



Appendix A for 2.4G Test Data

カラフル 無線キーボード
Wireless Keyboard

Test Model: DB-CK01

Environmental Conditions

Temperature:	21.8°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun





A.1 Frequency Error

Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	2.4G	Ant1	2402	0.41632	±50	PASS
			2440	0.00000	±50	PASS
			2480	0.00000	±50	PASS

TestCondition	TestMode	Antenna	Channel	Result[ppm]	Limit[ppm]	Verdict
NTHV	2.4G	Ant1	2402	-0.41632	±50	PASS
			2440	-0.40984	±50	PASS
			2480	-0.40323	±50	PASS

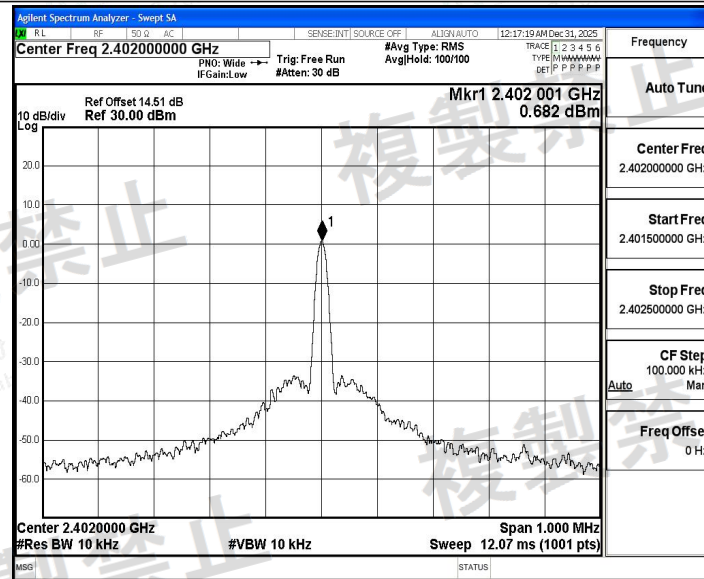
TestCondition	TestMode	Antenna	Channel	Result[ppm]	Limit[ppm]	Verdict
NTLV	2.4G	Ant1	2402	-0.41632	±50	PASS
			2440	-0.40984	±50	PASS
			2480	-0.40323	±50	PASS



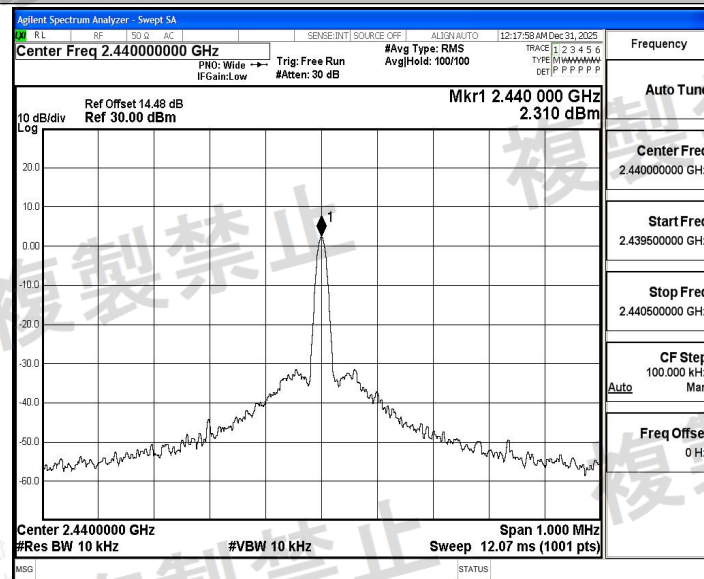


Test Graphs

NTNV_2.4G_Ant1_2402

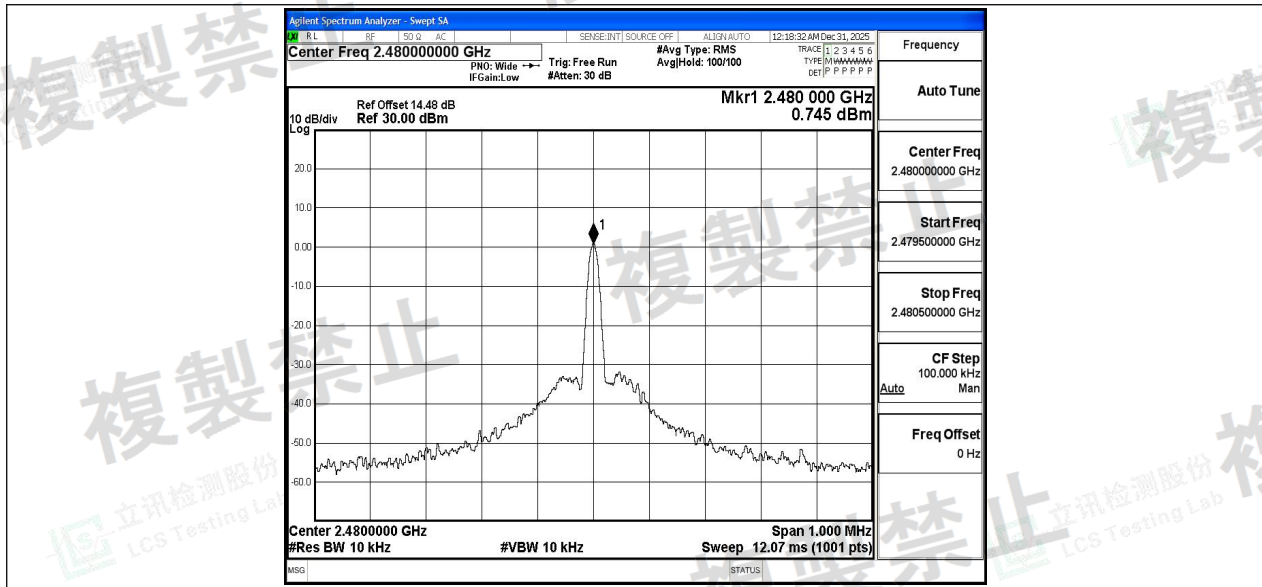


NTNV_2.4G_Ant1_2440



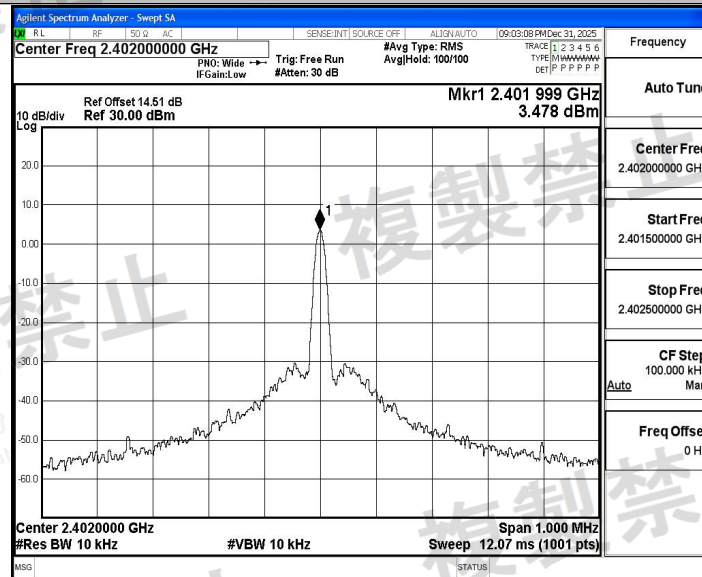
NTNV_2.4G_Ant1_2480



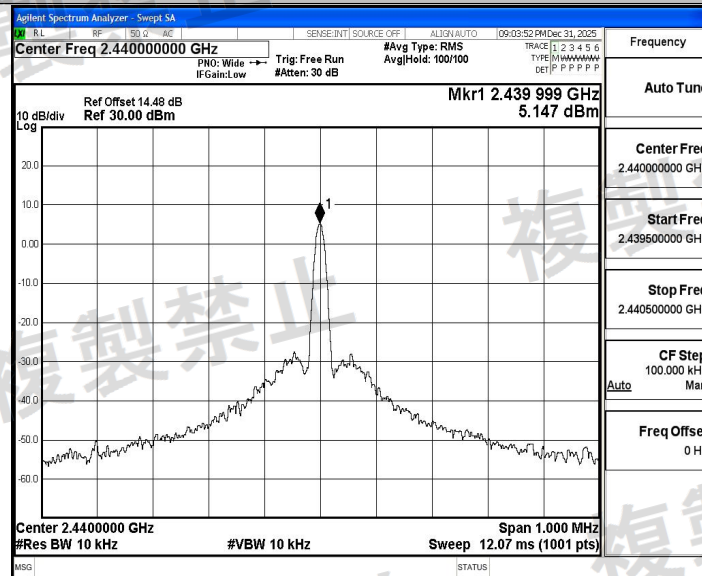




NTHV_2.4G_Ant1_2402

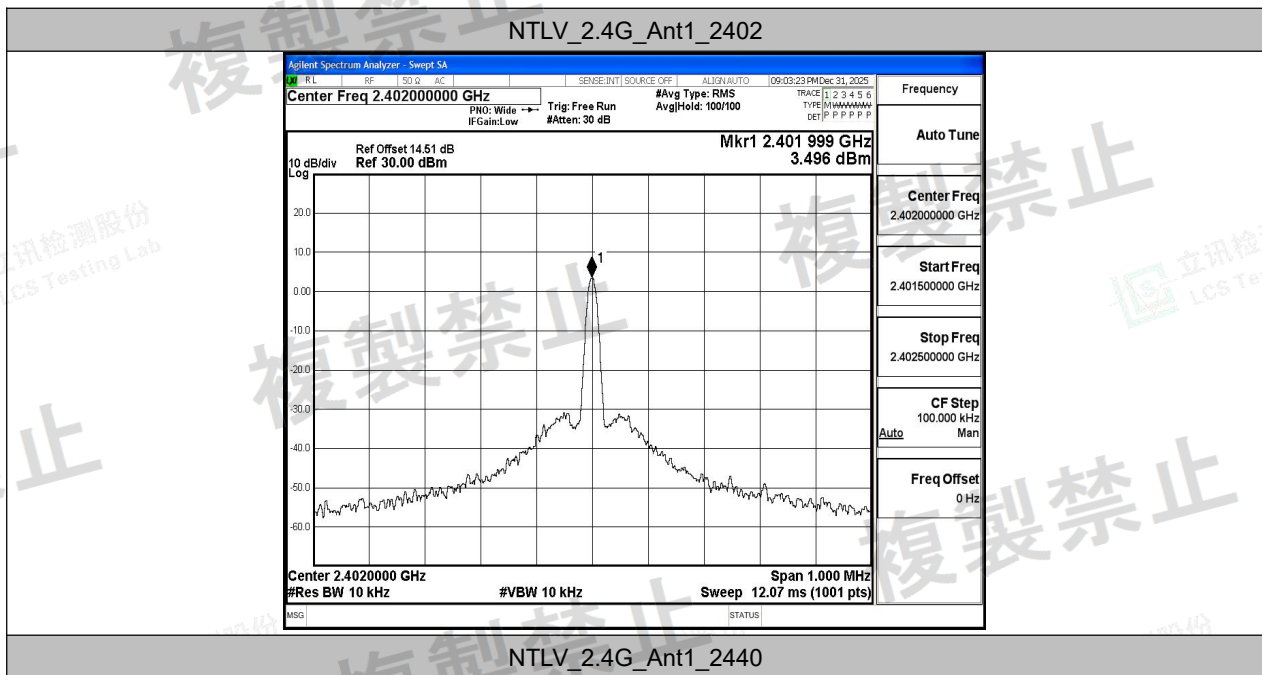
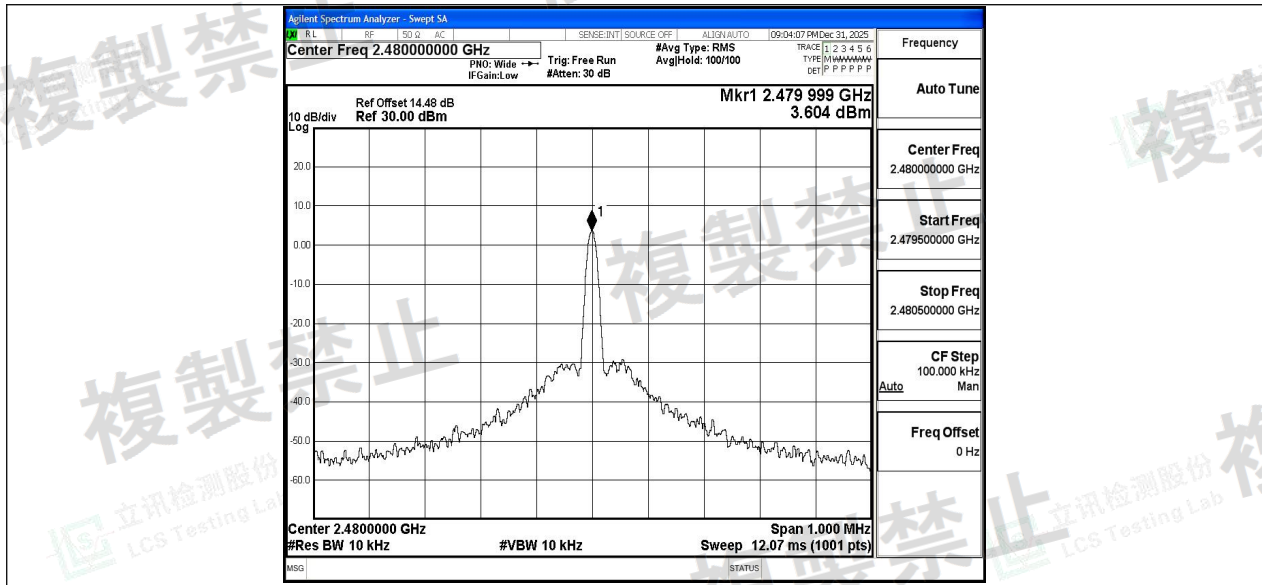


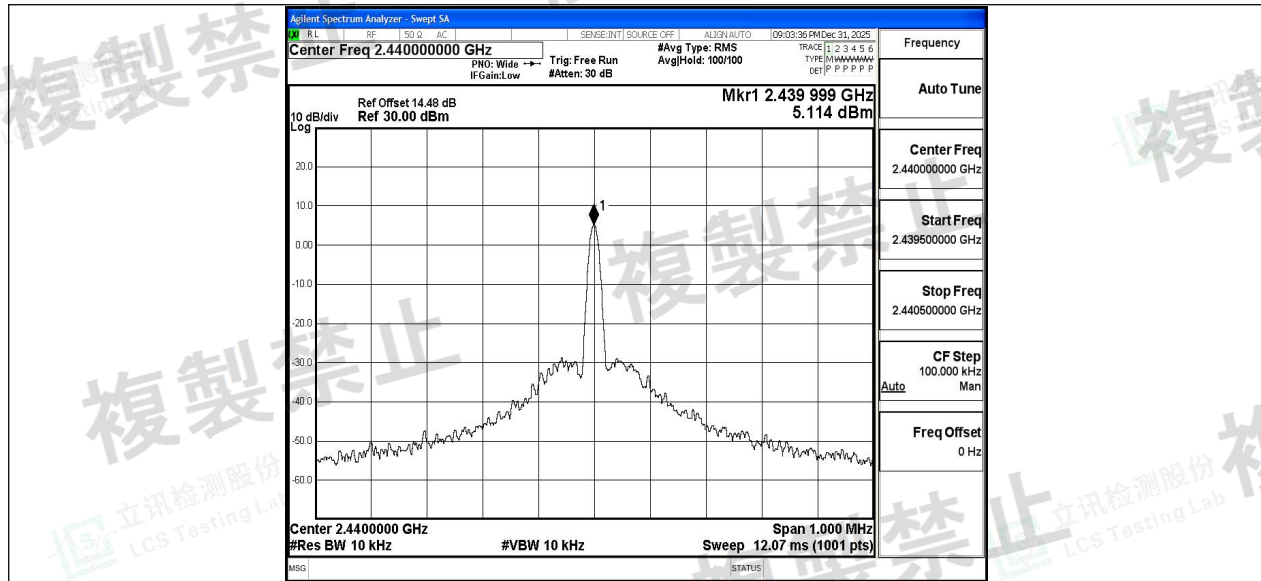
NTHV_2.4G_Ant1_2440



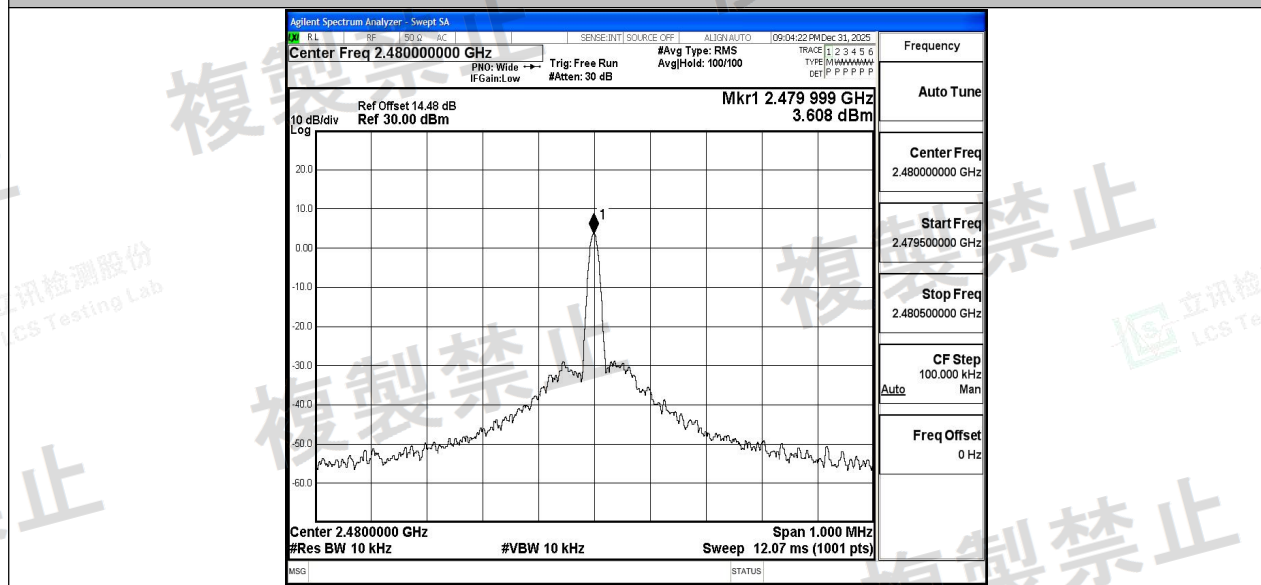
NTHV_2.4G_Ant1_2480







NTLV_2.4G_Ant1_2480





A.2 Antenna Power

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency[MHz]	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTNV	2.4G	Ant1	2402	-0.51	0.8892	≤10	PASS
			2440	-0.38	0.9162	≤10	PASS
			2480	-1.42	0.7211	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	2.4G	Ant1	2402	0.8892	1	-11.08	+20	PASS
			2440	0.9162	1	-8.38	+20	PASS
			2480	0.7211	1	-27.89	+20	PASS

Antenna Power							
TestCondition	TestMode	Antenna	Frequency[MHz]	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTHV	2.4G	Ant1	2402	-0.54	0.8831	≤10	PASS
			2440	-0.40	0.9120	≤10	PASS
			2480	-1.45	0.7161	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTHV	2.4G	Ant1	2402	0.8831	1	-11.69	+20	PASS
			2440	0.9120	1	-8.80	+20	PASS
			2480	0.7161	1	-28.39	+20	PASS





Antenna Power							
TestCondition	TestMode	Antenna	Frequency[MHz]	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTLV	2.4G	Ant1	2402	-0.58	0.8750	≤10	PASS
			2440	-0.43	0.9057	≤10	PASS
			2480	-1.47	0.7129	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTLV	2.4G	Ant1	2402	0.8750	1	-12.50	+20	PASS
			2440	0.9057	1	-9.43	+20	PASS
			2480	0.7129	1	-28.71	+20	PASS

EIRP								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Measured Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
NTNV	2.4G	Ant1	2402	-0.51	2.58	2.07	≤12.14	PASS
			2440	-0.38	2.58	2.20	≤12.14	PASS
			2480	-1.42	2.58	1.16	≤12.14	PASS
NTHV	2.4G	Ant1	2402	-0.54	2.58	2.04	≤12.14	PASS
			2440	-0.40	2.58	2.18	≤12.14	PASS
			2480	-1.45	2.58	1.13	≤12.14	PASS
NTLV	2.4G	Ant1	2402	-0.58	2.58	2.00	≤12.14	PASS
			2440	-0.43	2.58	2.15	≤12.14	PASS
			2480	-1.47	2.58	1.11	≤12.14	PASS





A.3 Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	2.4G	Ant1	2402	1.018	≤26	PASS
			2440	1.023	≤26	PASS
			2480	1.021	≤26	PASS

TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTHV	2.4G	Ant1	2402	1.015	≤26	PASS
			2440	1.019	≤26	PASS
			2480	1.023	≤26	PASS

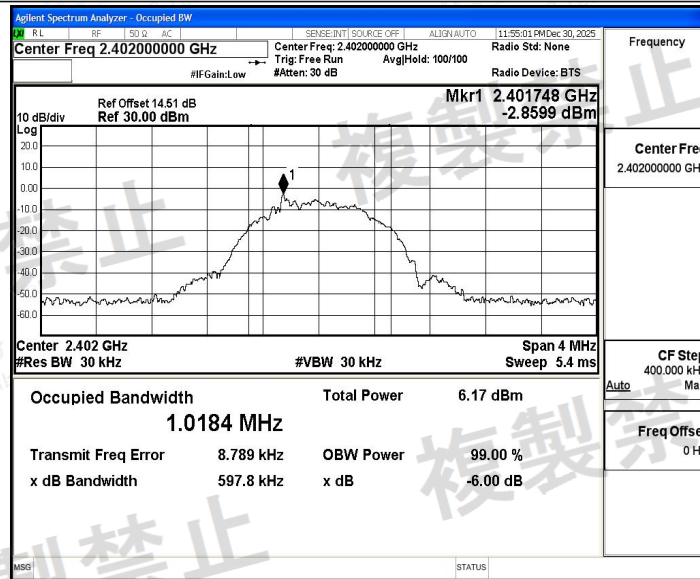
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTLV	2.4G	Ant1	2402	1.018	≤26	PASS
			2440	1.019	≤26	PASS
			2480	1.018	≤26	PASS



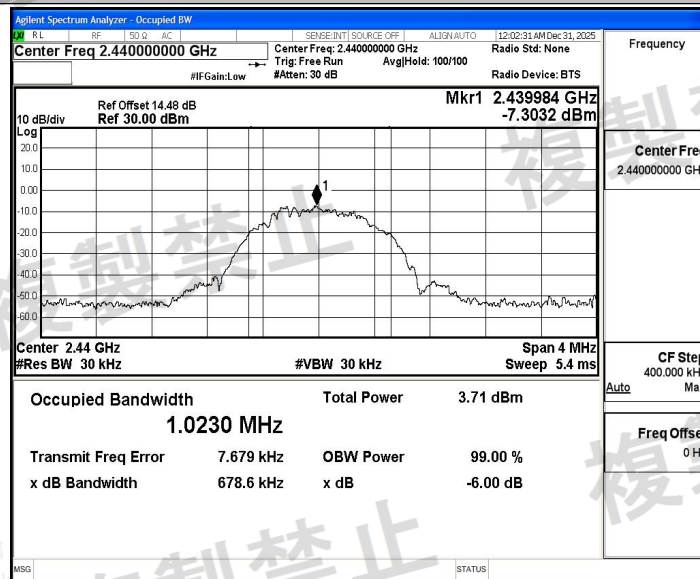


Test Graphs

NTNV_2.4G_Ant1_2402



NTNV_2.4G_Ant1_2440



NTNV_2.4G_Ant1_2480

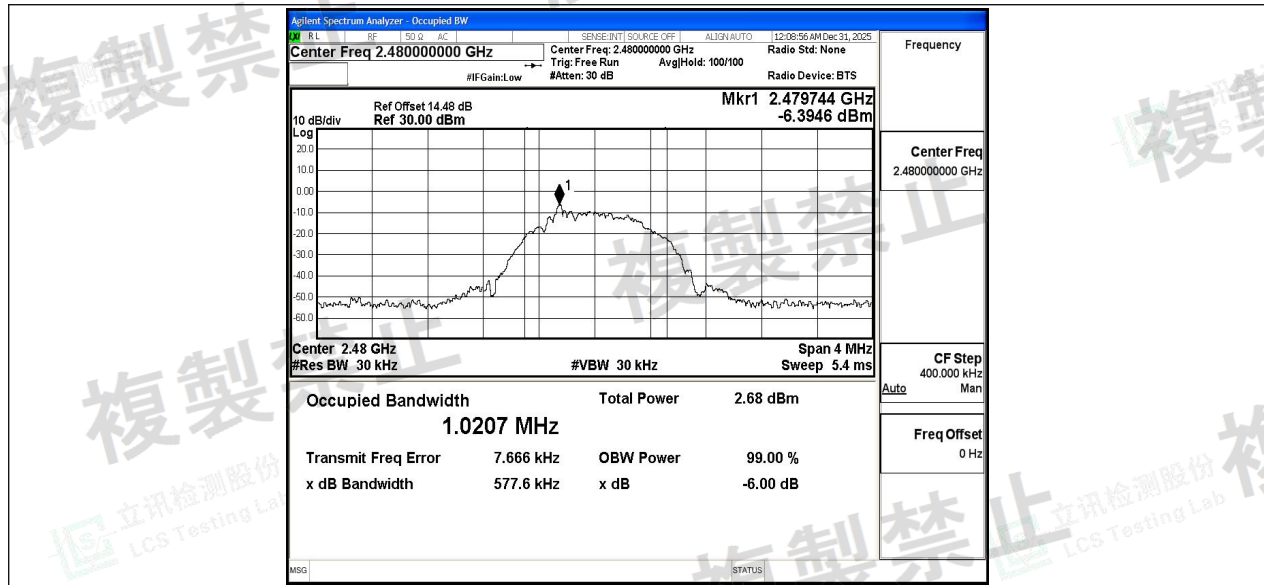


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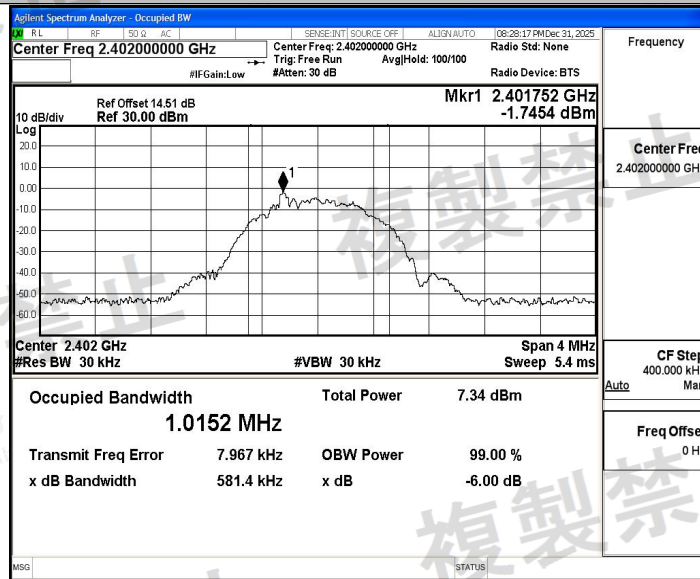
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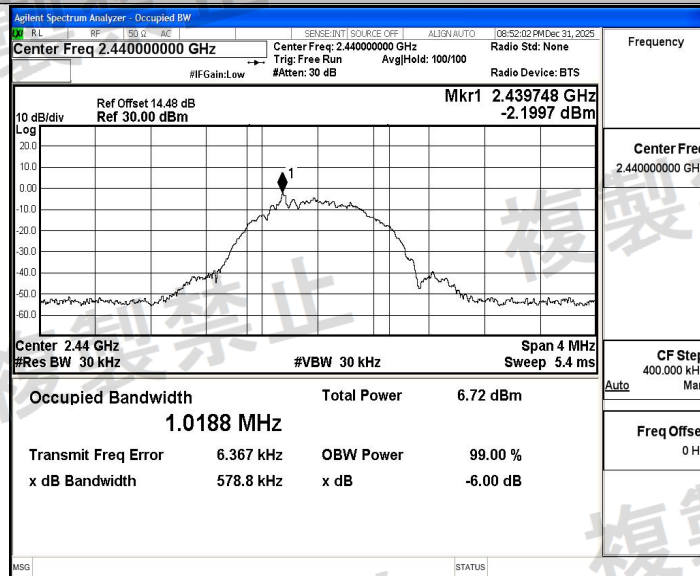




NTHV_2.4G_Ant1_2402

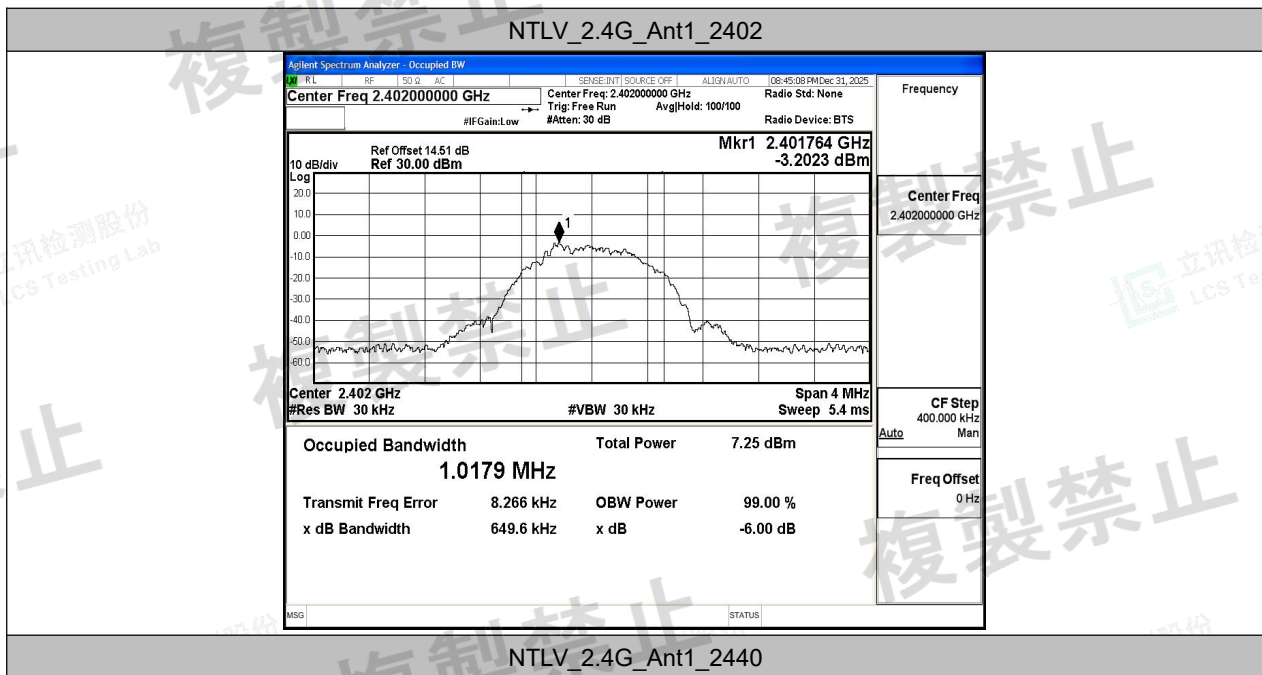
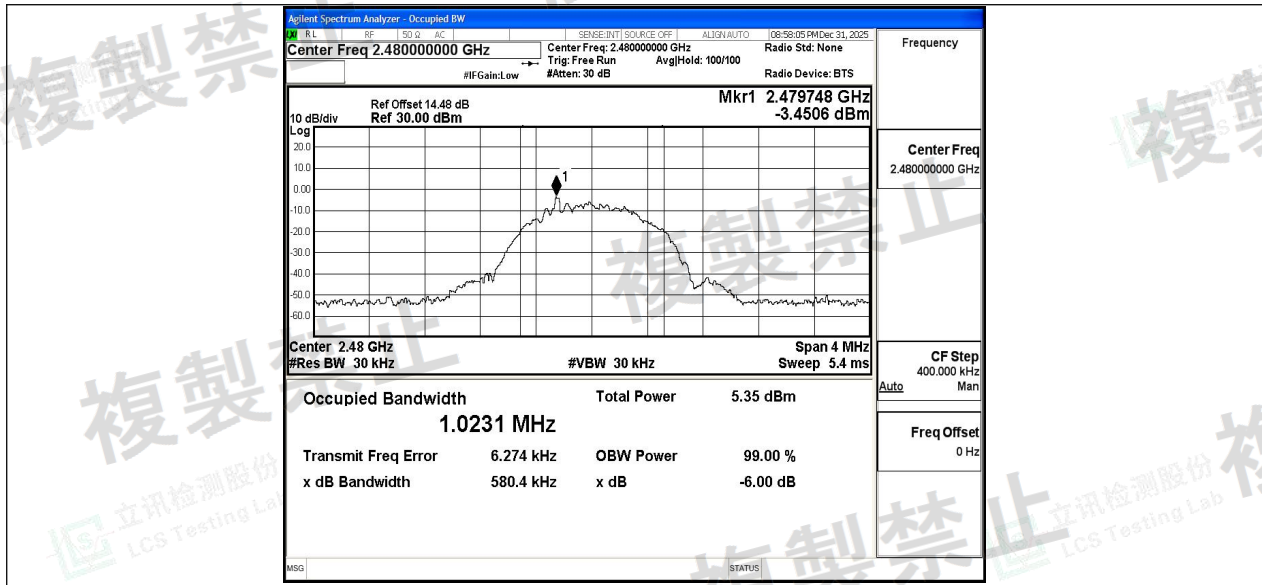


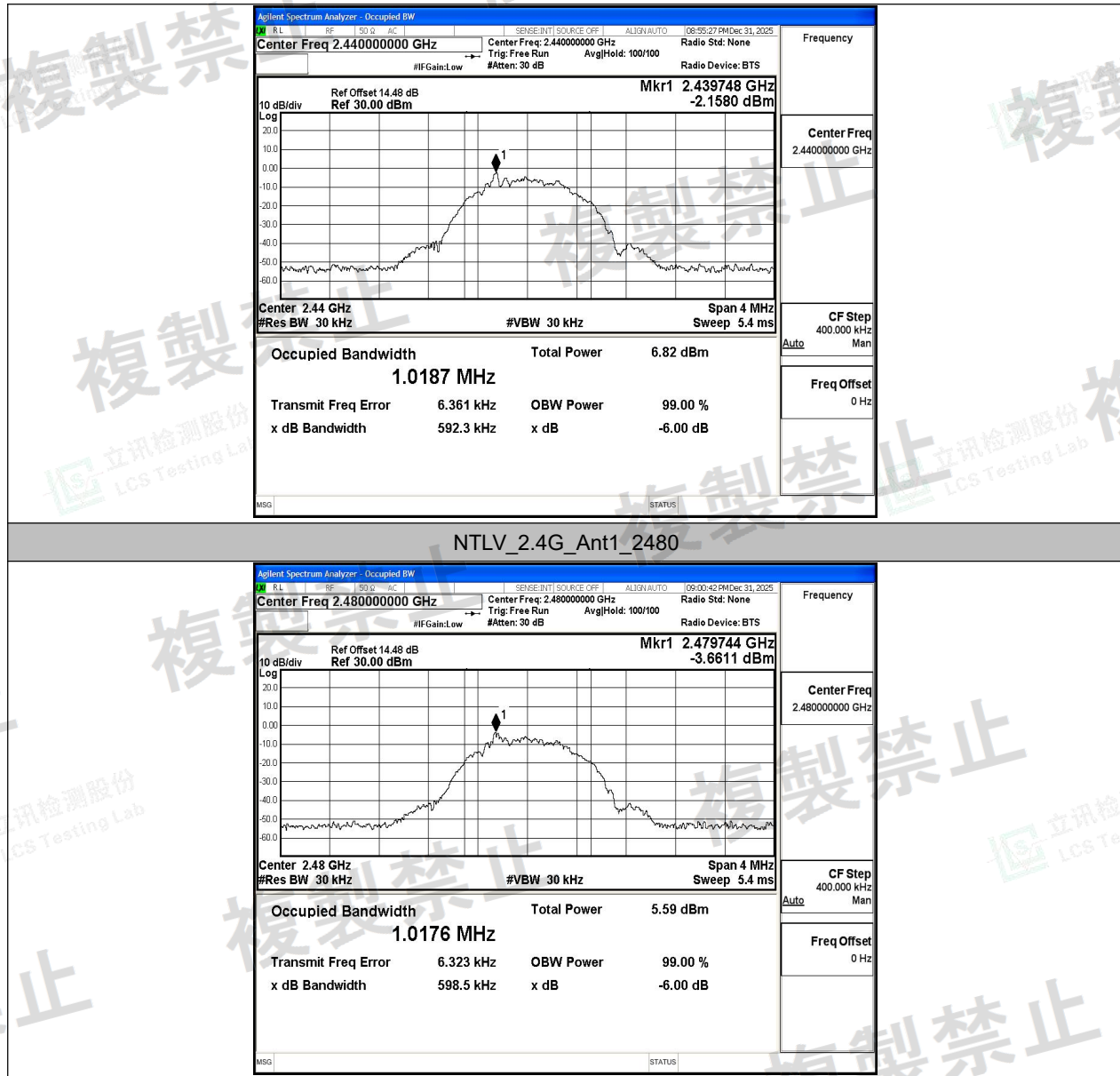
NTHV_2.4G_Ant1_2440



NTHV_2.4G_Ant1_2480









A.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	2.4G	Ant1	2402	0.672	----	PASS
			2440	0.660	----	PASS
			2480	0.659	----	PASS

TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTHV	2.4G	Ant1	2402	0.666	≥0.5	PASS
			2440	0.670	≥0.5	PASS
			2480	0.664	≥0.5	PASS

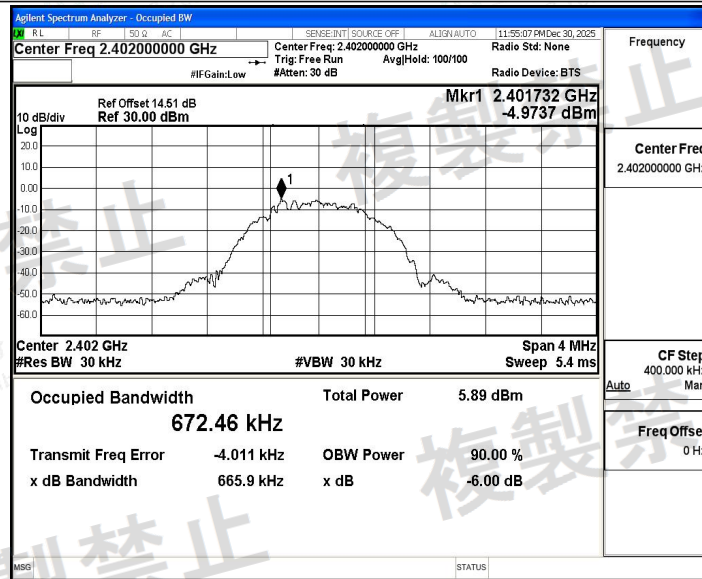
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTLV	2.4G	Ant1	2402	0.669	≥0.5	PASS
			2440	0.667	≥0.5	PASS
			2480	0.667	≥0.5	PASS



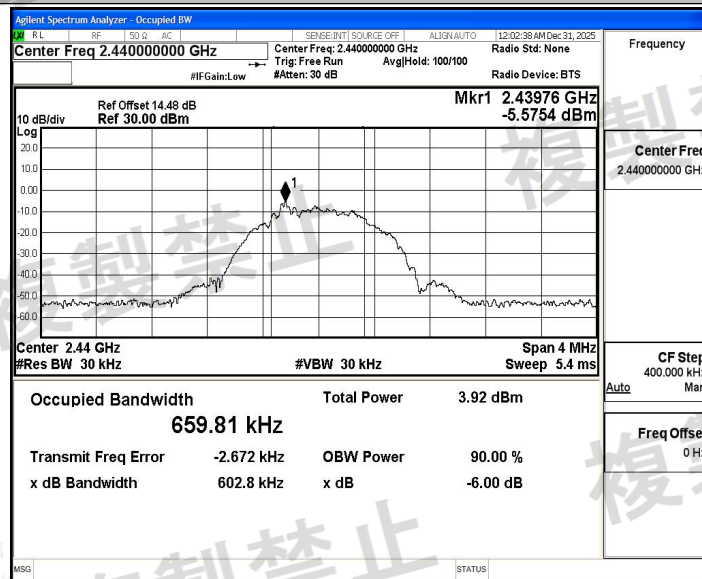


Test Graphs

NTNV_2.4G_Ant1_2402



NTNV_2.4G_Ant1_2440



NTNV_2.4G_Ant1_2480

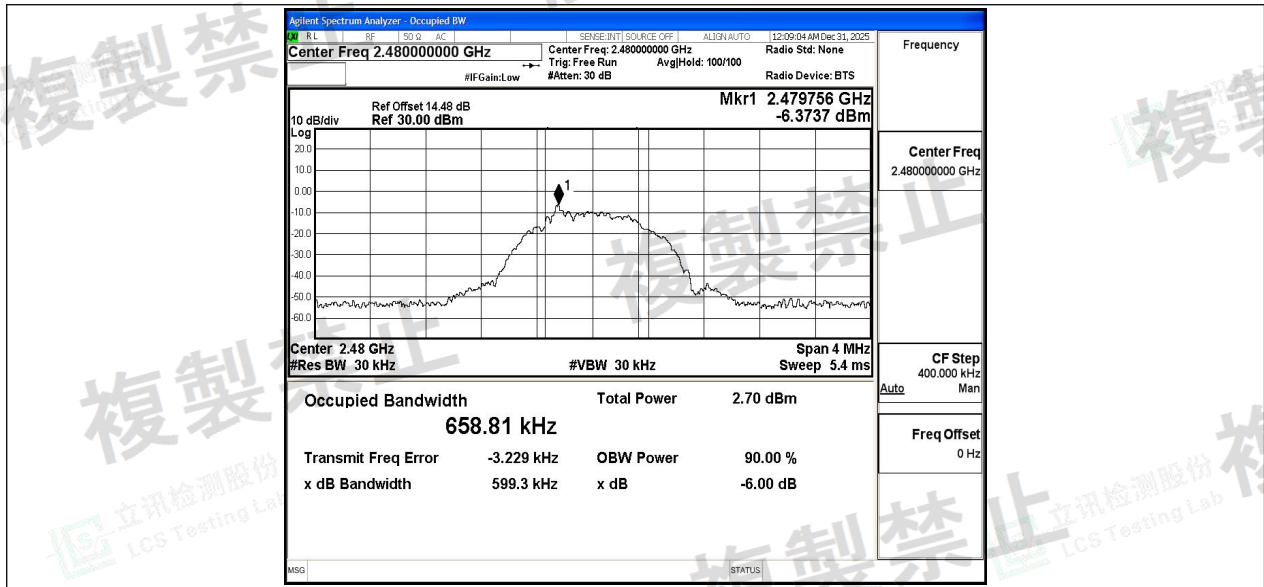


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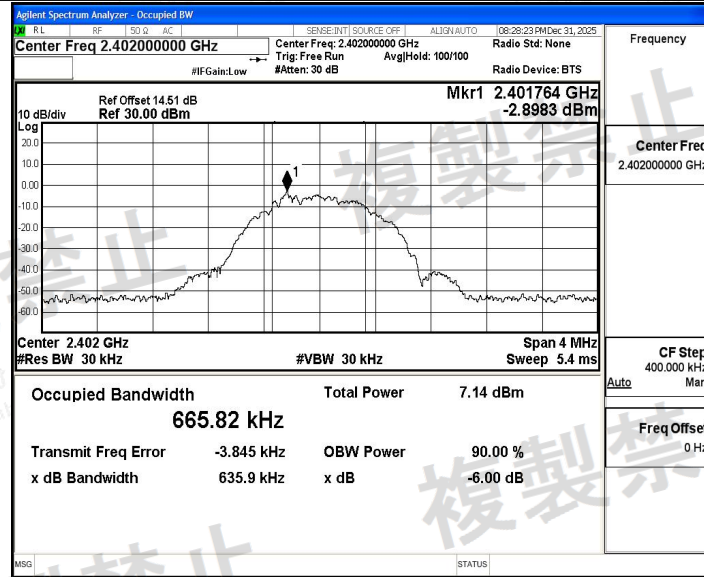
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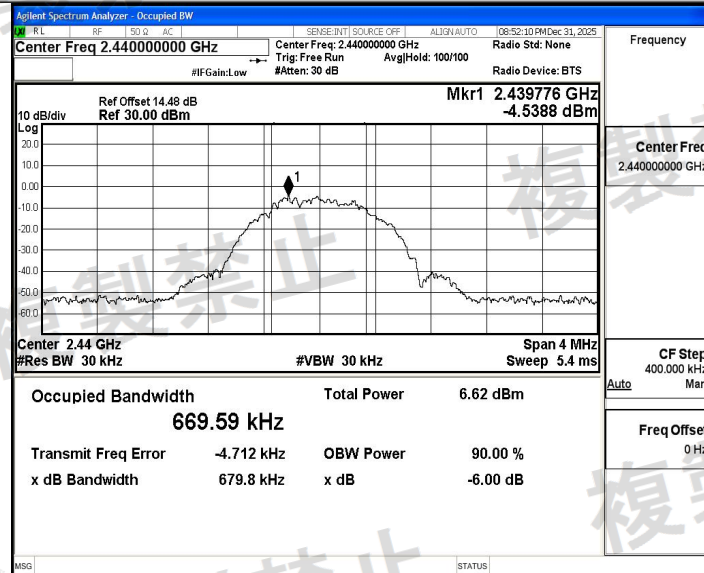




NTHV_2.4G_Ant1_2402



NTHV_2.4G_Ant1_2440



NTHV_2.4G_Ant1_2480

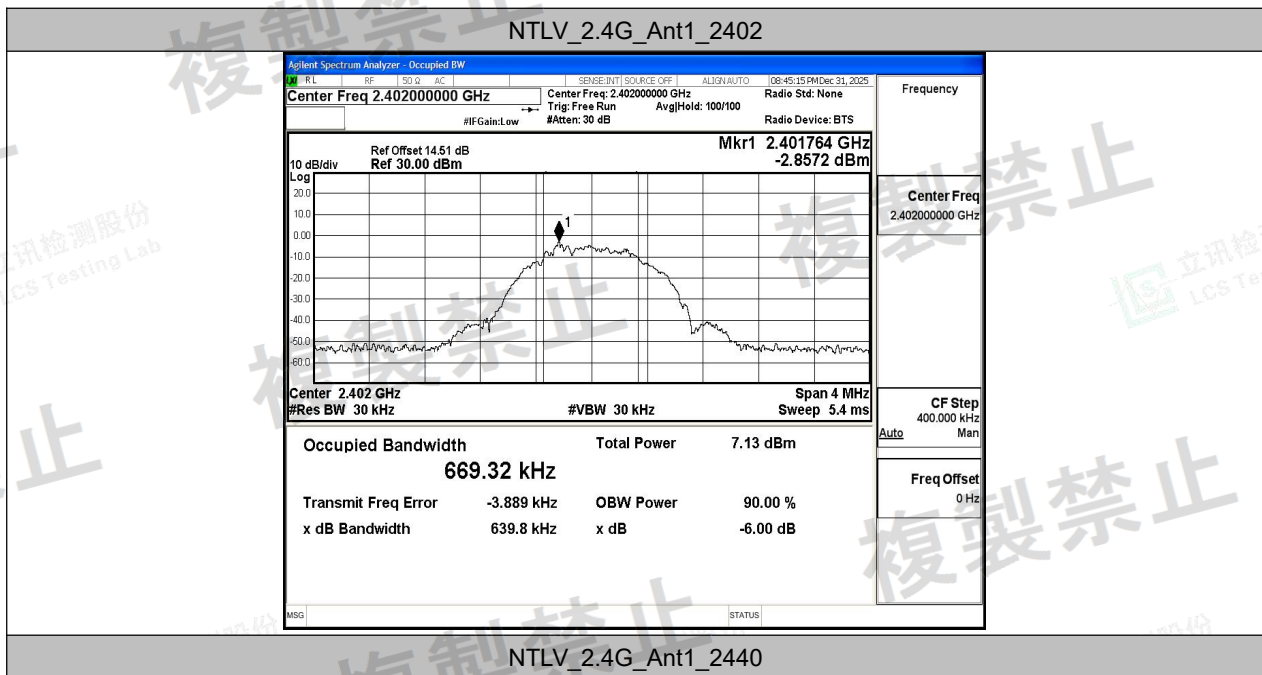
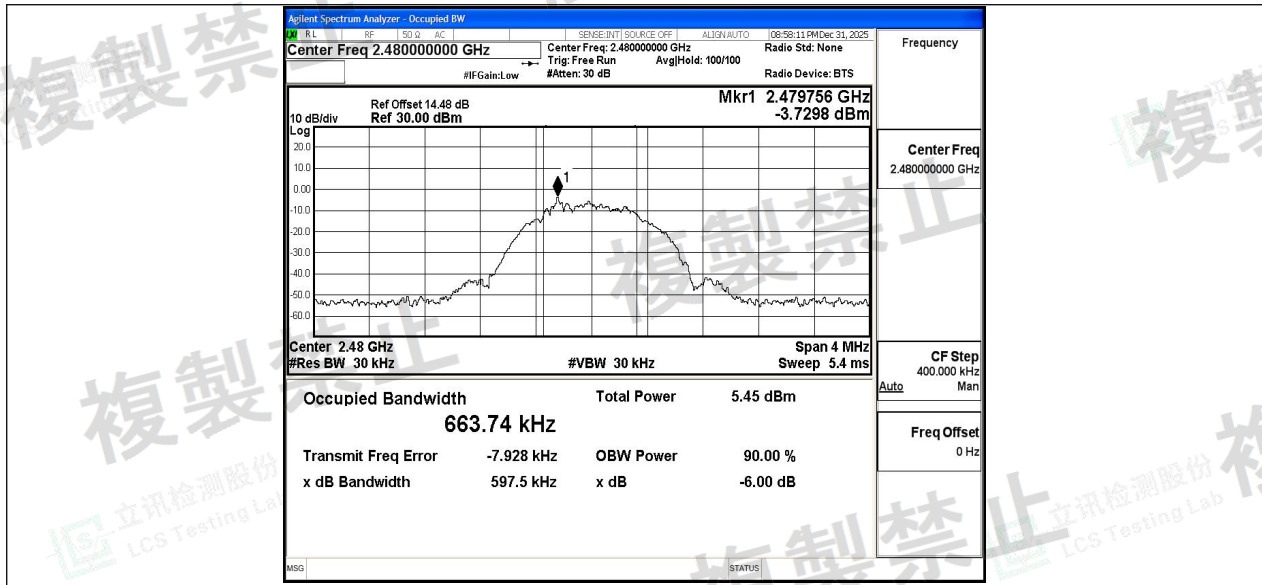


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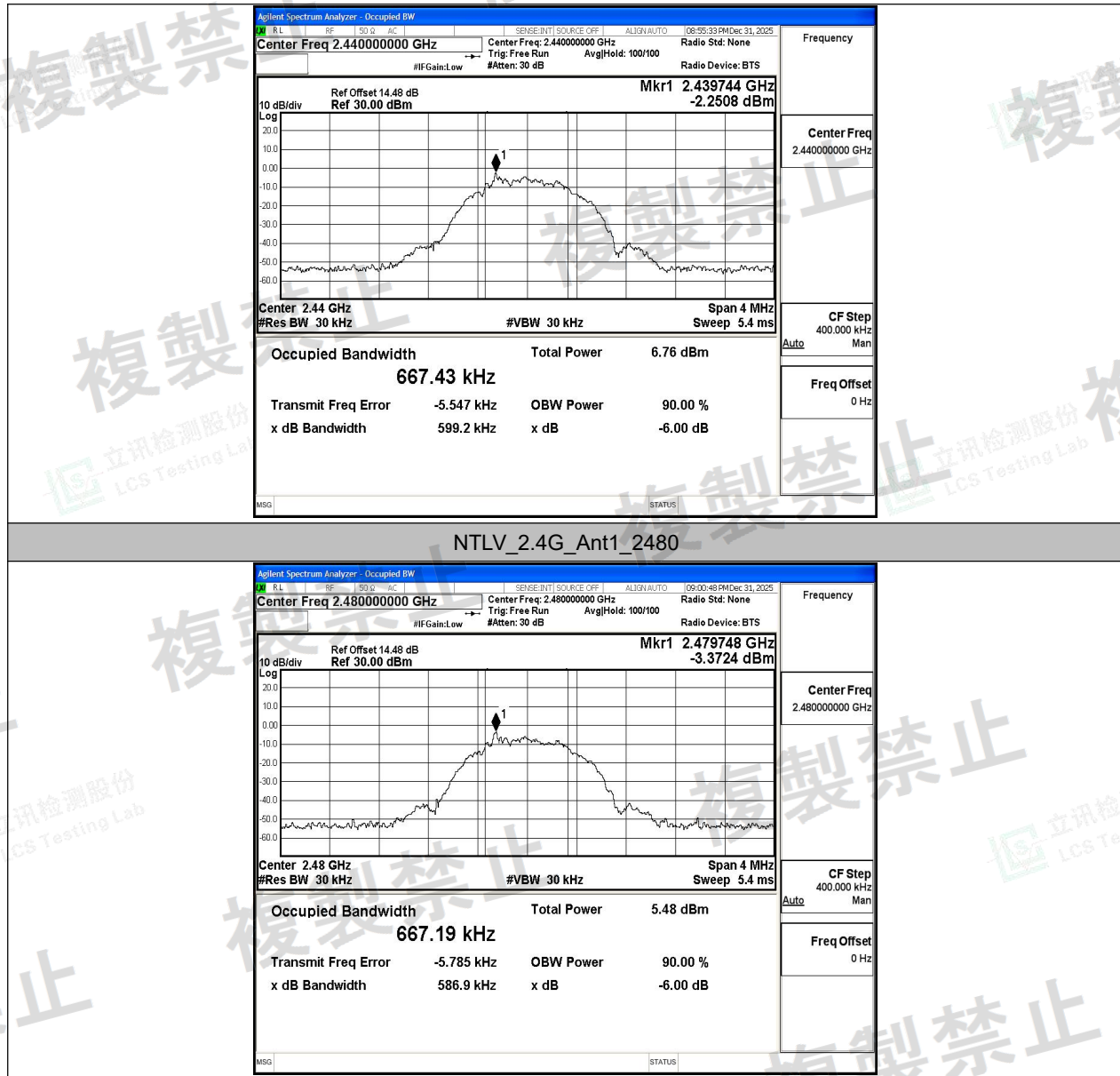


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A.5 Spurious Emission of TX

Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	2.4G	Ant1	2402	30~1000	-53.72	≤-26	0.00425	≤2.5	PASS
				1000~2387	-52.84	≤-26	0.00520	≤2.5	PASS
				2387~2400	-41.33	≤-16	0.07362	≤25	PASS
				2483.5~2496.5	-43.27	≤-16	0.04710	≤25	PASS
				2496.5~13000	-45.08	≤-26	0.03105	≤2.5	PASS
			2440	30~1000	-53.91	≤-26	0.00406	≤2.5	PASS
				1000~2387	-52.81	≤-26	0.00524	≤2.5	PASS
				2387~2400	-43.46	≤-16	0.04508	≤25	PASS
				2483.5~2496.5	-43.27	≤-16	0.04710	≤25	PASS
				2496.5~13000	-45.52	≤-26	0.02805	≤2.5	PASS
			2480	30~1000	-53.82	≤-26	0.00415	≤2.5	PASS
				1000~2387	-52.75	≤-26	0.00531	≤2.5	PASS
				2387~2400	-43.48	≤-16	0.04487	≤25	PASS
				2483.5~2496.5	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	-45.34	≤-26	0.02924	≤2.5	PASS

TestCondition	TestMode	Antenna	Channel	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTHV	2.4G	Ant1	2402	30~1000	-53.68	≤-26	0.00429	≤2.5	PASS
				1000~2387	-48.40	≤-26	0.01445	≤2.5	PASS
				2387~2400	-40.80	≤-16	0.08318	≤25	PASS
				2483.5~2496.5	-43.33	≤-16	0.04645	≤25	PASS
				2496.5~13000	-45.04	≤-26	0.03133	≤2.5	PASS
			2440	30~1000	-53.91	≤-26	0.00406	≤2.5	PASS
				1000~2387	-52.80	≤-26	0.00525	≤2.5	PASS
				2387~2400	-43.41	≤-16	0.04560	≤25	PASS
				2483.5~2496.5	-43.39	≤-16	0.04581	≤25	PASS
				2496.5~13000	-45.57	≤-26	0.02773	≤2.5	PASS
			2480	30~1000	-54.04	≤-26	0.00394	≤2.5	PASS
				1000~2387	-52.76	≤-26	0.00530	≤2.5	PASS
				2387~2400	-43.62	≤-16	0.04345	≤25	PASS
				2483.5~2496.5	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	-45.48	≤-26	0.02831	≤2.5	PASS





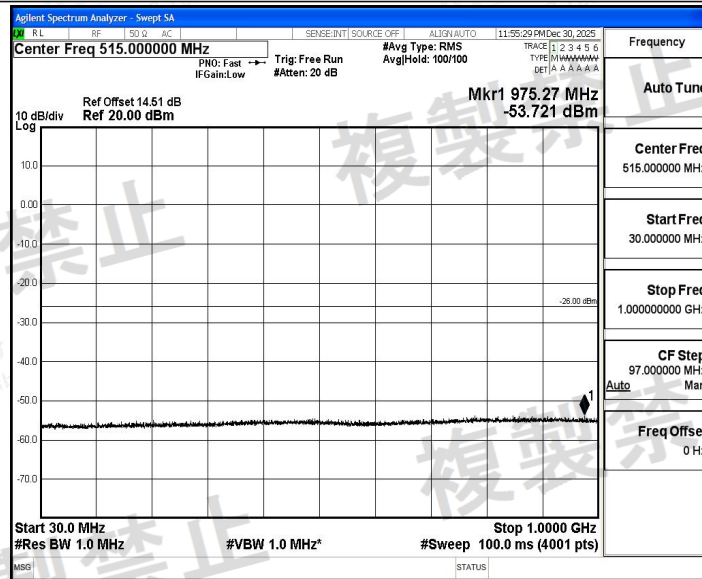
TestCondition	TestMode	Antenna	Channel	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTLV	2.4G	Ant1	2402	30~1000	-53.94	≤-26	0.00404	≤2.5	PASS
				1000~2387	-48.48	≤-26	0.01419	≤2.5	PASS
				2387~2400	-40.53	≤-16	0.08851	≤25	PASS
				2483.5~2496.5	-43.13	≤-16	0.04864	≤25	PASS
				2496.5~13000	-45.31	≤-26	0.02944	≤2.5	PASS
			2440	30~1000	-54.00	≤-26	0.00398	≤2.5	PASS
				1000~2387	-52.49	≤-26	0.00564	≤2.5	PASS
				2387~2400	-43.36	≤-16	0.04613	≤25	PASS
				2483.5~2496.5	-43.32	≤-16	0.04656	≤25	PASS
				2496.5~13000	-45.61	≤-26	0.02748	≤2.5	PASS
			2480	30~1000	-53.95	≤-26	0.00403	≤2.5	PASS
				1000~2387	-52.45	≤-26	0.00569	≤2.5	PASS
				2387~2400	-43.52	≤-16	0.04446	≤25	PASS
				2483.5~2496.5	-43.50	≤-16	0.04467	≤25	PASS
				2496.5~13000	-45.46	≤-26	0.02844	≤2.5	PASS



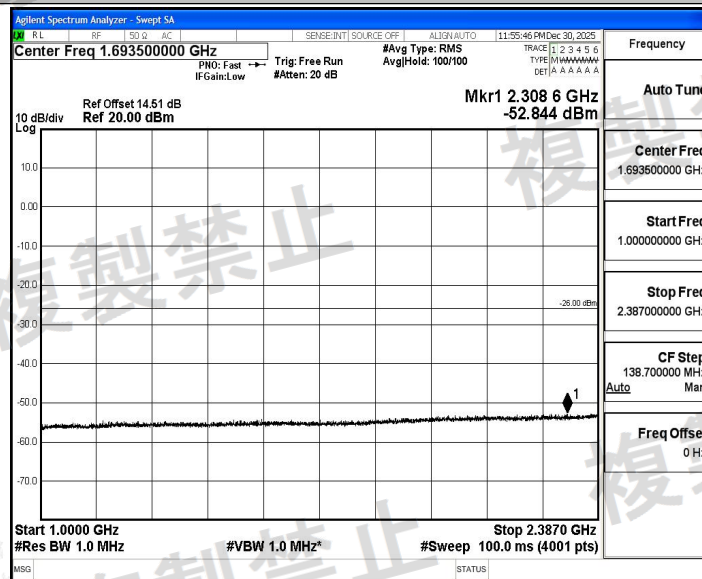


Test Graphs

NTNV_2.4G_Ant1_2402_30~1000

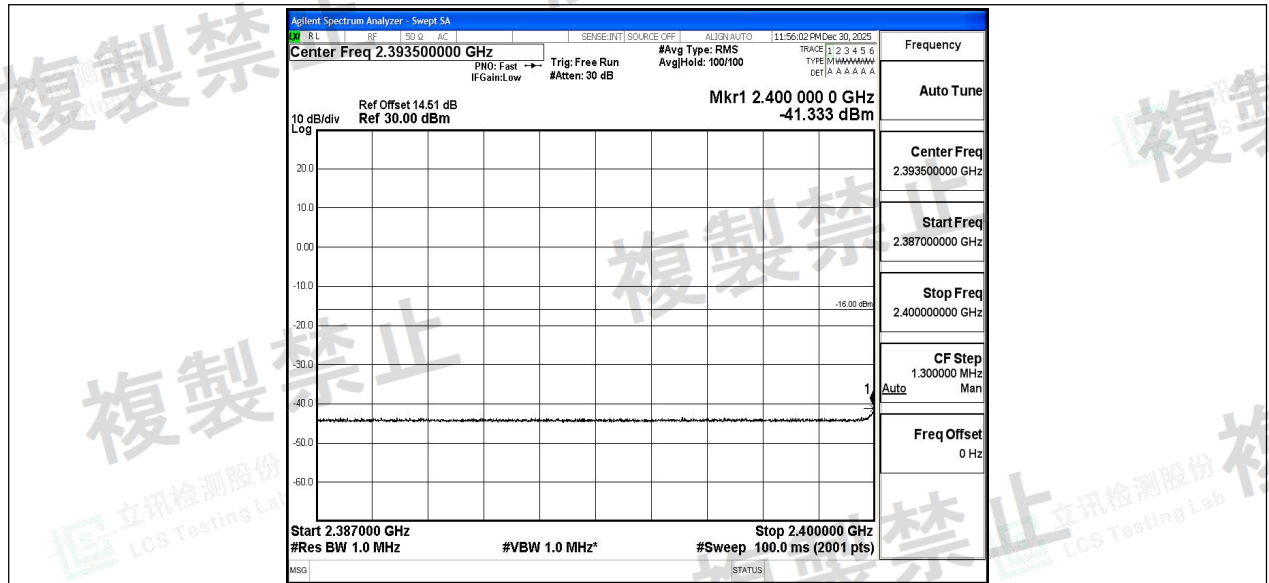


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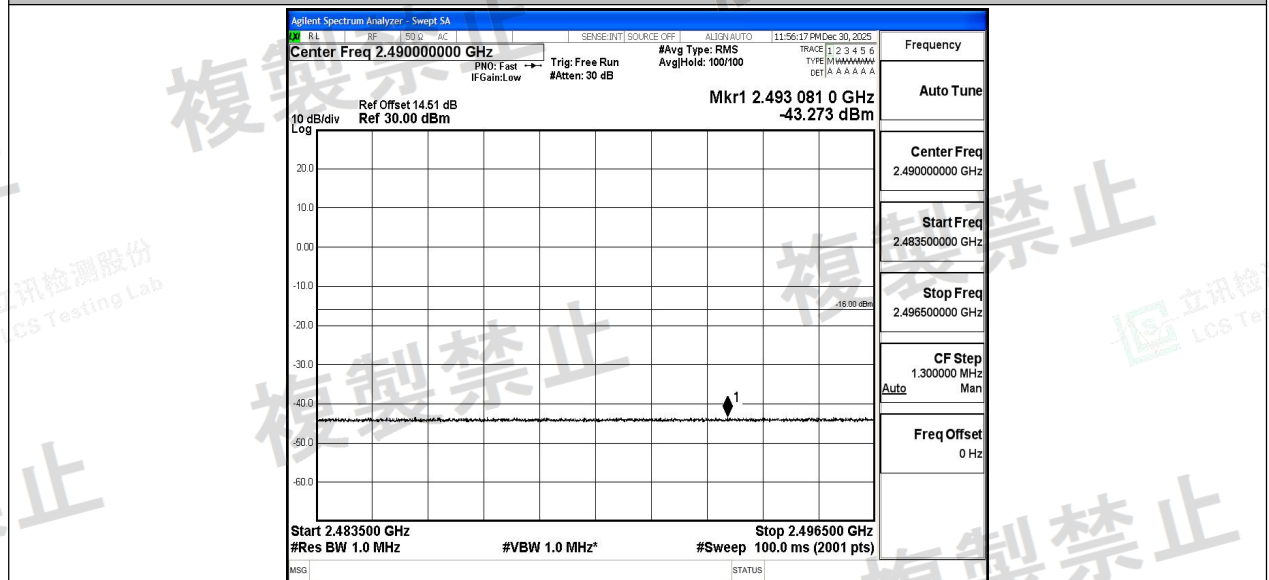


NTNV_2.4G_Ant1_2402_2387~2400

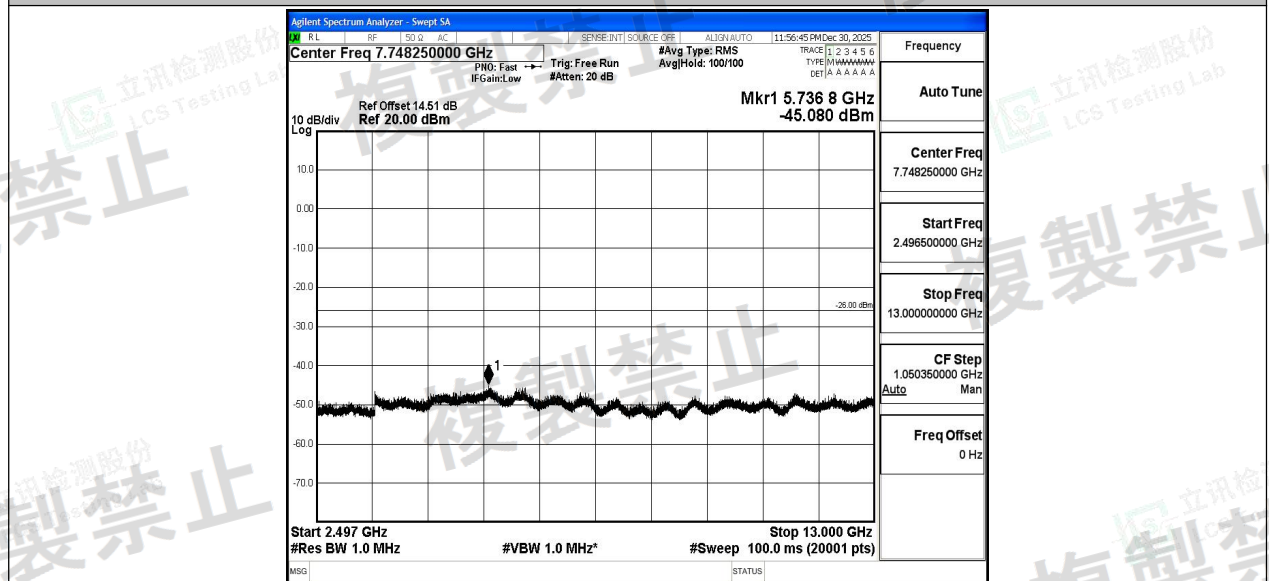




NTNV_2.4G_Ant1_2402_2483.5~2496.5

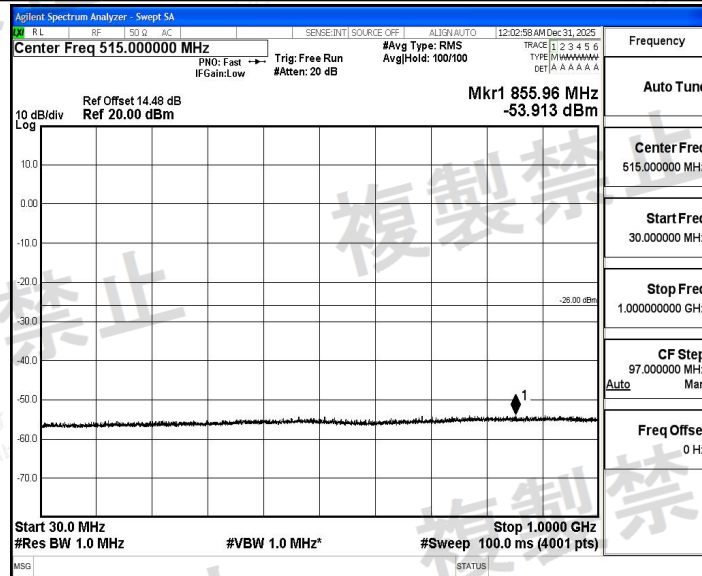


NTNV_2.4G_Ant1_2402_2496.5~13000

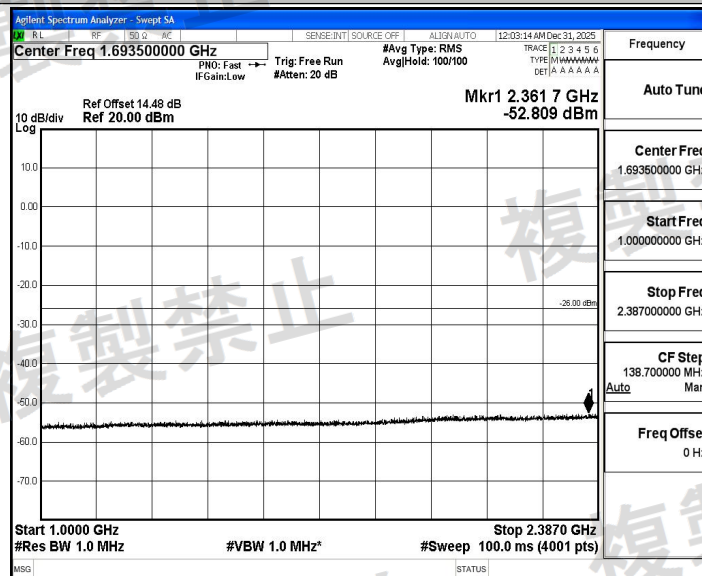




NTNV_2.4G_Ant1_2440_30~1000



NTNV_2.4G_Ant1_2440_1000~2387



NTNV_2.4G_Ant1_2440_2387~2400

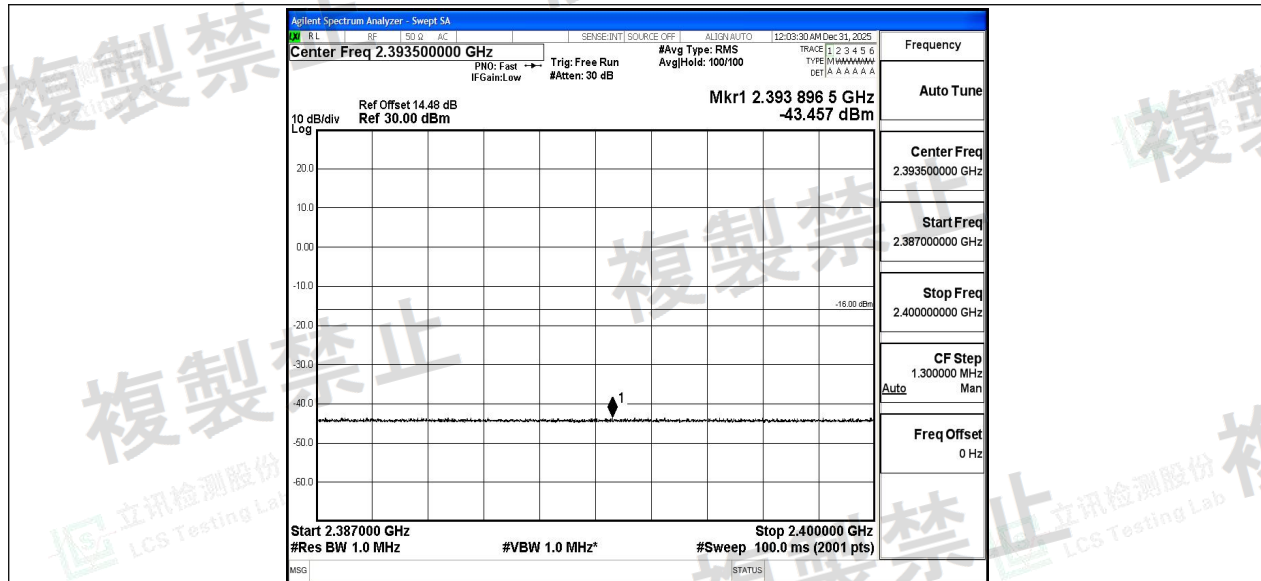


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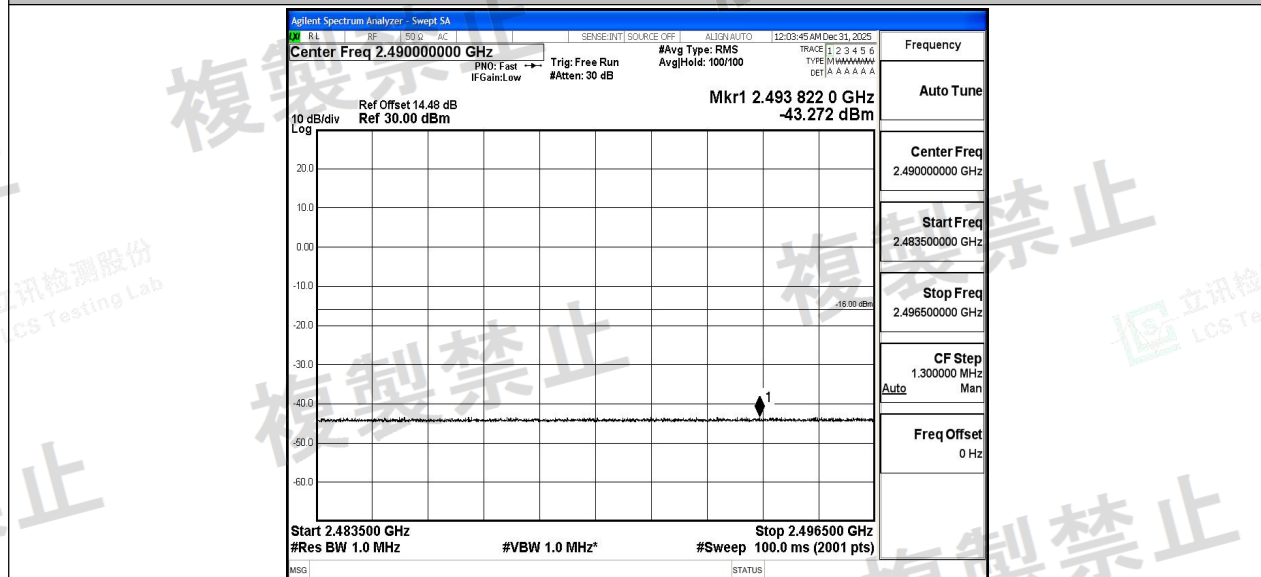
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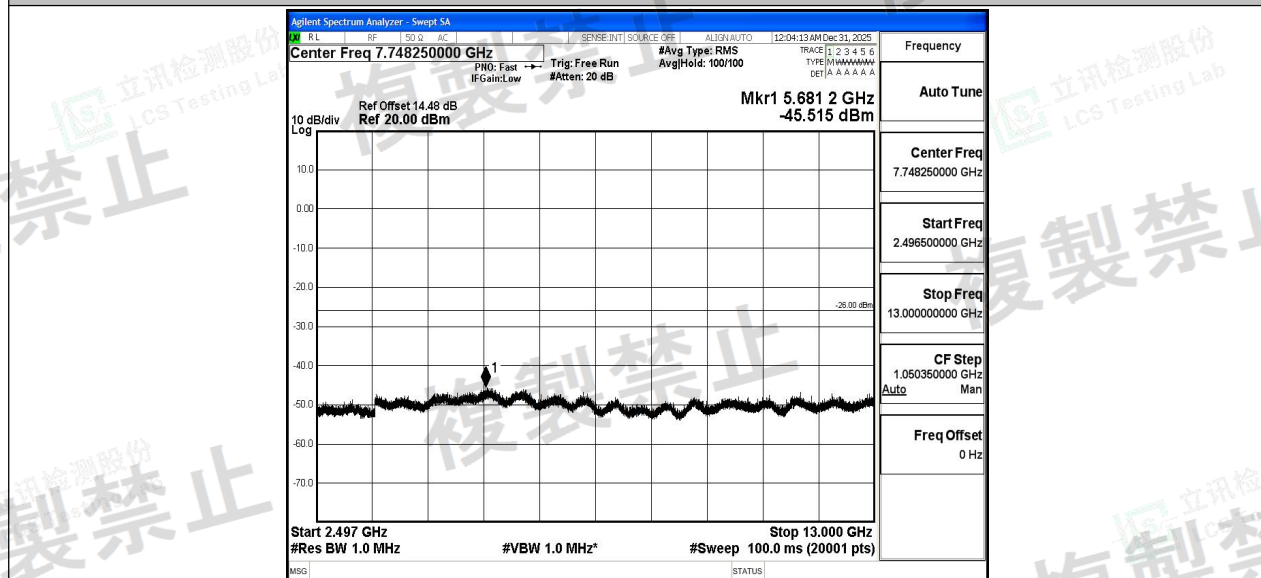
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NTNV_2.4G_Ant1_2440_2483.5~2496.5

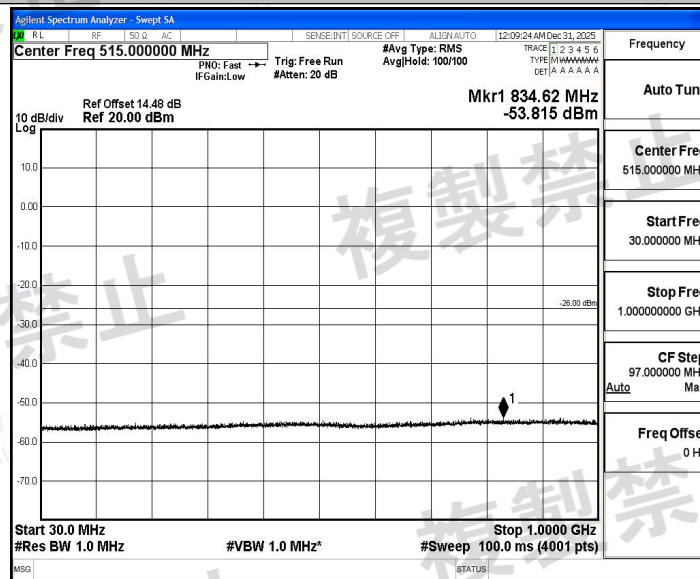


NTNV_2.4G_Ant1_2440_2496.5~13000

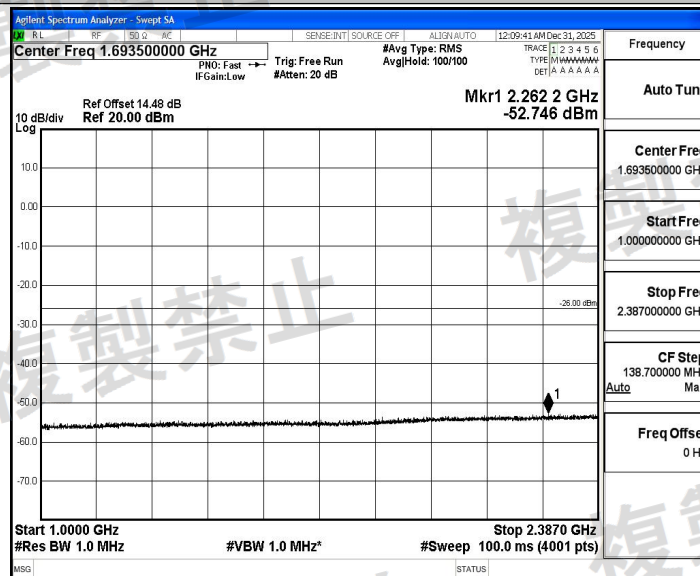




NTNV_2.4G_Ant1_2480_30~1000



NTNV_2.4G_Ant1_2480_1000~2387



NTNV_2.4G_Ant1_2480_2387~2400

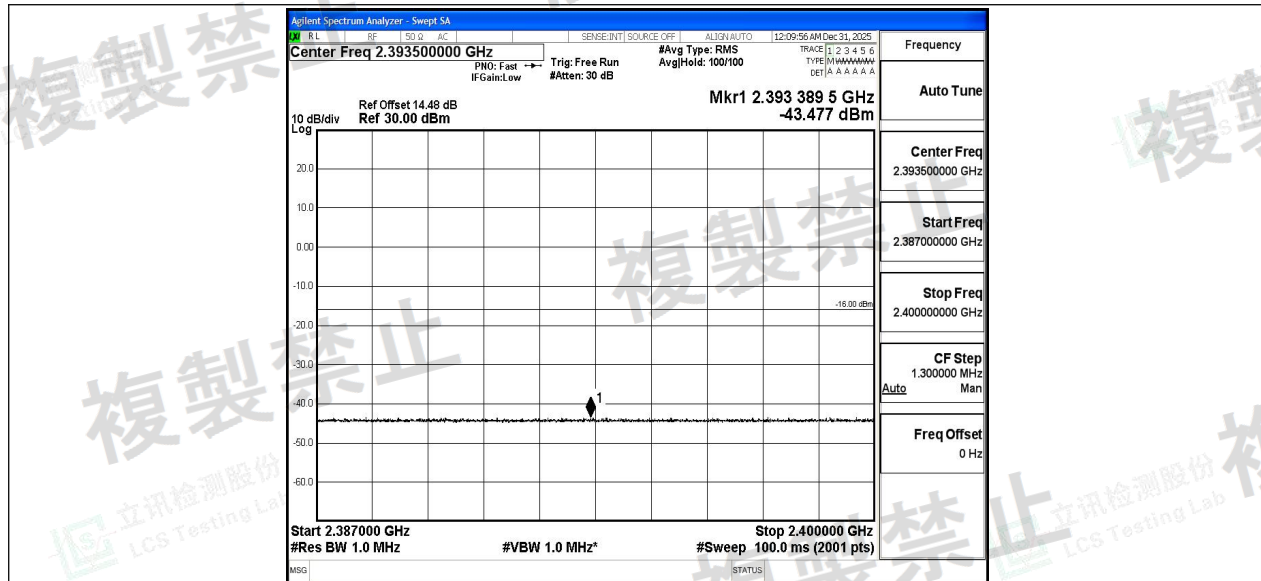


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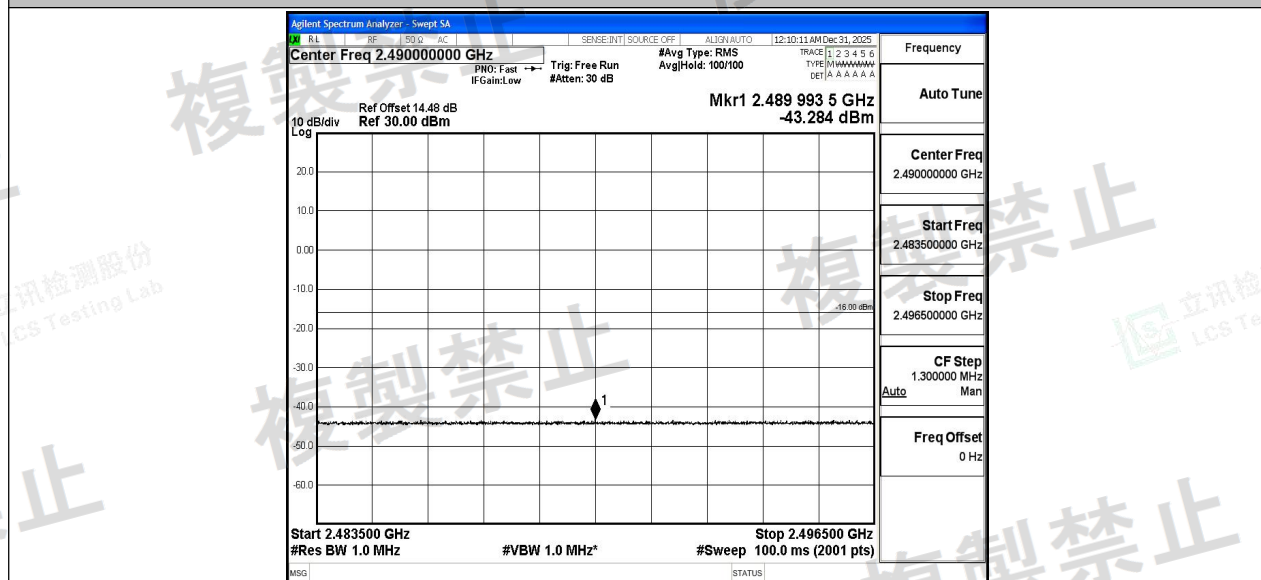
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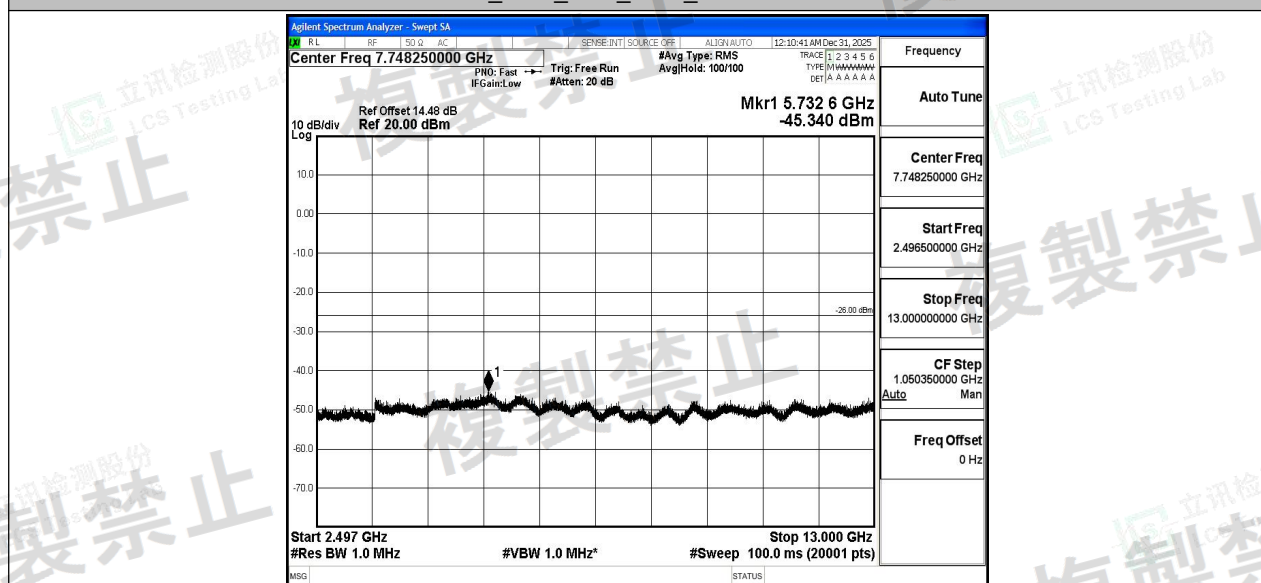
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NTNV_2.4G_Ant1_2480_2483.5~2496.5

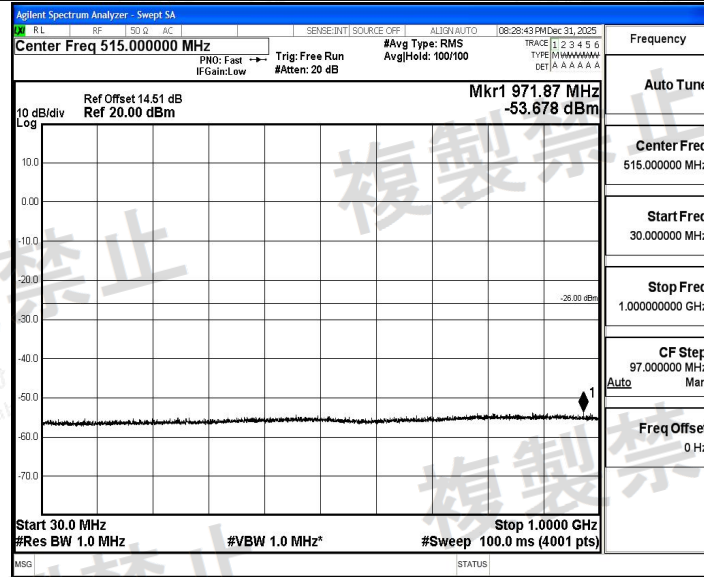


NTNV_2.4G_Ant1_2480_2496.5~13000

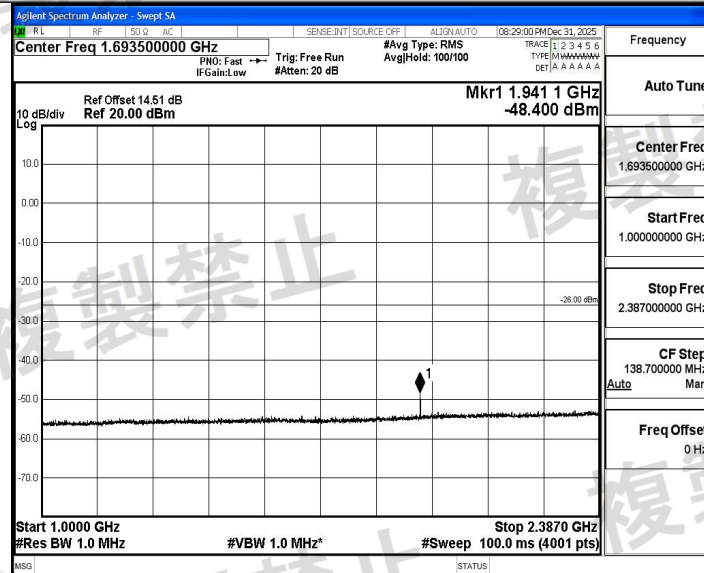




NTHV_2.4G_Ant1_2402_30~1000



NTHV_2.4G_Ant1_2402_1000~2387



NTHV_2.4G_Ant1_2402_2387~2400

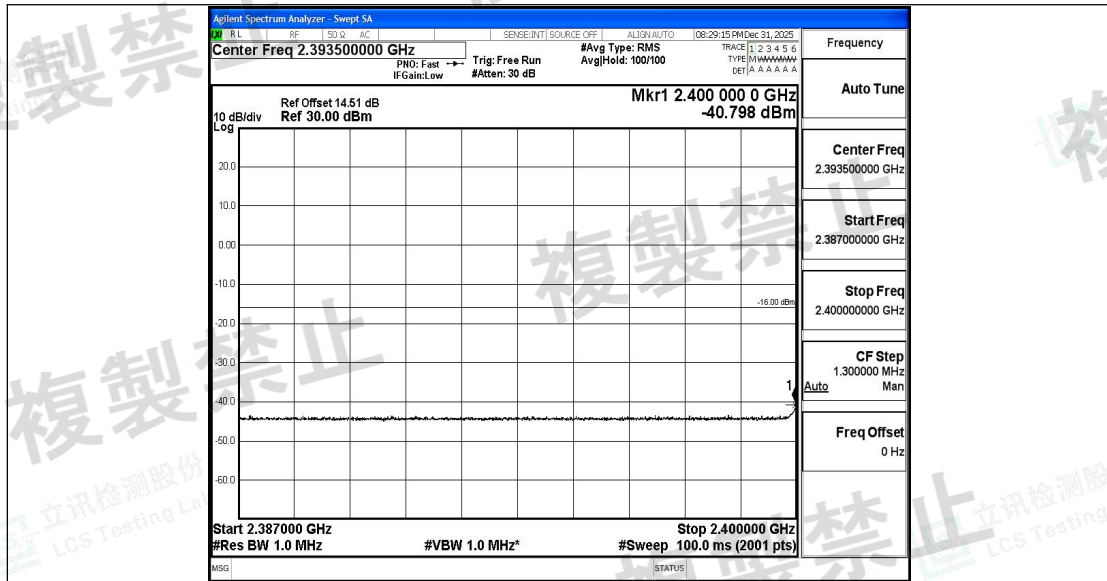


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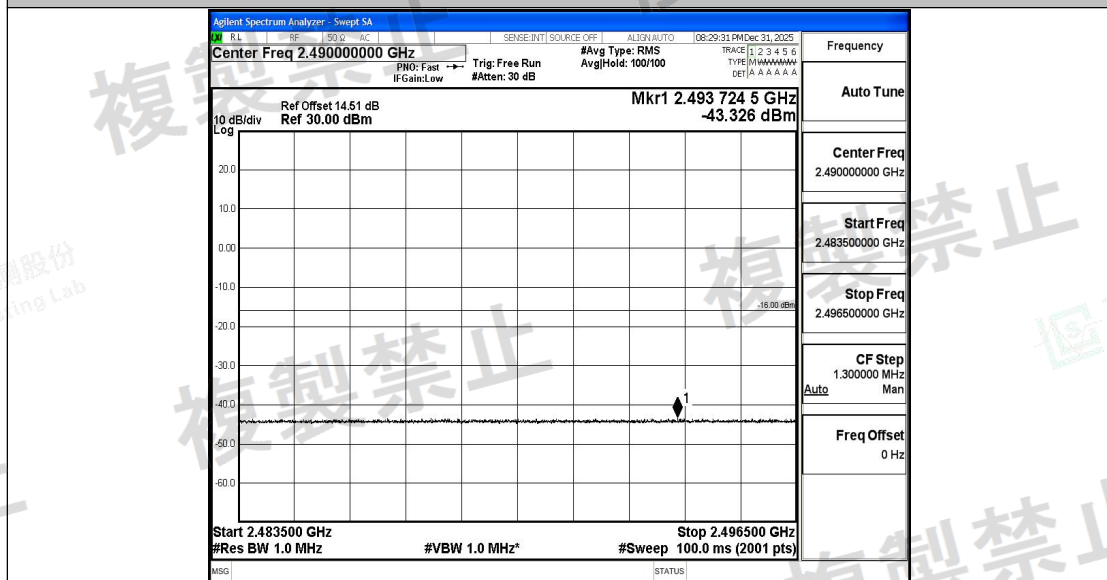
Add: Room 101/201, Building A, and Room 101/301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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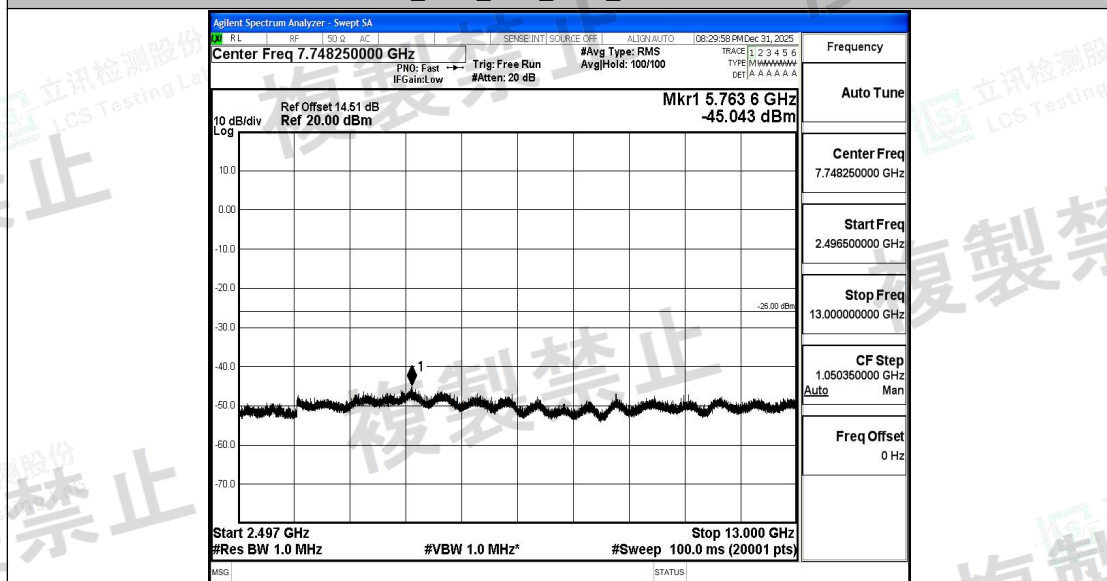
Scan code to check authenticity

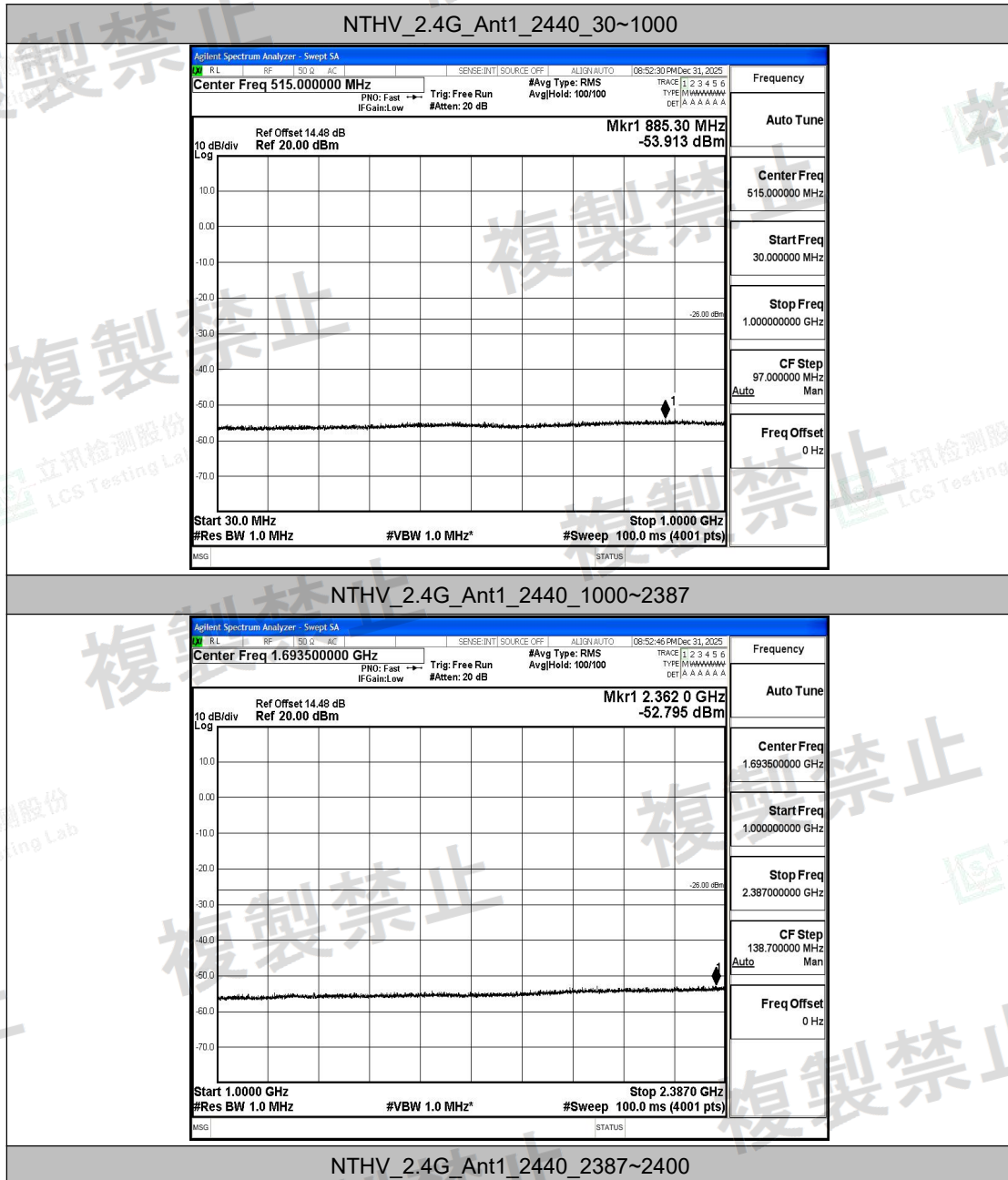


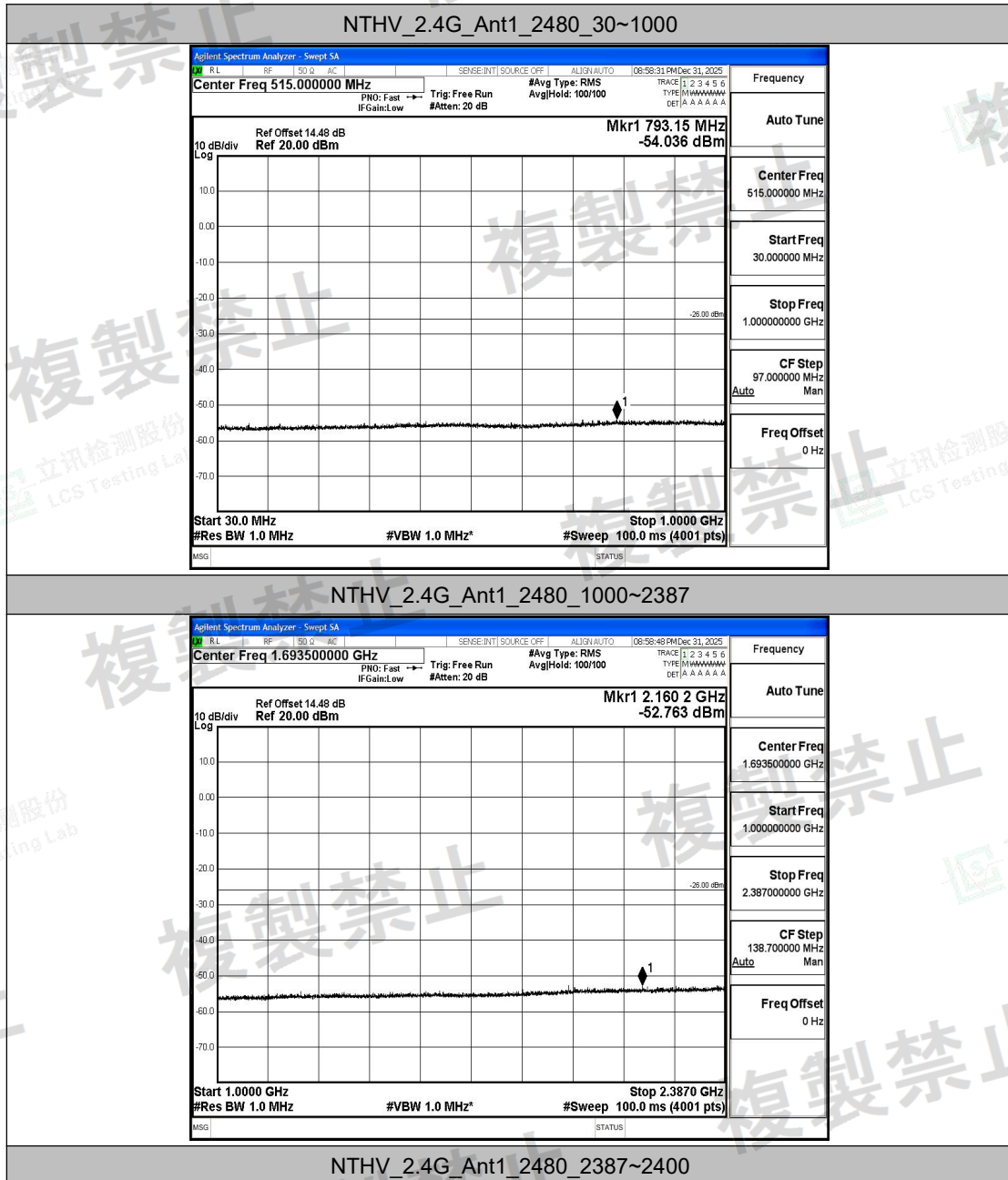
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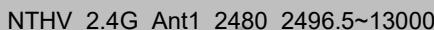
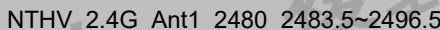


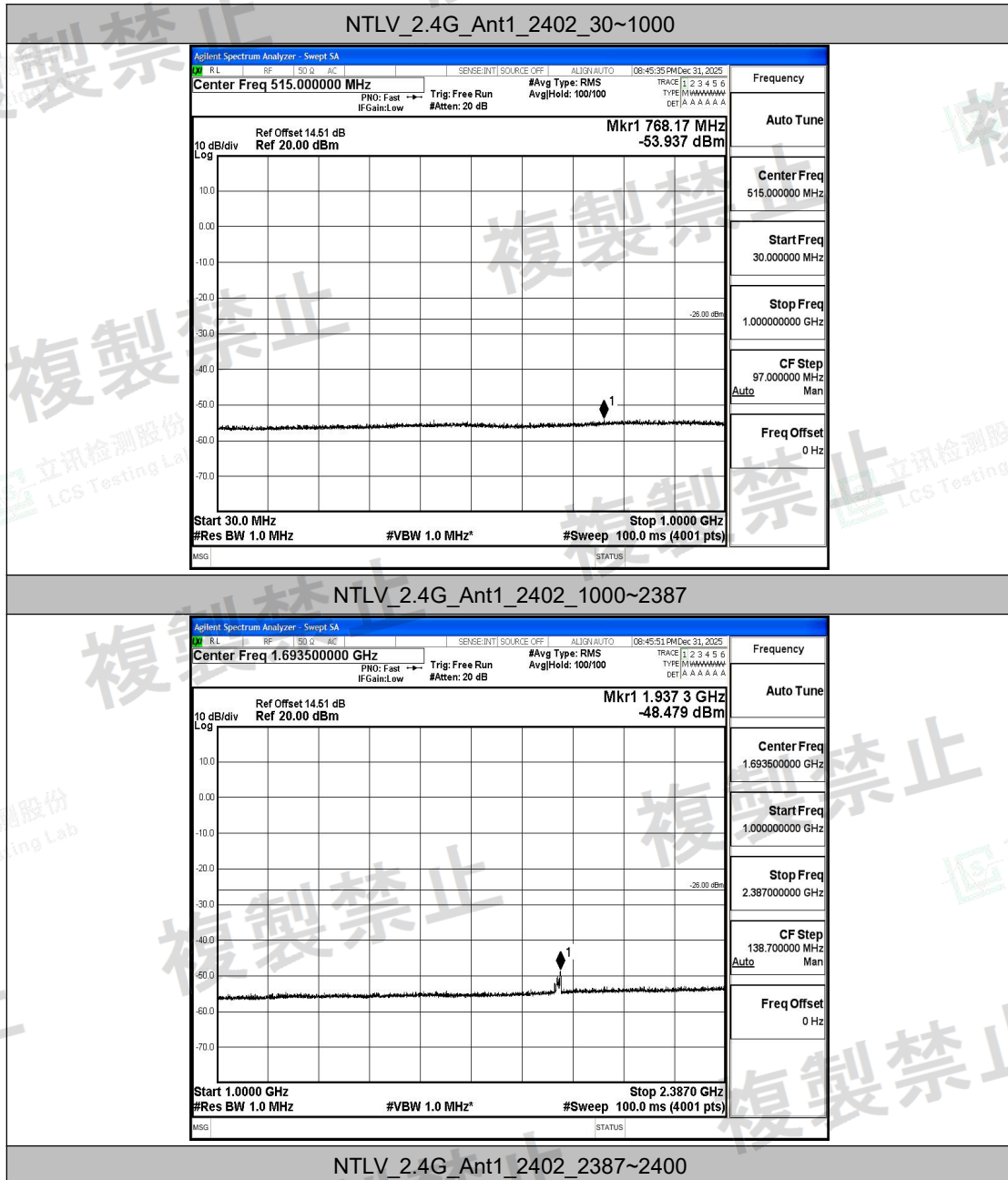
NTHV_2.4G_Ant1_2402_2496.5~13000

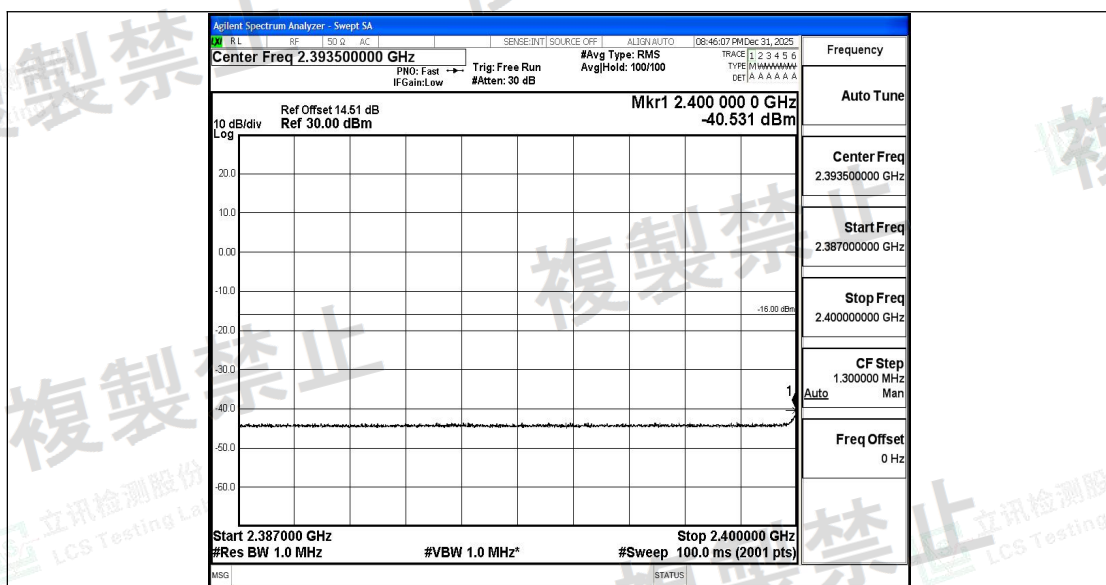




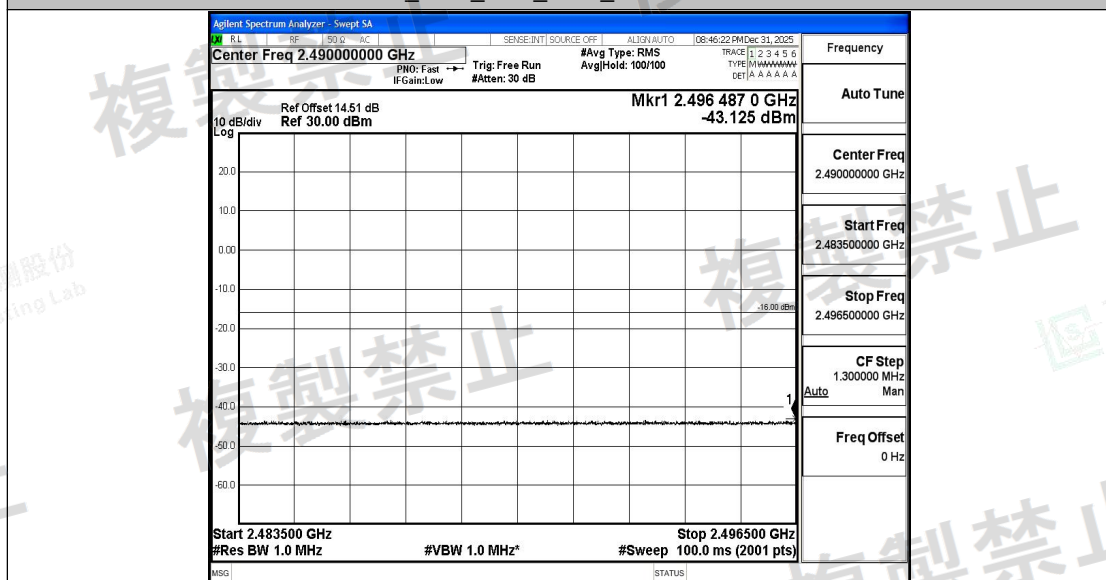




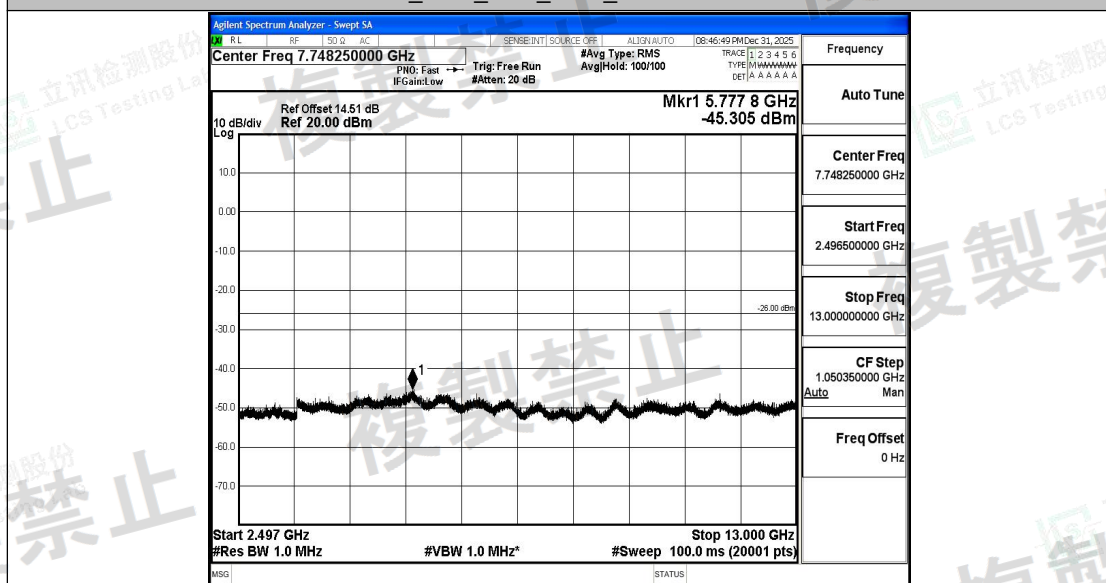


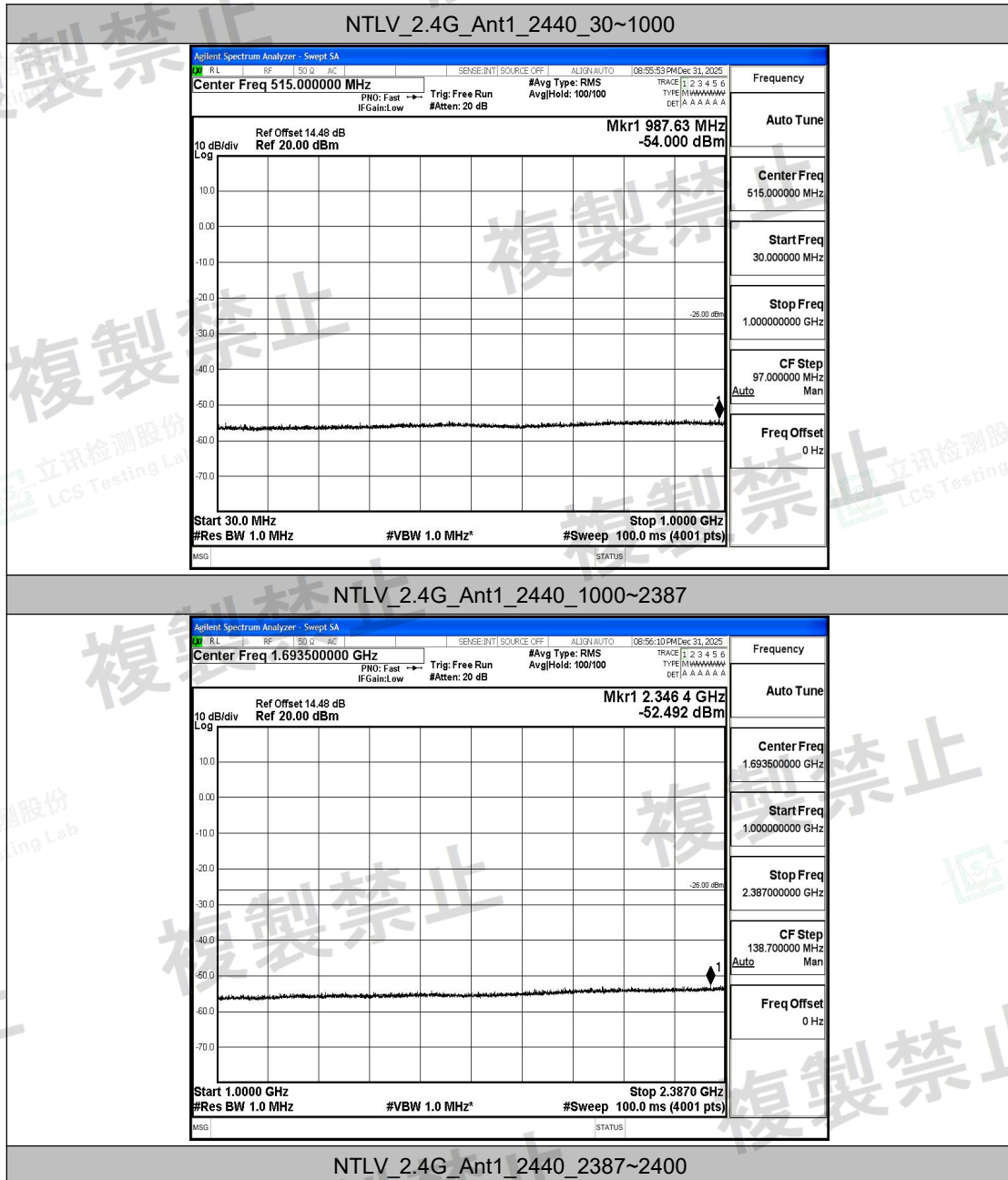


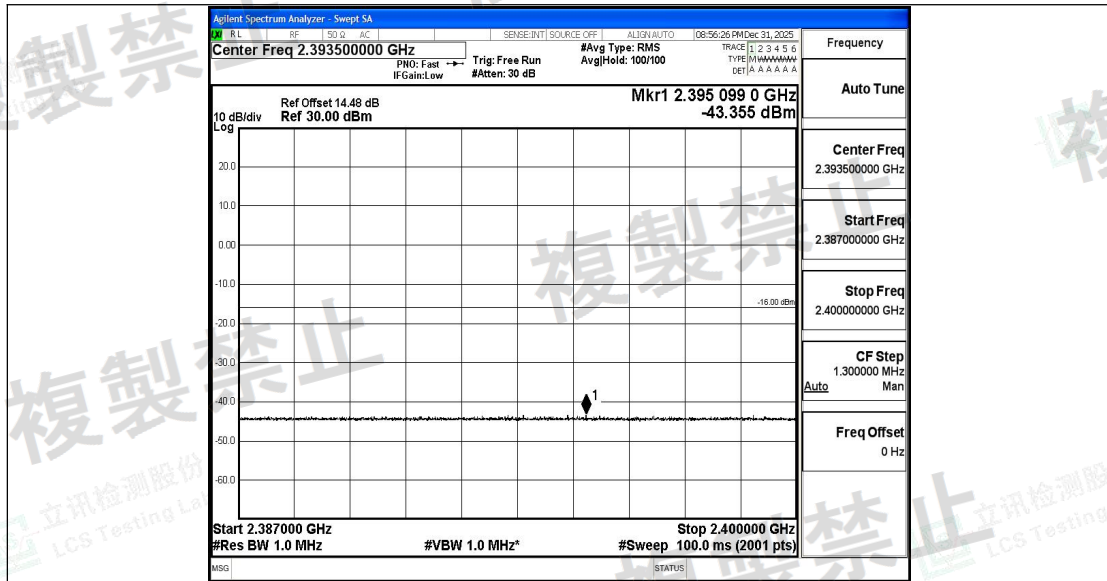
NTLV 2.4G Ant1 2402 2483.5~2496.5



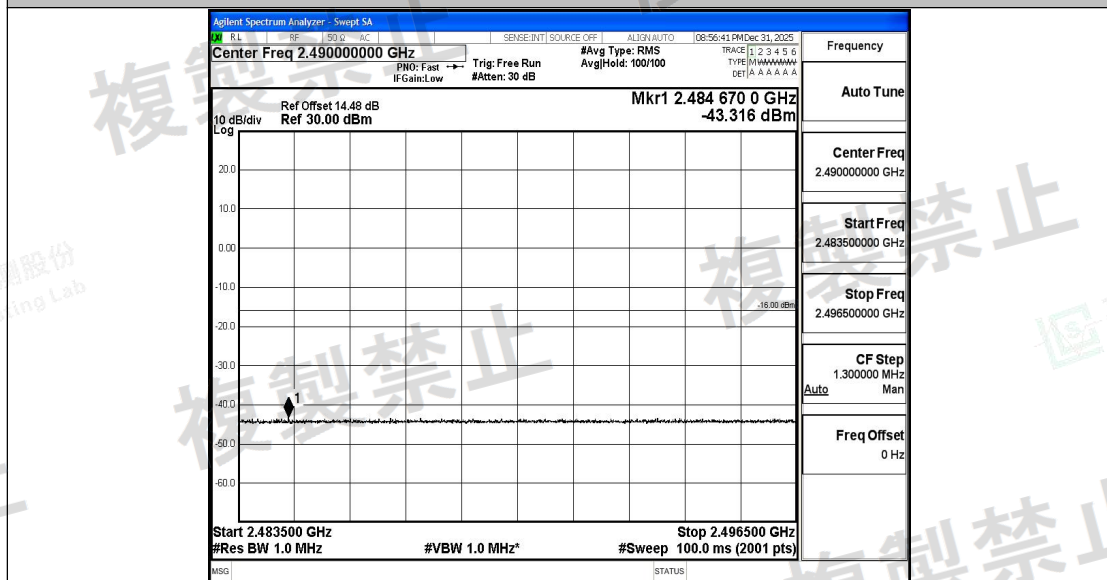
NTLV 2.4G Ant1 2402 2496.5~13000



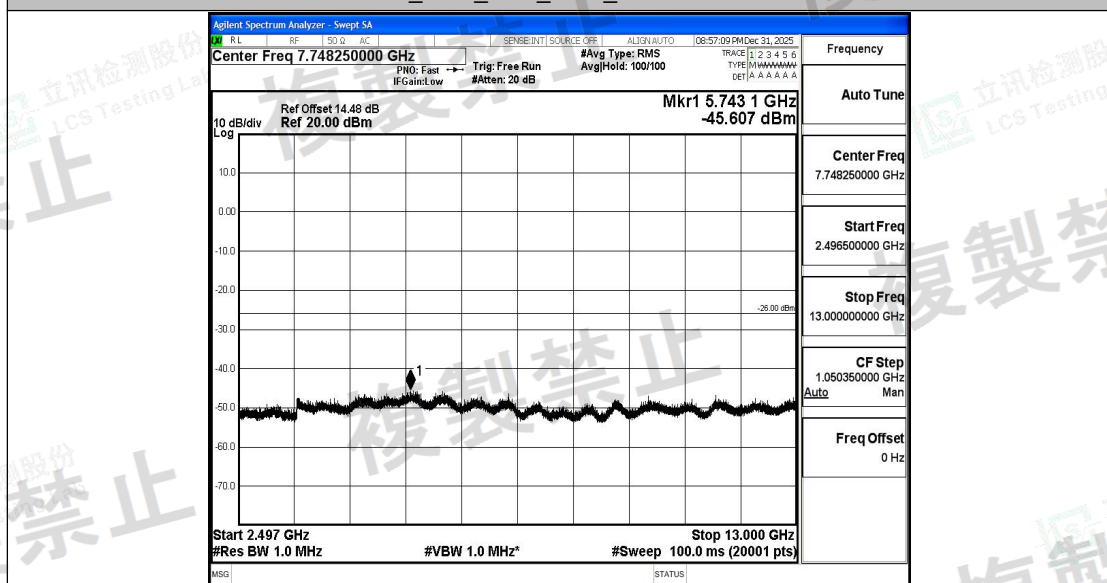


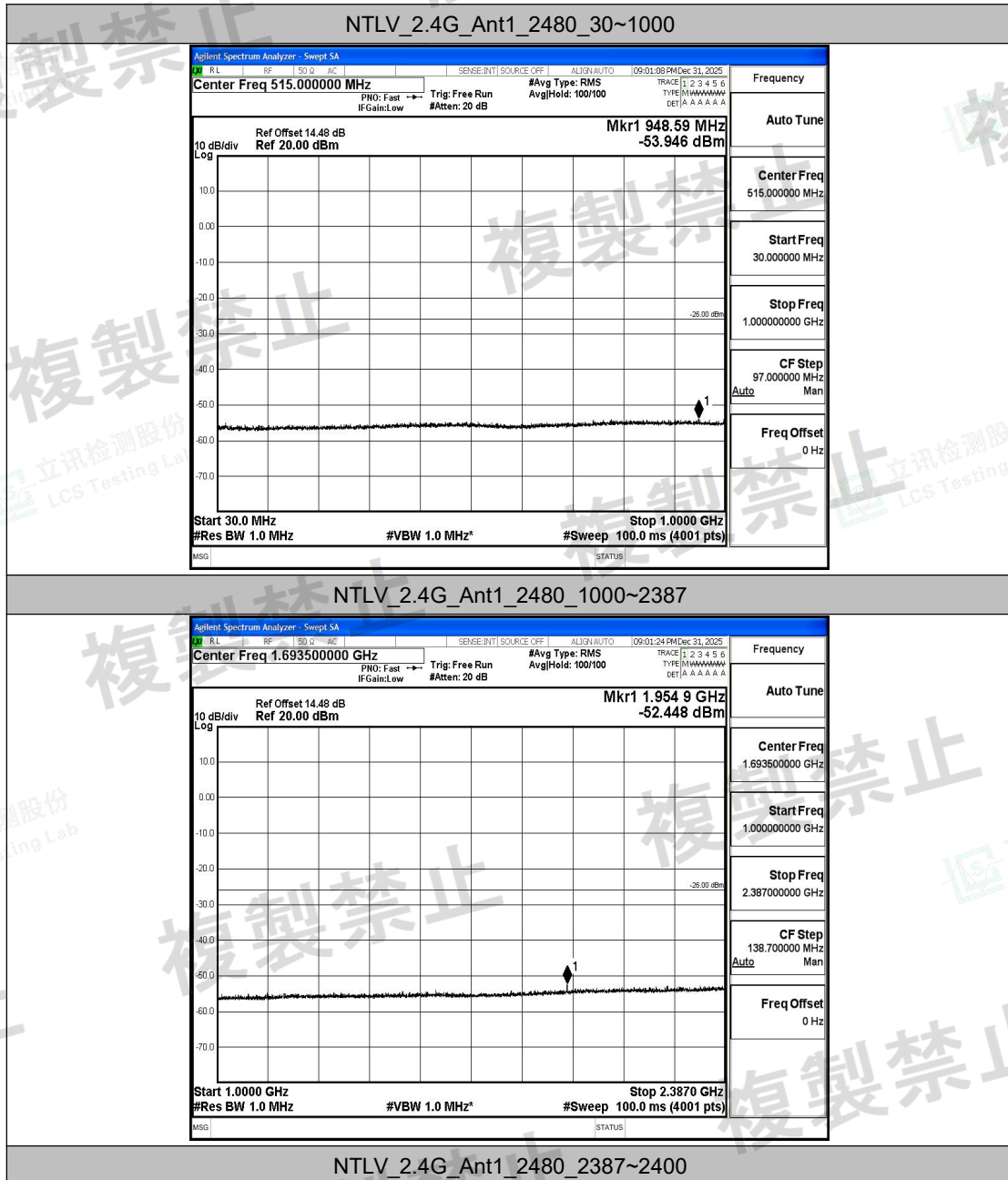


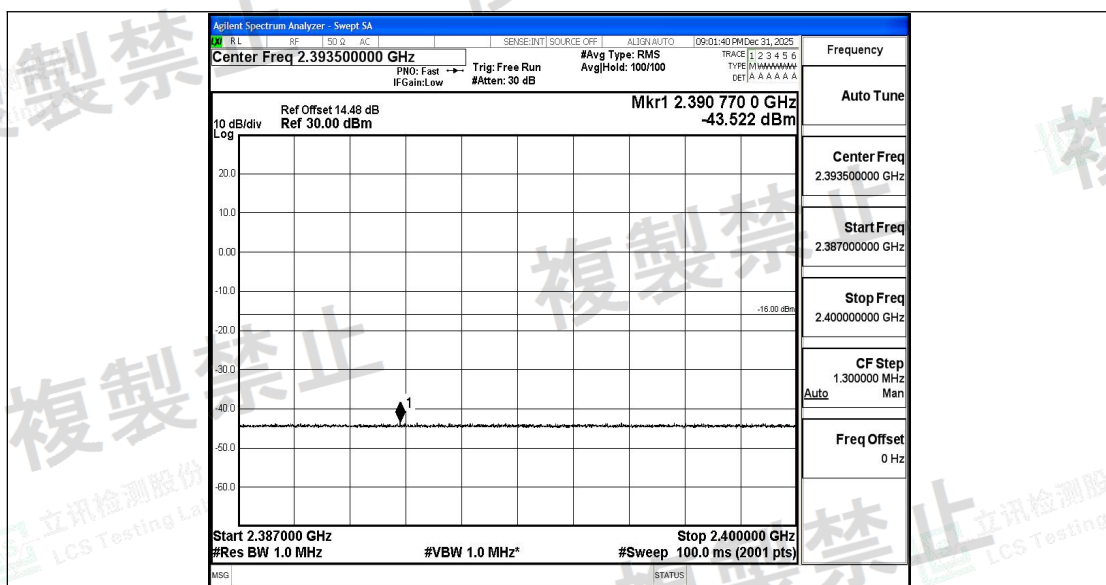
NTLV_2.4G_Ant1_2440_2483.5~2496.5



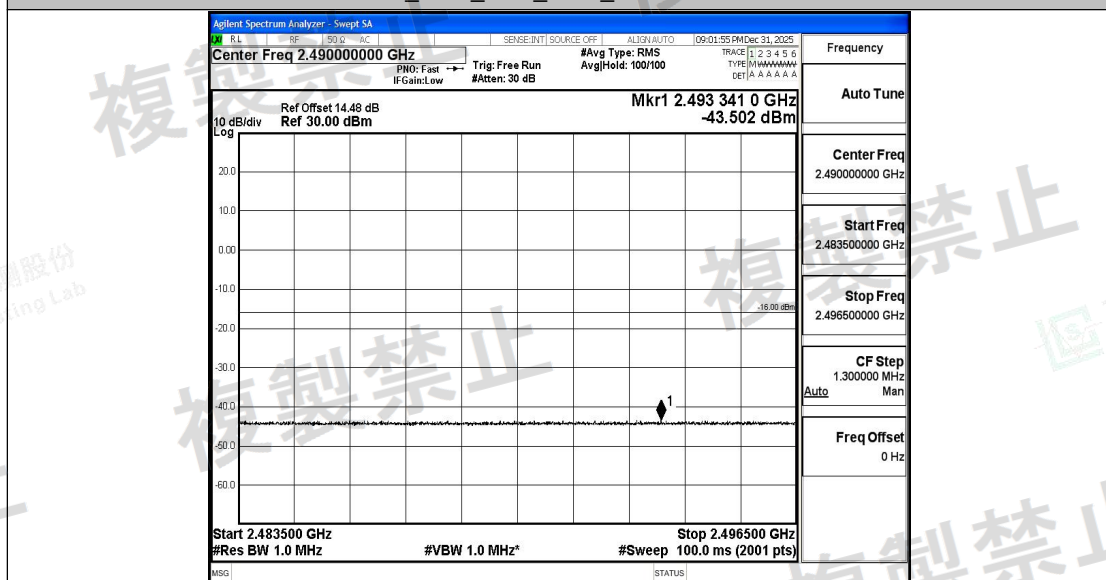
NTLV_2.4G_Ant1_2440_2496.5~13000



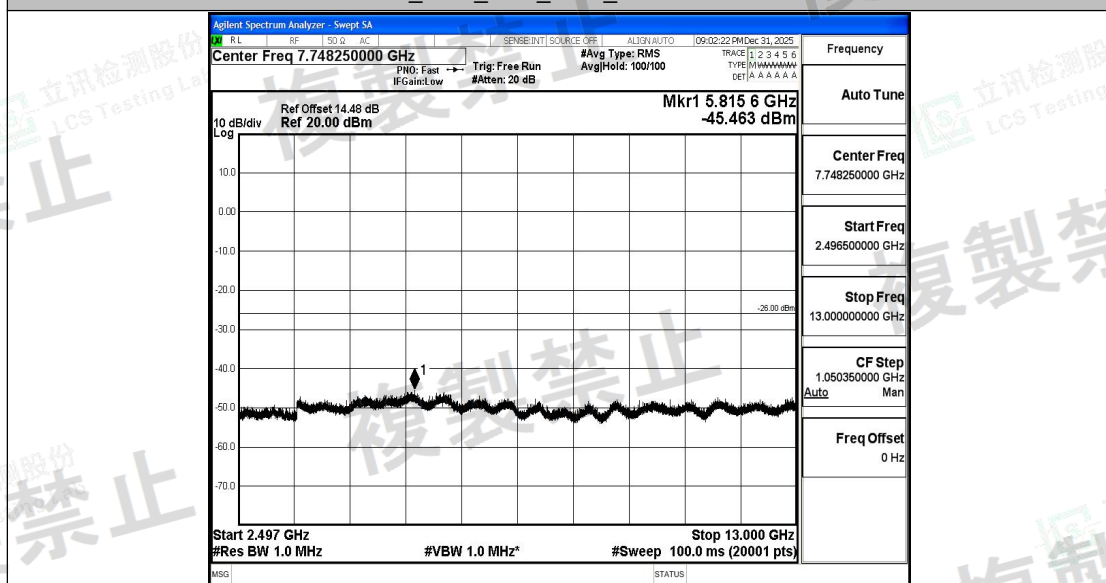




NTLV 2.4G Ant1 2480 2483.5~2496.5



NTLV 2.4G Ant1 2480 2496.5~13000





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	2.4G	Ant1	2402	30~1000	-83.95	≤-54	0.00403	≤4	PASS
				1000~12500	-66.96	≤-47	0.20137	≤20	PASS
			2440	30~1000	-84.01	≤-54	0.00397	≤4	PASS
				1000~12500	-67.23	≤-47	0.18923	≤20	PASS
			2480	30~1000	-83.84	≤-54	0.00413	≤4	PASS
				1000~12500	-67.25	≤-47	0.18836	≤20	PASS

TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTHV	2.4G	Ant1	2402	30~1000	-83.75	≤-54	0.00422	≤4	PASS
				1000~12500	-66.55	≤-47	0.22131	≤20	PASS
			2440	30~1000	-83.86	≤-54	0.00411	≤4	PASS
				1000~12500	-66.75	≤-47	0.21135	≤20	PASS
			2480	30~1000	-84.29	≤-54	0.00372	≤4	PASS
				1000~12500	-66.76	≤-47	0.21086	≤20	PASS

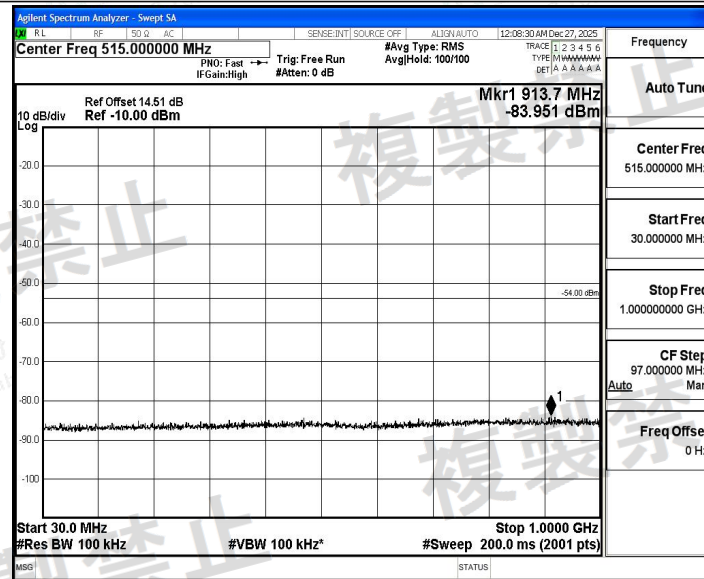
TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTLV	2.4G	Ant1	2402	30~1000	-75.39	≤-54	0.02891	≤4	PASS
				1000~12500	-67.24	≤-47	0.18880	≤20	PASS
			2440	30~1000	-83.79	≤-54	0.00418	≤4	PASS
				1000~12500	-66.98	≤-47	0.20045	≤20	PASS
			2480	30~1000	-83.93	≤-54	0.00405	≤4	PASS
				1000~12500	-65.52	≤-47	0.28054	≤20	PASS



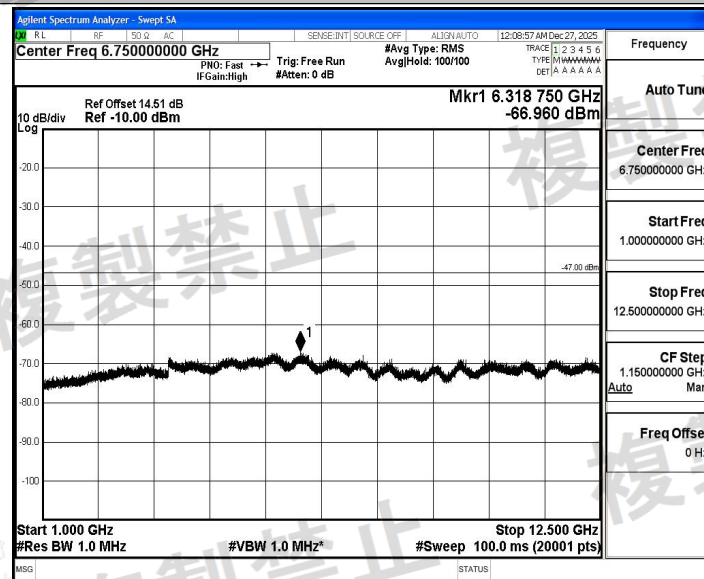


Test Graphs

NTNV_2.4G_Ant1_2402_30~1000

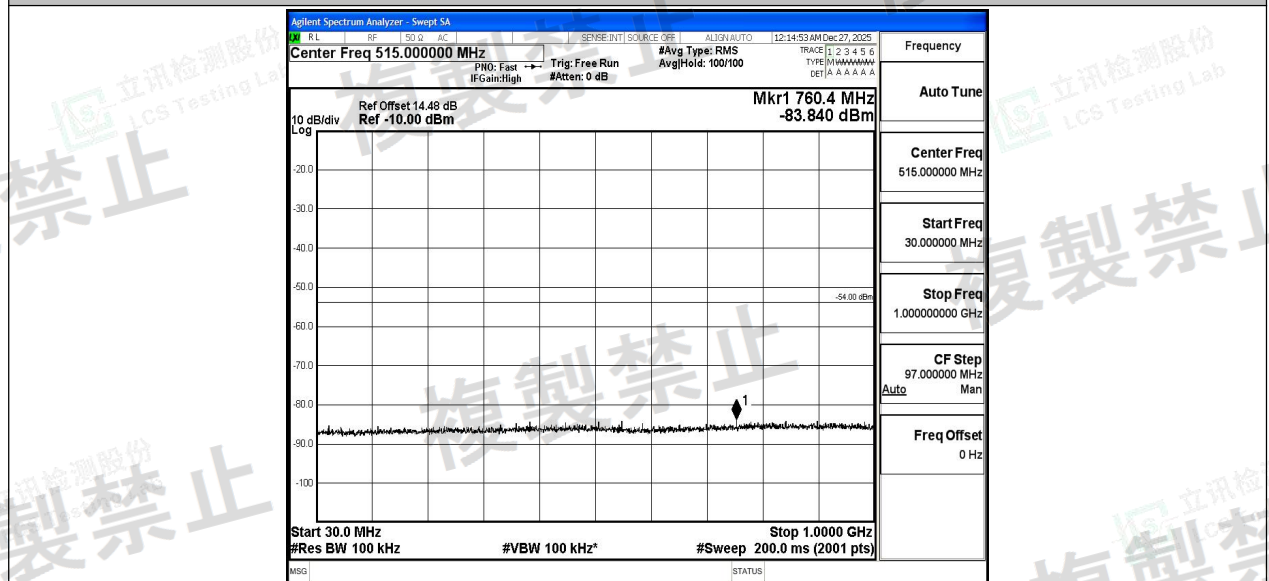
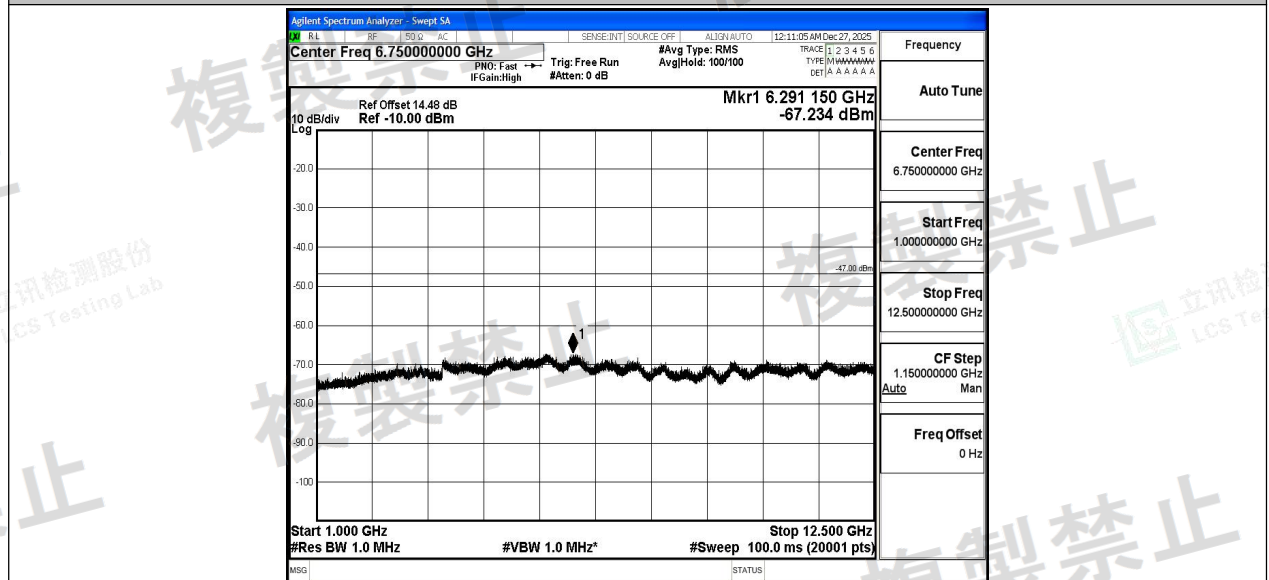
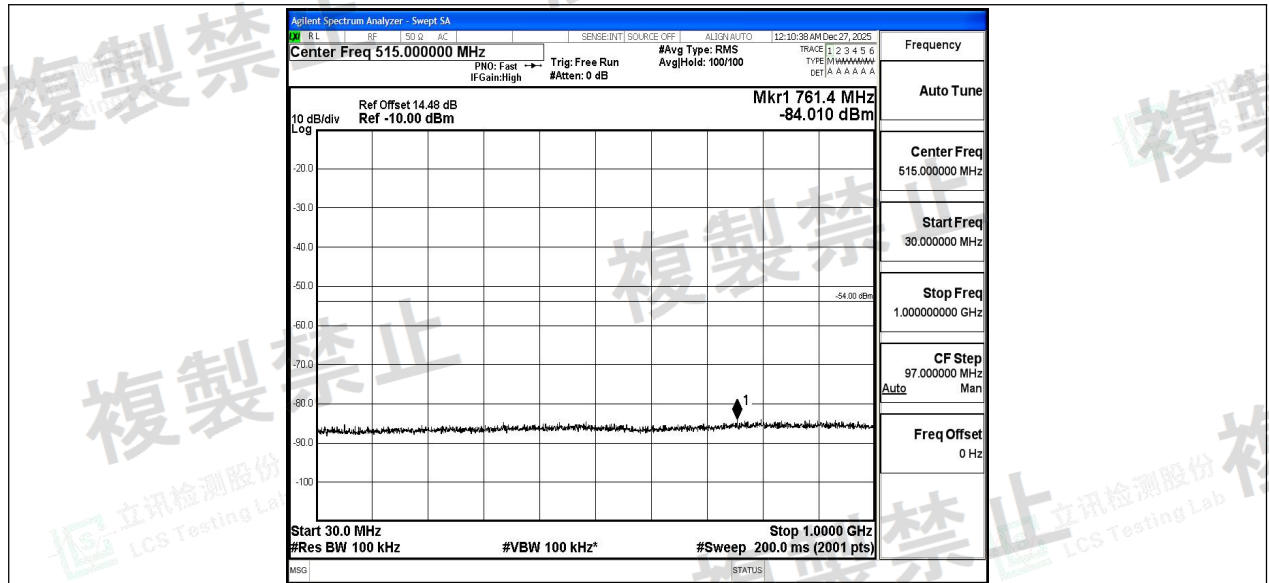


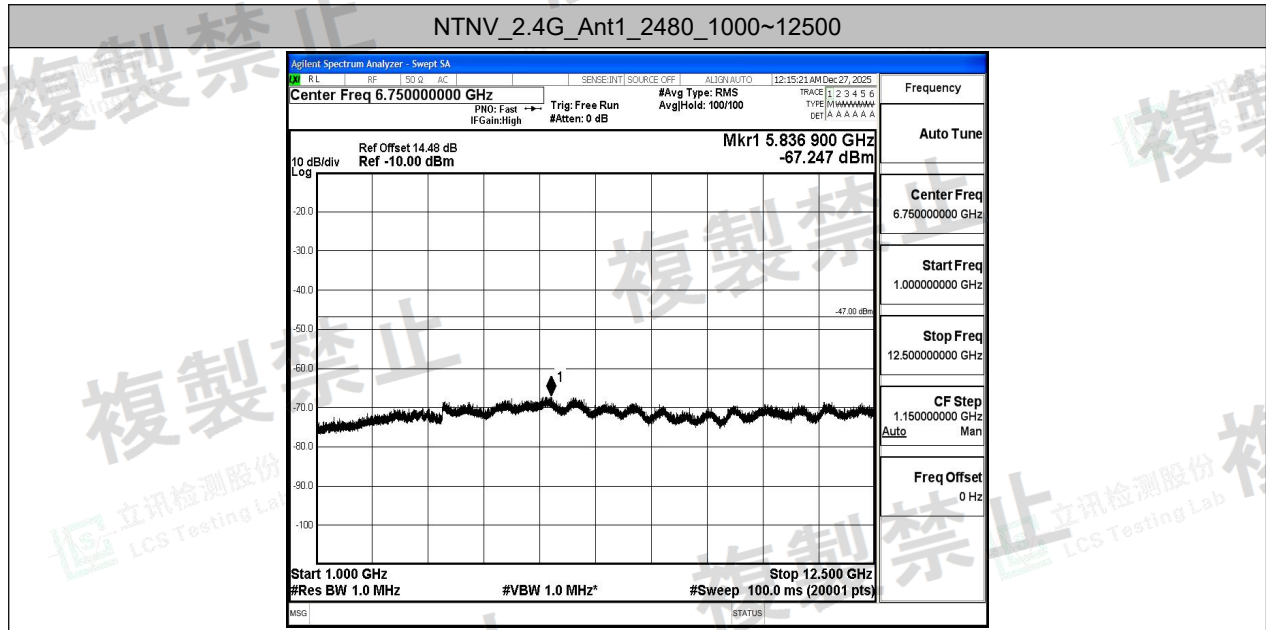
NTNV_2.4G_Ant1_2402_1000~12500



NTNV_2.4G_Ant1_2440_30~1000

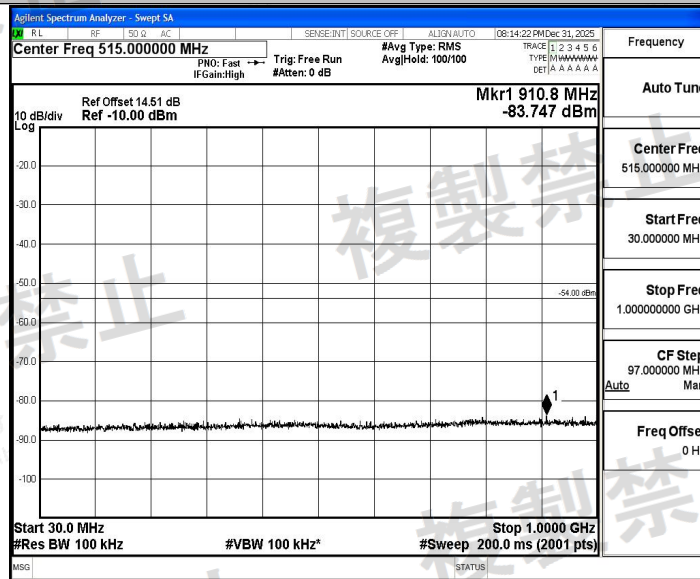




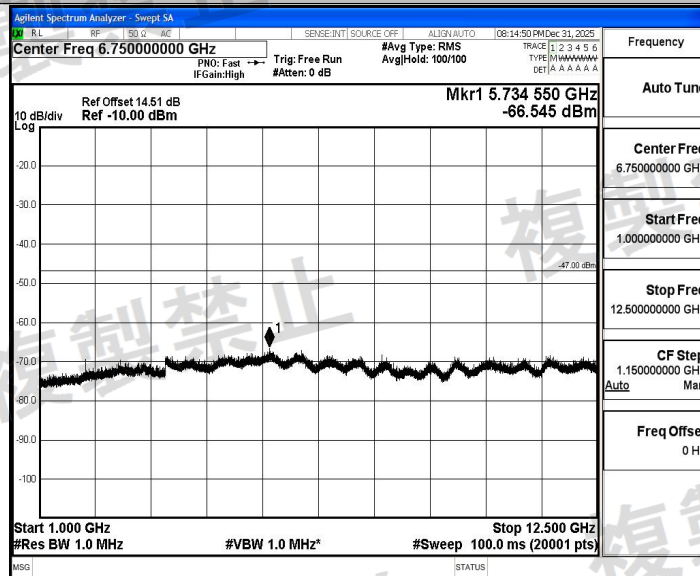




NTHV_2.4G_Ant1_2402_30~1000



NTHV_2.4G_Ant1_2402_1000~12500



NTHV_2.4G_Ant1_2440_30~1000

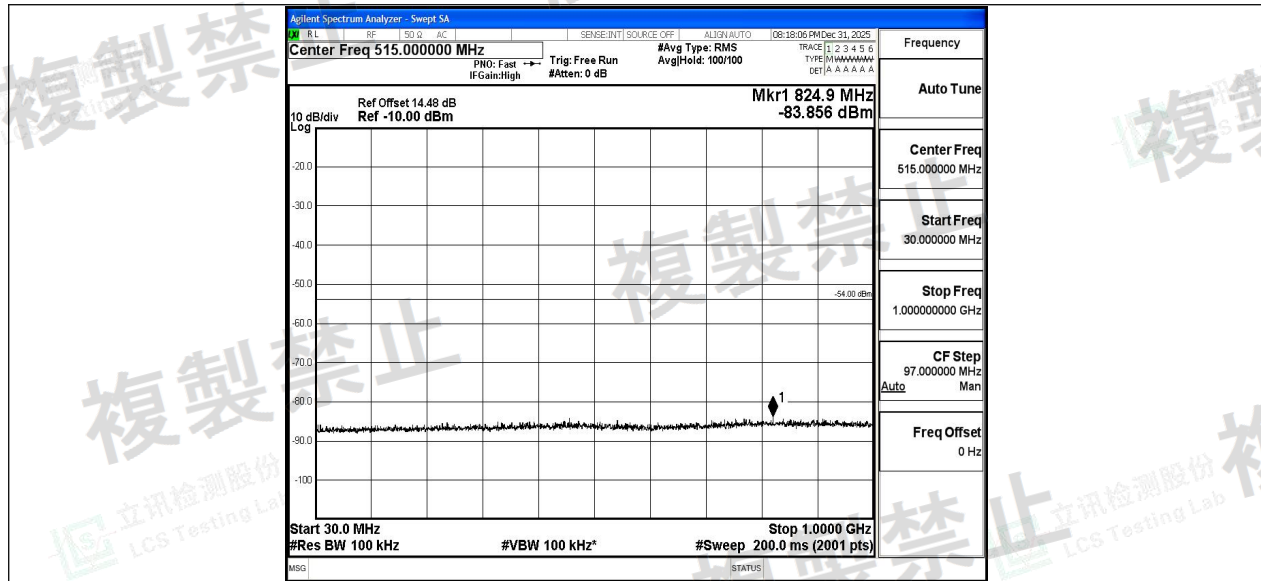


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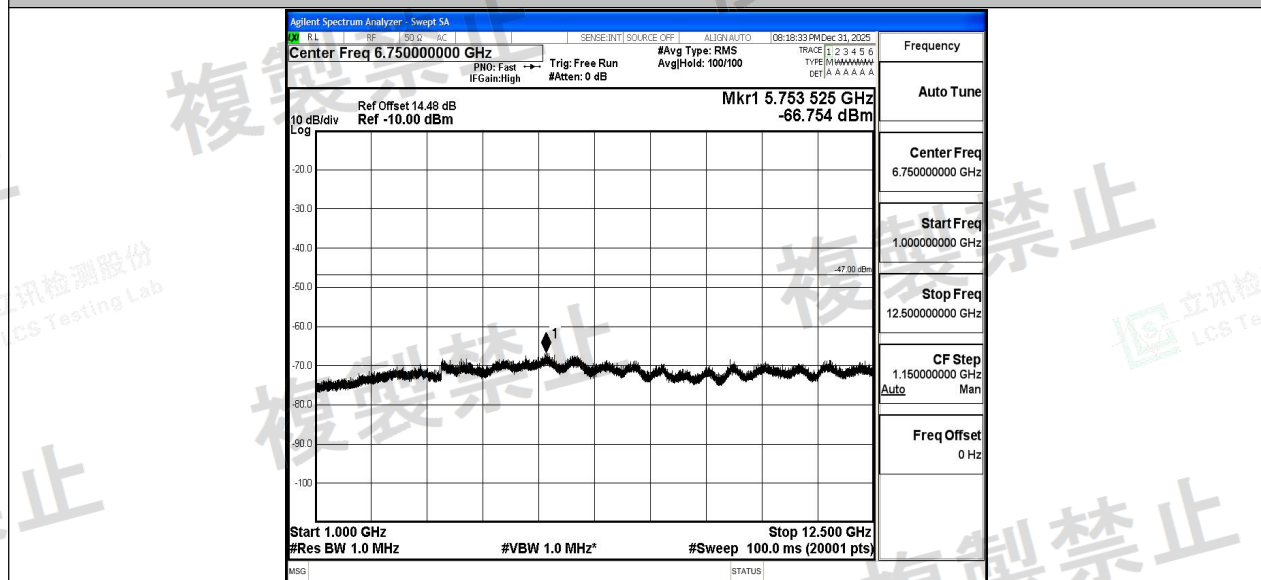
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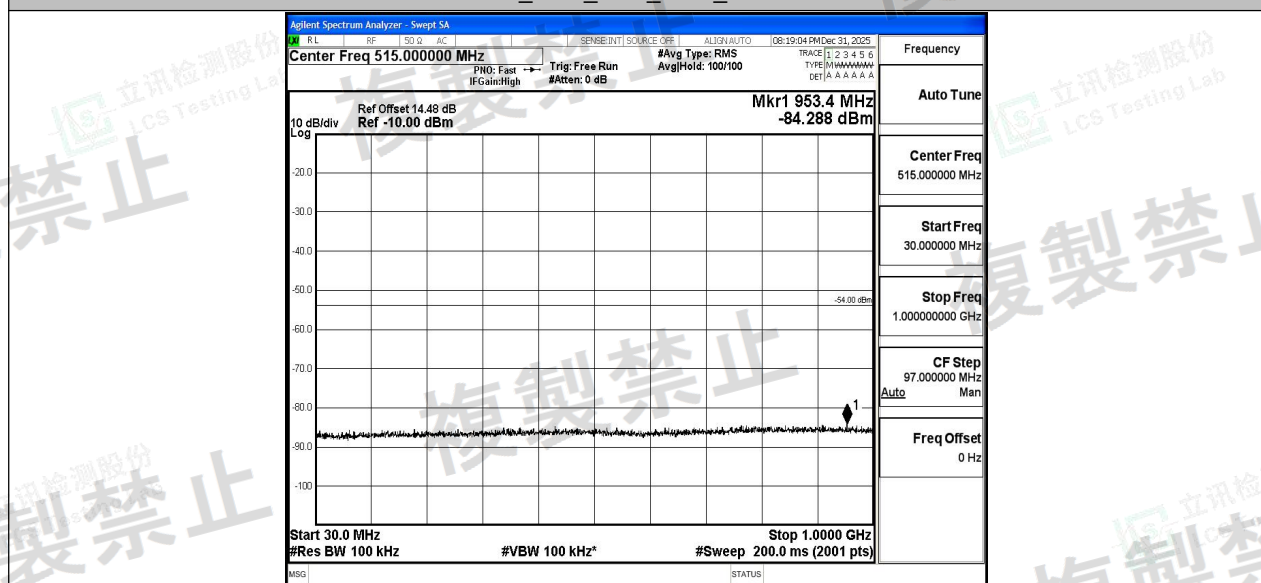
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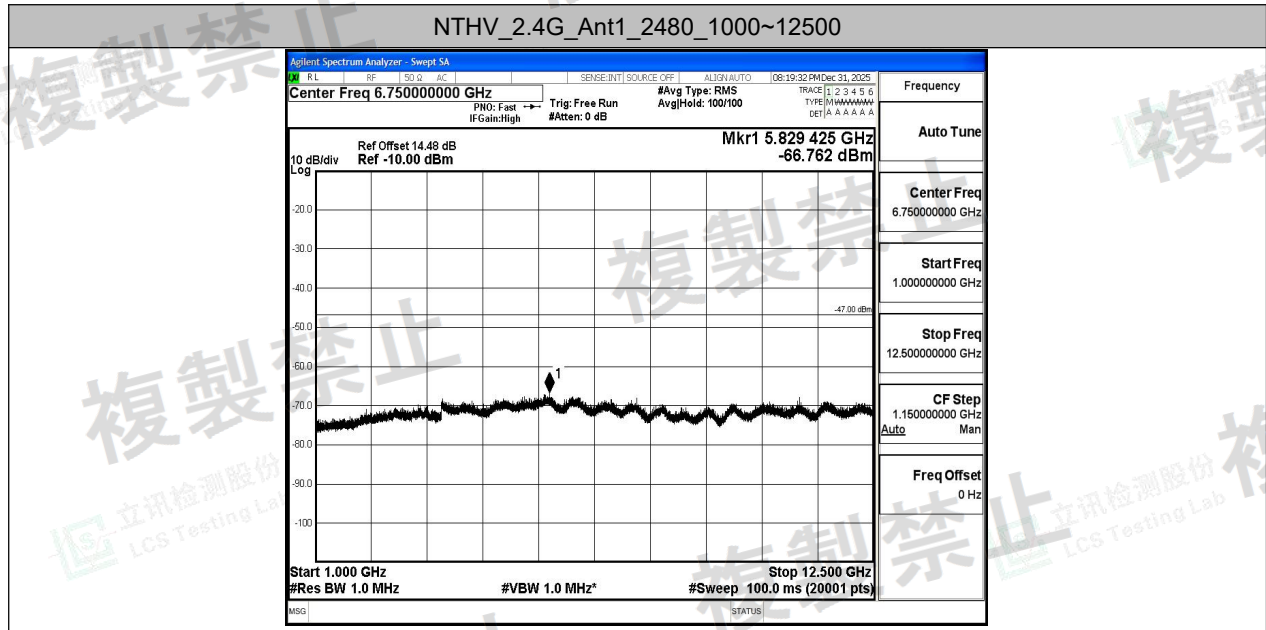


NTHV_2.4G_Ant1_2440_1000~12500



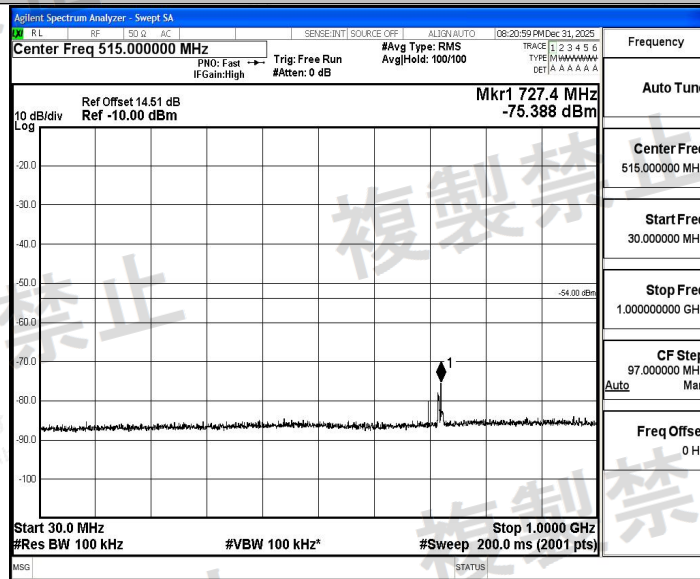
NTHV_2.4G_Ant1_2480_30~1000



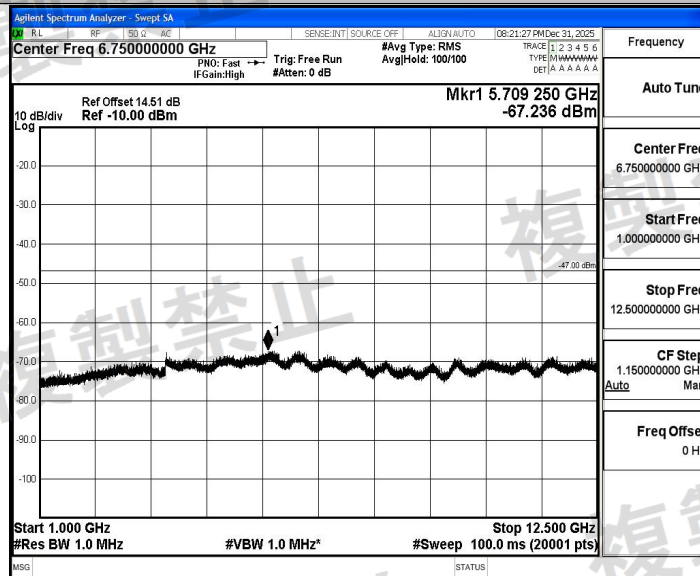




NTLV_2.4G_Ant1_2402_30~1000



NTLV_2.4G_Ant1_2402_1000~12500



NTLV_2.4G_Ant1_2440_30~1000

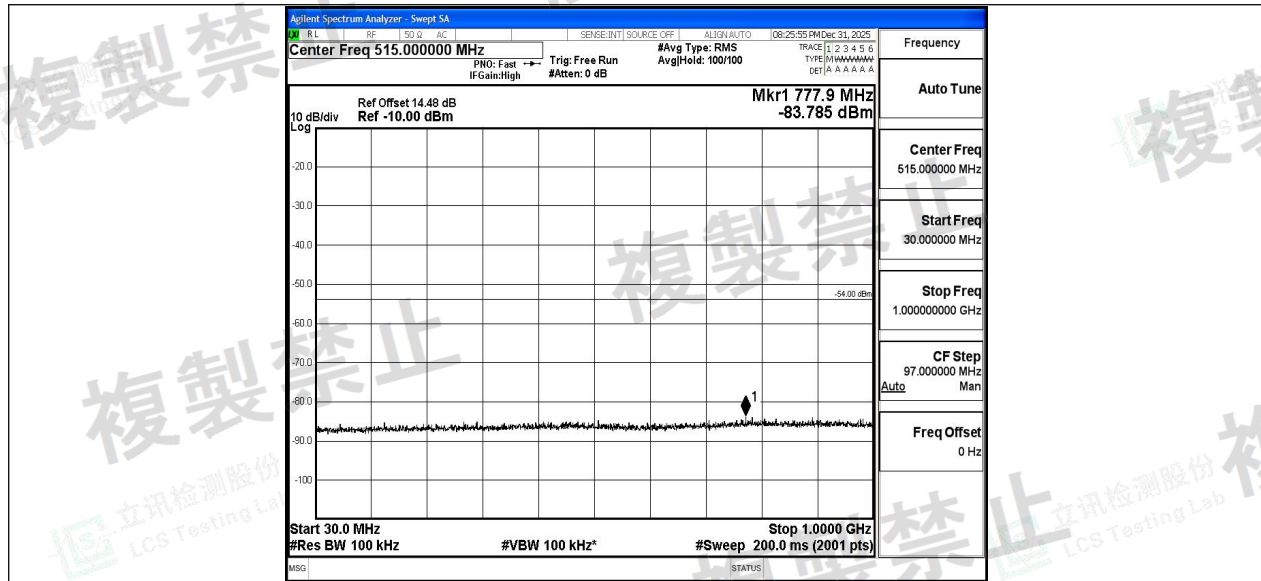


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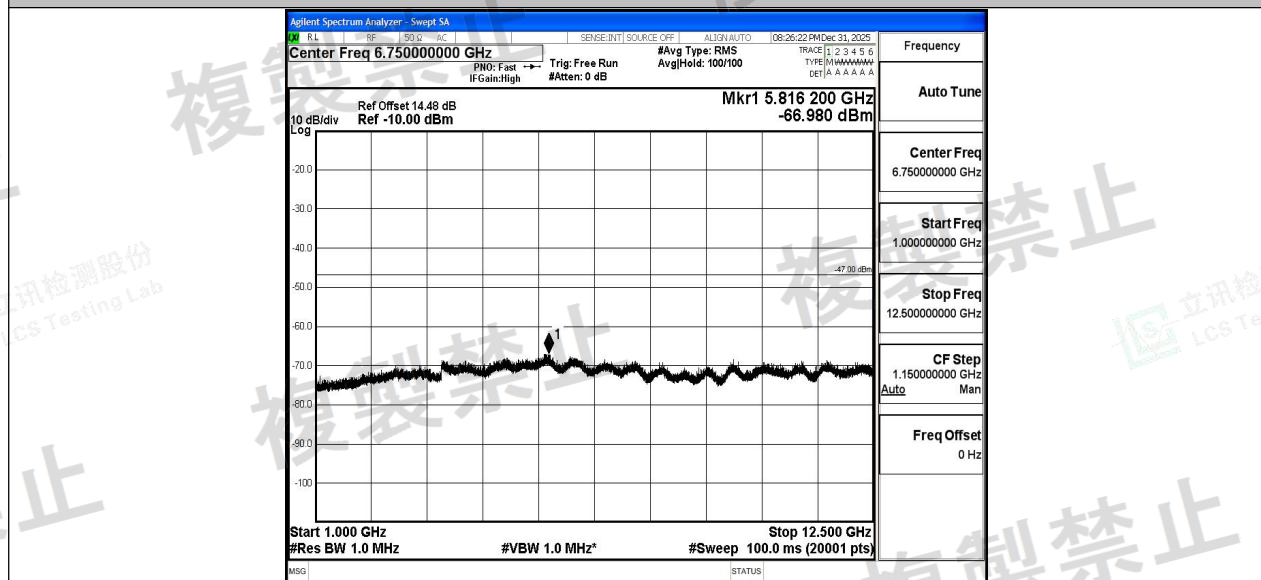
Add: Room 101/201, Building A, and Room 101/301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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NTLV_2.4G_Ant1_2440_1000~12500



NTLV_2.4G_Ant1_2480_30~1000

