Appendix RF Test Data for BLE

Company	:	**Chengdu Nuonaya Trading Co., Ltd.**
EUT	:	**Bluetooth Keyboard**
Model Number	:	**NNY-X4**
Report No.	:	**CTA26031002001**
Reviewed By	:	**Eric Wang**

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Appendix A: Frequency Error

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	BLE_1M	Ant1	2402	4.99167	±50	PASS
			2440	4.66803	±50	PASS
			2480	4.59274	±50	PASS

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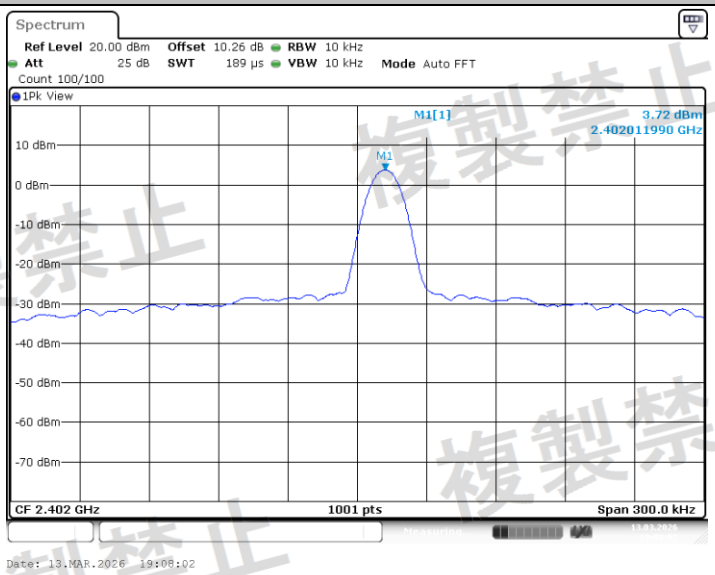
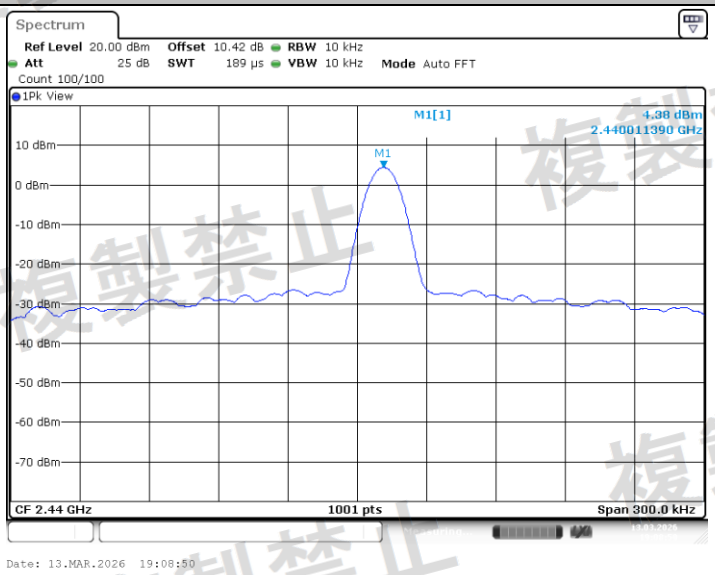
Test Graphs

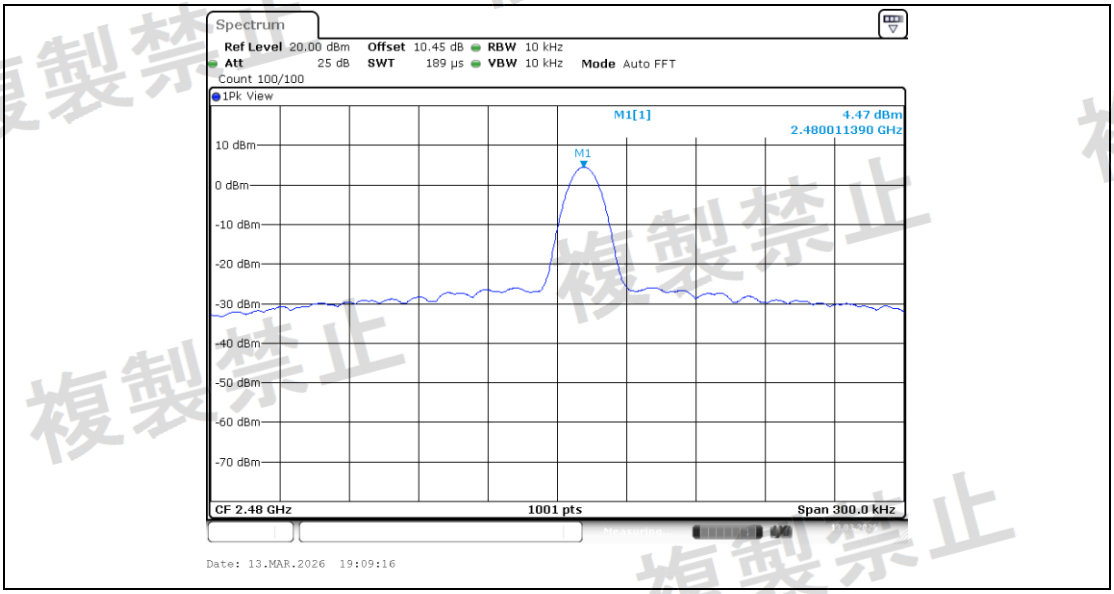
NTNV_BLE_1M_Ant1_2402



NTNV_BLE_1M_Ant1_2440



NTNV_BLE_1M_Ant1_2480


Spectrum
Ref Level 20.00 dBm Offset 10.45 dB RBW 10 kHz
Att 25 dB SWT 189 µs VBW 10 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] 4.47 dBm
2.480011390 GHz
M1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.48 GHz
1001 pts
Span 300.0 kHz
Date: 13.MAR.2026 19:09:16

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Appendix B: Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.219	≤26	PASS
			2440	1.227	≤26	PASS
			2480	1.219	≤26	PASS

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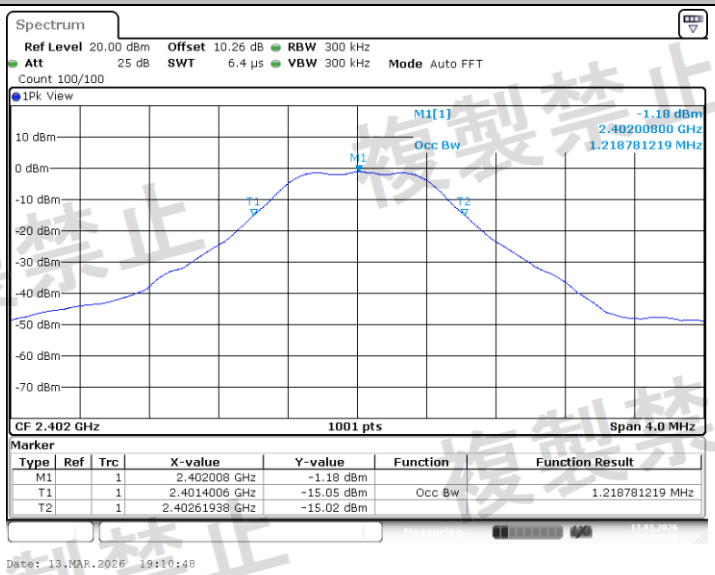
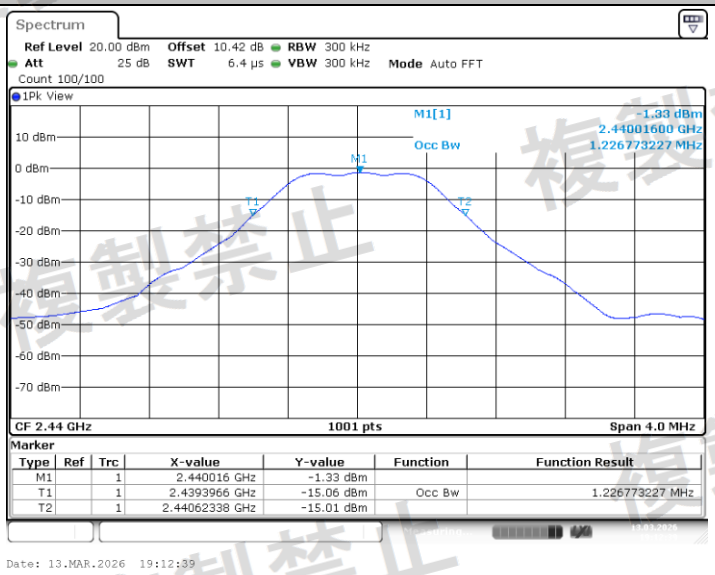
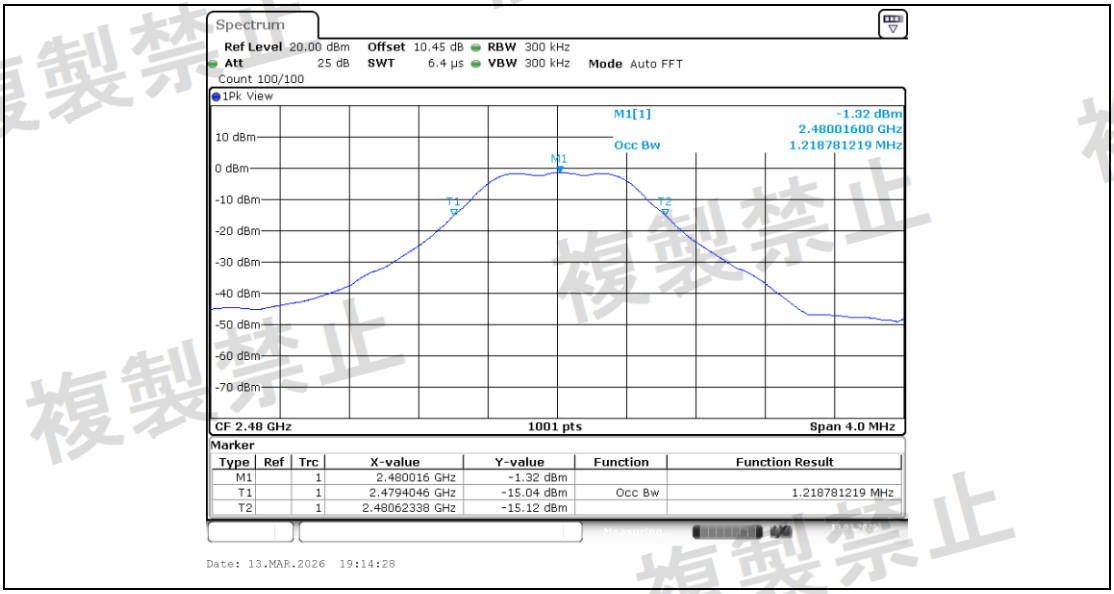
Test Graphs

NTNV_BLE_1M_Ant1_2402

NTNV_BLE_1M_Ant1_2440

NTNV_BLE_1M_Ant1_2480


Spectrum
Ref Level 20.00 dBm Offset 10.45 dB RBW 300 kHz
Att 25 dB SWT 6.4 µs VBW 300 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] -1.32 dBm
2.48001600 GHz
Occ Bw 1.218781219 MHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
T1
T2
CF 2.48 GHz
1001 pts
Span 4.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.480016 GHz -1.32 dBm
T1 1 2.4794046 GHz -15.04 dBm Occ Bw 1.218781219 MHz
T2 1 2.48062338 GHz -15.12 dBm
Date: 13.MAR.2026 19:14:28

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Appendix C: Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.823	≥0.5	PASS
			2440	0.823	≥0.5	PASS
			2480	0.823	≥0.5	PASS

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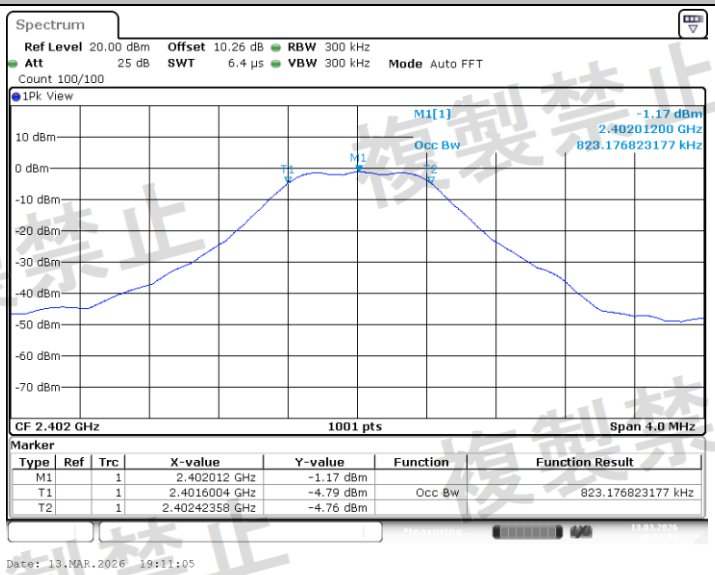
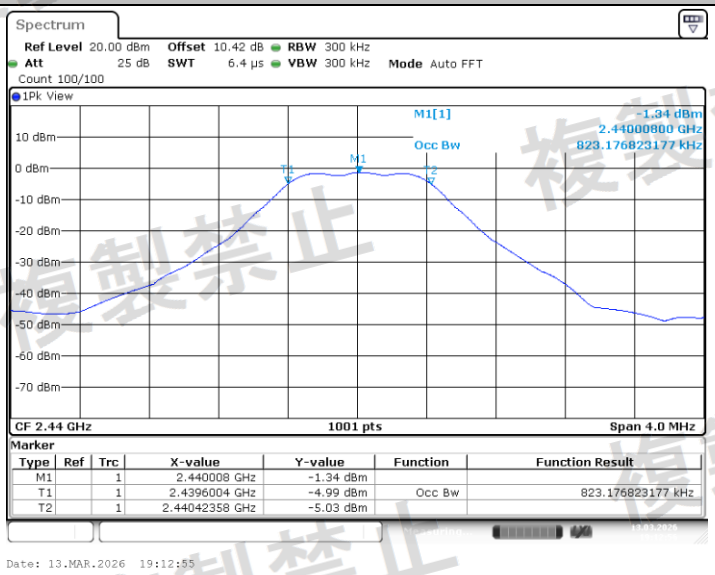
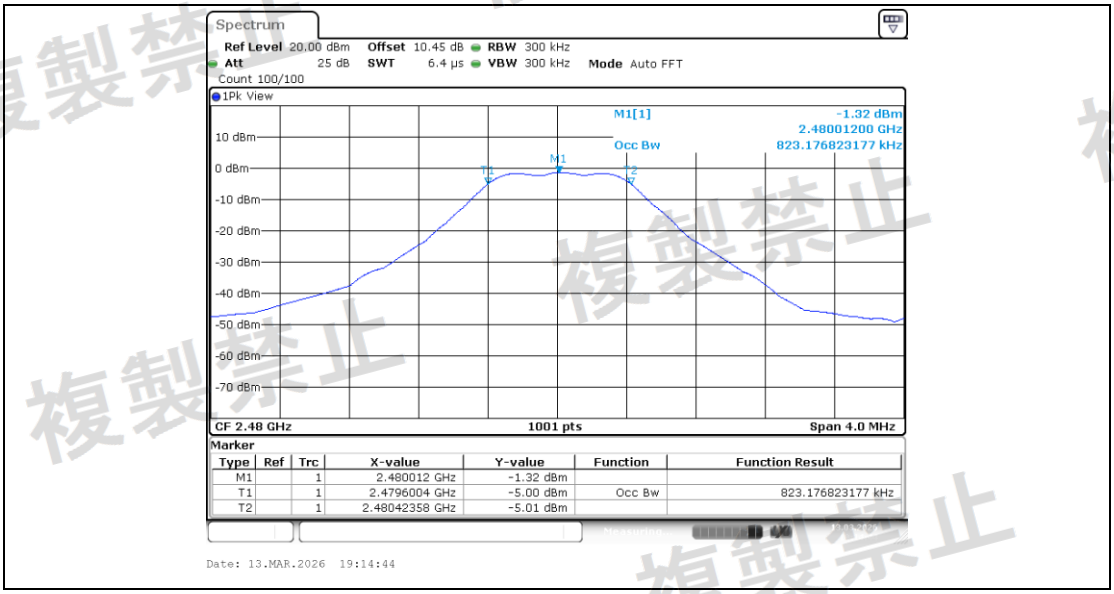
Test Graphs

NTNV_BLE_1M_Ant1_2402

NTNV_BLE_1M_Ant1_2440

NTNV_BLE_1M_Ant1_2480


Spectrum
Ref Level 20.00 dBm Offset 10.45 dB RBW 300 kHz
Att 25 dB SWT 6.4 µs VBW 300 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] -1.32 dBm
2.48001200 GHz
Occ Bw 823.176823177 kHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.48 GHz
1001 pts
Span 4.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.480012 GHz -1.32 dBm
T1 1 2.4796004 GHz -5.00 dBm Occ Bw 823.176823177 kHz
T2 1 2.48042358 GHz -5.01 dBm
Date: 13.MAR.2026 19:14:44

Appendix D: Spurious Emission of TX

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	909.79	-53.31	≤-26	0.00467	≤2.5	PASS
				1000~2387	2368.97	-52.63	≤-26	0.00546	≤2.5	PASS
				2387~2400	2399.99	-30.64	≤-16	0.86298	≤25	PASS
				2483.5~2496.5	2493.04	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	4804.12	-41.52	≤-26	0.07047	≤2.5	PASS
			2440	30~1000	970.17	-53.29	≤-26	0.00469	≤2.5	PASS
				1000~2387	2117.23	-54.00	≤-26	0.00398	≤2.5	PASS
				2387~2400	2389.40	-43.74	≤-16	0.04227	≤25	PASS
				2483.5~2496.5	2494.24	-42.94	≤-16	0.05082	≤25	PASS
				2496.5~13000	4879.74	-40.97	≤-26	0.07998	≤2.5	PASS
			2480	30~1000	237.82	-52.96	≤-26	0.00506	≤2.5	PASS
				1000~2387	1748.98	-53.65	≤-26	0.00432	≤2.5	PASS
				2387~2400	2396.28	-43.81	≤-16	0.04159	≤25	PASS
				2483.5~2496.5	2484.44	-40.46	≤-16	0.08995	≤25	PASS
				2496.5~13000	4959.57	-41.26	≤-26	0.07482	≤2.5	PASS

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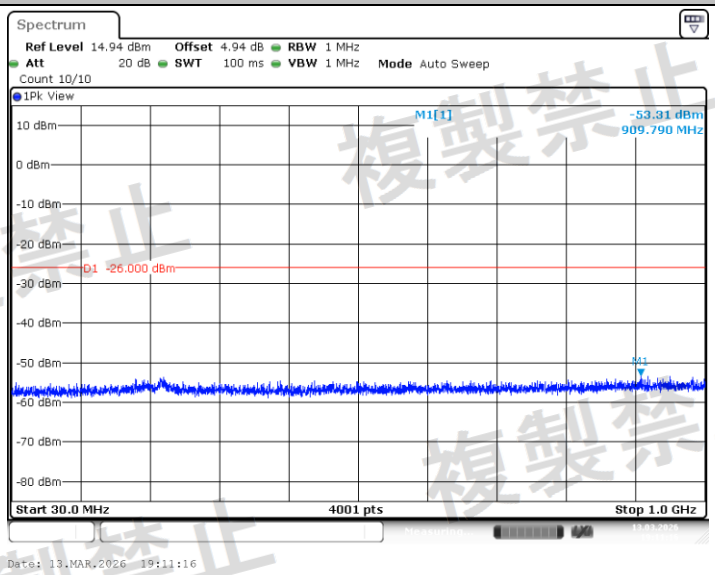
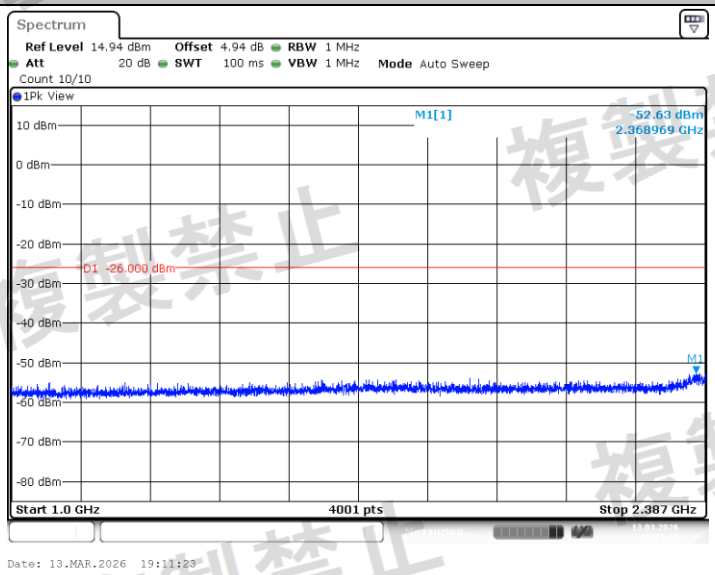
Test Graphs

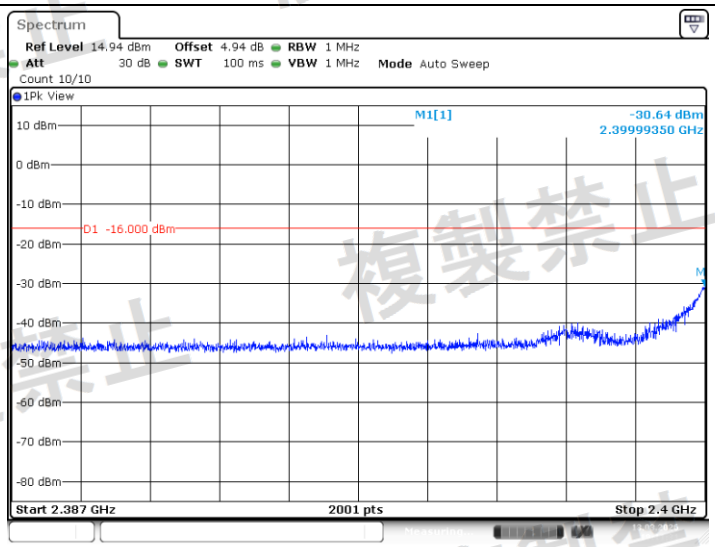
NTNV_BLE_1M_Ant1_2402_30~1000



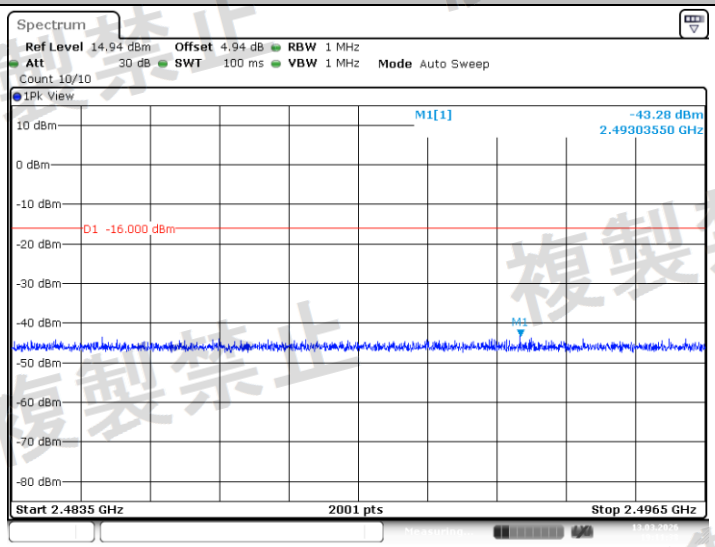
NTNV_BLE_1M_Ant1_2402_1000~2387



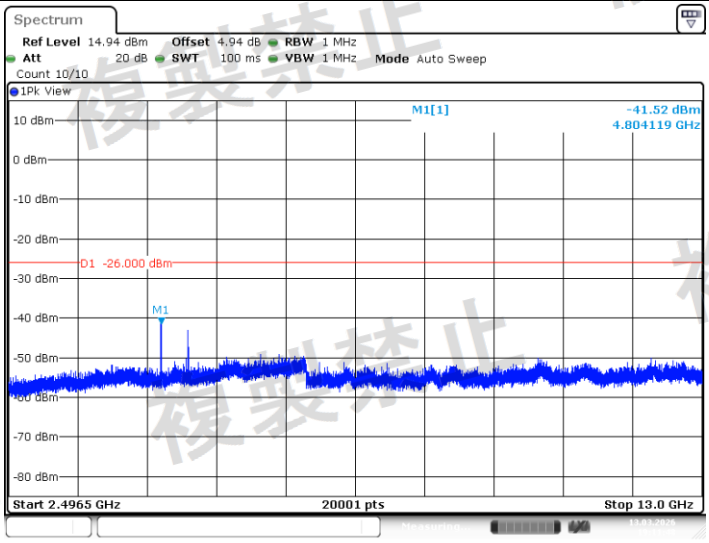
NTNV_BLE_1M_Ant1_2402_2387~2400



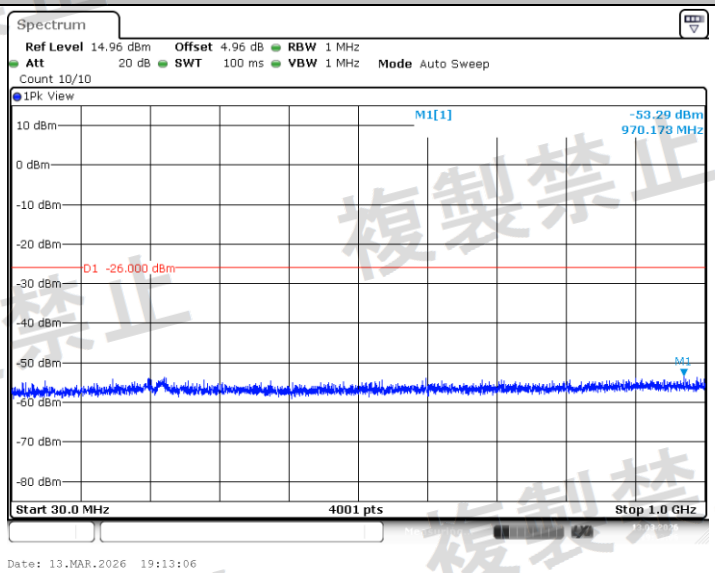
NTNV_BLE_1M_Ant1_2402_2483.5~2496.5



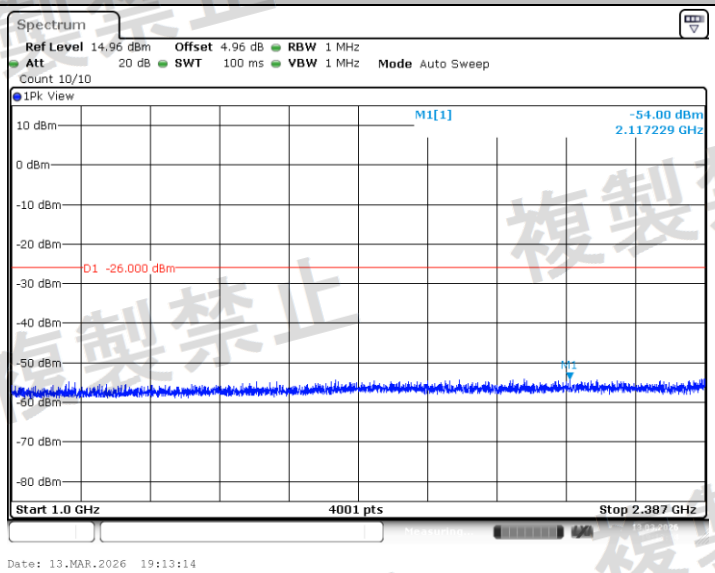
NTNV_BLE_1M_Ant1_2402_2496.5~13000



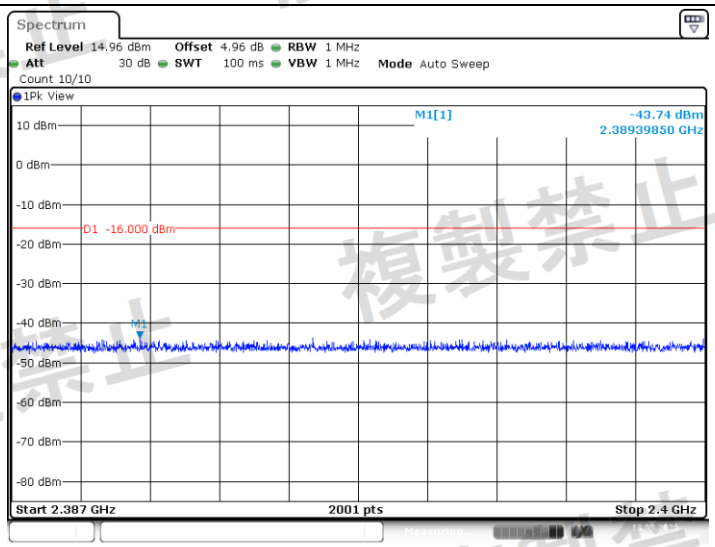
NTNV_BLE_1M_Ant1_2440_30~1000



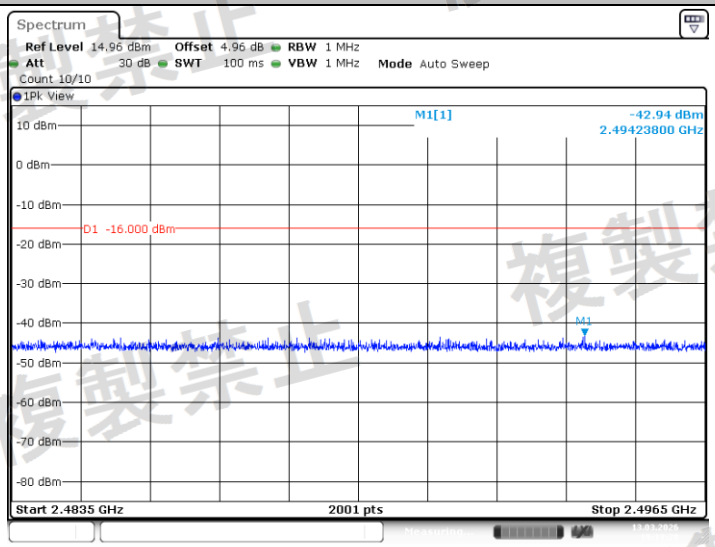
NTNV_BLE_1M_Ant1_2440_1000~2387



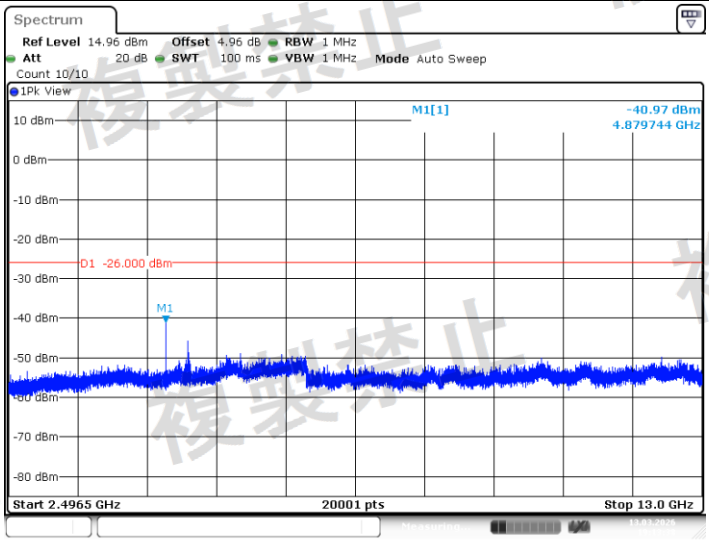
NTNV_BLE_1M_Ant1_2440_2387~2400

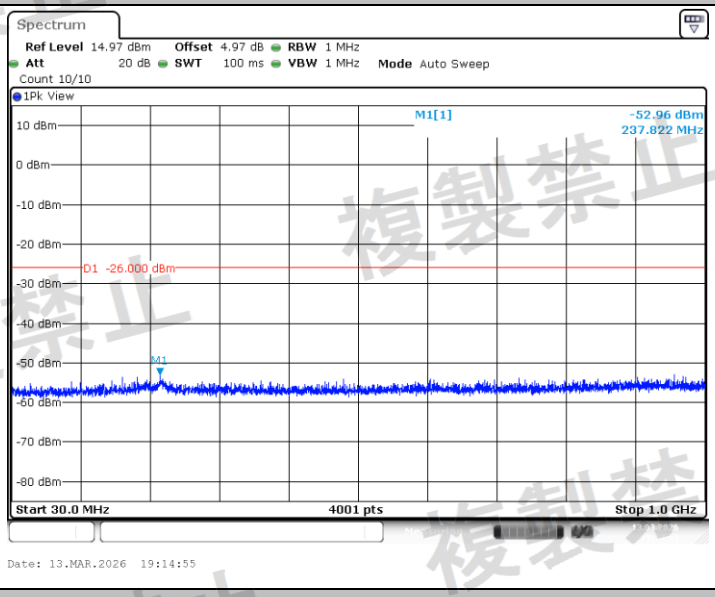
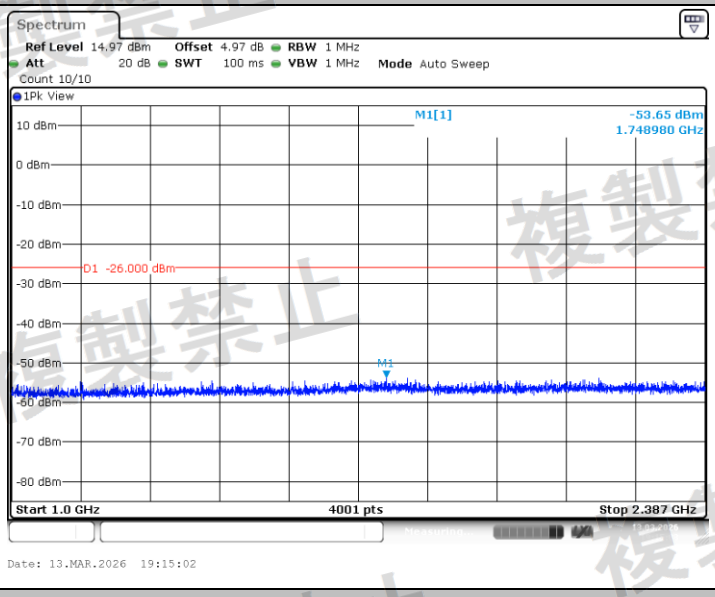


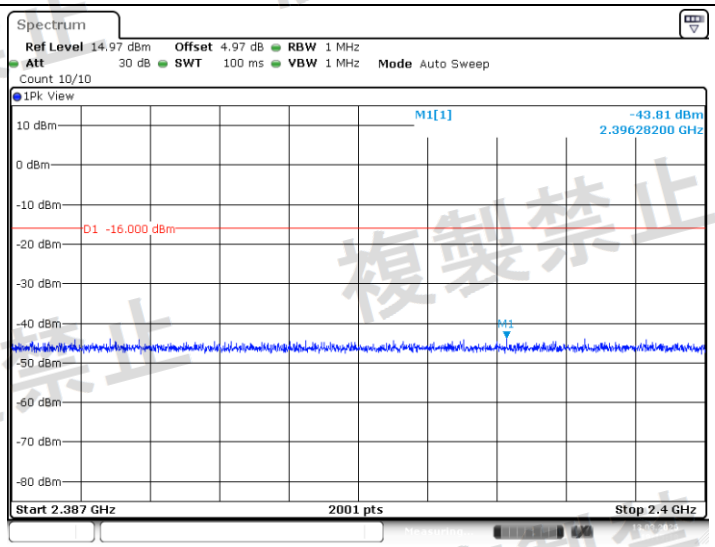
NTNV_BLE_1M_Ant1_2440_2483.5~2496.5



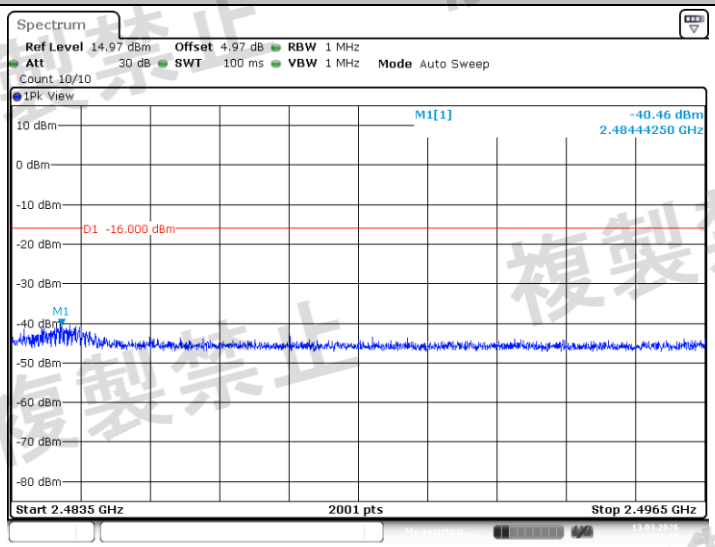
NTNV_BLE_1M_Ant1_2440_2496.5~13000



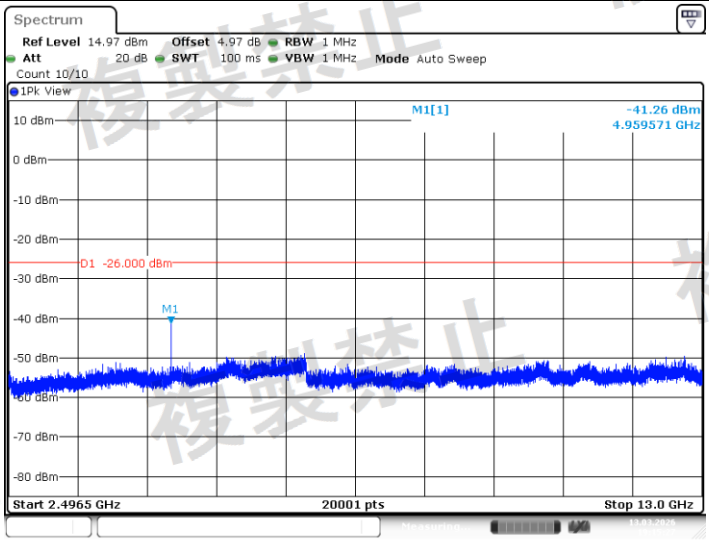
NTNV_BLE_1M_Ant1_2480_30~1000

NTNV_BLE_1M_Ant1_2480_1000~2387

NTNV_BLE_1M_Ant1_2480_2387~2400



NTNV_BLE_1M_Ant1_2480_2483.5~2496.5



NTNV_BLE_1M_Ant1_2480_2496.5~13000



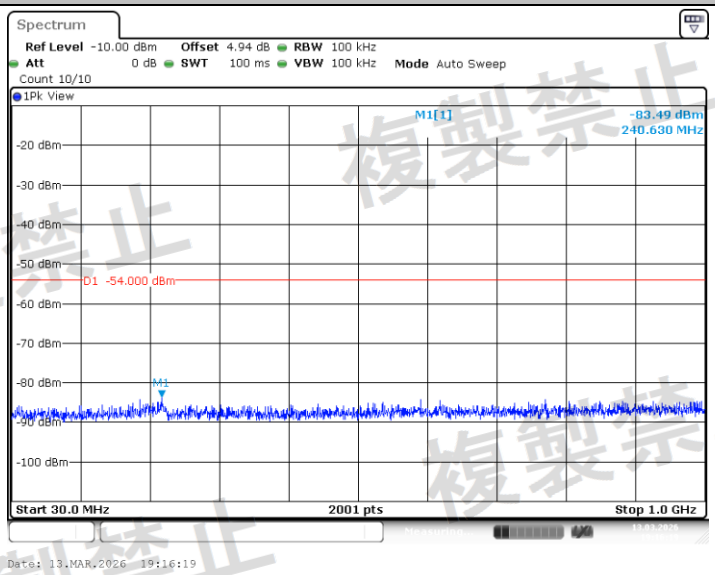
Appendix E: Spurious Emission of RX

Test Result

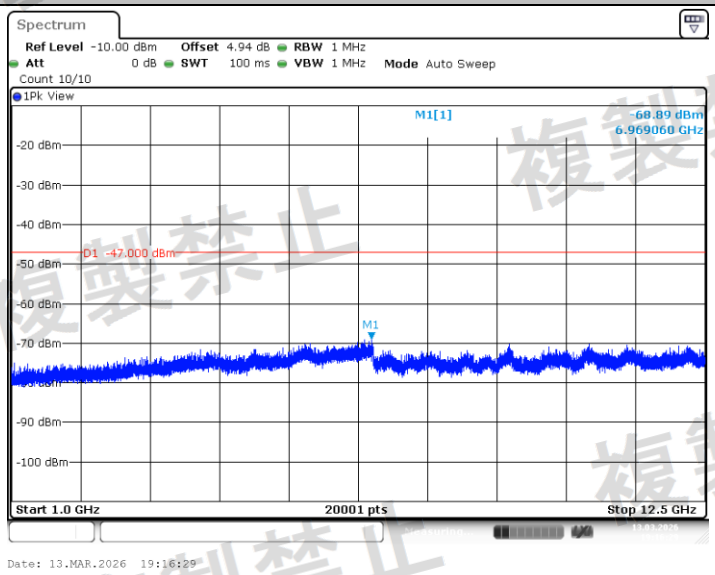
TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	240.63	-83.49	≤-54	0.00448	≤4	PASS
				1000~12500	6969.06	-68.89	≤-47	0.12912	≤20	PASS
			2440	30~1000	931.89	-83.15	≤-54	0.00484	≤4	PASS
				1000~12500	6739.08	-69.60	≤-47	0.10965	≤20	PASS
			2480	30~1000	992.97	-83.70	≤-54	0.00427	≤4	PASS
				1000~12500	6981.14	-69.22	≤-47	0.11967	≤20	PASS

Test Graphs

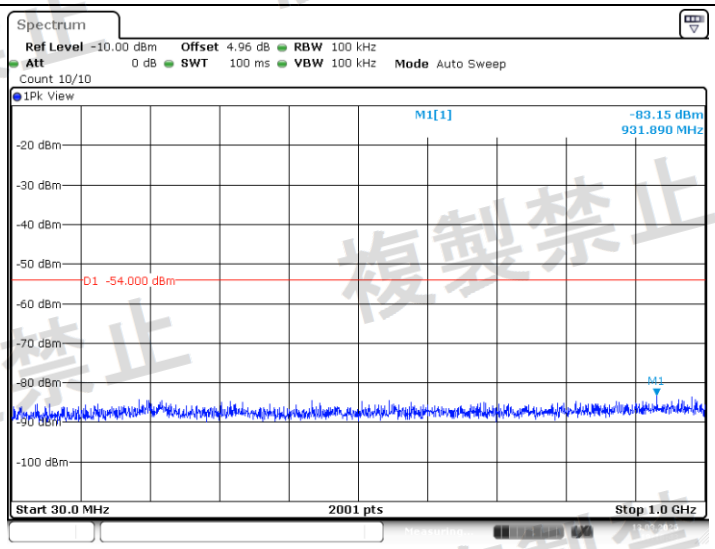
NTNV_BLE_1M_Ant1_2402_30~1000



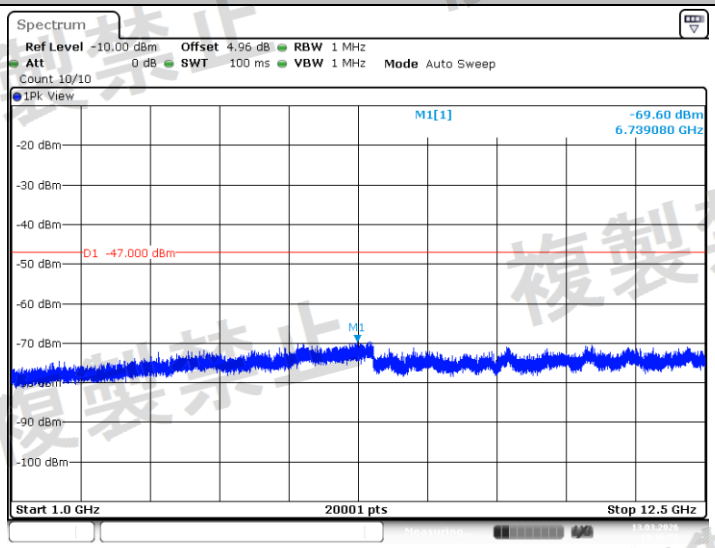
NTNV_BLE_1M_Ant1_2402_1000~12500



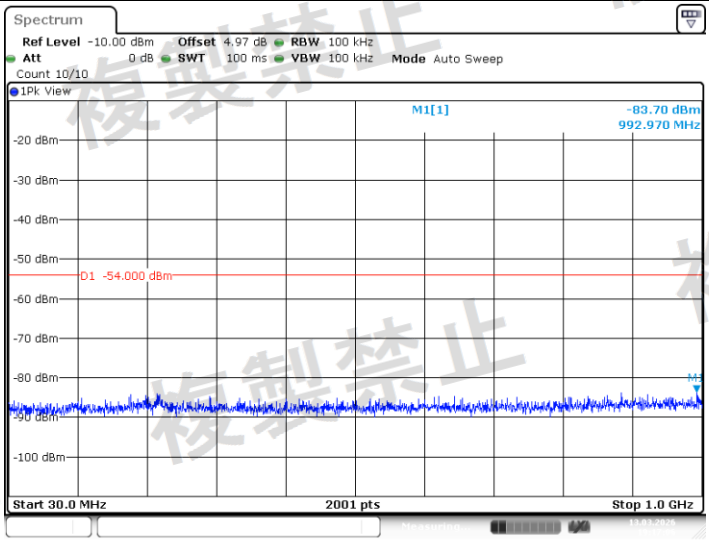
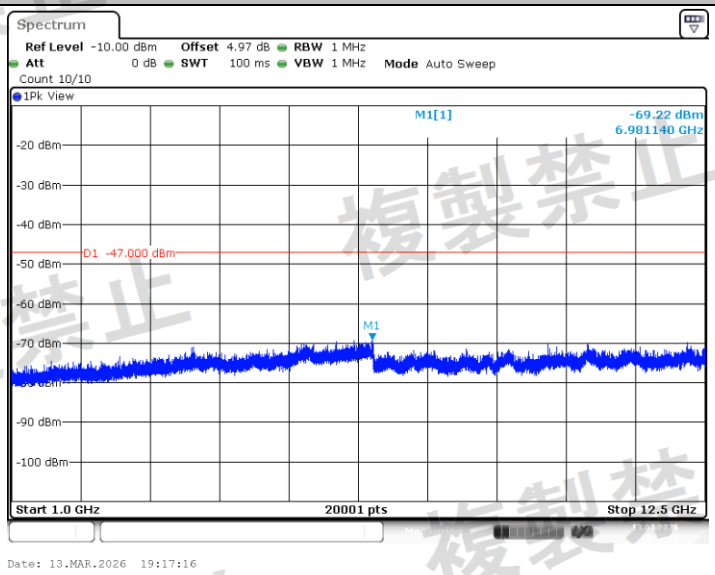
NTNV_BLE_1M_Ant1_2440_30~1000



NTNV_BLE_1M_Ant1_2440_1000~12500



NTNV_BLE_1M_Ant1_2480_30~1000



NTNV_BLE_1M_Ant1_2480_1000~12500