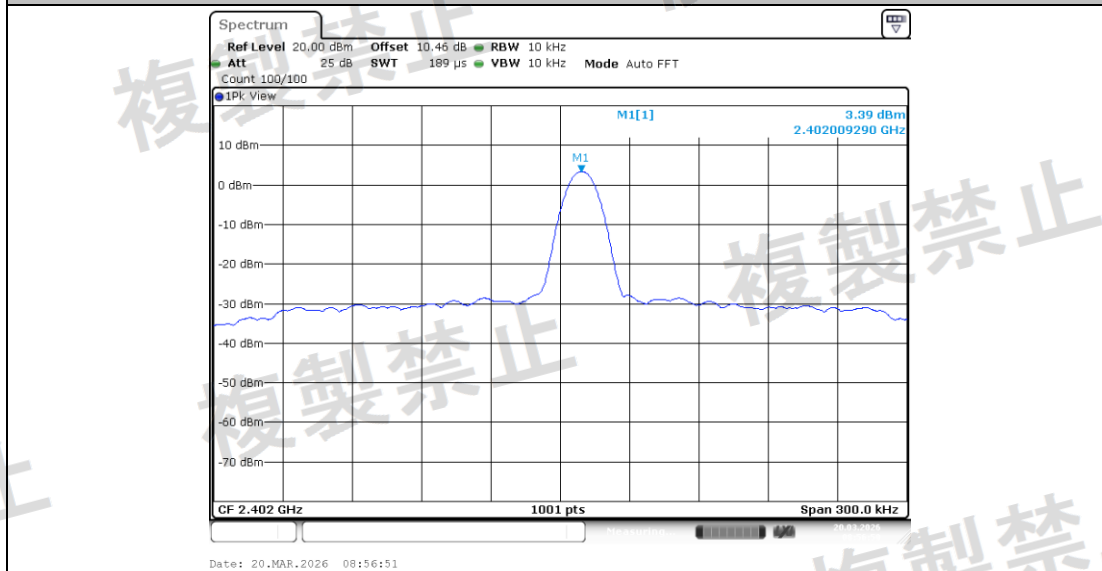
TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	BLE_1M	Ant1	2402	4.11740	±50	PASS
			2440	3.93033	±50	PASS
			2480	3.86694	±50	PASS
	BLE_2M	Ant1	2402	3.86761	±50	PASS
			2440	3.80738	±50	PASS
			2480	3.86694	±50	PASS

Test Graphs

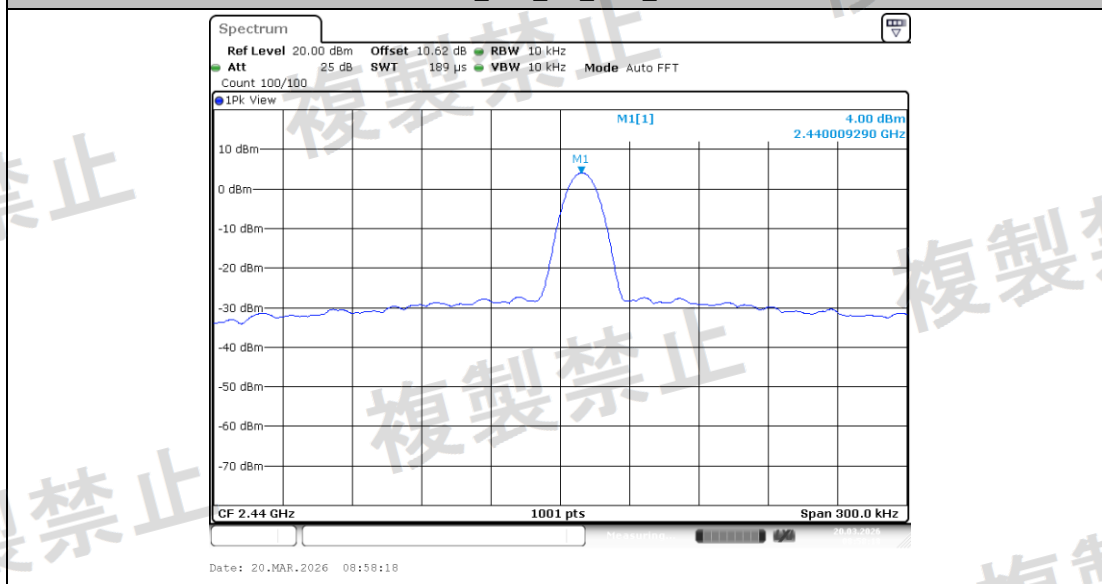


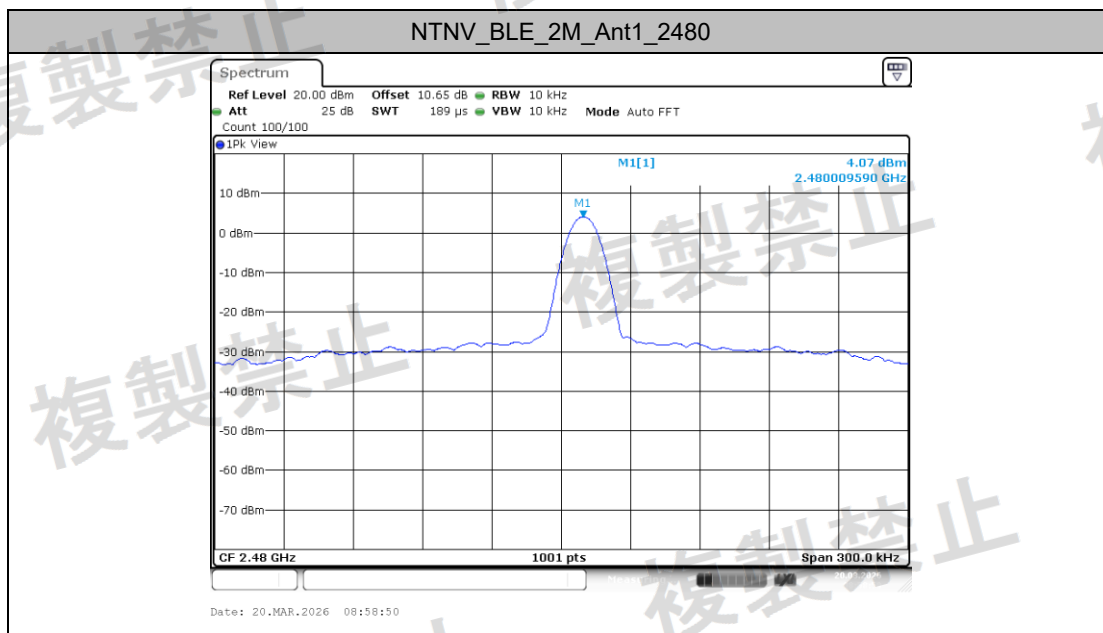


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440



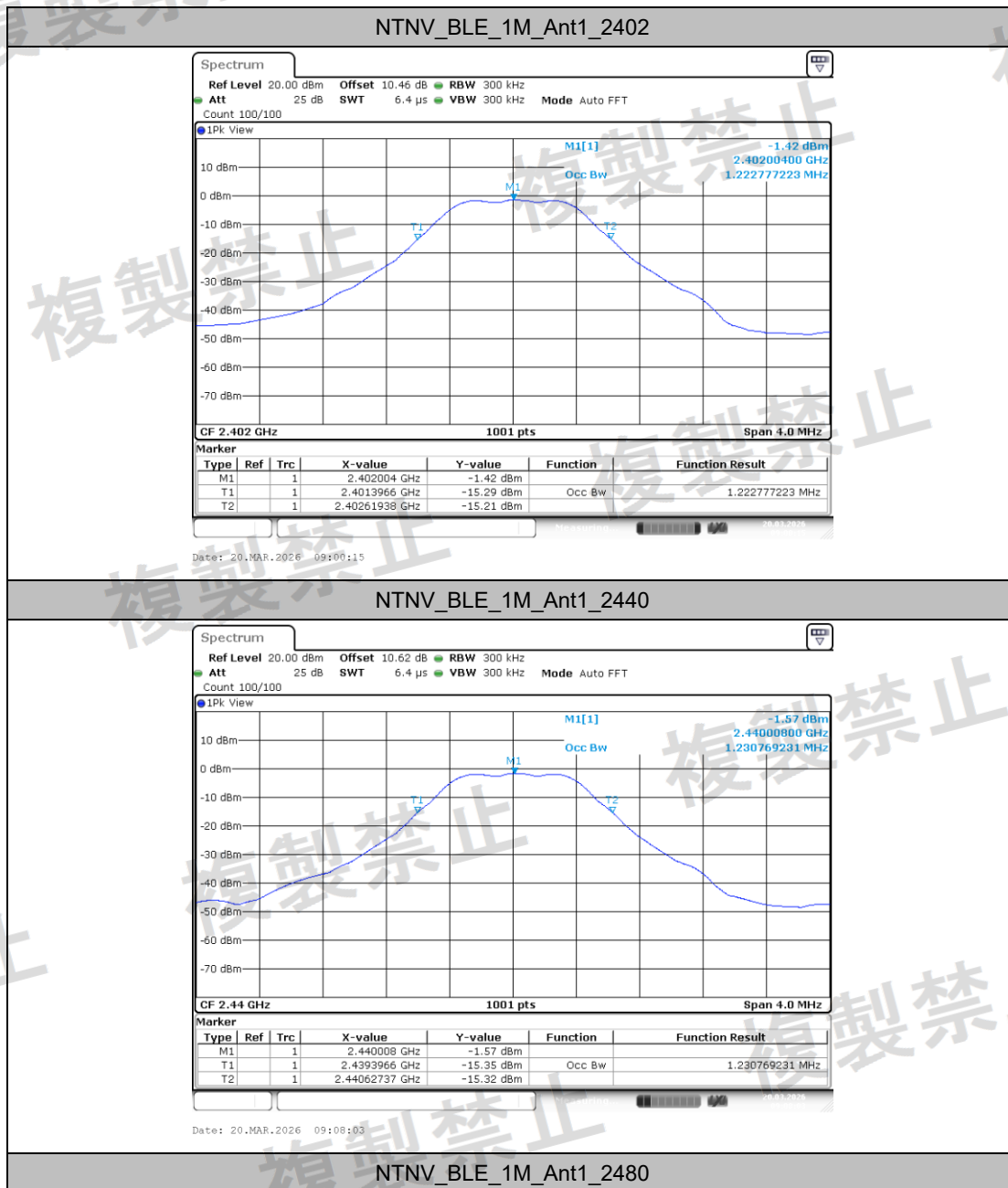


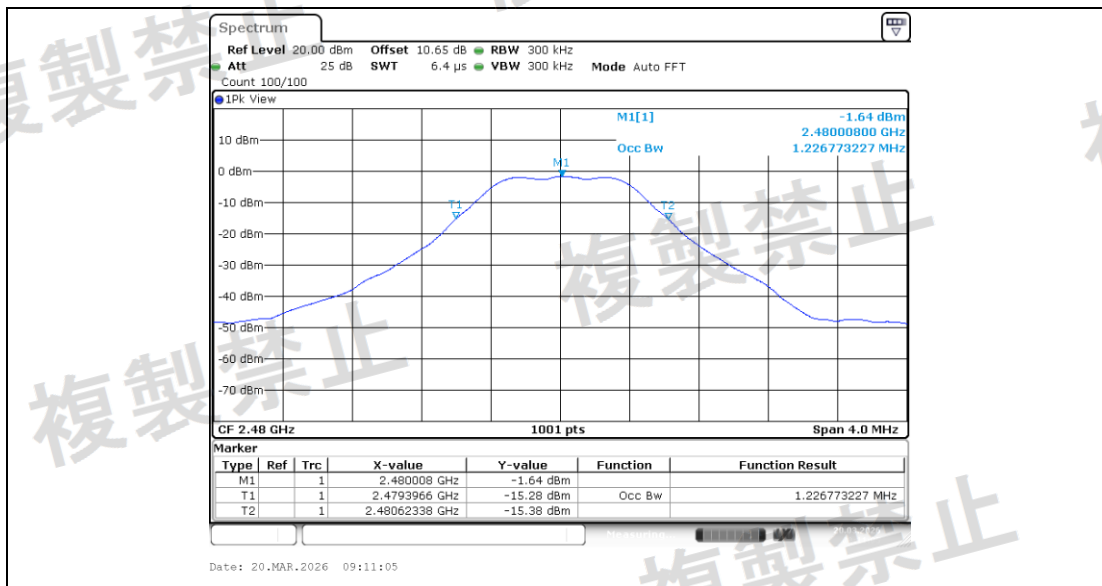
Appendix B: Occupied Bandwidth

Test Result

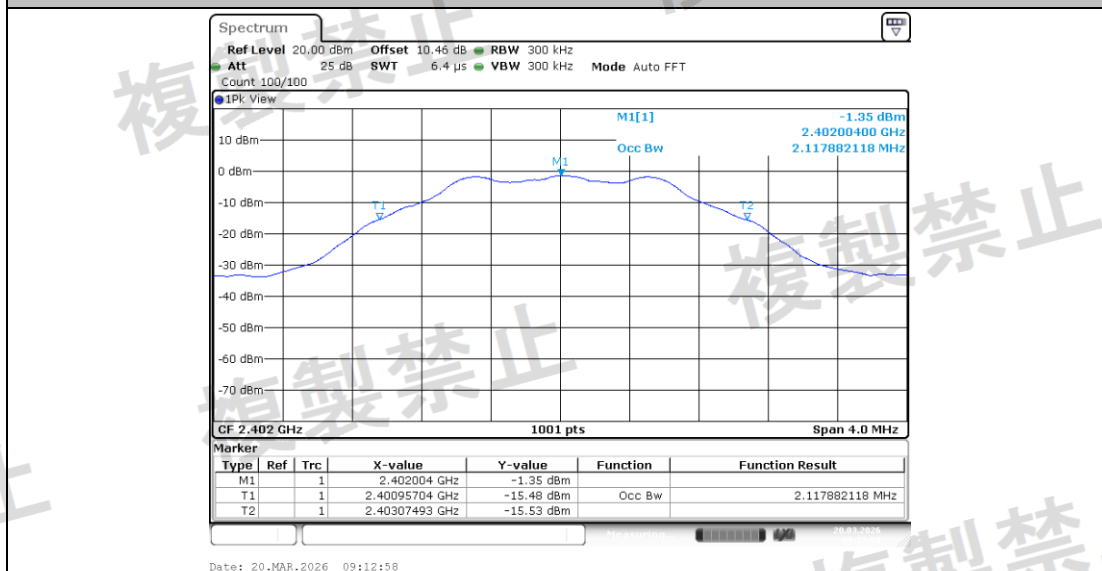
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.223	≤26	PASS
			2440	1.231	≤26	PASS
			2480	1.227	≤26	PASS
	BLE_2M	Ant1	2402	2.118	≤26	PASS
			2440	2.118	≤26	PASS
			2480	2.118	≤26	PASS

Test Graphs

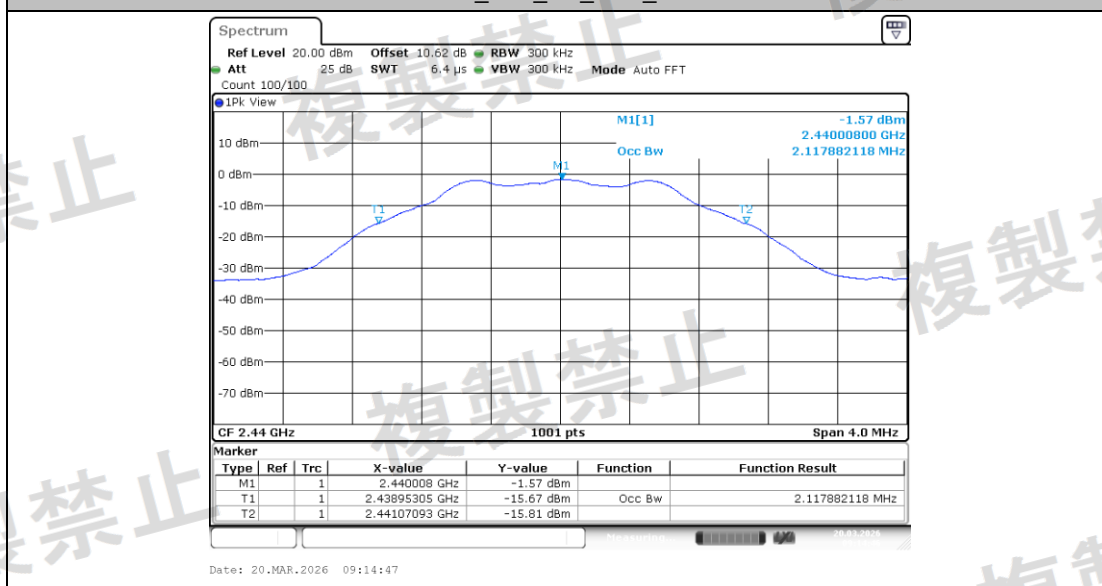


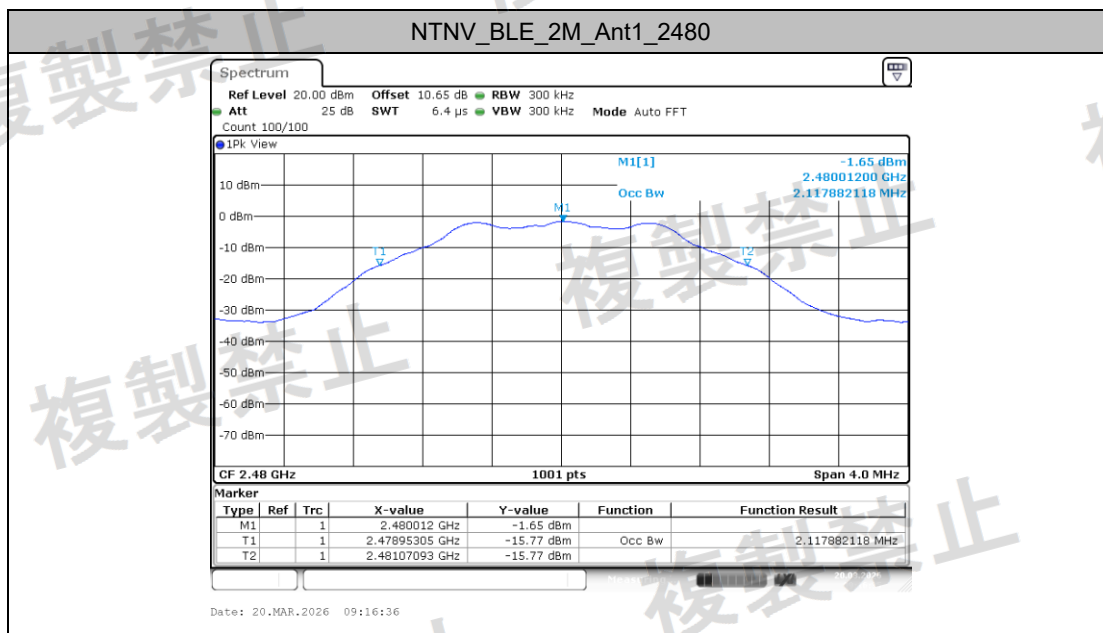


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440



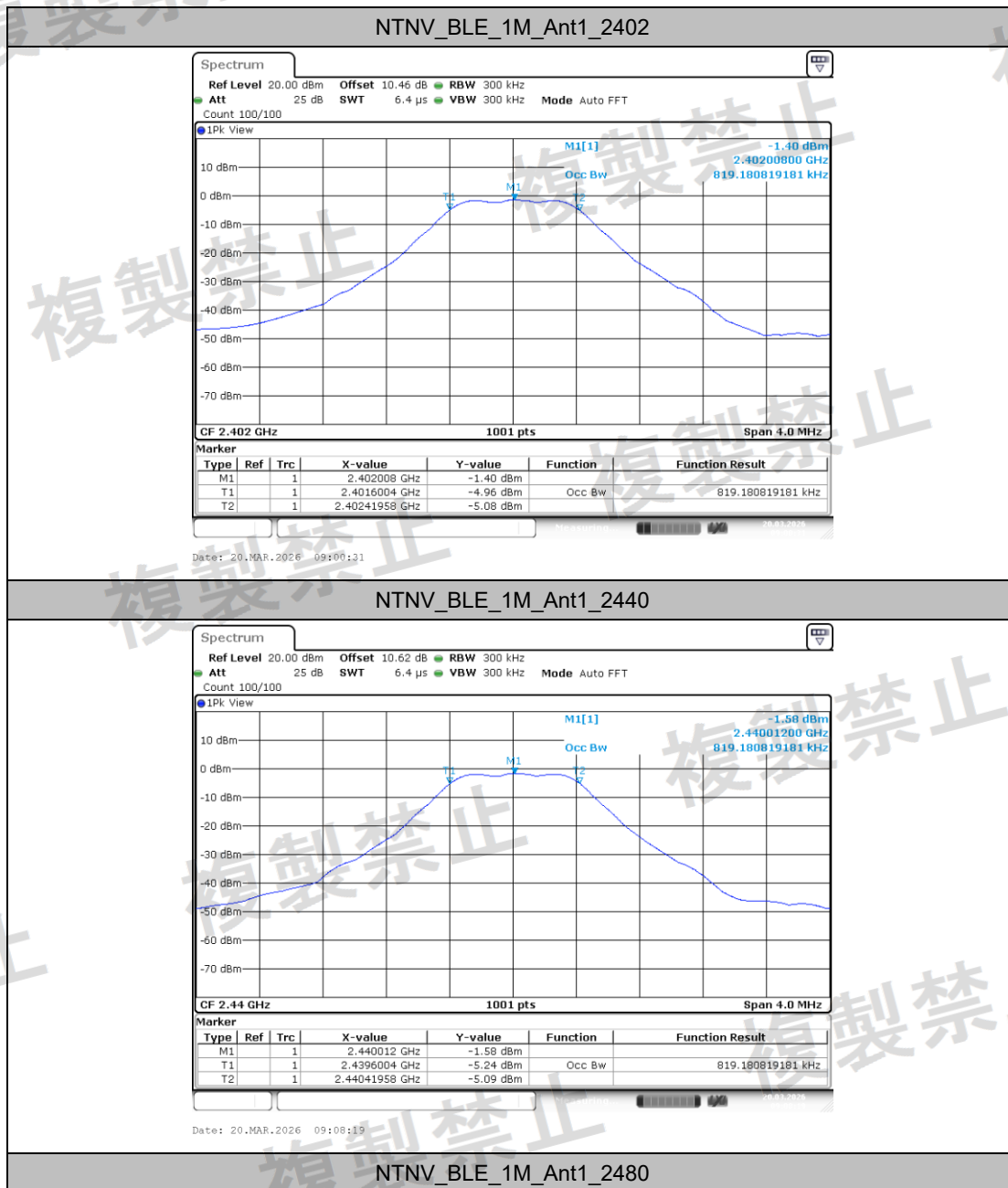


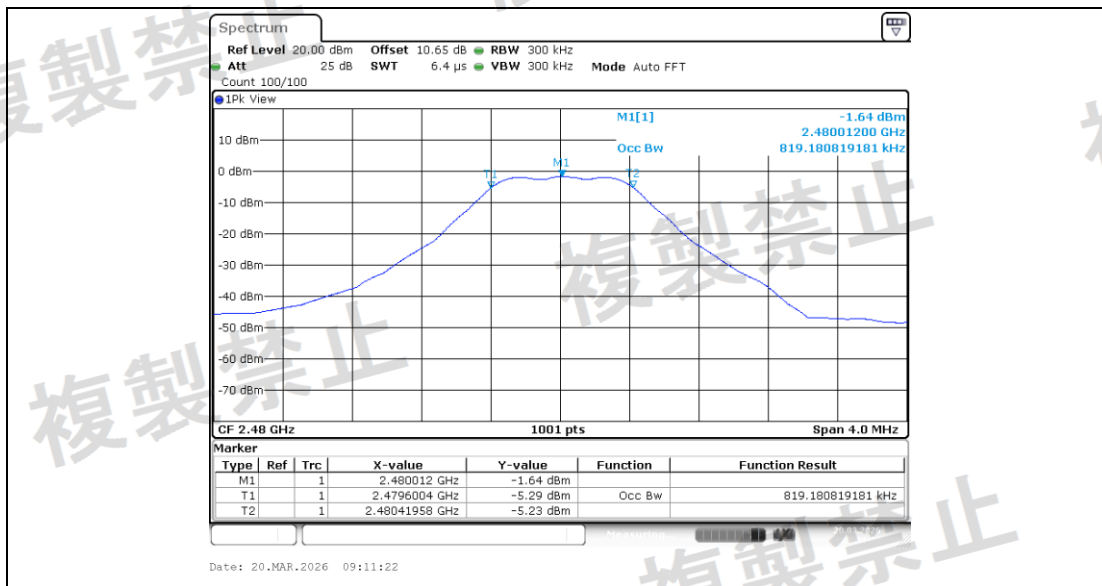
Appendix C: Spread Bandwidth

Test Result

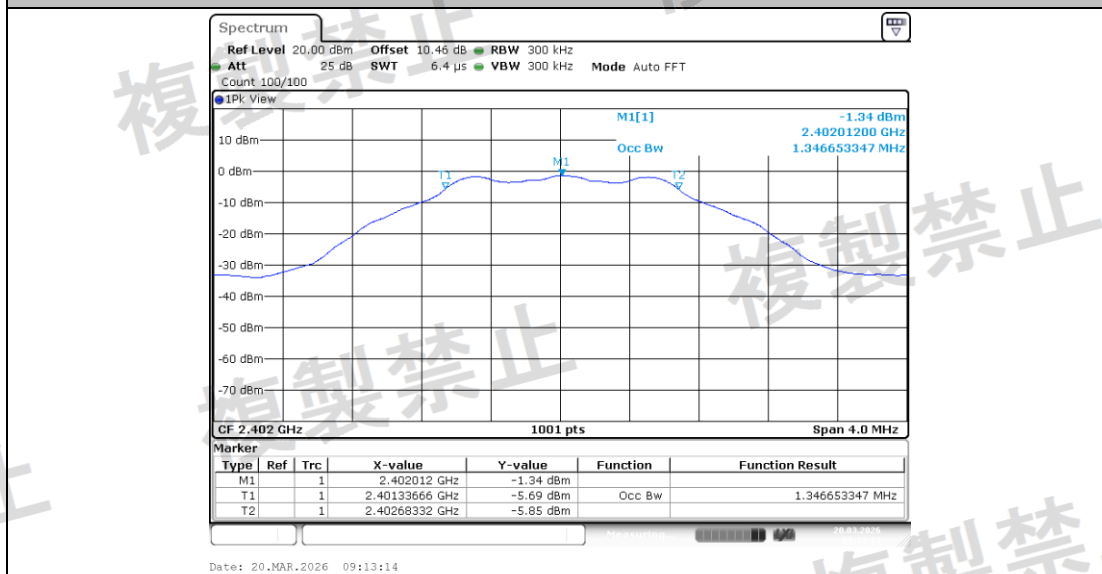
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.819	≥0.5	PASS
			2440	0.819	≥0.5	PASS
			2480	0.819	≥0.5	PASS
	BLE_2M	Ant1	2402	1.347	≥0.5	PASS
			2440	1.351	≥0.5	PASS
			2480	1.347	≥0.5	PASS

Test Graphs

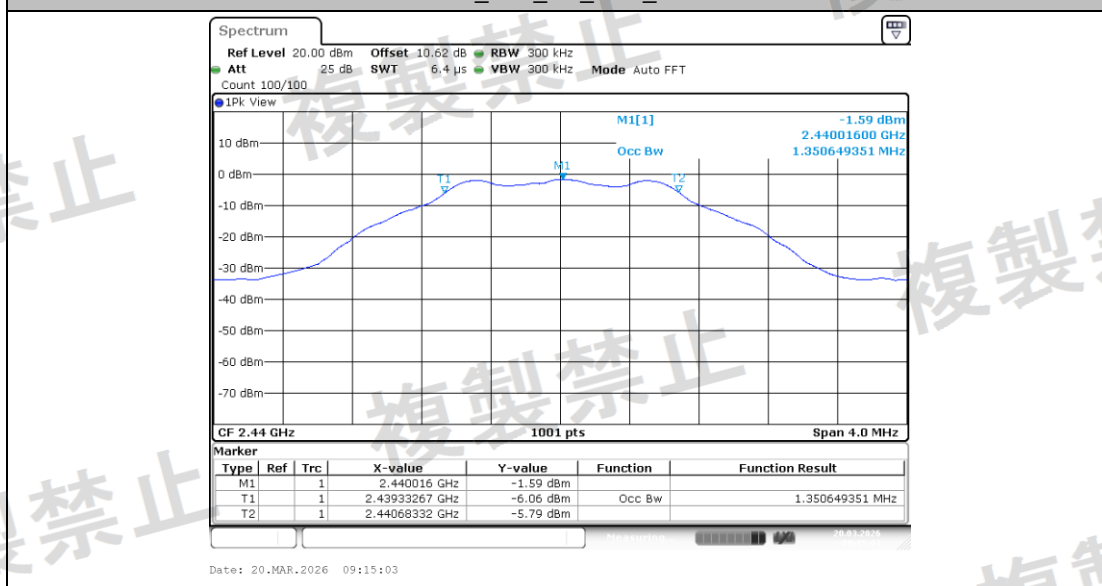


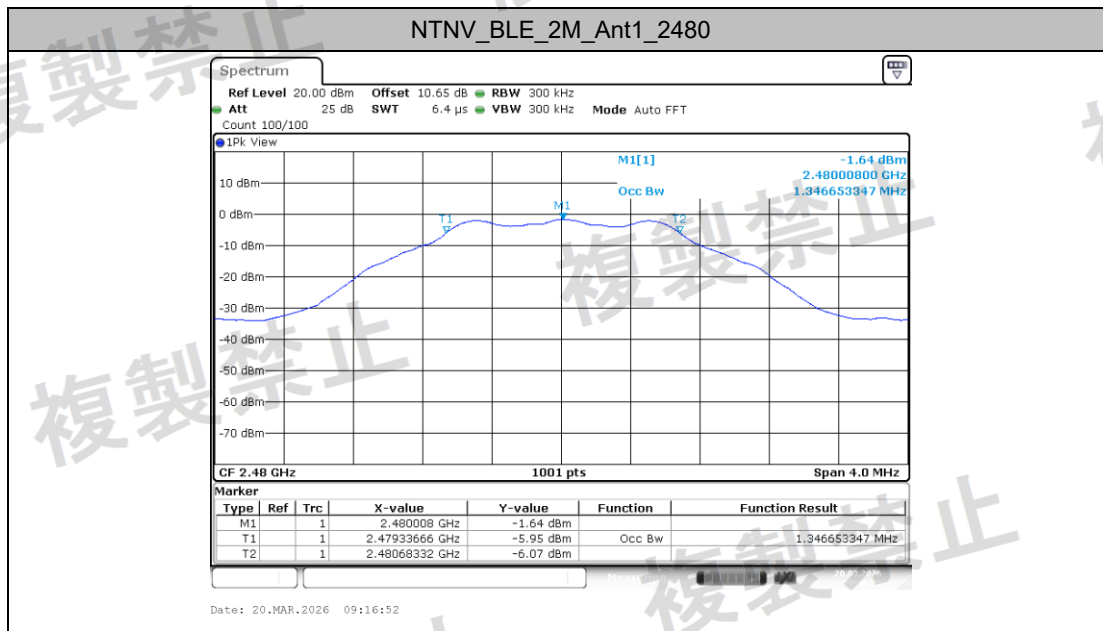


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440



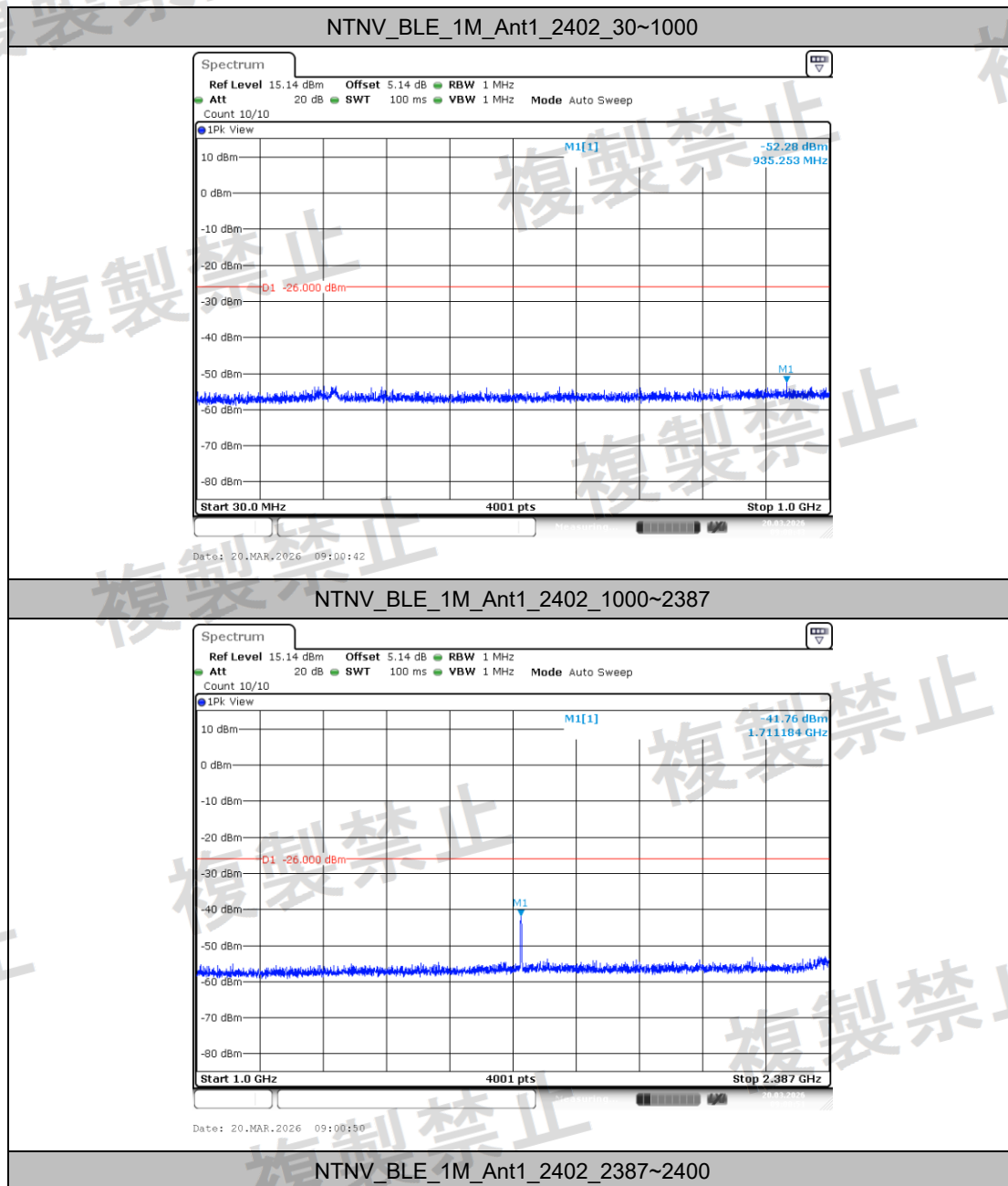


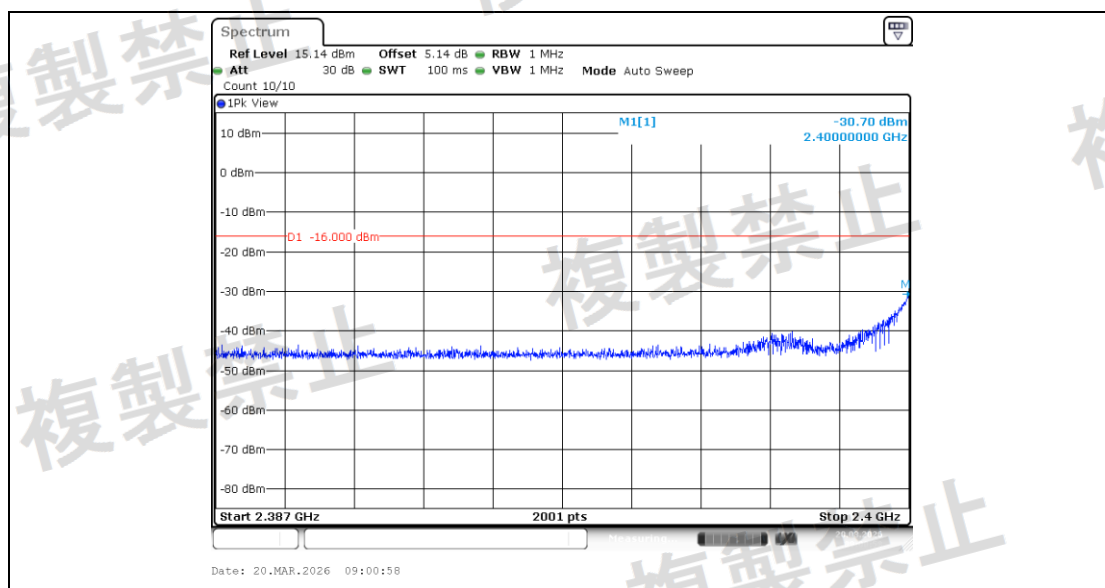
Appendix D: Spurious Emission of TX

Test Result

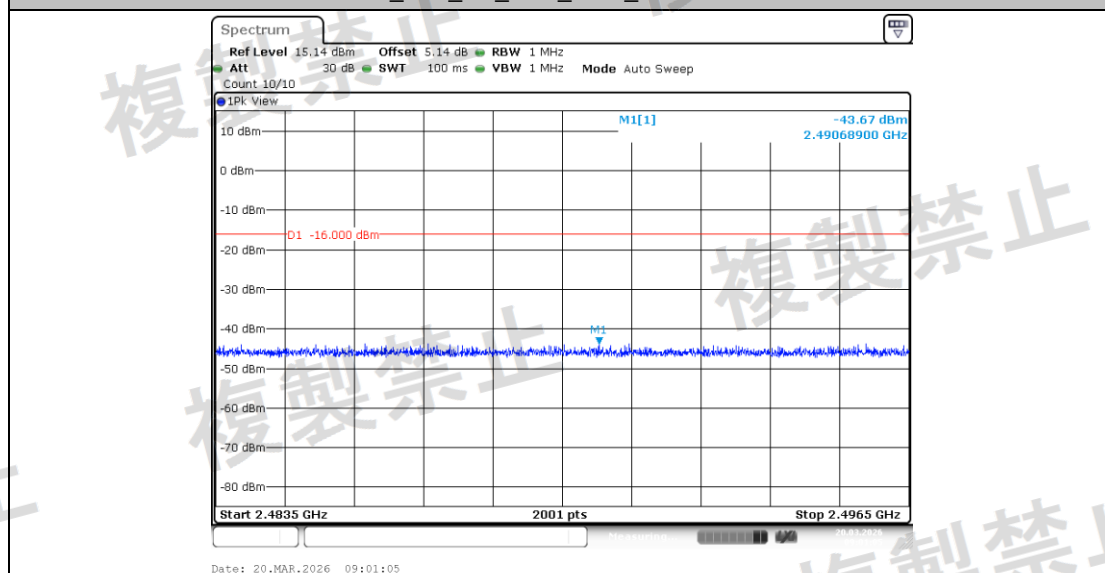
TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	935.25	-52.28	≤-26	0.00592	≤2.5	PASS
				1000~2387	1711.18	-41.76	≤-26	0.06668	≤2.5	PASS
				2387~2400	2400.00	-30.70	≤-16	0.85114	≤25	PASS
				2483.5~2496.5	2490.69	-43.67	≤-16	0.04295	≤25	PASS
				2496.5~13000	4804.12	-42.38	≤-26	0.05781	≤2.5	PASS
			2440	30~1000	224.00	-53.30	≤-26	0.00468	≤2.5	PASS
				1000~2387	1752.79	-45.89	≤-26	0.02576	≤2.5	PASS
				2387~2400	2390.82	-43.49	≤-16	0.04477	≤25	PASS
				2483.5~2496.5	2491.12	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	4879.74	-41.33	≤-26	0.07362	≤2.5	PASS
			2480	30~1000	687.42	-53.59	≤-26	0.00438	≤2.5	PASS
				1000~2387	1733.72	-44.40	≤-26	0.03631	≤2.5	PASS
				2387~2400	2393.60	-43.04	≤-16	0.04966	≤25	PASS
				2483.5~2496.5	2484.37	-40.93	≤-16	0.08072	≤25	PASS
				2496.5~13000	4959.57	-41.69	≤-26	0.06776	≤2.5	PASS
	BLE_2M	Ant1	2402	30~1000	910.52	-50.86	≤-26	0.00820	≤2.5	PASS
				1000~2387	1751.41	-48.48	≤-26	0.01419	≤2.5	PASS
				2387~2400	2399.99	-22.50	≤-16	5.62341	≤25	PASS
				2483.5~2496.5	2494.78	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	4804.64	-43.03	≤-26	0.04977	≤2.5	PASS
			2440	30~1000	241.46	-52.14	≤-26	0.00611	≤2.5	PASS
				1000~2387	1715.35	-46.67	≤-26	0.02153	≤2.5	PASS
				2387~2400	2388.11	-43.56	≤-16	0.04406	≤25	PASS
				2483.5~2496.5	2490.64	-43.62	≤-16	0.04345	≤25	PASS
				2496.5~13000	4878.69	-42.19	≤-26	0.06039	≤2.5	PASS
			2480	30~1000	870.75	-53.05	≤-26	0.00495	≤2.5	PASS
				1000~2387	1749.67	-46.79	≤-26	0.02094	≤2.5	PASS
				2387~2400	2398.80	-43.71	≤-16	0.04256	≤25	PASS
				2483.5~2496.5	2484.18	-40.18	≤-16	0.09594	≤25	PASS
				2496.5~13000	4959.05	-42.15	≤-26	0.06095	≤2.5	PASS

Test Graphs

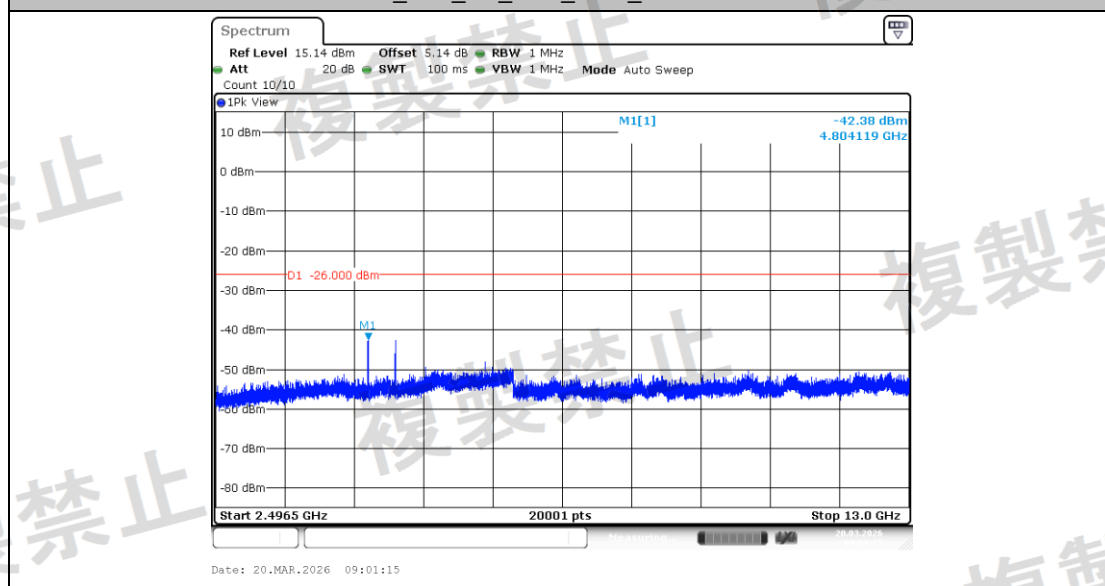


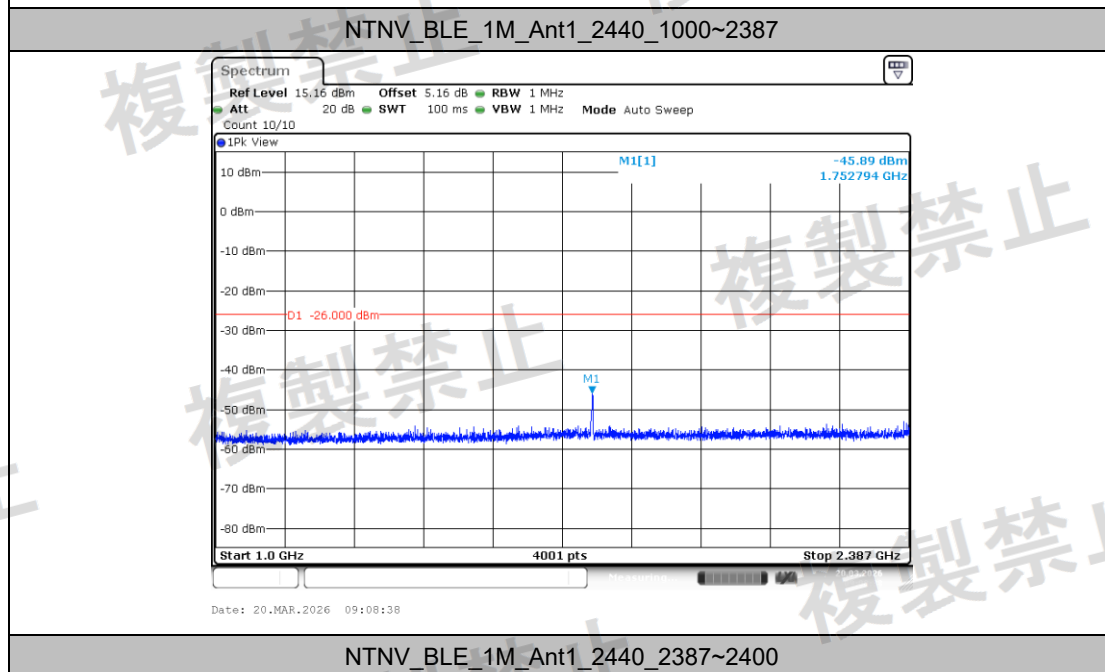
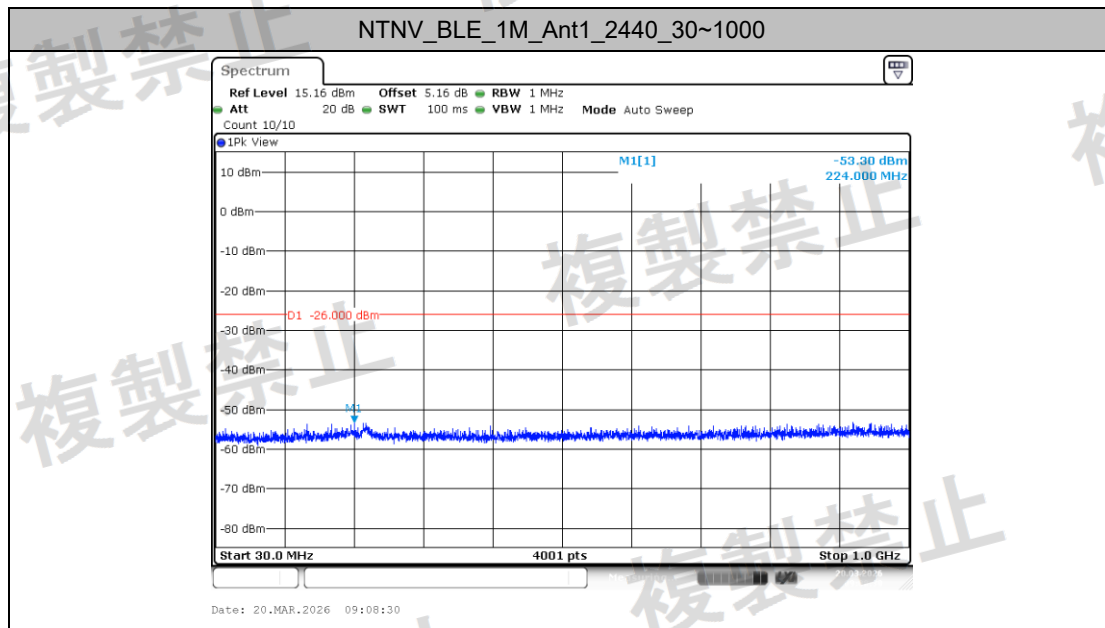


NTNV_BLE_1M_Ant1_2402_2483.5~2496.5

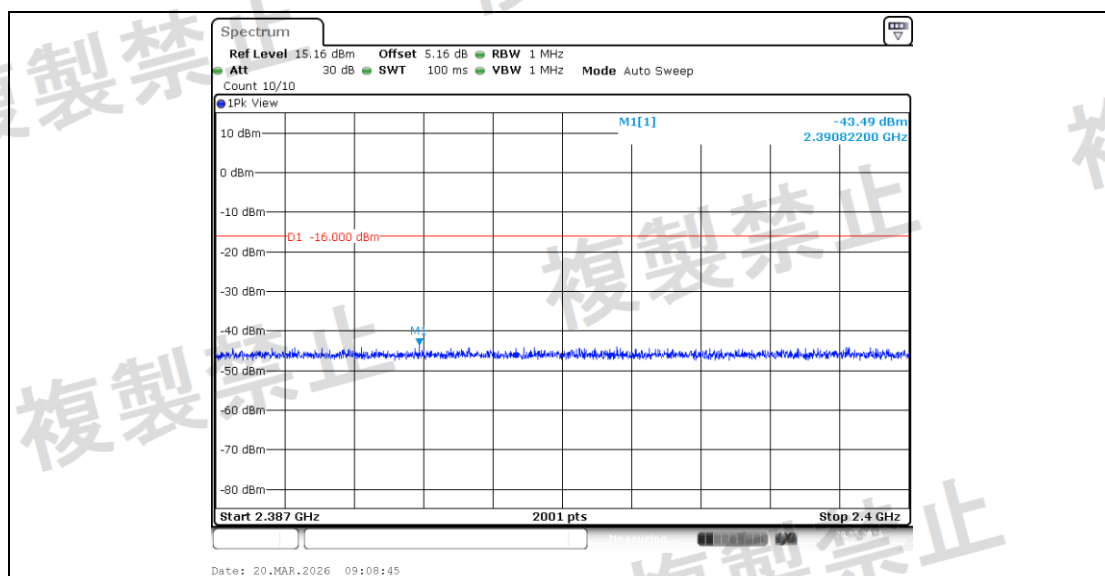


NTNV_BLE_1M_Ant1_2402_2496.5~13000

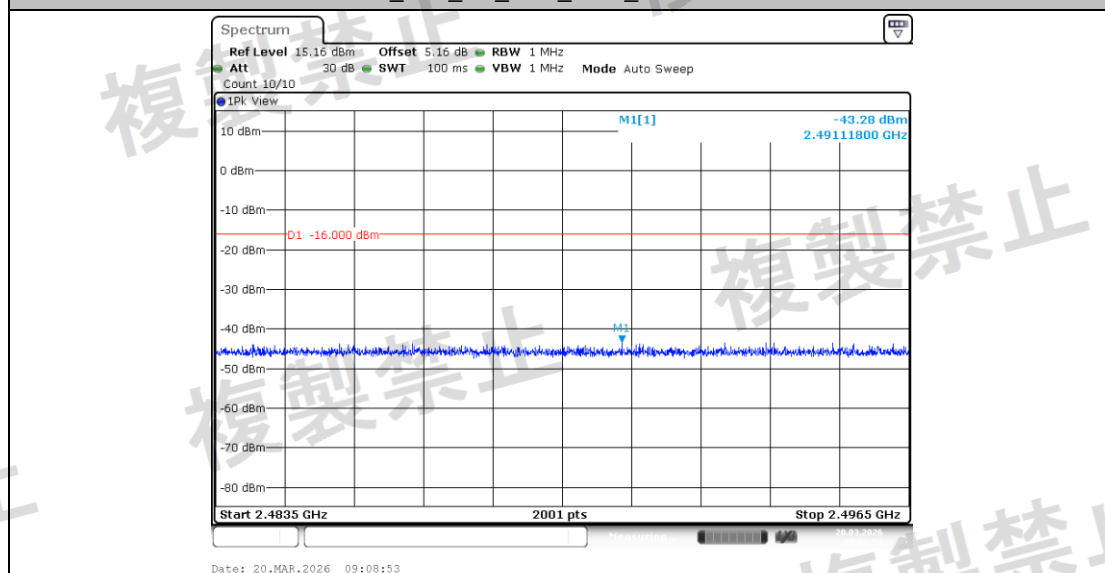




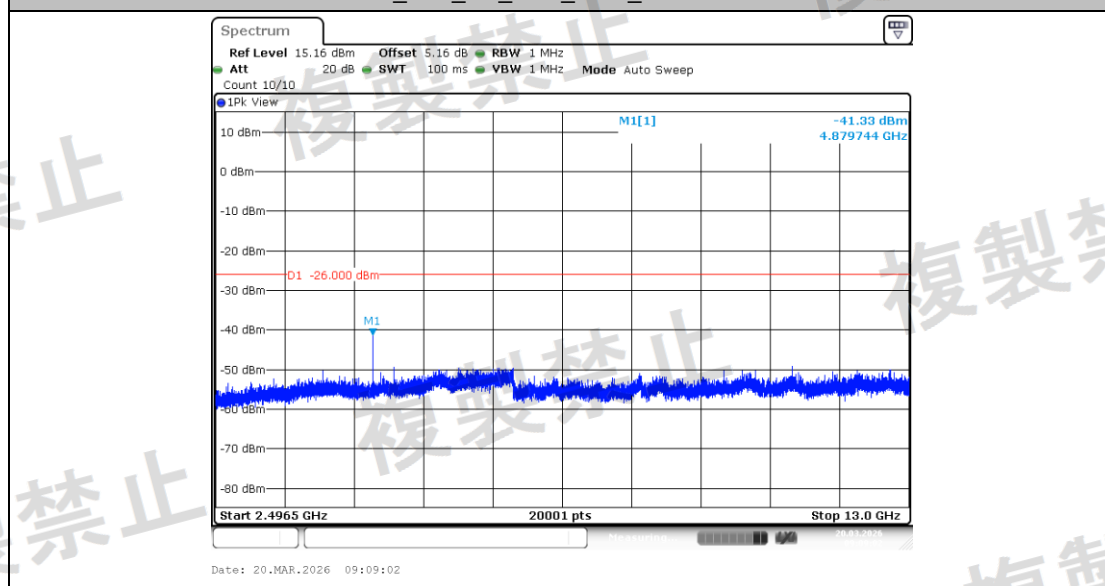
NTNV_BLE_1M_Ant1_2440_2387~2400

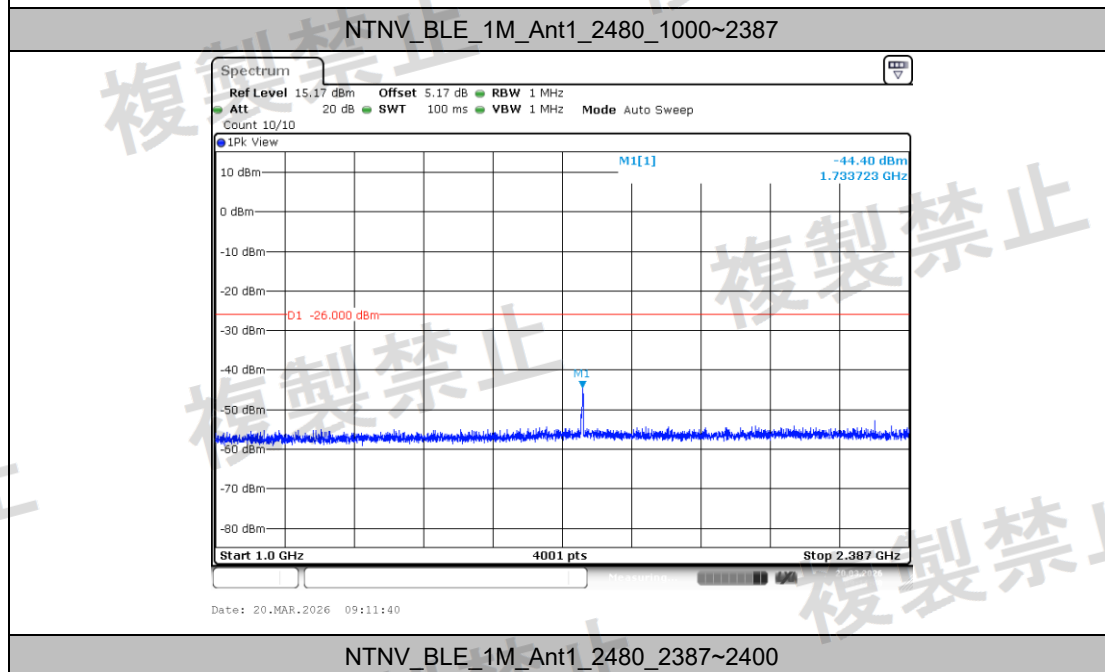
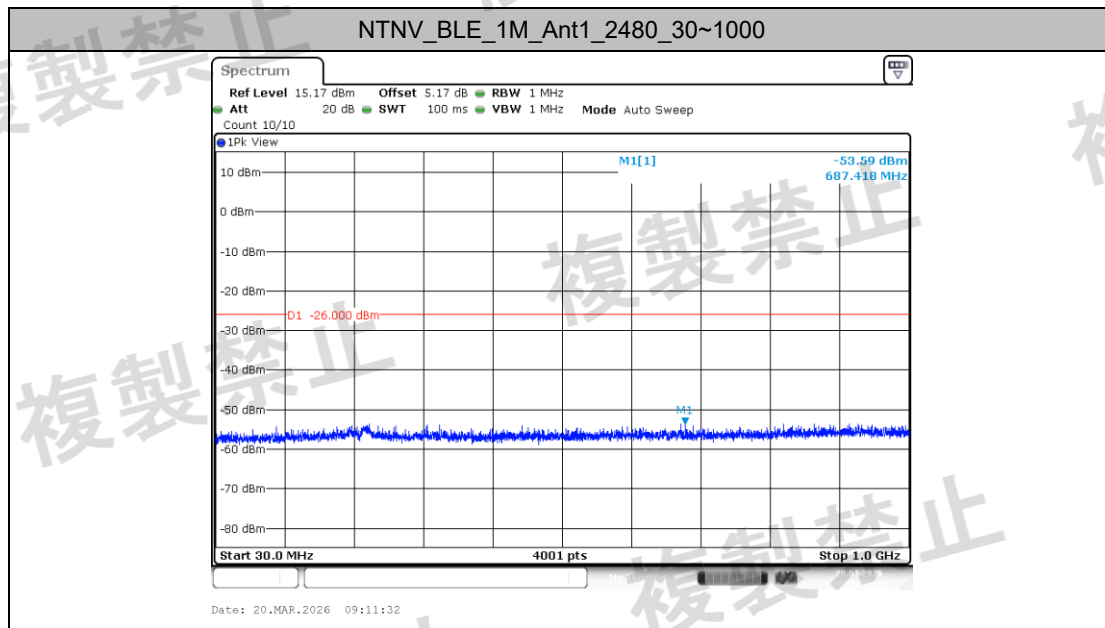


NTNV_BLE_1M_Ant1_2440_2483.5~2496.5

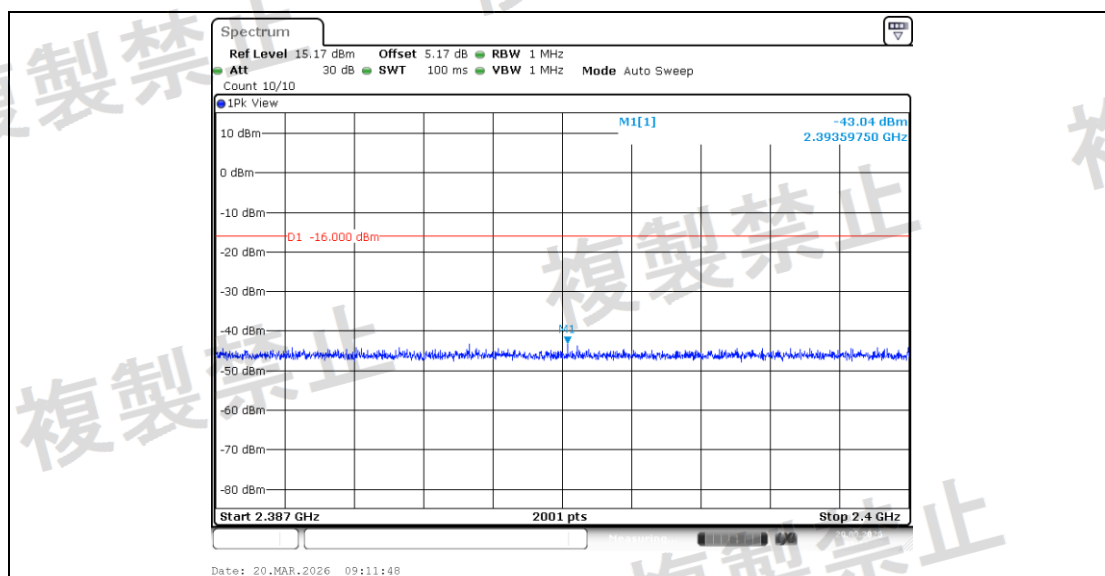


NTNV_BLE_1M_Ant1_2440_2496.5~13000

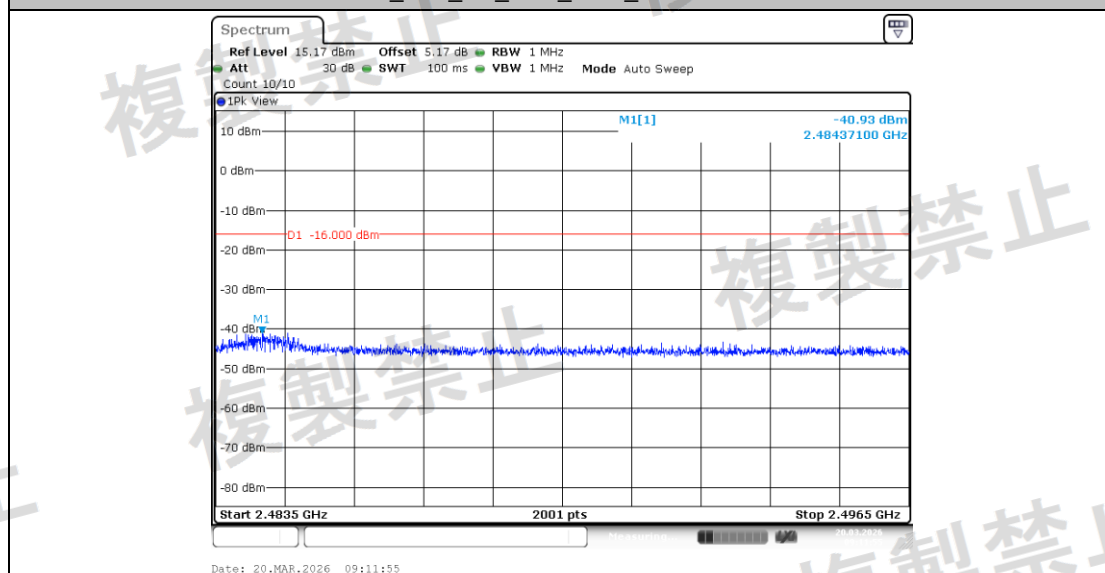




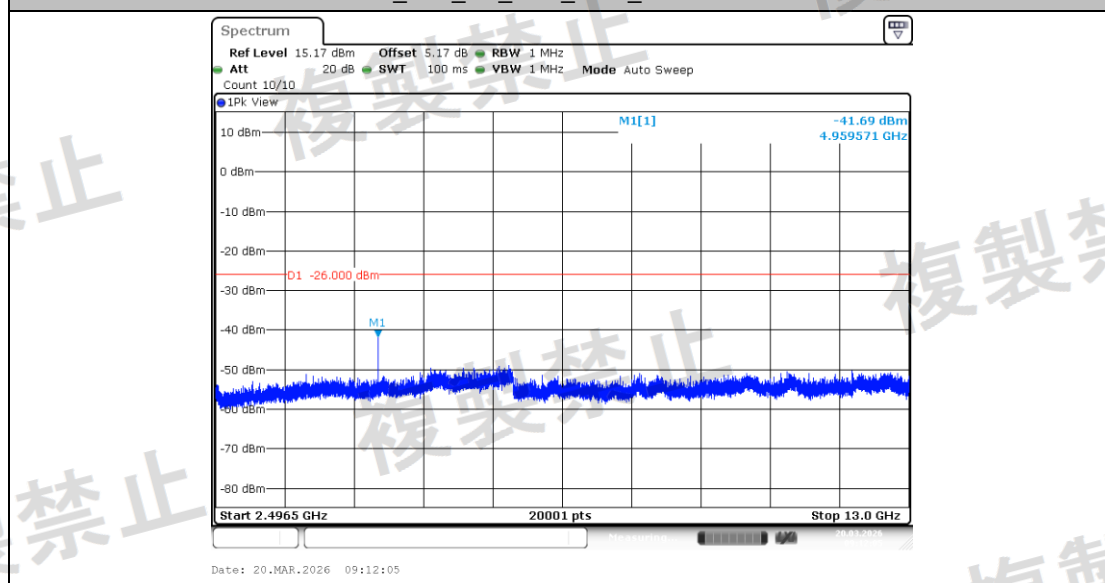
NTNV_BLE_1M_Ant1_2480_2387~2400

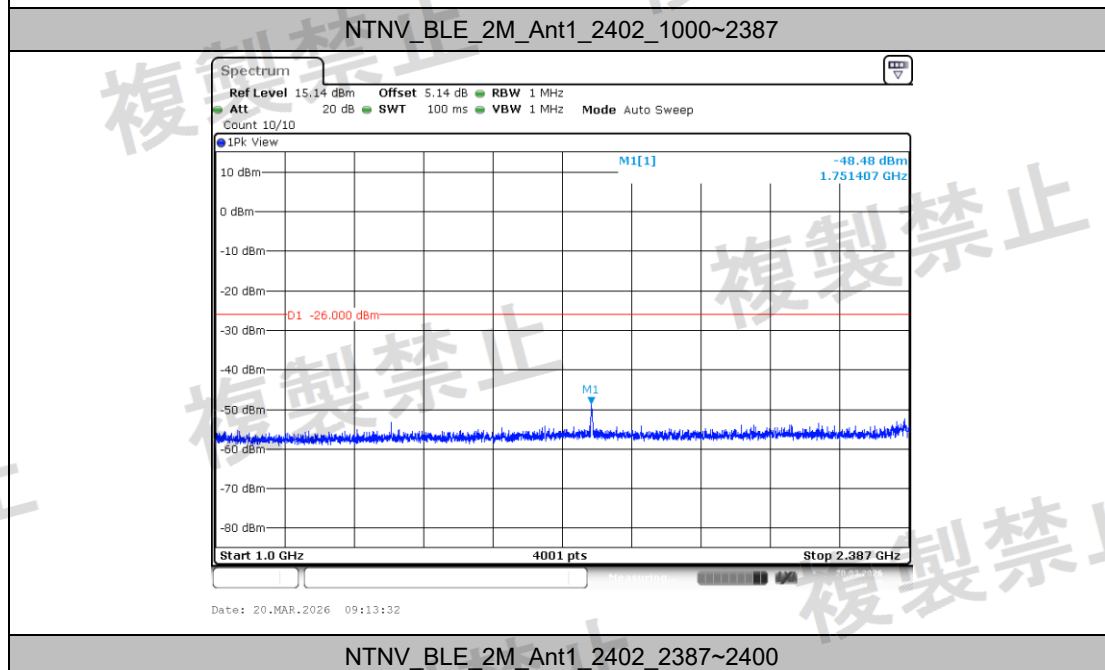
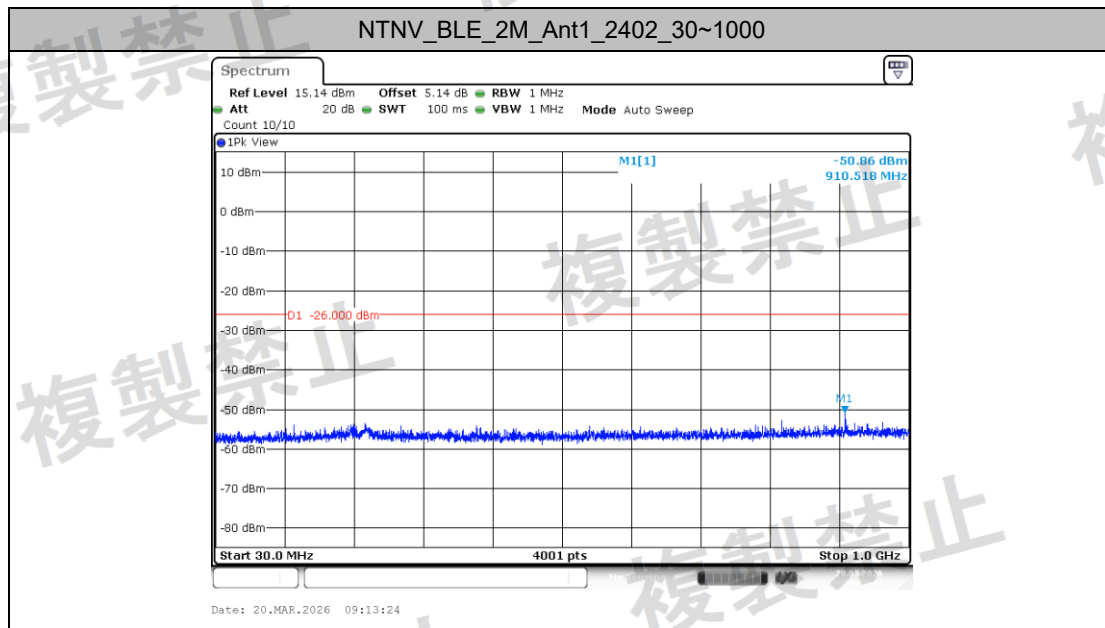


NTNV_BLE_1M_Ant1_2480_2483.5~2496.5

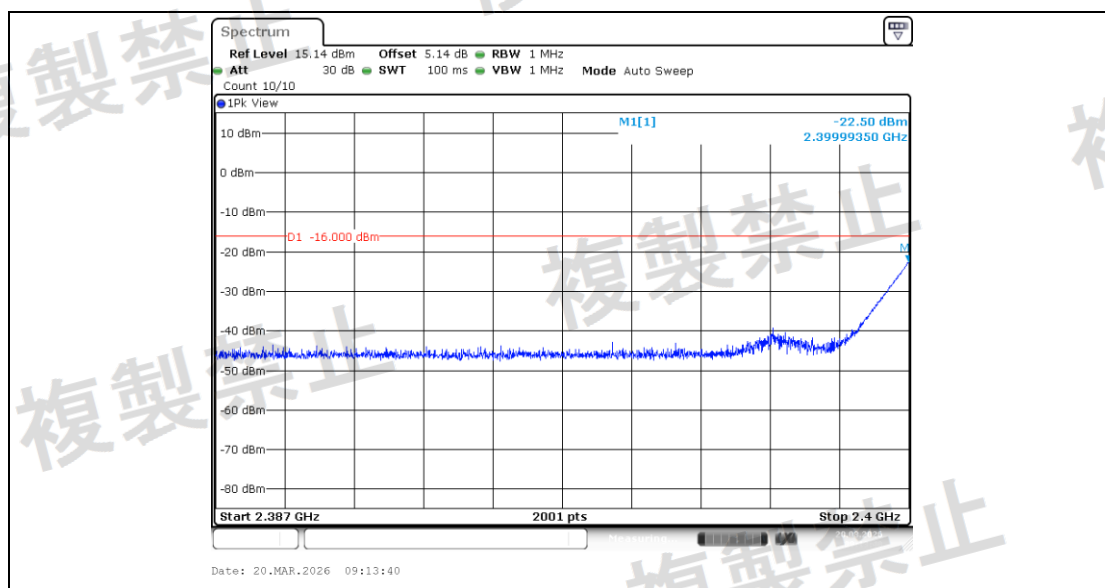


NTNV_BLE_1M_Ant1_2480_2496.5~13000

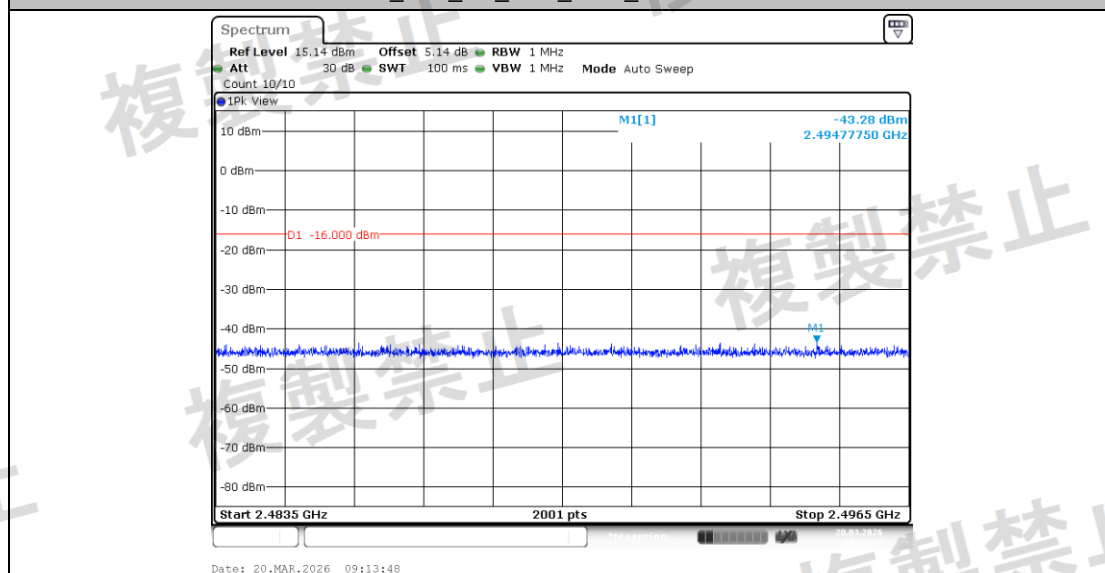




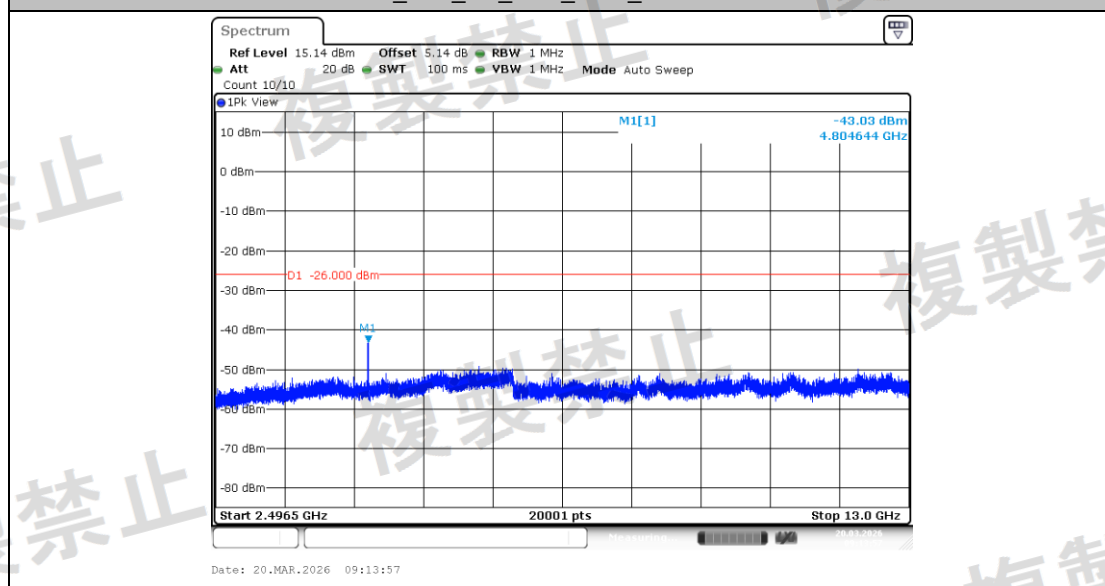
NTNV_BLE_2M_Ant1_2402_2387~2400

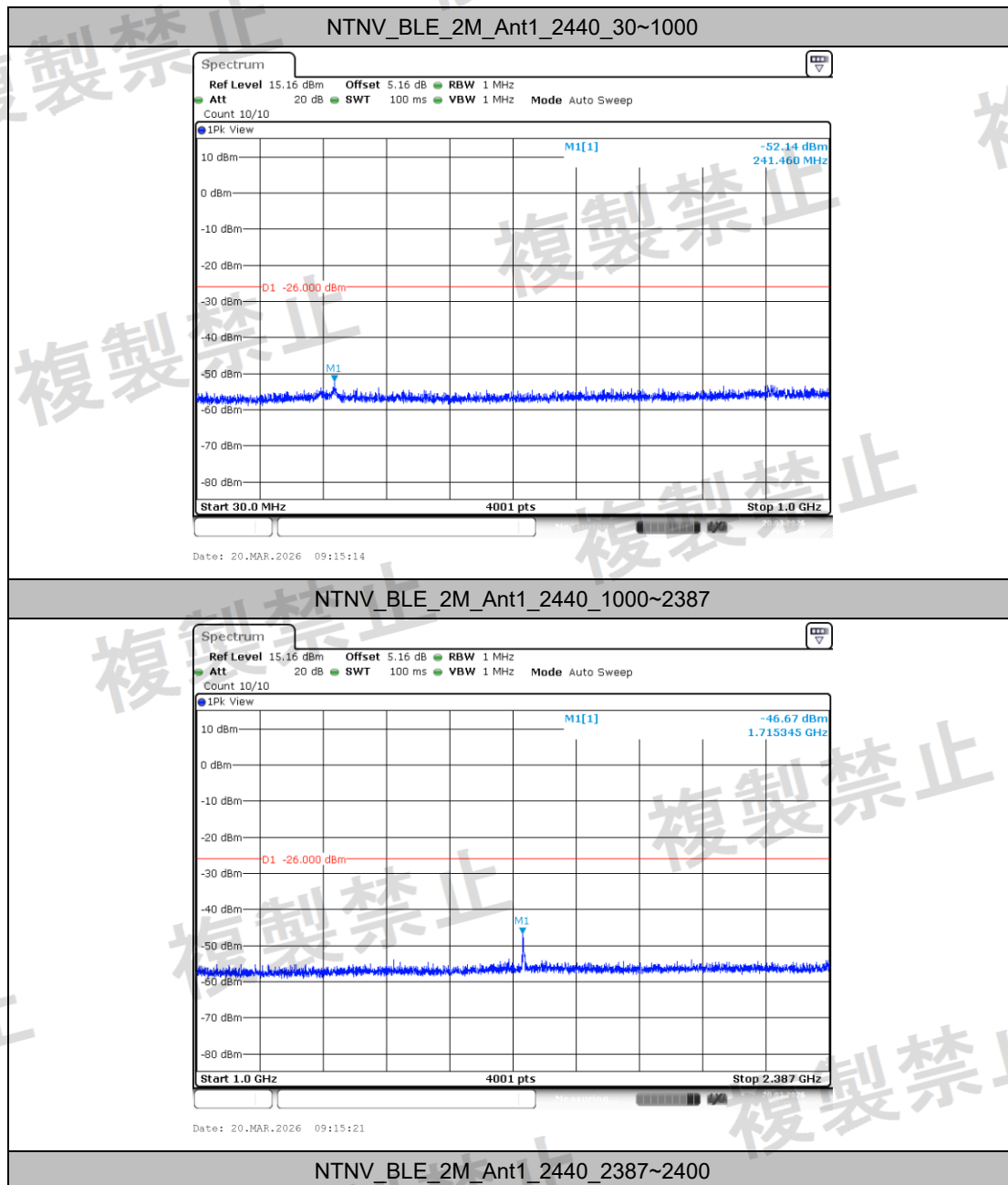


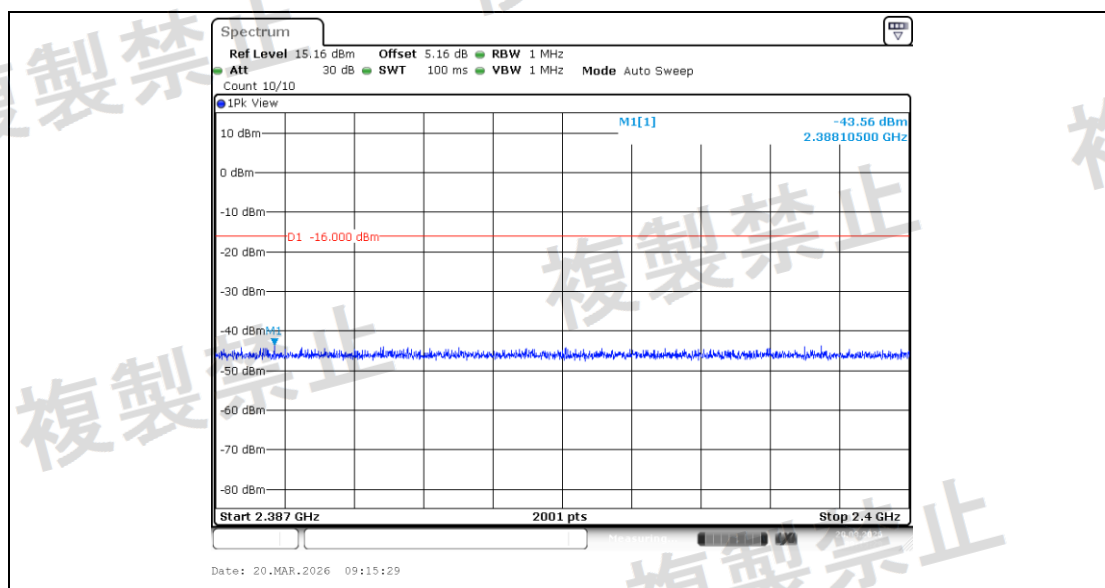
NTNV_BLE_2M_Ant1_2402_2483.5~2496.5



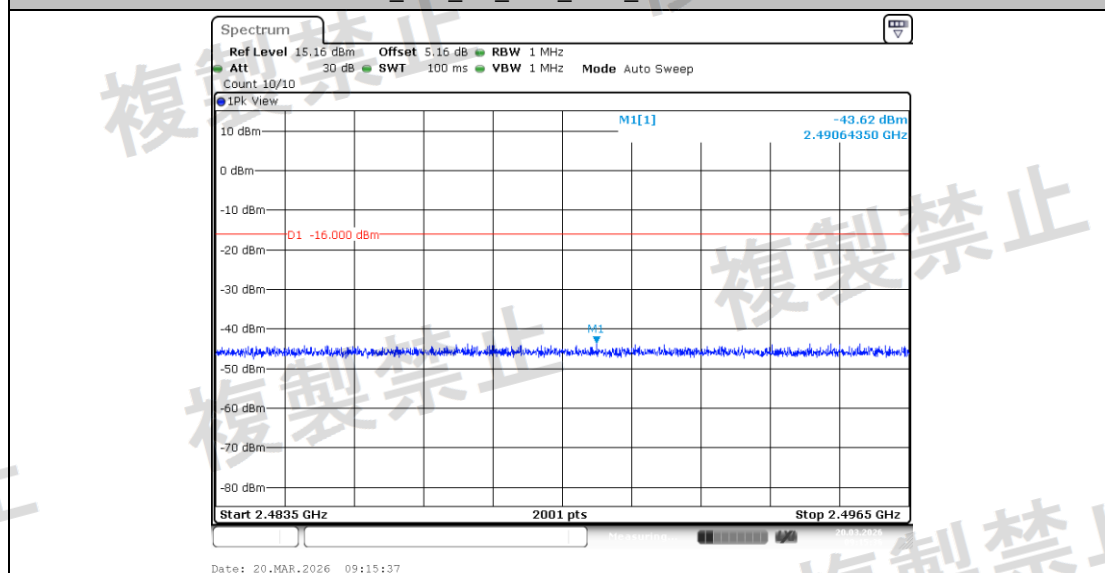
NTNV_BLE_2M_Ant1_2402_2496.5~13000



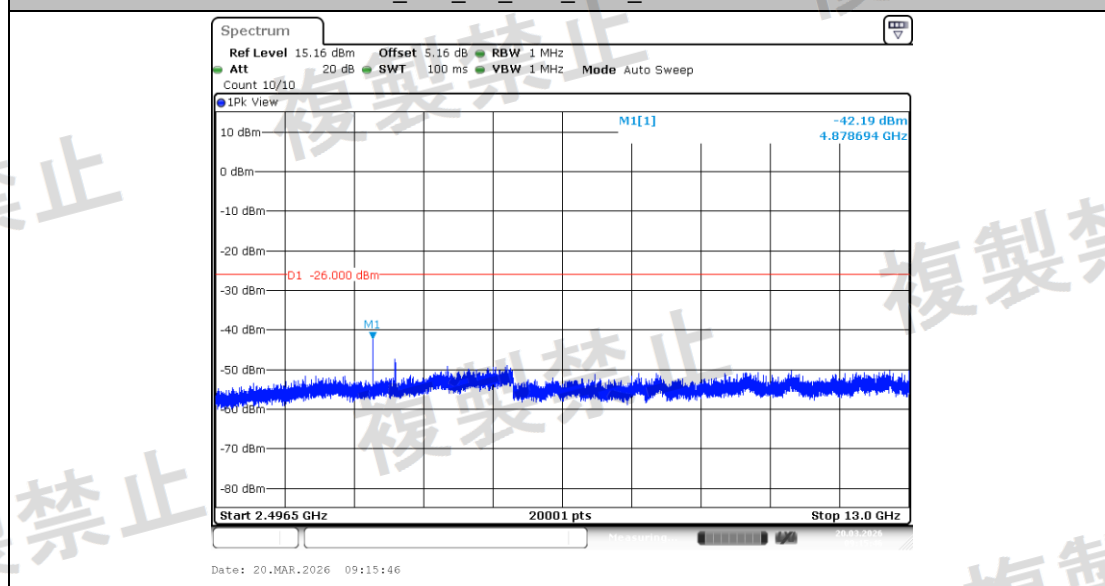


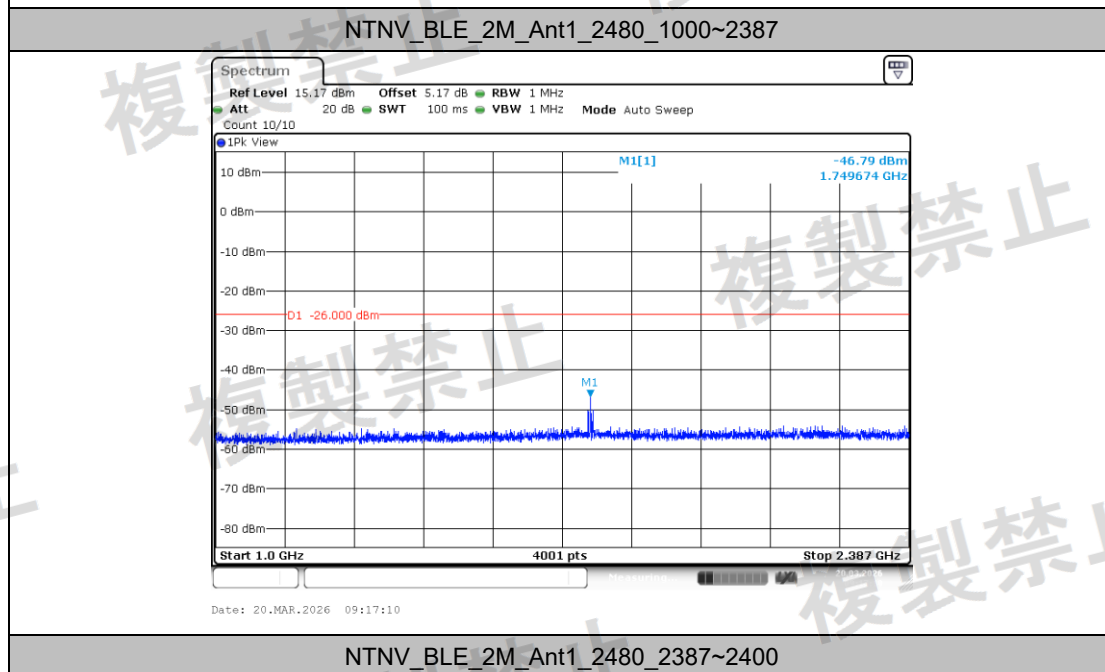
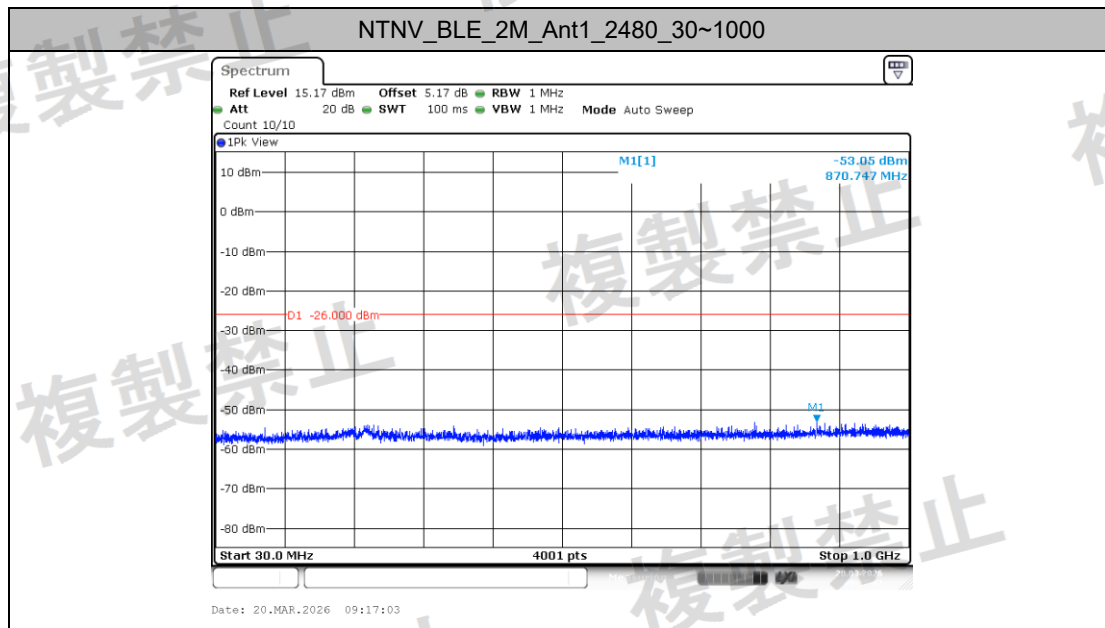


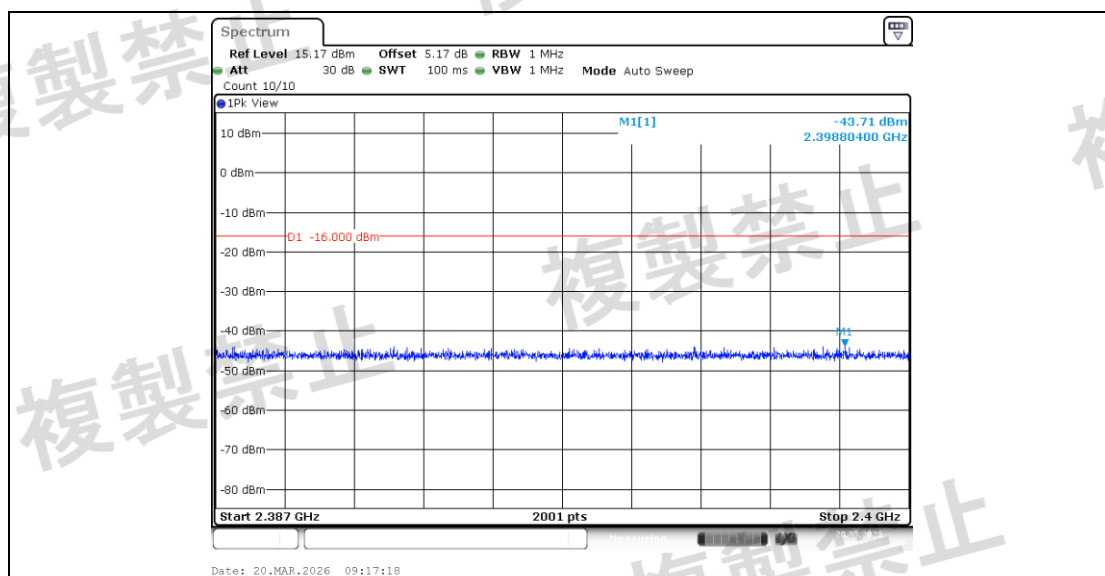
NTNV_BLE_2M_Ant1_2440_2483.5~2496.5



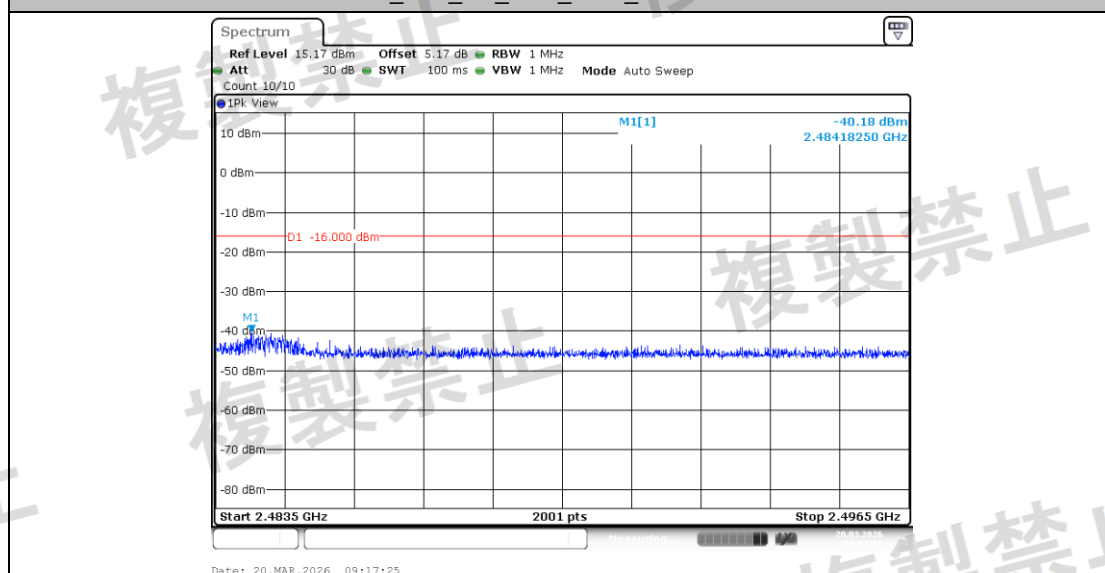
NTNV_BLE_2M_Ant1_2440_2496.5~13000



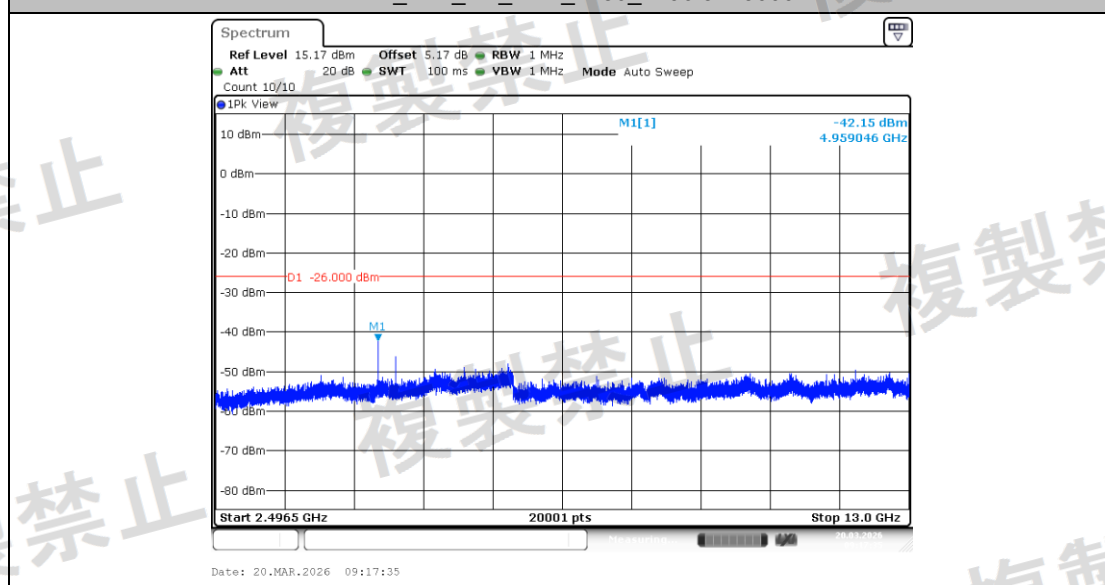




NTNV_BLE_2M_Ant1_2480_2483.5~2496.5



NTNV_BLE_2M_Ant1_2480_2496.5~13000

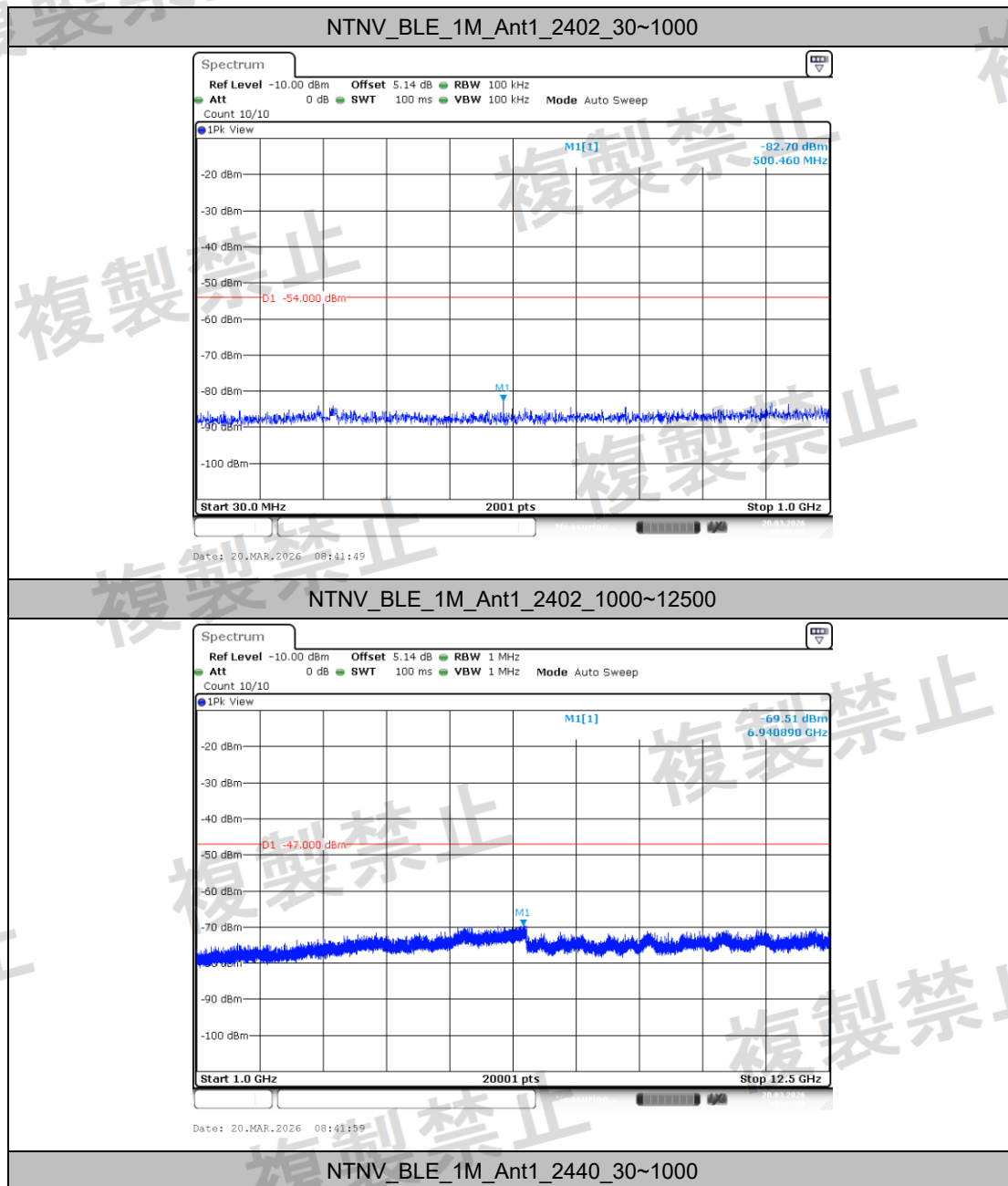


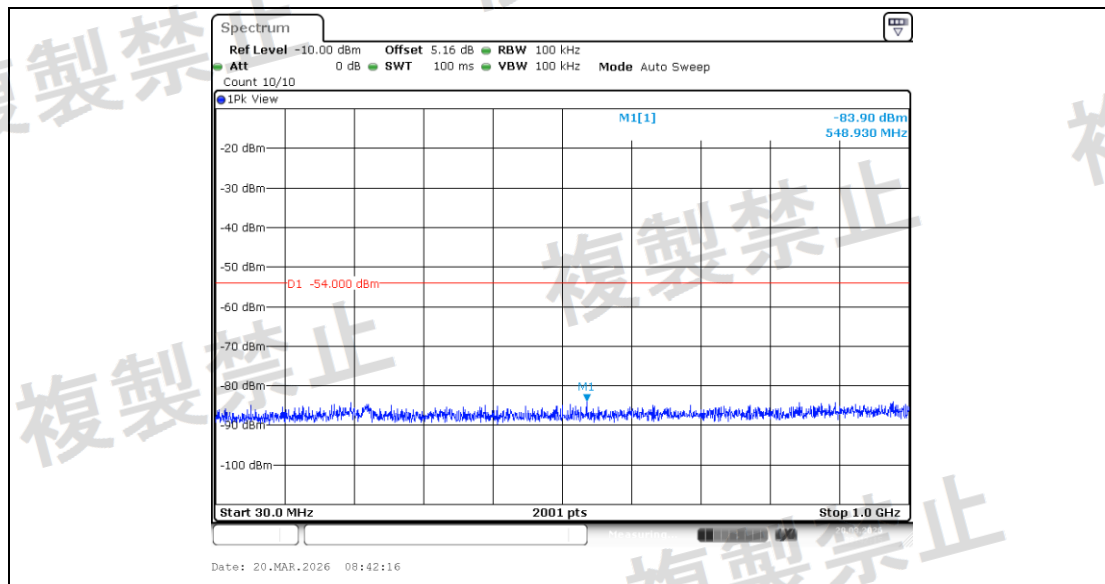
Appendix E: Spurious Emission of RX

Test Result

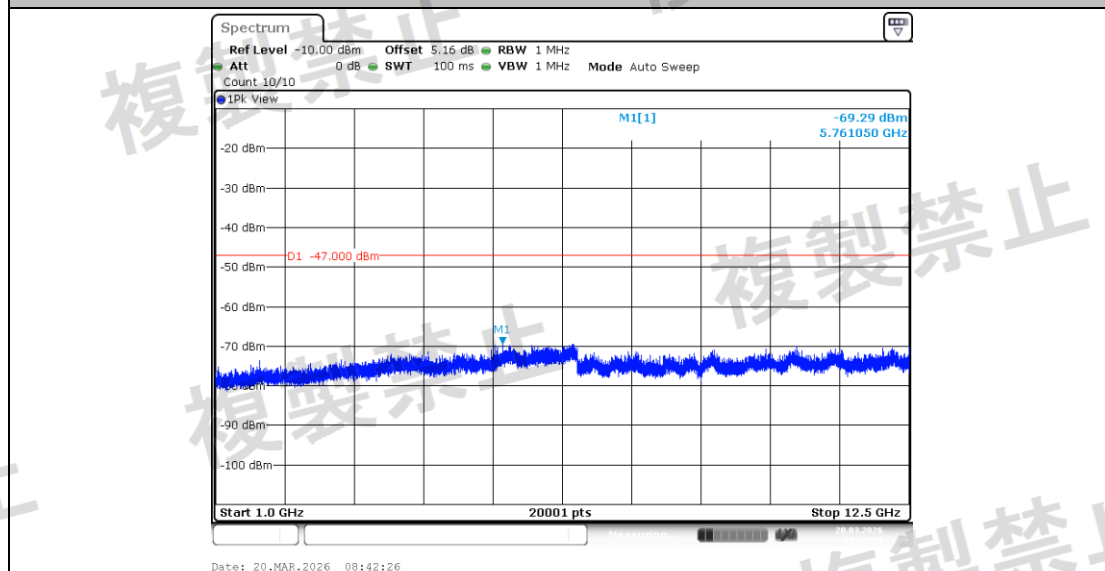
TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	500.46	-82.70	≤-54	0.00537	≤4	PASS
				1000~12500	6940.89	-69.51	≤-47	0.11194	≤20	PASS
			2440	30~1000	548.93	-83.90	≤-54	0.00407	≤4	PASS
				1000~12500	5761.05	-69.29	≤-47	0.11776	≤20	PASS
			2480	30~1000	970.67	-83.28	≤-54	0.00470	≤4	PASS
				1000~12500	6607.98	-68.29	≤-47	0.14825	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	894.08	-83.46	≤-54	0.00451	≤4	PASS
				1000~12500	10599.43	-68.74	≤-47	0.13366	≤20	PASS
			2440	30~1000	235.29	-83.44	≤-54	0.00453	≤4	PASS
				1000~12500	6981.14	-69.57	≤-47	0.11041	≤20	PASS
			2480	30~1000	240.14	-83.44	≤-54	0.00453	≤4	PASS
				1000~12500	6992.06	-68.76	≤-47	0.13305	≤20	PASS

Test Graphs

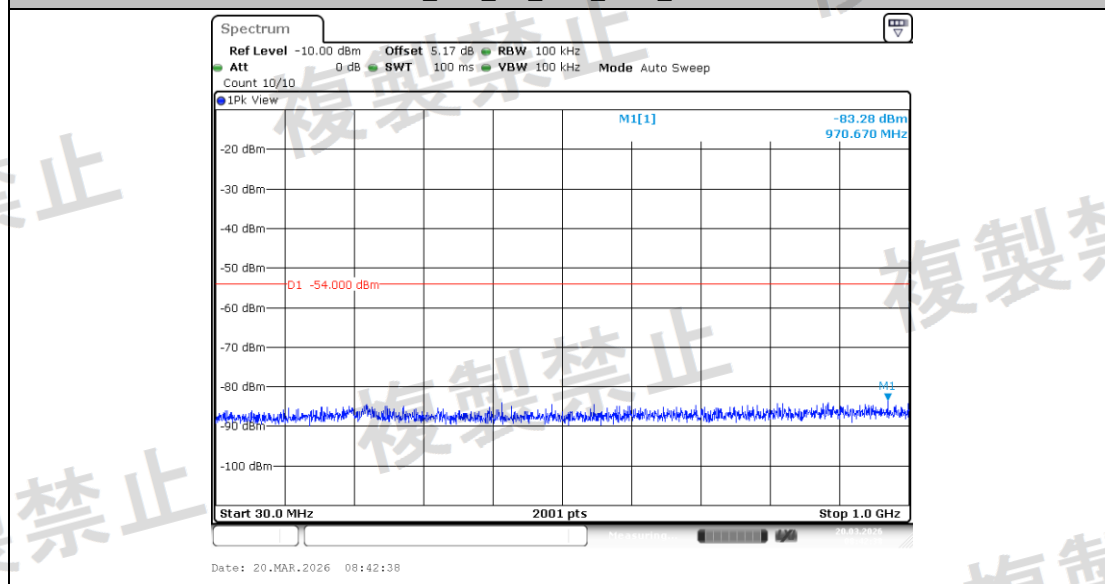


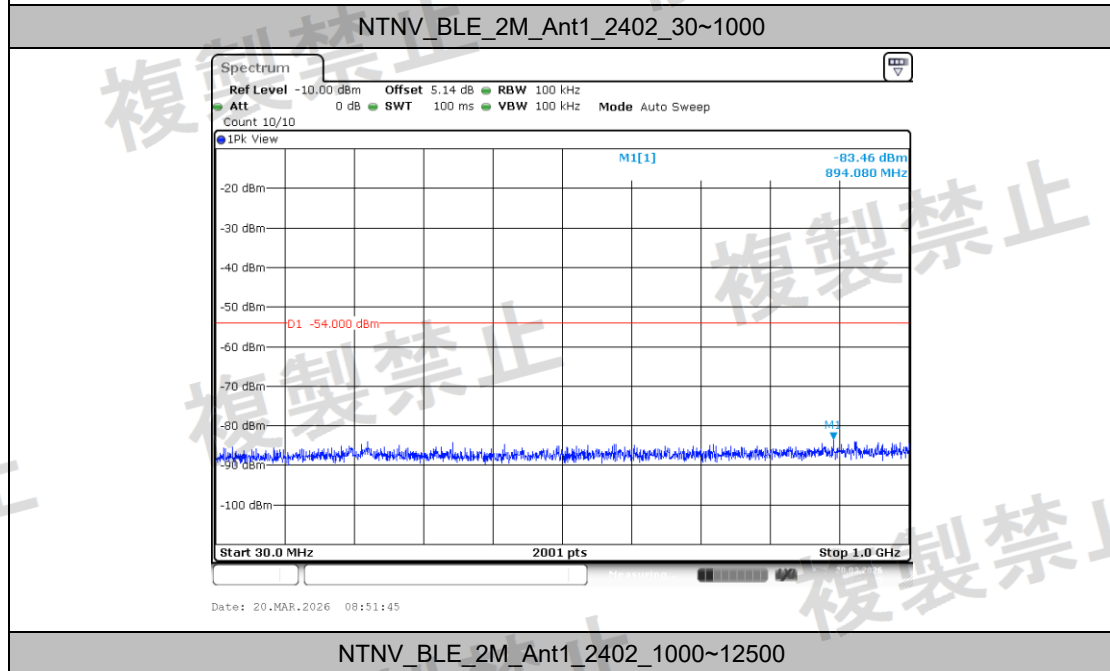
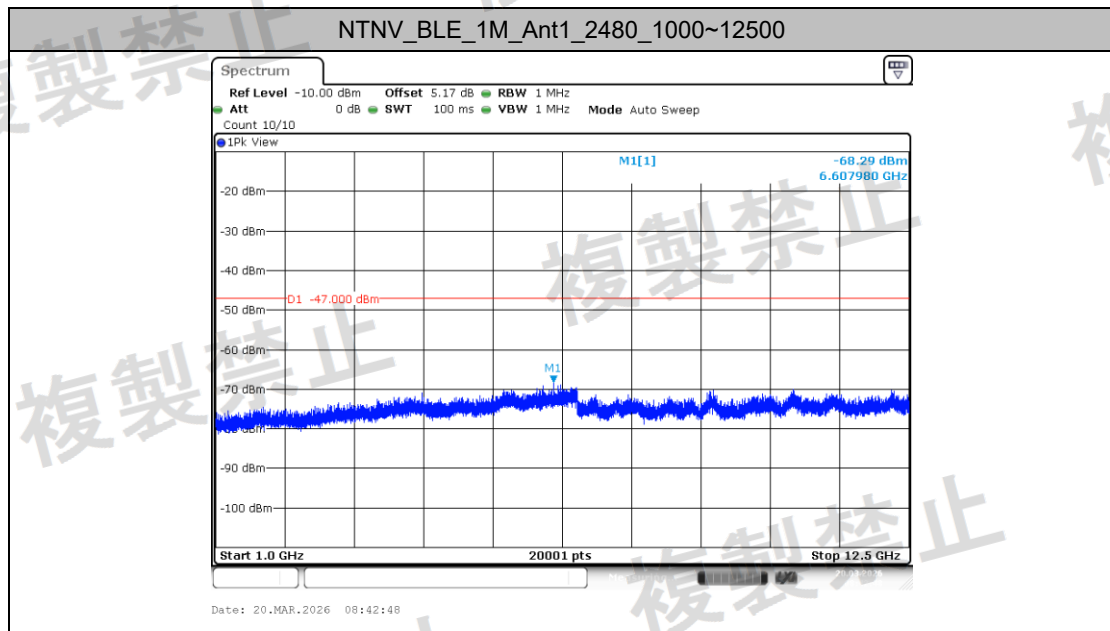


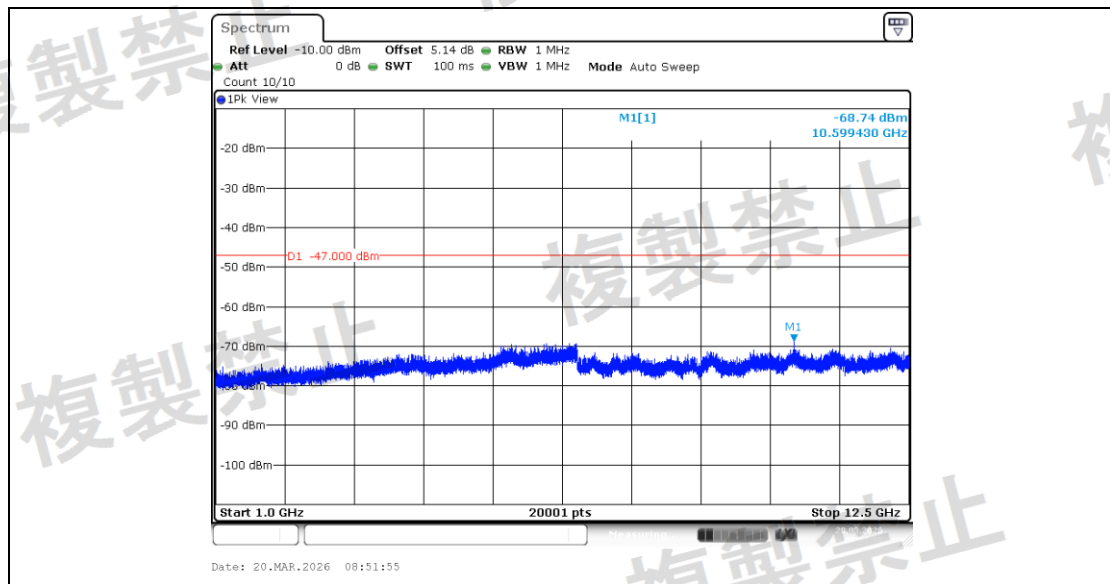
NTNV_BLE_1M_Ant1_2440_1000~12500



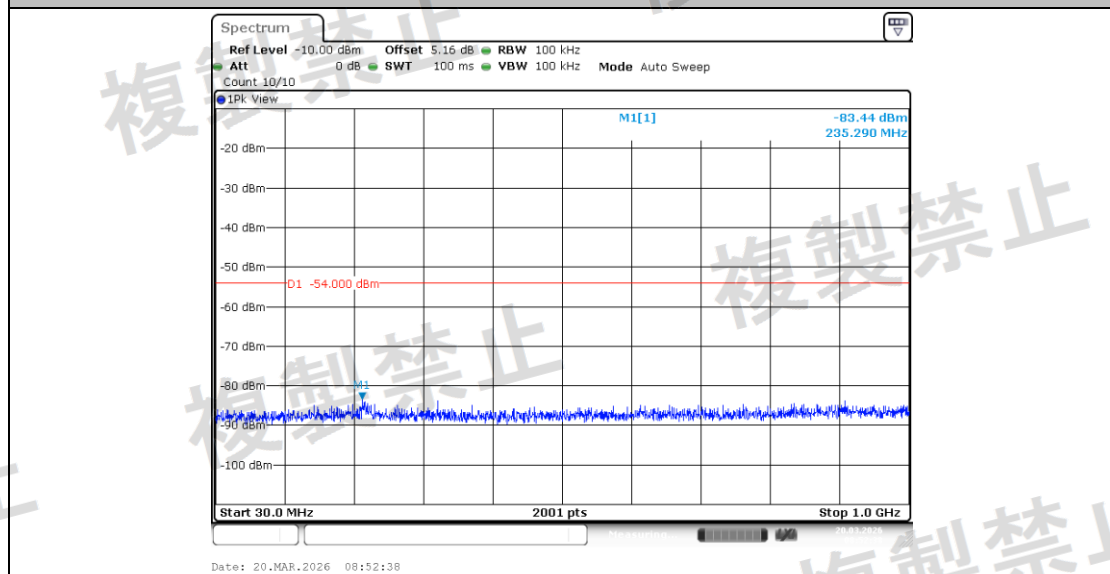
NTNV_BLE_1M_Ant1_2480_30~1000







NTNV_BLE_2M_Ant1_2440_30~1000



NTNV_BLE_2M_Ant1_2440_1000~12500

