



Appendix A for BT LE Test Data

Product Name: module

Test Model: T1-U-HL

Environmental Conditions

Temperature:	22.4° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Billy Yu
Supervised by:	Paddi Chen



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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	0.00000	±50	PASS

TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ppm]	Limit[ppm]	Verdict
NTLV	Frequency Error	Ant1	2402	0.00000	±50	PASS
			2440	-0.40984	±50	PASS
			2480	-0.40323	±50	PASS

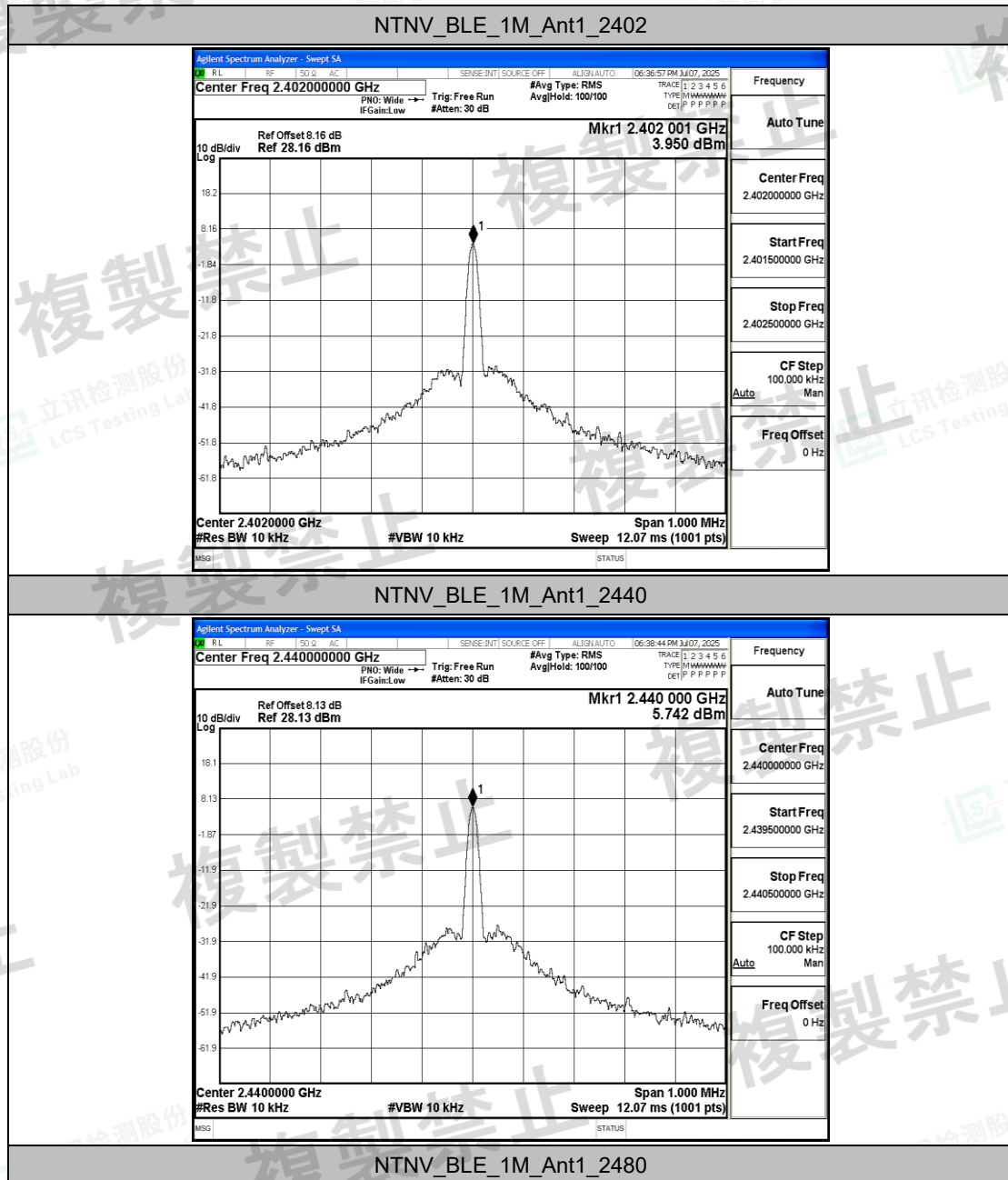
TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ppm]	Limit[ppm]	Verdict
NTHV	Frequency Error	Ant1	2402	-0.41632	±50	PASS
			2440	-0.40984	±50	PASS
			2480	-0.40323	±50	PASS

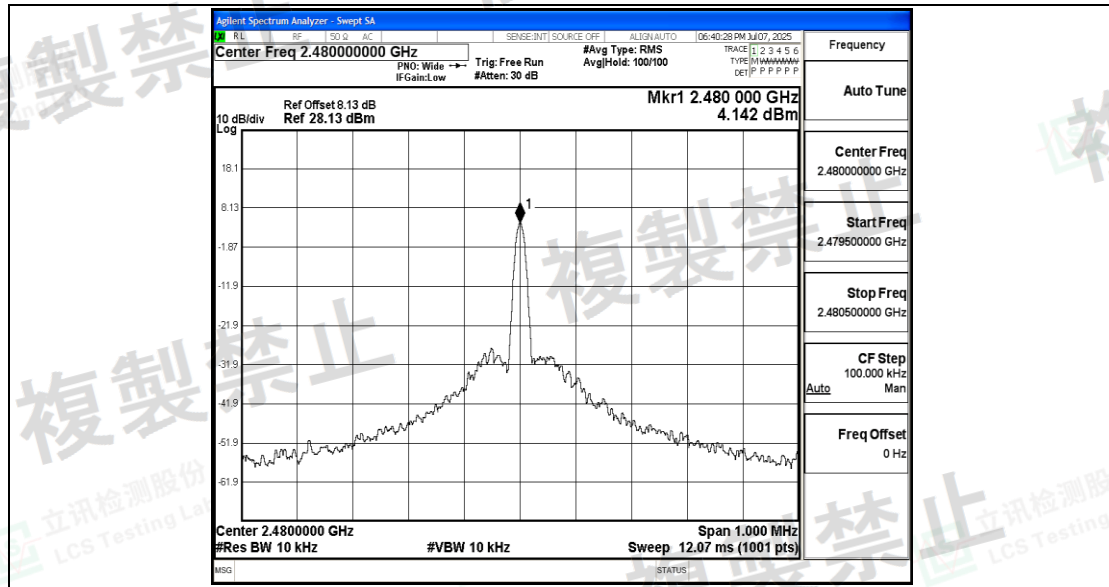


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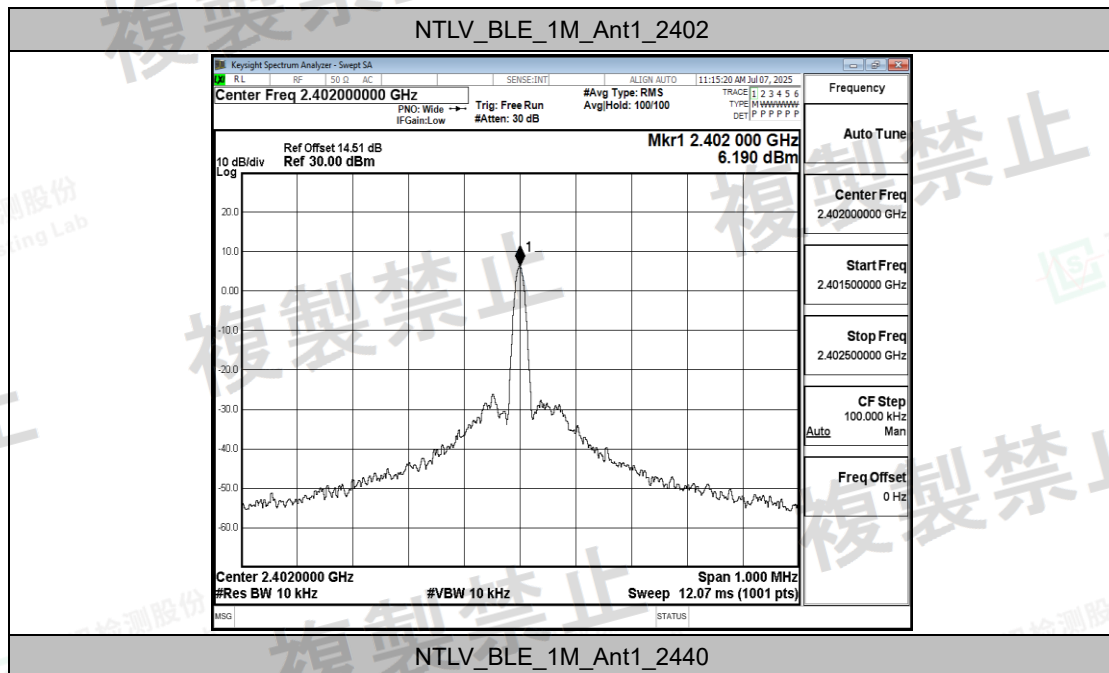


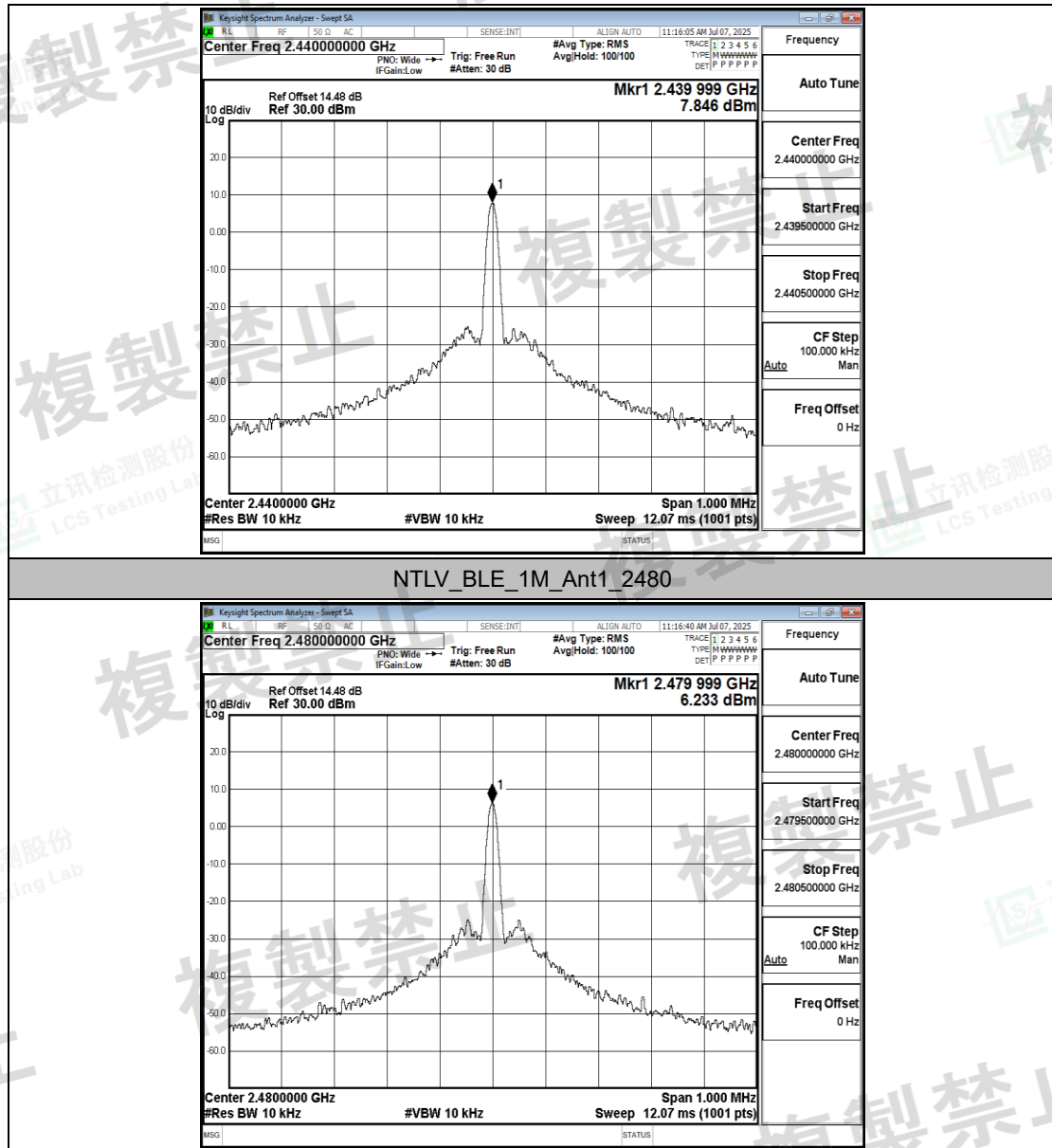
Test Graphs





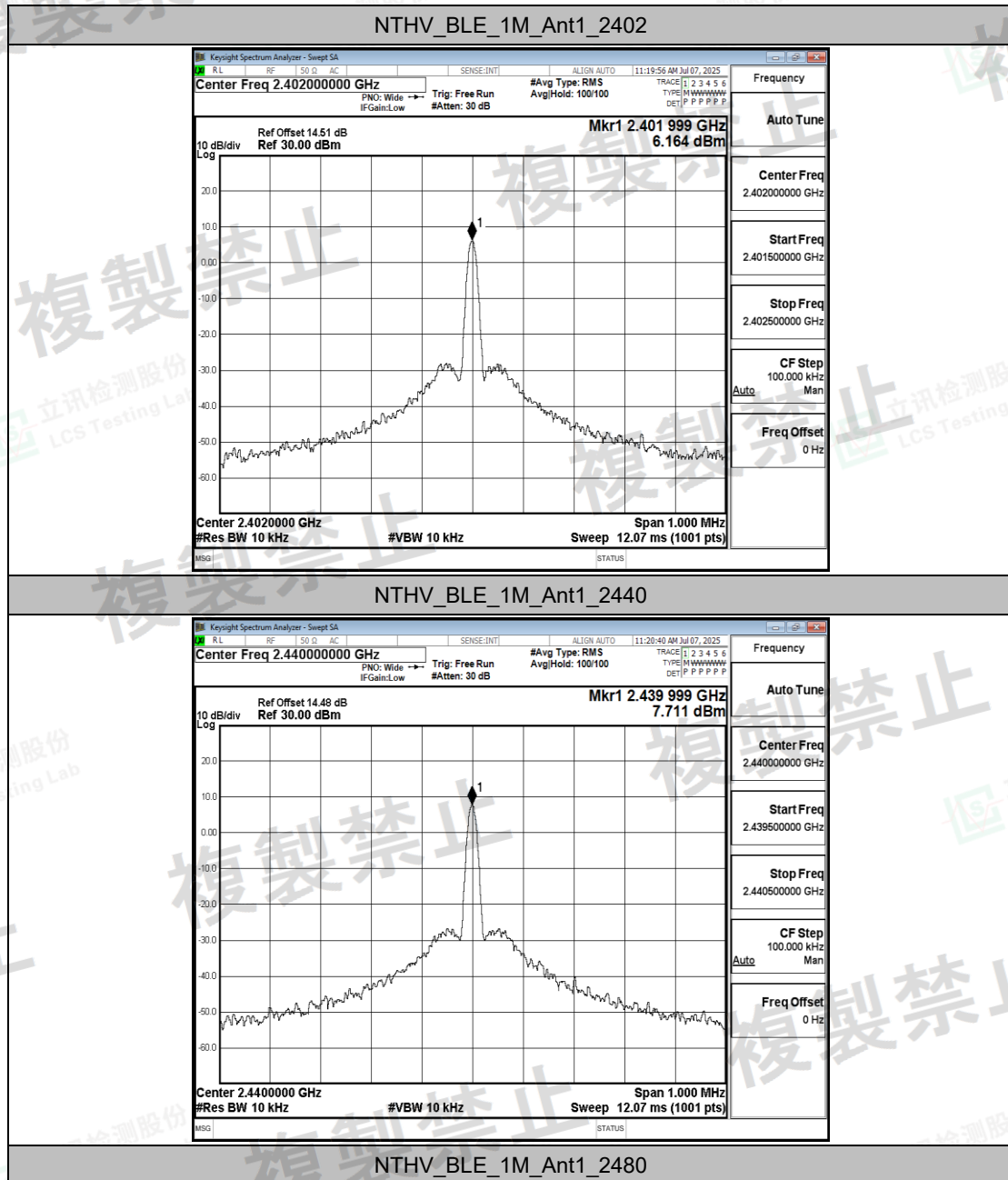
Test Graphs

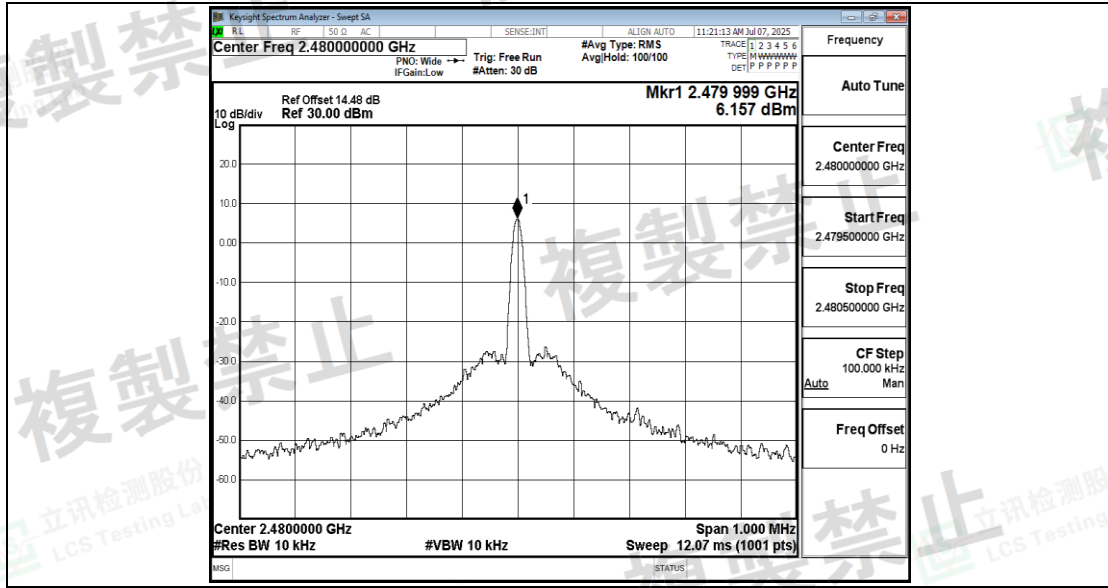






Test Graphs





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A.2 Antenna Power

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant1	2402	-1.02	0.7907	≤10	PASS
			2440	-0.82	0.8279	≤10	PASS
			2480	-0.48	0.8954	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTNV	BLE_1M	Ant1	2402	0.7907	1.0	-20.93	+20	PASS
			2440	0.8279	1.0	-17.21	+20	PASS
			2480	0.8954	1.0	-10.46	+20	PASS

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTLV	BLE_1M	Ant1	2402	-3.18	0.4808	≤10	PASS
			2440	-0.18	0.9594	≤10	PASS
			2480	-1.66	0.6823	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTLV	BLE_1M	Ant1	2402	0.4808	1.0	-51.92	+20	PASS
			2440	0.9594	1.0	-4.06	+20	PASS
			2480	0.6823	1.0	-31.77	+20	PASS





Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTHV	BLE_1M	Ant1	2402	-0.71	0.8492	≤10	PASS
			2440	-0.69	0.8531	≤10	PASS
			2480	-0.61	0.8690	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTHV	BLE_1M	Ant1	2402	0.8492	1.0	-15.08	+20	PASS
			2440	0.8531	1.0	-14.69	+20	PASS
			2480	0.8690	1.0	-13.10	+20	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	1.017	≤26	PASS
			2480	1.017	≤26	PASS

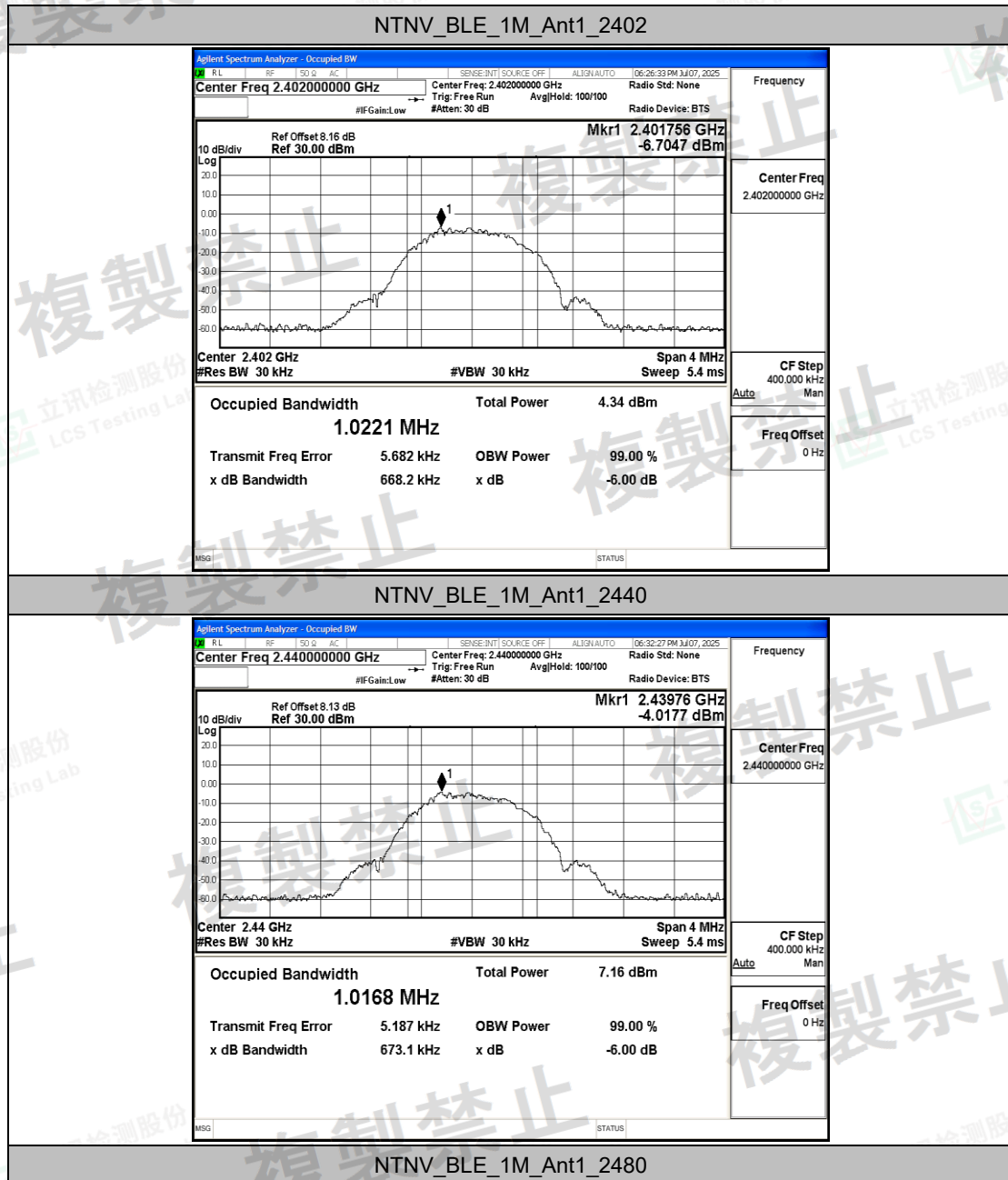
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTLV	BLE_1M	Ant1	2402	1.016	≤26	PASS
			2440	1.019	≤26	PASS
			2480	1.021	≤26	PASS

TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTHV	BLE_1M	Ant1	2402	1.024	≤26	PASS
			2440	1.018	≤26	PASS
			2480	1.022	≤26	PASS





Test Graphs

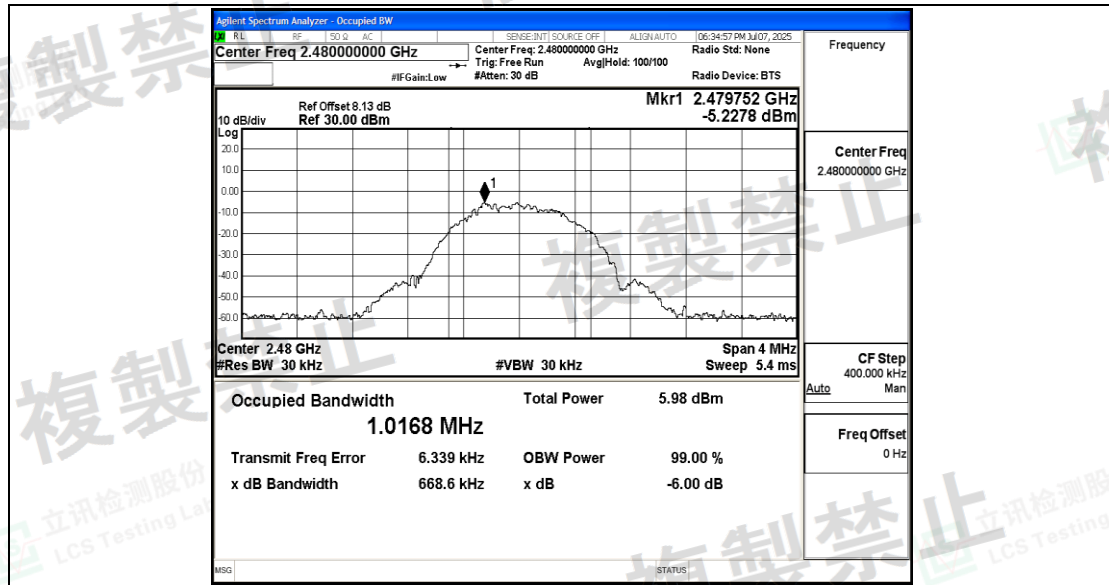


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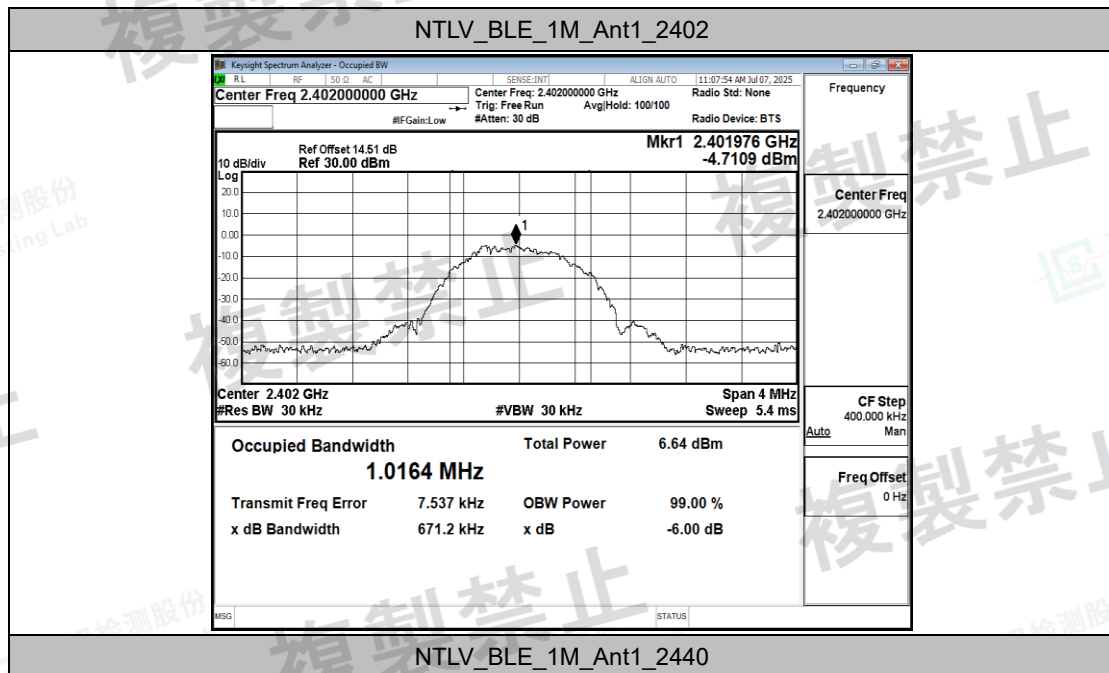
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

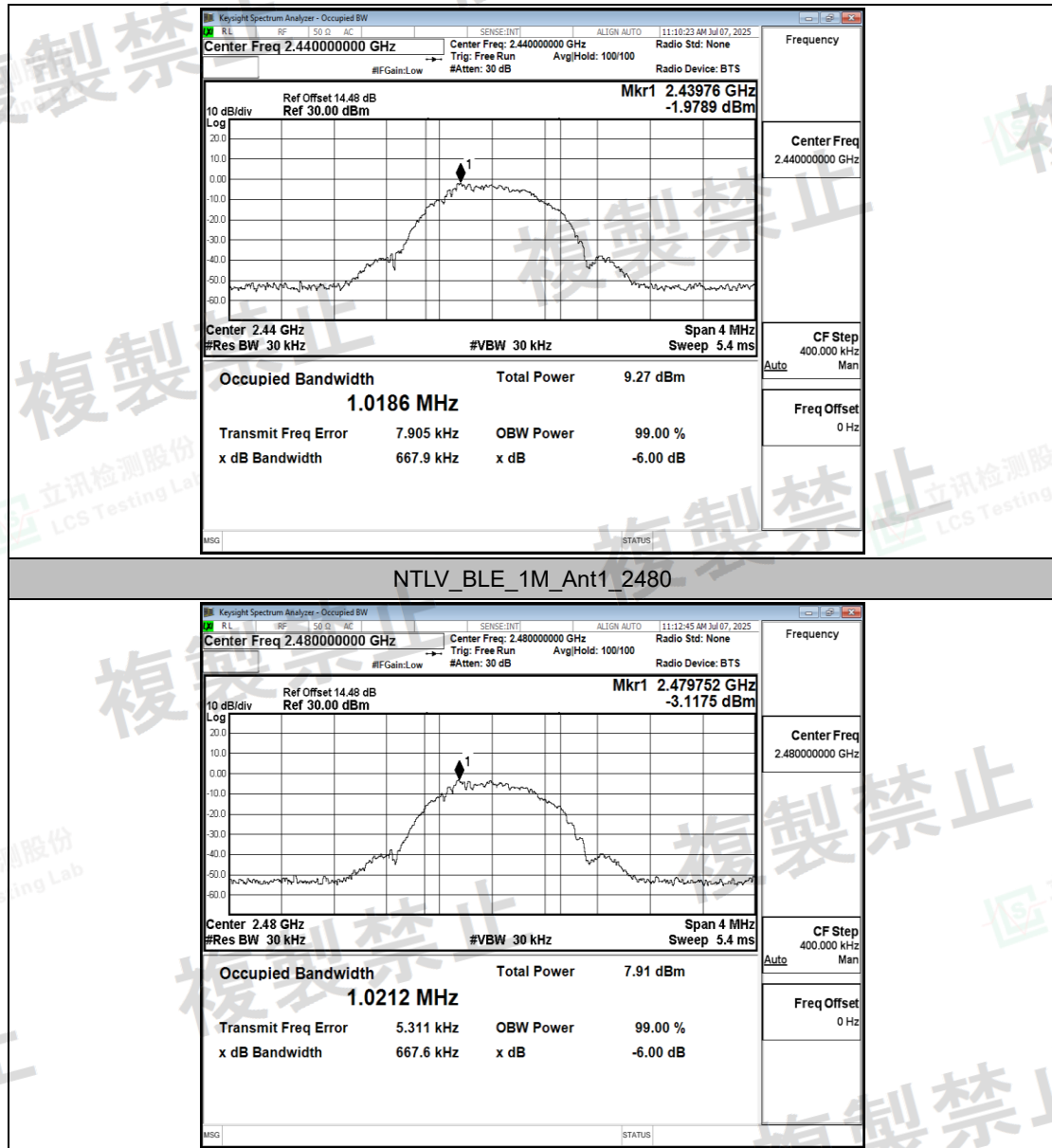
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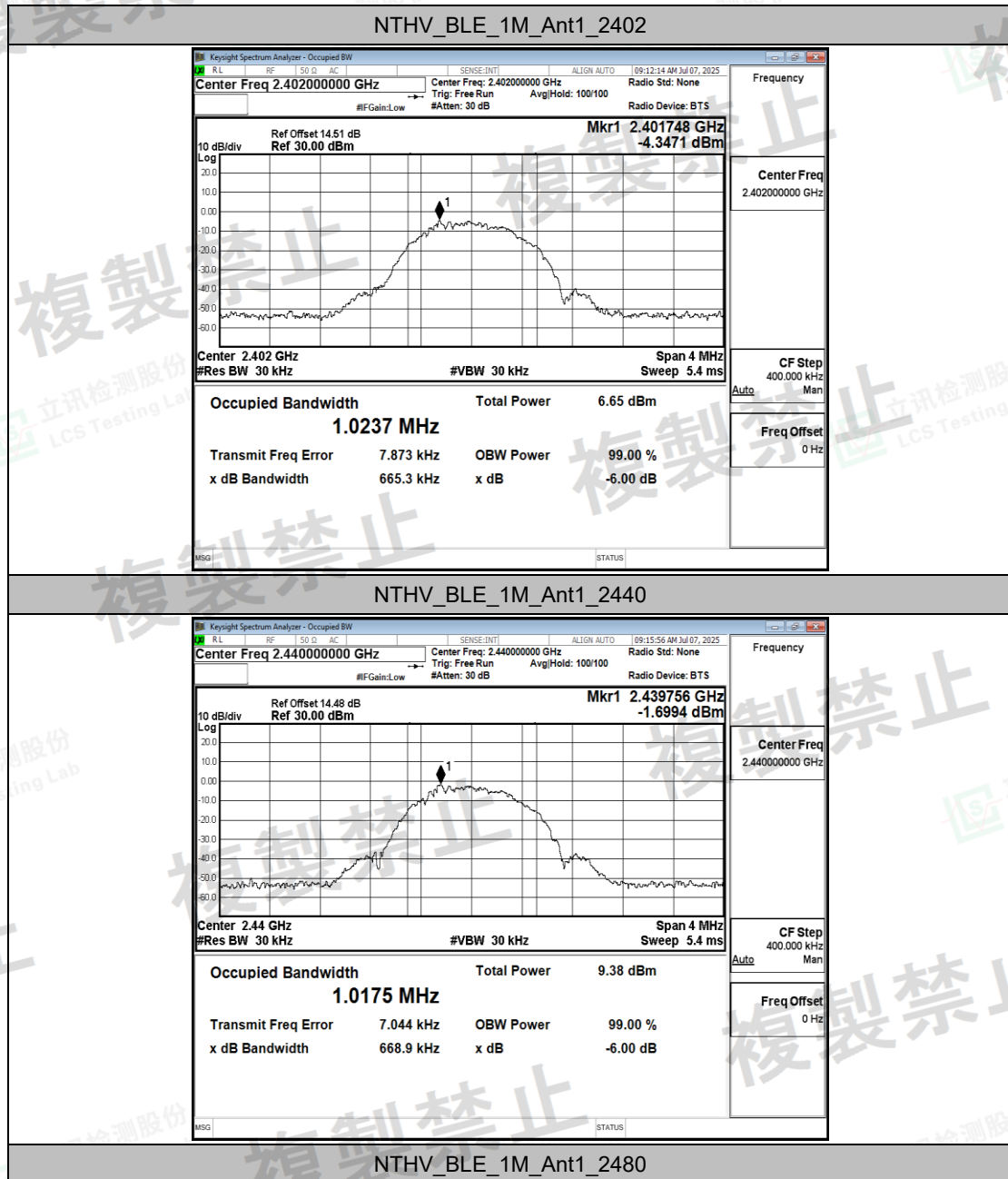
Test Graphs

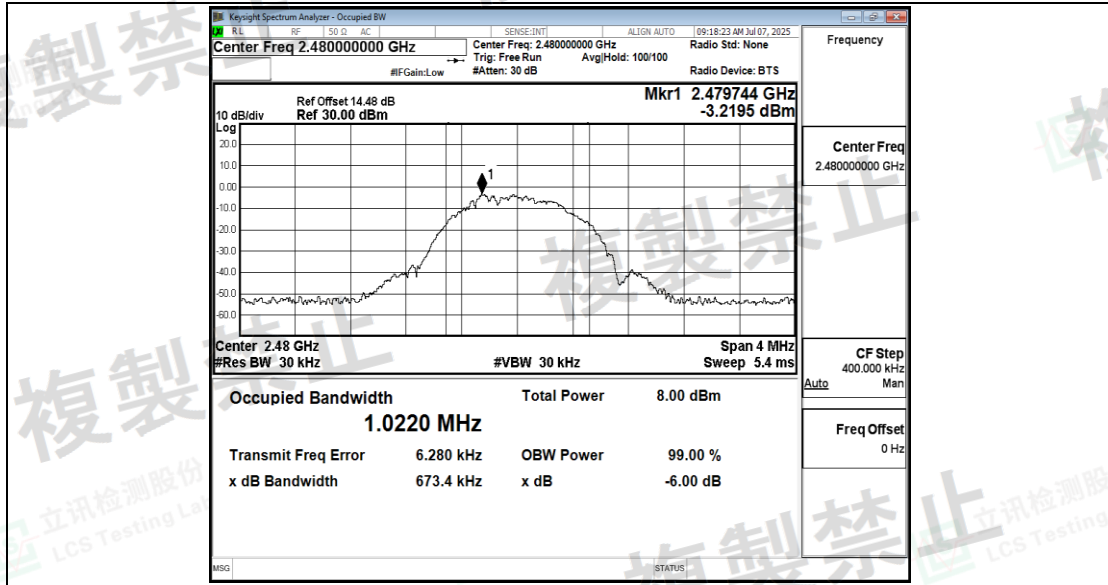






Test Graphs







A.4 Spread Bandwidth

Test Result

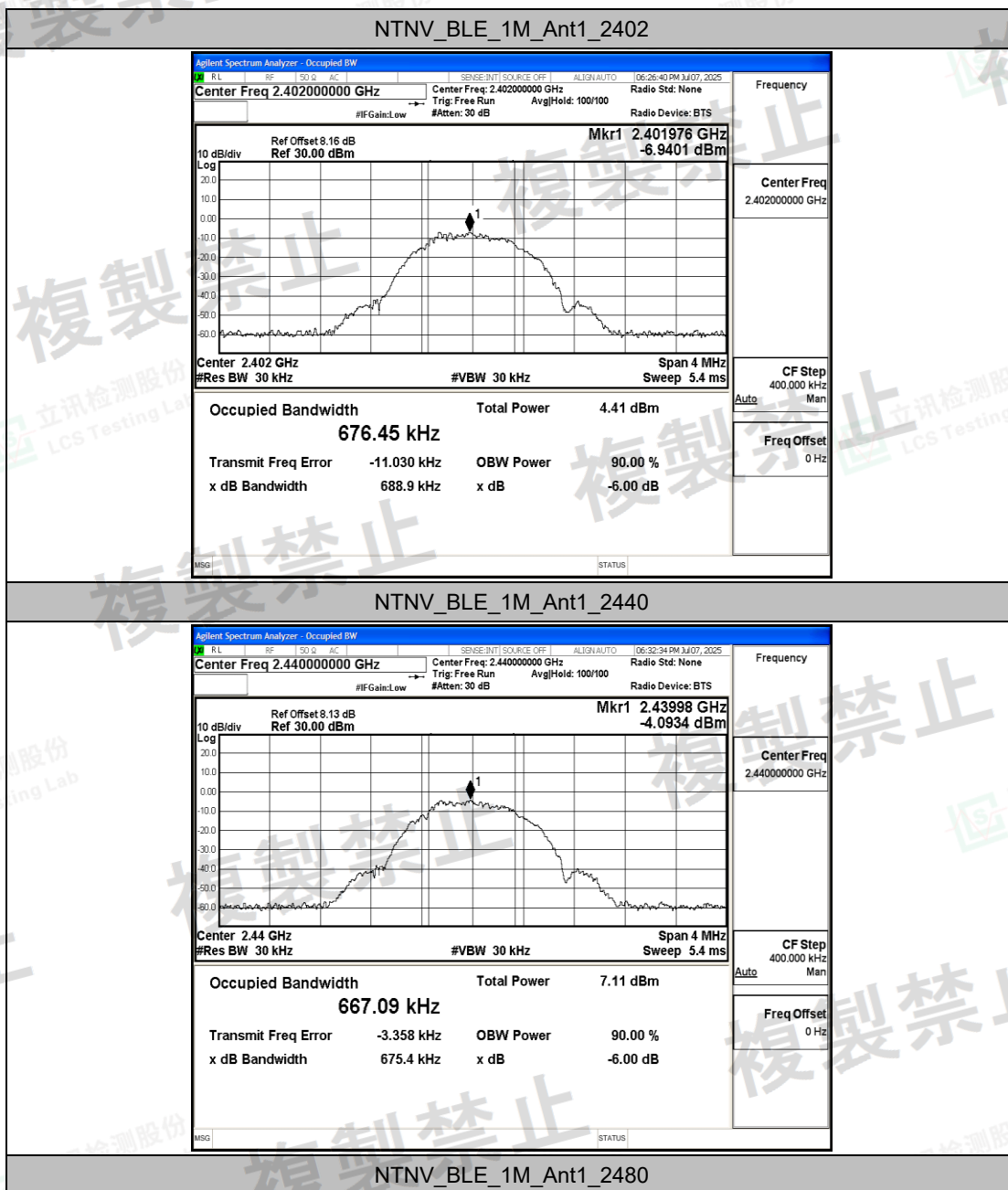
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.676	≥ 0.5	PASS
			2440	0.667	≥ 0.5	PASS
			2480	0.677	≥ 0.5	PASS

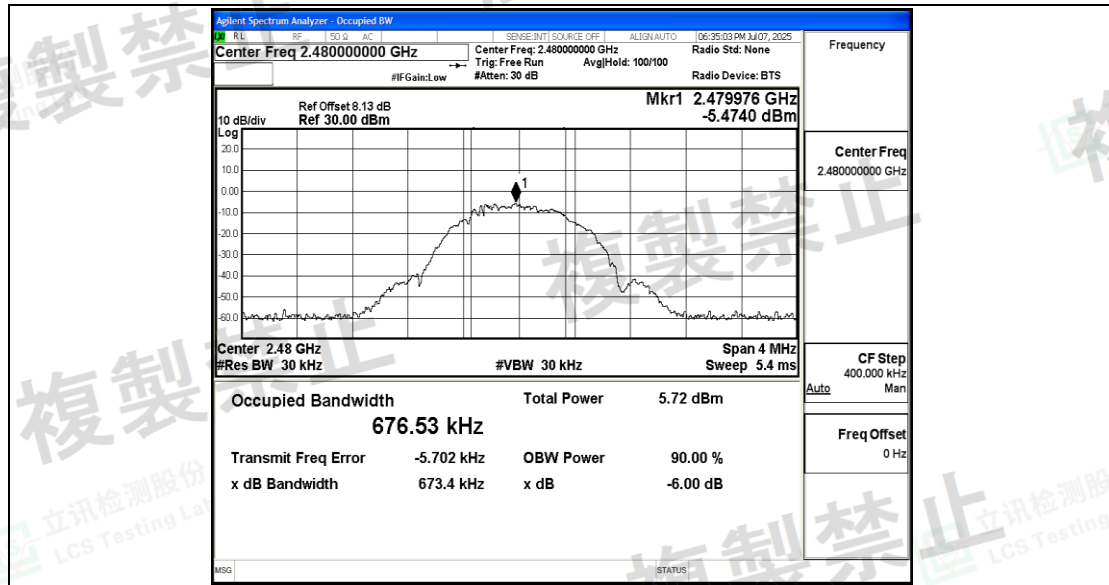
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTLV	BLE_1M	Ant1	2402	0.677	≥ 0.5	PASS
			2440	0.681	≥ 0.5	PASS
			2480	0.672	≥ 0.5	PASS

TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTHV	BLE_1M	Ant1	2402	0.681	≥ 0.5	PASS
			2440	0.682	≥ 0.5	PASS
			2480	0.679	≥ 0.5	PASS

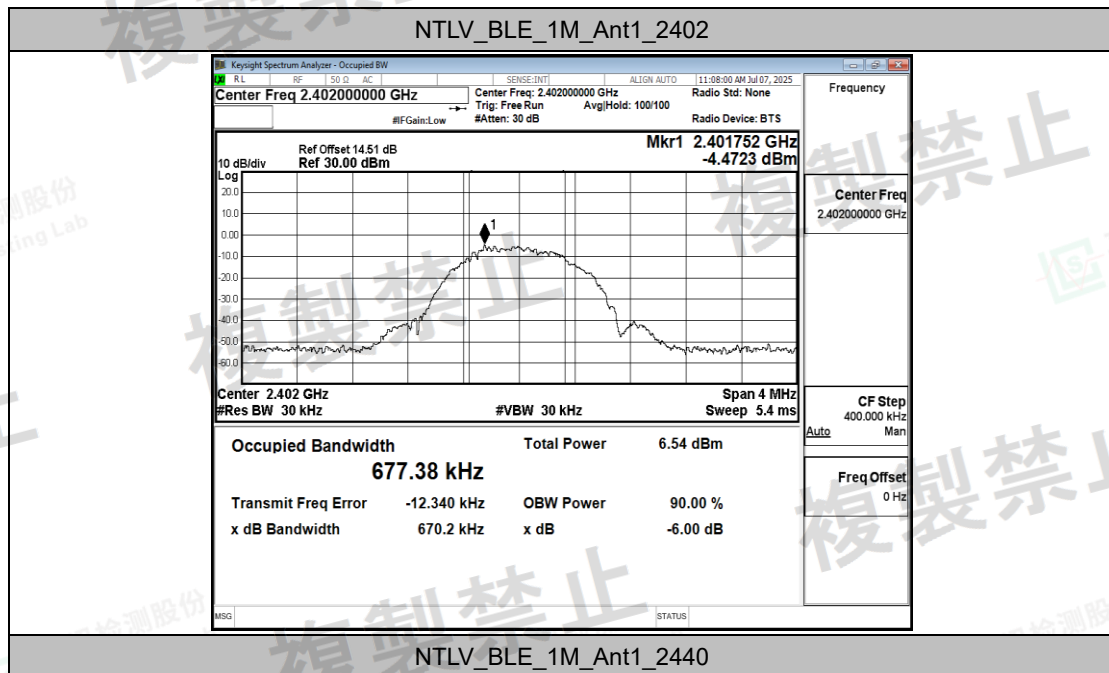


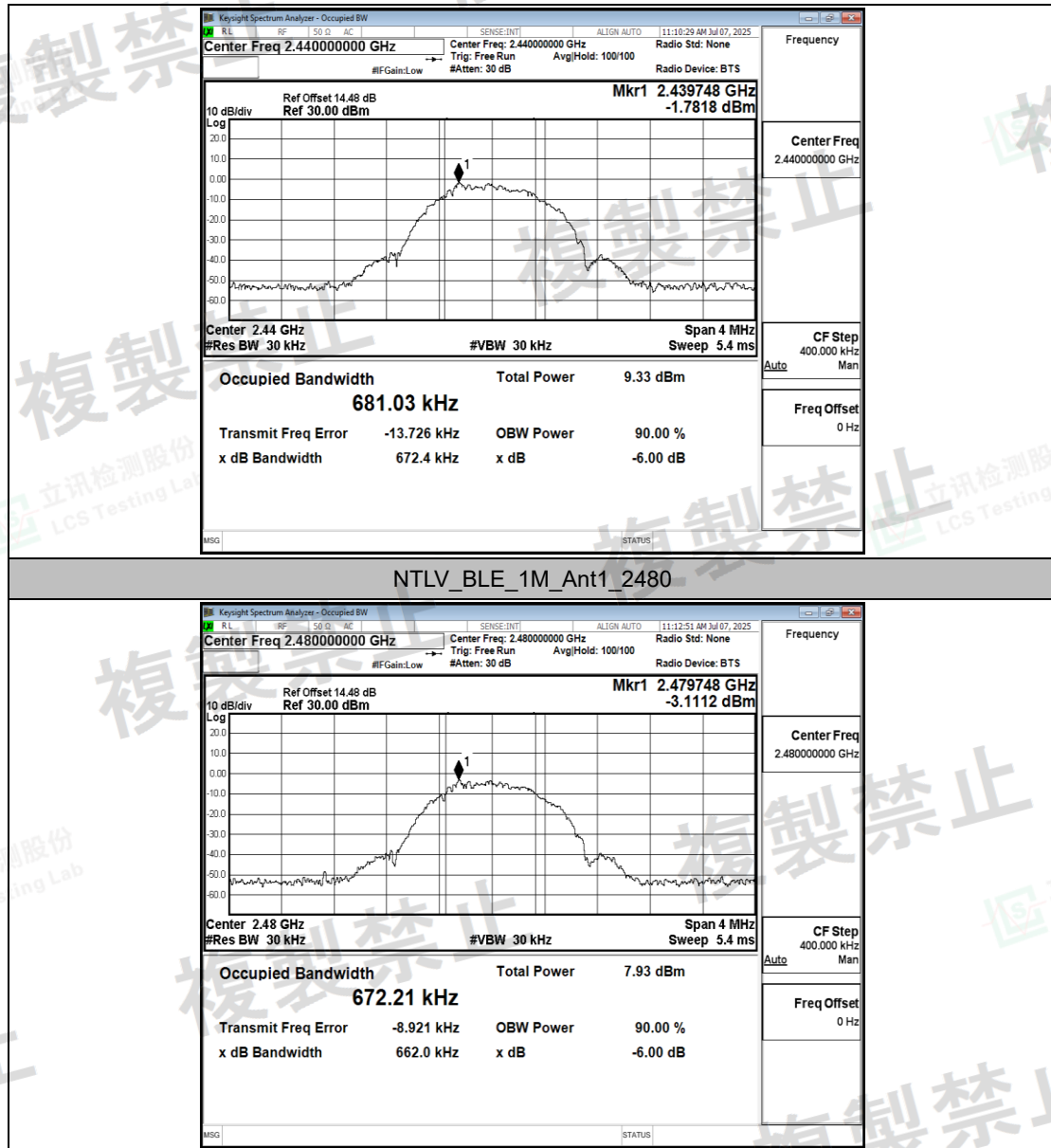
Test Graphs





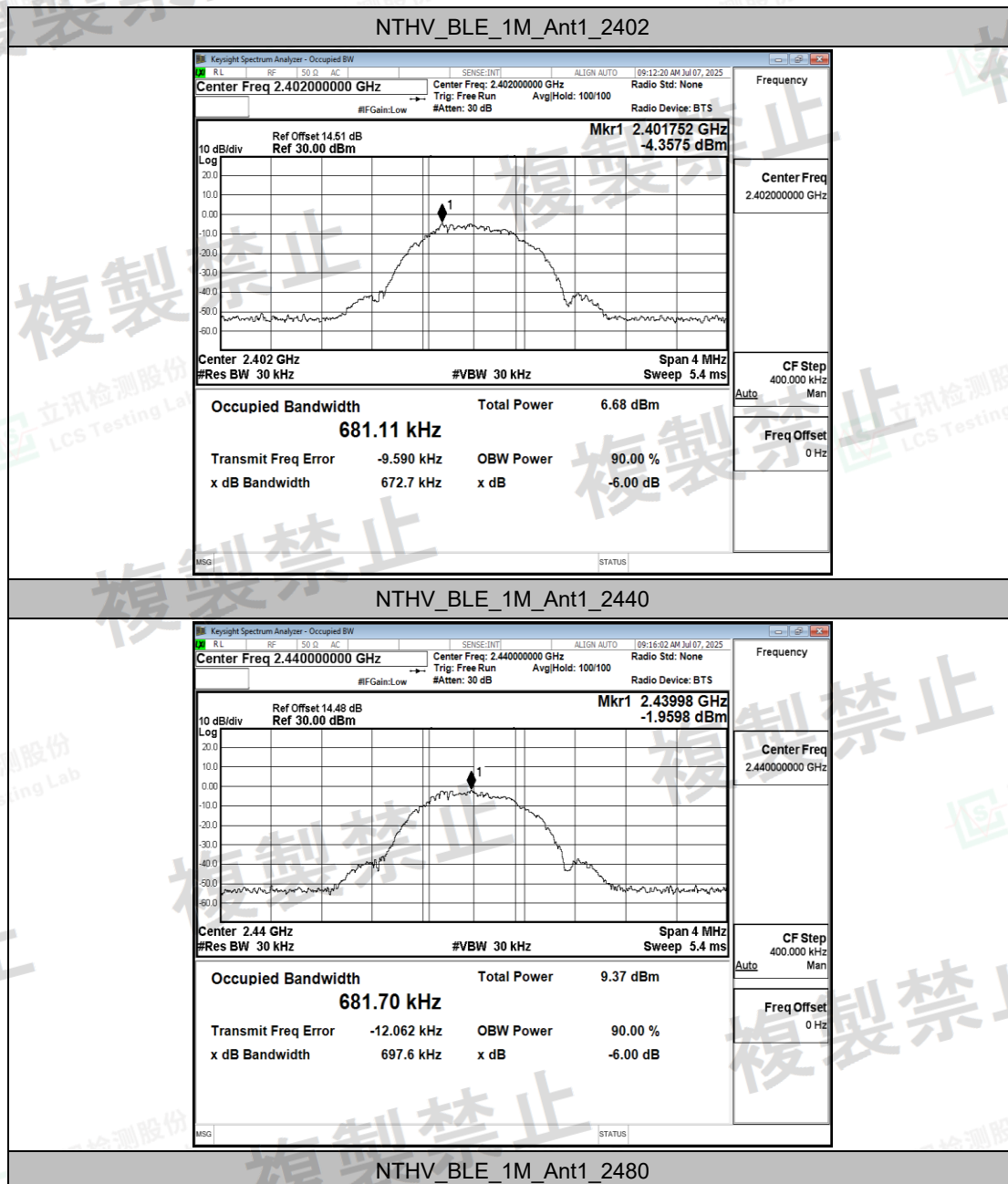
Test Graphs







Test Graphs

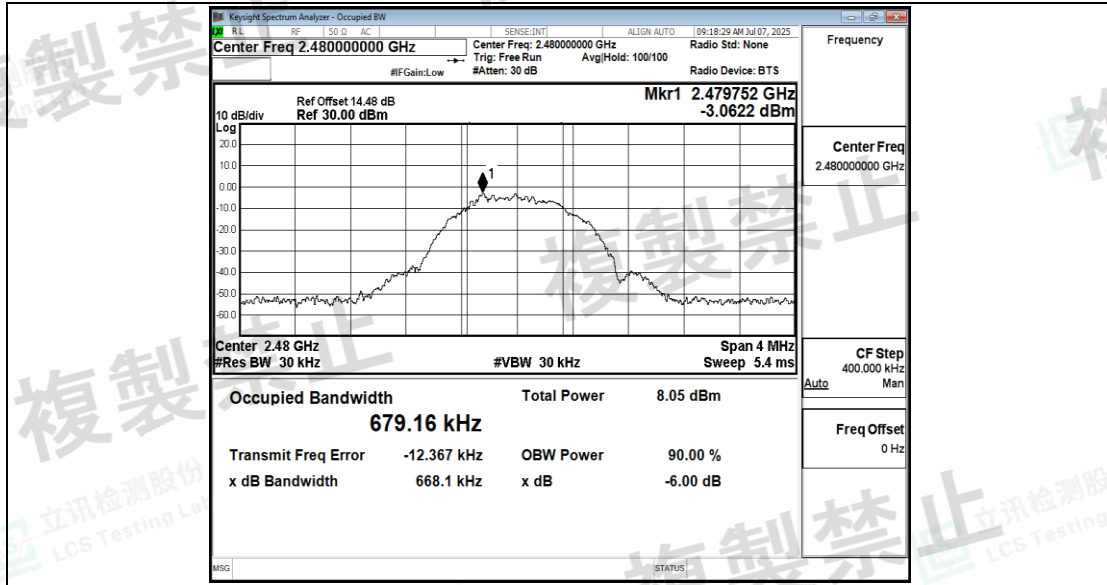


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A.5 Spurious Emission of TX

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-60.10	≤-26	0.00098	≤2.5	PASS
				1000~2387	-55.88	≤-26	0.00258	≤2.5	PASS
				2387~2400	-44.37	≤-16	0.03656	≤25	PASS
				2483.5~2496.5	-49.40	≤-16	0.01148	≤25	PASS
				2496.5~13000	-51.40	≤-26	0.00724	≤2.5	PASS
			2440	30~1000	-60.15	≤-26	0.00097	≤2.5	PASS
				1000~2387	-59.08	≤-26	0.00124	≤2.5	PASS
				2387~2400	-49.84	≤-16	0.01038	≤25	PASS
				2483.5~2496.5	-49.54	≤-16	0.01112	≤25	PASS
				2496.5~13000	-51.70	≤-26	0.00676	≤2.5	PASS
			2480	30~1000	-59.93	≤-26	0.00102	≤2.5	PASS
				1000~2387	-58.95	≤-26	0.00127	≤2.5	PASS
				2387~2400	-49.33	≤-16	0.01167	≤25	PASS
				2483.5~2496.5	-49.33	≤-16	0.01167	≤25	PASS
				2496.5~13000	-51.76	≤-26	0.00667	≤2.5	PASS

TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTLV	BLE_1M	Ant1	2402	30~1000	-54.10	≤-26	0.00389	≤2.5	PASS
				1000~2387	-51.87	≤-26	0.00650	≤2.5	PASS
				2387~2400	-40.85	≤-16	0.08222	≤25	PASS
				2483.5~2496.5	-43.26	≤-16	0.04721	≤25	PASS
				2496.5~13000	-47.35	≤-26	0.01841	≤2.5	PASS
			2440	30~1000	-53.96	≤-26	0.00402	≤2.5	PASS
				1000~2387	-52.31	≤-26	0.00587	≤2.5	PASS
				2387~2400	-43.55	≤-16	0.04416	≤25	PASS
				2483.5~2496.5	-43.51	≤-16	0.04457	≤25	PASS
				2496.5~13000	-47.13	≤-26	0.01936	≤2.5	PASS
			2480	30~1000	-54.19	≤-26	0.00381	≤2.5	PASS
				1000~2387	-52.20	≤-26	0.00603	≤2.5	PASS
				2387~2400	-43.62	≤-16	0.04345	≤25	PASS
				2483.5~2496.5	-43.36	≤-16	0.04613	≤25	PASS
				2496.5~13000	-47.09	≤-26	0.01954	≤2.5	PASS





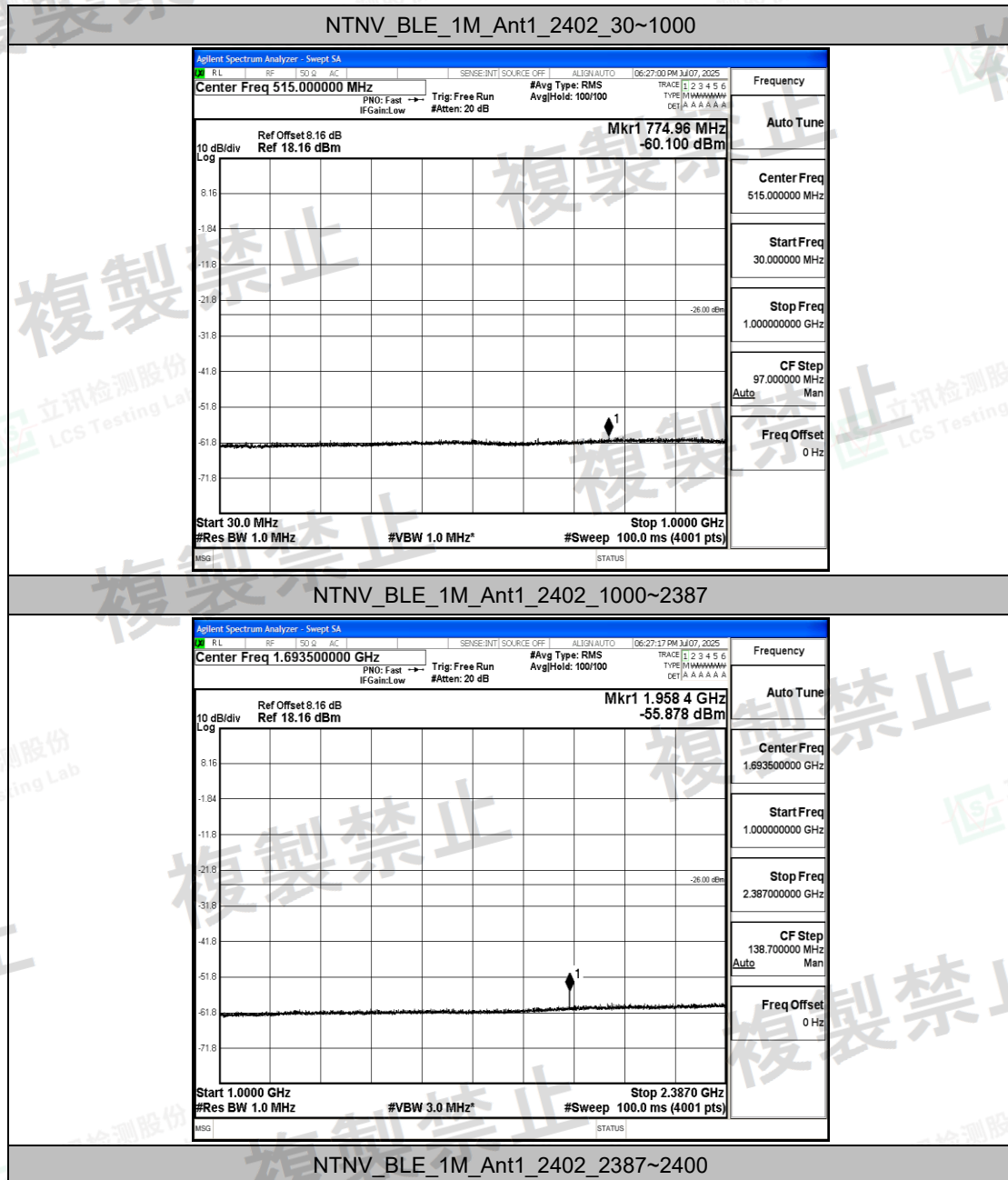
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTHV	BLE_1M	Ant1	2402	30~1000	-54.25	≤-26	0.00376	≤2.5	PASS
				1000~2387	-52.20	≤-26	0.00603	≤2.5	PASS
				2387~2400	-40.95	≤-16	0.08035	≤25	PASS
				2483.5~2496.5	-43.51	≤-16	0.04457	≤25	PASS
				2496.5~13000	-47.22	≤-26	0.01897	≤2.5	PASS
			2440	30~1000	-54.17	≤-26	0.00383	≤2.5	PASS
				1000~2387	-52.15	≤-26	0.00610	≤2.5	PASS
				2387~2400	-43.53	≤-16	0.04436	≤25	PASS
				2483.5~2496.5	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	-47.22	≤-26	0.01897	≤2.5	PASS
			2480	30~1000	-53.92	≤-26	0.00406	≤2.5	PASS
				1000~2387	-52.38	≤-26	0.00578	≤2.5	PASS
				2387~2400	-43.53	≤-16	0.04436	≤25	PASS
				2483.5~2496.5	-43.39	≤-16	0.04581	≤25	PASS
				2496.5~13000	-47.26	≤-26	0.01879	≤2.5	PASS

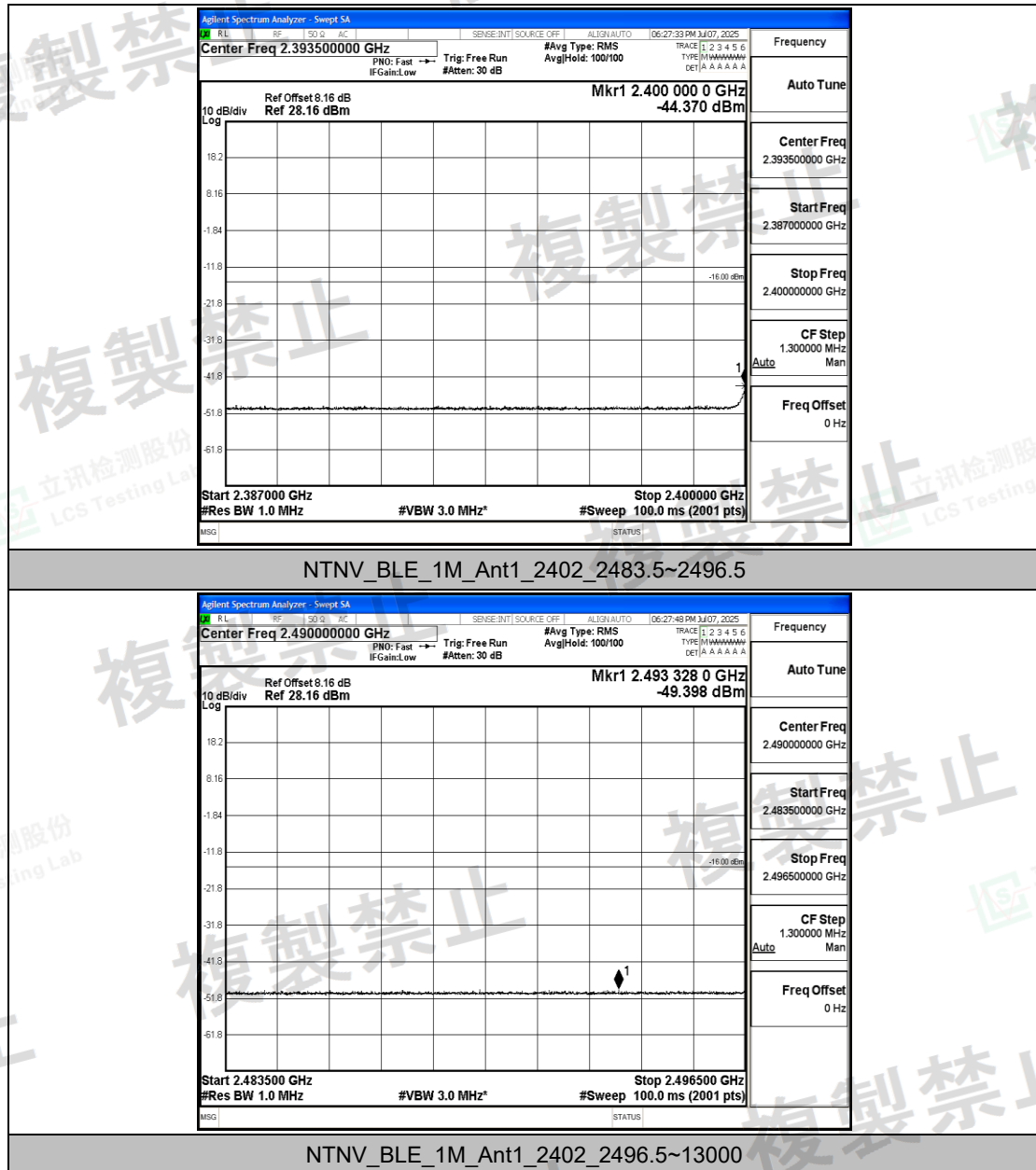


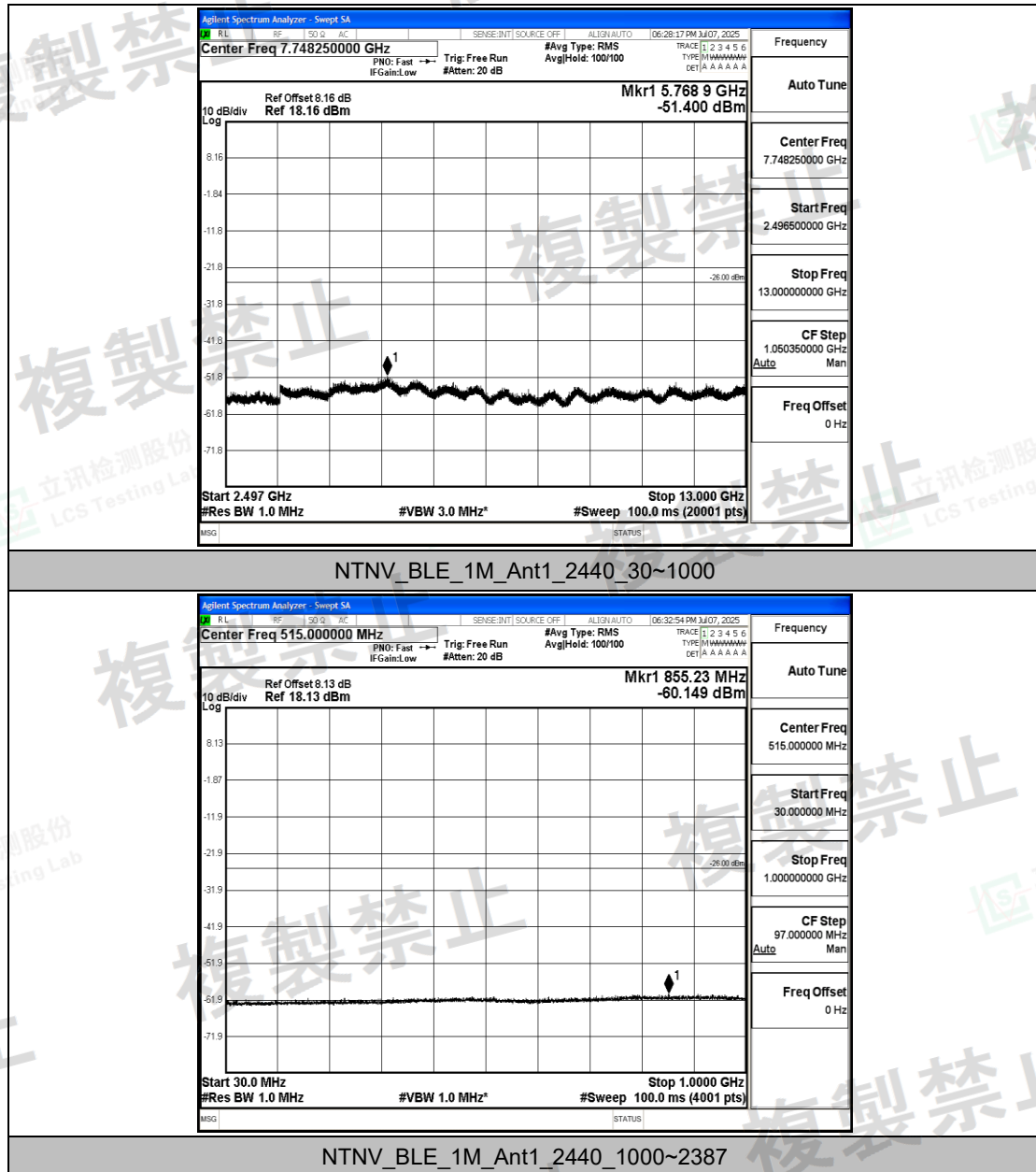
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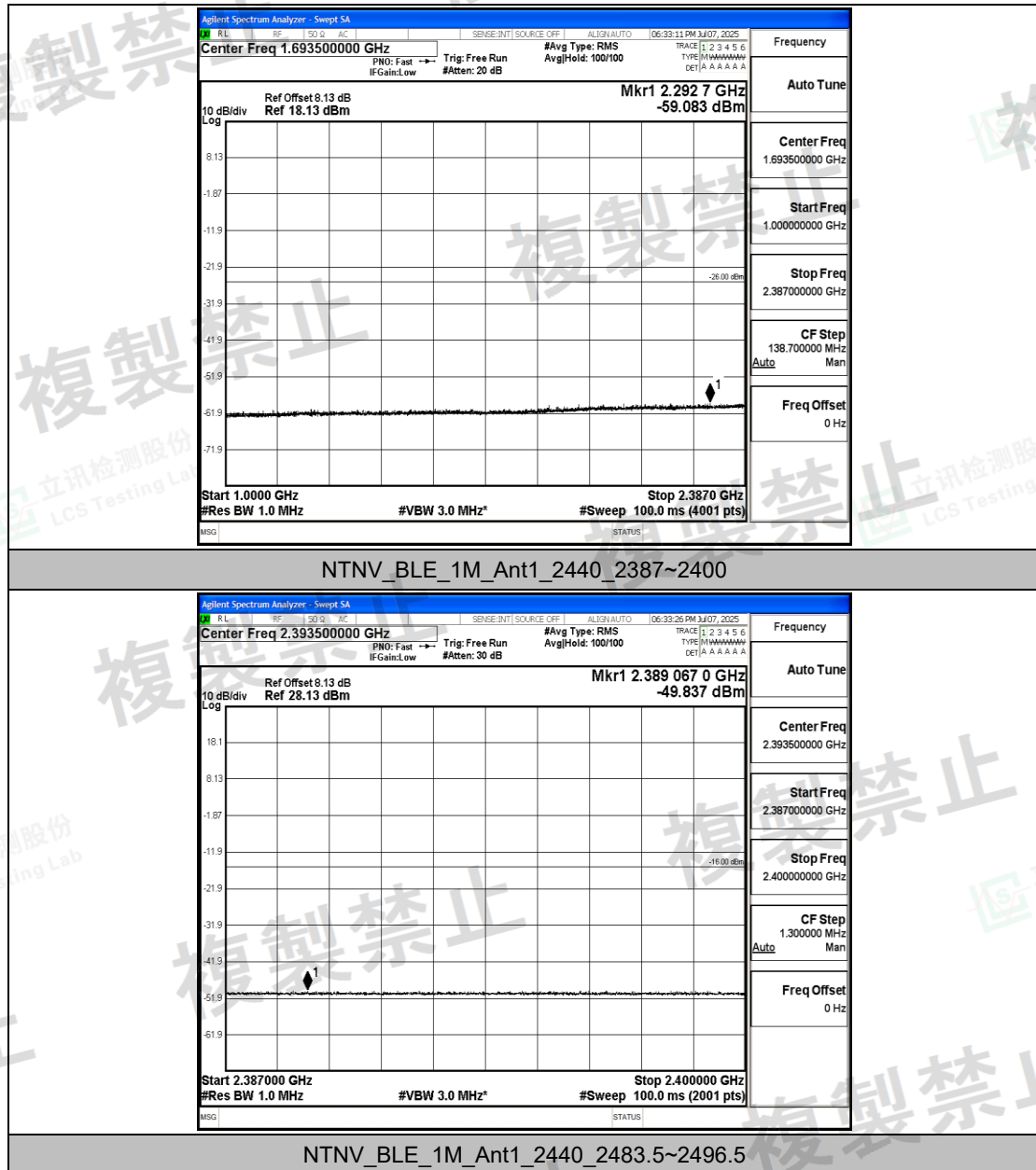


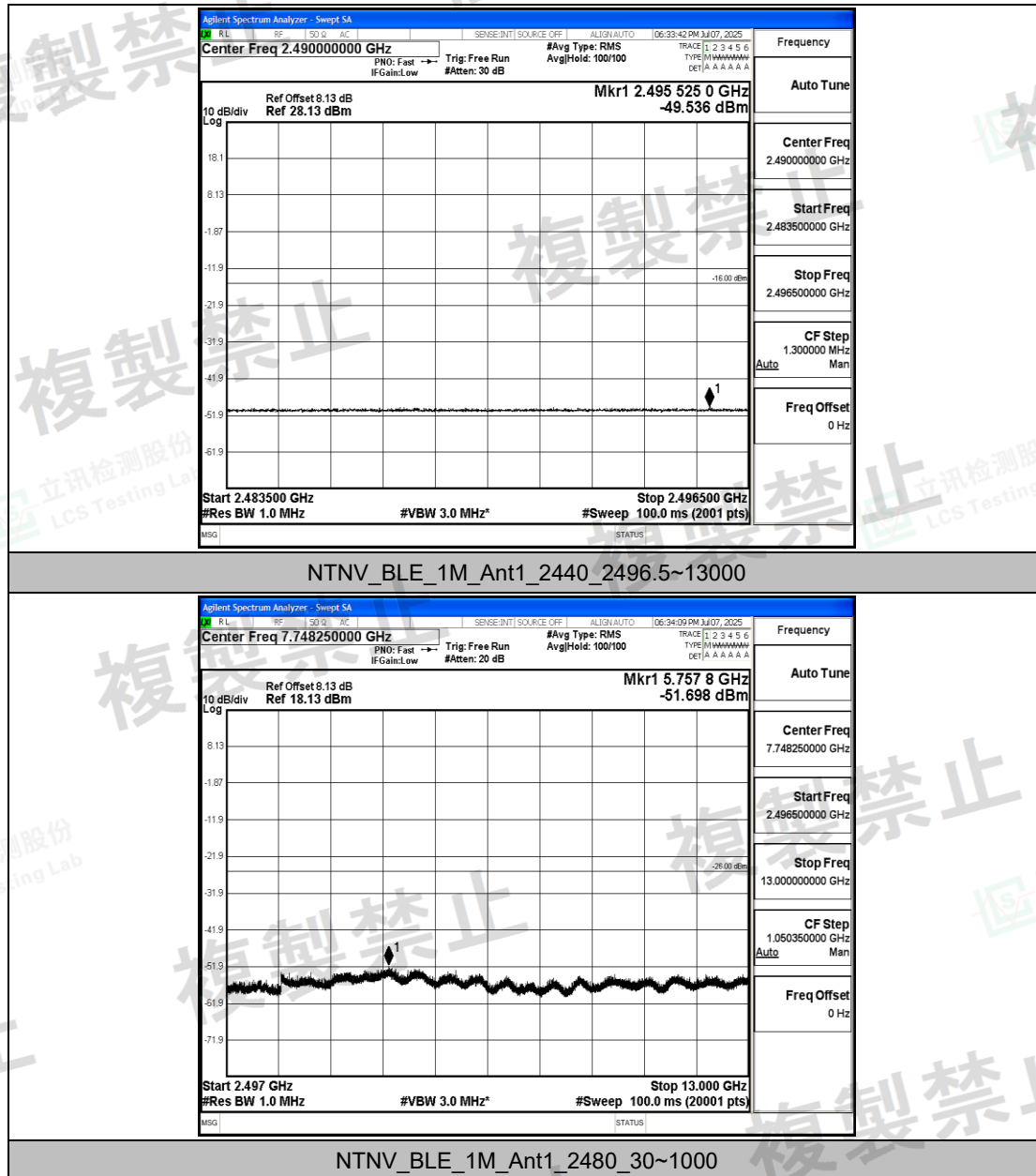
Test Graphs



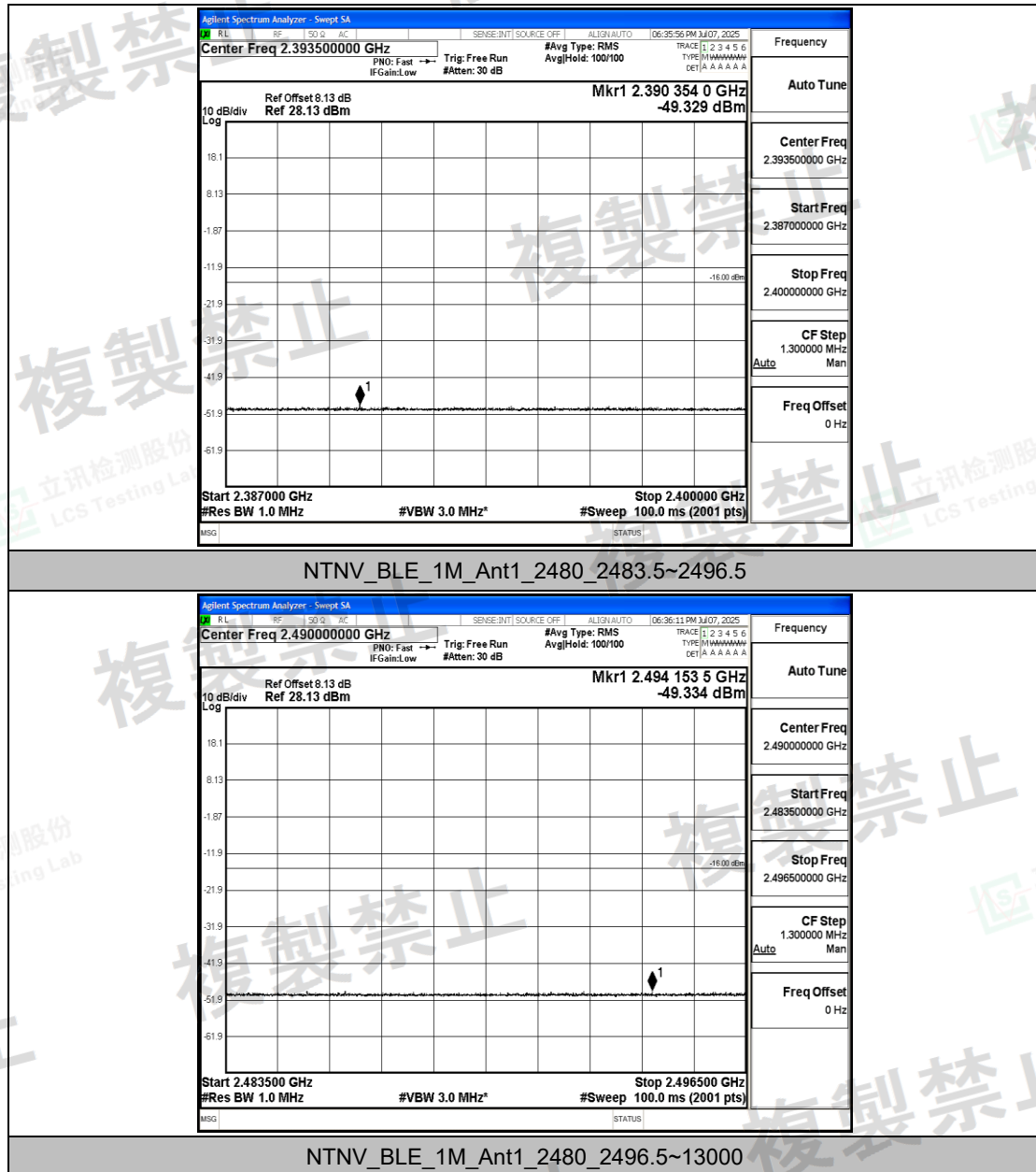


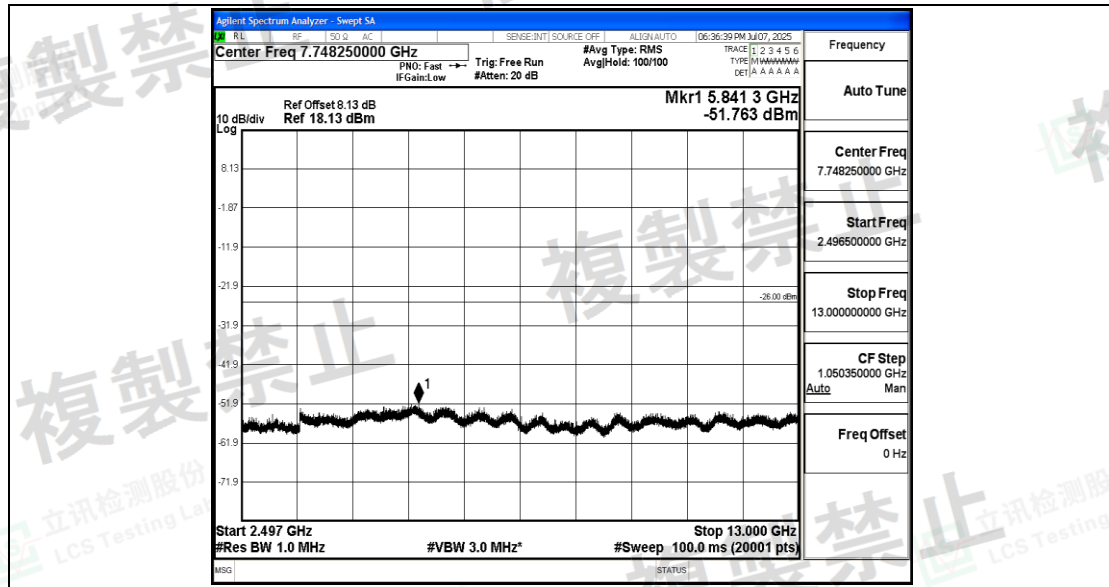




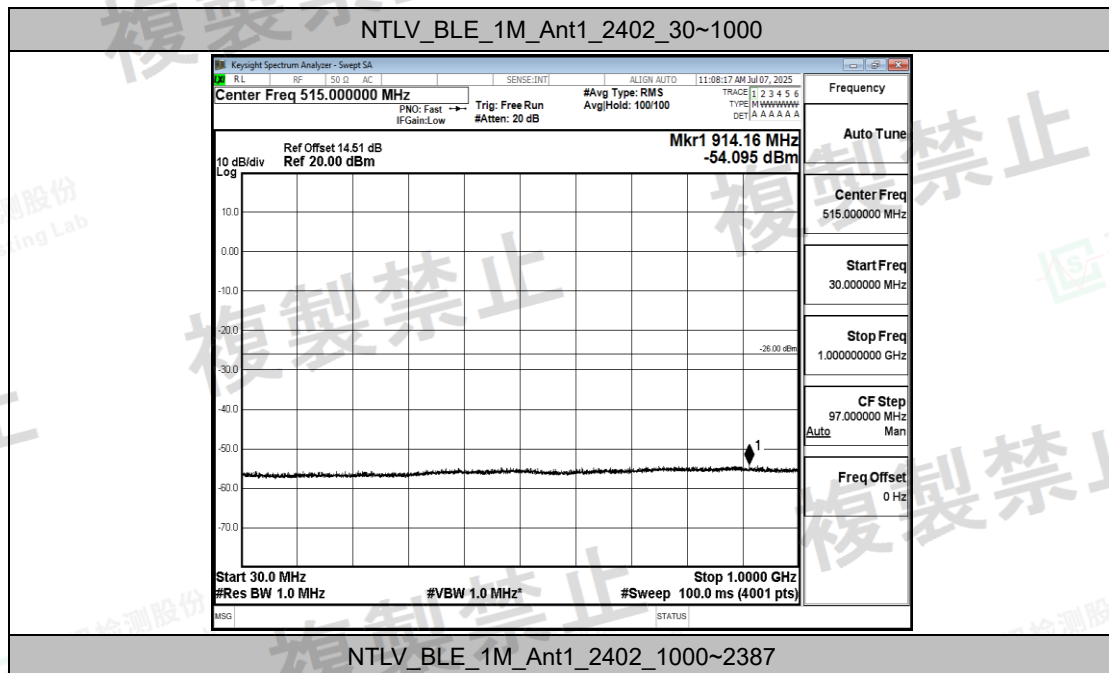


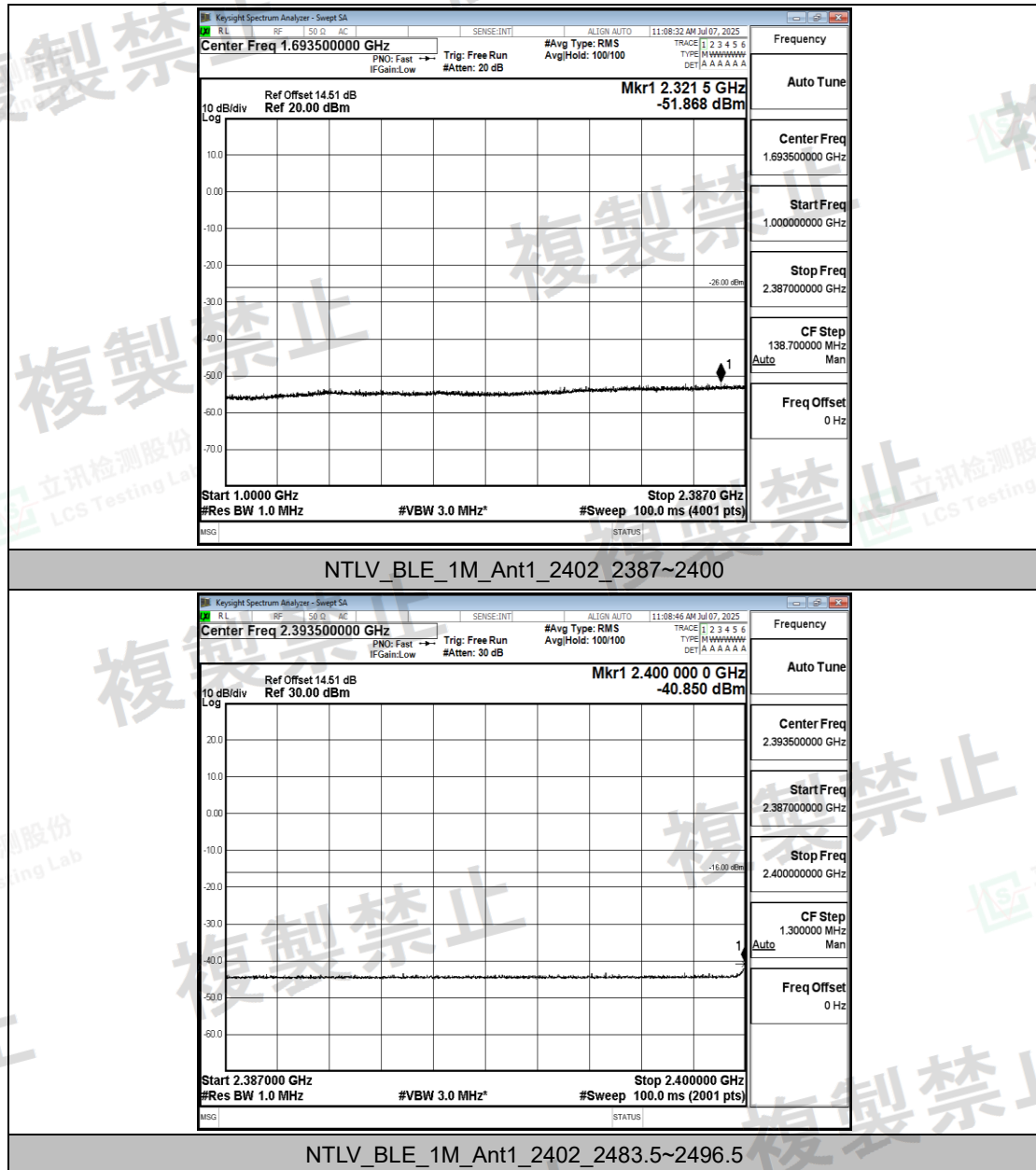


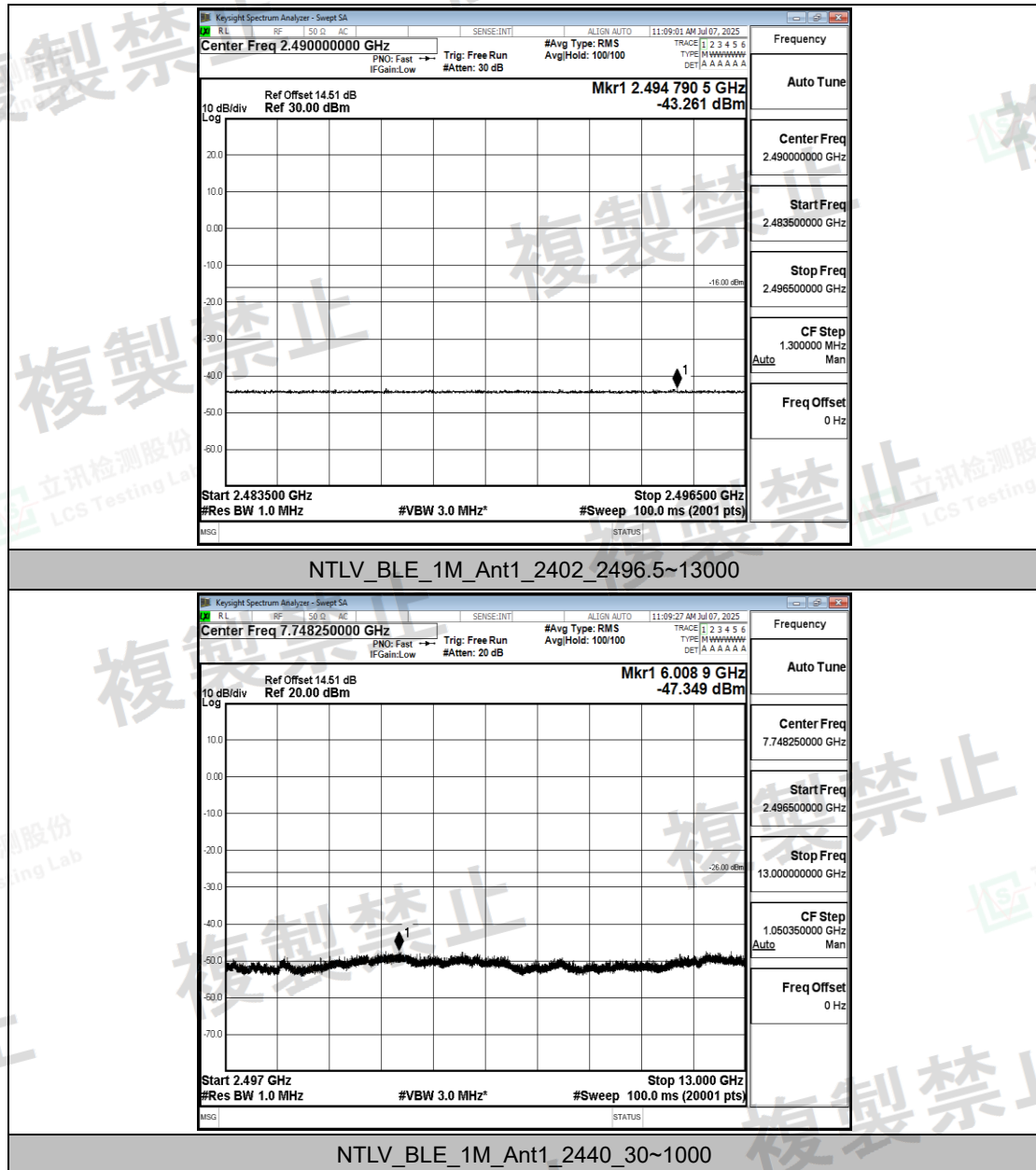


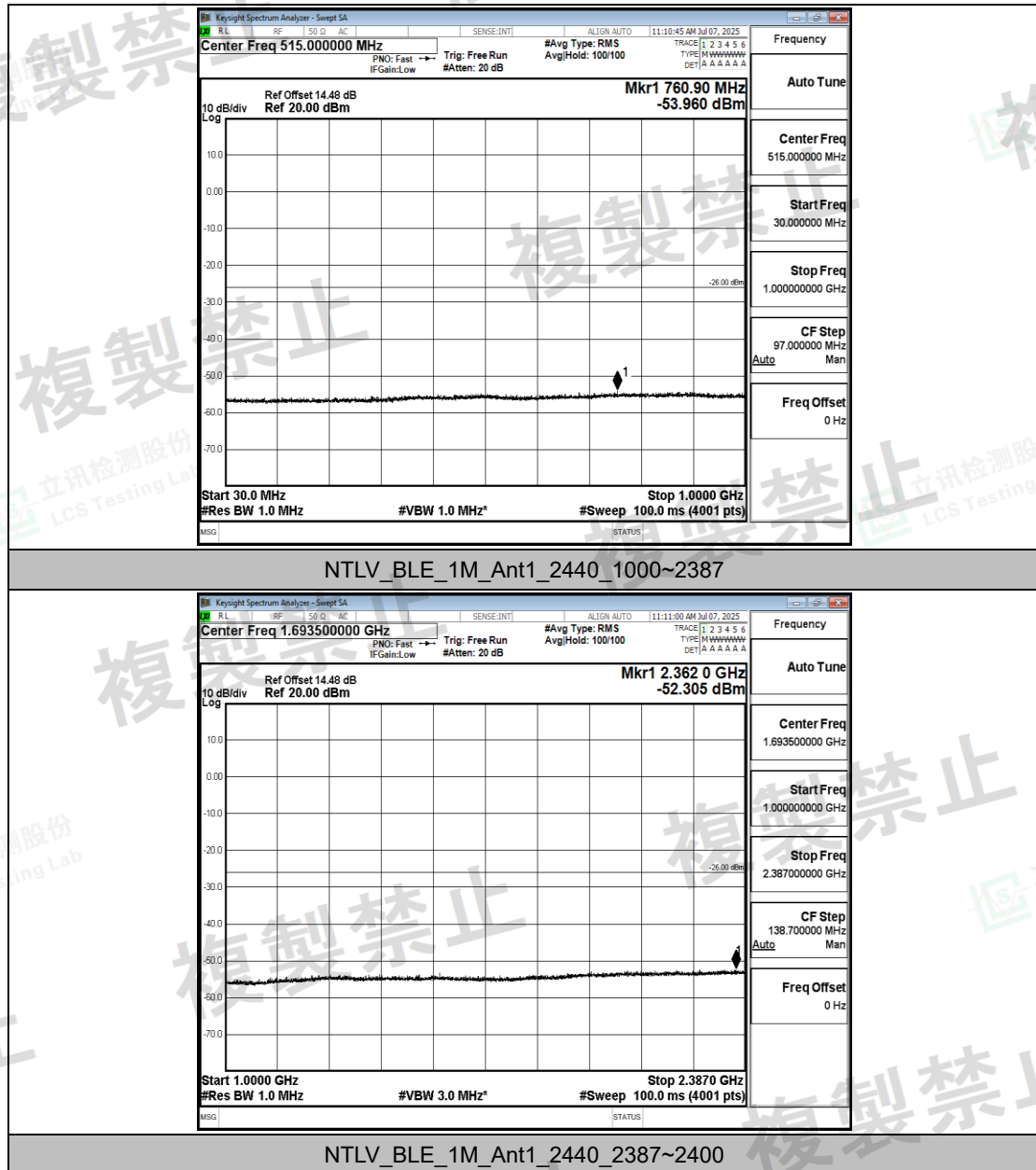


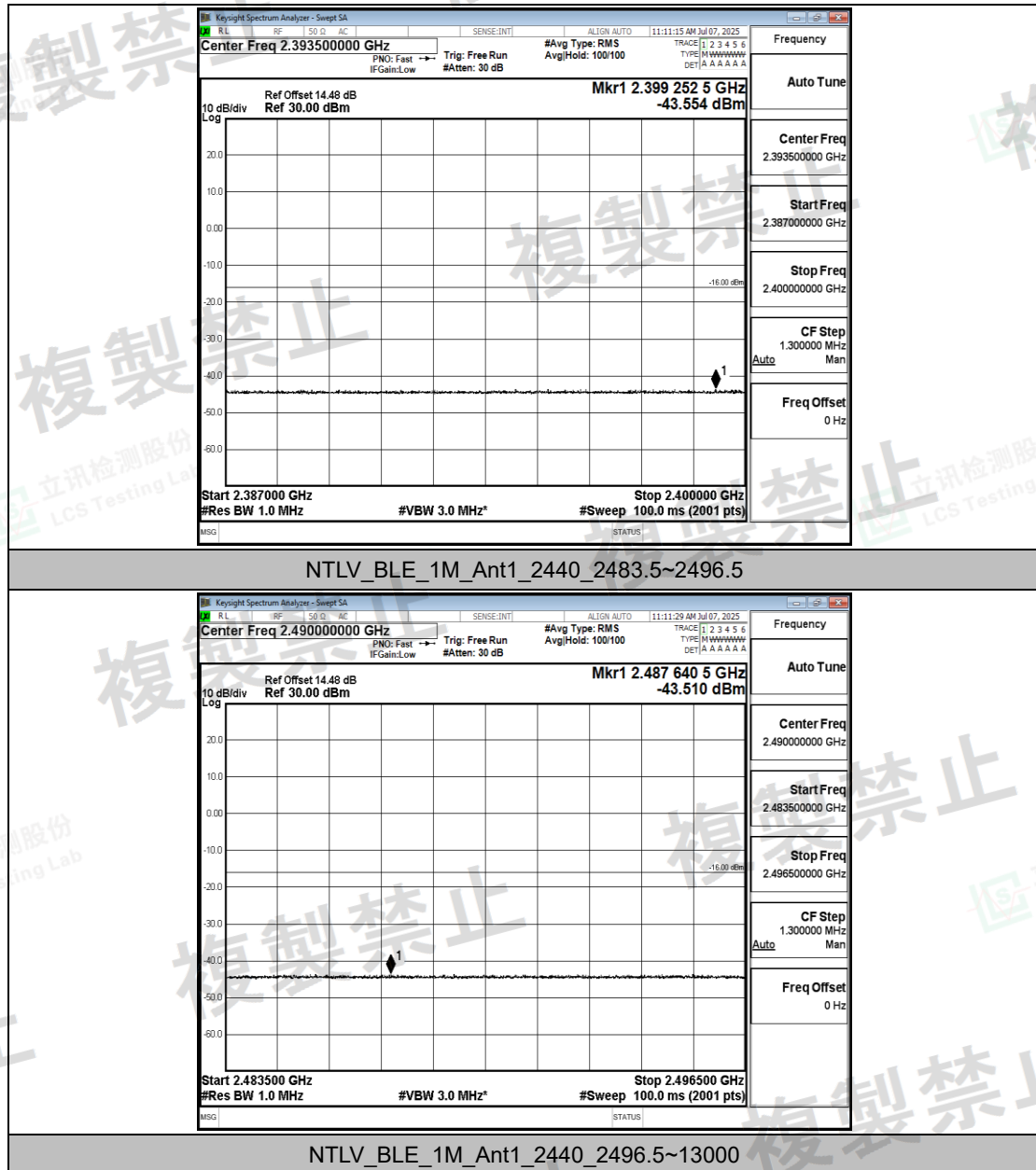
Test Graphs

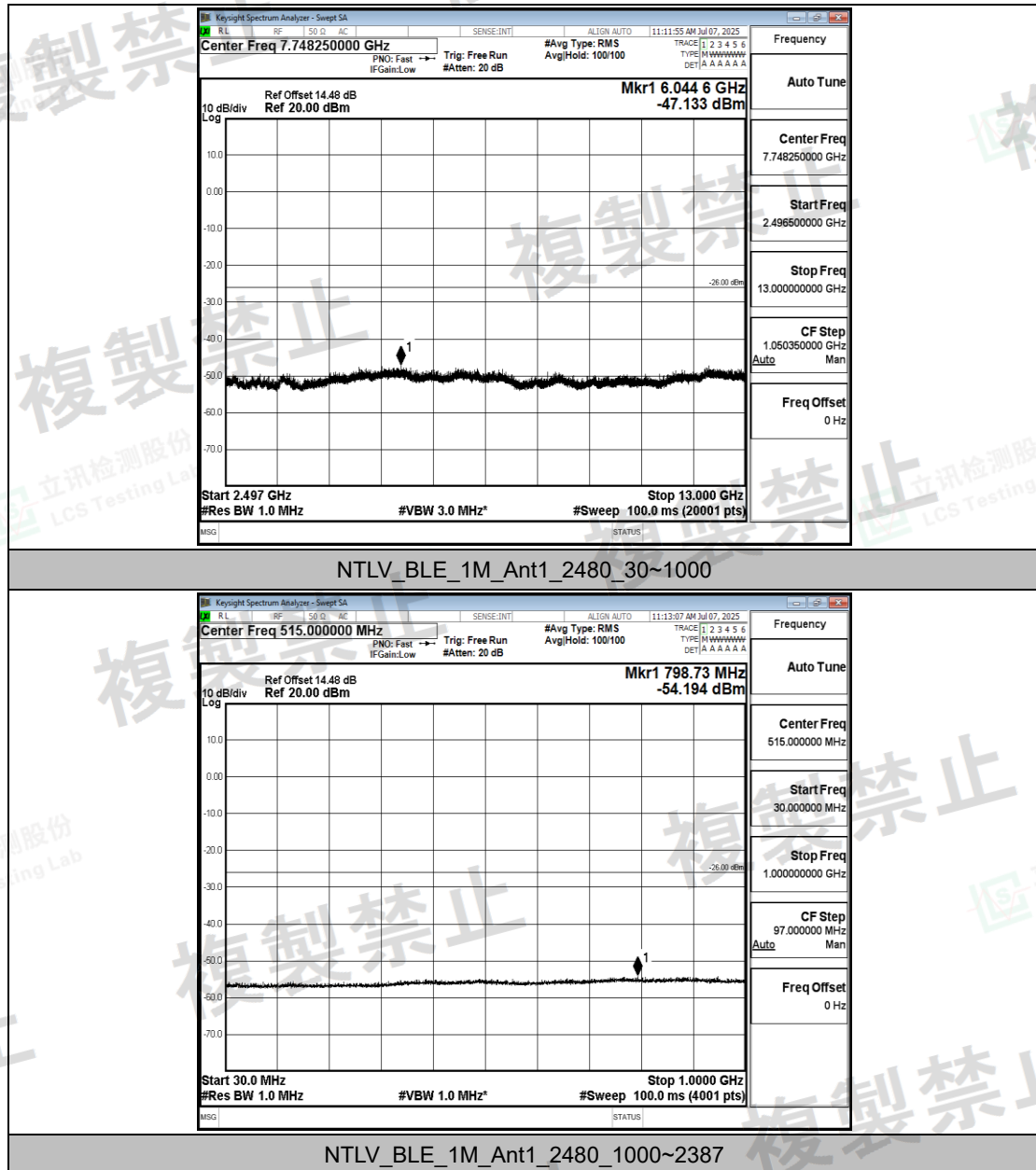


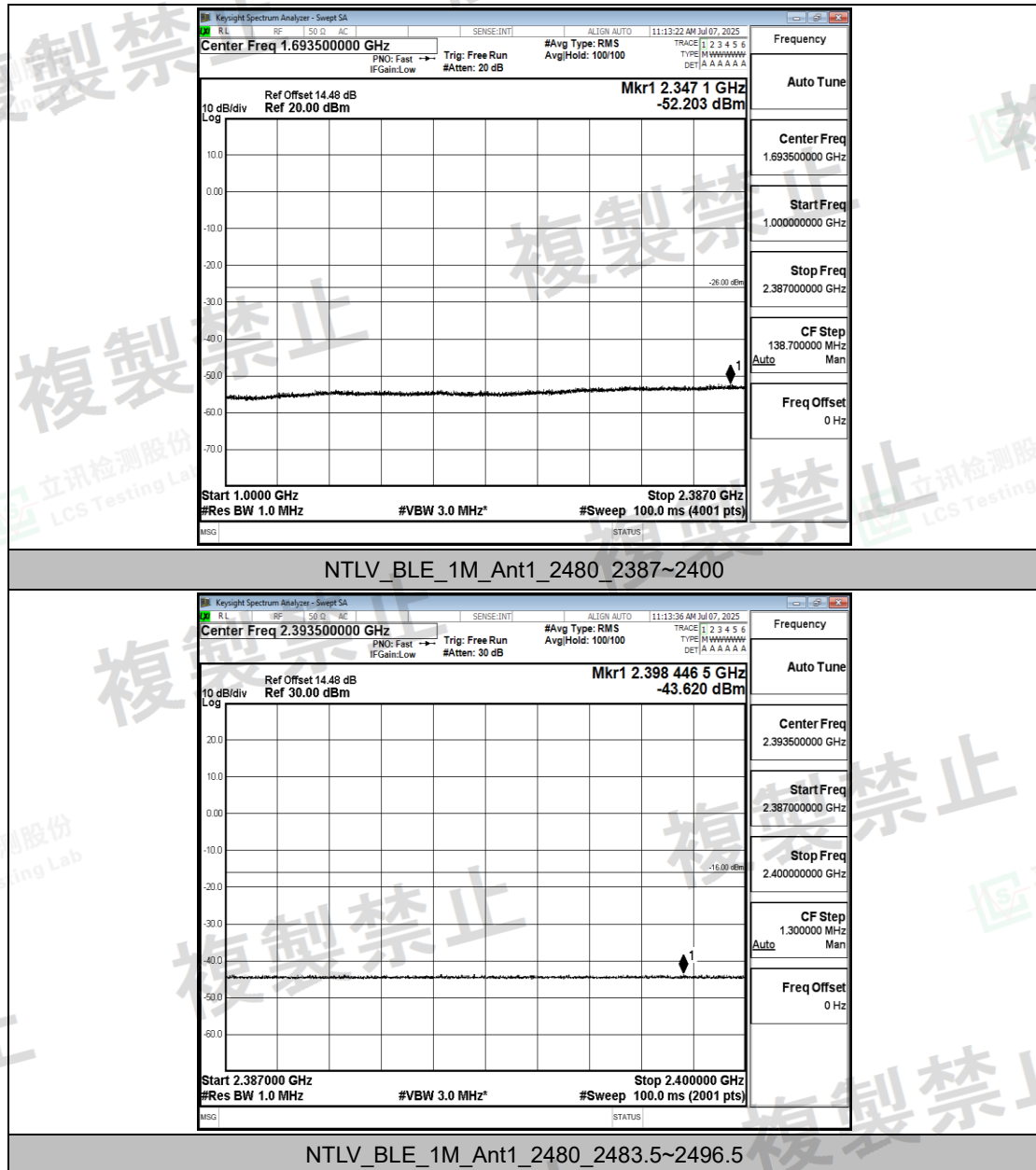


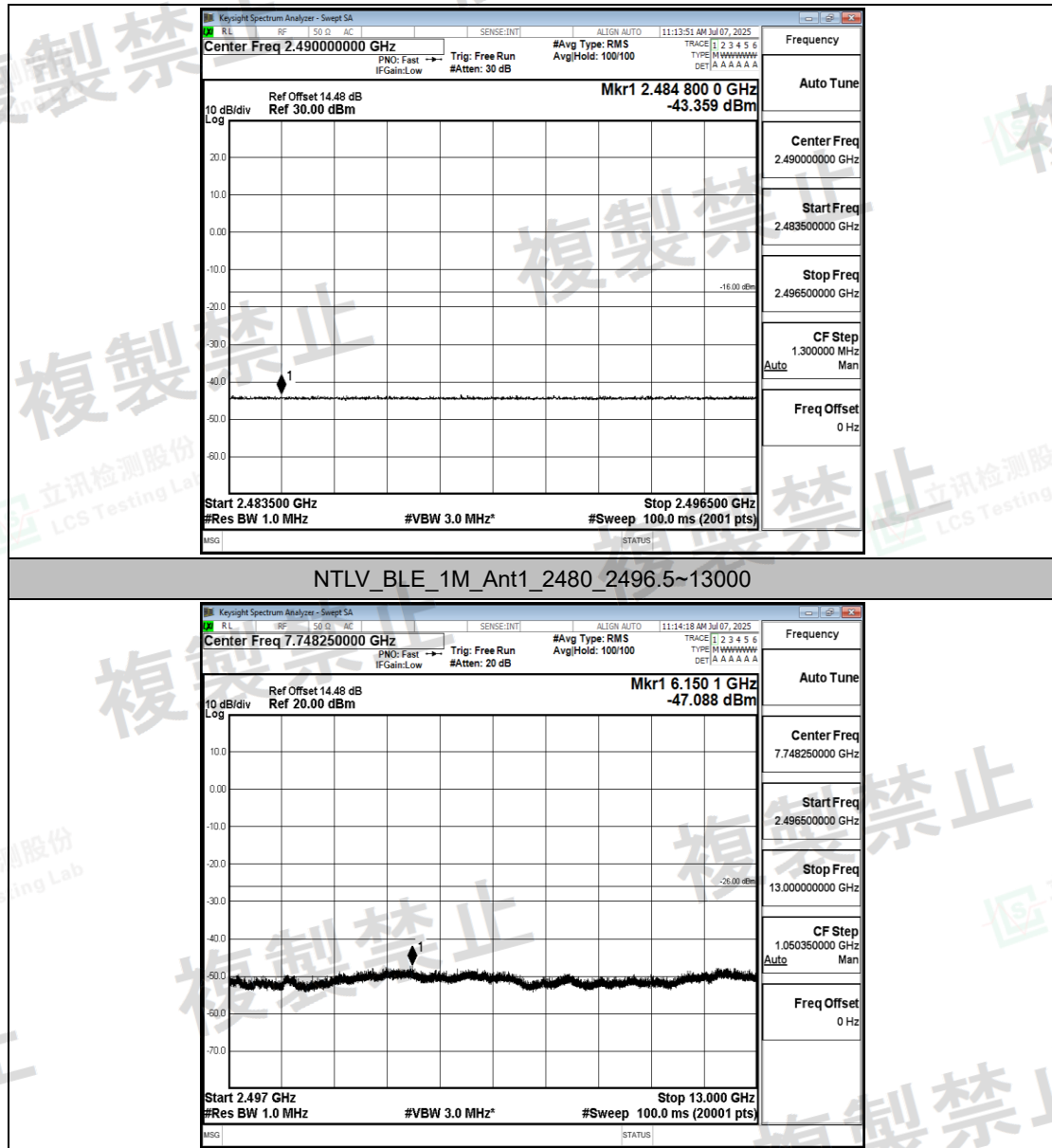






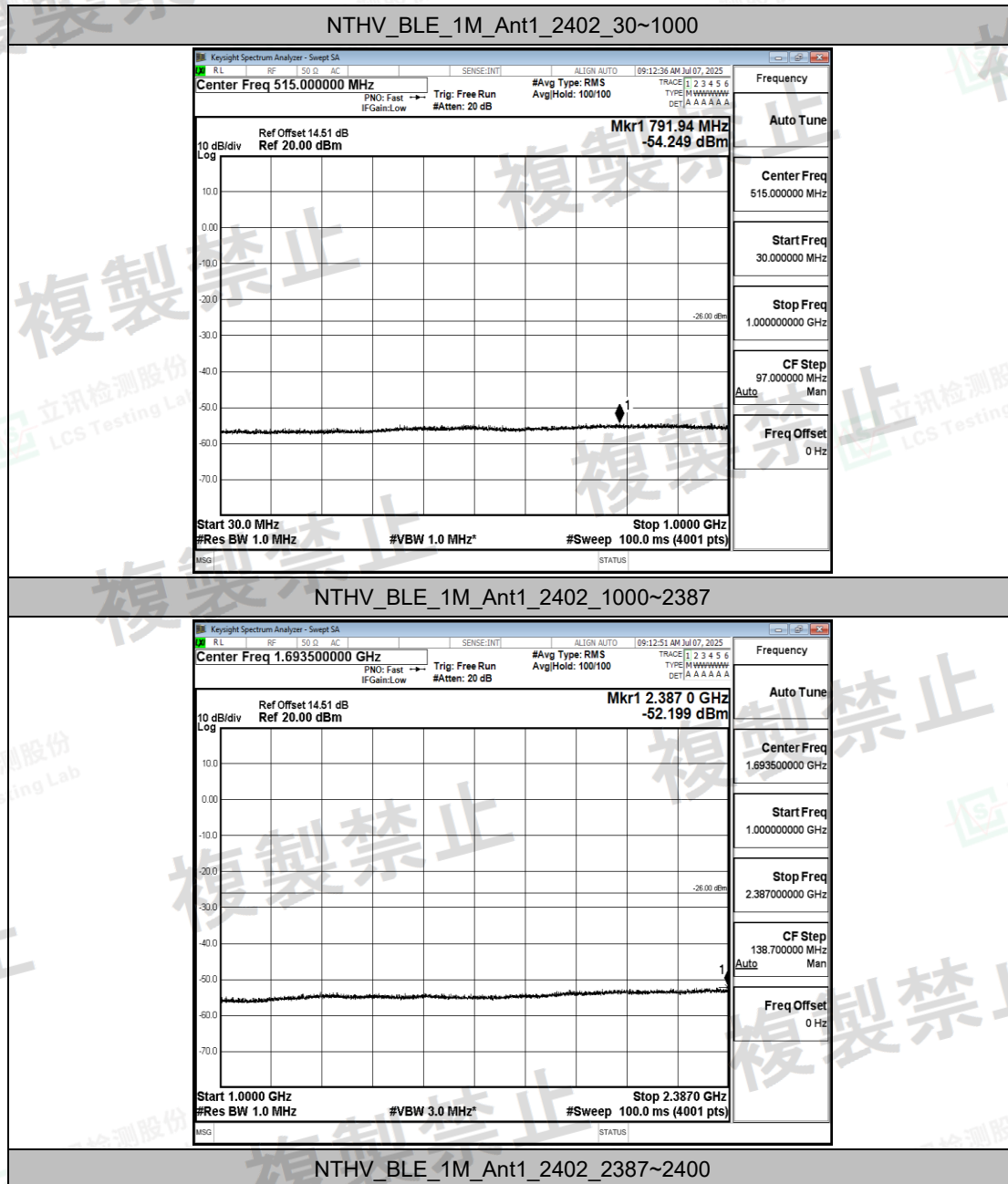


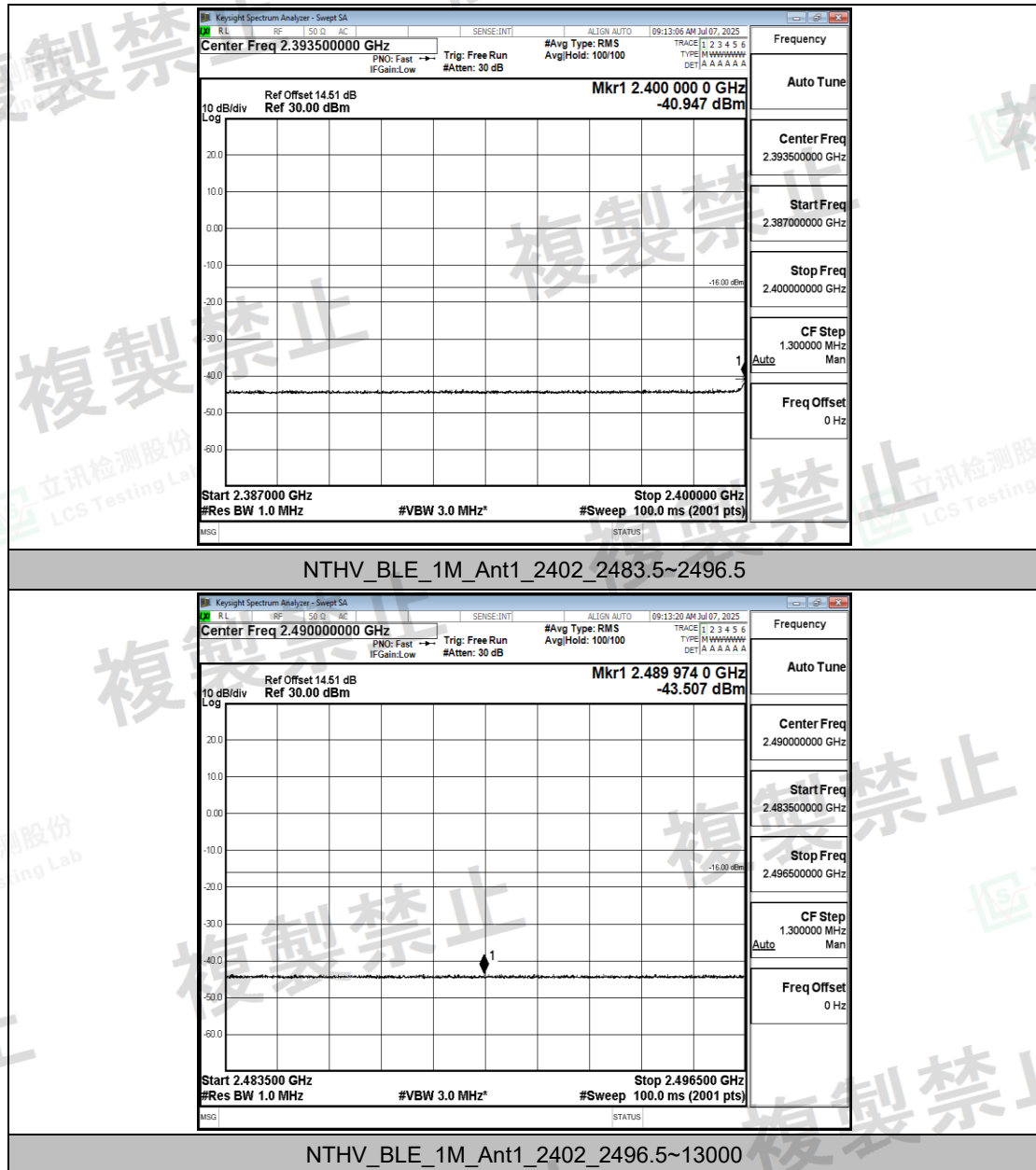


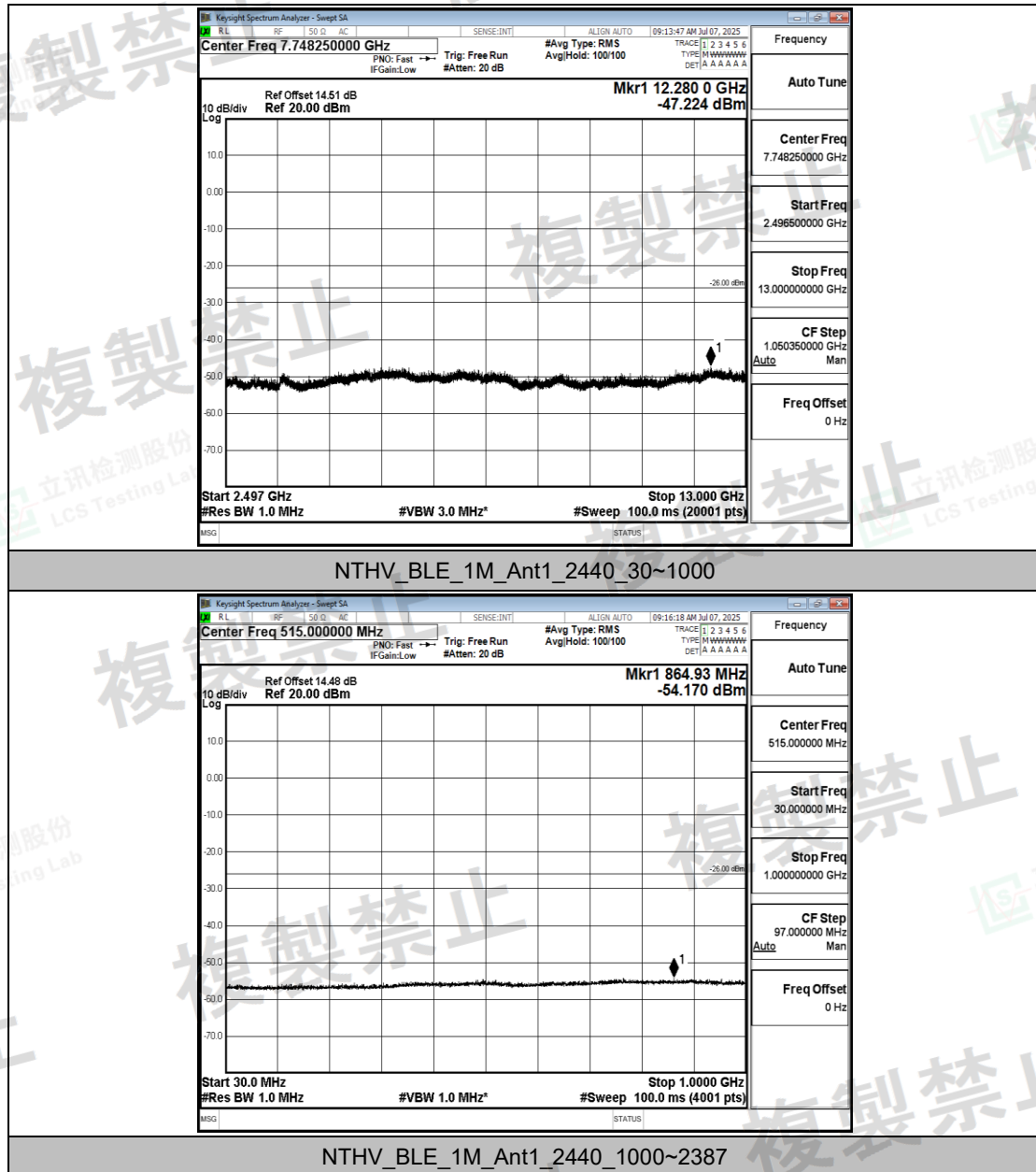


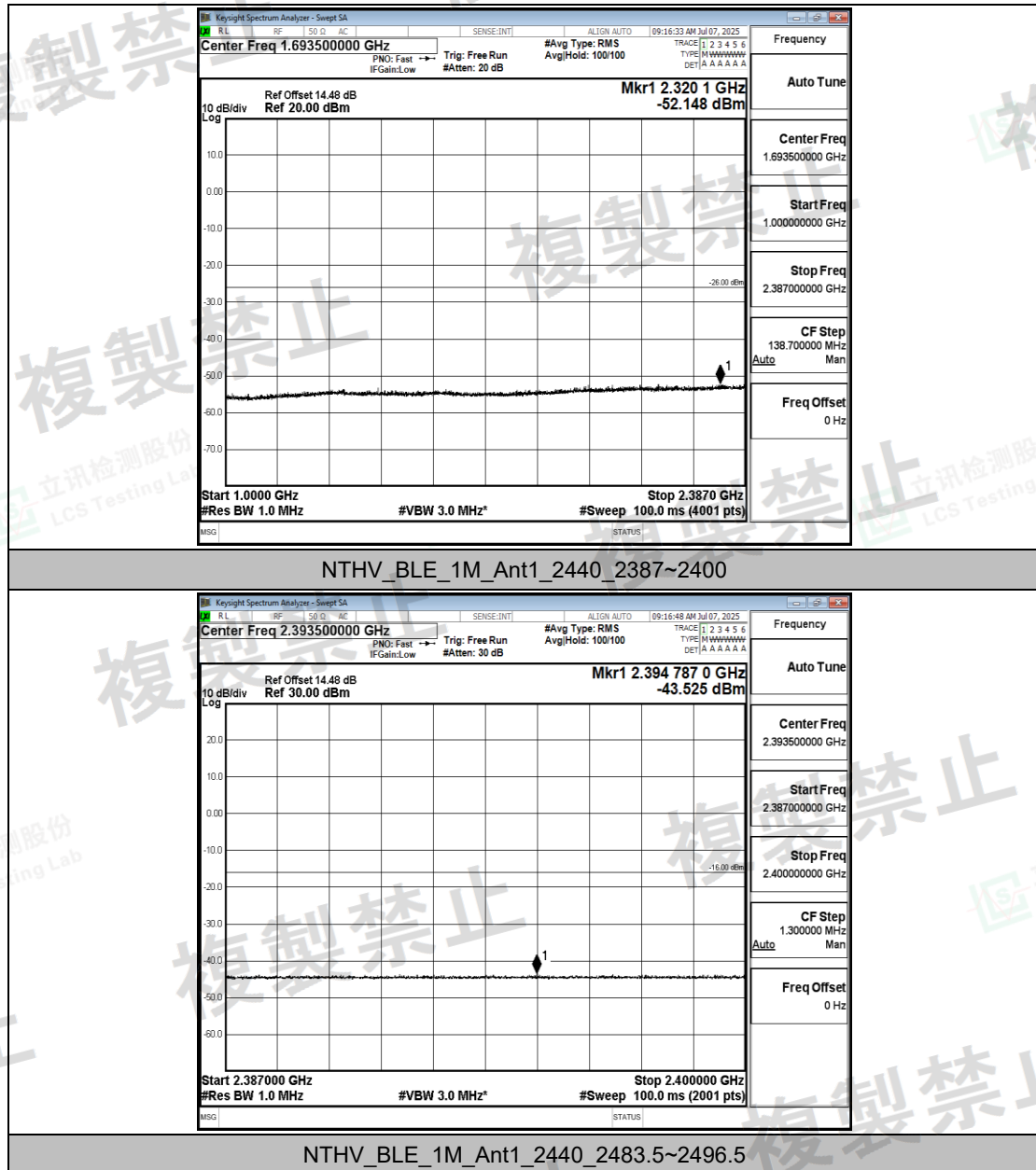


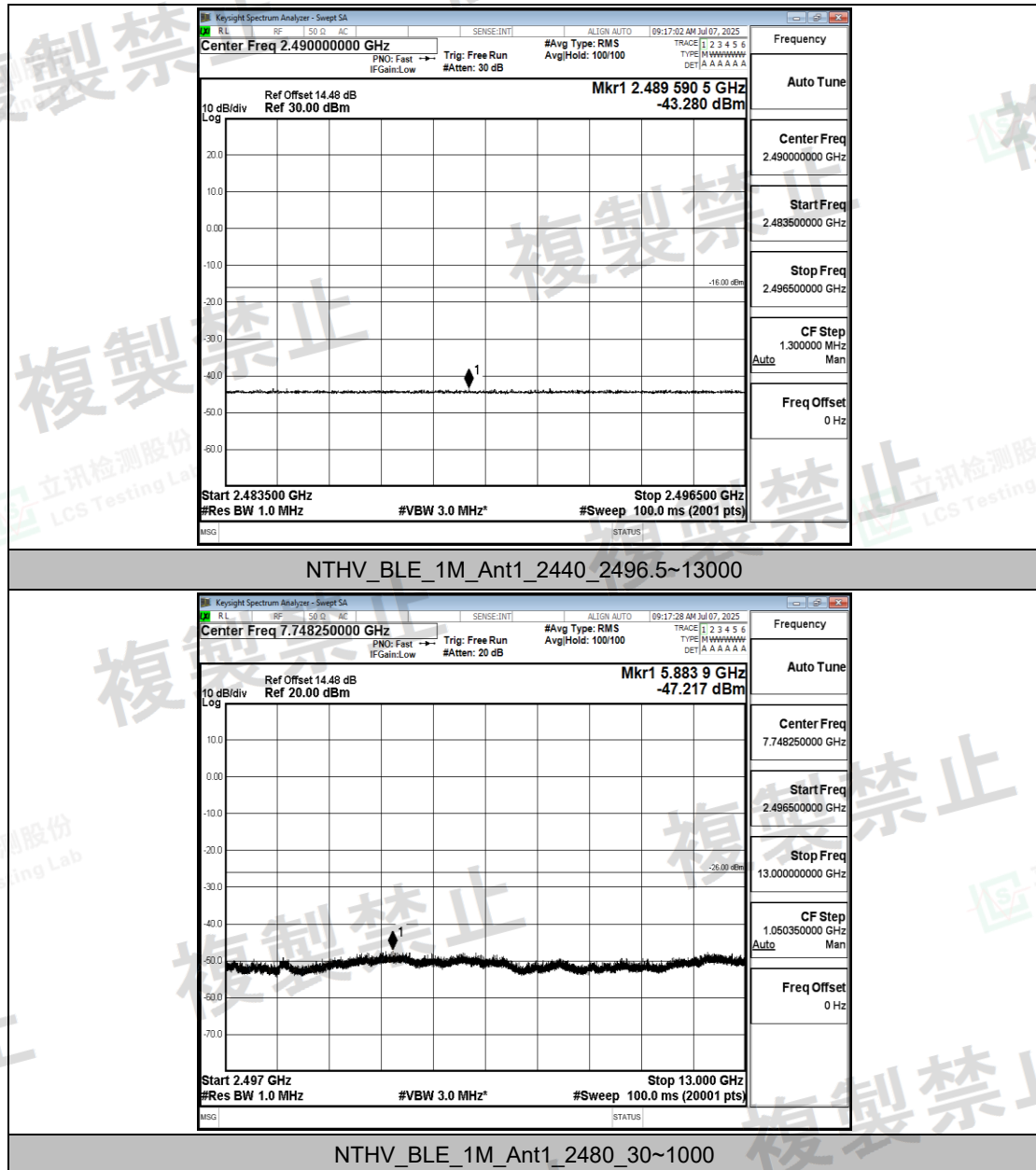
Test Graphs

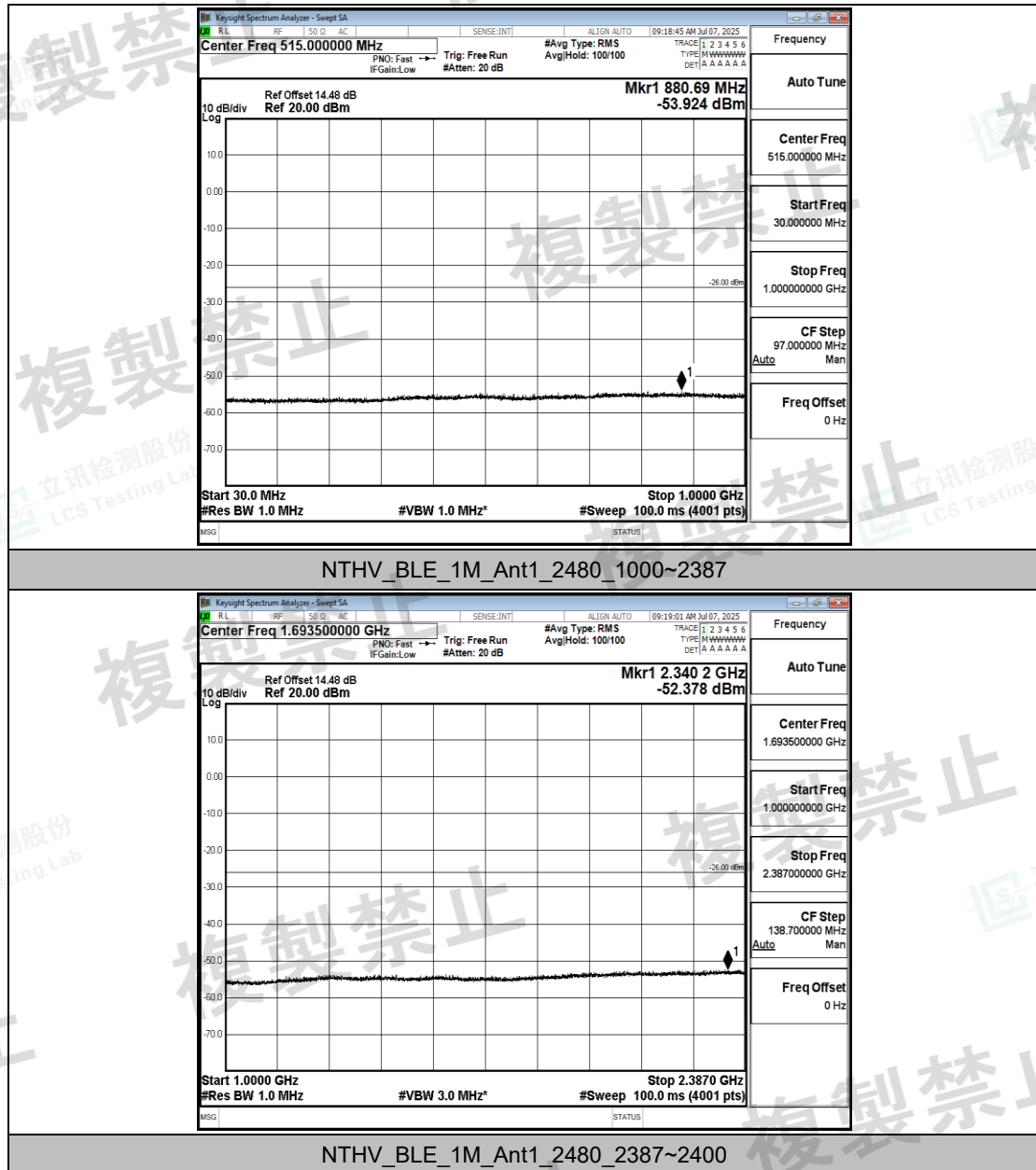


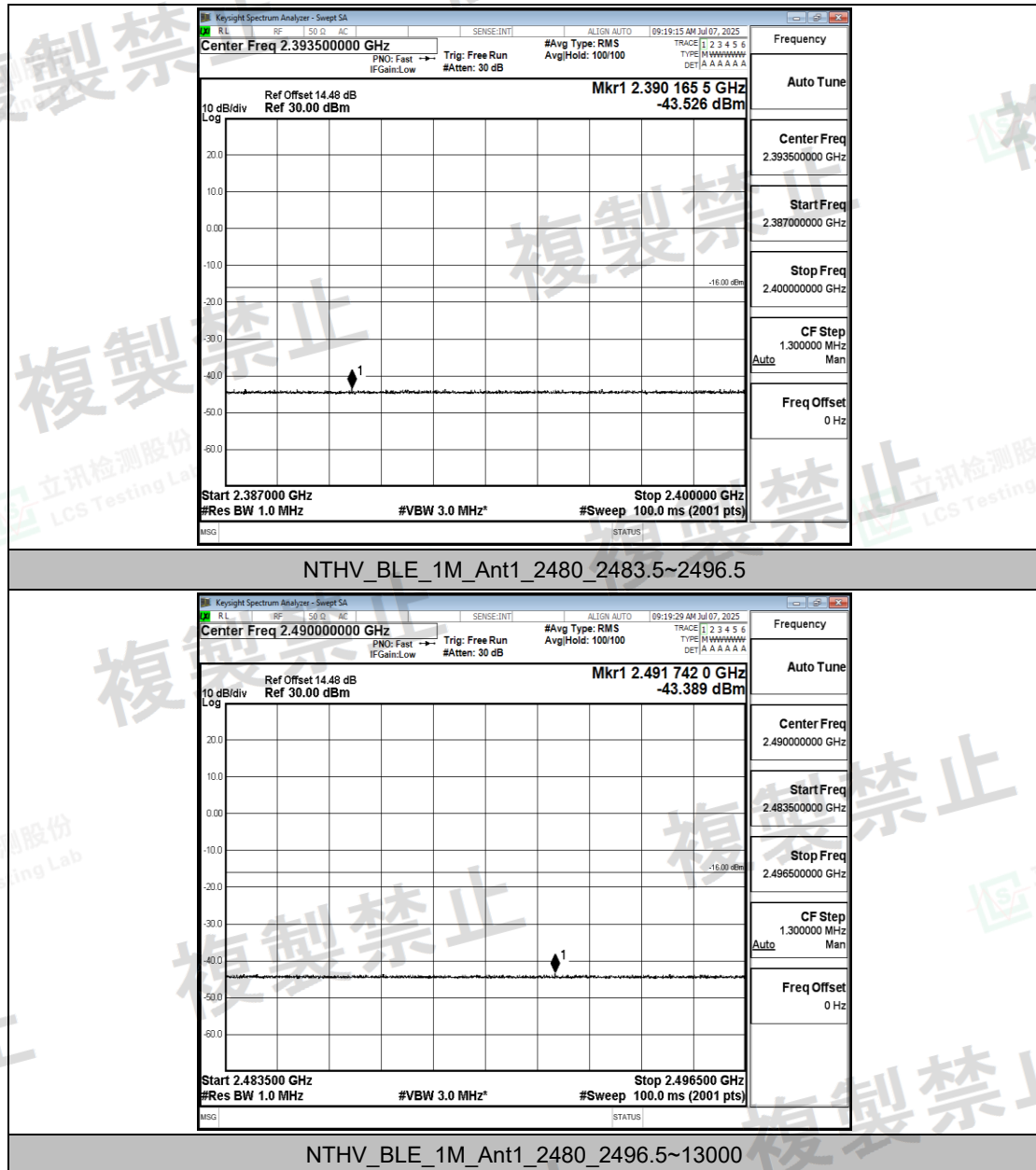


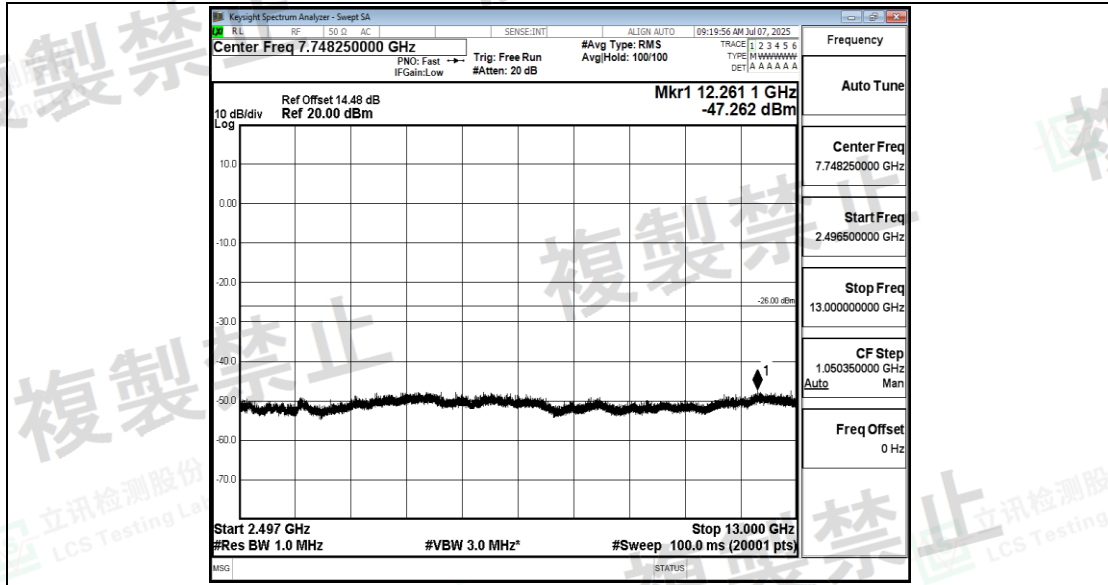














A.6 Spurious Emission of RX

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	-89.53	≤-54	0.00111	≤4	PASS
				1000~12500	-73.15	≤-47	0.04842	≤20	PASS
			2440	30~1000	-89.73	≤-54	0.00106	≤4	PASS
				1000~12500	-72.64	≤-47	0.05445	≤20	PASS
			2480	30~1000	-89.42	≤-54	0.00114	≤4	PASS
				1000~12500	-73.24	≤-47	0.04742	≤20	PASS

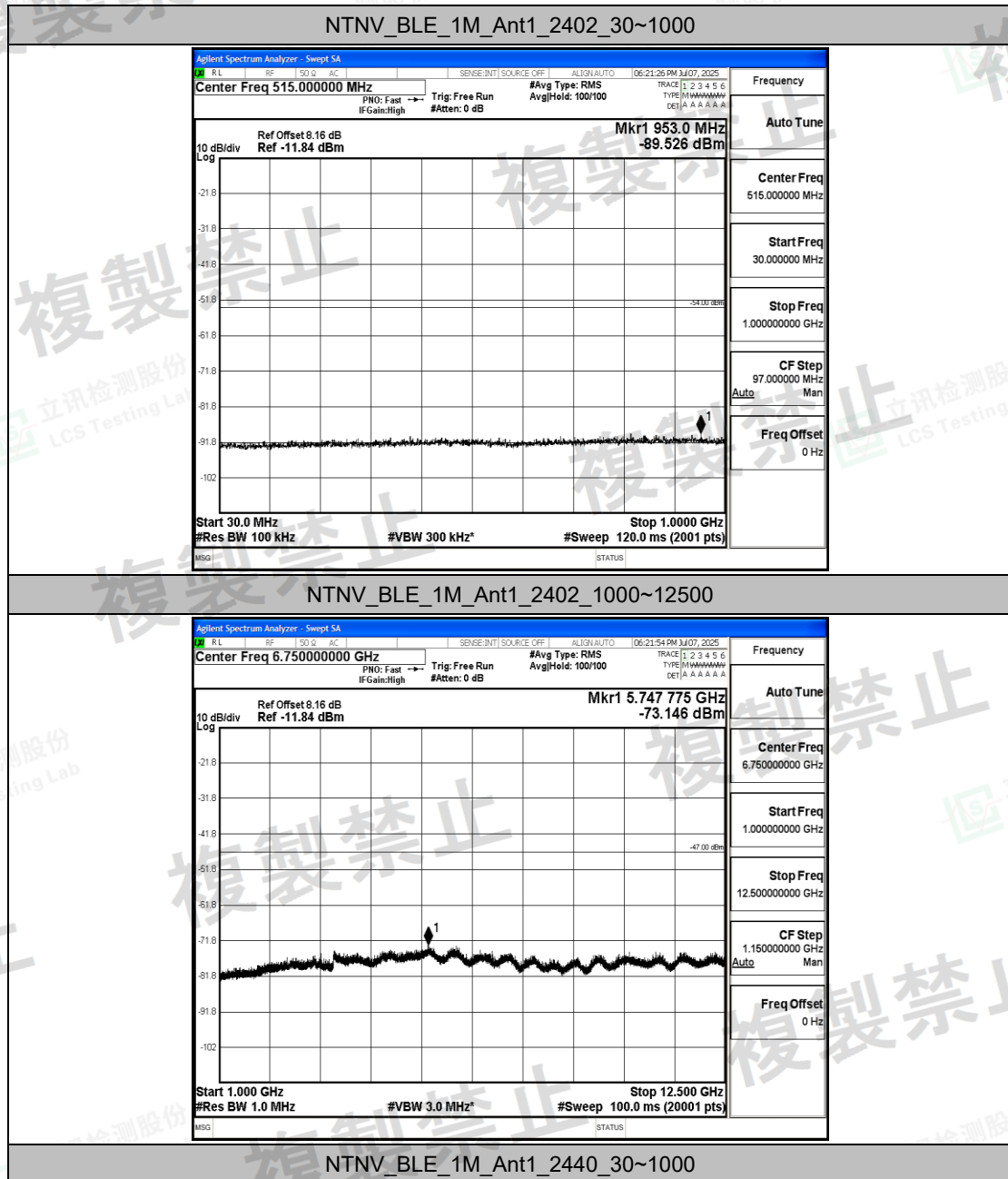
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTLV	BLE_1M	Ant1	2402	30~1000	-83.6	≤-54	0.00437	≤4	PASS
				1000~12500	-67.8	≤-47	0.16596	≤20	PASS
			2440	30~1000	-83.55	≤-54	0.00442	≤4	PASS
				1000~12500	-68.37	≤-47	0.14555	≤20	PASS
			2480	30~1000	-82.96	≤-54	0.00506	≤4	PASS
				1000~12500	-68.97	≤-47	0.12677	≤20	PASS

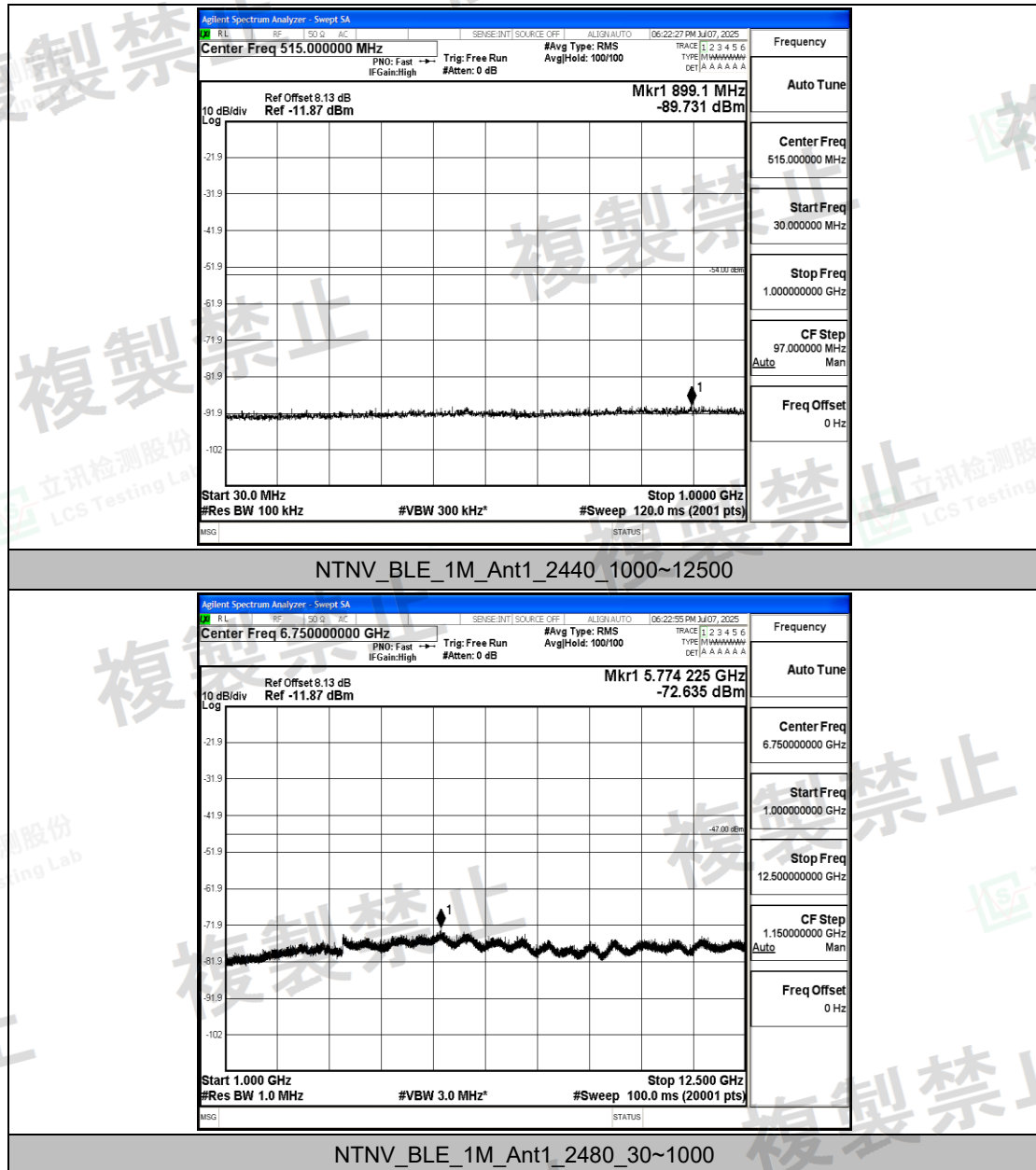
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTHV	BLE_1M	Ant1	2402	30~1000	-83.5	≤-54	0.00447	≤4	PASS
				1000~12500	-68.74	≤-47	0.13366	≤20	PASS
			2440	30~1000	-83.47	≤-54	0.00450	≤4	PASS
				1000~12500	-68.86	≤-47	0.13002	≤20	PASS
			2480	30~1000	-83.66	≤-54	0.00431	≤4	PASS
				1000~12500	-68.34	≤-47	0.14655	≤20	PASS

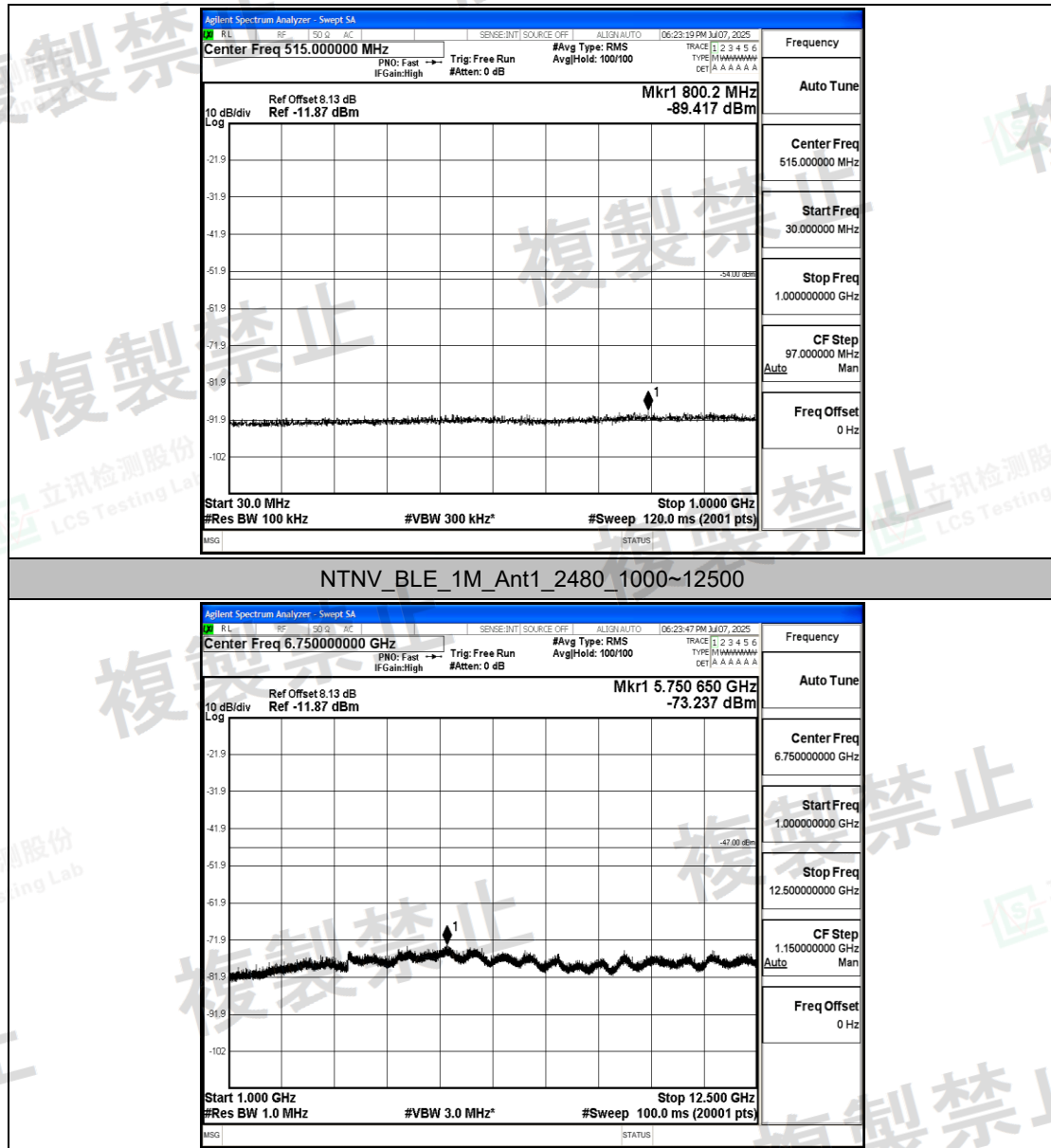




Test Graphs



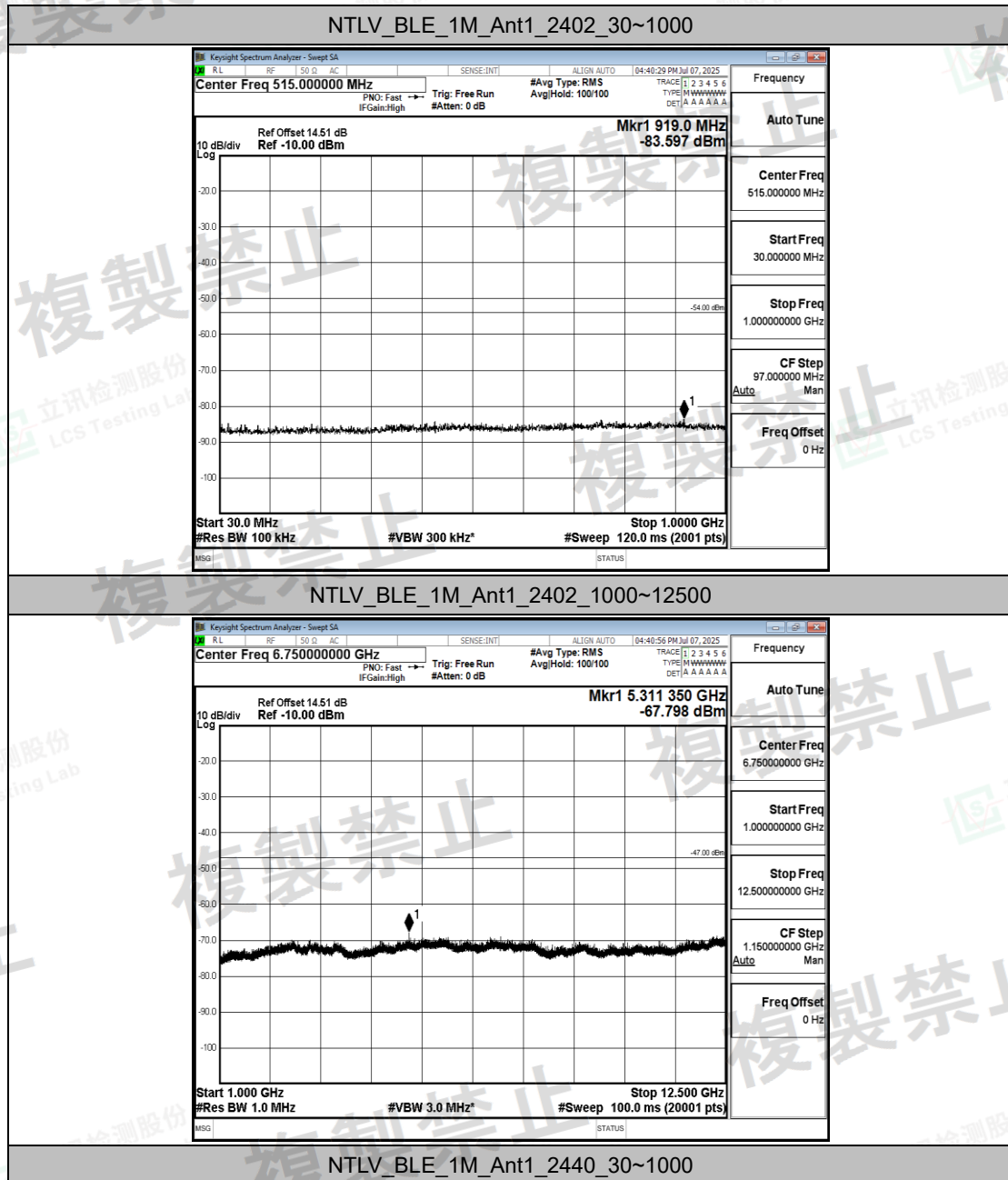


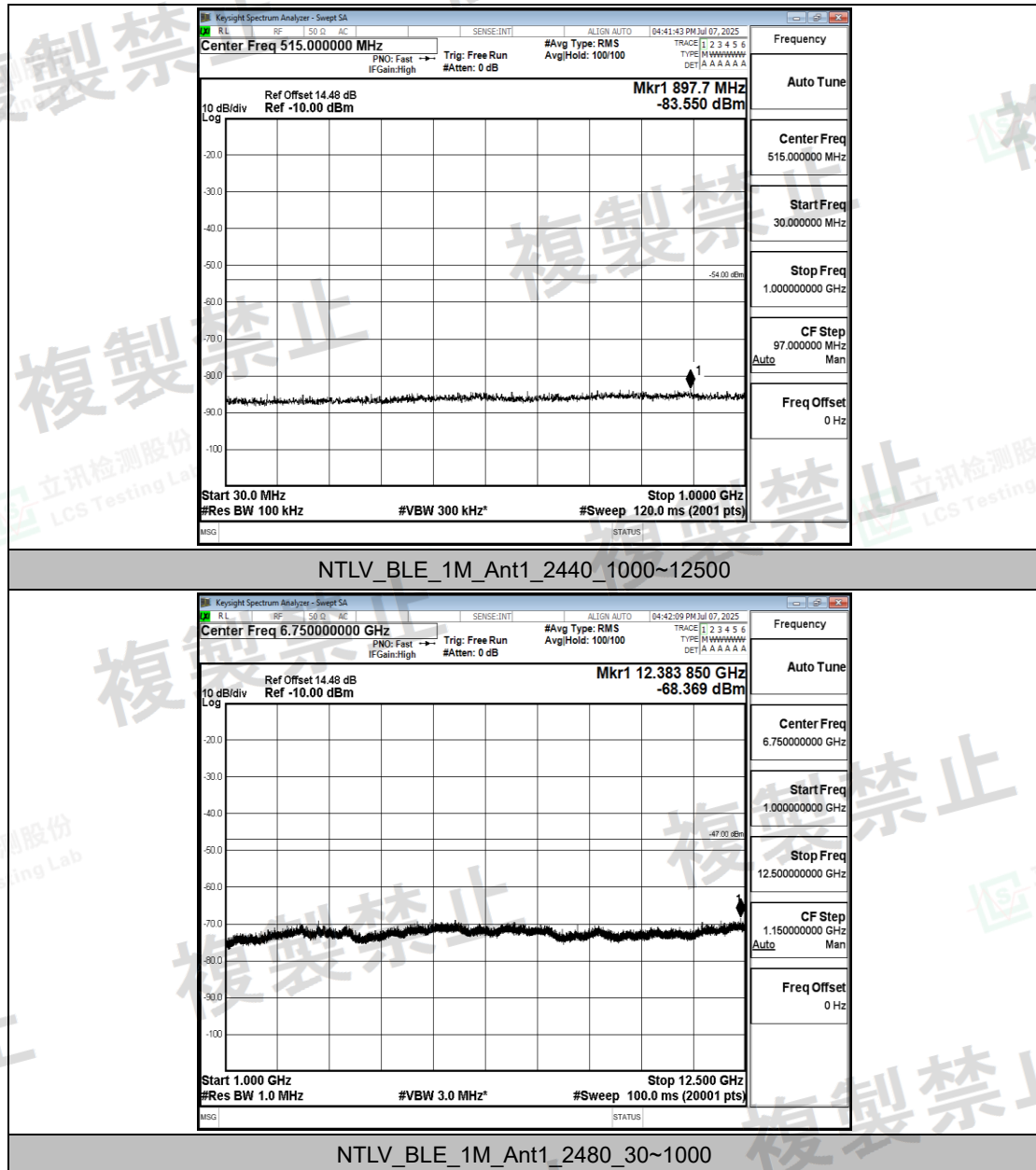


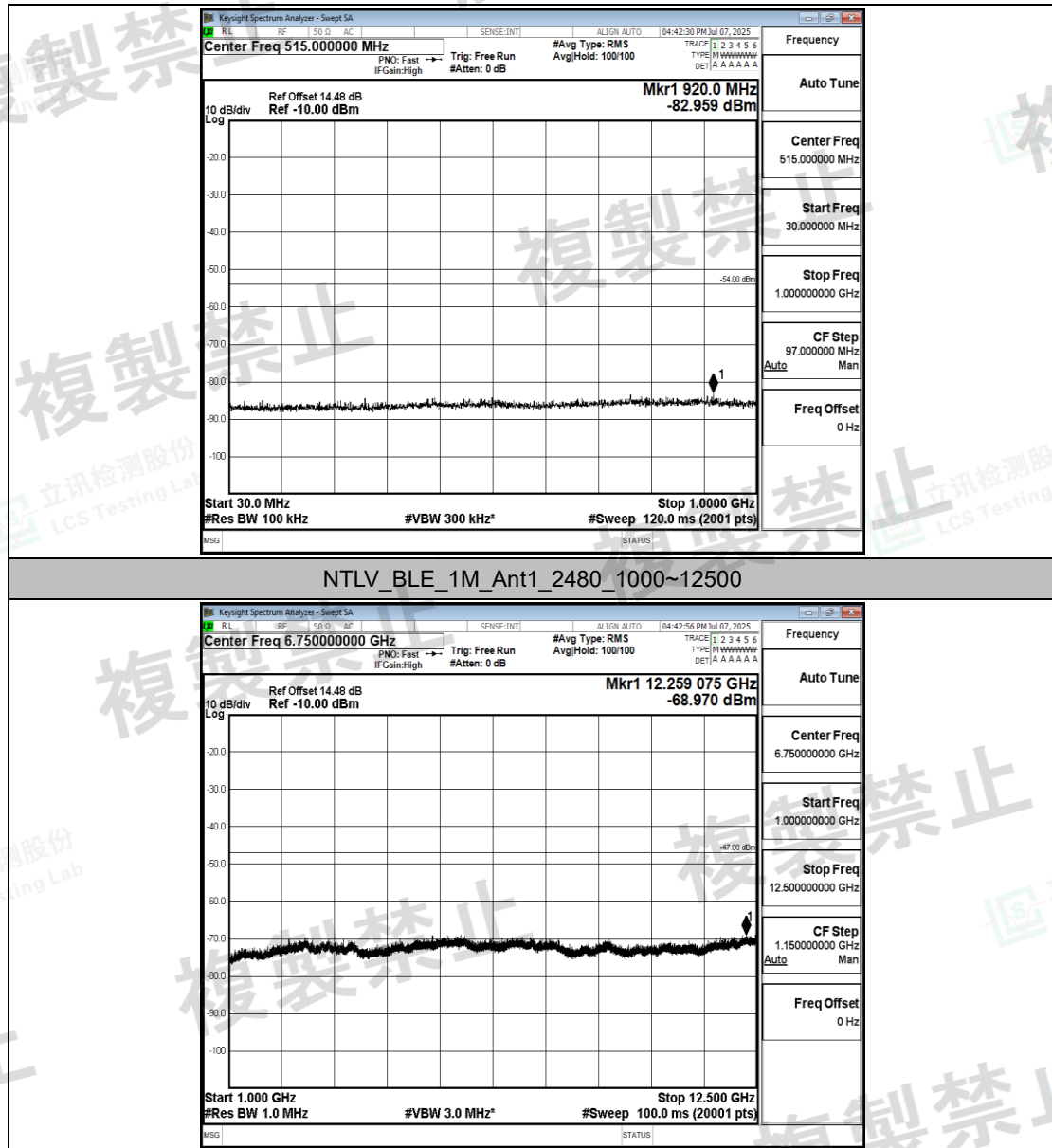
Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity



Test Graphs

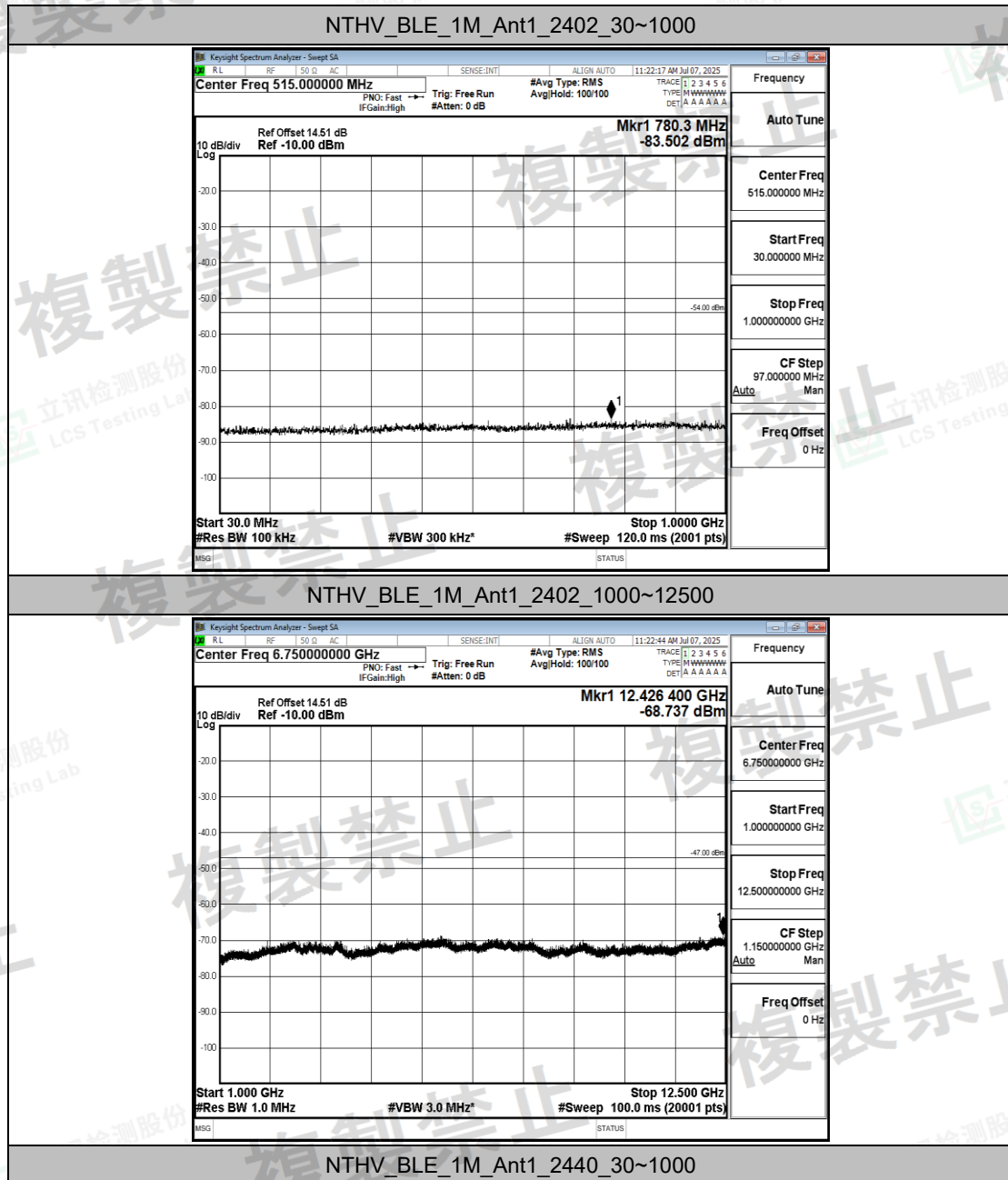


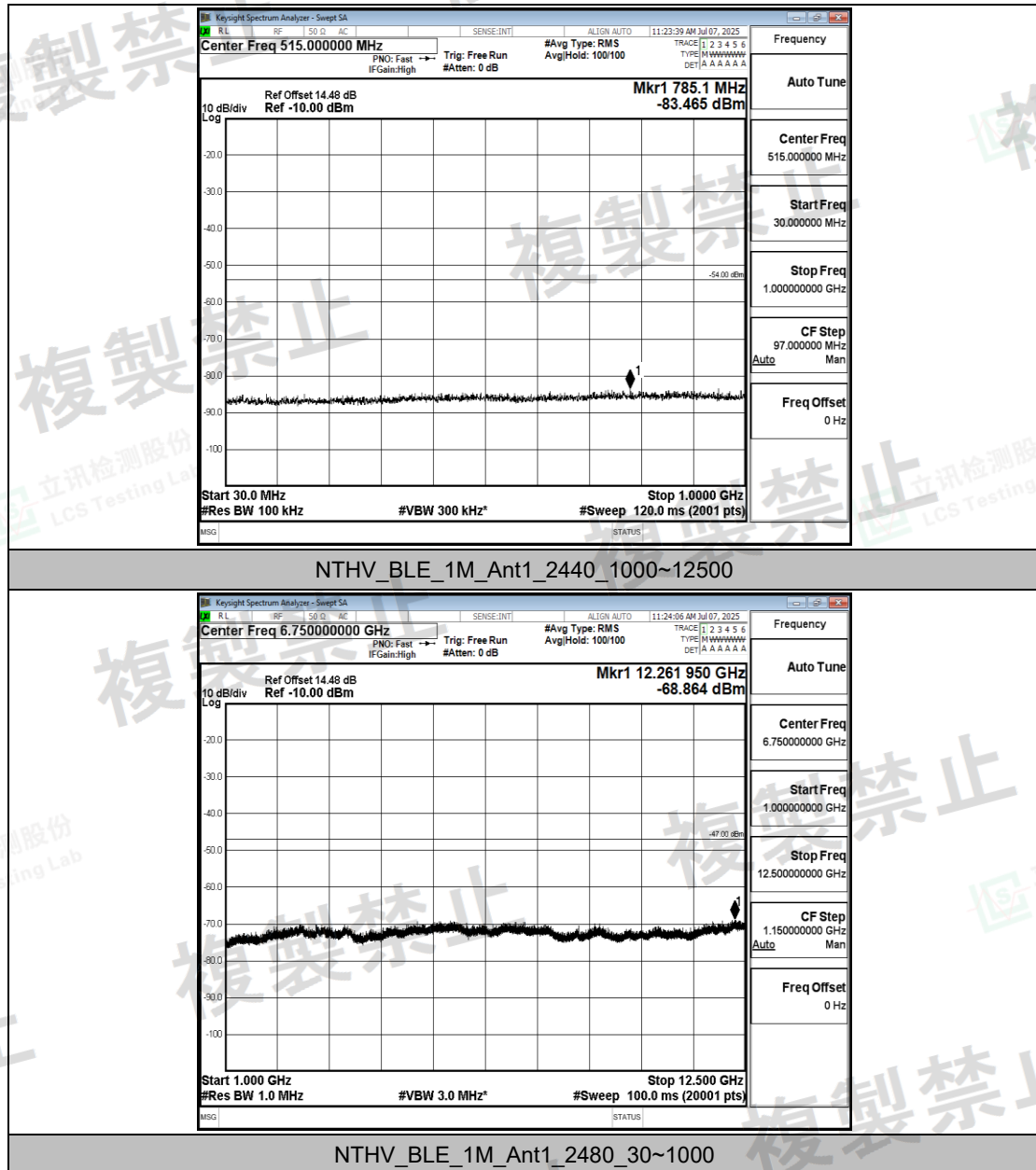


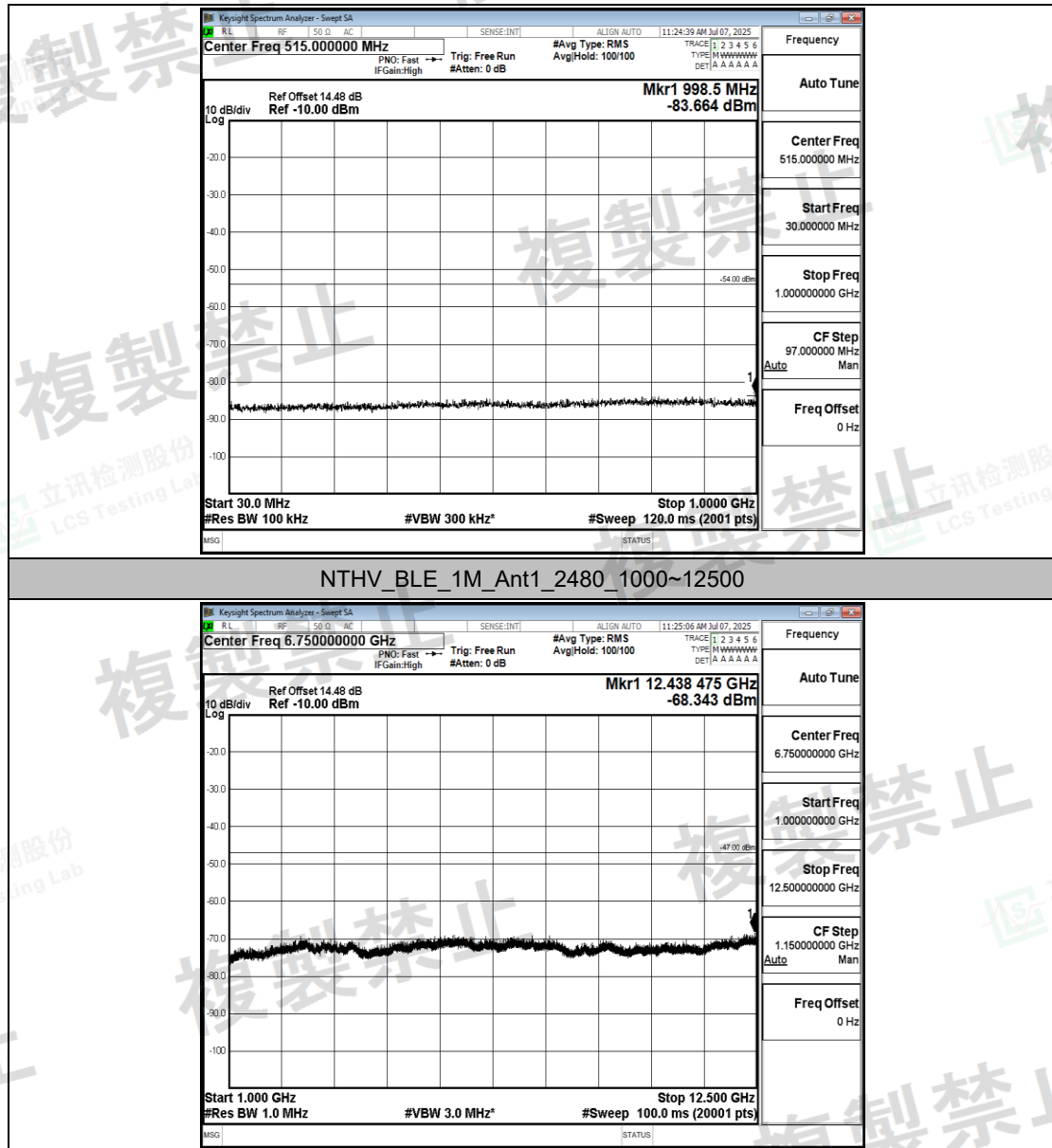




Test Graphs







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