



Appendix B for BT LE Test Data

Product Name: Optical gaming mouse

Test Model: VARO V1

Environmental Conditions

Temperature:	22.5°C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun



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B.1 Frequency Error

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency Error	Ant1	2402	-4.16320	±50	PASS
			2440	-4.09836	±50	PASS
			2480	-4.03226	±50	PASS



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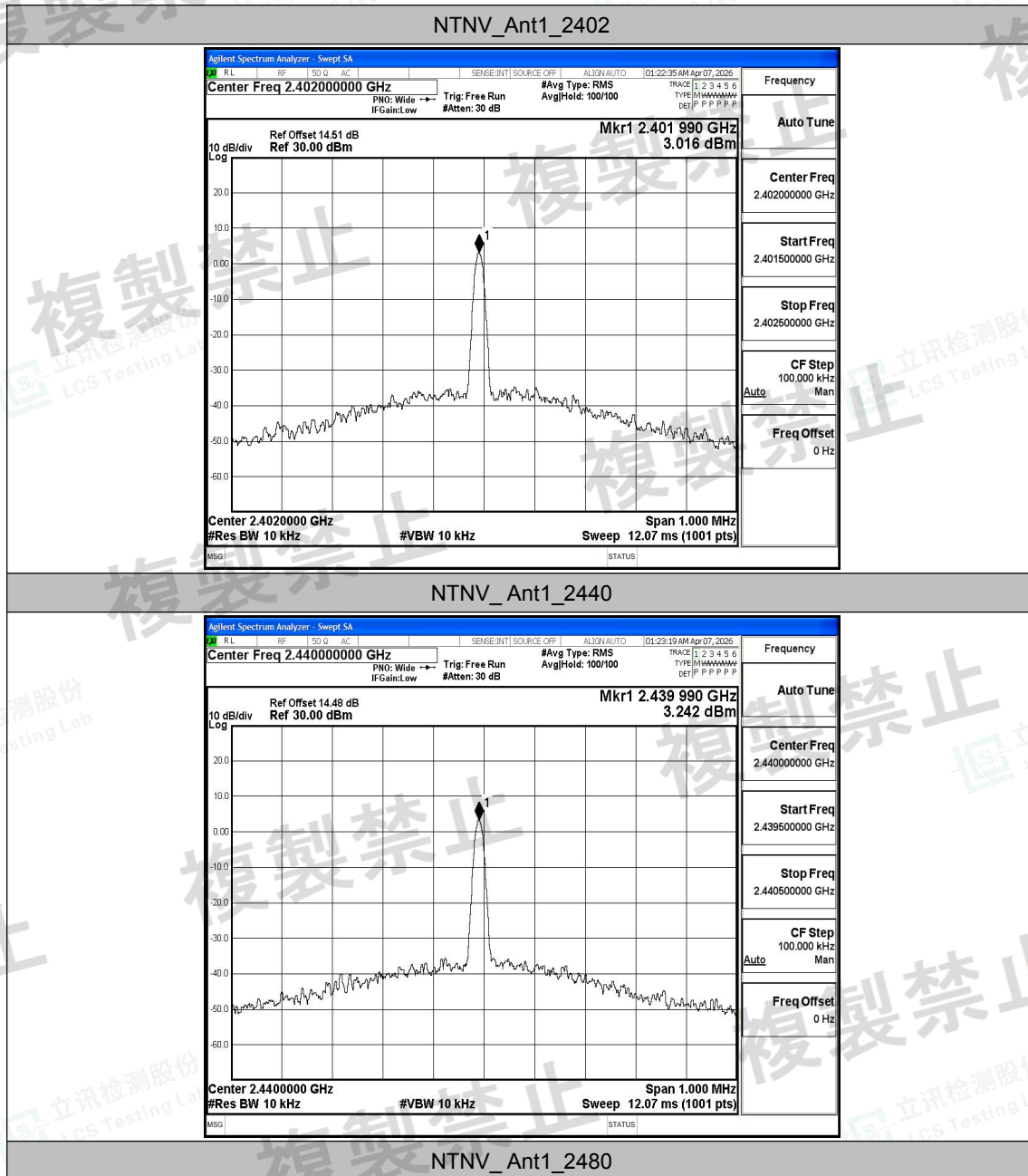
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Test Graphs

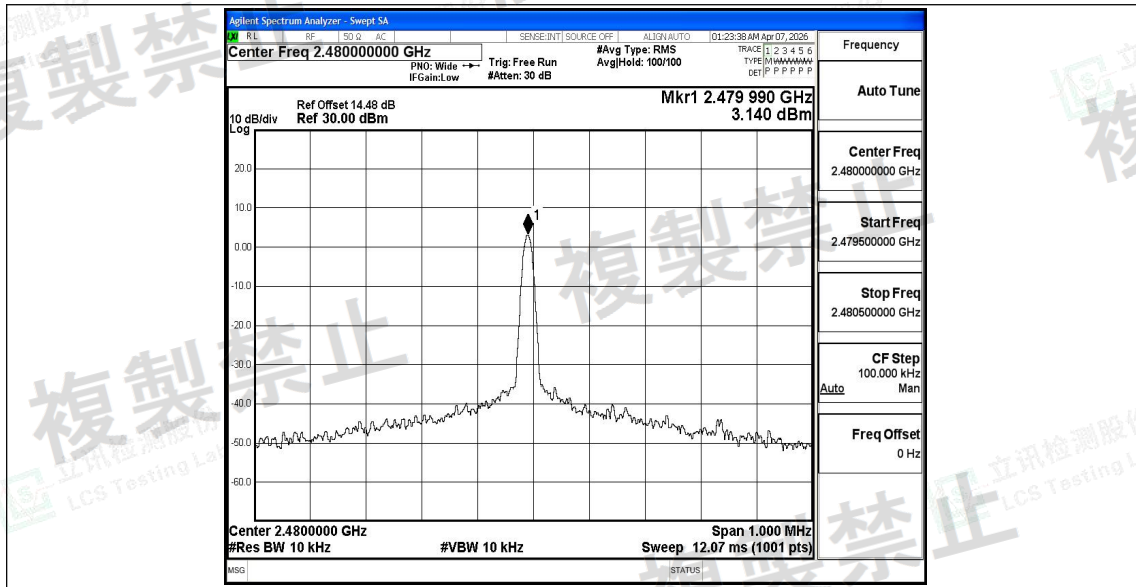


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B.2 Antenna Power

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant	2402	-2.02	0.6281	≤10	PASS
			2440	-2.23	0.5984	≤10	PASS
			2480	-1.75	0.6683	≤10	PASS
	BLE_2M	Ant	2402	-1.56	0.6982	≤10	PASS
			2440	-1.83	0.6561	≤10	PASS
			2480	-1.50	0.7079	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTNV	BLE_1M	Ant	2402	0.6281	0.6	4.68	+20	PASS
			2440	0.5984	0.6	-0.27	+20	PASS
			2480	0.6683	0.6	11.38	+20	PASS
	BLE_2M	Ant	2402	0.6982	0.6	16.37	+20	PASS
			2440	0.6561	0.6	9.35	+20	PASS
			2480	0.7079	0.6	17.98	+20	PASS



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B.3 Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.058	≤26	PASS
			2440	1.058	≤26	PASS
			2480	1.057	≤26	PASS
	BLE_2M	Ant1	2402	2.073	≤26	PASS
			2440	2.084	≤26	PASS
			2480	2.084	≤26	PASS



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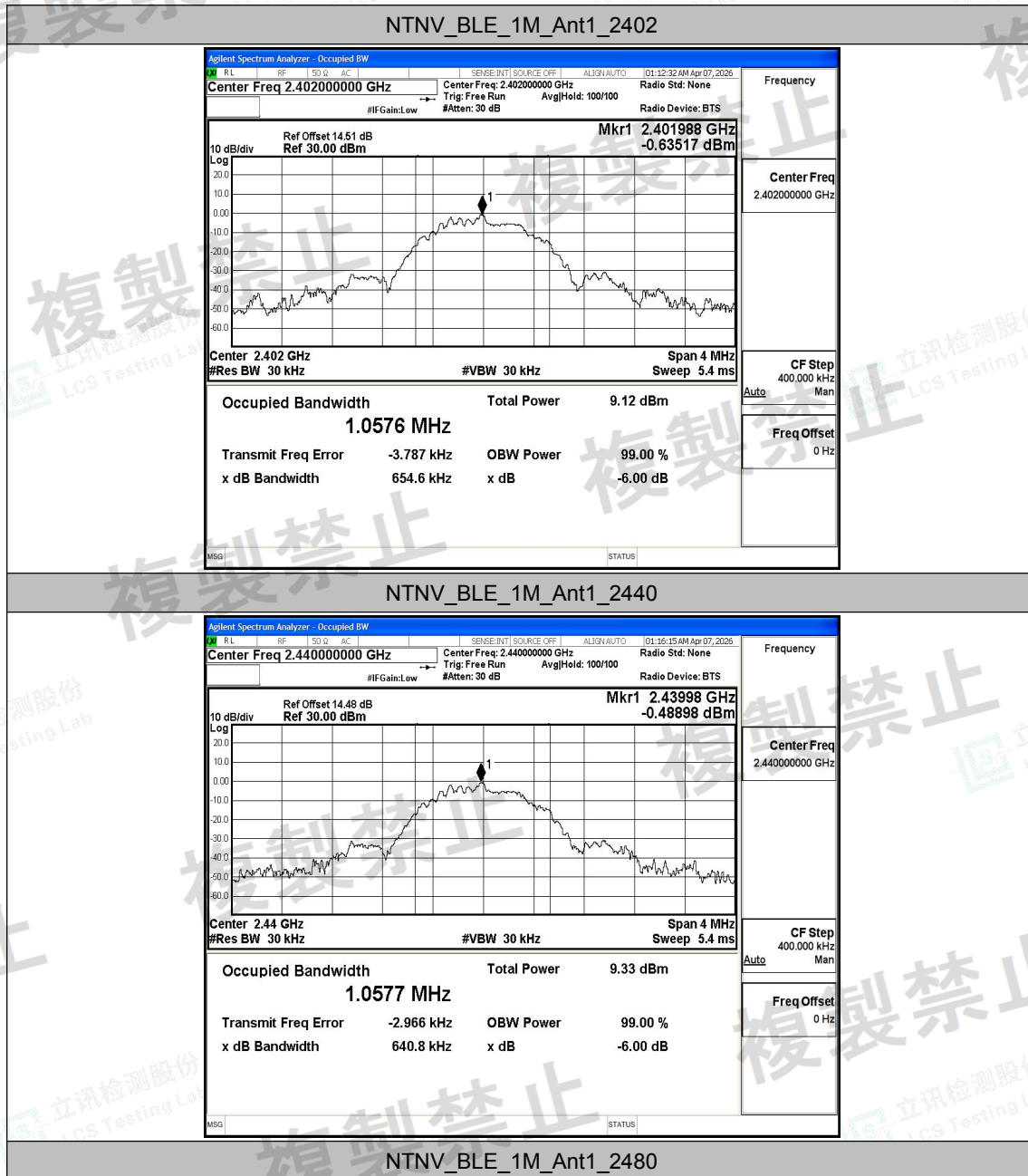
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Test Graphs

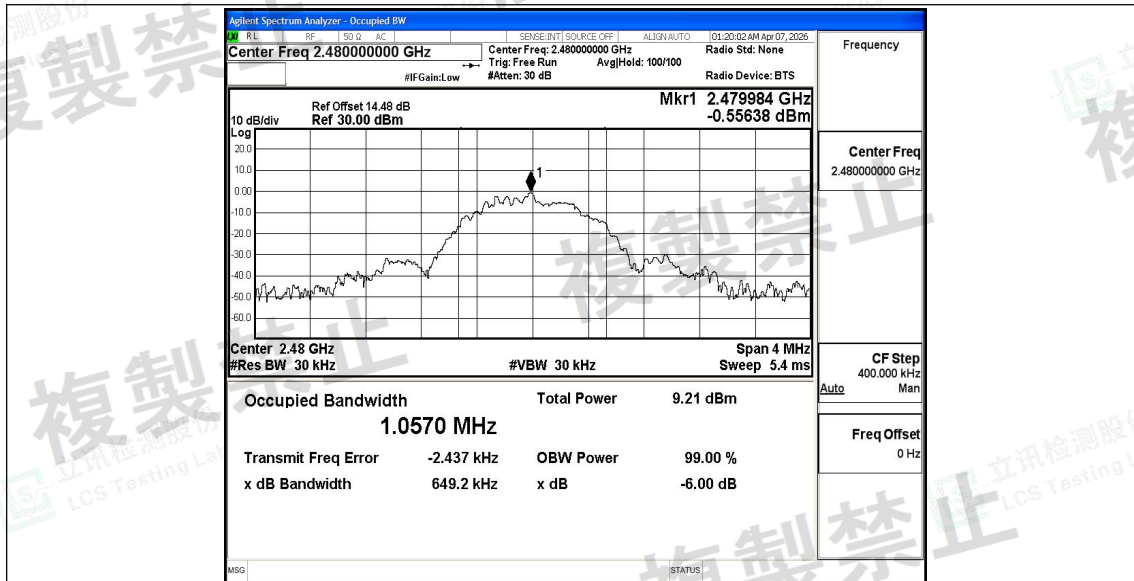


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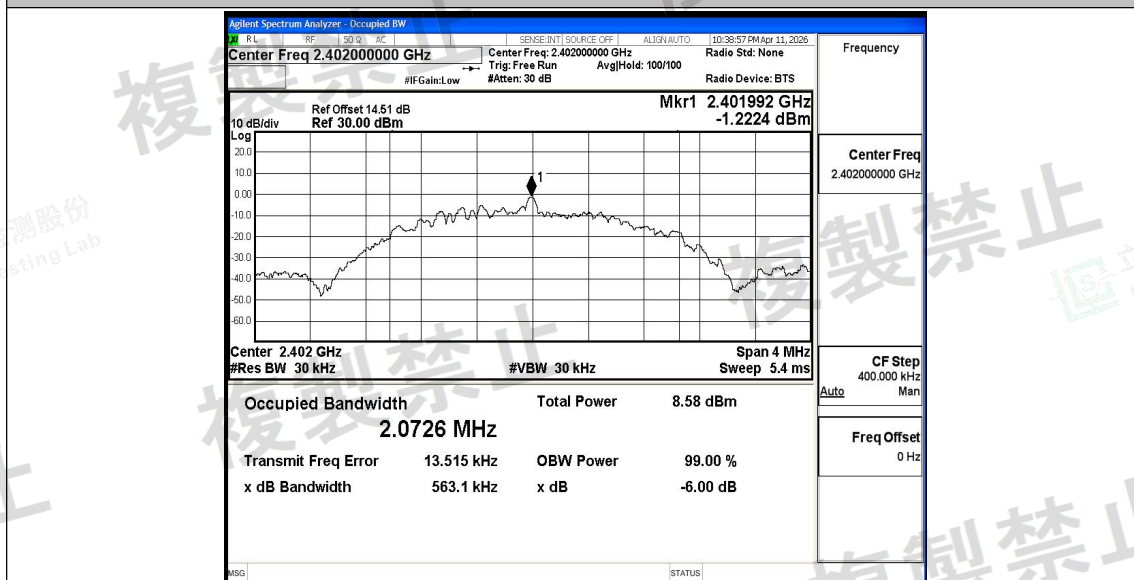
Add: Room 101/201, Building A, and Room 101/301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440

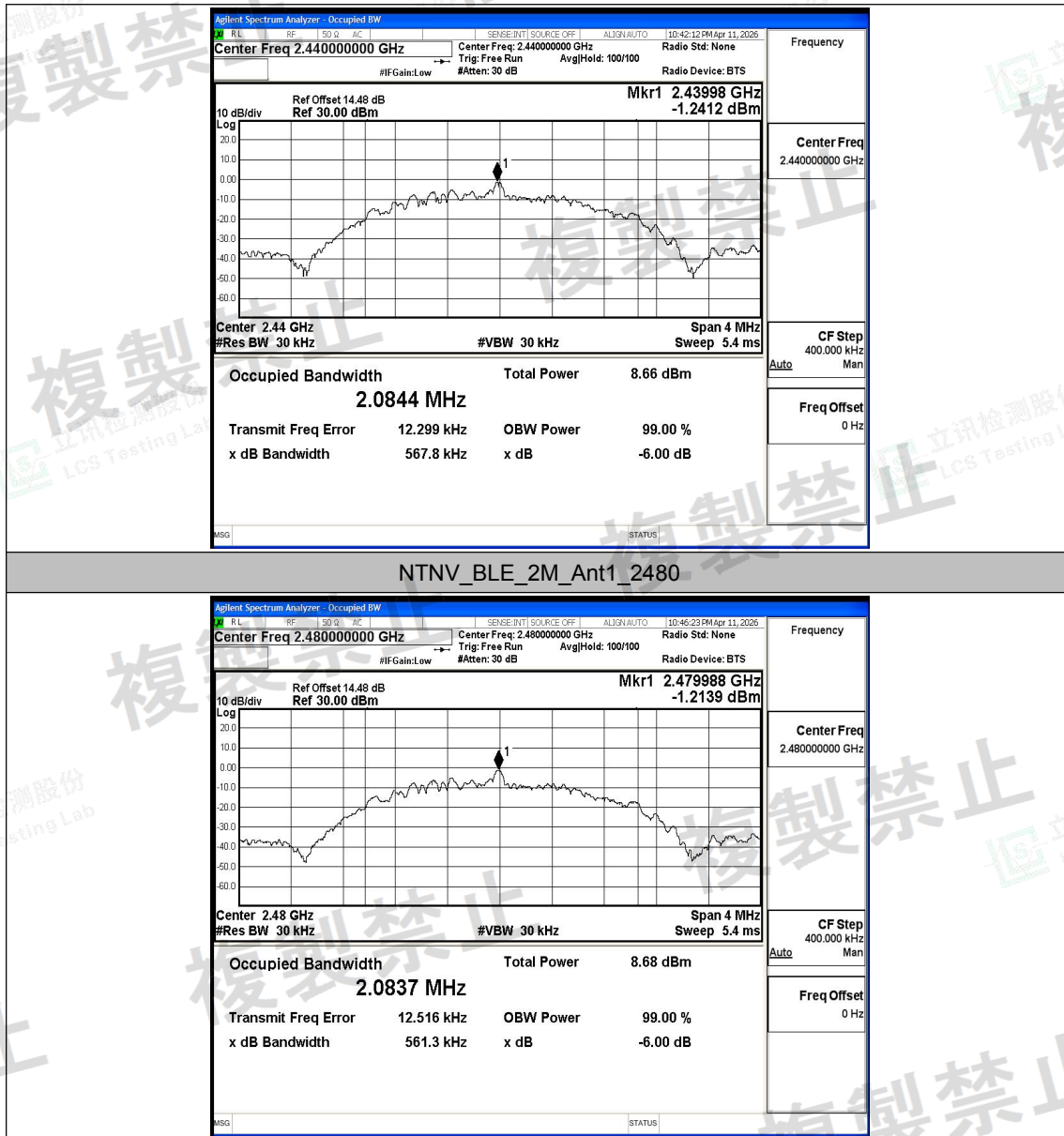


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B.4 Spread Bandwidth

Test Result

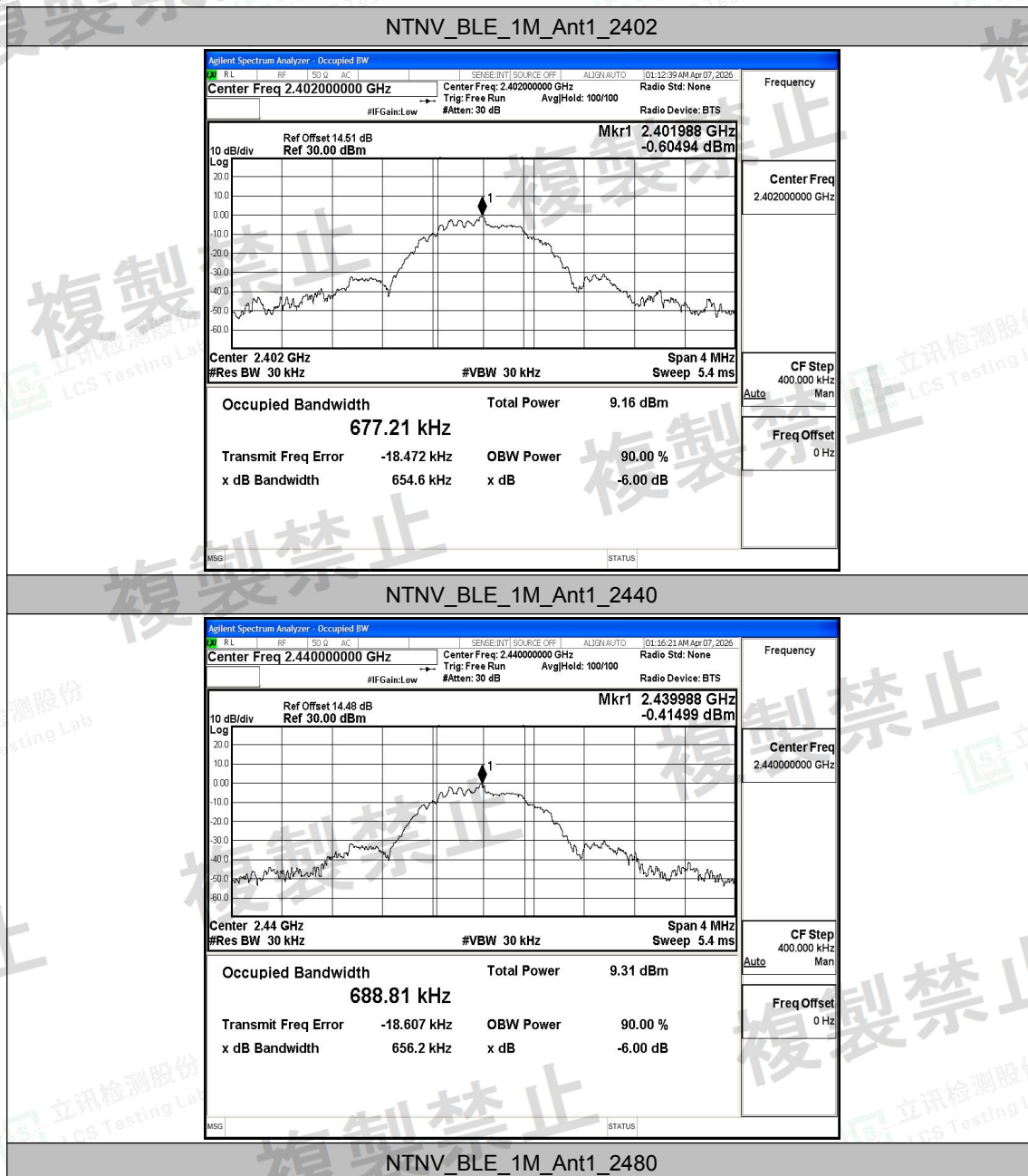
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.677	≥0.5	PASS
			2440	0.689	≥0.5	PASS
			2480	0.683	≥0.5	PASS
	BLE_2M	Ant1	2402	1.379	≥0.5	PASS
			2440	1.360	≥0.5	PASS
			2480	1.370	≥0.5	PASS



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Test Graphs

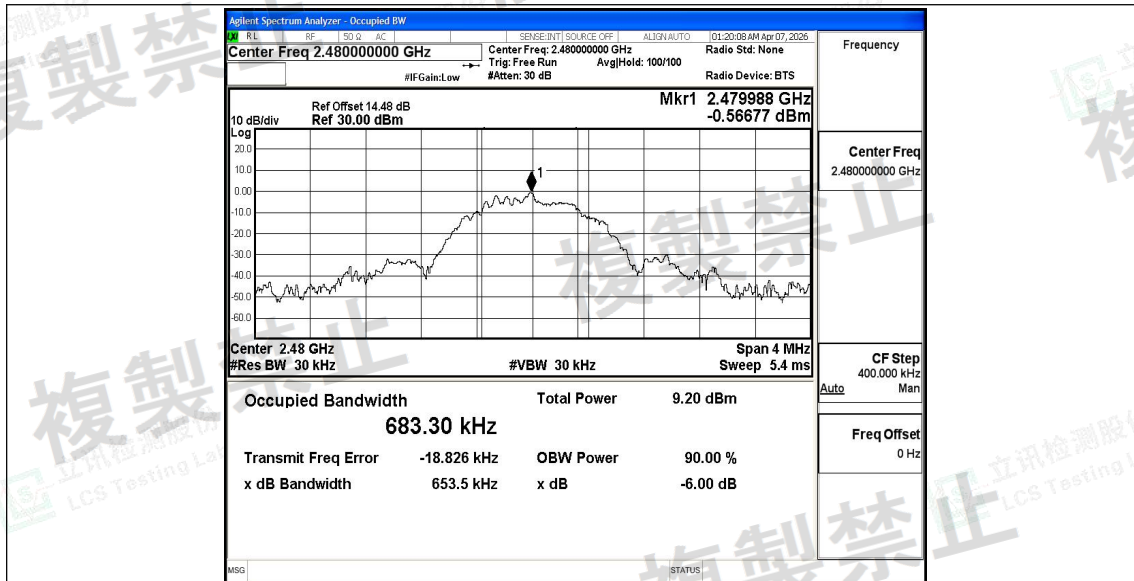


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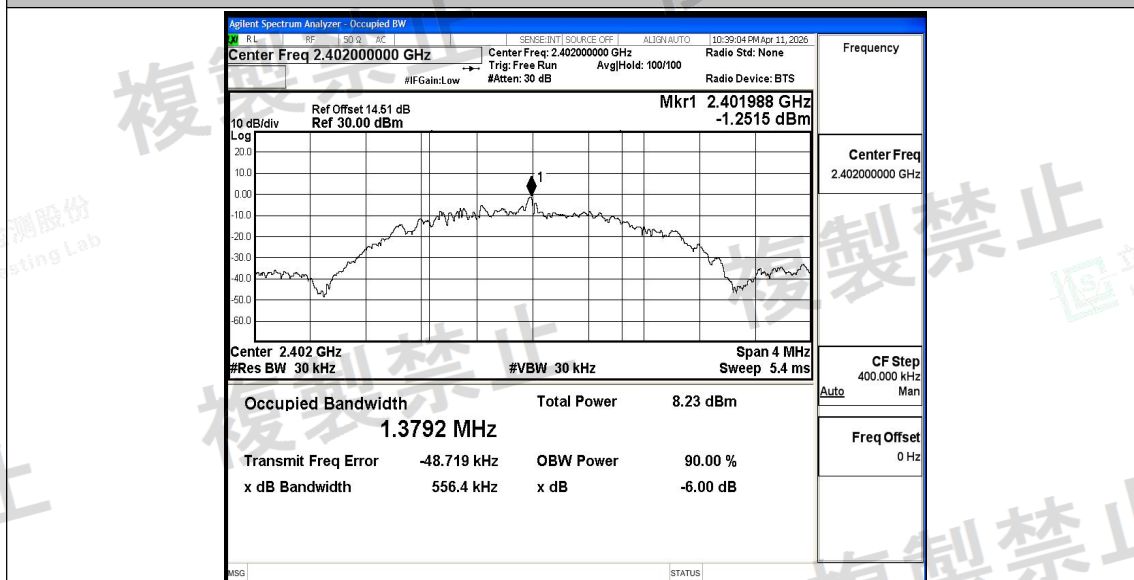
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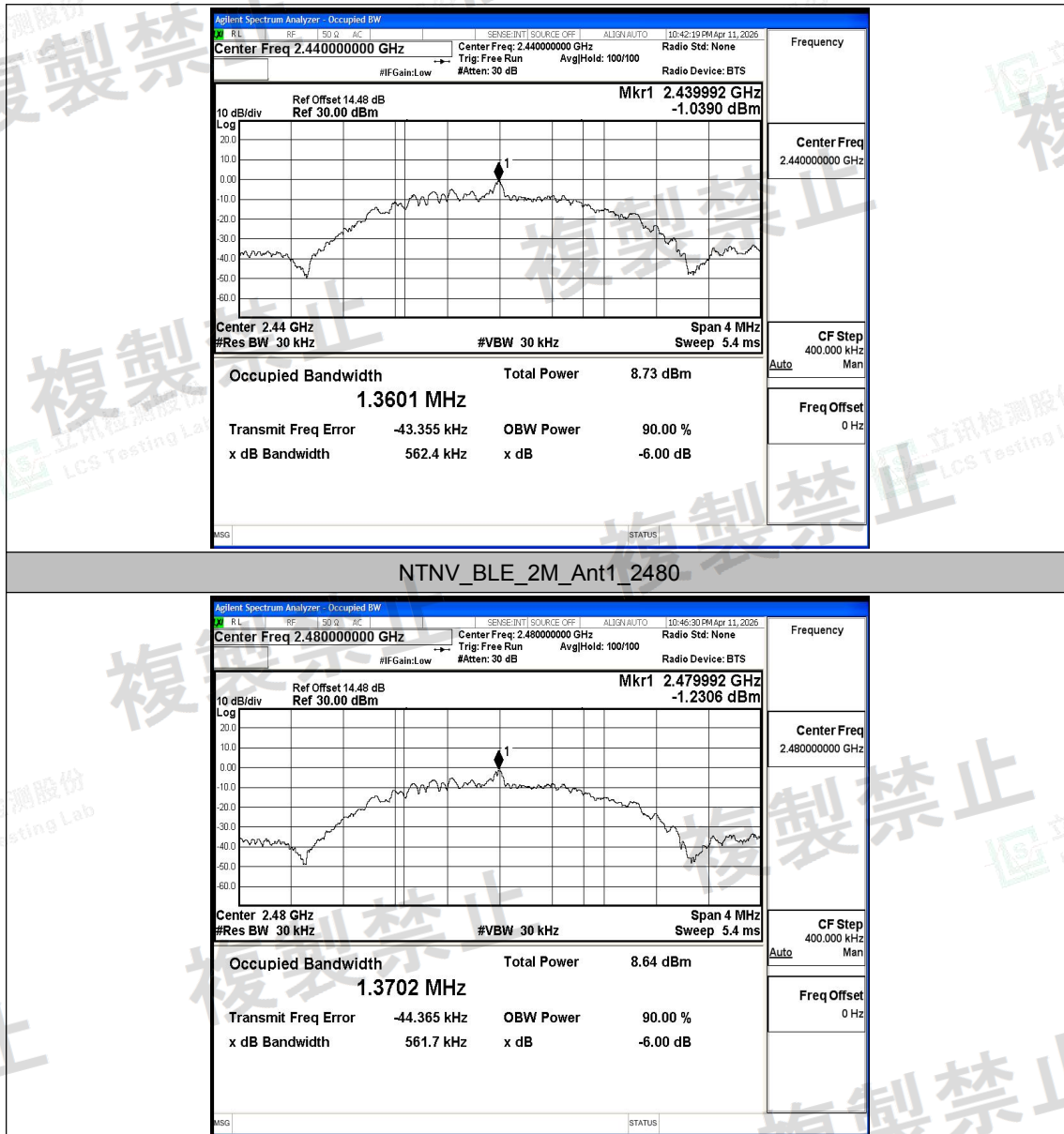


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440





**B.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	-53.92	≤-26	0.00406	≤2.5	PASS
				1000~2387	-51.90	≤-26	0.00646	≤2.5	PASS
				2387~2400	-34.60	≤-16	0.34674	≤25	PASS
				2483.5~2496.5	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	-44.38	≤-26	0.03648	≤2.5	PASS
		Ant1	2440	30~1000	-53.86	≤-26	0.00411	≤2.5	PASS
				1000~2387	-52.44	≤-26	0.00570	≤2.5	PASS
				2387~2400	-43.40	≤-16	0.04571	≤25	PASS
				2483.5~2496.5	-43.36	≤-16	0.04613	≤25	PASS
				2496.5~13000	-45.54	≤-26	0.02793	≤2.5	PASS
		Ant1	2480	30~1000	-53.80	≤-26	0.00417	≤2.5	PASS
				1000~2387	-52.74	≤-26	0.00532	≤2.5	PASS
				2387~2400	-43.58	≤-16	0.04385	≤25	PASS
				2483.5~2496.5	-42.05	≤-16	0.06237	≤25	PASS
				2496.5~13000	-45.95	≤-26	0.02541	≤2.5	PASS
	BLE_2M	Ant1	2402	30~1000	-53.81	≤-26	0.00416	≤2.5	PASS
				1000~2387	-52.58	≤-26	0.00552	≤2.5	PASS
				2387~2400	-22.35	≤-16	5.82103	≤25	PASS
				2483.5~2496.5	-43.22	≤-16	0.04764	≤25	PASS
				2496.5~13000	-45.62	≤-26	0.02742	≤2.5	PASS
		Ant1	2440	30~1000	-53.99	≤-26	0.00399	≤2.5	PASS
				1000~2387	-53.01	≤-26	0.00500	≤2.5	PASS
				2387~2400	-43.37	≤-16	0.04603	≤25	PASS
				2483.5~2496.5	-43.43	≤-16	0.04539	≤25	PASS
				2496.5~13000	-45.40	≤-26	0.02884	≤2.5	PASS
		Ant1	2480	30~1000	-53.96	≤-26	0.00402	≤2.5	PASS
				1000~2387	-52.53	≤-26	0.00558	≤2.5	PASS
				2387~2400	-43.31	≤-16	0.04667	≤25	PASS
				2483.5~2496.5	-42.12	≤-16	0.06138	≤25	PASS
				2496.5~13000	-45.64	≤-26	0.02729	≤2.5	PASS

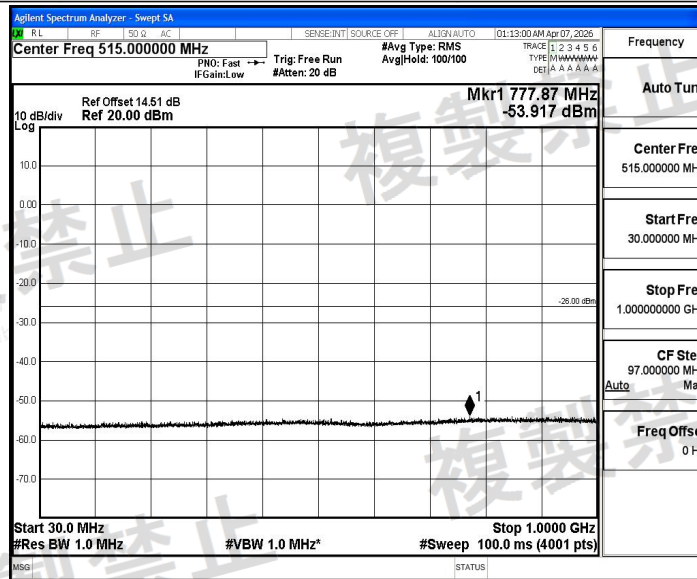


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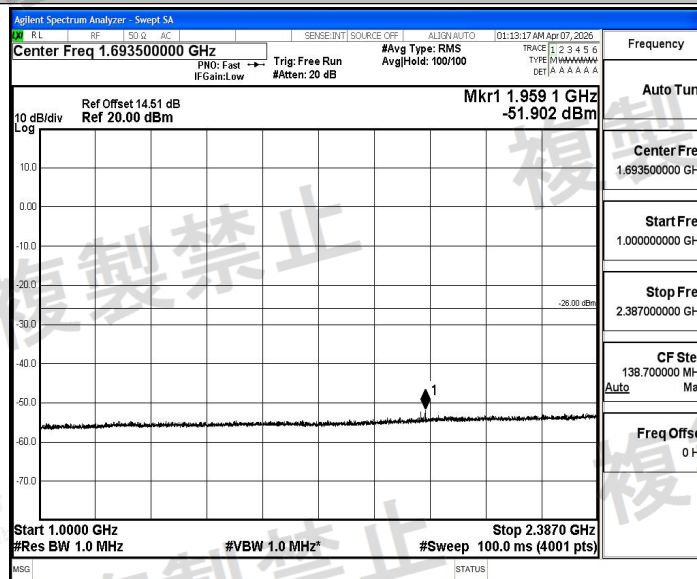


Test Graphs

NTNV_BLE_1M_Ant1_2402_30~1000



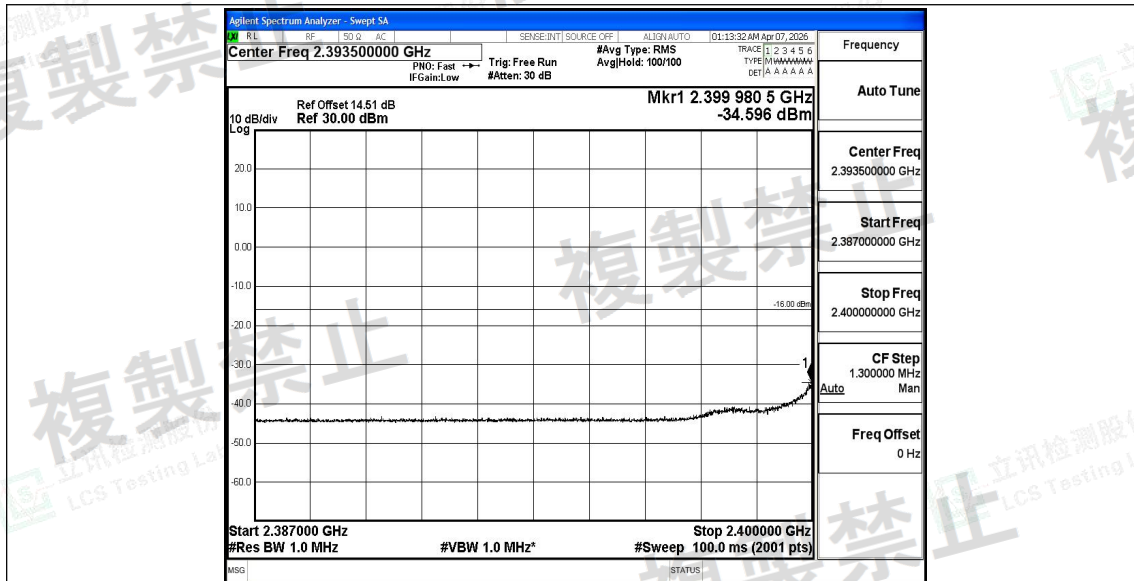
NTNV_BLE_1M_Ant1_2402_1000~2387



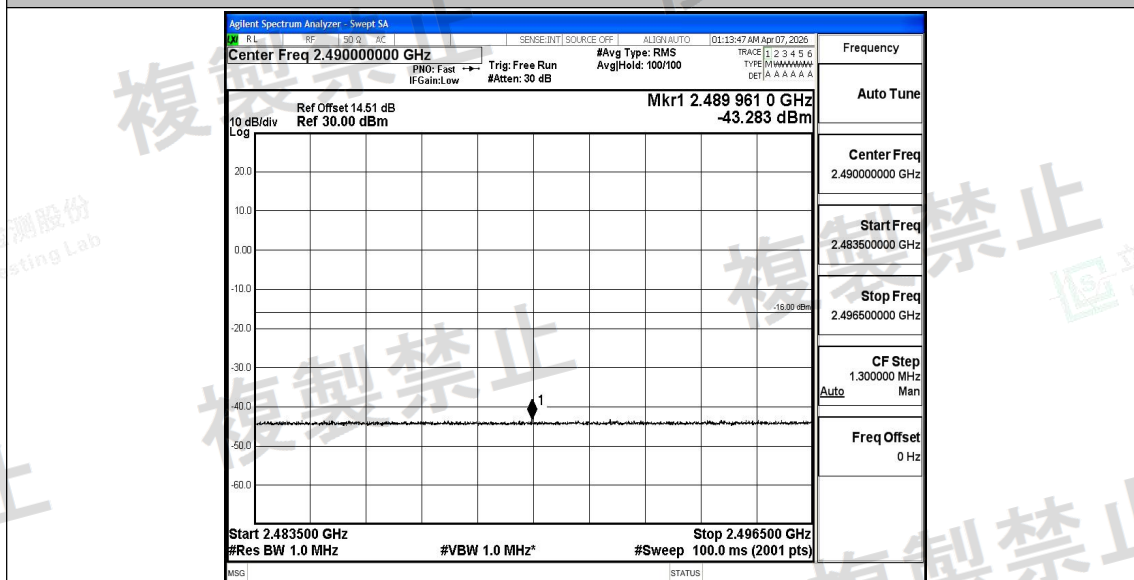
NTNV_BLE_1M_Ant1_2402_2387~2400



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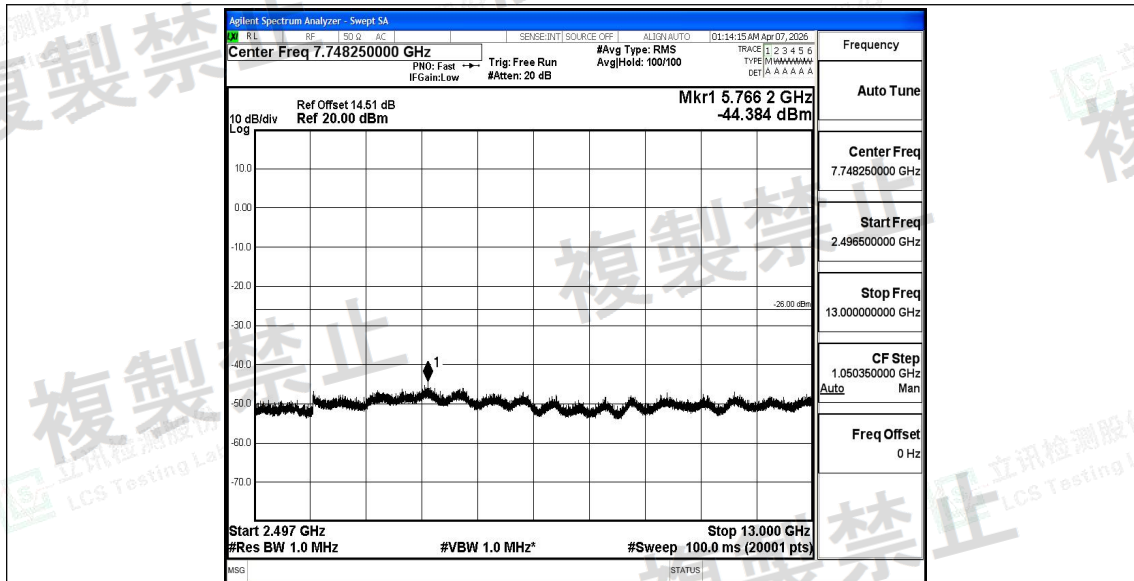
NTNV_BLE_1M_Ant1_2402_2483.5~2496.5



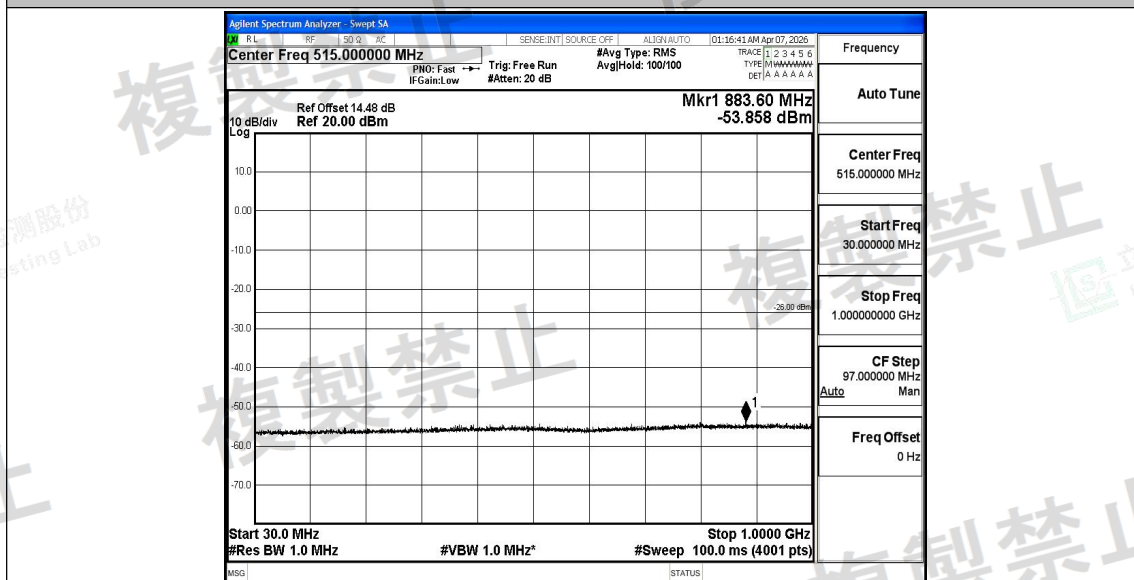
NTNV_BLE_1M_Ant1_2402_2496.5~13000



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NTNV_BLE_1M_Ant1_2440_30~1000



NTNV_BLE_1M_Ant1_2440_1000~2387

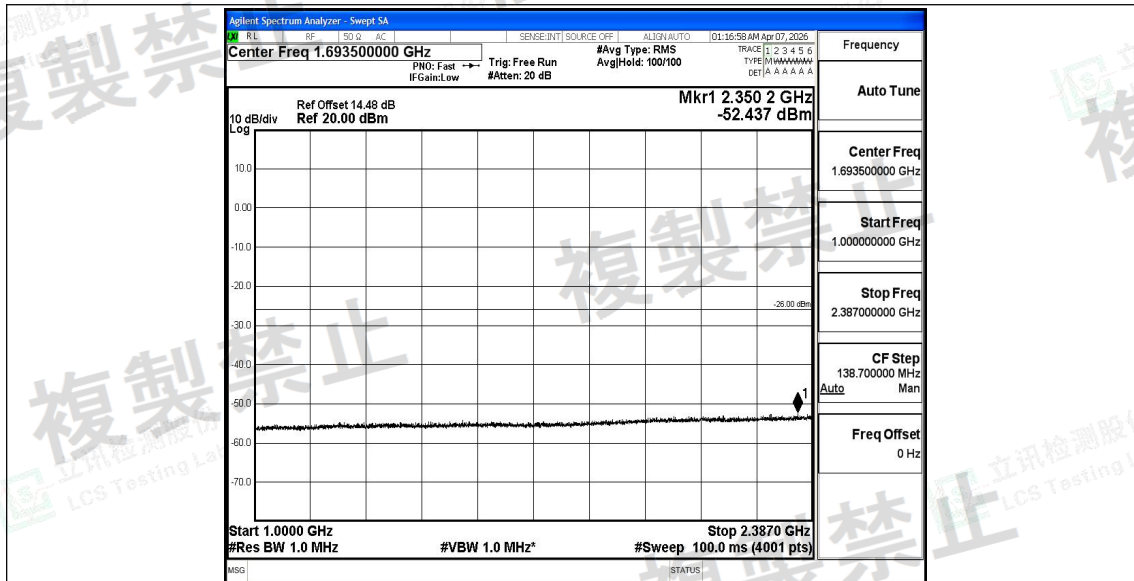


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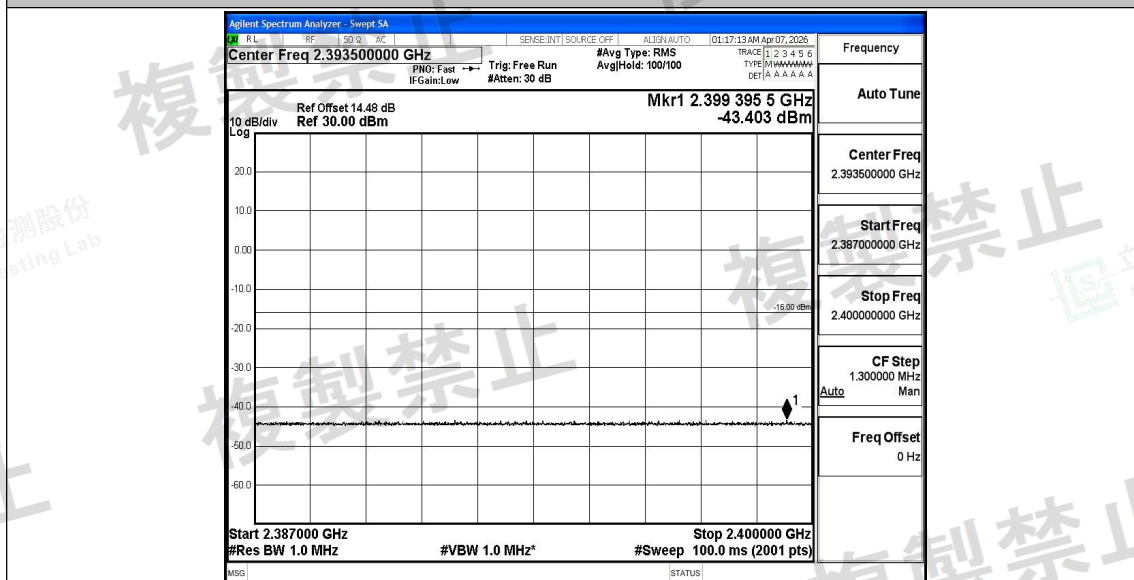
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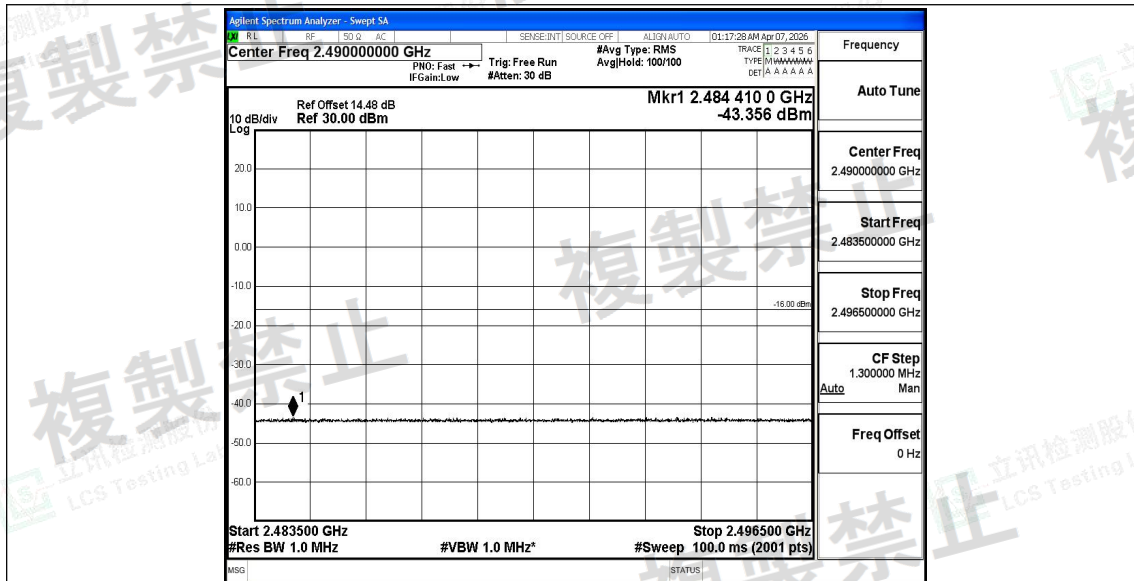
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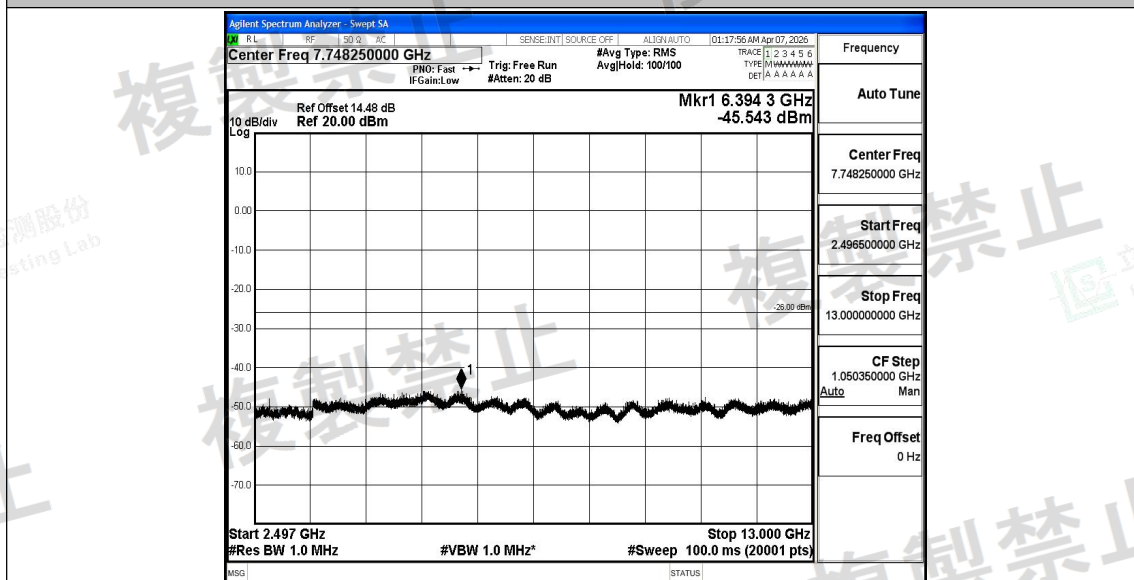
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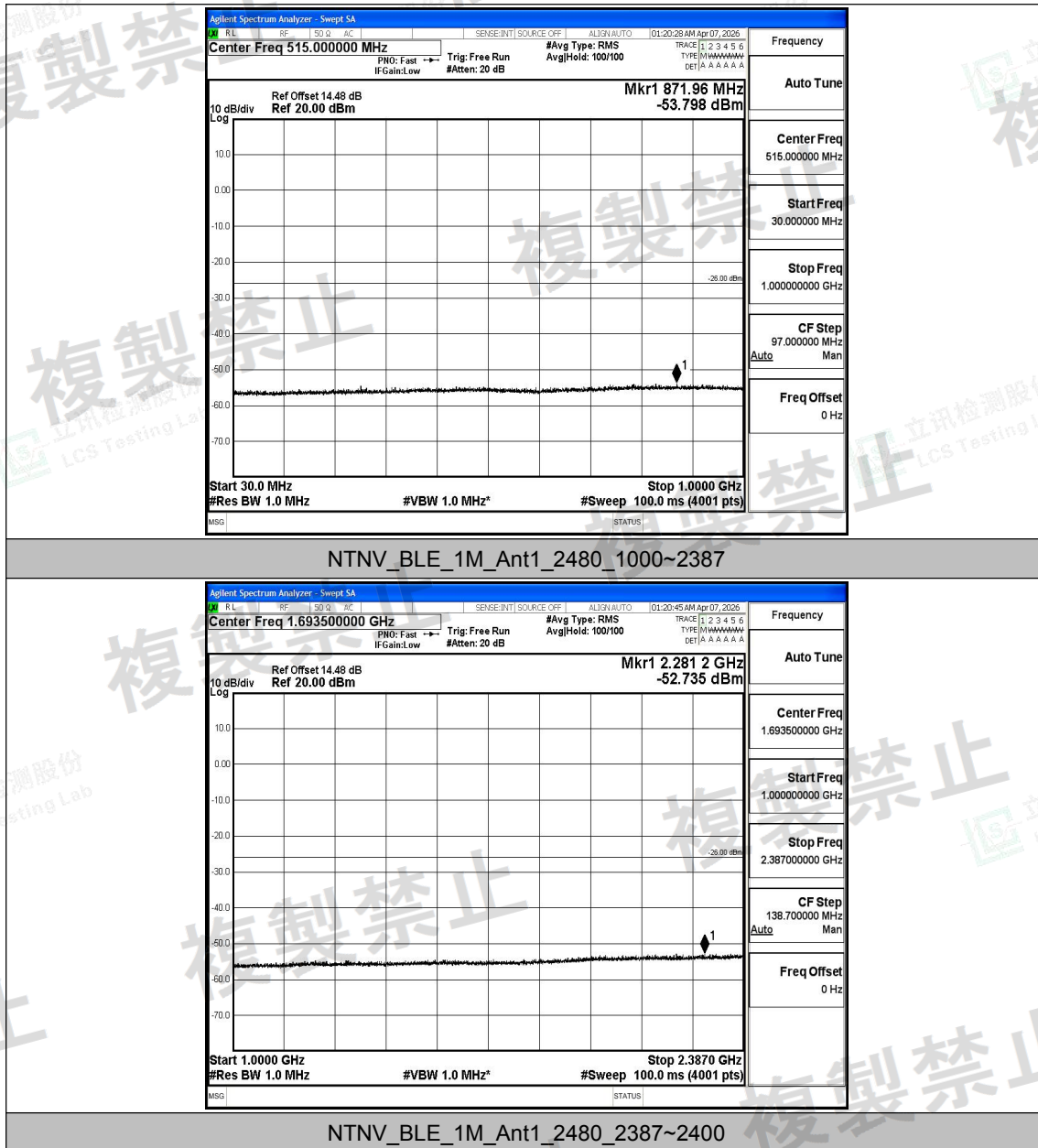
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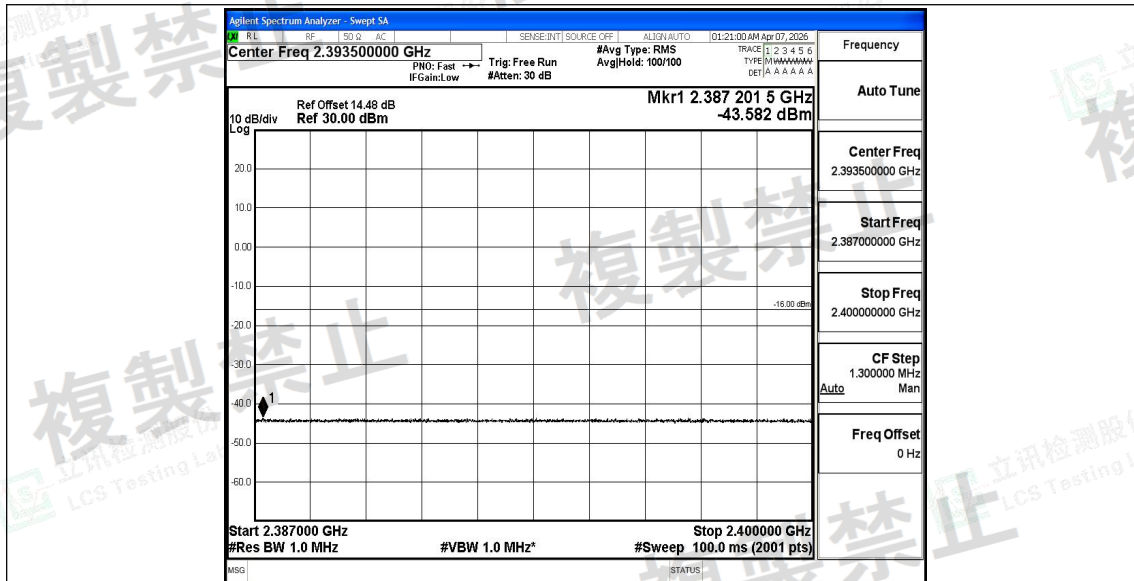
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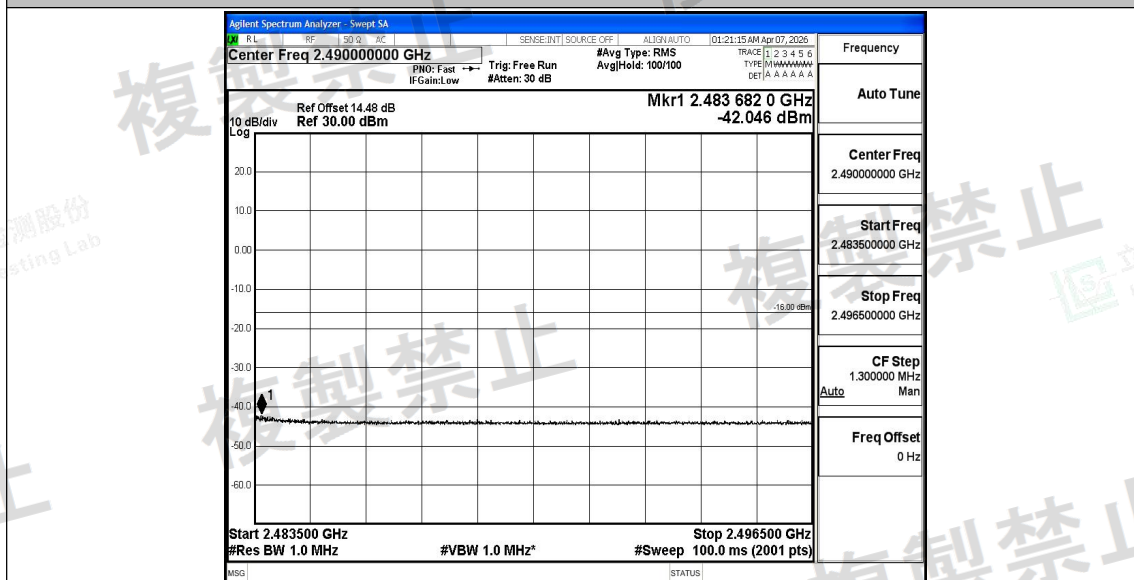
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NTNV_BLE_1M_Ant1_2480_2483.5~2496.5



NTNV_BLE_1M_Ant1_2480_2496.5~13000

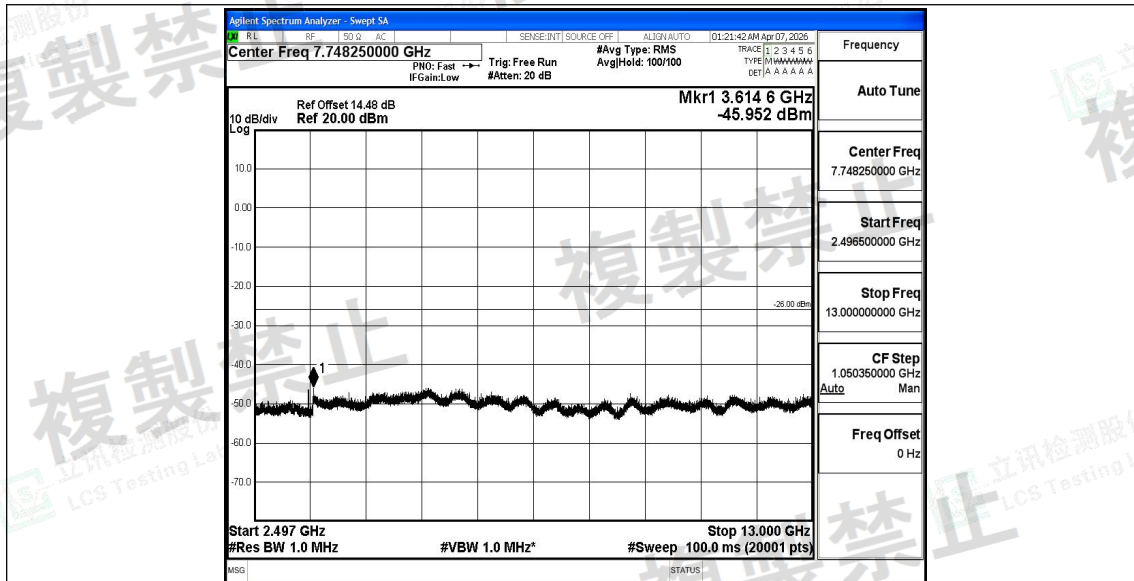


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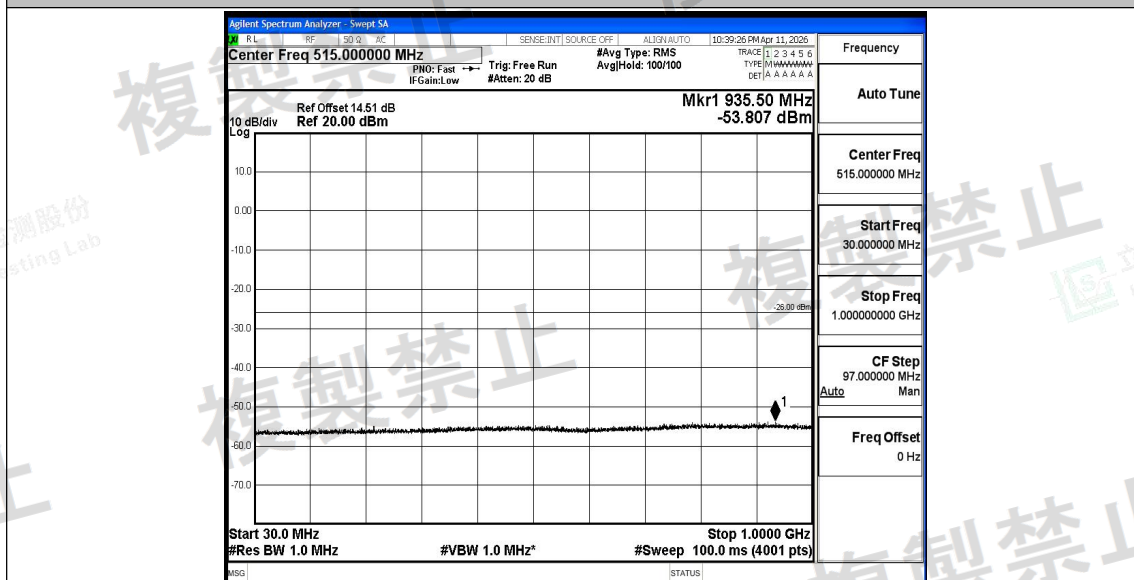
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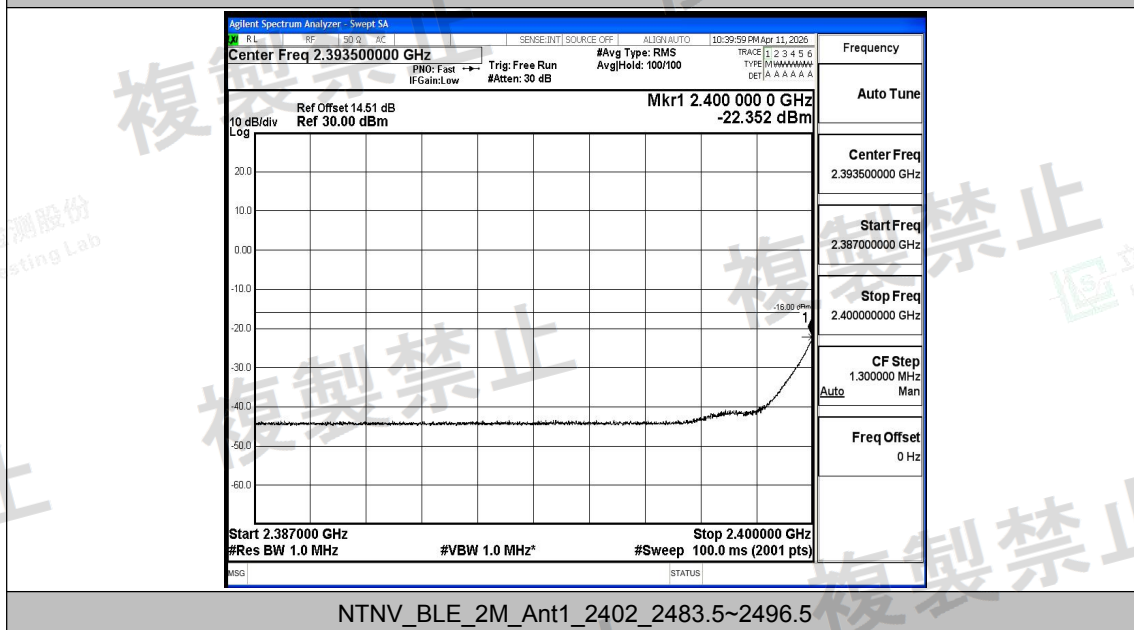
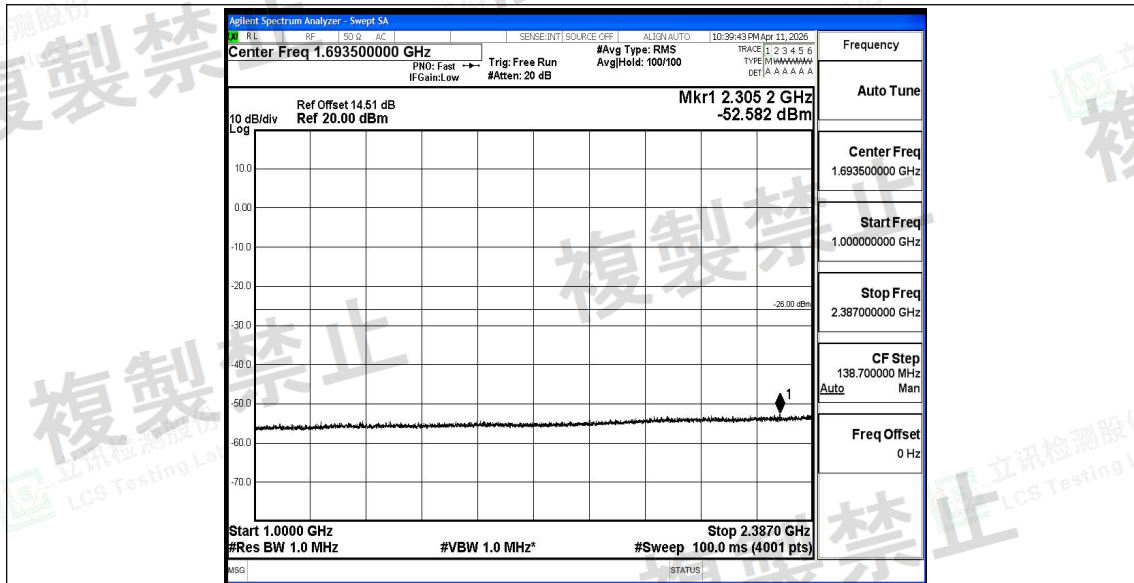
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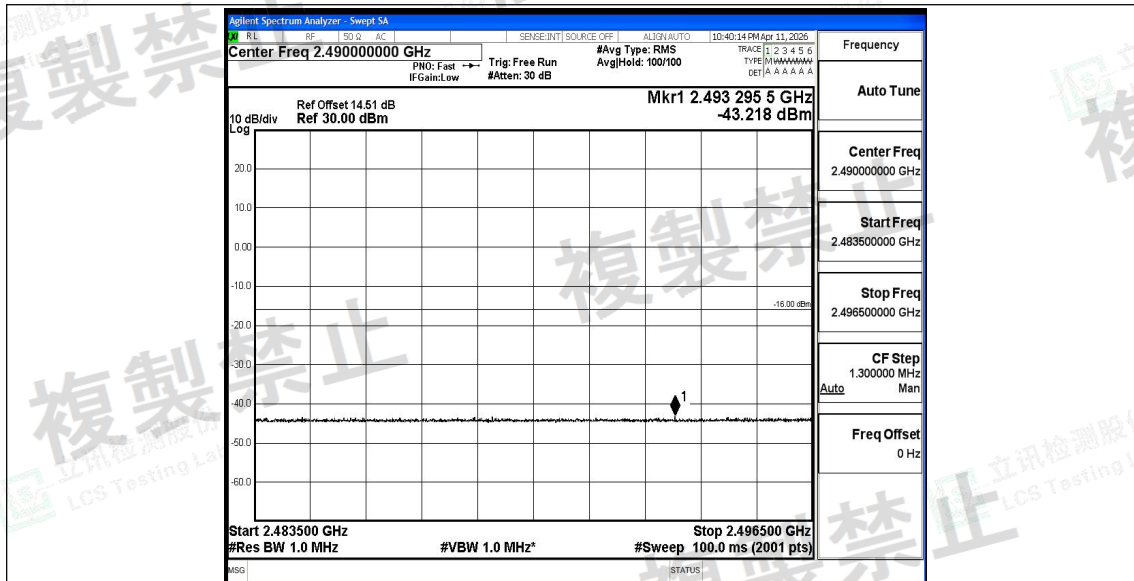


NTNV_BLE_2M_Ant1_2402_1000~2387

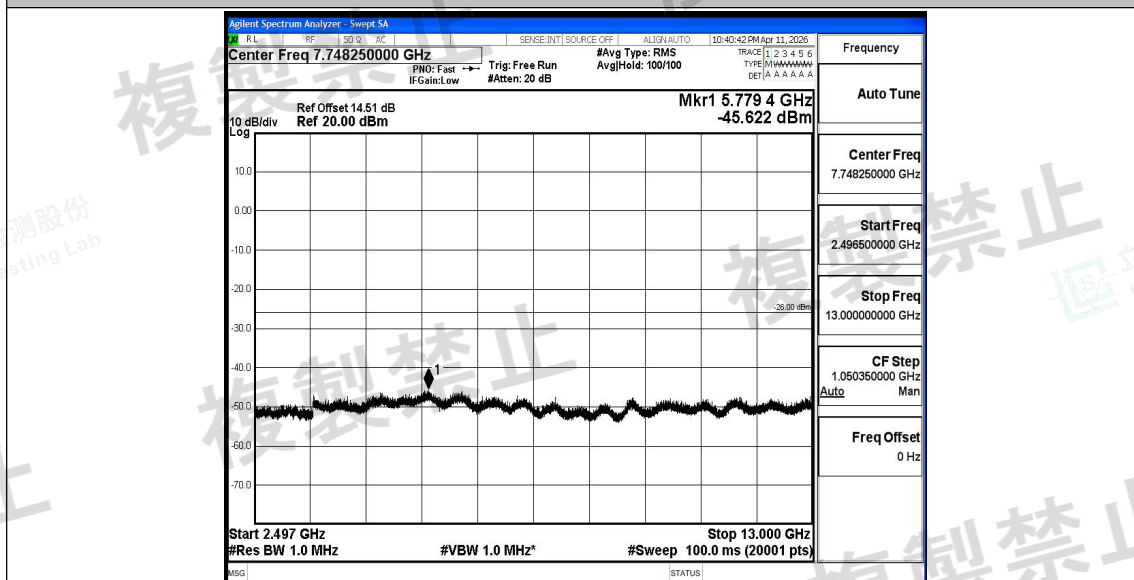


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NTNV_BLE_2M_Ant1_2402_2496.5~13000



NTNV_BLE_2M_Ant1_2440_30~1000

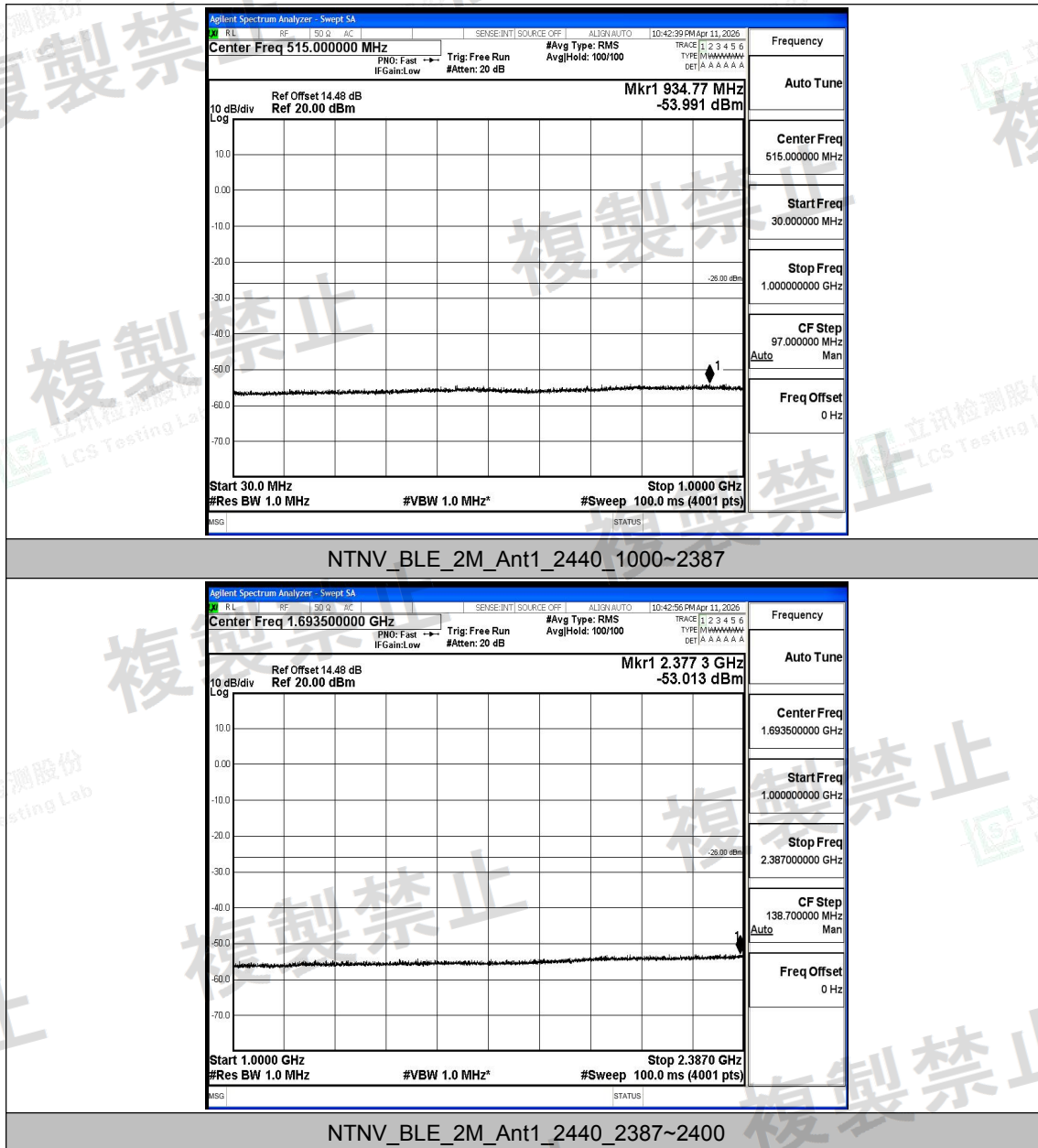


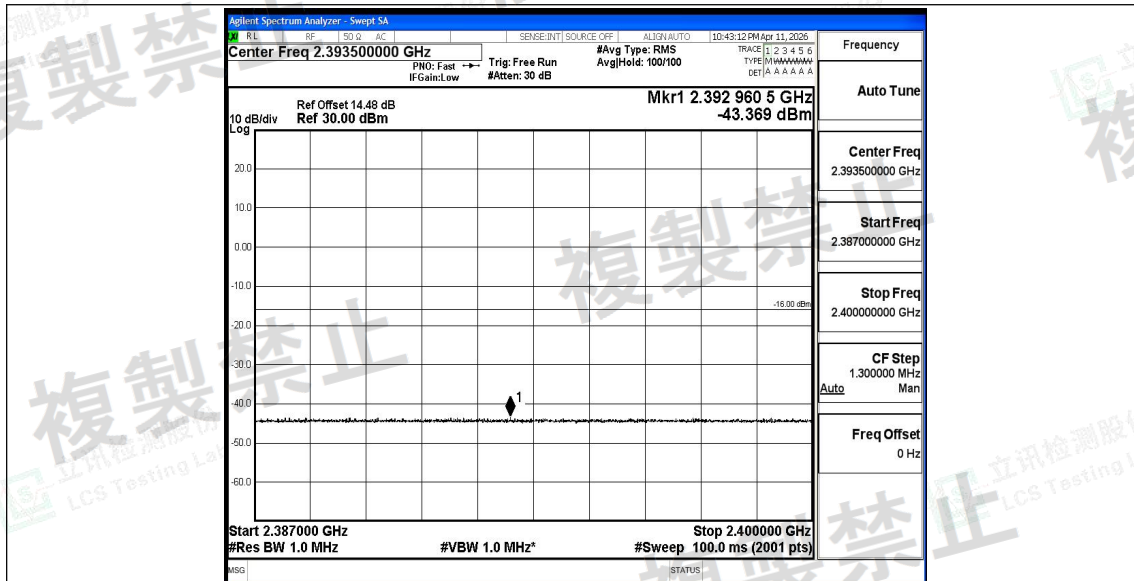
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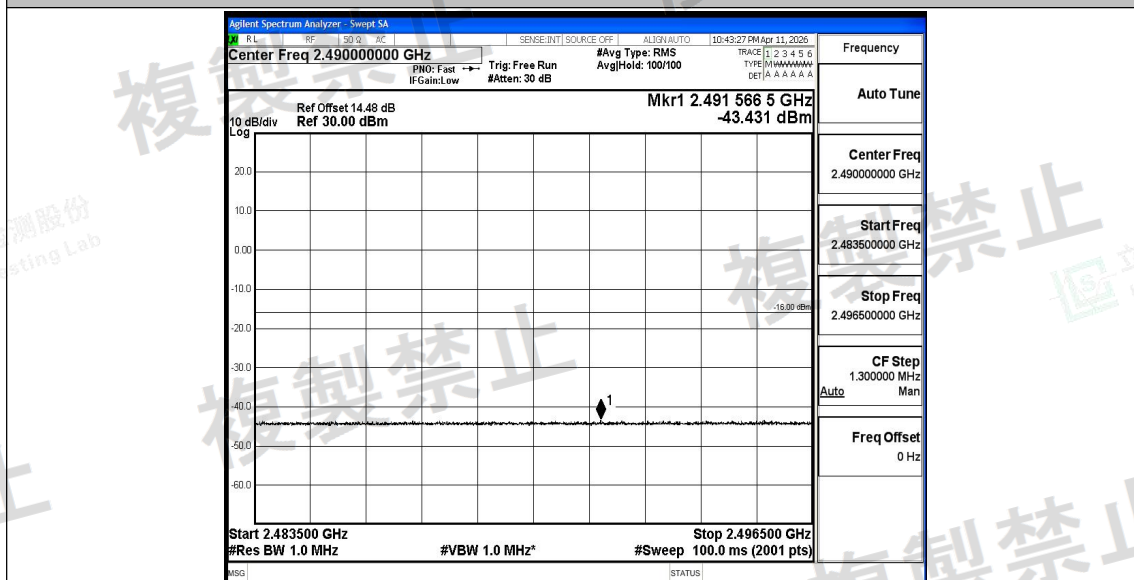
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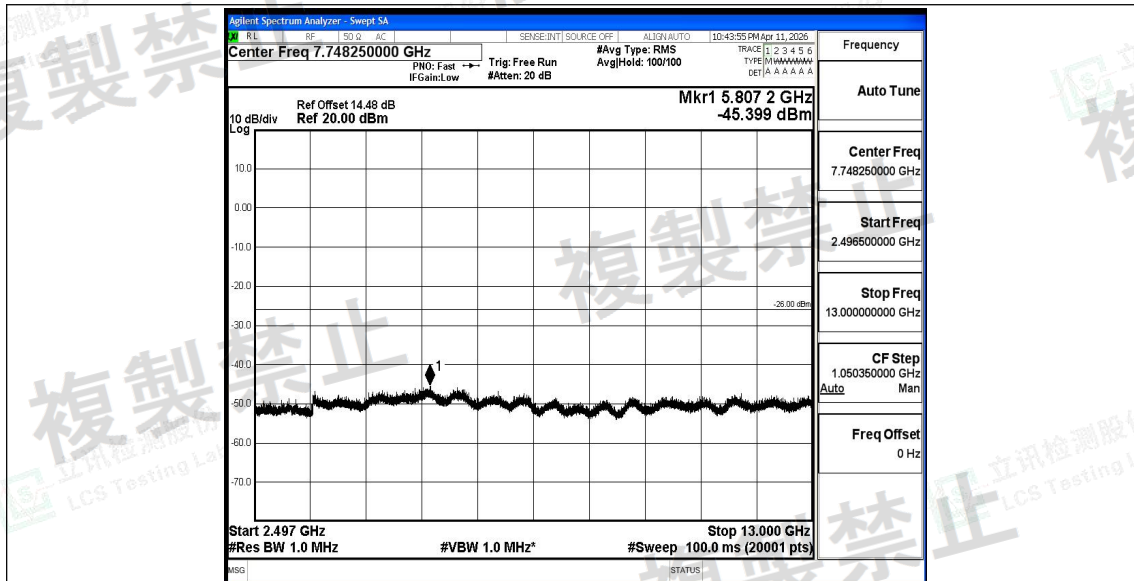
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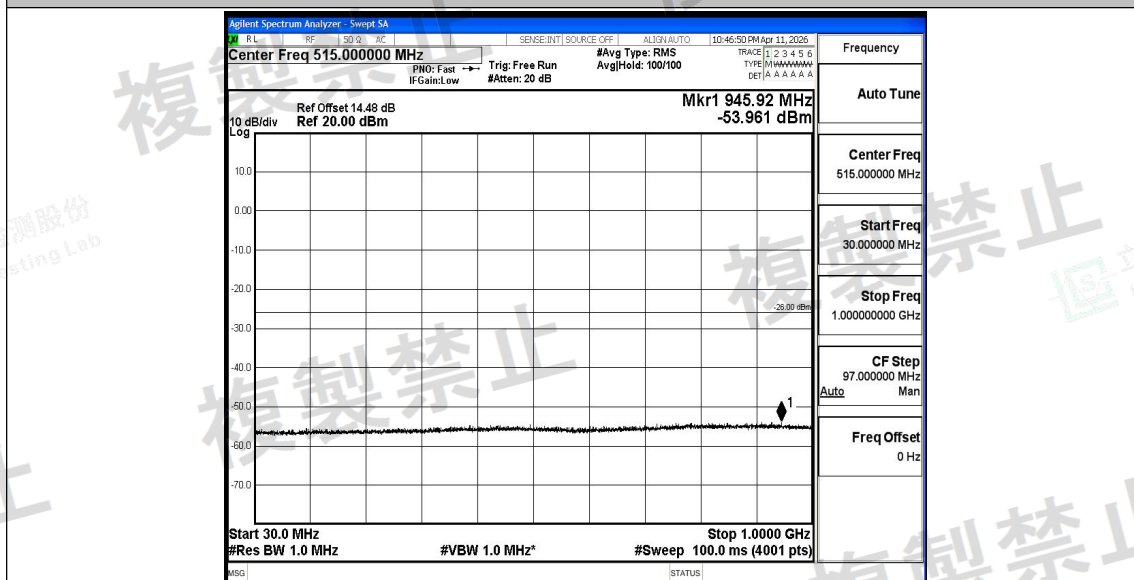
NTNV_BLE_2M_Ant1_2440_2496.5~13000



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NTNV_BLE_2M_Ant1_2480_30~1000



NTNV_BLE_2M_Ant1_2480_1000~2387

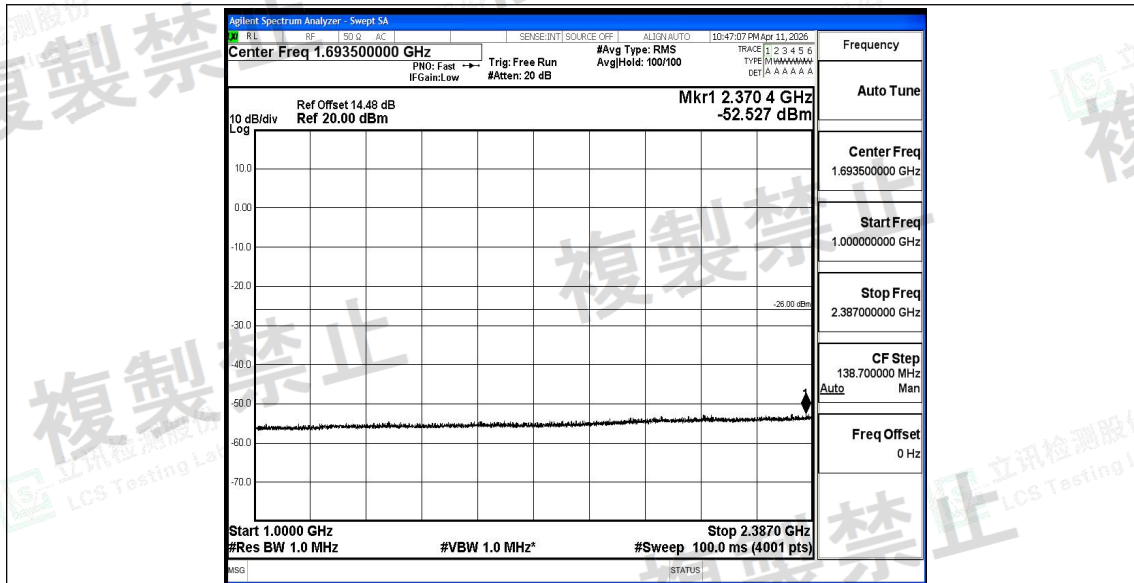


Shenzhen LCS Compliance Testing Laboratory Ltd.

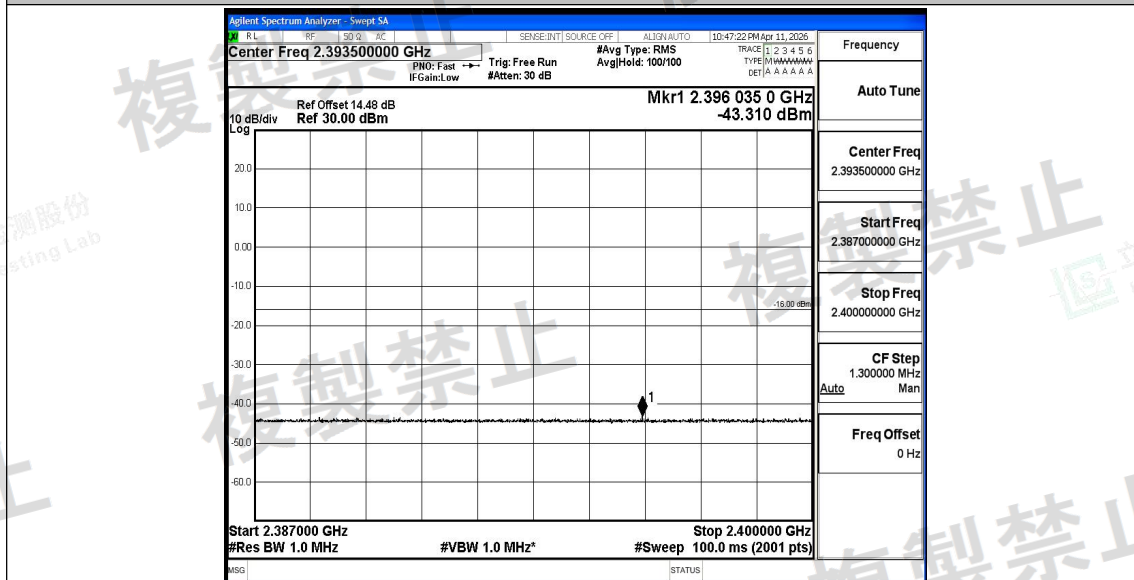
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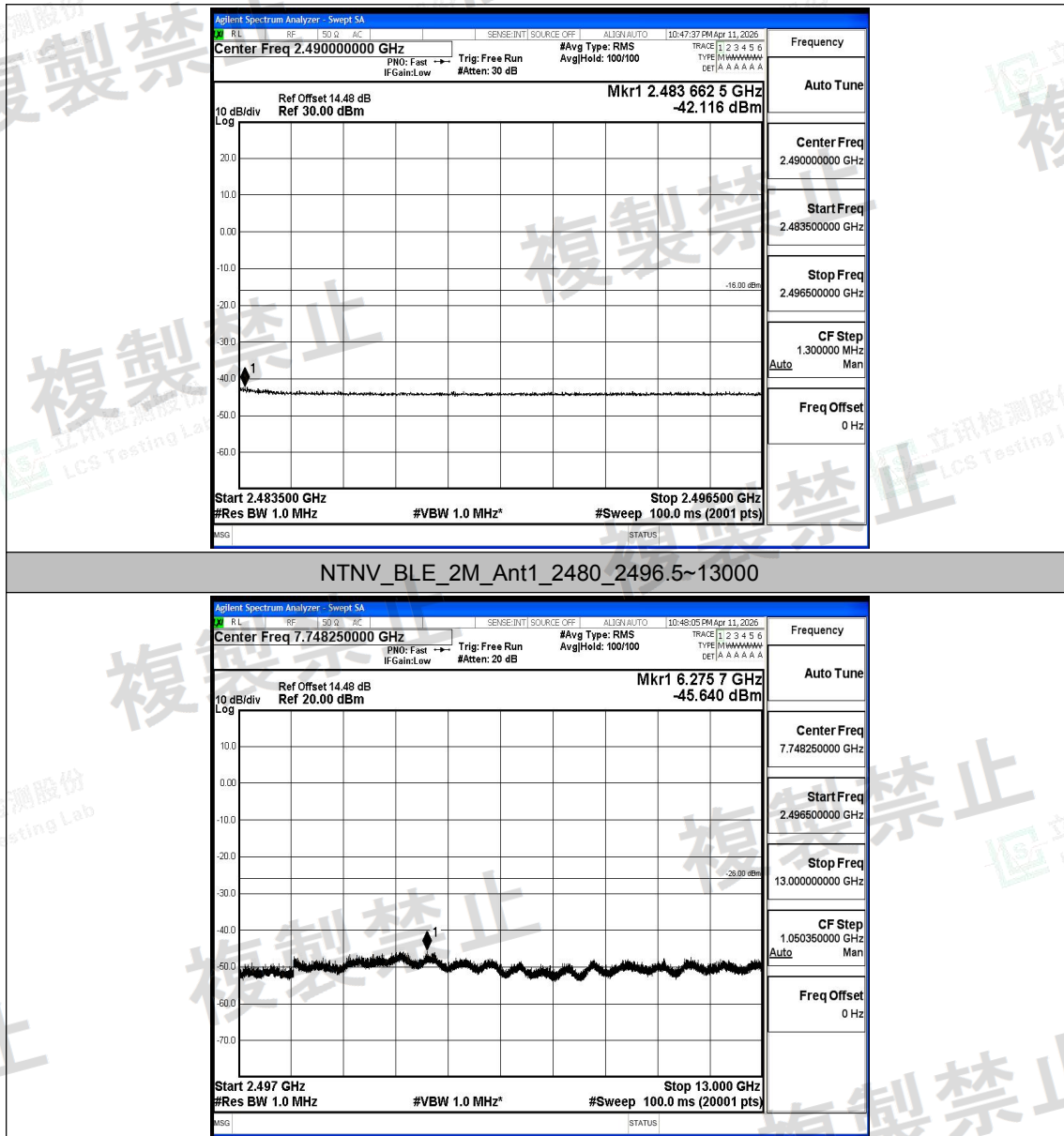
NTNV_BLE_2M_Ant1_2480_2387~2400



NTNV_BLE_2M_Ant1_2480_2483.5~2496.5



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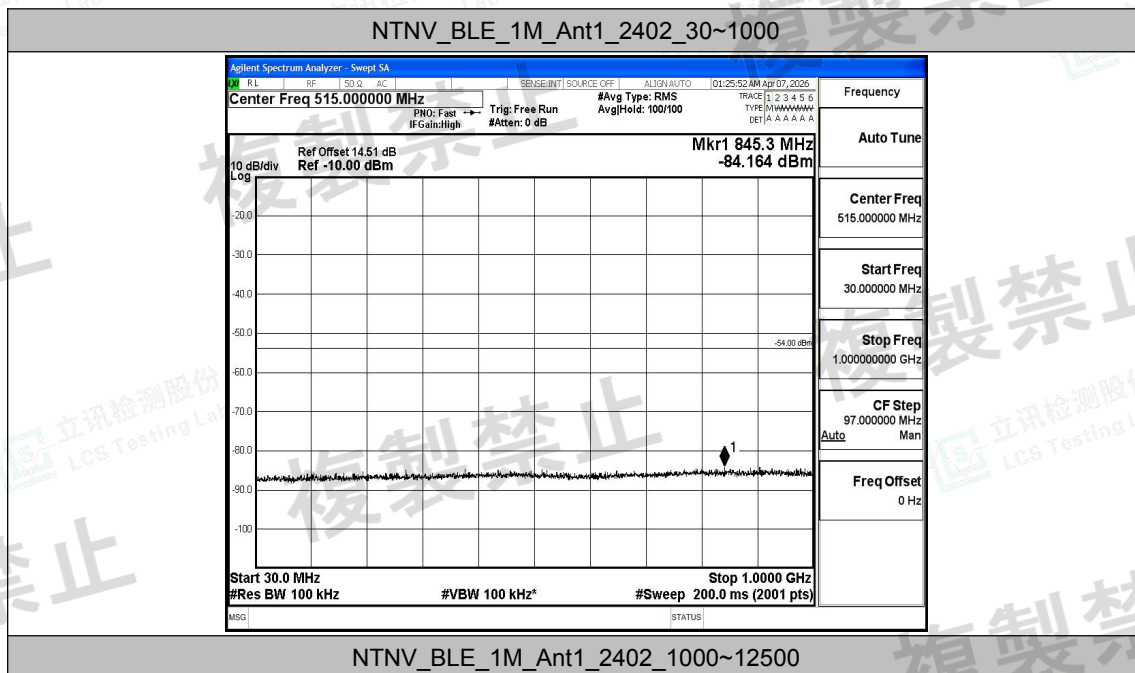


B.6 Spurious Emission of RX

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	-84.16	≤-54	0.00384	≤4	PASS
				1000~12500	-66.82	≤-47	0.20797	≤20	PASS
			2440	30~1000	-83.83	≤-54	0.00414	≤4	PASS
				1000~12500	-67.16	≤-47	0.19231	≤20	PASS
			2480	30~1000	-84.36	≤-54	0.00366	≤4	PASS
				1000~12500	-66.9	≤-47	0.20417	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	-83.72	≤-54	0.00425	≤4	PASS
				1000~12500	-67	≤-47	0.19953	≤20	PASS
			2440	30~1000	-77.21	≤-54	0.01901	≤4	PASS
				1000~12500	-67.23	≤-47	0.18923	≤20	PASS
			2480	30~1000	-84.14	≤-54	0.00385	≤4	PASS
				1000~12500	-66.49	≤-47	0.22439	≤20	PASS

Test Graphs

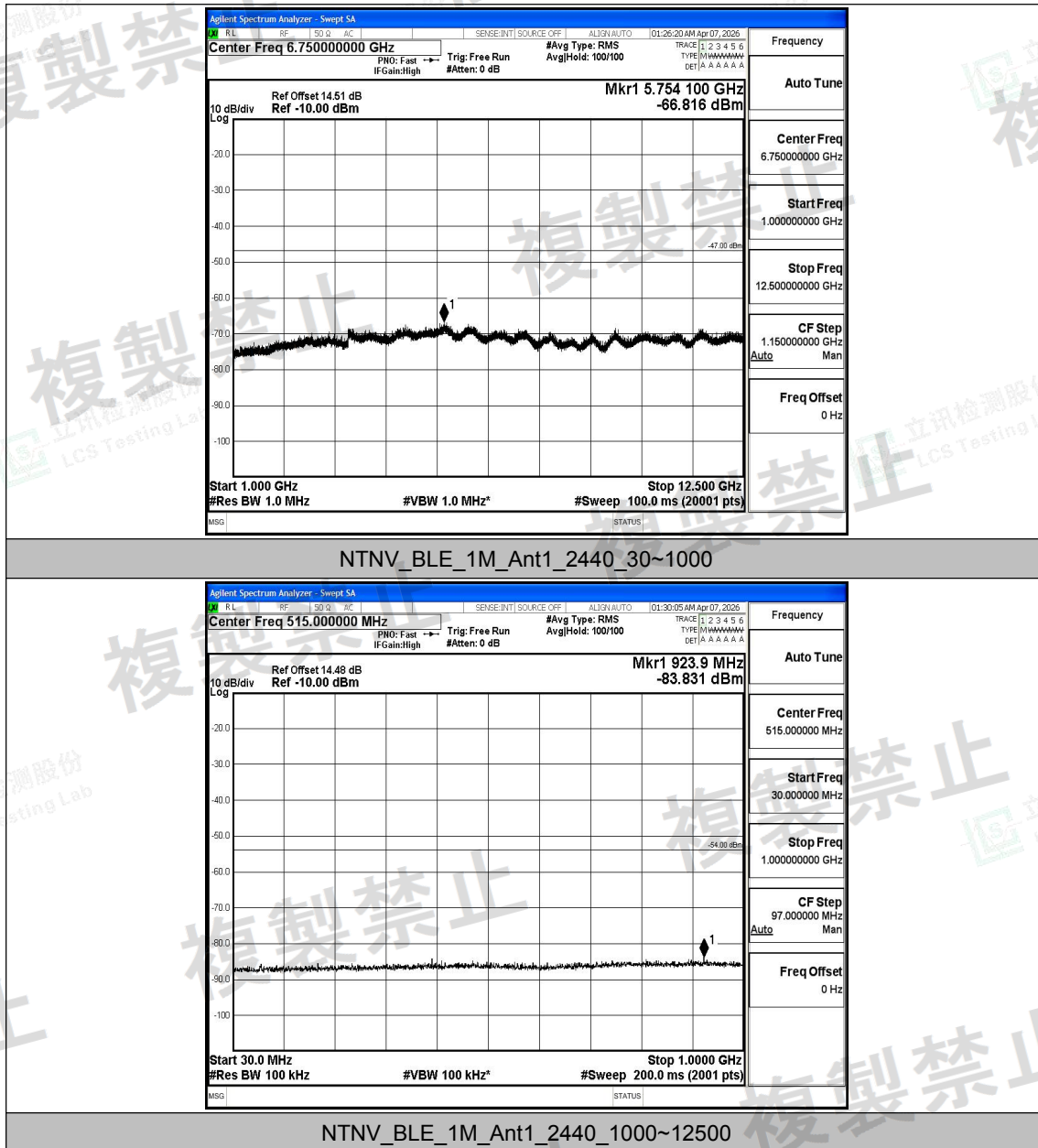


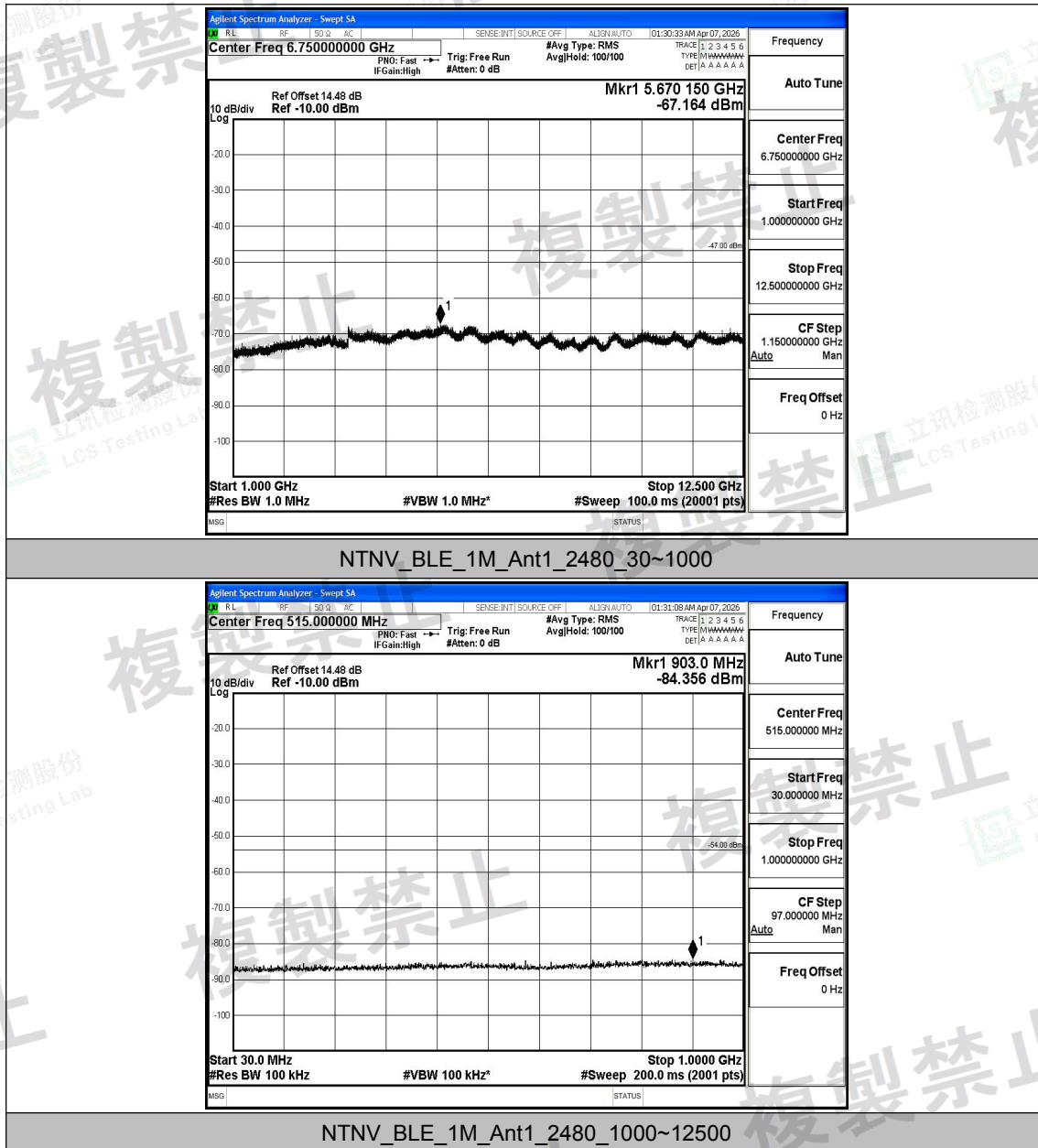
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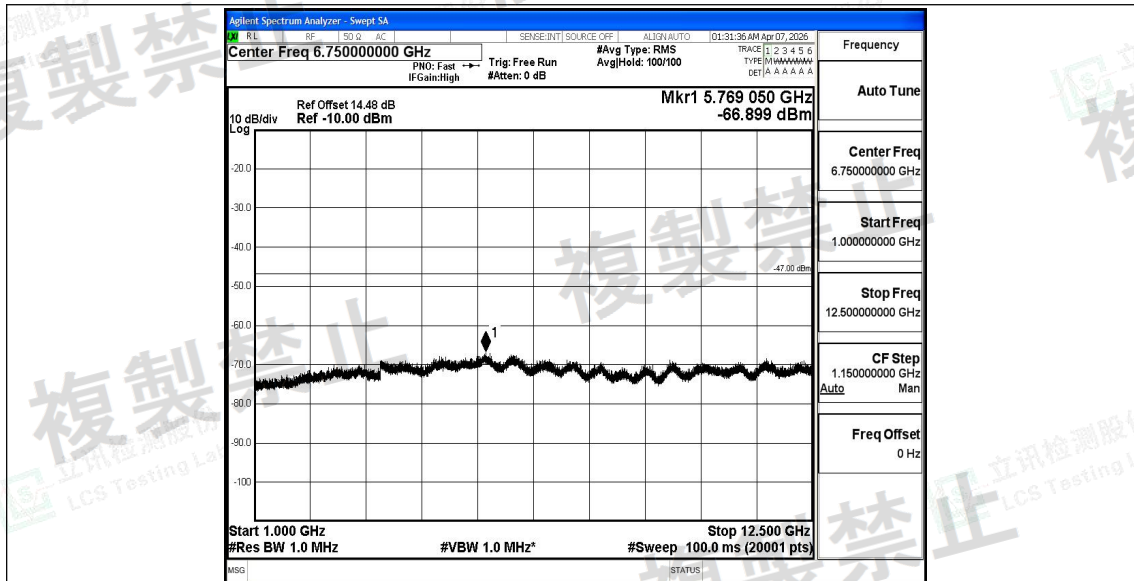
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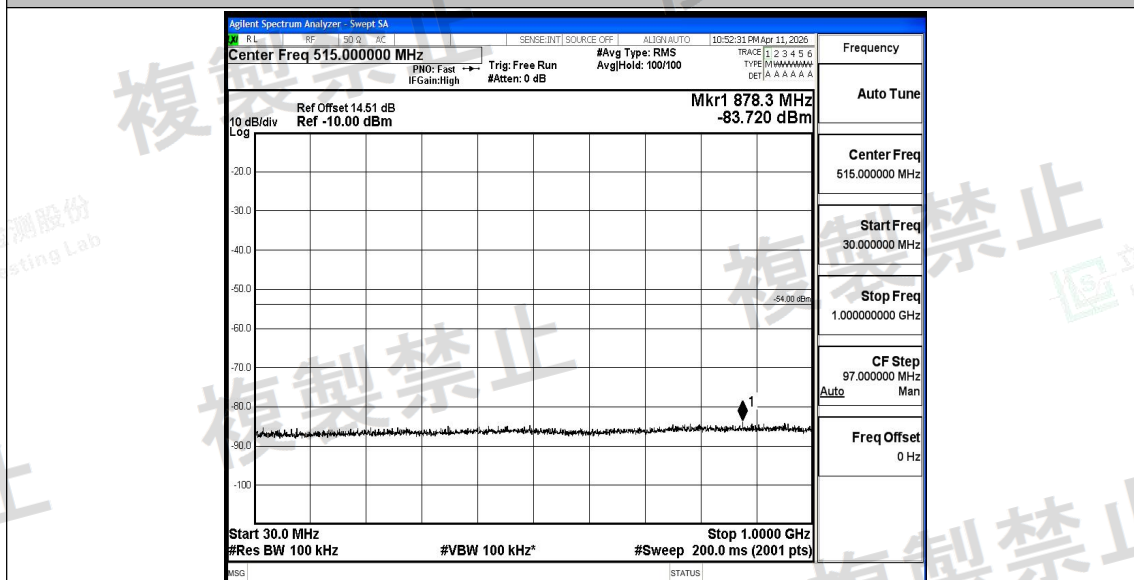
Scan code to check authenticity





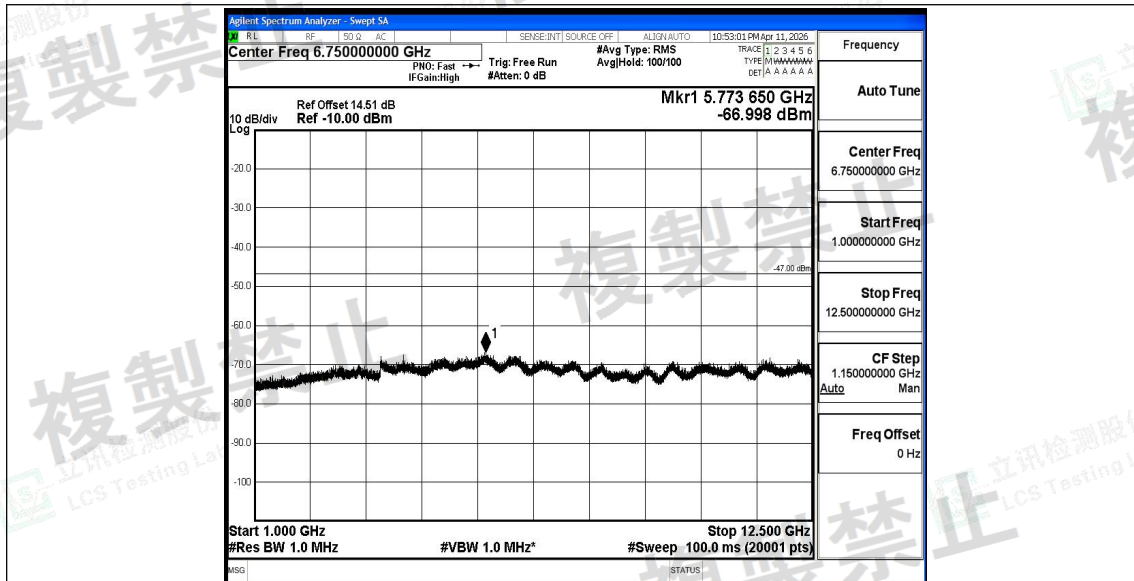


NTNV_BLE_2M_Ant1_2402_30~1000

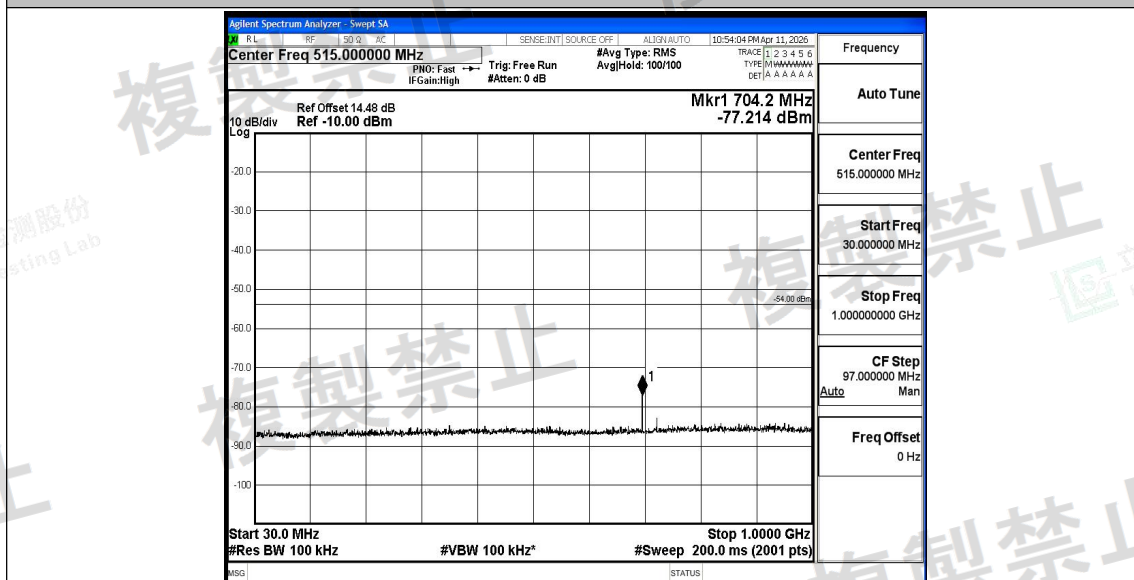


NTNV_BLE_2M_Ant1_2402_1000~12500





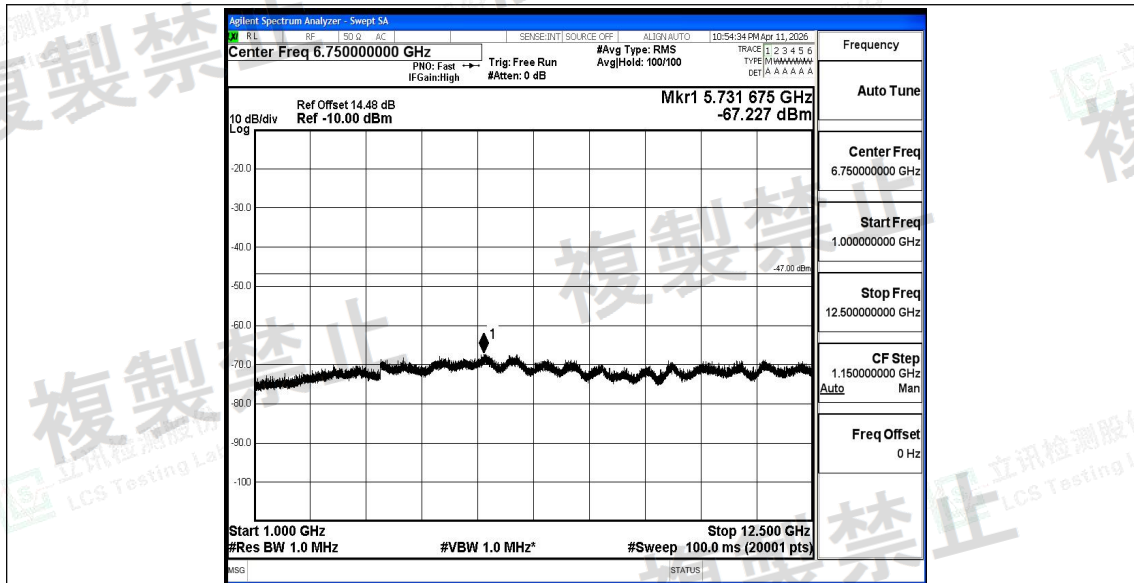
NTNV_BLE_2M_Ant1_2440_30~1000



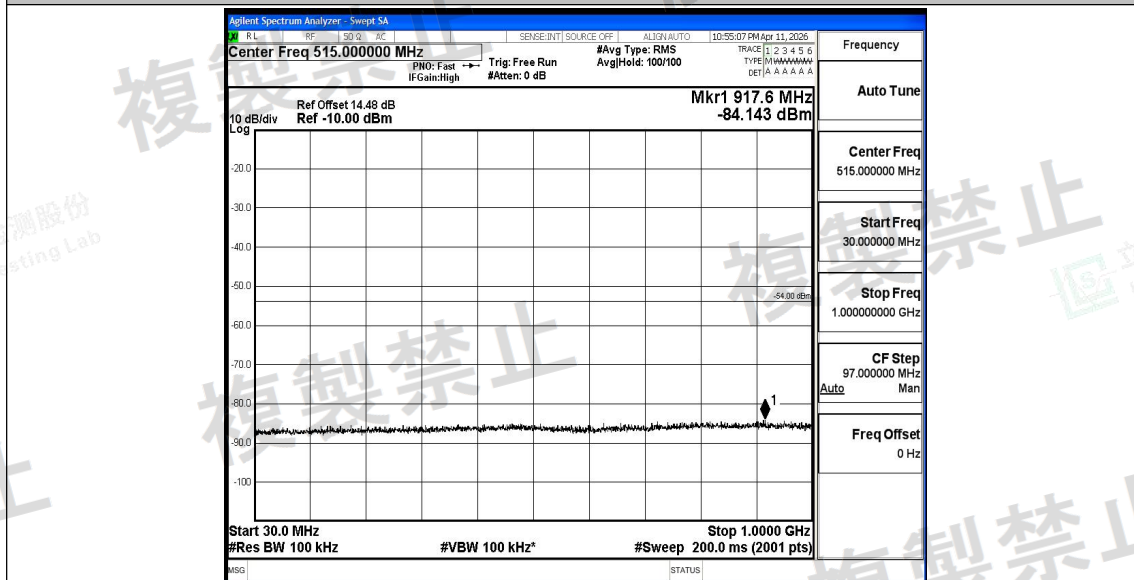
NTNV_BLE_2M_Ant1_2440_1000~12500



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NTNV_BLE_2M_Ant1_2480_30~1000



NTNV_BLE_2M_Ant1_2480_1000~12500

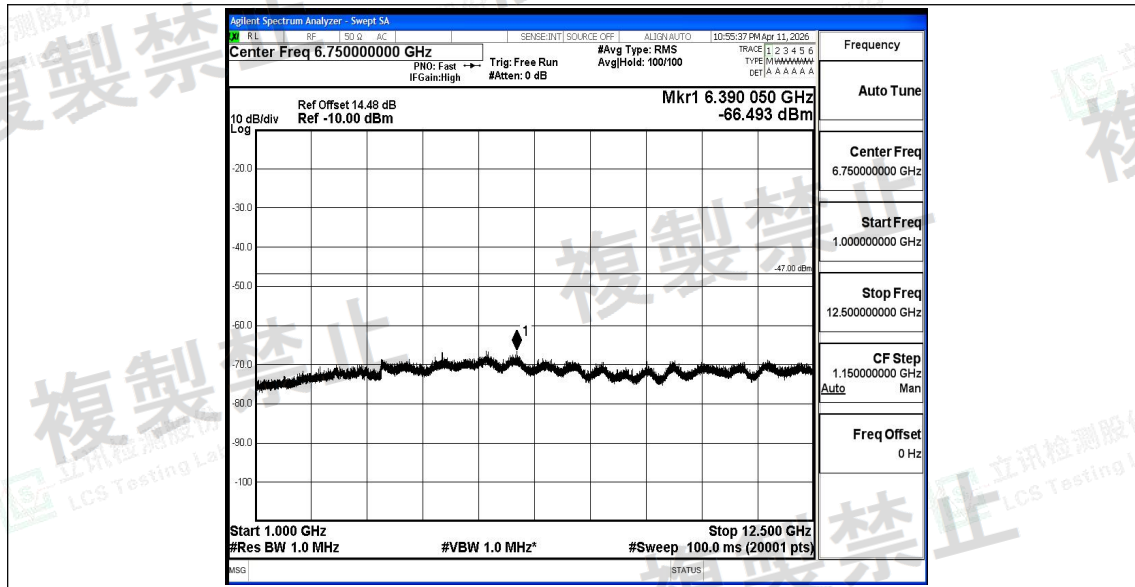


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