

Appendix A for BT LE Test Data

Product Name: Label Printer

Test Model: 2523/GHLP

Environmental Conditions

Temperature:	21.8°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

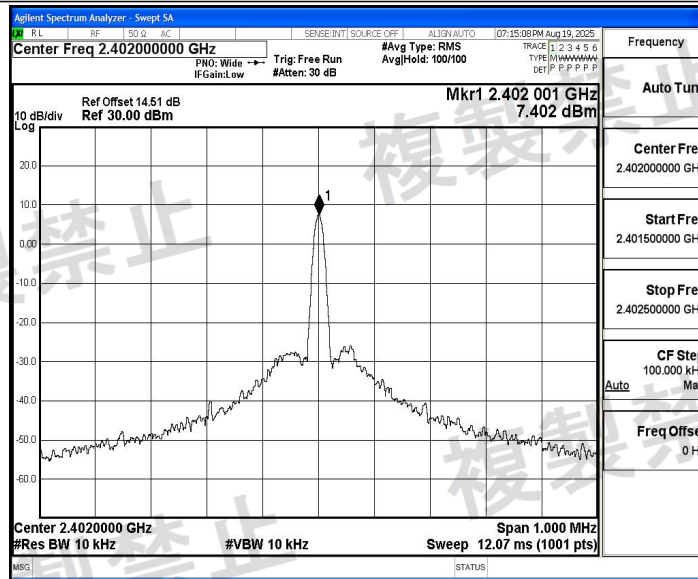
A.1 Frequency Error

Test Result

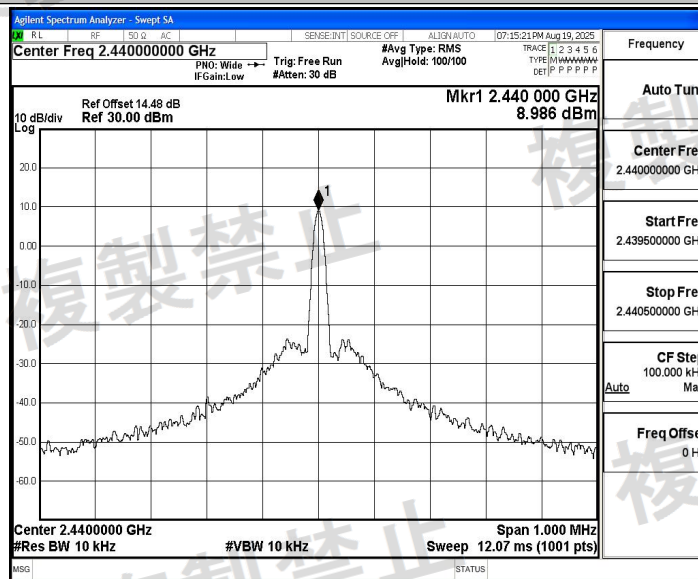
TestCondition	TestMode	Antenna	Frequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency_Error	Ant1	2402	0.41632	±50	PASS
			2440	0.00000	±50	PASS
			2480	0.40323	±50	PASS

Test Graphs

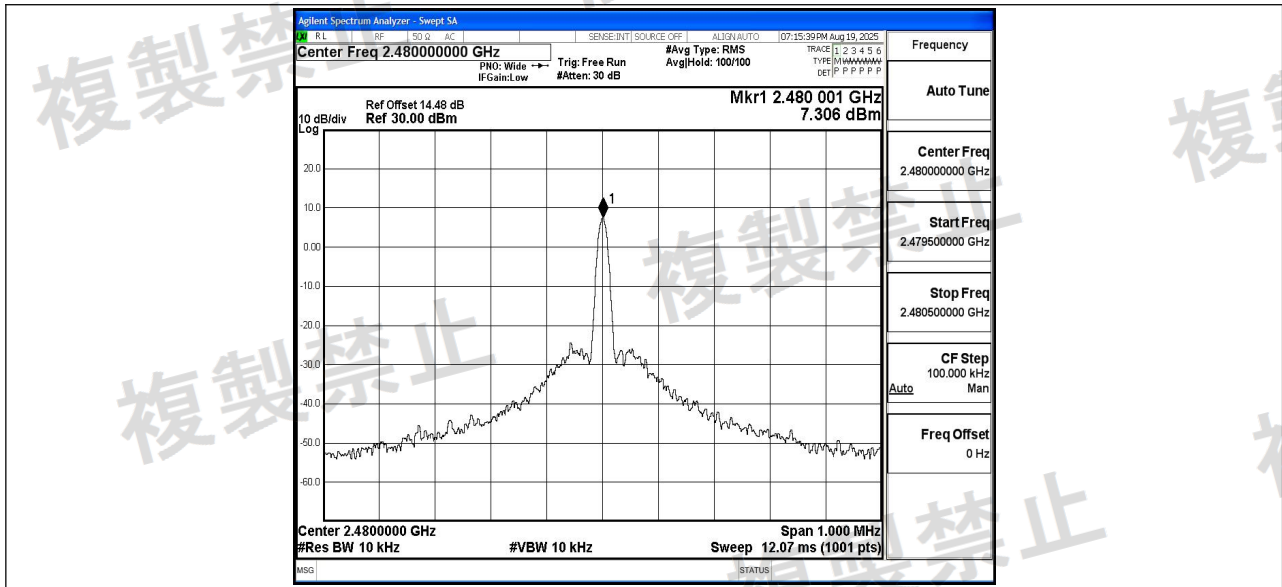
NTNV_Ant1_2402



NTNV_Ant1_2440



NTNV_Ant1_2480



A.2 Antenna Power and E.I.R.P

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant	2402	3.42	2.1979	≤10	PASS
			2440	2.81	1.9099	≤10	PASS
			2480	1.25	1.3335	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTNV	BLE_1M	Ant	2402	2.1979	2	9.90	+20	PASS
			2440	1.9099	2	-4.51	+20	PASS
			2480	1.3335	2	-33.33	+20	PASS

EIRP								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Measured Power [dBm]	Antenna gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
NVNT	BLE_1M	Ant	2402	3.42	2.58	6.0	≤12.14	PASS
			2440	2.81	2.58	5.39	≤12.14	PASS
			2480	1.25	2.58	3.83	≤12.14	PASS

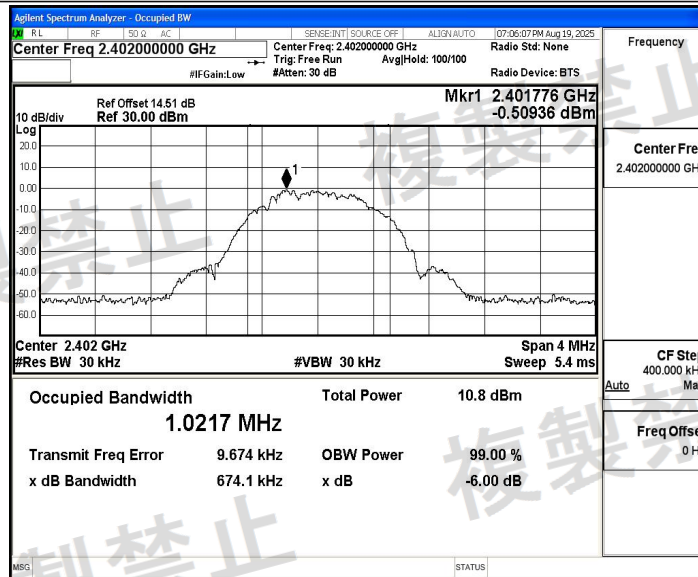
A.3 Occupied Bandwidth

Test Result

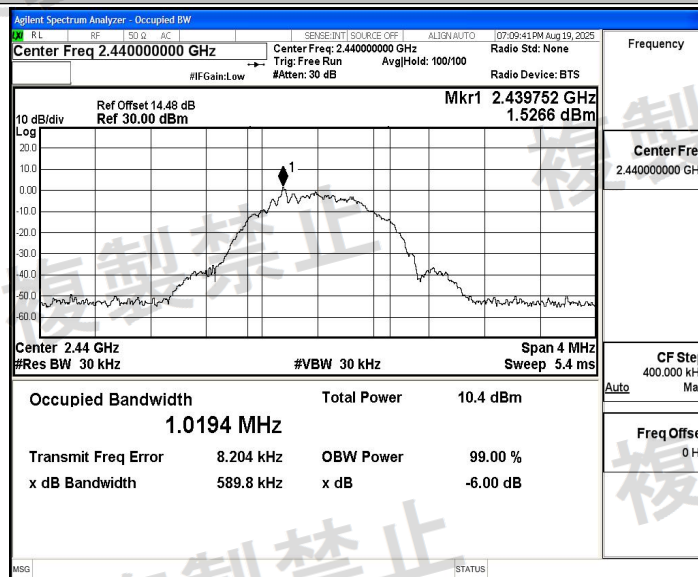
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.022	≤26	PASS
			2440	1.019	≤26	PASS
			2480	1.017	≤26	PASS

Test Graphs

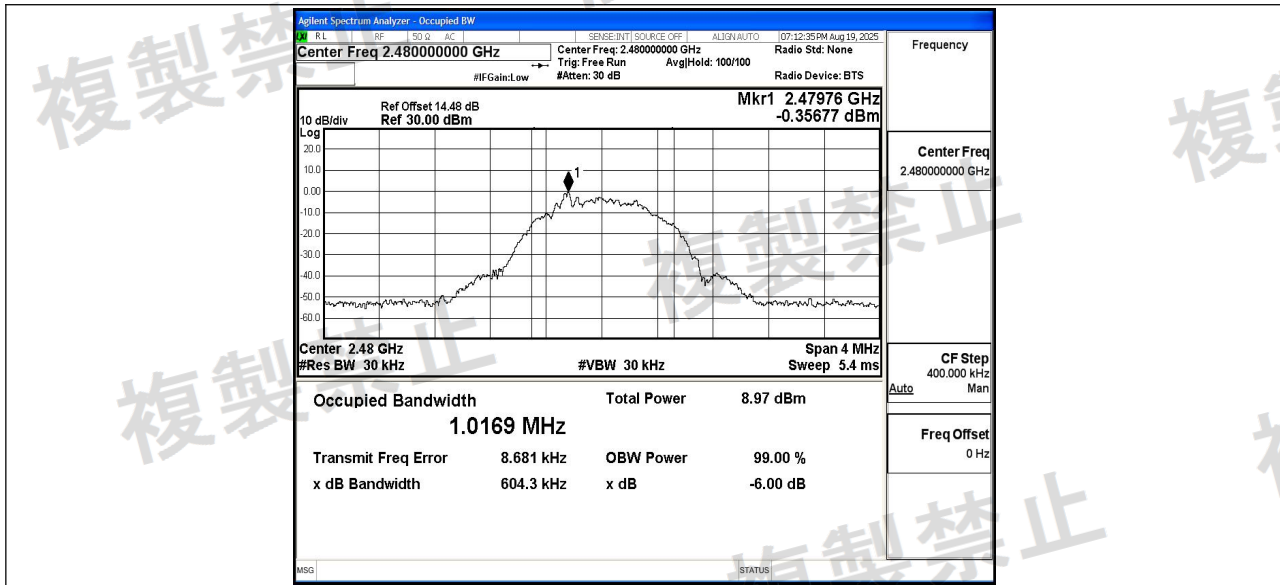
NTNV_BLE_1M_Ant1_2402



NTNV_BLE_1M_Ant1_2440



NTNV_BLE_1M_Ant1_2480



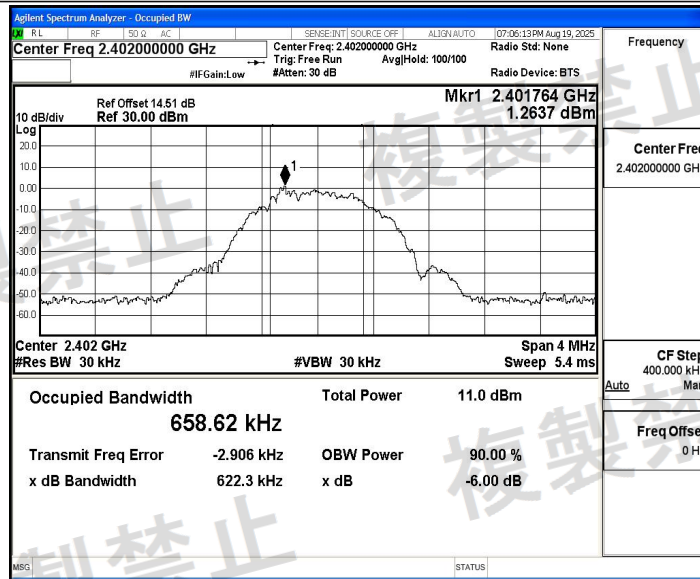
A.4 Spread Bandwidth

Test Result

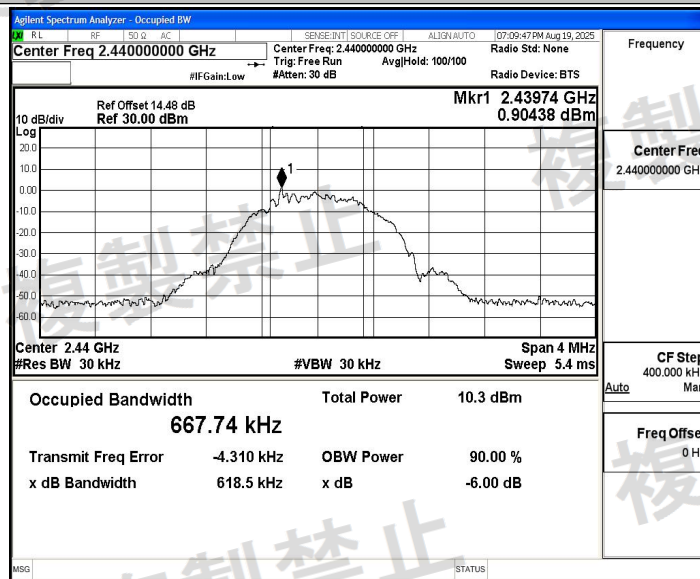
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.659	----	PASS
			2440	0.668	----	PASS
			2480	0.672	----	PASS

Test Graphs

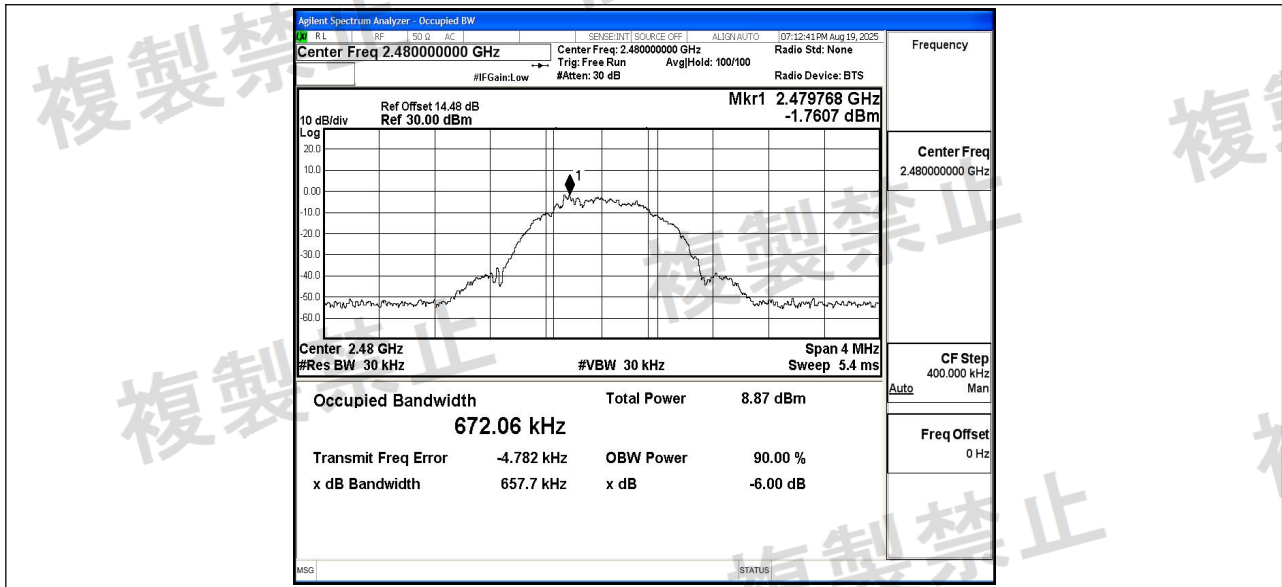
NTNV_BLE_1M_Ant1_2402



NTNV_BLE_1M_Ant1_2440



NTNV_BLE_1M_Ant1_2480



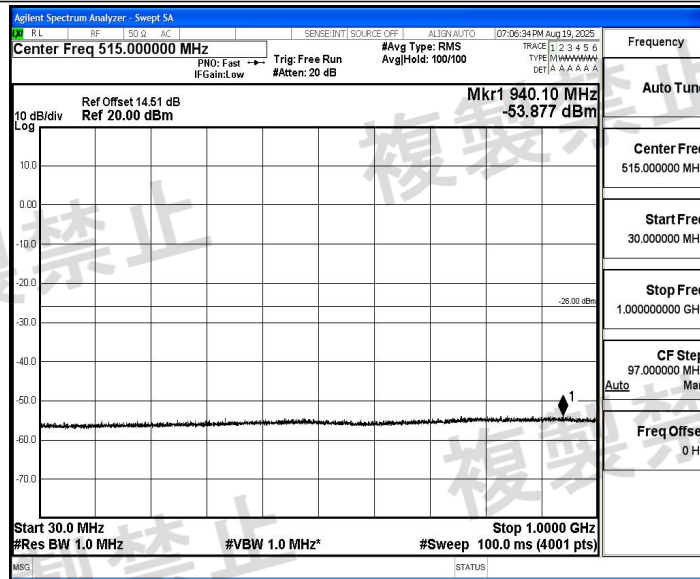
A.5 Spurious Emission of TX

Test Result

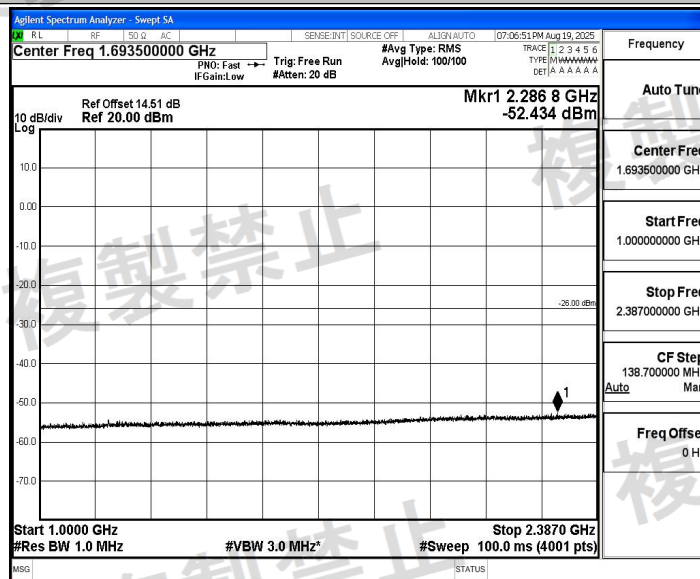
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-53.88	≤-26	0.00409	≤2.5	PASS
				1000~2387	-52.43	≤-26	0.00571	≤2.5	PASS
				2387~2400	-38.18	≤-16	0.15205	≤25	PASS
				2483.5~2496.5	-43.06	≤-16	0.04943	≤25	PASS
				2496.5~13000	-45.66	≤-26	0.02716	≤2.5	PASS
			2440	30~1000	-53.47	≤-26	0.00450	≤2.5	PASS
				1000~2387	-44.51	≤-26	0.03540	≤2.5	PASS
				2387~2400	-43.31	≤-16	0.04667	≤25	PASS
				2483.5~2496.5	-43.11	≤-16	0.04887	≤25	PASS
				2496.5~13000	-45.73	≤-26	0.02673	≤2.5	PASS
			2480	30~1000	-52.70	≤-26	0.00537	≤2.5	PASS
				1000~2387	-52.58	≤-26	0.00552	≤2.5	PASS
				2387~2400	-43.29	≤-16	0.04688	≤25	PASS
				2483.5~2496.5	-43.29	≤-16	0.04688	≤25	PASS
				2496.5~13000	-45.46	≤-26	0.02844	≤2.5	PASS

Test Graphs

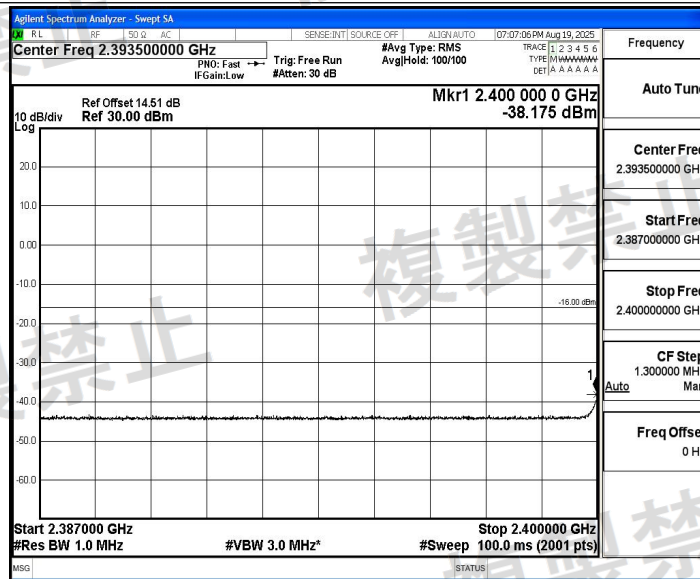
NTNV_BLE_1M_Ant1_2402_30~1000



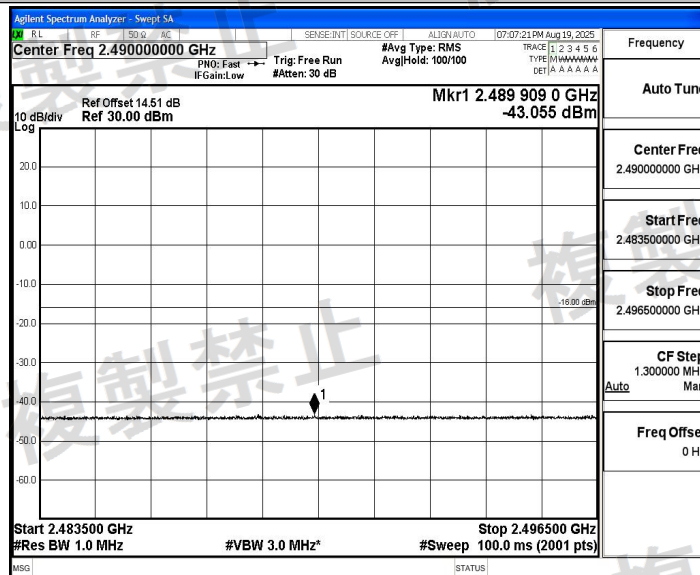
NTNV_BLE_1M_Ant1_2402_1000~2387



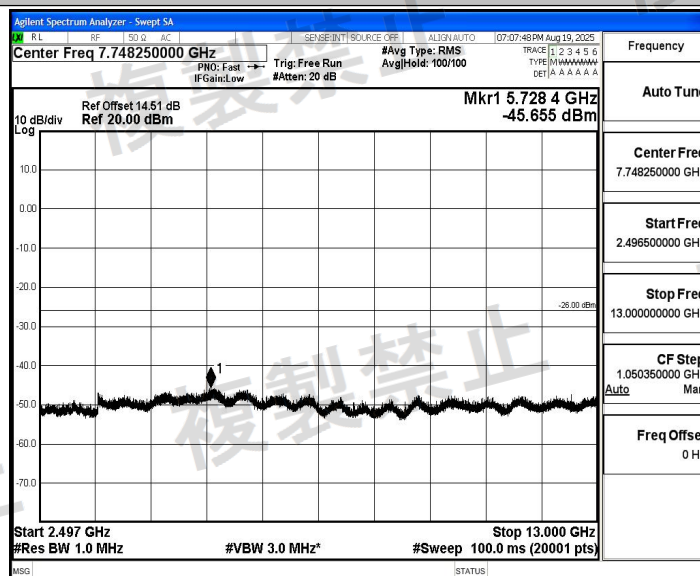
NTNV_BLE_1M_Ant1_2402_2387~2400



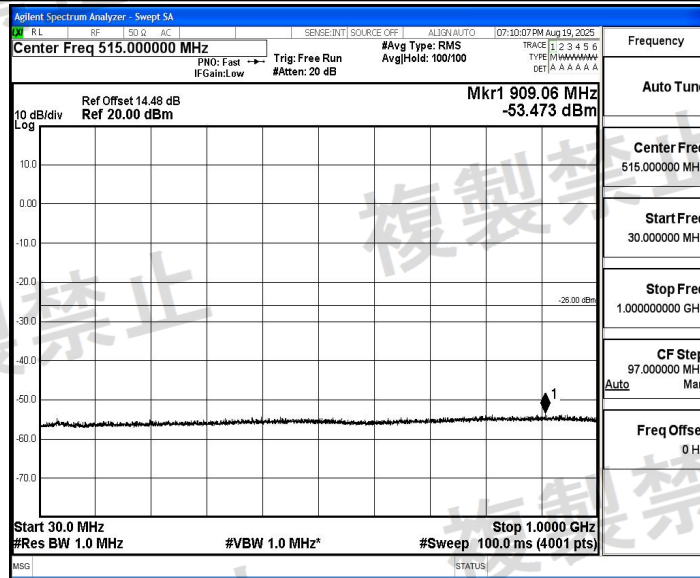
NTNV_BLE_1M_Ant1_2402_2483.5~2496.5



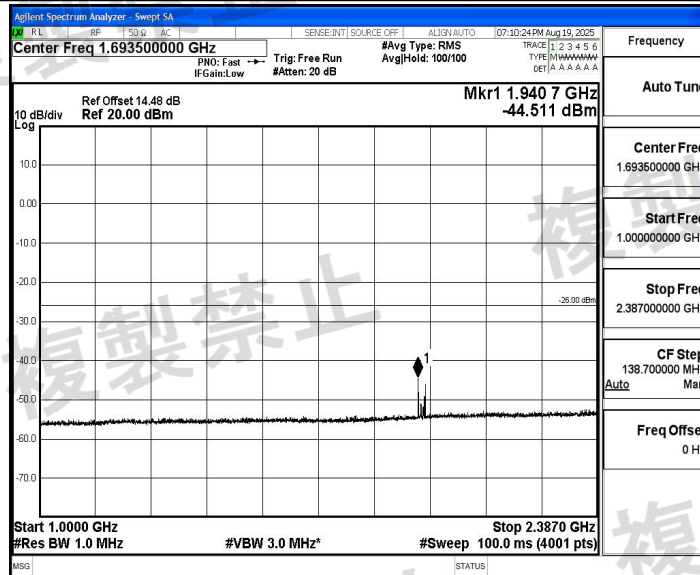
NTNV_BLE_1M_Ant1_2402_2496.5~13000



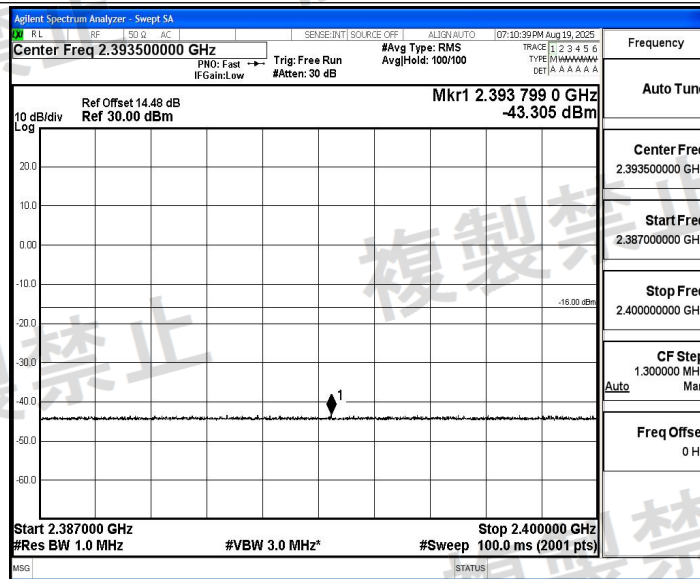
NTNV_BLE_1M_Ant1_2440_30~1000



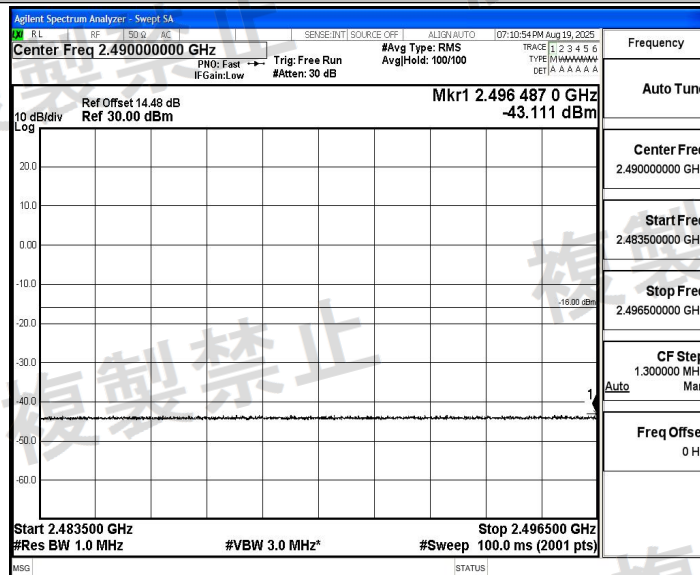
NTNV_BLE_1M_Ant1_2440_1000~2387



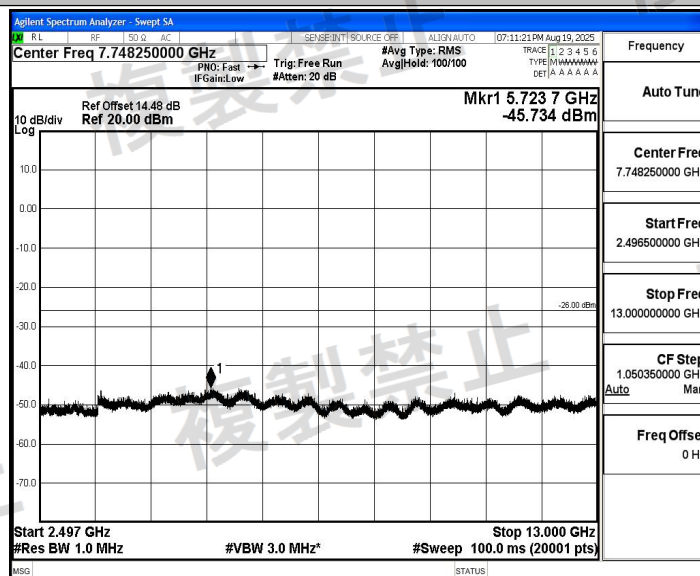
NTNV_BLE_1M_Ant1_2440_2387~2400



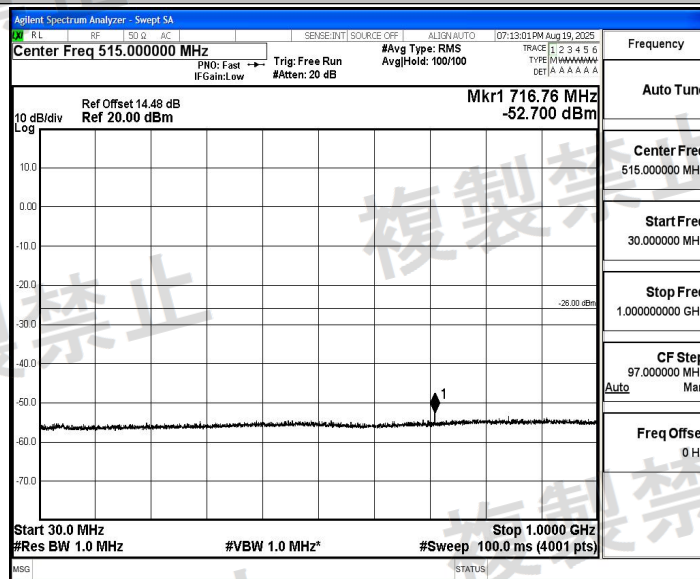
NTNV_BLE_1M_Ant1_2440_2483.5~2496.5



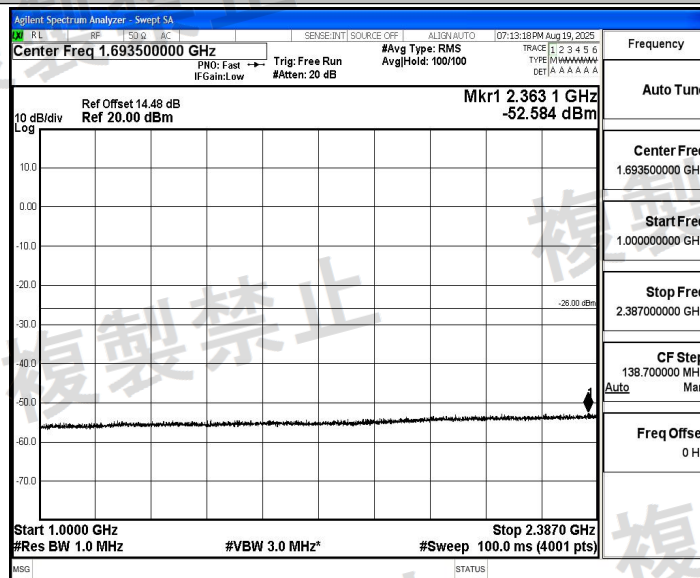
NTNV_BLE_1M_Ant1_2440_2496.5~13000



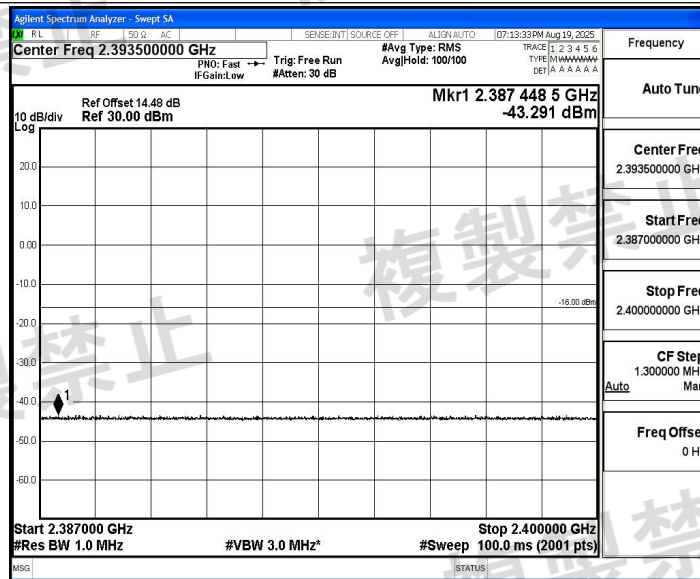
NTNV_BLE_1M_Ant1_2480_30~1000



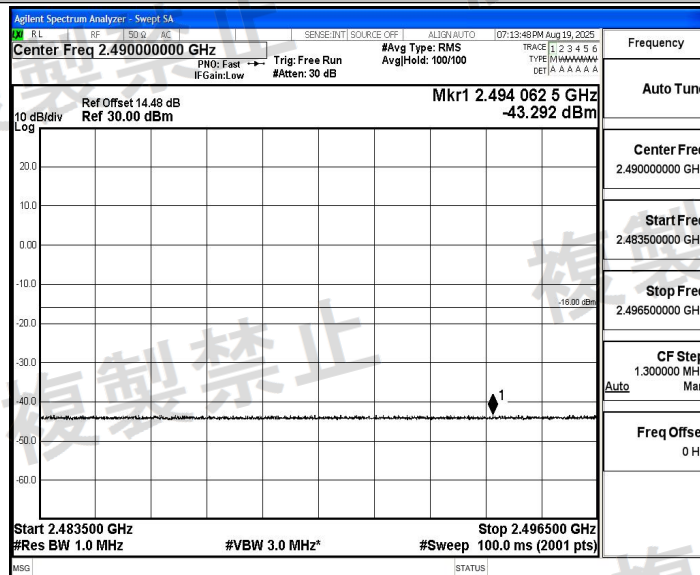
NTNV_BLE_1M_Ant1_2480_1000~2387



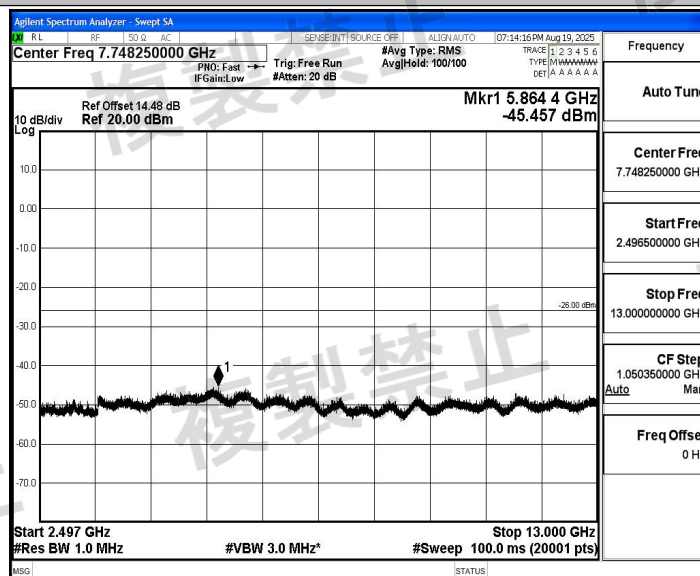
NTNV_BLE_1M_Ant1_2480_2387~2400



NTNV_BLE_1M_Ant1_2480_2483.5~2496.5



NTNV_BLE_1M_Ant1_2480_2496.5~13000



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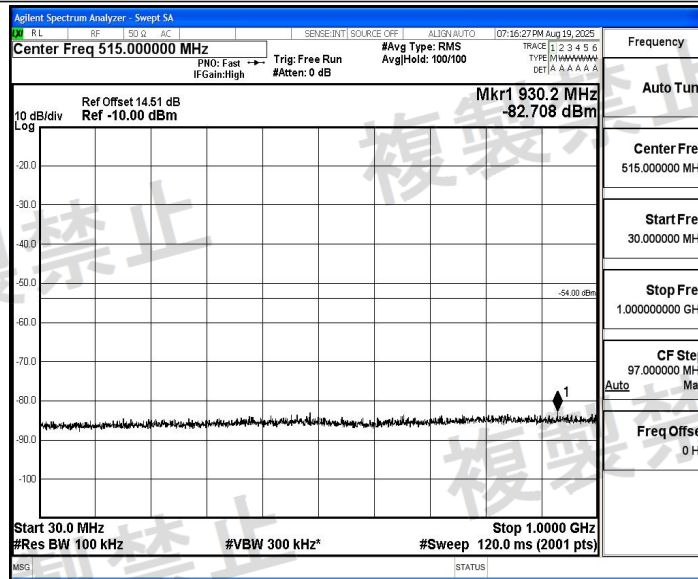
A.6 Spurious Emission of RX

Test Result

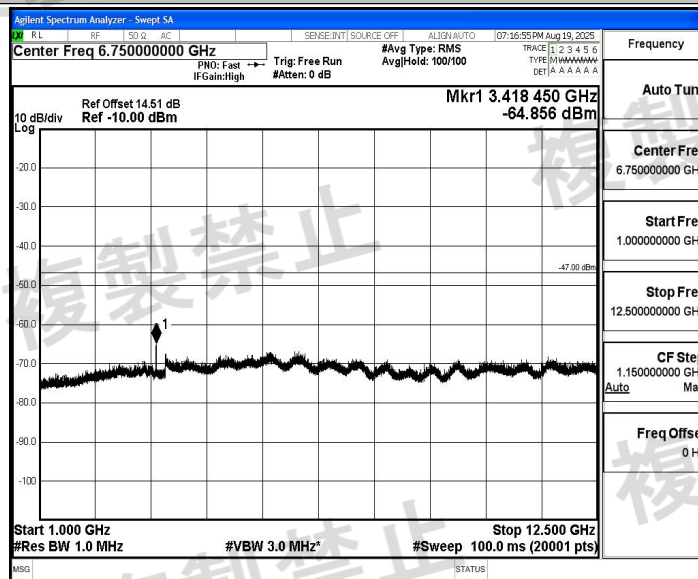
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-82.71	≤-54	0.00536	≤4	PASS
				1000~12500	-64.86	≤-47	0.32659	≤20	PASS
			2440	30~1000	-80.81	≤-54	0.00830	≤4	PASS
				1000~12500	-62.31	≤-47	0.58749	≤20	PASS
			2480	30~1000	-83.16	≤-54	0.00483	≤4	PASS
				1000~12500	-67	≤-47	0.19953	≤20	PASS

Test Graphs

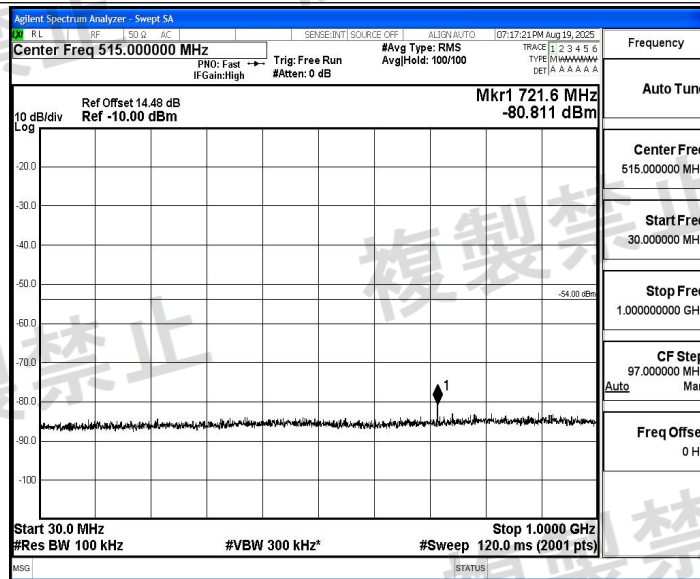
NTNV_BLE_1M_Ant1_2402_30~1000



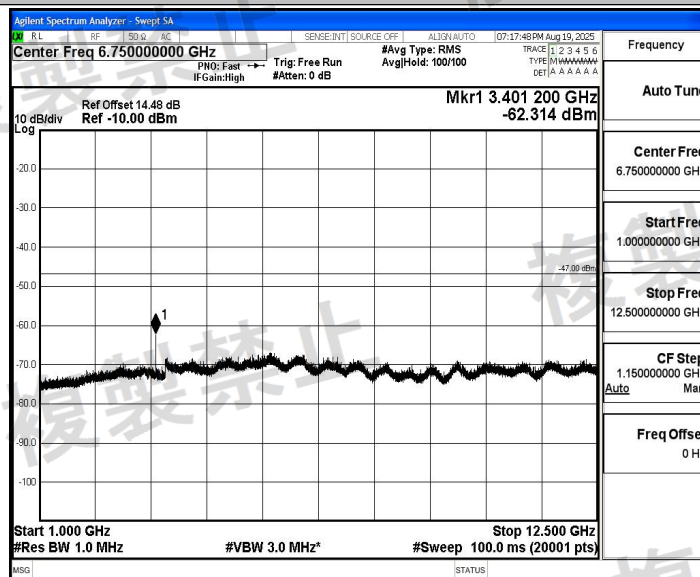
NTNV_BLE_1M_Ant1_2402_1000~12500



NTNV_BLE_1M_Ant1_2440_30~1000



NTNV_BLE_1M_Ant1_2440_1000~12500



NTNV_BLE_1M_Ant1_2480_30~1000

