

Appendix A for BT LE Test Data

Product Name: Wireless mouse

Test Model: RS3 ULTRA

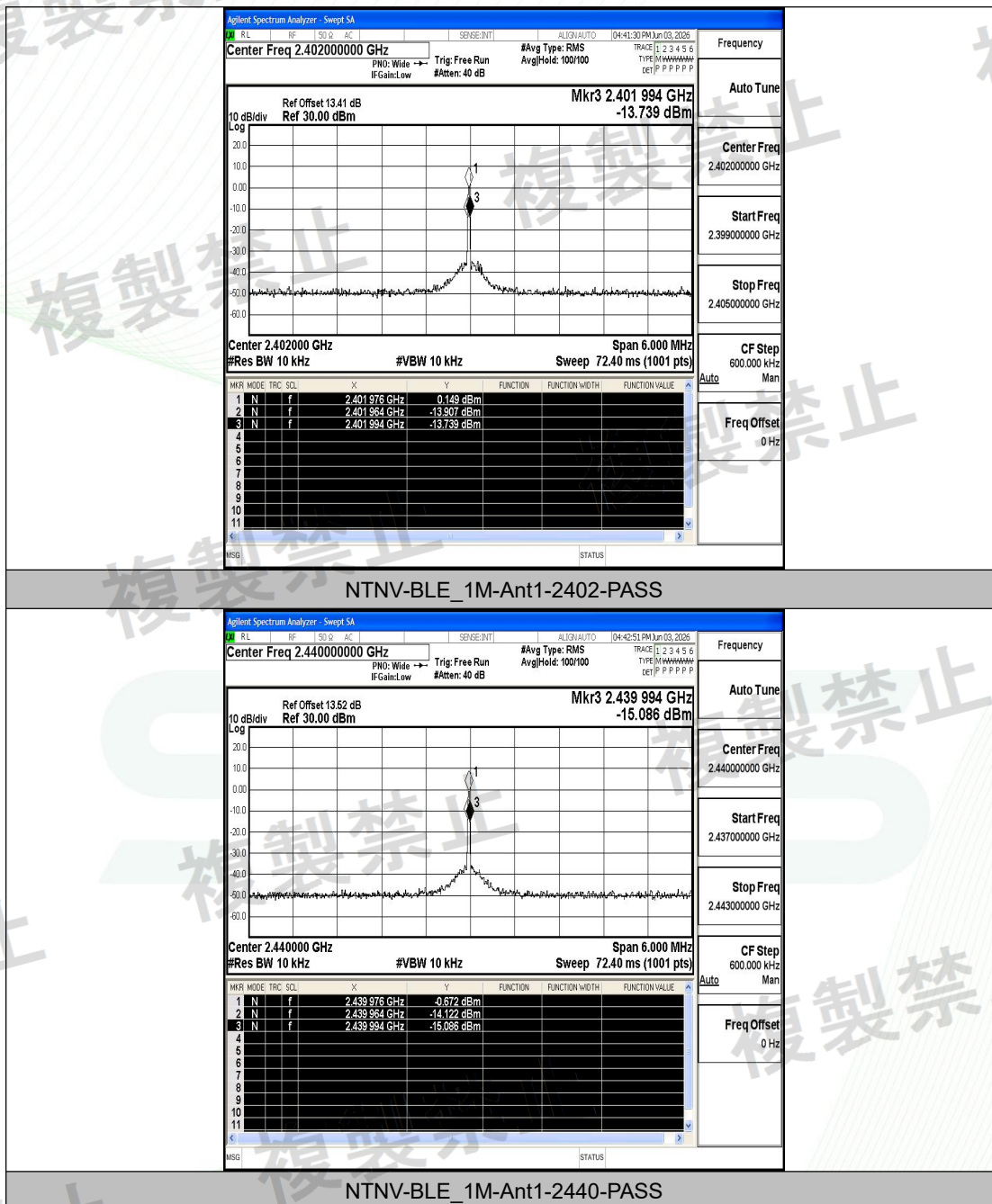
Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	54.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Peng Dong
Supervised by:	Zom Zhang

A.1 Frequency Error

Test Result

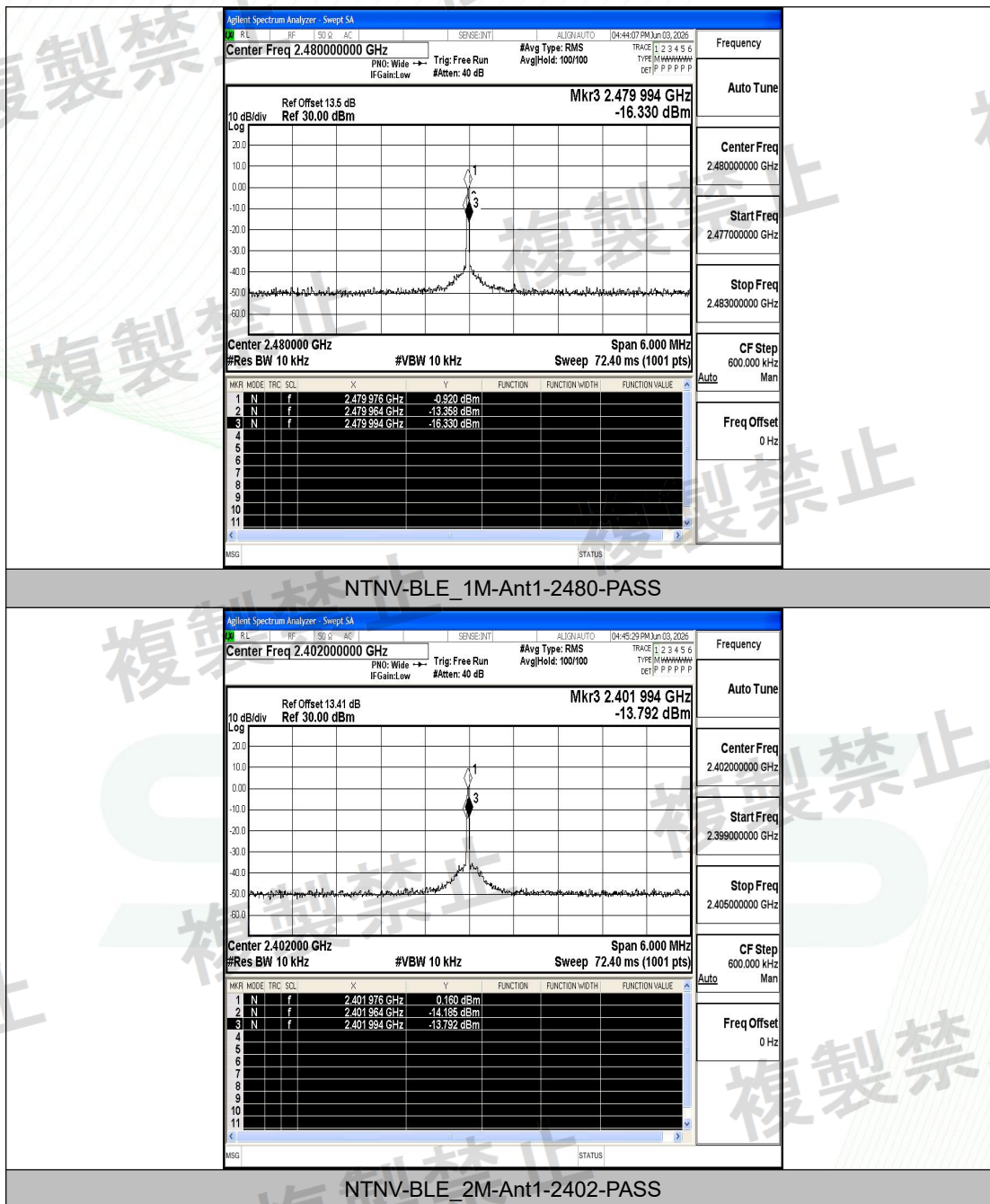
TestCondition	TestMode	Antenna	Freq(MHz)	CenterFreq [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	BLE_1M	Ant1	2402	2401.979	-8.74271	±50	PASS
NTNV	BLE_1M	Ant1	2440	2439.979	-8.60656	±50	PASS
NTNV	BLE_1M	Ant1	2480	2479.979	-8.46774	±50	PASS
NTNV	BLE_2M	Ant1	2402	2401.979	-8.74271	±50	PASS
NTNV	BLE_2M	Ant1	2440	2439.979	-8.60656	±50	PASS
NTNV	BLE_2M	Ant1	2480	2479.979	-8.46774	±50	PASS

Test Graphs

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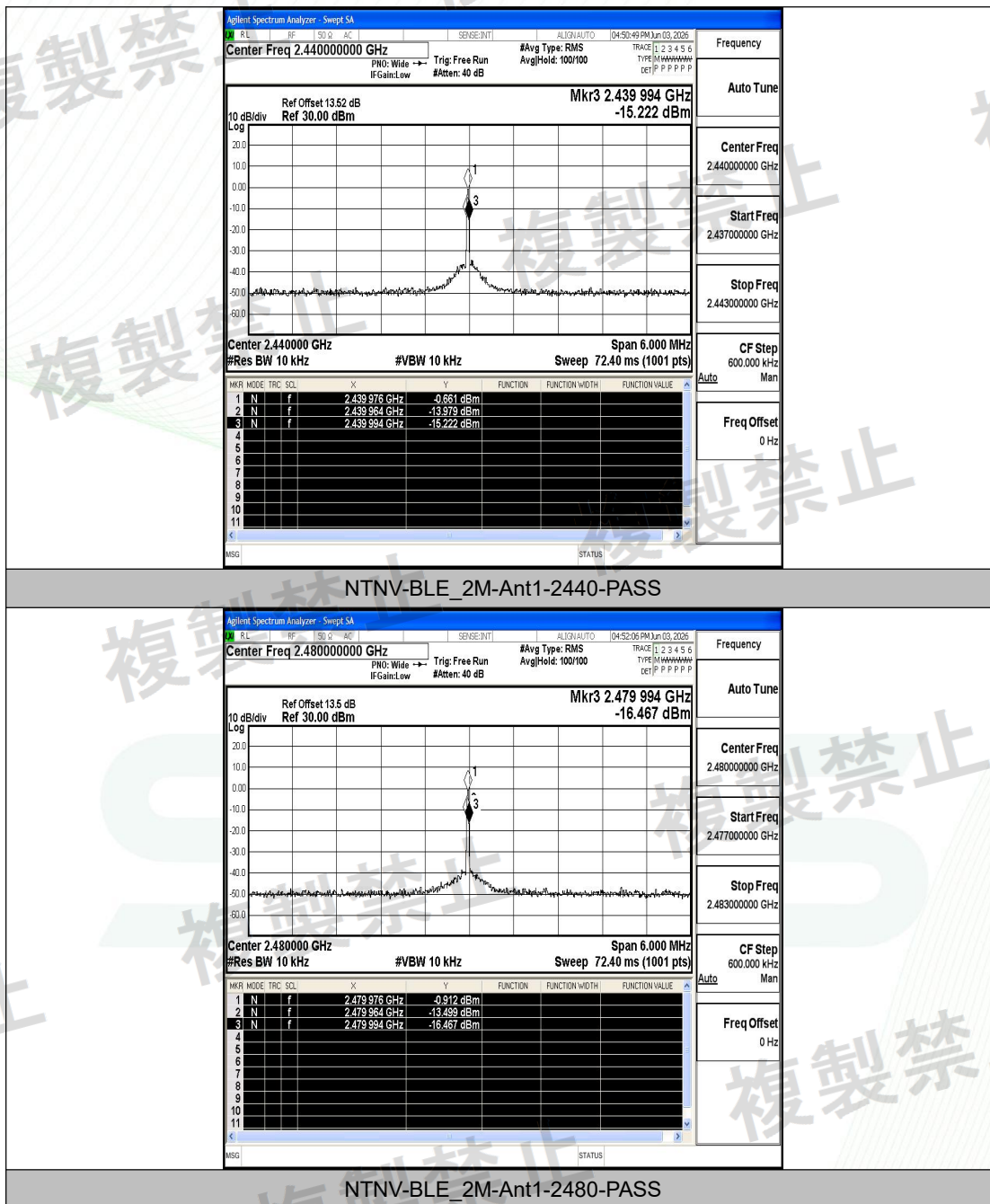
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A.2 Antenna Power

Test Result

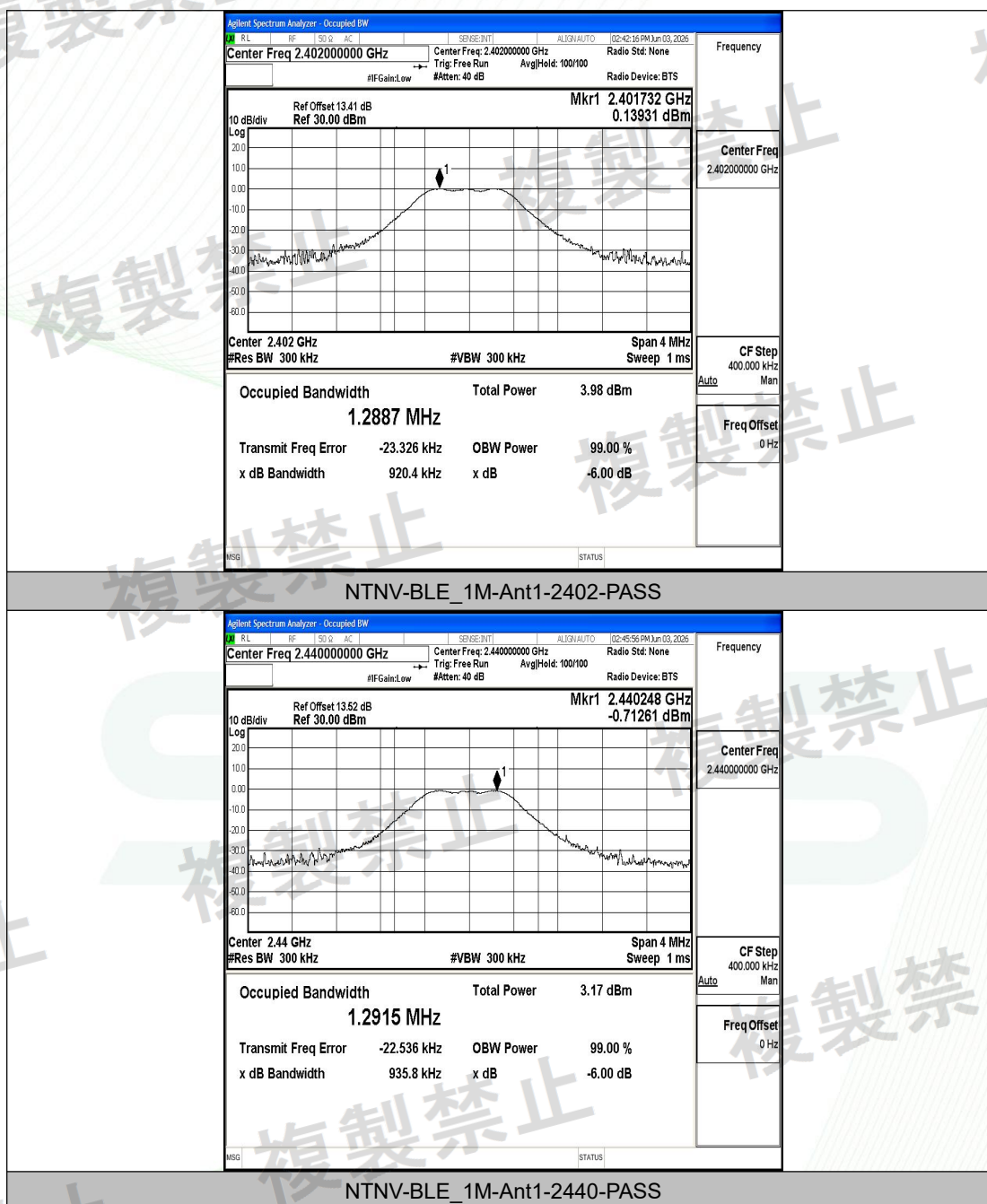
Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant1	2402	-0.91	0.81	≤10	PASS
			2440	-1.77	0.67	≤10	PASS
			2480	-1.97	0.64	≤10	PASS
	BLE_2M		2402	-1.80	0.66	≤10	PASS
			2440	-2.72	0.53	≤10	PASS
			2480	-2.92	0.51	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	BLE_1M	Ant1	2402	0.81	1.0	-19.00	+20	PASS
			2440	0.67	1.0	-33.00	+20	PASS
			2480	0.64	1.0	-36.00	+20	PASS
	BLE_2M		2402	0.66	1.0	-34.00	+20	PASS
			2440	0.53	1.0	-47.00	+20	PASS
			2480	0.51	1.0	-49.00	+20	PASS

A.3 Occupied Bandwidth

Test Result

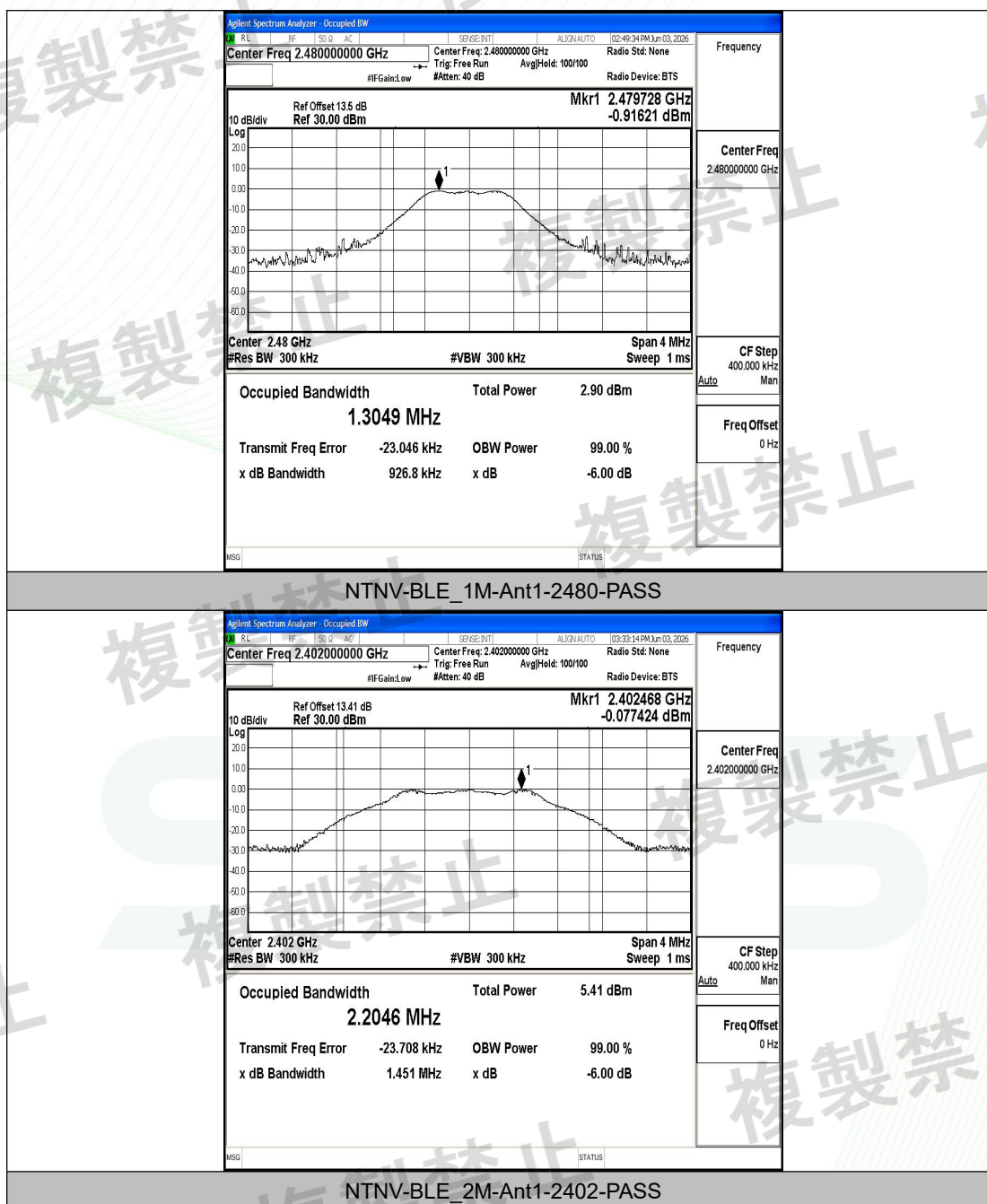
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.289	≤26	PASS
NTNV	BLE_1M	Ant1	2440	1.292	≤26	PASS
NTNV	BLE_1M	Ant1	2480	1.305	≤26	PASS
NTNV	BLE_2M	Ant1	2402	2.205	≤26	PASS
NTNV	BLE_2M	Ant1	2440	2.225	≤26	PASS
NTNV	BLE_2M	Ant1	2480	2.218	≤26	PASS

Test Graphs

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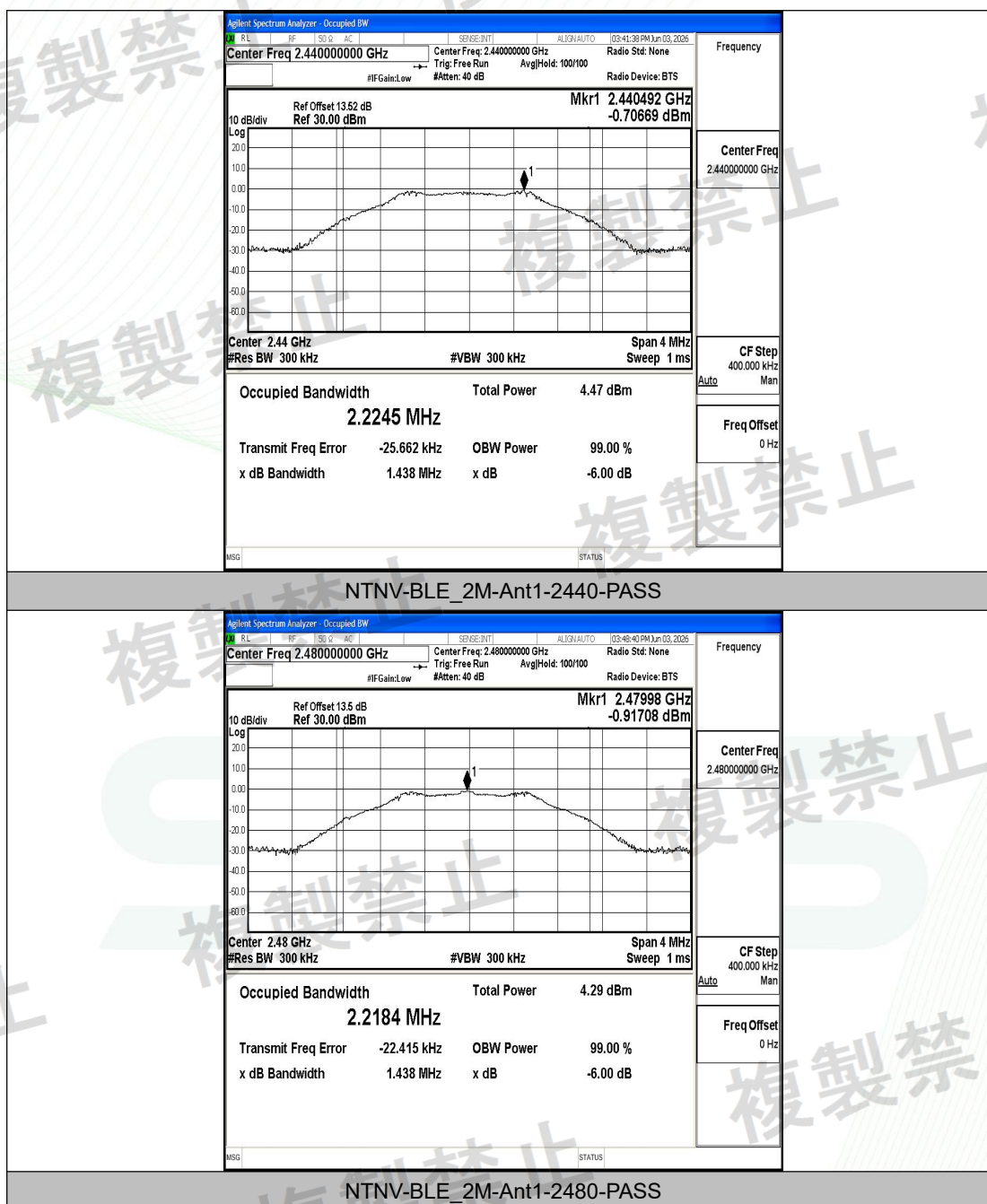
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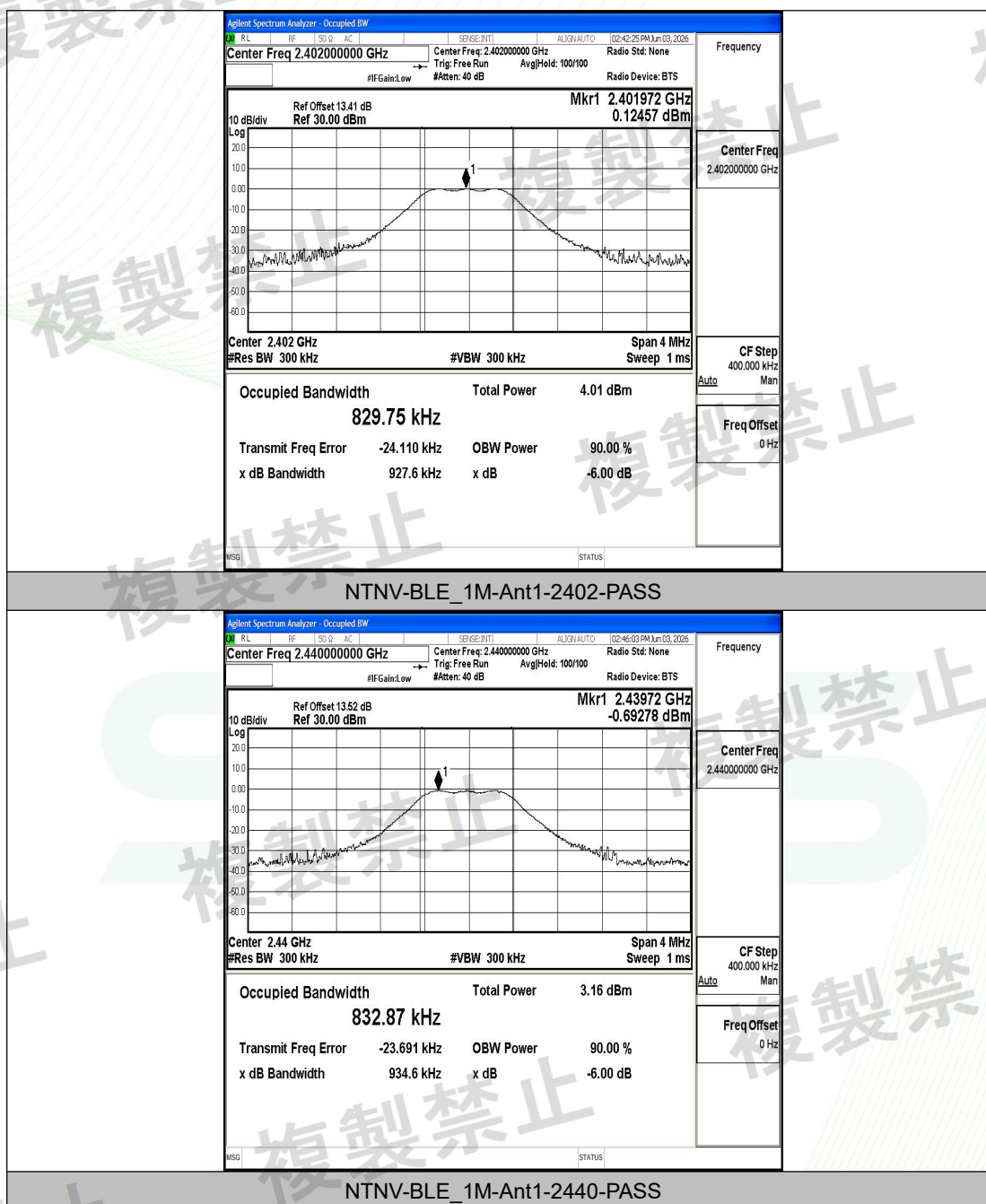
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A.4 Spread Bandwidth

Test Result

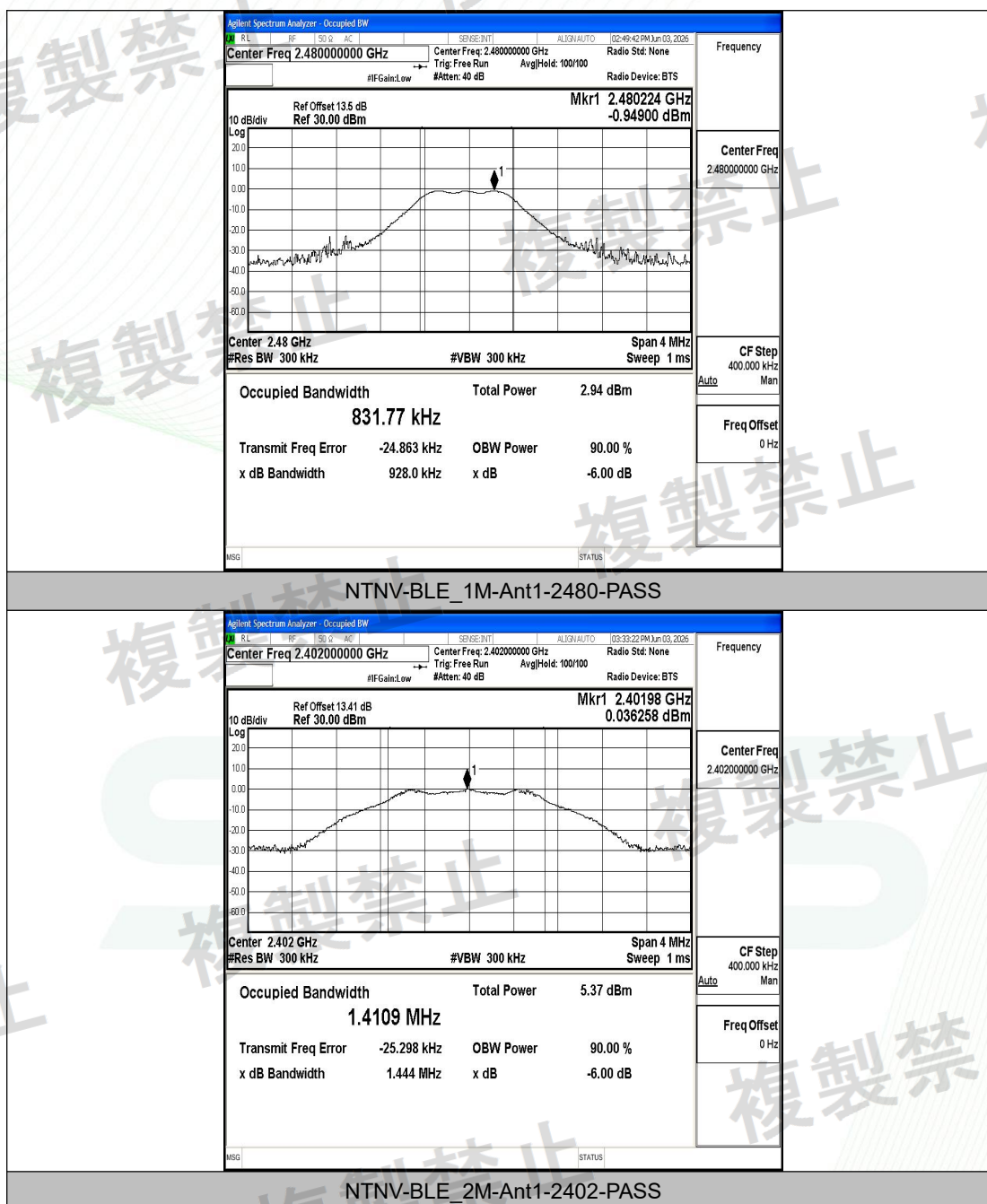
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.830	≥0.5	PASS
NTNV	BLE_1M	Ant1	2440	0.833	≥0.5	PASS
NTNV	BLE_1M	Ant1	2480	0.832	≥0.5	PASS
NTNV	BLE_2M	Ant1	2402	1.411	≥0.5	PASS
NTNV	BLE_2M	Ant1	2440	1.411	≥0.5	PASS
NTNV	BLE_2M	Ant1	2480	1.410	≥0.5	PASS

Test Graphs

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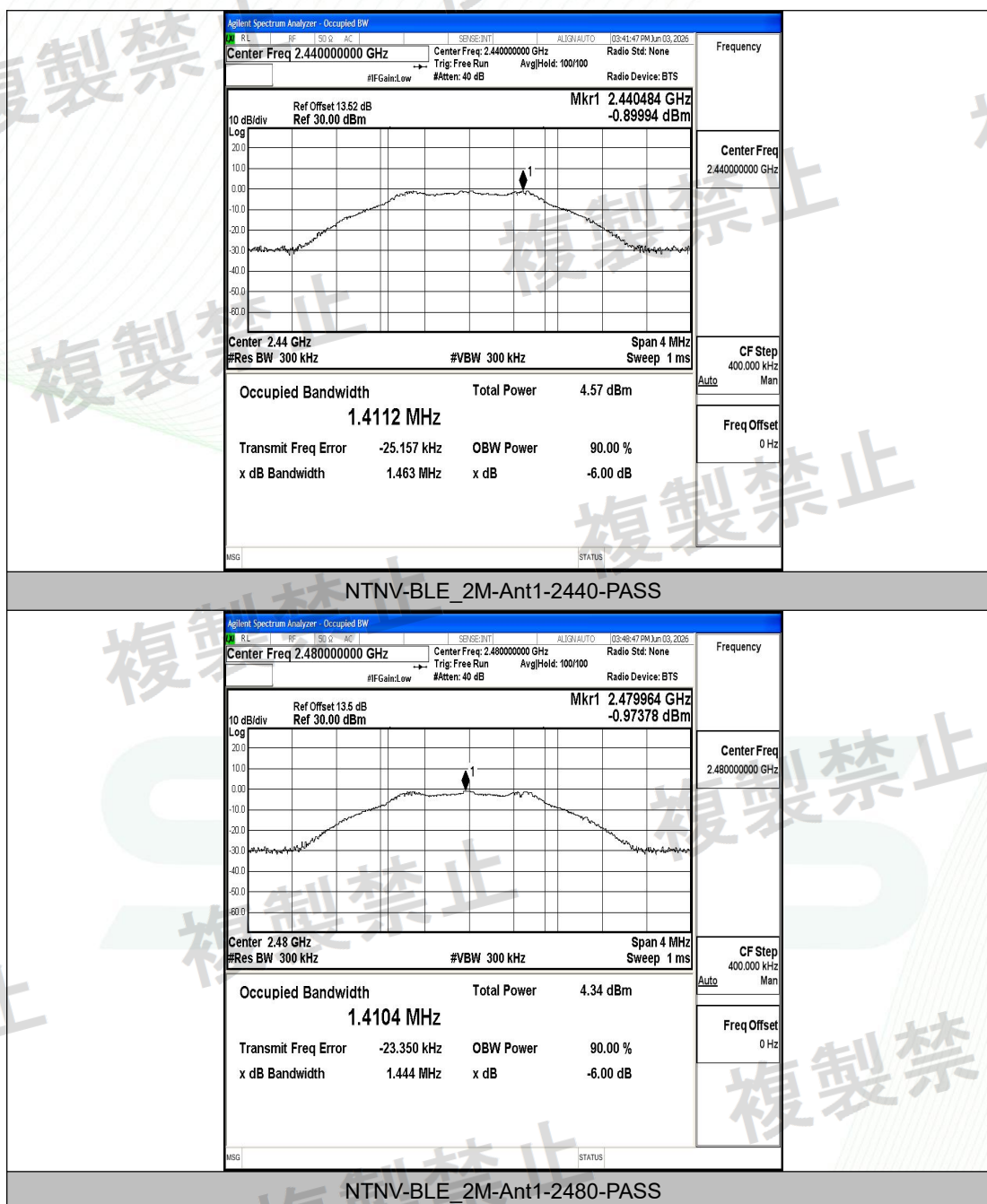
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A.5 Spurious Emission of TX

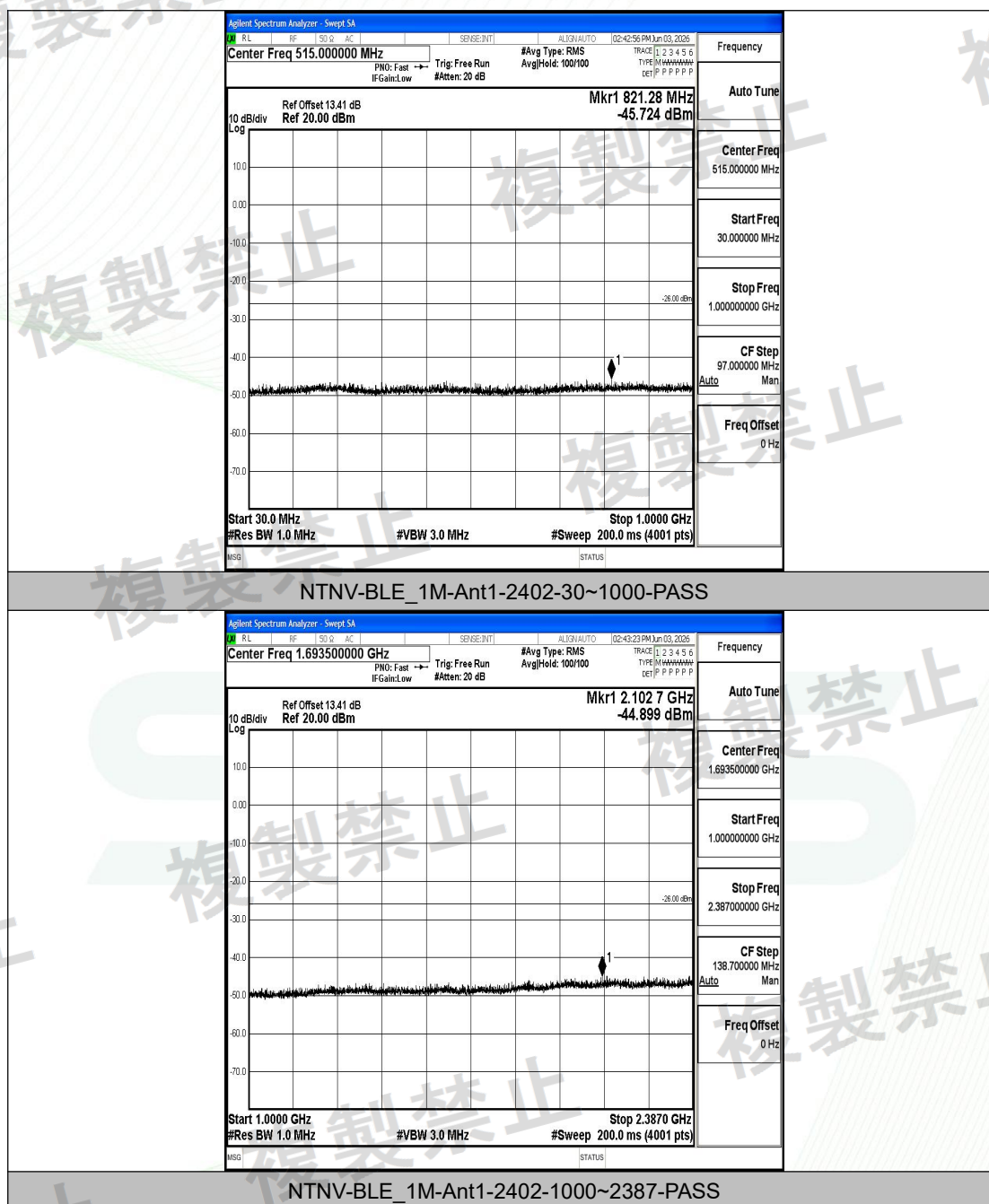
Test Result

TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	821.28	-45.72	≤-26	0.02679	≤2.5	PASS
NTNV	BLE_1M	Ant1	2402	1000~2387	2102.67	-44.90	≤-26	0.03236	≤2.5	PASS
NTNV	BLE_1M	Ant1	2402	2387~2400	2399.95	-23.97	≤-16	4.00867	≤25	PASS
NTNV	BLE_1M	Ant1	2402	2483.5~2496.5	2486.46	-35.39	≤-16	0.28907	≤25	PASS
NTNV	BLE_1M	Ant1	2402	2496.5~13000	6150.67	-42.72	≤-26	0.05346	≤2.5	PASS
NTNV	BLE_1M	Ant1	2440	30~1000	780.54	-44.46	≤-26	0.03581	≤2.5	PASS
NTNV	BLE_1M	Ant1	2440	1000~2387	2288.18	-44.76	≤-26	0.03342	≤2.5	PASS
NTNV	BLE_1M	Ant1	2440	2387~2400	2397.14	-35.23	≤-16	0.29992	≤25	PASS
NTNV	BLE_1M	Ant1	2440	2483.5~2496.5	2489.27	-35.36	≤-16	0.29107	≤25	PASS
NTNV	BLE_1M	Ant1	2440	2496.5~13000	5236.34	-42.34	≤-26	0.05834	≤2.5	PASS
NTNV	BLE_1M	Ant1	2480	30~1000	897.42	-45.13	≤-26	0.03069	≤2.5	PASS
NTNV	BLE_1M	Ant1	2480	1000~2387	2245.53	-44.25	≤-26	0.03758	≤2.5	PASS
NTNV	BLE_1M	Ant1	2480	2387~2400	2391.47	-35.28	≤-16	0.29648	≤25	PASS
NTNV	BLE_1M	Ant1	2480	2483.5~2496.5	2483.51	-32.71	≤-16	0.53580	≤25	PASS
NTNV	BLE_1M	Ant1	2480	2496.5~13000	5366.58	-42.08	≤-26	0.06194	≤2.5	PASS
NTNV	BLE_2M	Ant1	2402	30~1000	858.87	-45.64	≤-26	0.02729	≤2.5	PASS
NTNV	BLE_2M	Ant1	2402	1000~2387	2227.84	-44.61	≤-26	0.03459	≤2.5	PASS
NTNV	BLE_2M	Ant1	2402	2387~2400	2400.00	-19.40	≤-16	11.4815 4	≤25	PASS
NTNV	BLE_2M	Ant1	2402	2483.5~2496.5	2488.76	-35.48	≤-16	0.28314	≤25	PASS
NTNV	BLE_2M	Ant1	2402	2496.5~13000	5240.01	-42.11	≤-26	0.06152	≤2.5	PASS
NTNV	BLE_2M	Ant1	2440	30~1000	385.99	-44.99	≤-26	0.03170	≤2.5	PASS
NTNV	BLE_2M	Ant1	2440	1000~2387	2386.31	-44.34	≤-26	0.03681	≤2.5	PASS
NTNV	BLE_2M	Ant1	2440	2387~2400	2396.16	-35.11	≤-16	0.30832	≤25	PASS
NTNV	BLE_2M	Ant1	2440	2483.5~2496.5	2495.75	-34.85	≤-16	0.32734	≤25	PASS
NTNV	BLE_2M	Ant1	2440	2496.5~13000	7575.99	-42.53	≤-26	0.05585	≤2.5	PASS
NTNV	BLE_2M	Ant1	2480	30~1000	780.78	-45.30	≤-26	0.02951	≤2.5	PASS
NTNV	BLE_2M	Ant1	2480	1000~2387	2147.05	-43.92	≤-26	0.04055	≤2.5	PASS
NTNV	BLE_2M	Ant1	2480	2387~2400	2396.19	-35.26	≤-16	0.29785	≤25	PASS
NTNV	BLE_2M	Ant1	2480	2483.5~2496.5	2483.62	-32.11	≤-16	0.61518	≤25	PASS
NTNV	BLE_2M	Ant1	2480	2496.5~13000	12550.98	-42.17	≤-26	0.06067	≤2.5	PASS

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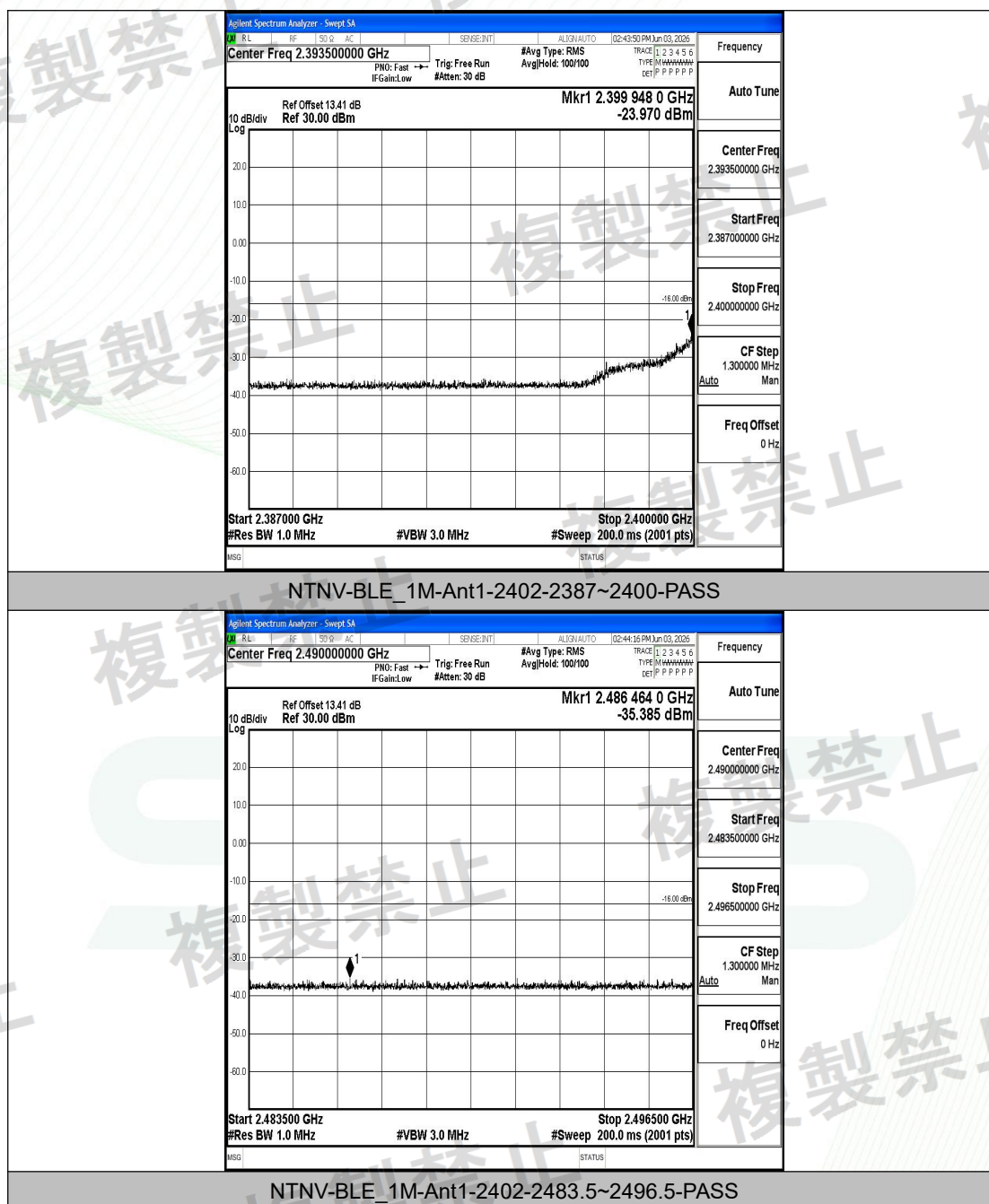
Tel: +(86)0755-29871520 E-mail: info@slcslab.com Web: www.slcslab.com

Test Graphs

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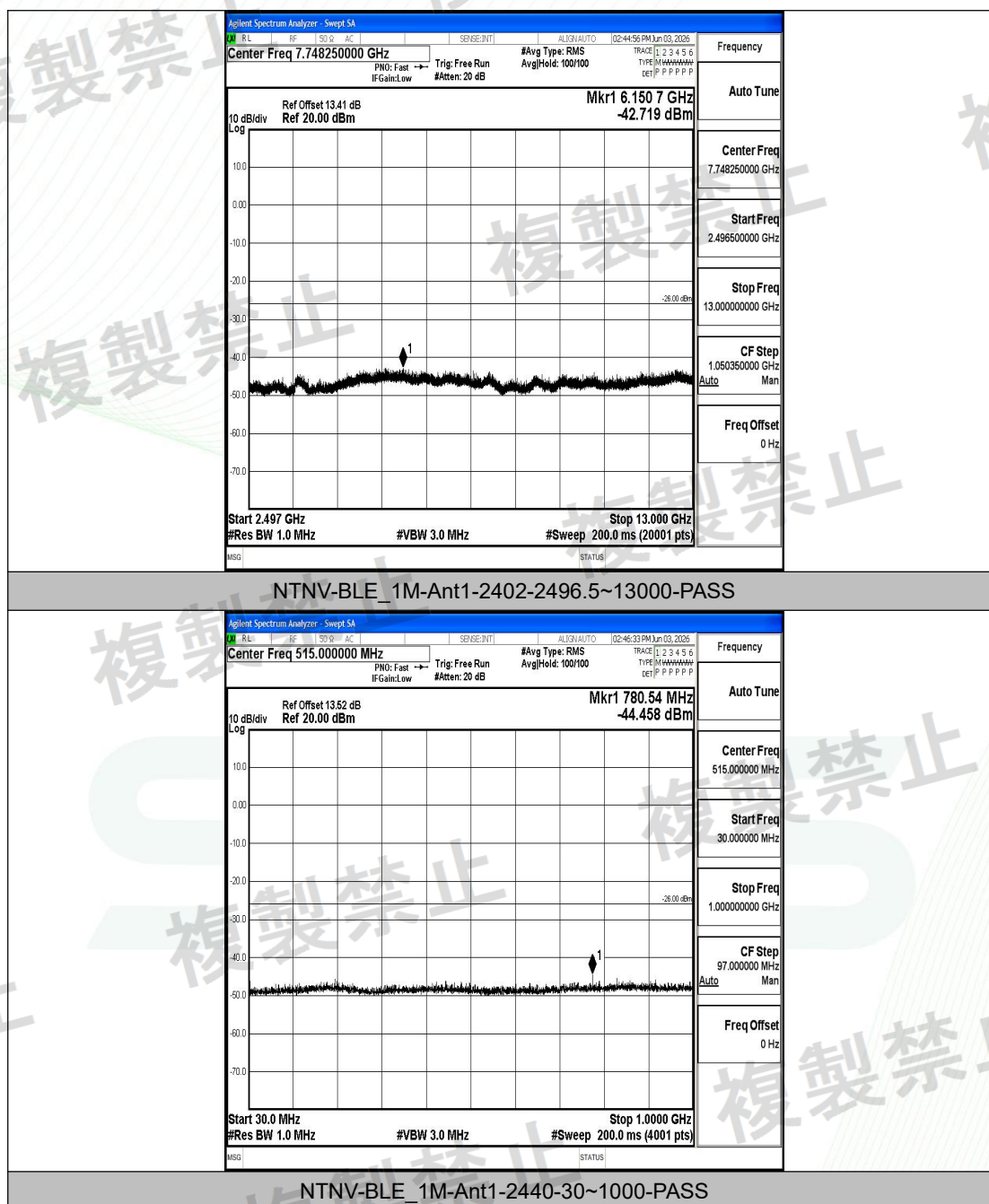
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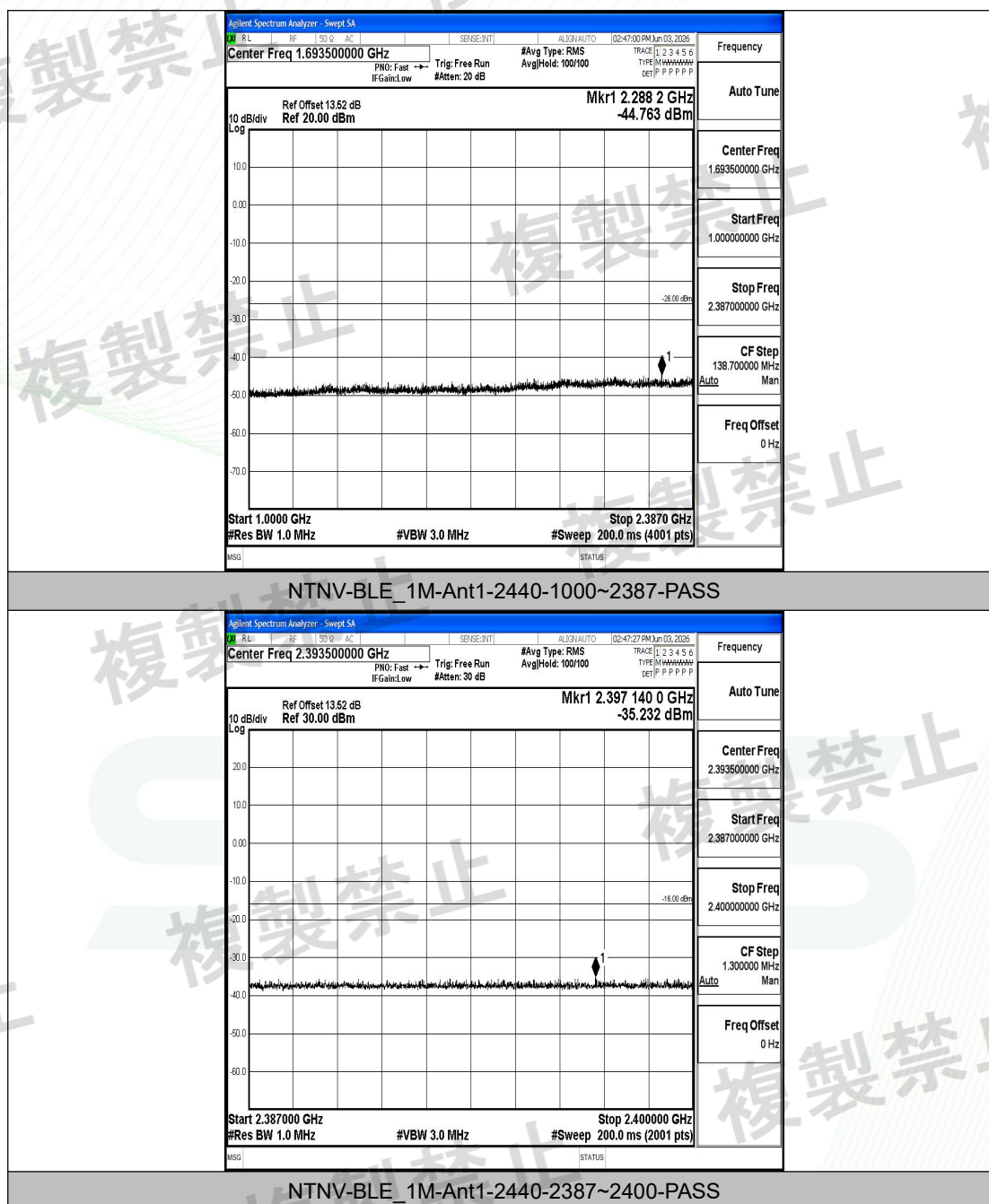
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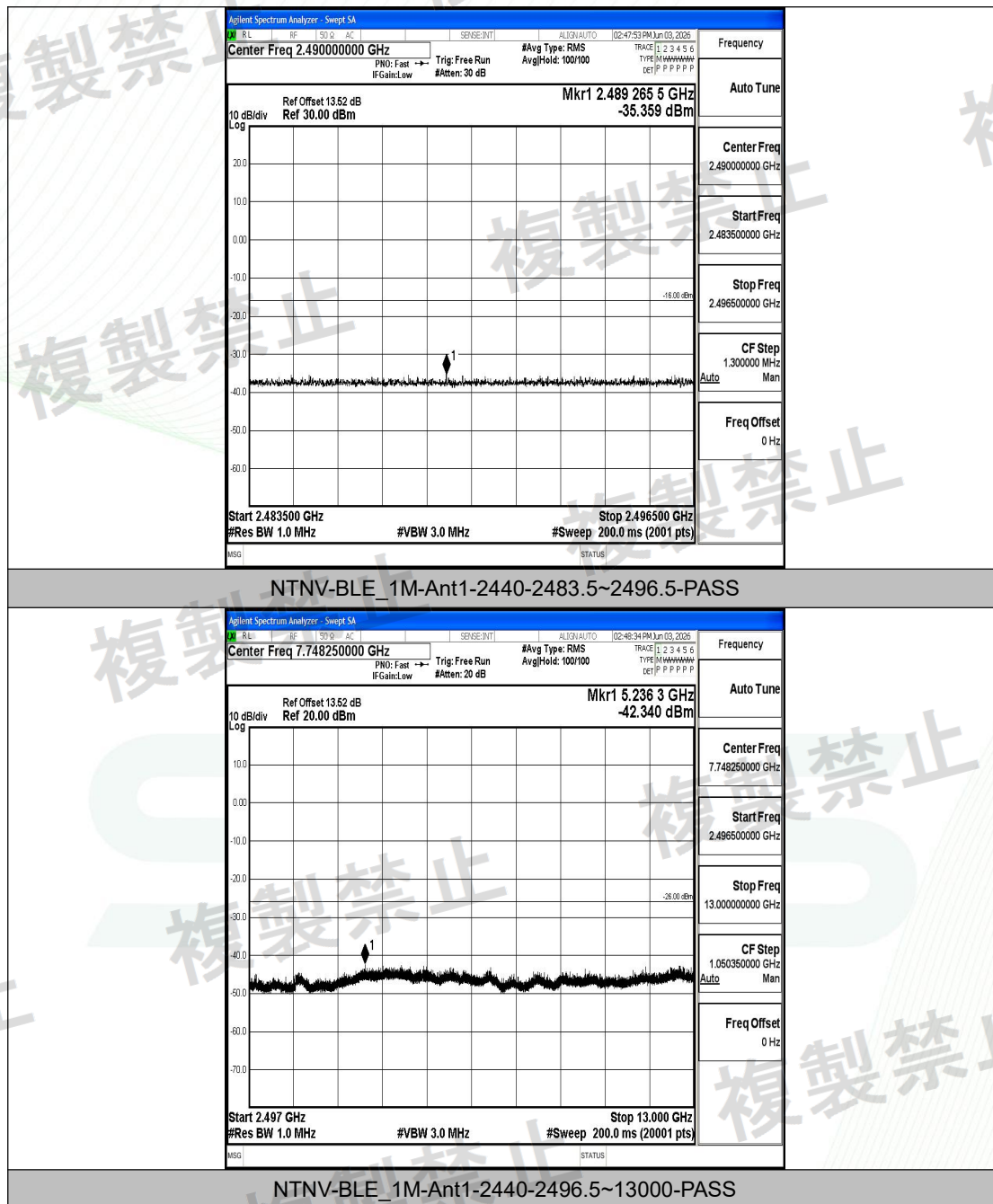
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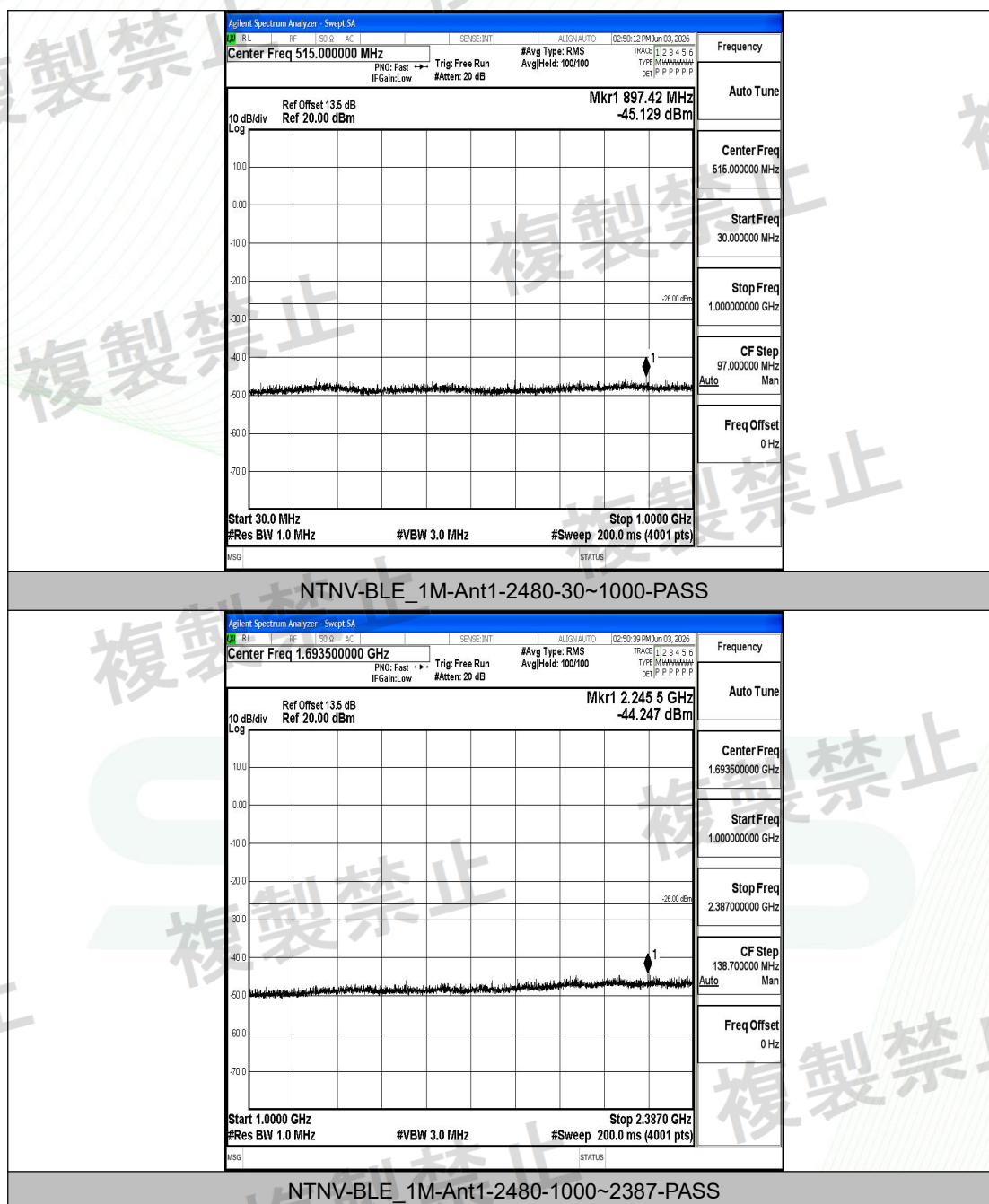
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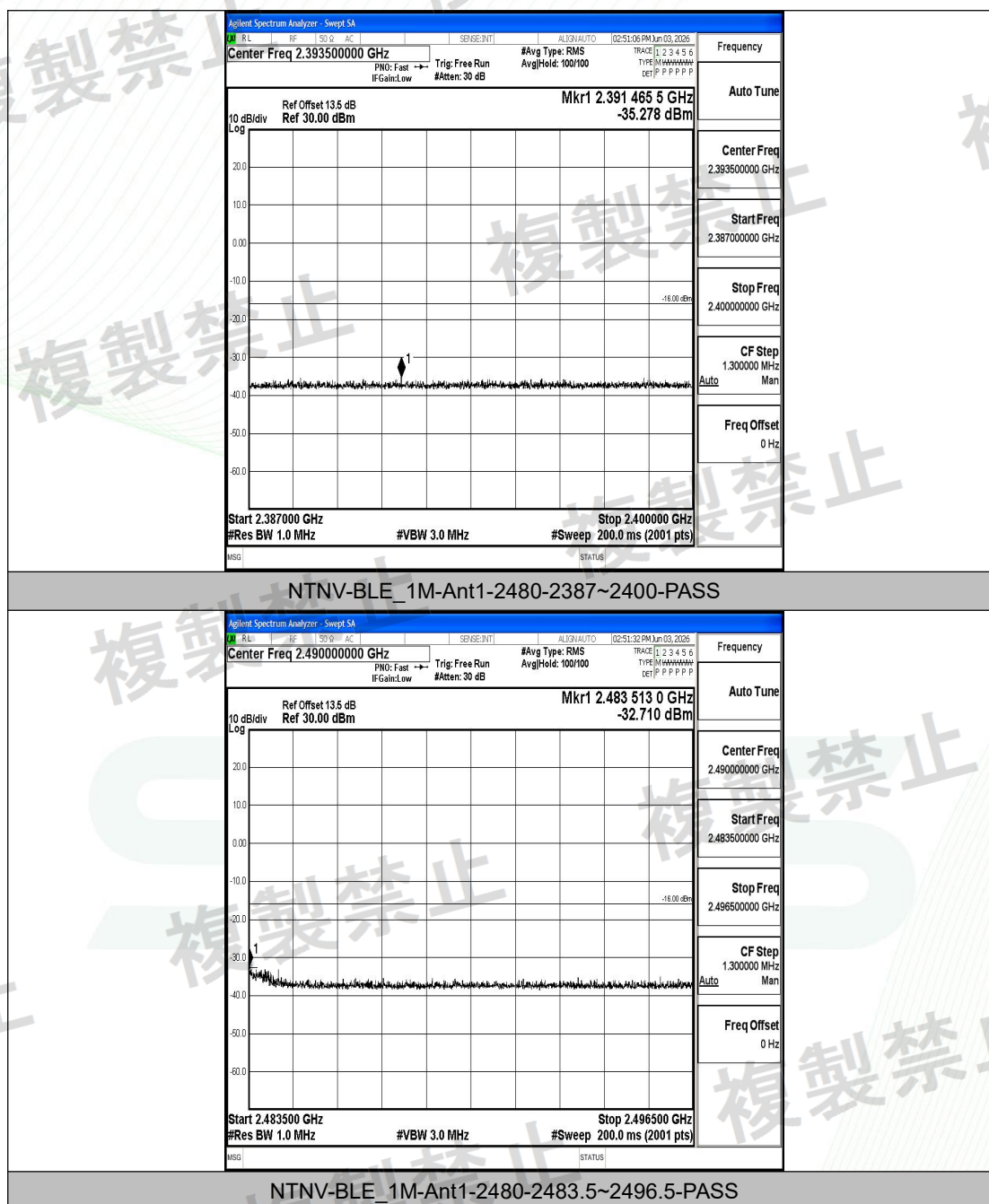
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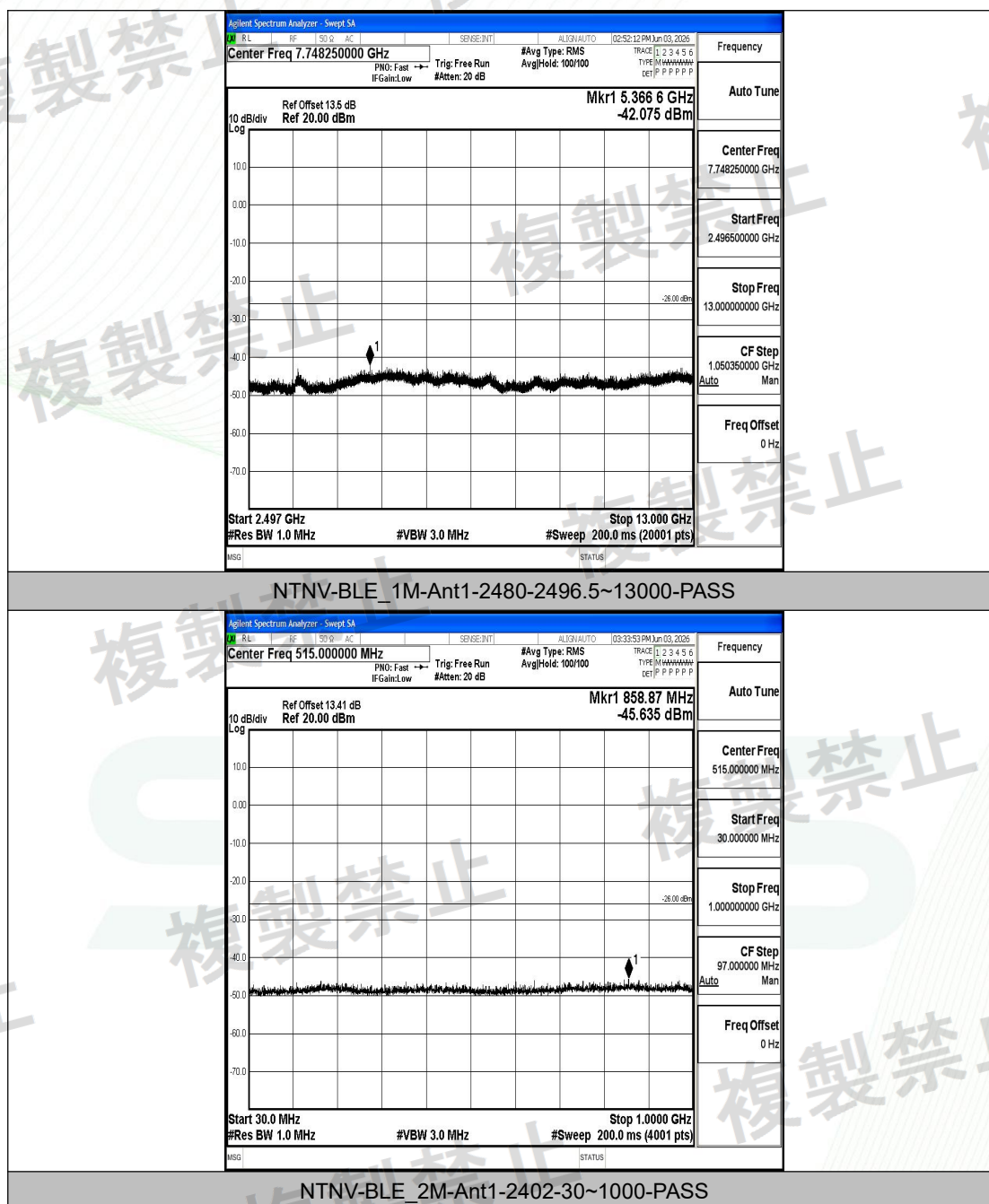
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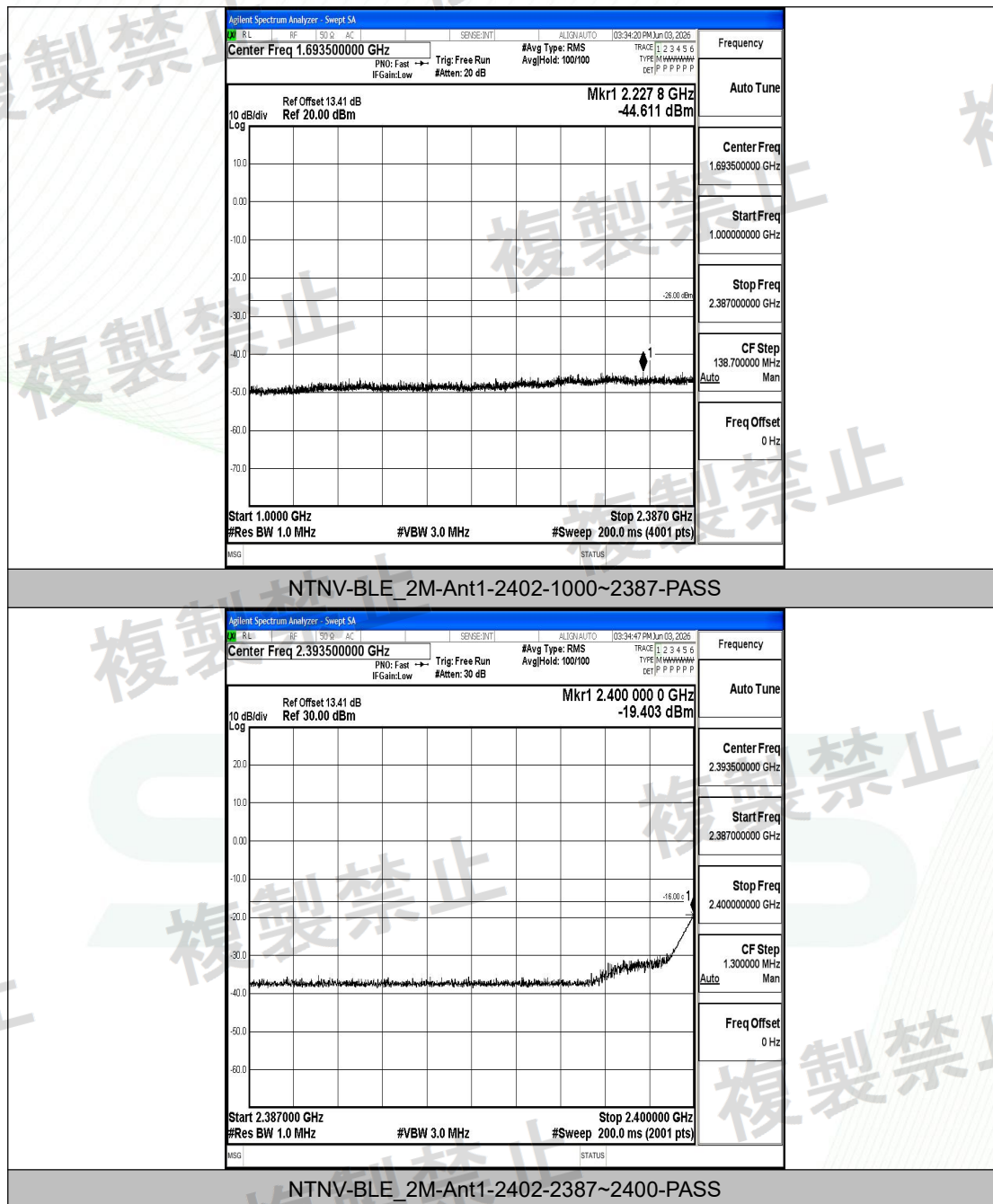
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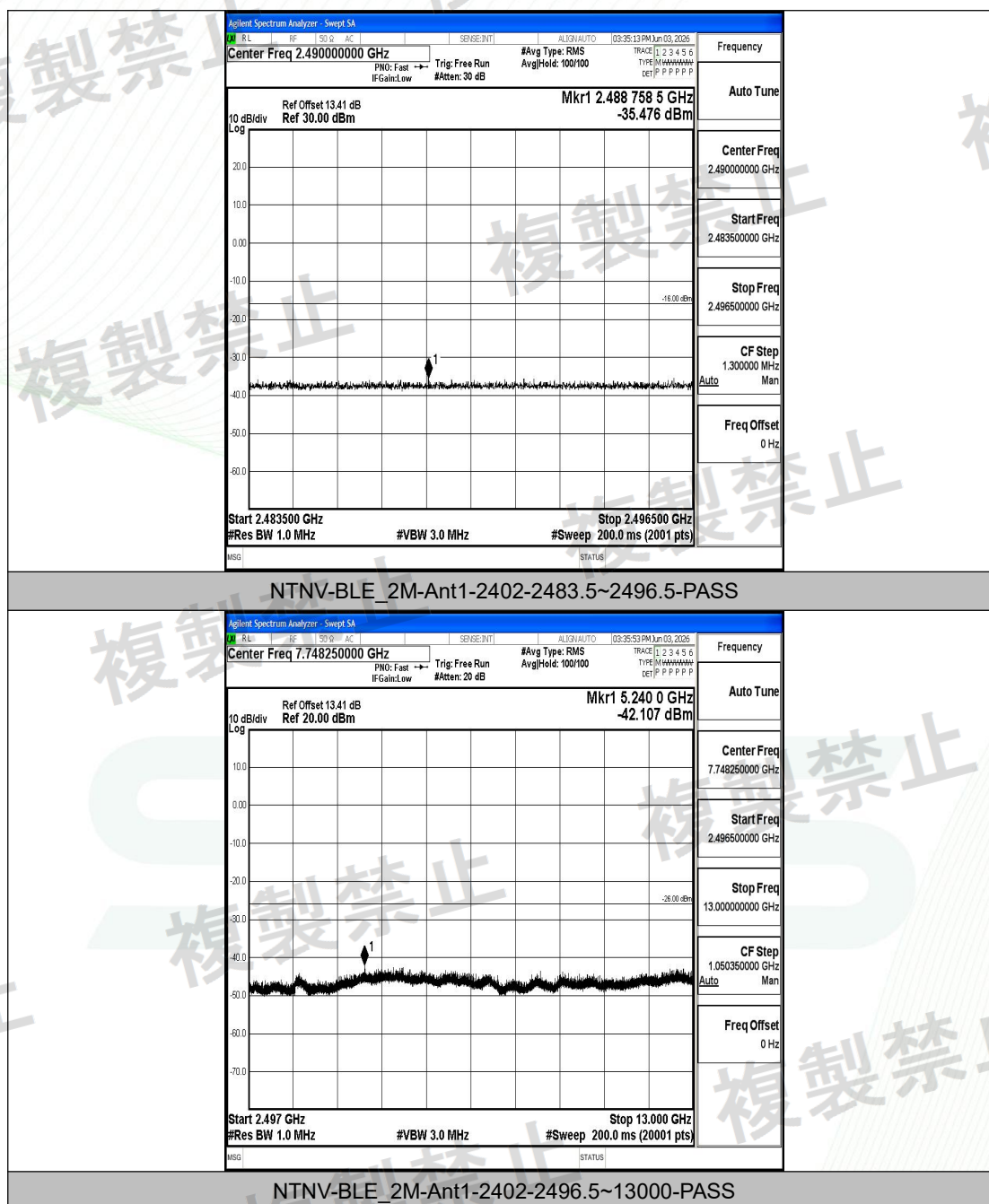
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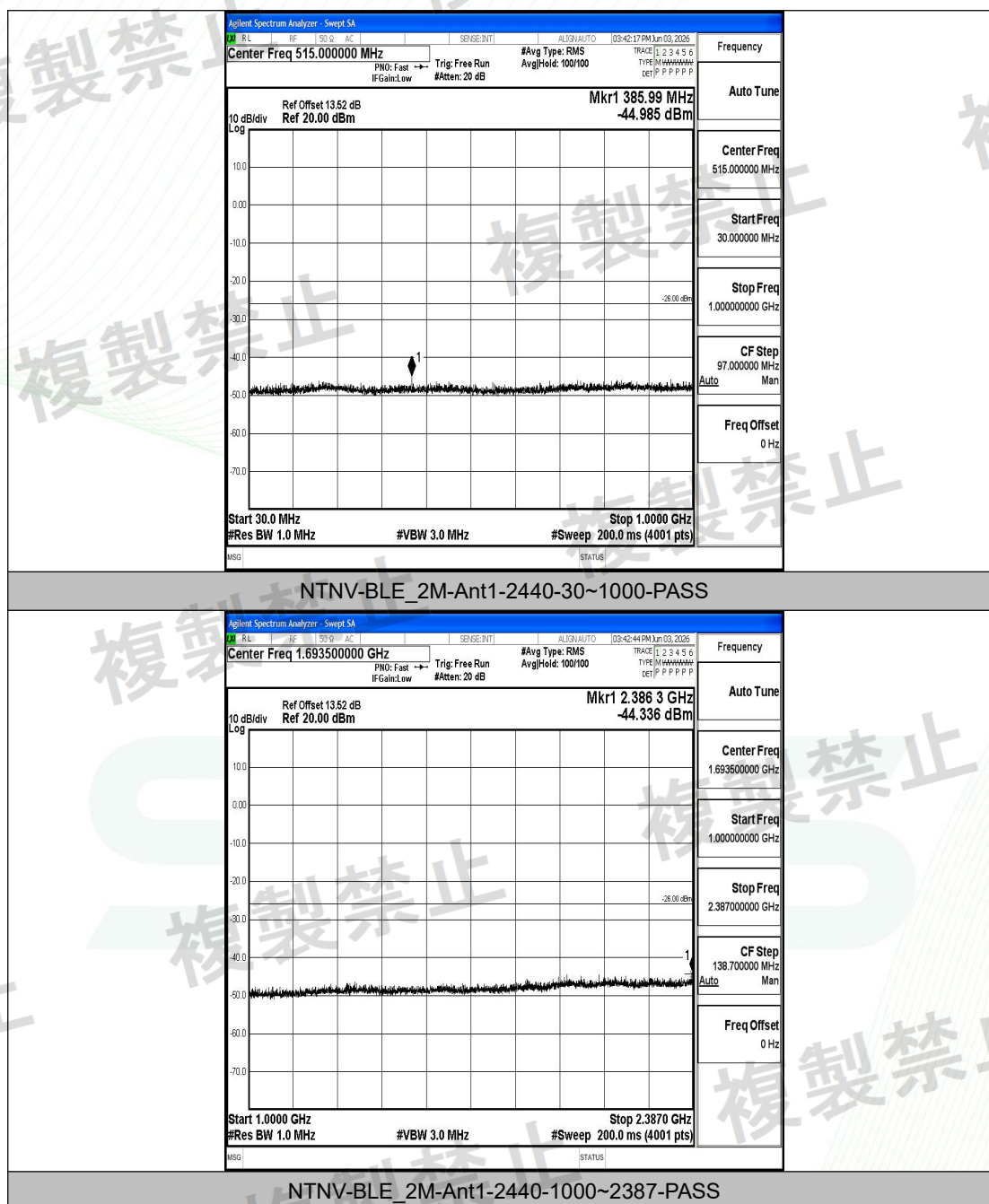
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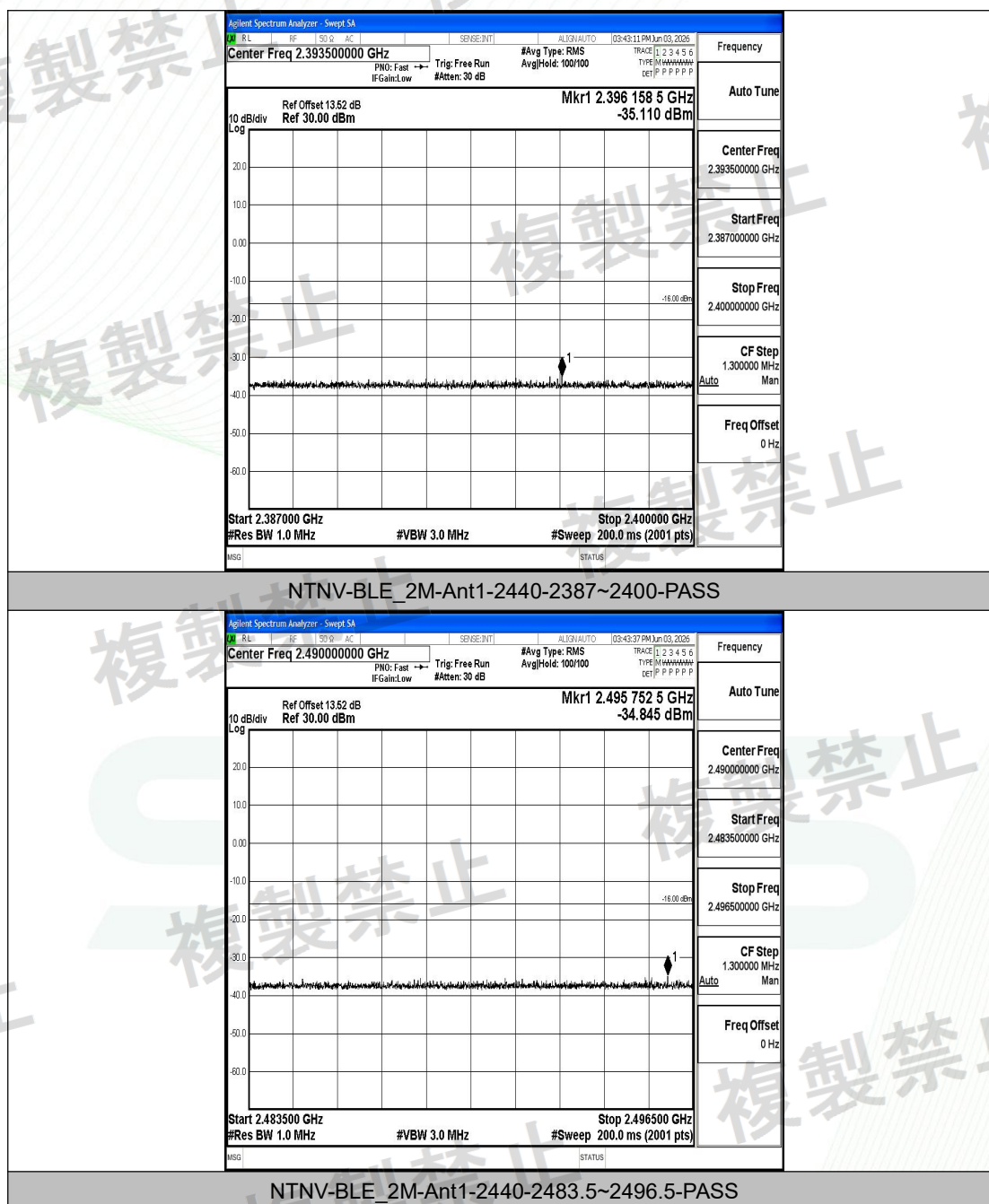
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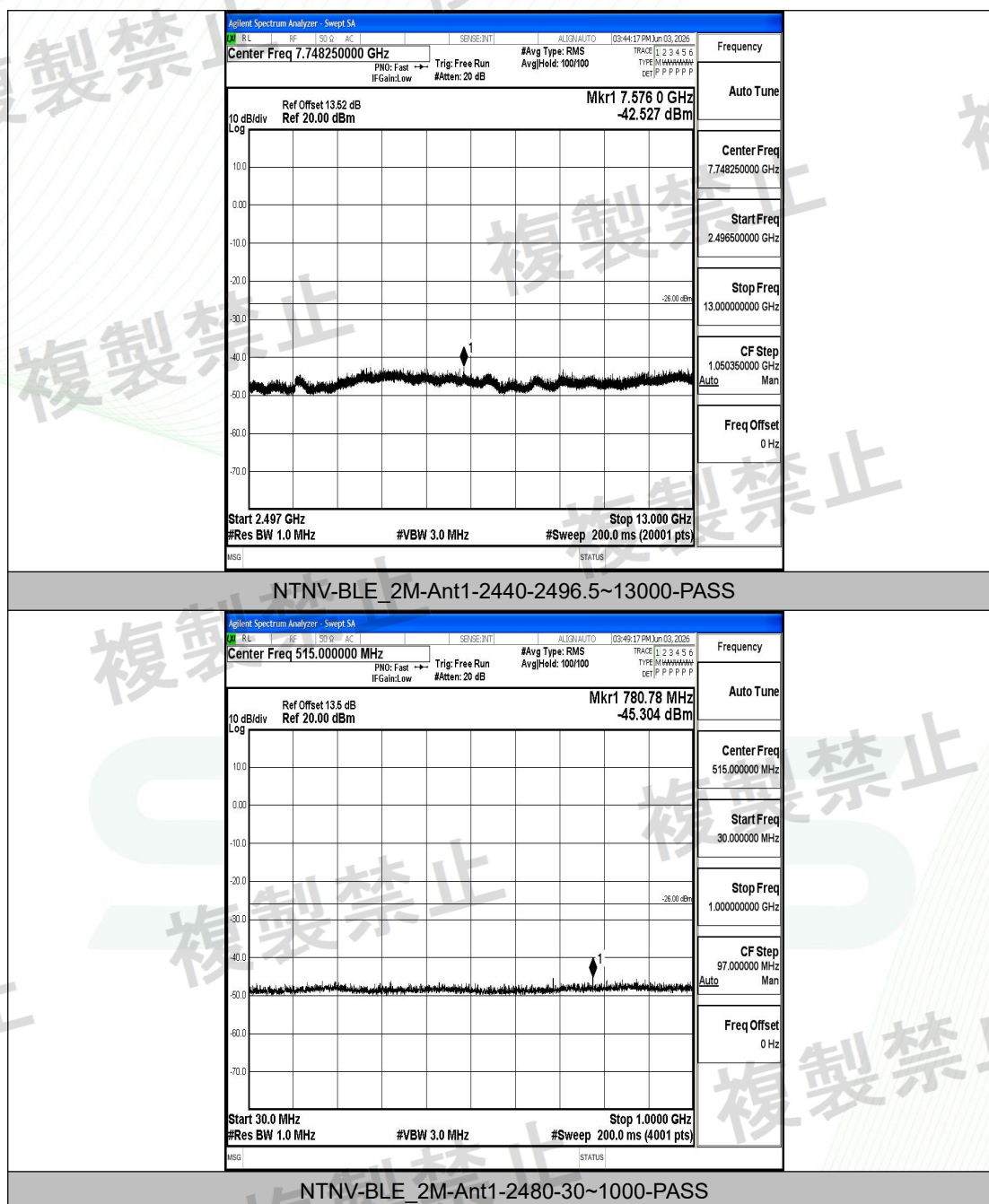
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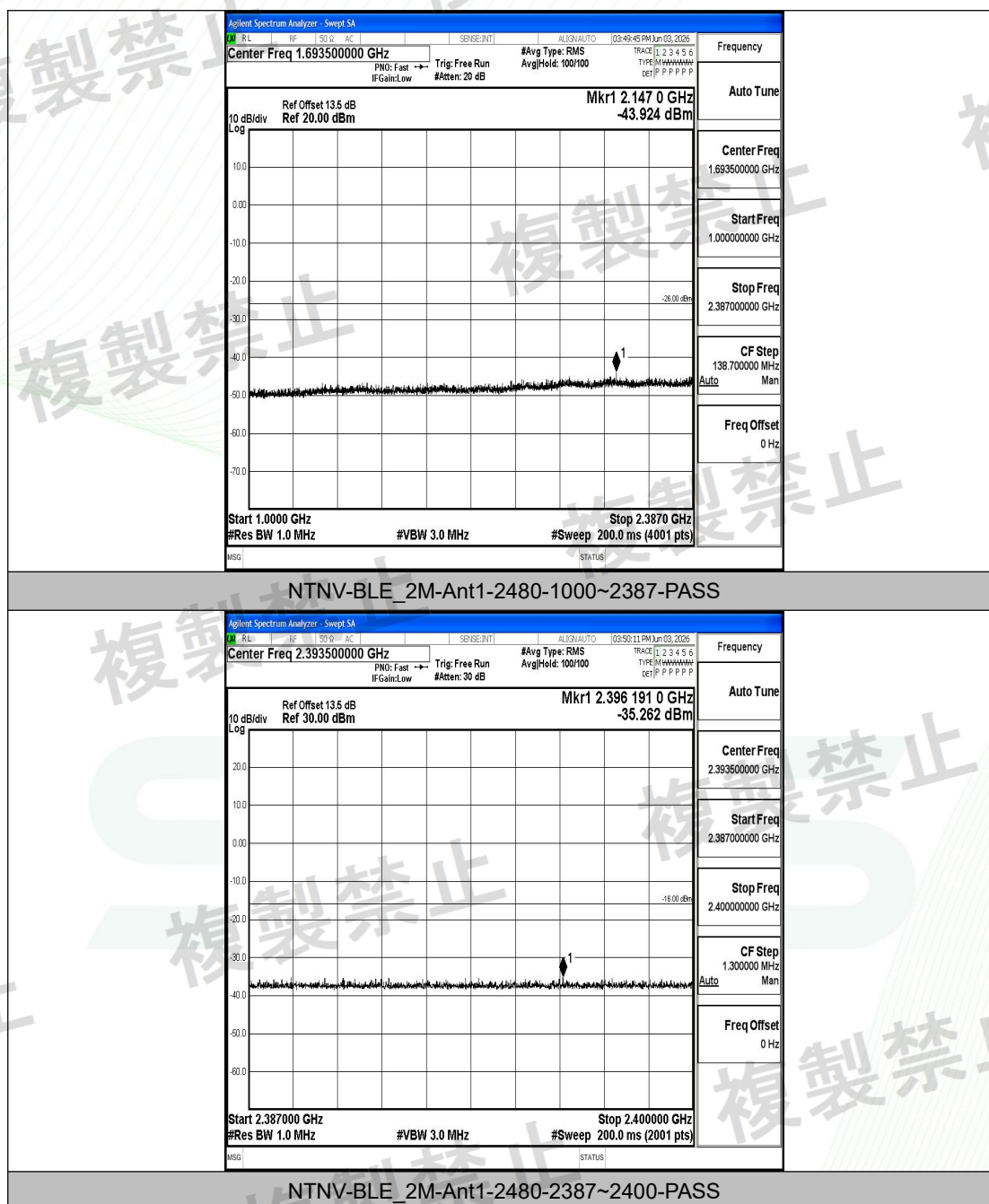
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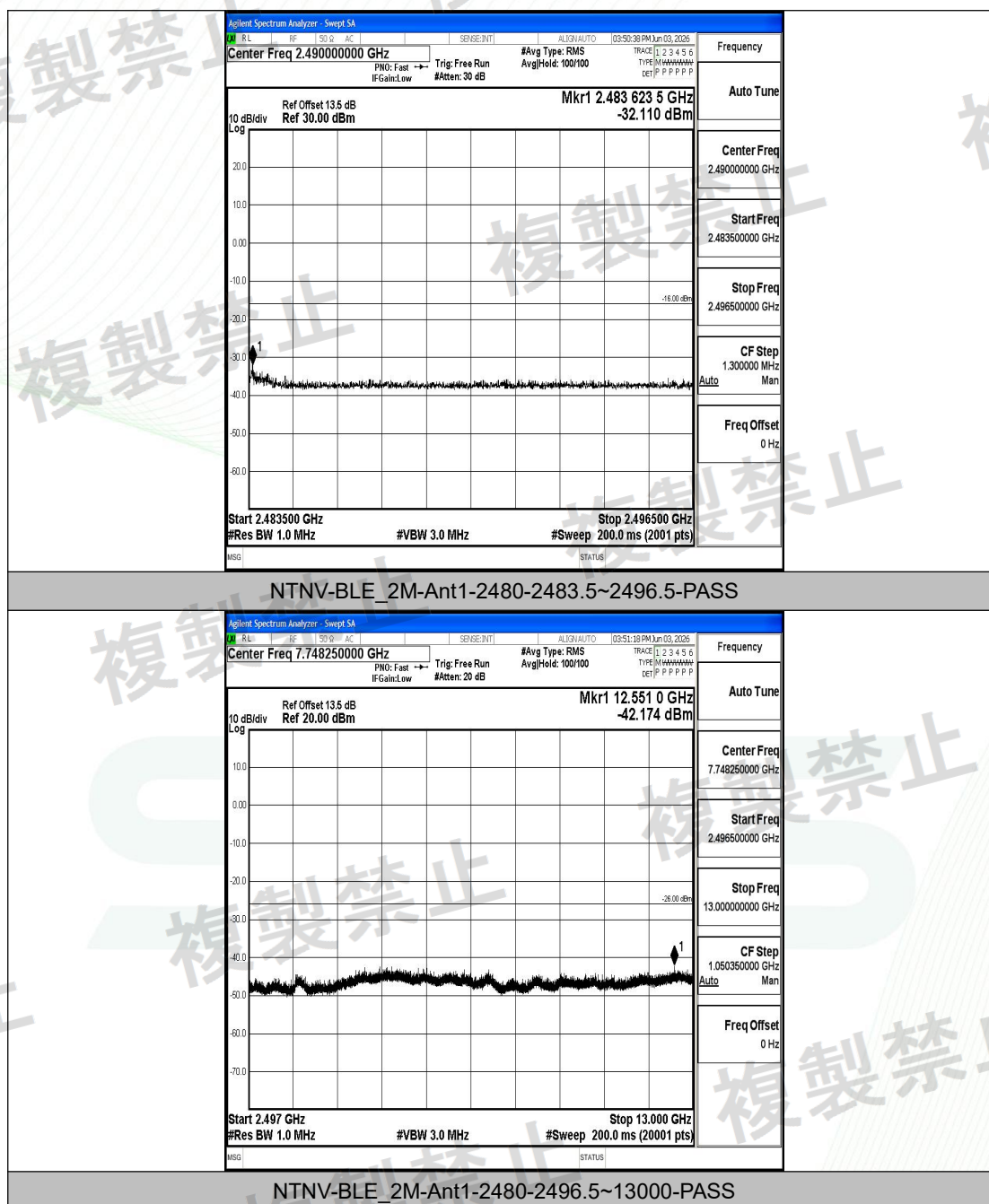
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A.6 Spurious Emission of RX

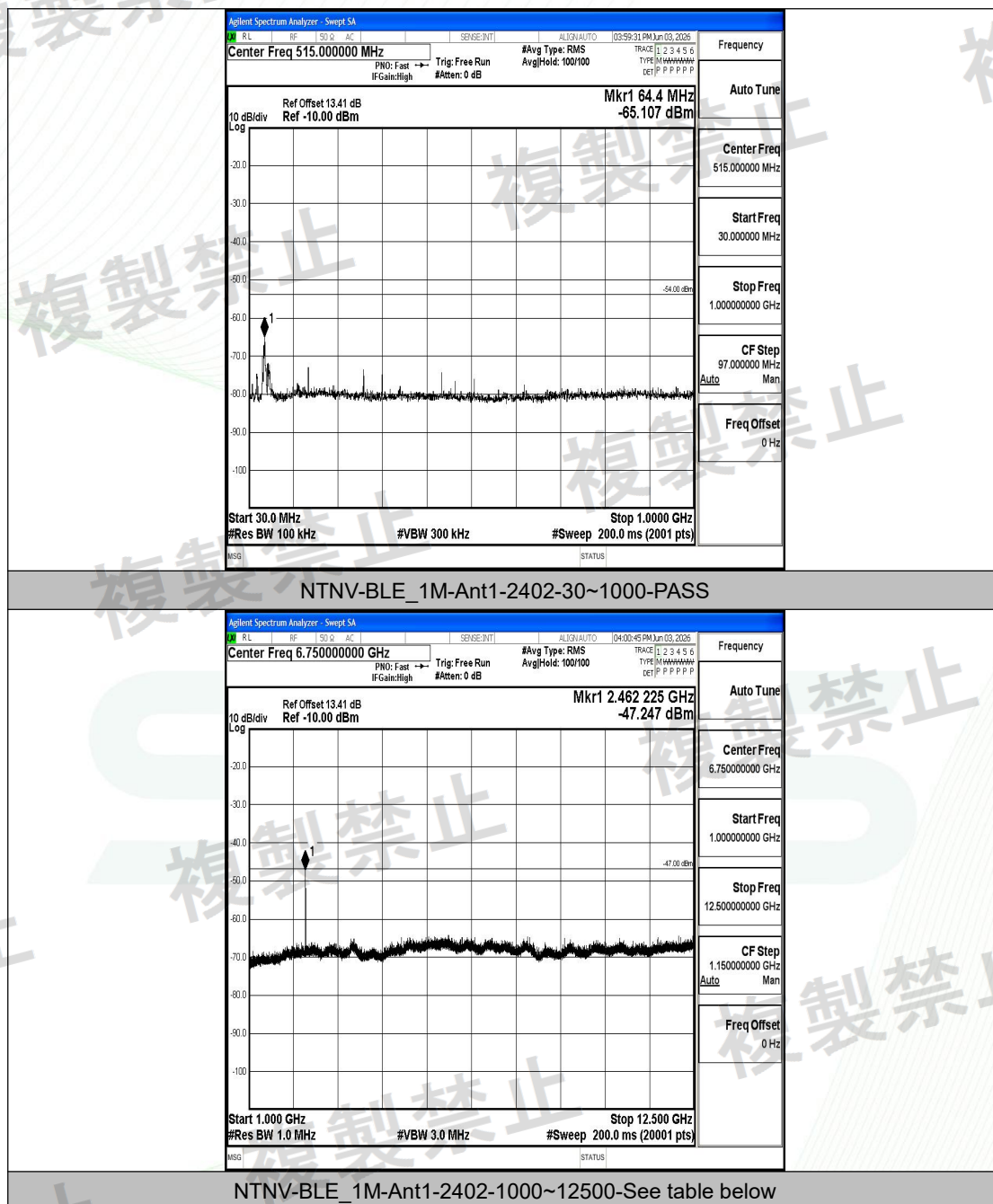
Test Result

TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	64.44	-65.11	≤-54	0.3083 2	≤4	PASS
NTNV	BLE_1M	Ant1	2402	1000~12500	2462.2 3	-47.25	≤-47	18.836 49	≤20	See table below
NTNV	BLE_1M	Ant1	2440	30~1000	63.95	-72.22	≤-54	0.0599 8	≤4	PASS
NTNV	BLE_1M	Ant1	2440	1000~12500	2462.2 3	-47.63	≤-47	17.258 38	≤20	See table below
NTNV	BLE_1M	Ant1	2480	30~1000	62.98	-70.90	≤-54	0.0812 8	≤4	PASS
NTNV	BLE_1M	Ant1	2480	1000~12500	2462.2 3	-50.69	≤-47	8.5310 0	≤20	See table below
NTNV	BLE_2M	Ant1	2402	30~1000	832.19	-62.89	≤-54	0.5140 4	≤4	See table below
NTNV	BLE_2M	Ant1	2402	1000~12500	2462.2 3	-52.67	≤-47	5.4075 4	≤20	See table below
NTNV	BLE_2M	Ant1	2440	30~1000	62.50	-70.57	≤-54	0.0877 0	≤4	PASS
NTNV	BLE_2M	Ant1	2440	1000~12500	2462.2 3	-47.20	≤-47	19.054 61	≤20	See table below
NTNV	BLE_2M	Ant1	2480	30~1000	62.50	-72.20	≤-54	0.0602 6	≤4	PASS
NTNV	BLE_2M	Ant1	2480	1000~12500	2462.2 3	-47.30	≤-47	18.620 87	≤20	See table below

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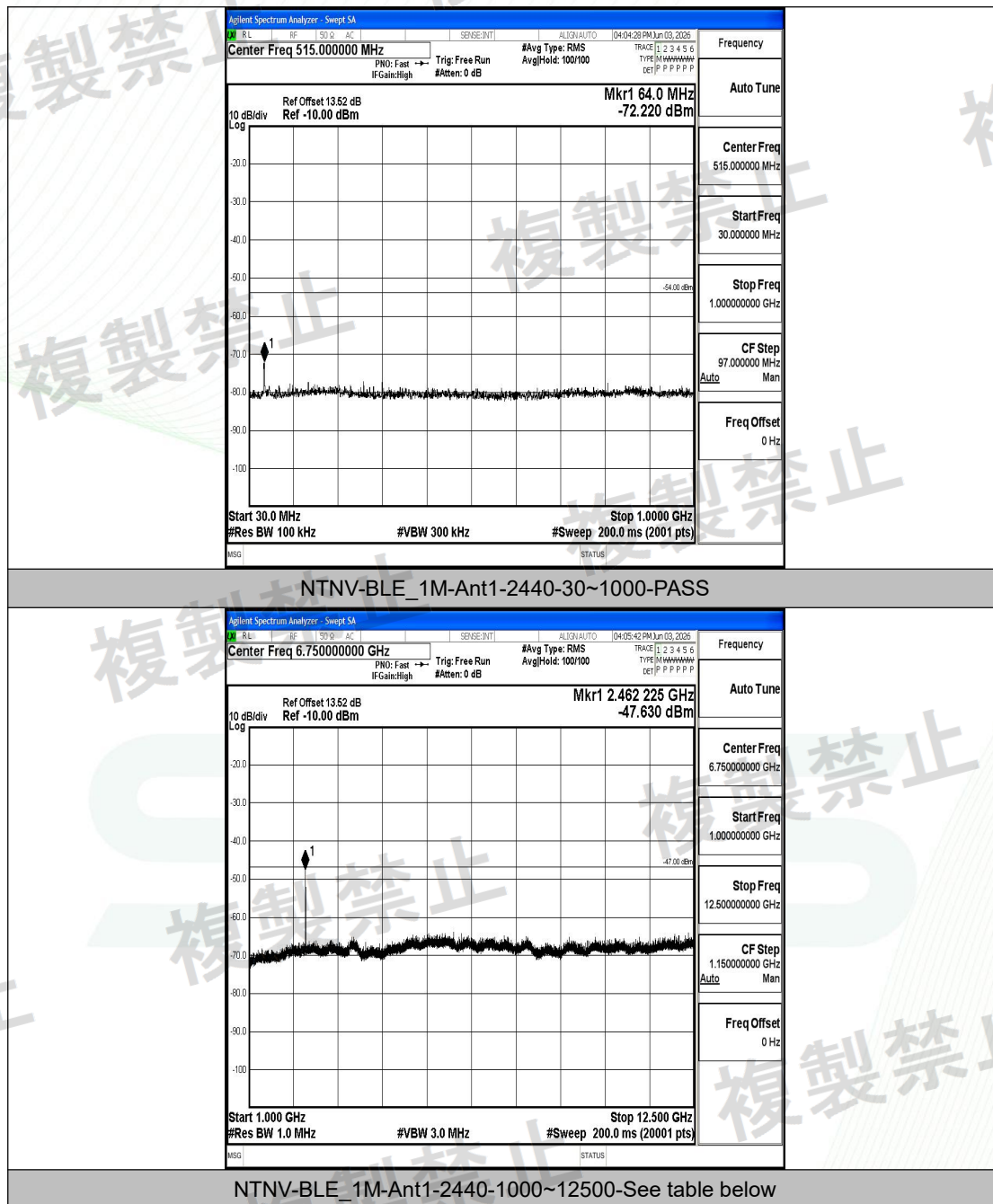
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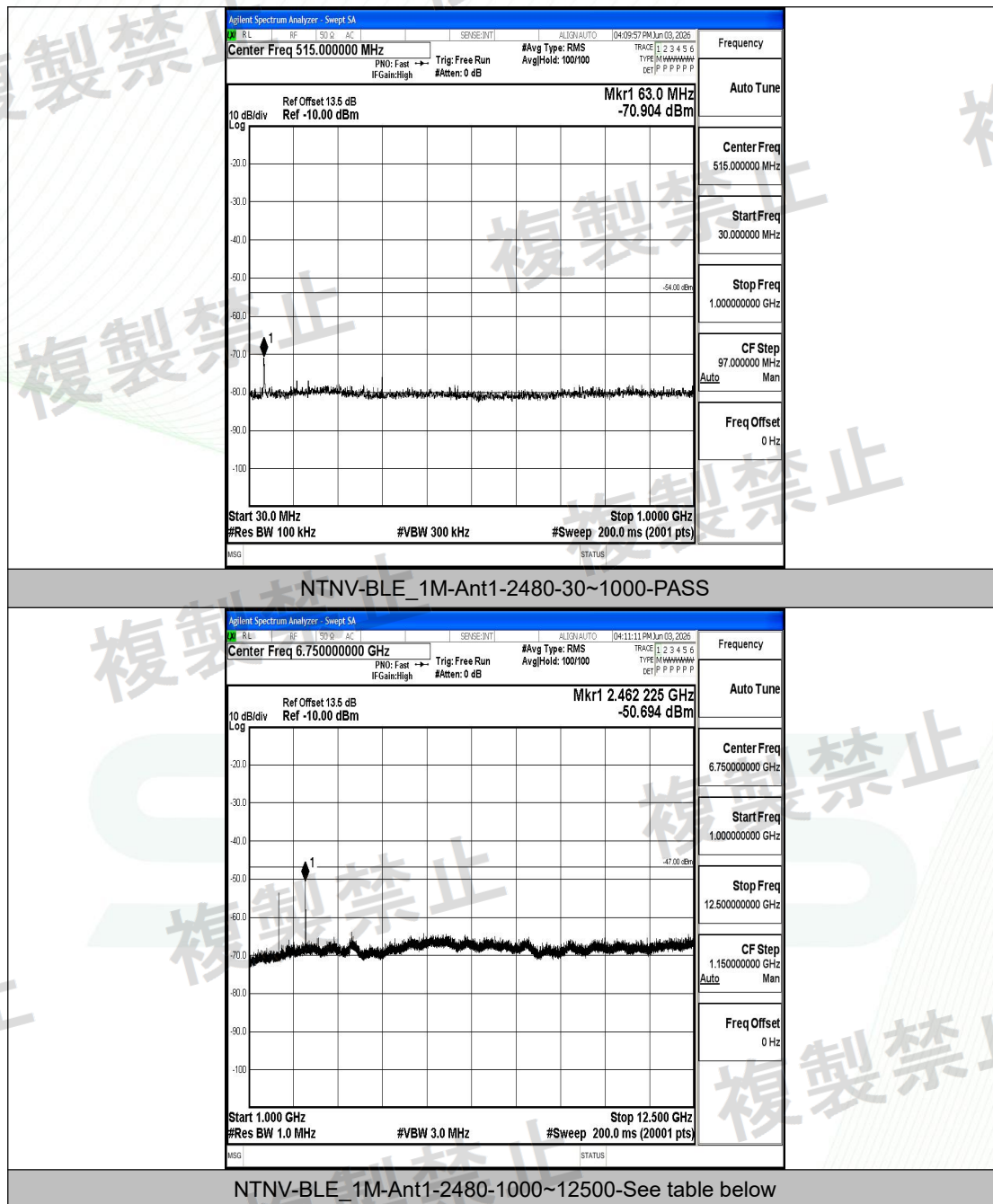
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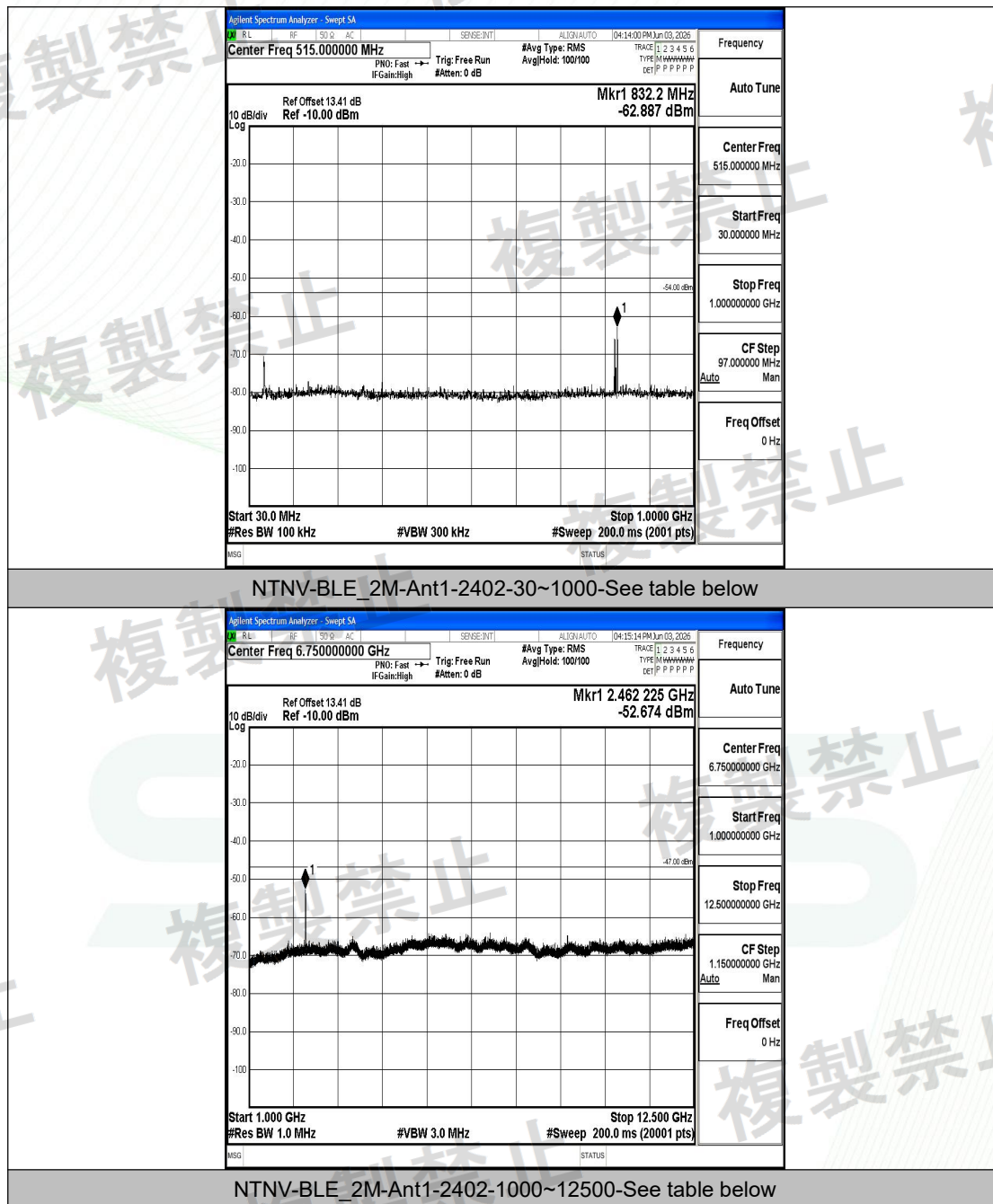
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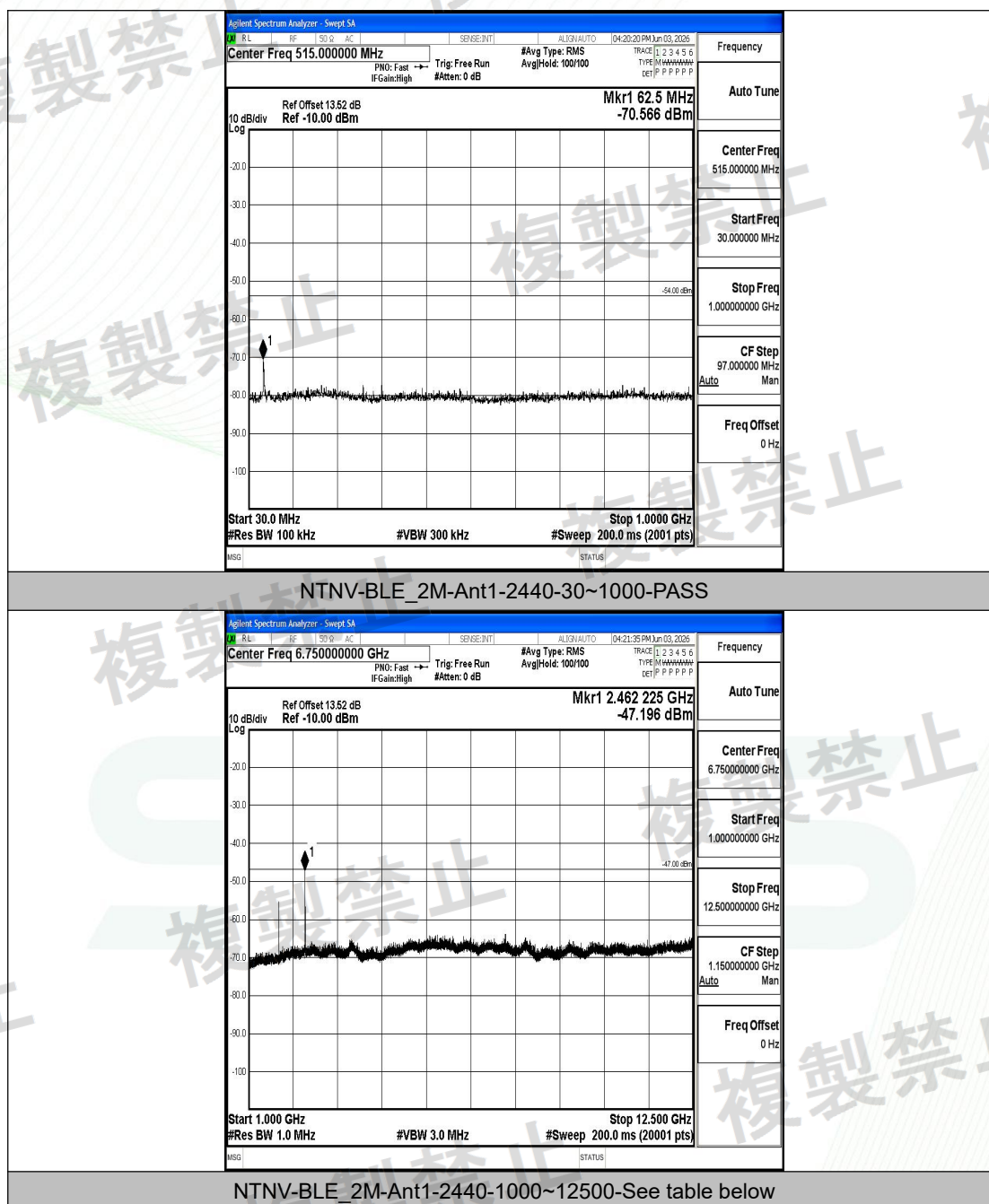
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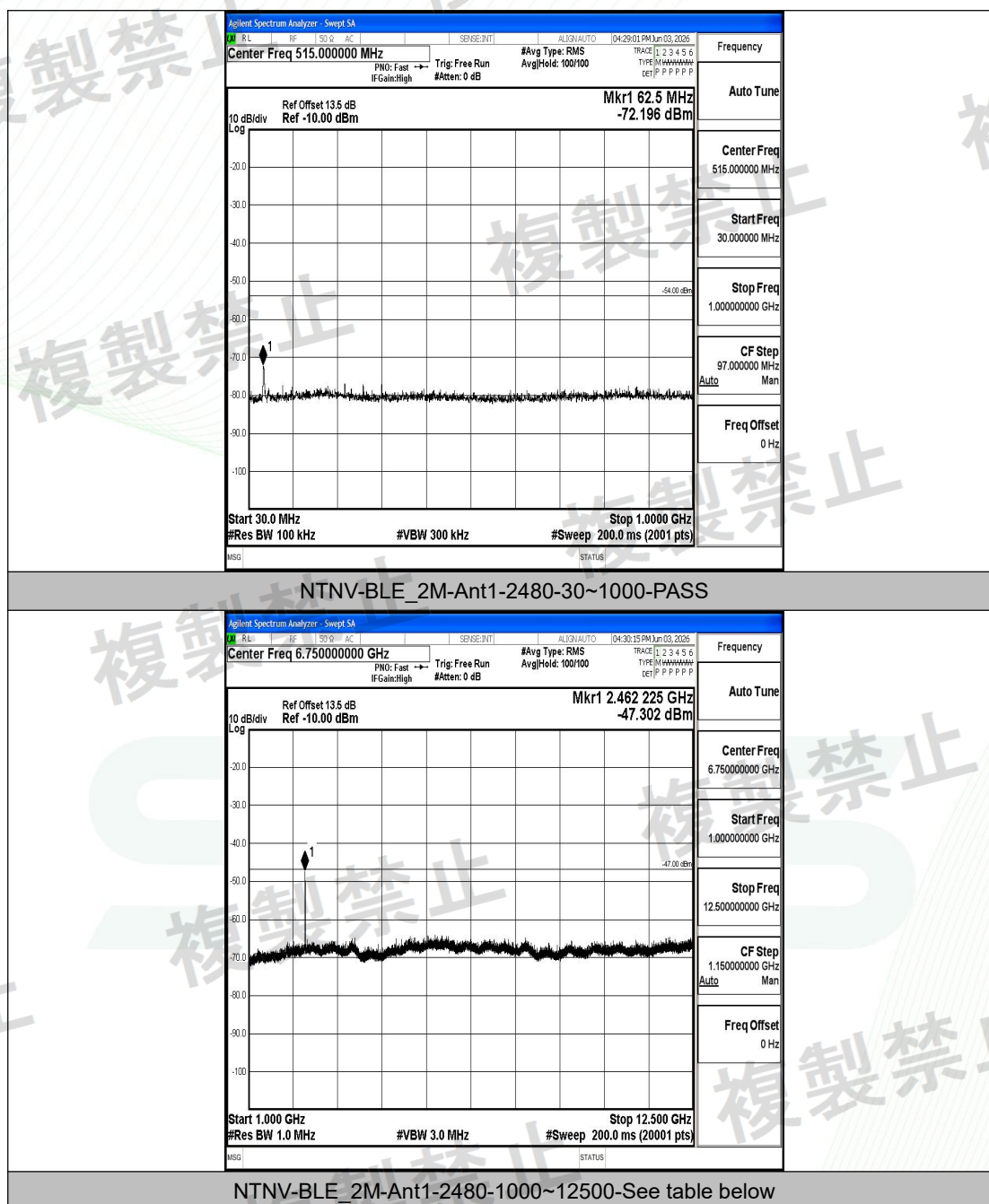
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