

Appendix B for 2.4GWIFI Test Data

Product Name: Nucleus Auto Focus Adapter Base Kit (E to PL)

Test Model: WLC-T07

Environmental Conditions

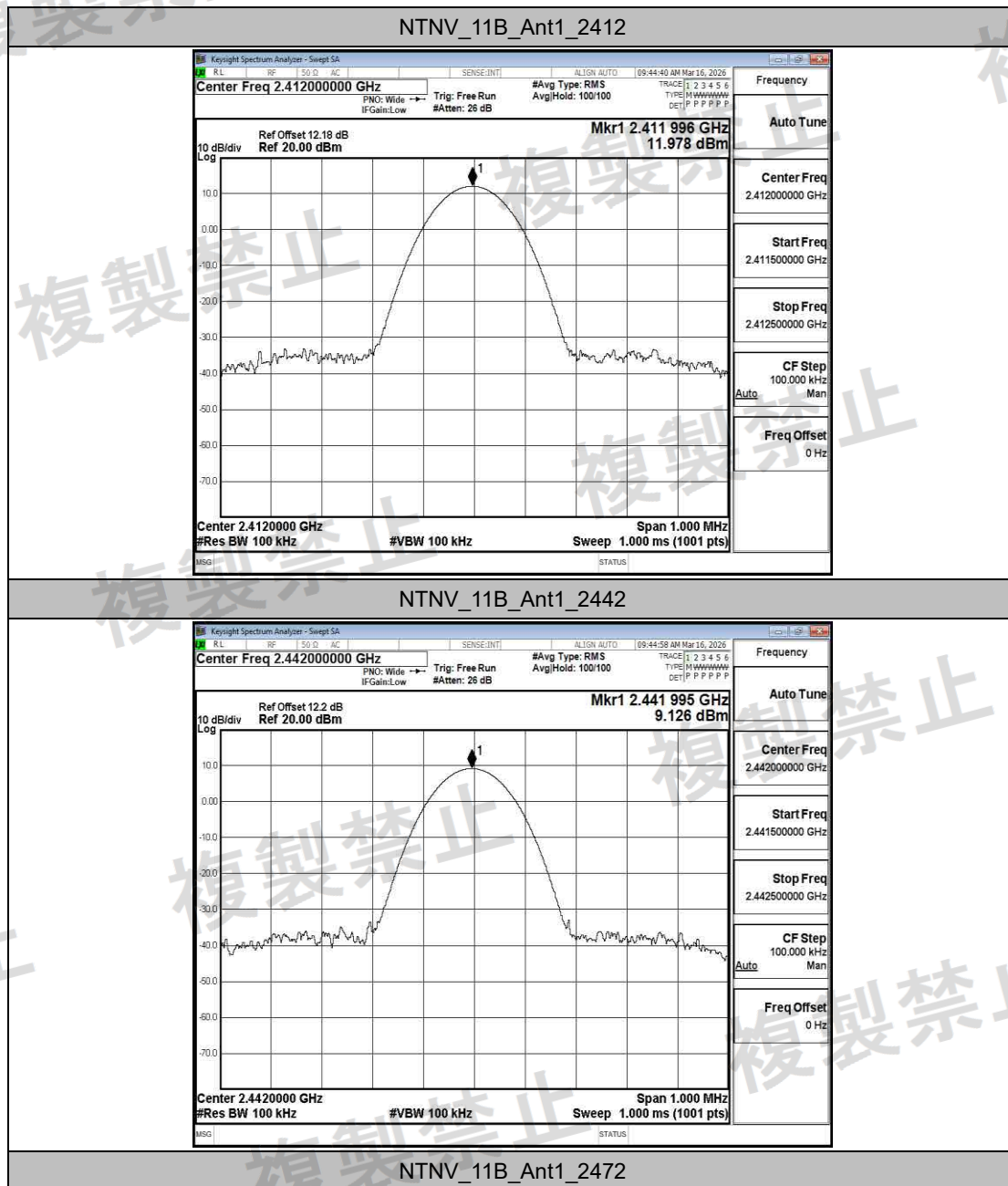
Temperature:	23.4°C
Relative Humidity:	54.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

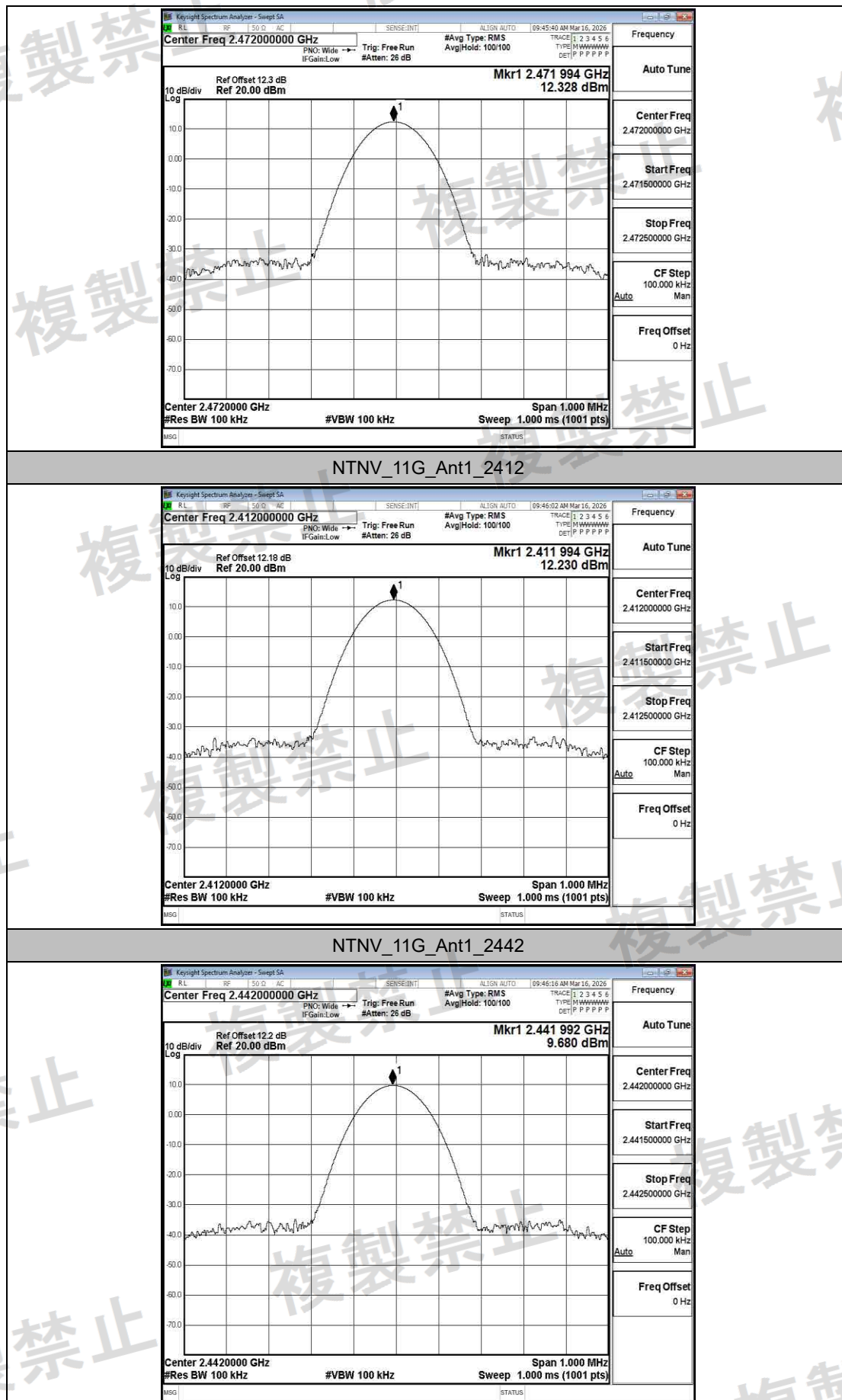
B.1 Frequency Error

Test Result

TestCondition	Test Mode	Antenna	Freq(MHz)	CenterFreq [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.996	-1.65838	±50	PASS
			2442	2441.995	-2.04750	±50	PASS
			2472	2471.994	-2.42718	±50	PASS
	11G	Ant1	2412	2411.994	-2.48756	±50	PASS
			2442	2441.992	-3.27600	±50	PASS
			2472	2471.992	-3.23625	±50	PASS
	11N20SISO	Ant1	2412	2411.994	-2.48756	±50	PASS
			2442	2441.992	-3.27600	±50	PASS
			2472	2471.991	-3.64078	±50	PASS
	11N40SISO	Ant1	2422	2421.993	-2.89017	±50	PASS
			2442	2441.991	-3.68550	±50	PASS
			2462	2461.992	-3.24939	±50	PASS

Test Graphs

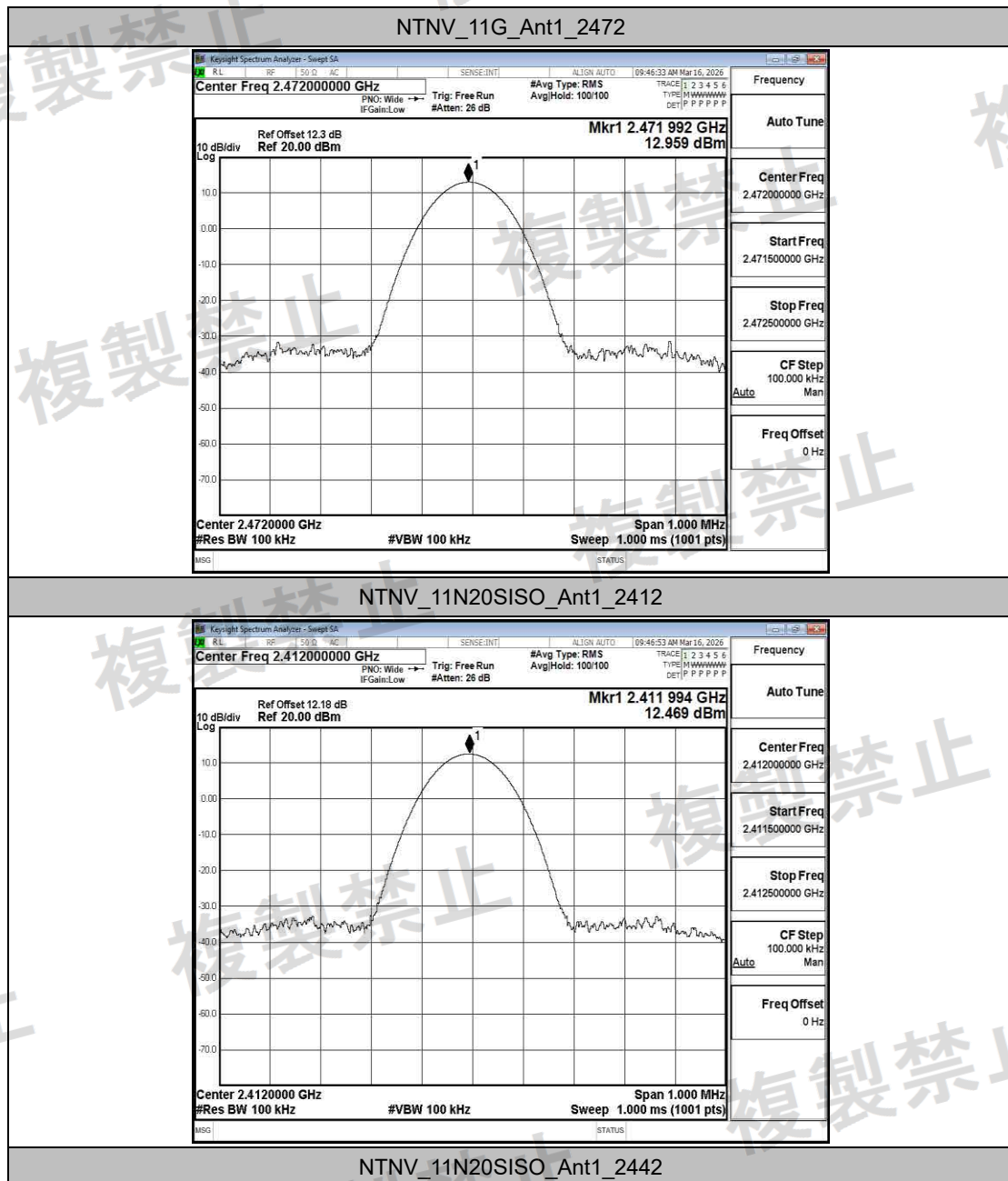


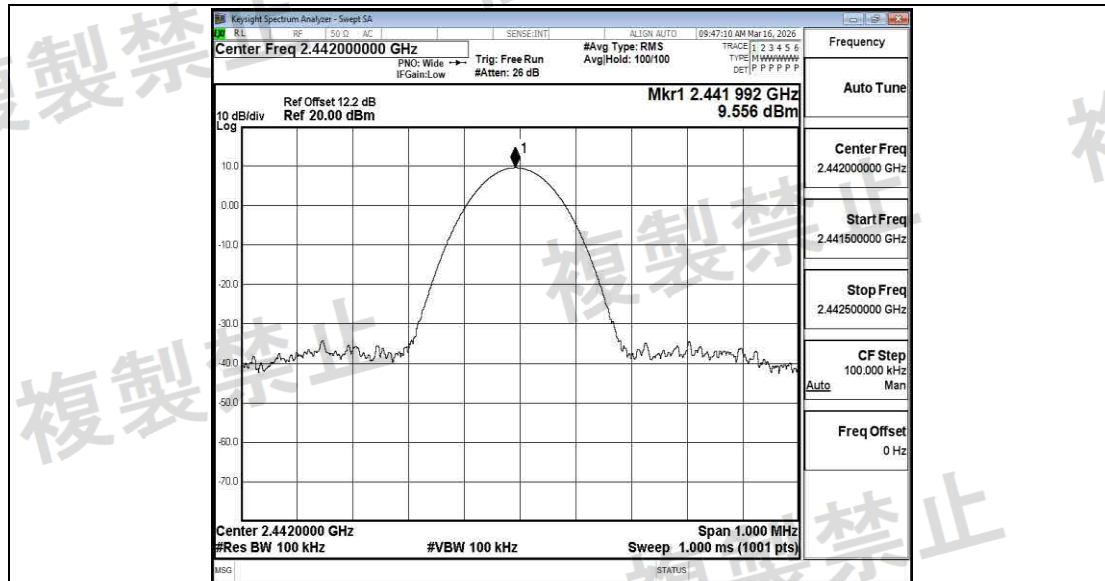


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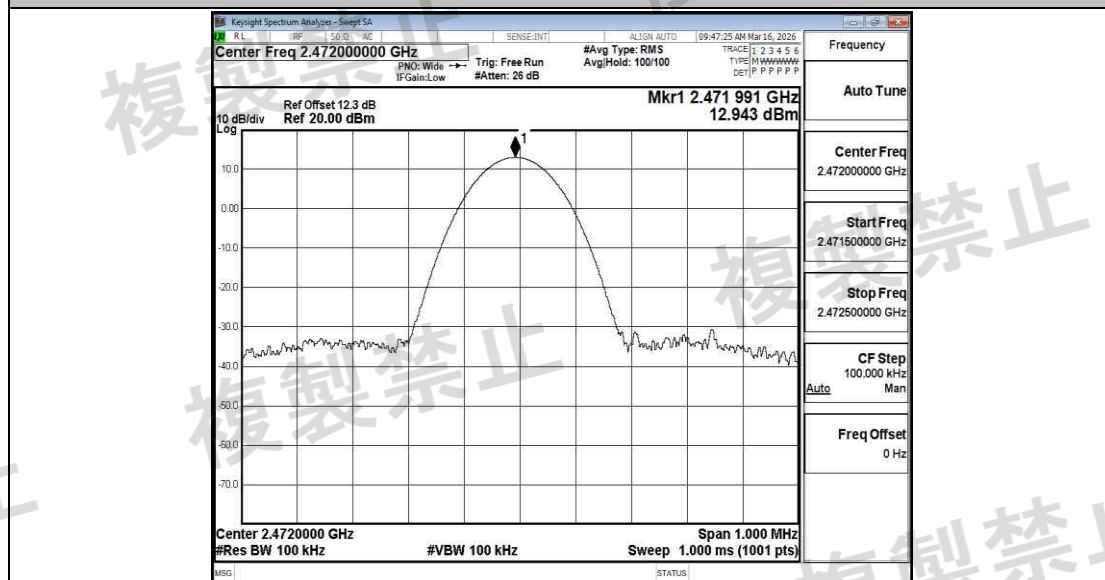
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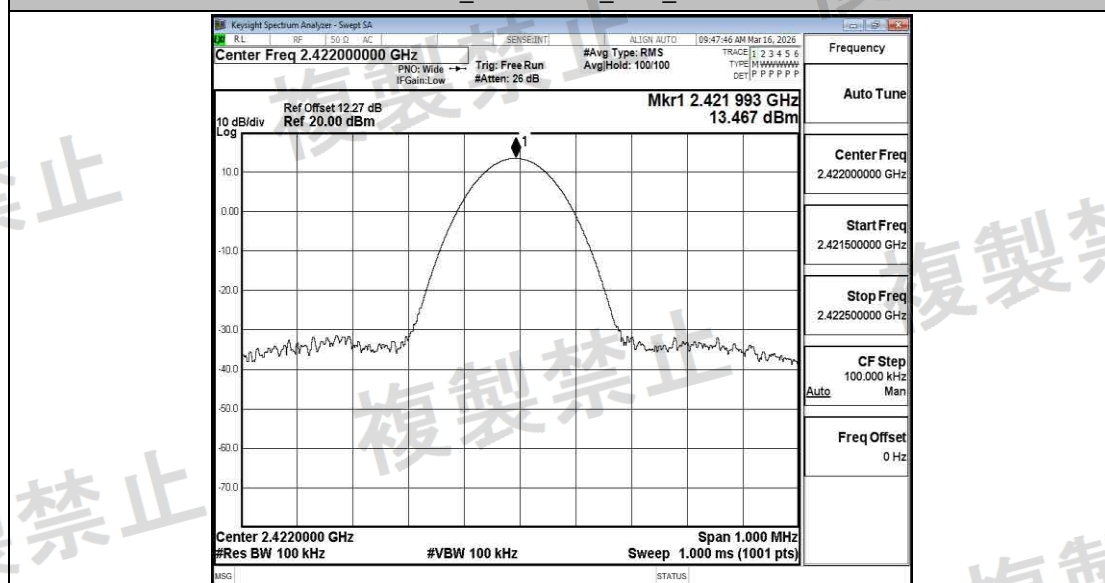




NTNV_11N20SISO_Ant1_2472



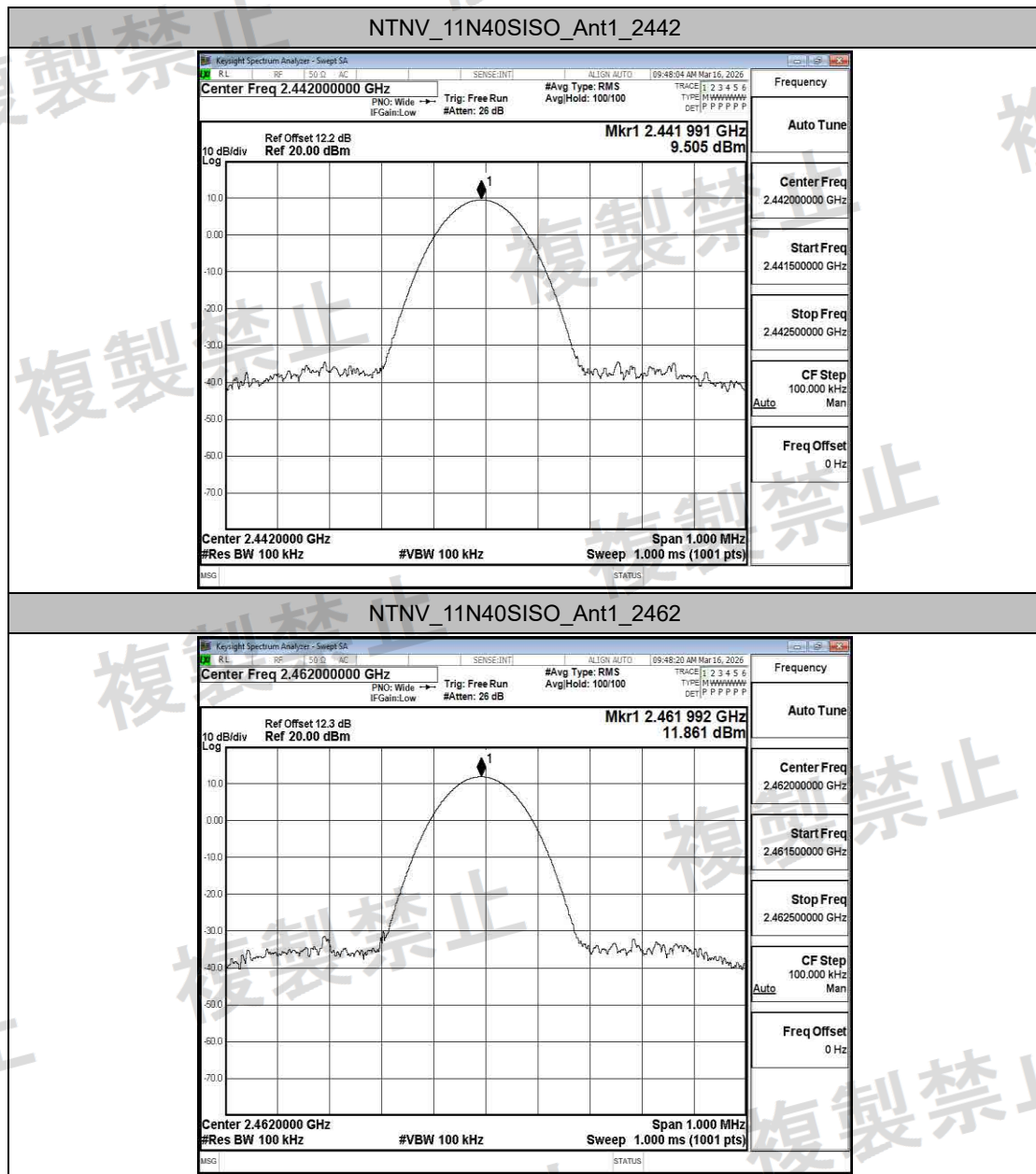
NTNV_11N40SISO_Ant1_2422



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B.2 Antenna Power

Test Result

Antenna Power							
Test Condition	Test Mode	Antenna	Freq(MHz)	Result (dBm/MHz)	Result (mW/MHz)	Limit (mW/MHz)	Verdict
NTNV	11B	Ant1	2412	4.89	3.0832	≤10	PASS
			2442	3.22	2.0989	≤10	PASS
			2472	4.99	3.1550	≤10	PASS
	11G	Ant1	2412	3.42	2.1979	≤10	PASS
			2442	3.15	2.0654	≤10	PASS
			2472	3.46	2.2182	≤10	PASS
	11N20SI SO	Ant1	2412	3.27	2.1232	≤10	PASS
			2442	3.34	2.1577	≤10	PASS
			2472	3.54	2.2594	≤10	PASS
	11N40SI SO	Ant1	2422	2.51	1.7824	≤5	PASS
			2442	2.14	1.6368	≤5	PASS
			2462	2.42	1.7458	≤5	PASS

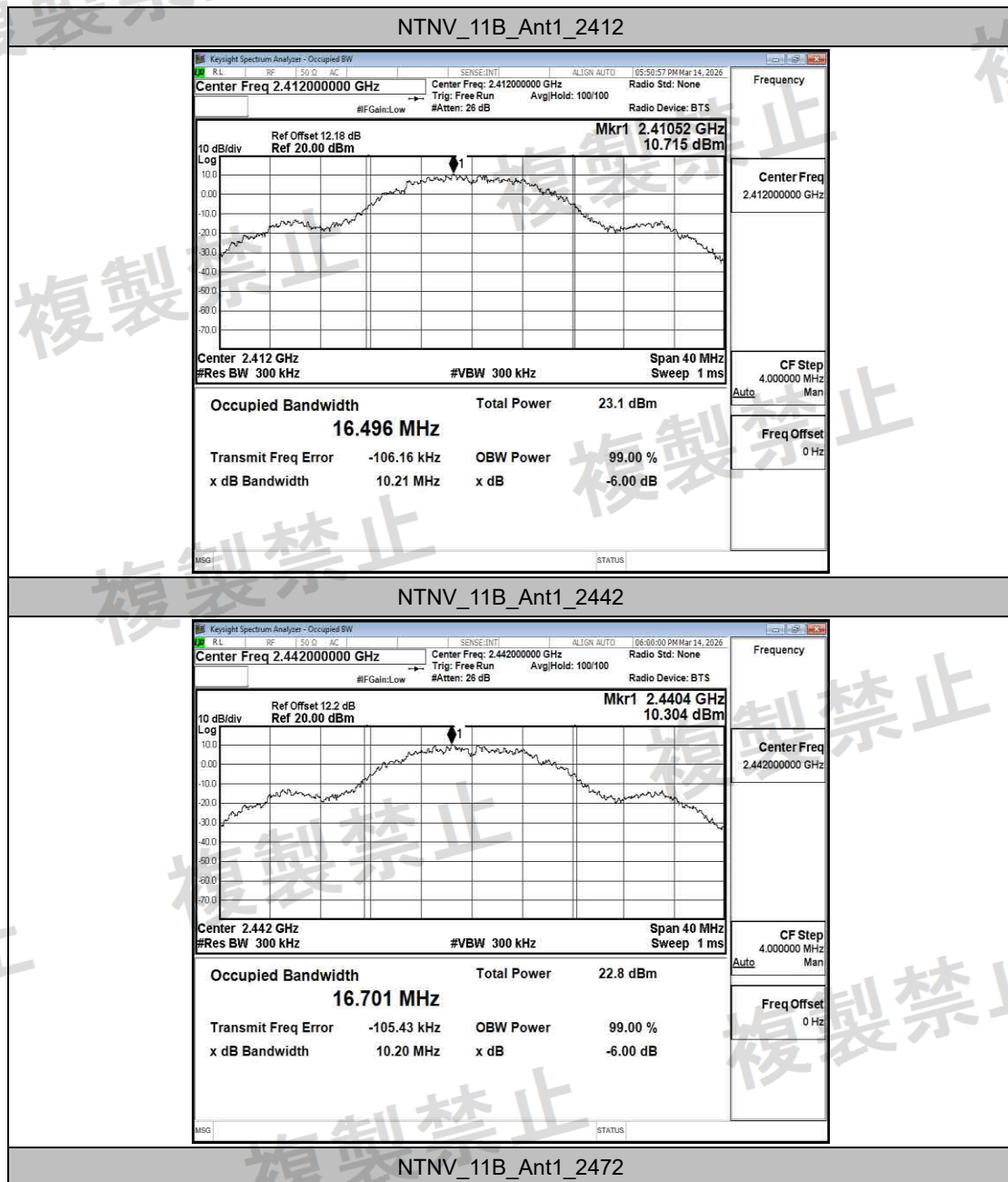
Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power [mW/MHz]	RatedPower [mW/MHz]	Result (%)	Limit (%)	Verdict
NTNV	11B	Ant1	2412	3.0832	4.0	-22.92	+20	PASS
			2442	2.0989	4.0	-47.53	+20	PASS
			2472	3.1550	4.0	-21.13	+20	PASS
	11G	Ant1	2412	2.1979	3.0	-26.74	+20	PASS
			2442	2.0654	3.0	-31.15	+20	PASS
			2472	2.2182	3.0	-26.06	+20	PASS
	11N20SI SO	Ant1	2412	2.1232	3.0	-29.23	+20	PASS
			2442	2.1577	3.0	-28.08	+20	PASS
			2472	2.2594	3.0	-24.69	+20	PASS
	11N40SI SO	Ant1	2422	1.7824	2.0	-10.88	+20	PASS
			2442	1.6368	2.0	-18.16	+20	PASS
			2462	1.7458	2.0	-12.71	+20	PASS

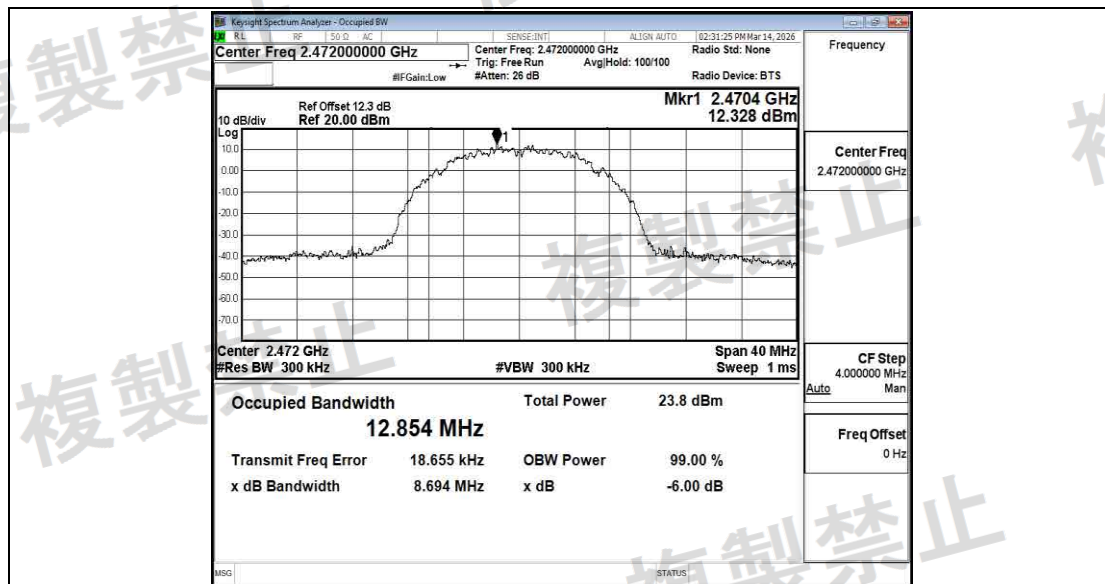
B.3 Occupied Bandwidth

Test Result

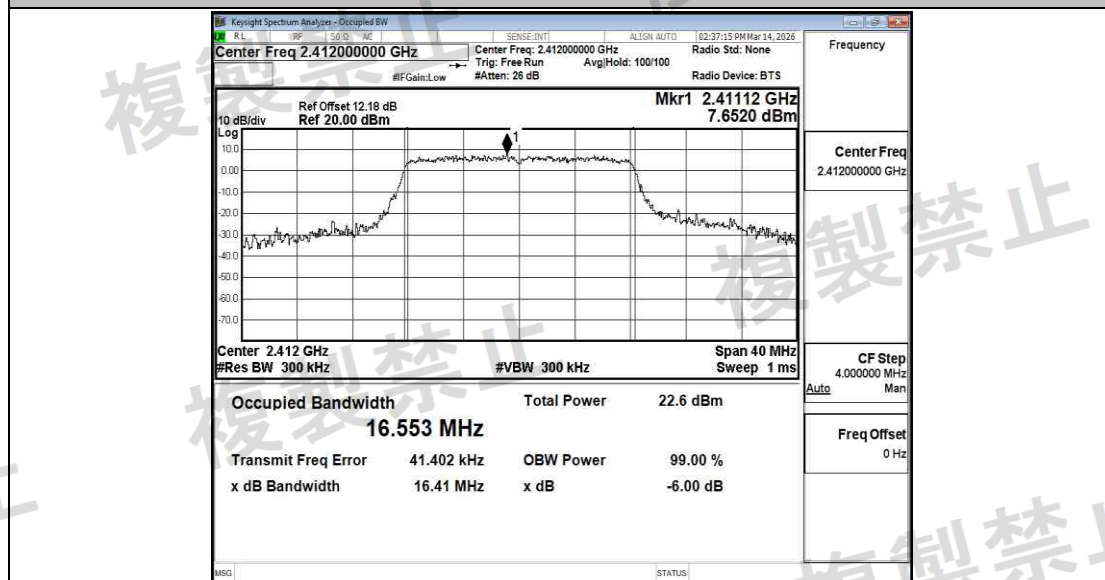
TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	16.496	≤26	PASS
			2442	16.701	≤26	PASS
			2472	12.854	≤26	PASS
	11G	Ant1	2412	16.553	≤26	PASS
			2442	16.809	≤26	PASS
			2472	16.876	≤26	PASS
	11N20SI SO	Ant1	2412	17.545	≤26	PASS
			2442	17.576	≤26	PASS
			2472	17.560	≤26	PASS
	11N40SI SO	Ant1	2422	35.863	26-40	PASS
			2442	35.972	26-40	PASS
			2462	35.836	26-40	PASS

Test Graphs

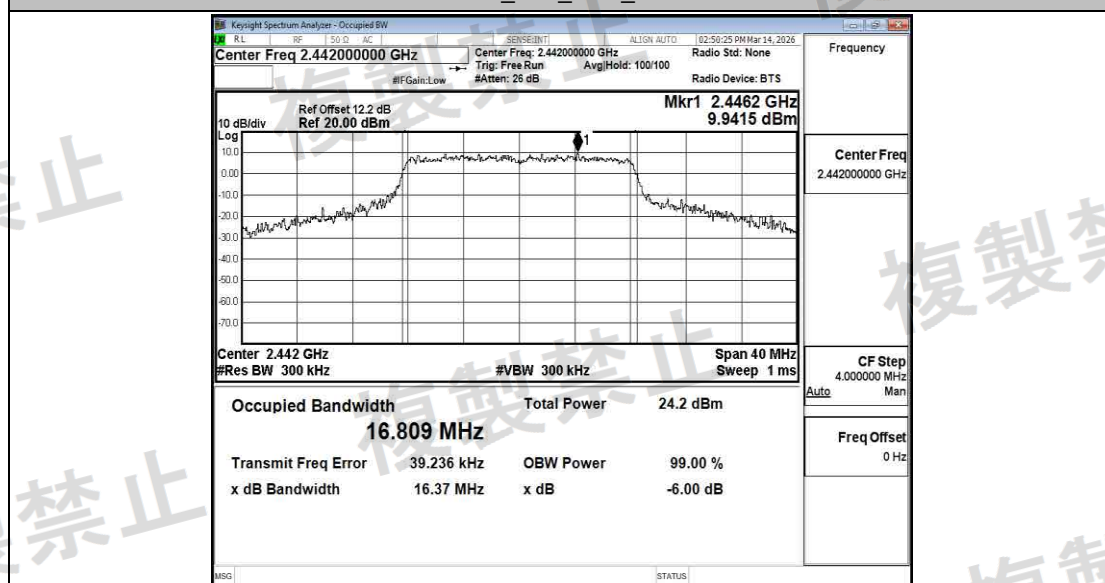


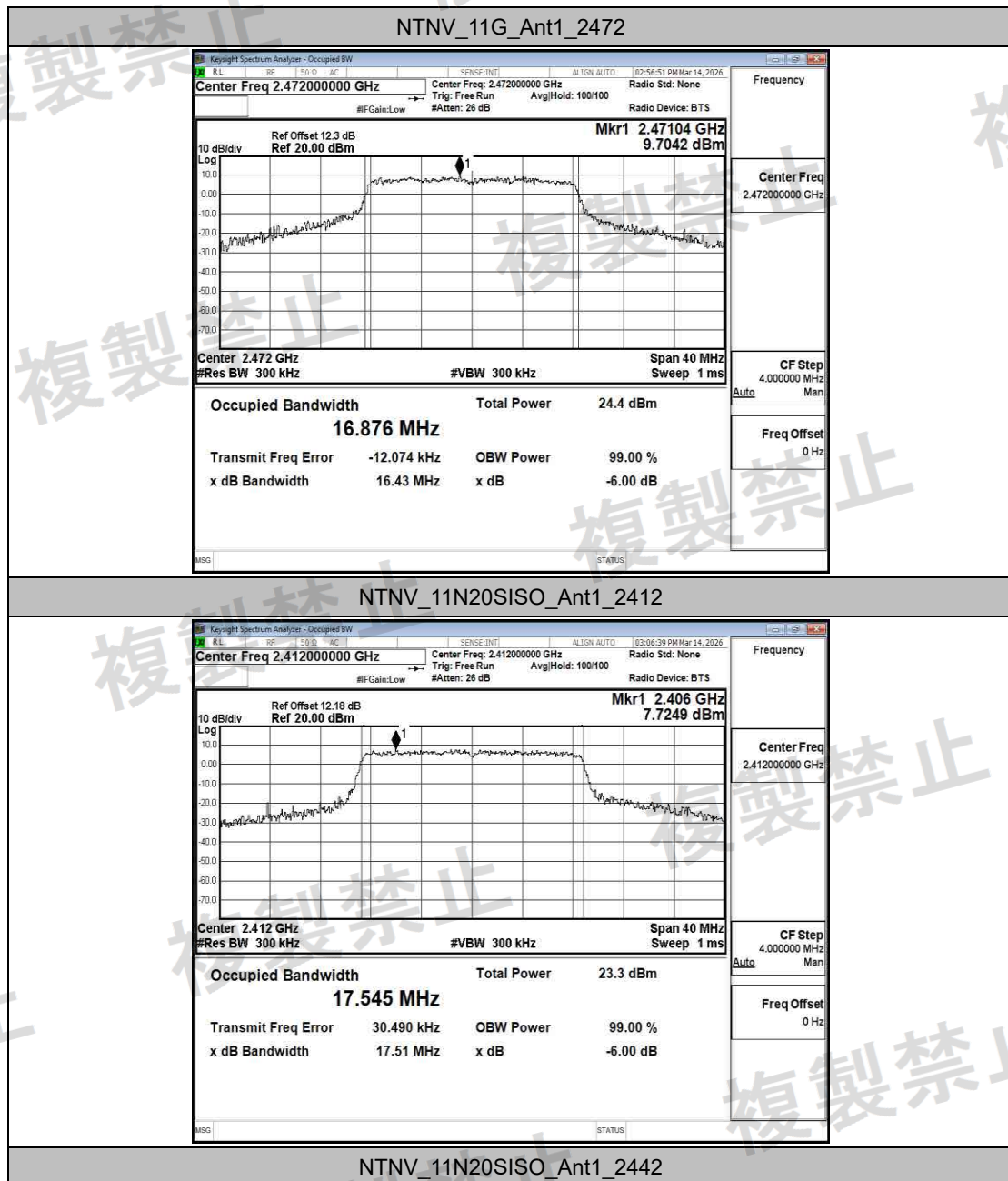


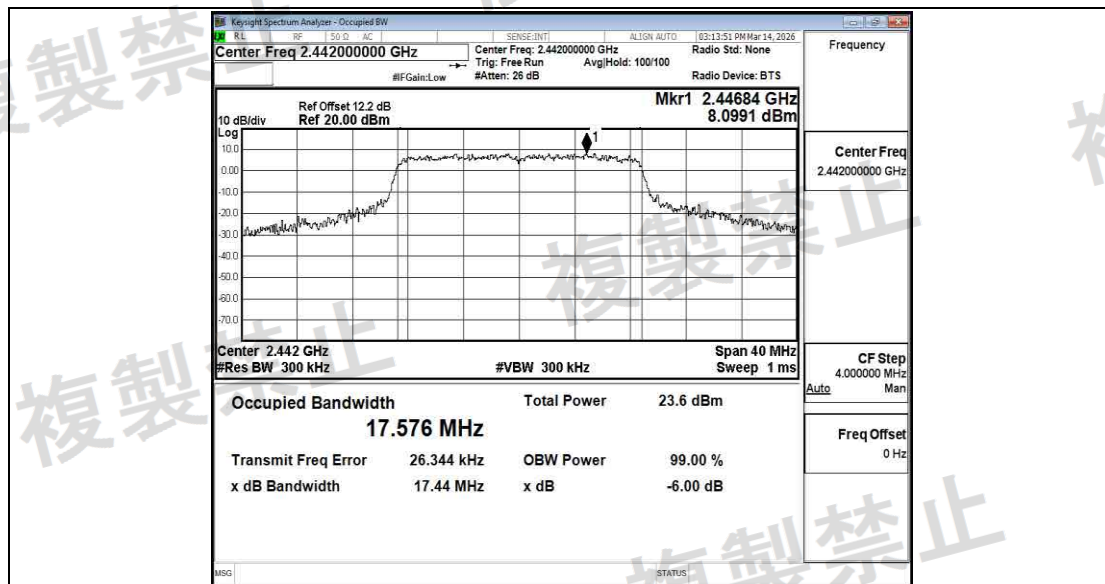
NTNV_11G_Ant1_2412



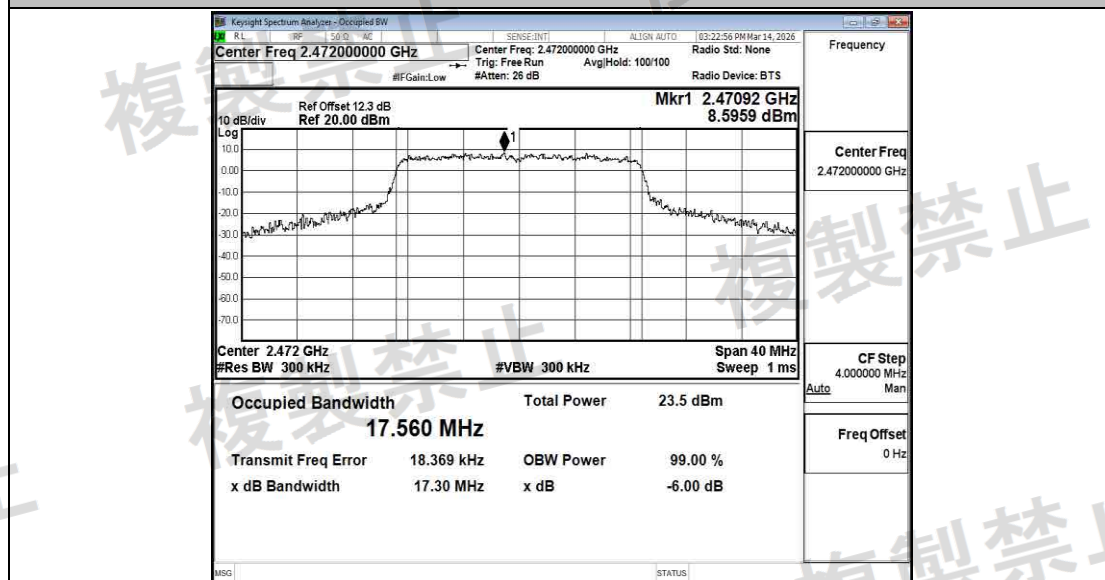
NTNV_11G_Ant1_2442



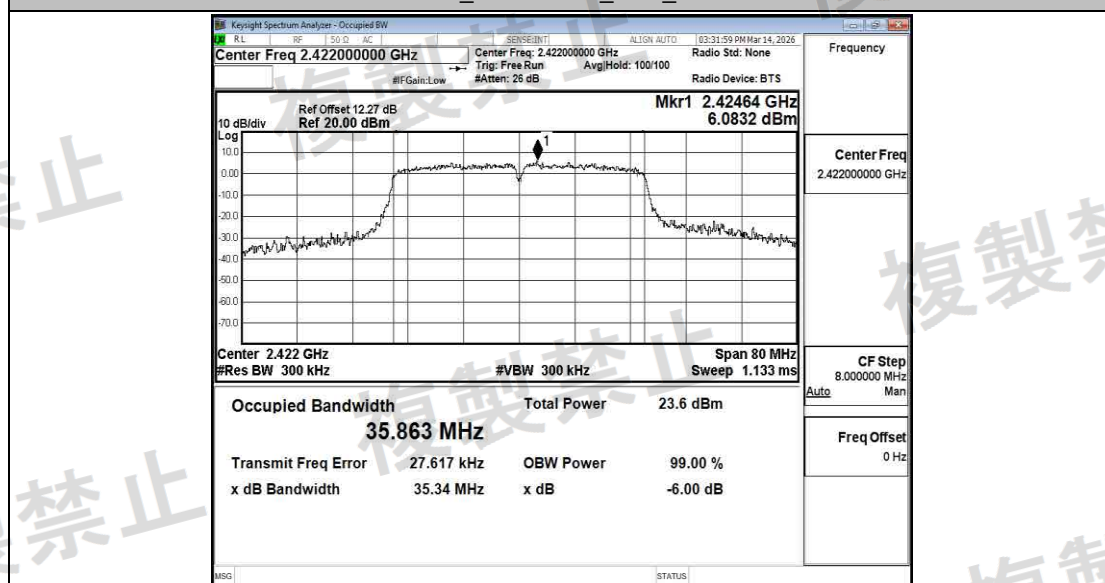


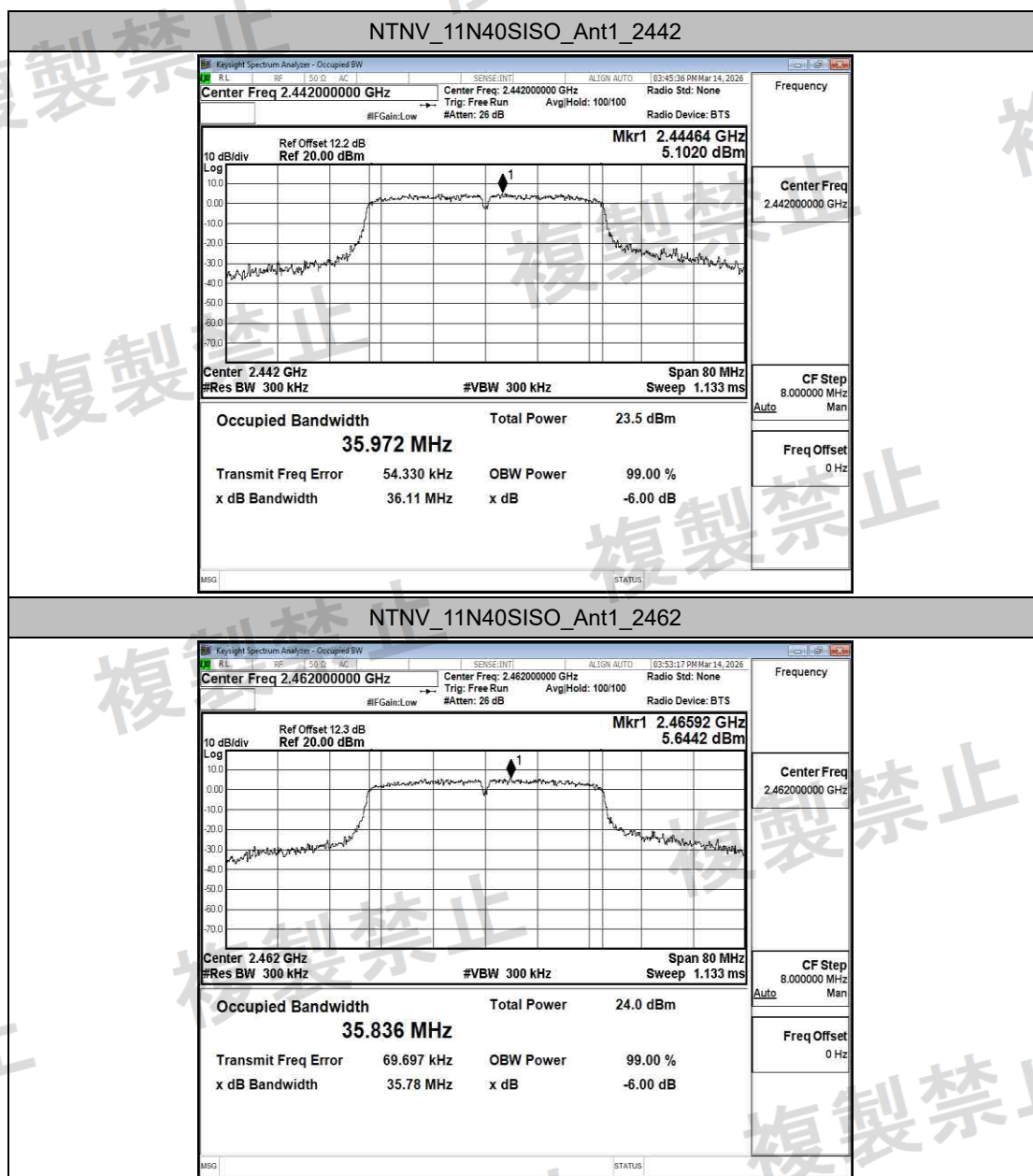


NTNV_11N20SISO_Ant1_2472



NTNV_11N40SISO_Ant1_2422



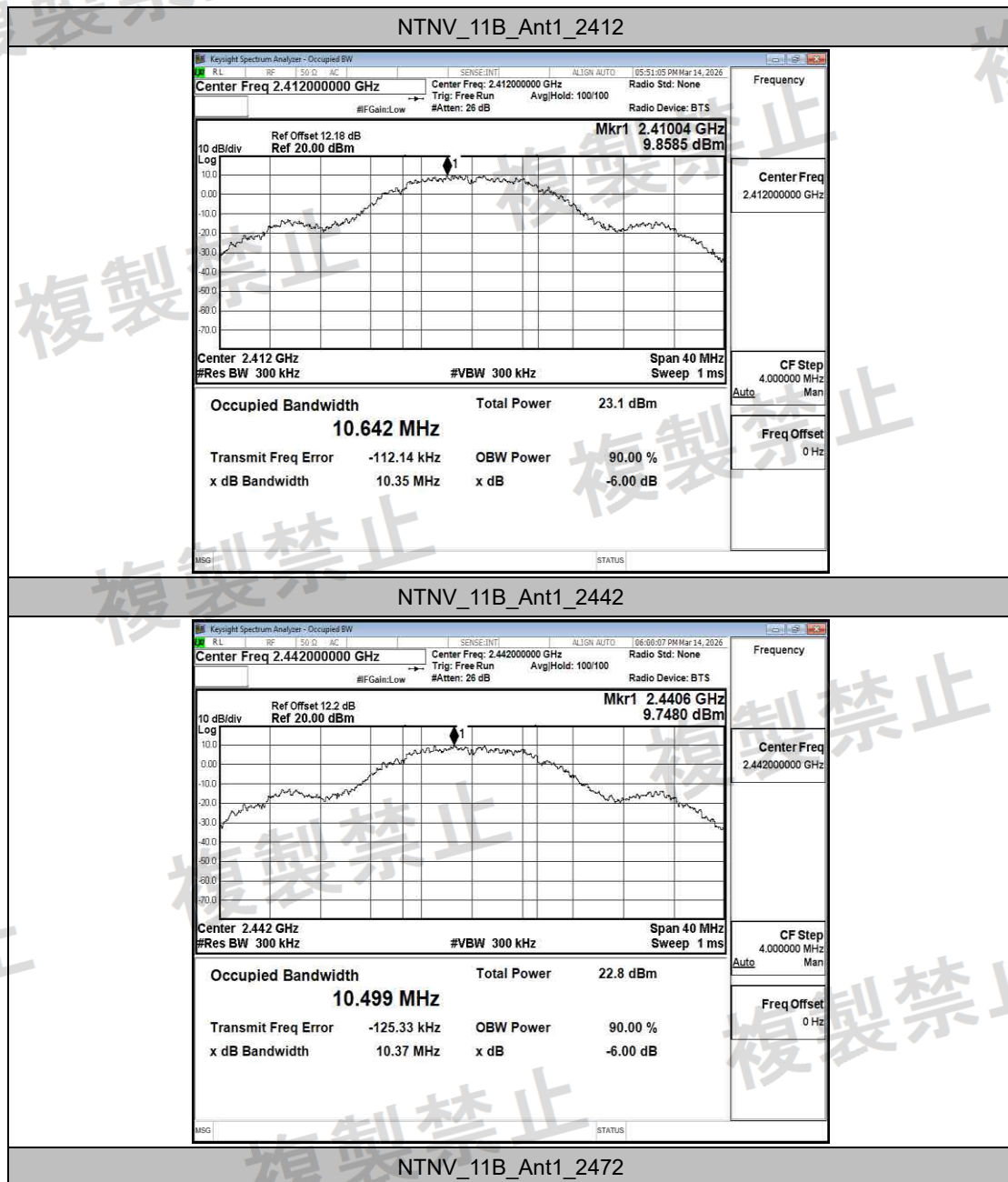


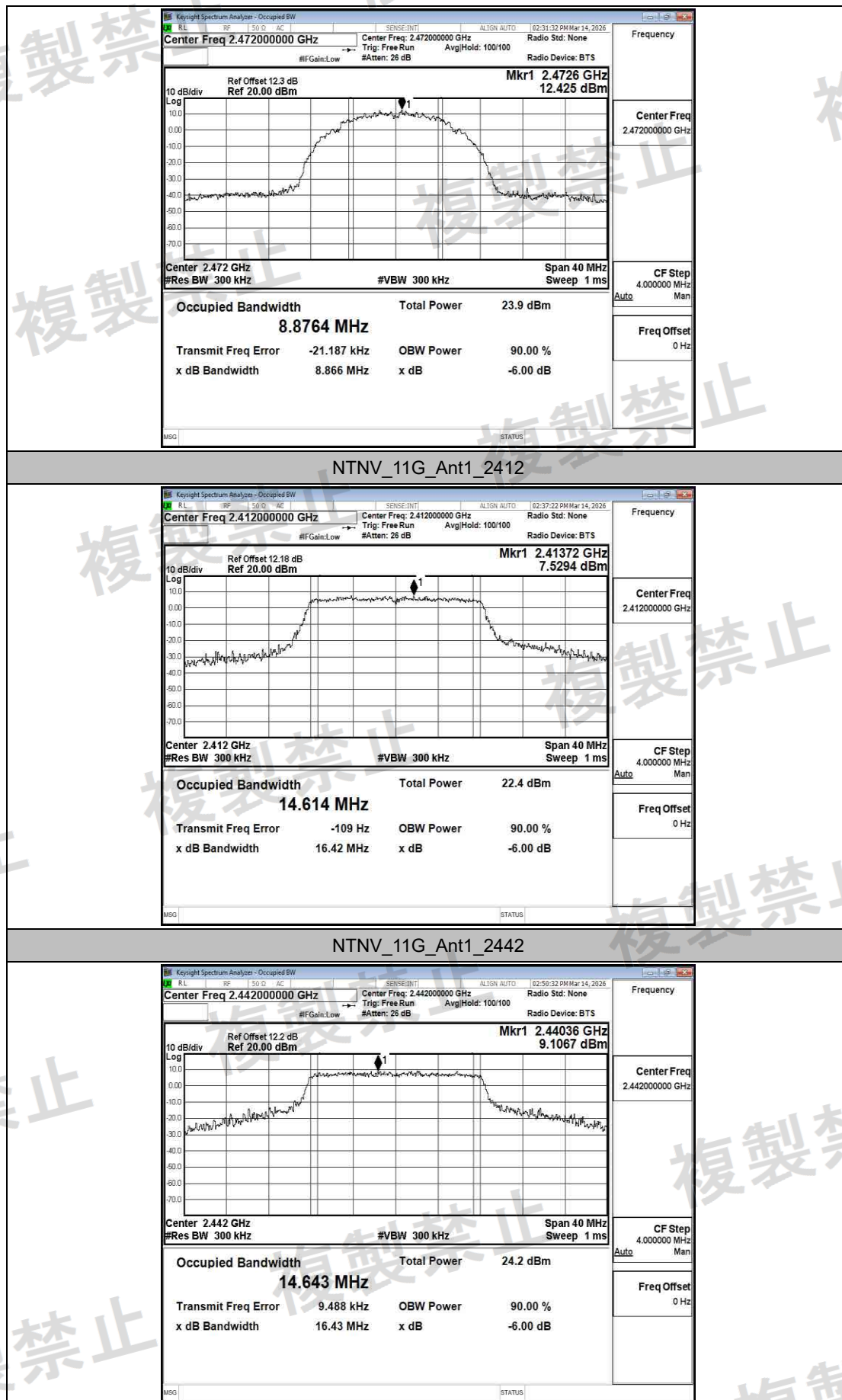
B.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	10.642	---	---	---	PASS
			2442	10.499	---	---	---	PASS
			2472	8.876	---	---	---	PASS
	11G	Ant1	2412	14.614	---	---	---	PASS
			2442	14.643	---	---	---	PASS
			2472	14.420	---	---	---	PASS
	11N20SI SO	Ant1	2412	15.377	---	---	---	PASS
			2442	15.365	---	---	---	PASS
			2472	15.329	---	---	---	PASS
	11N40SI SO	Ant1	2422	31.056	---	---	---	PASS
			2442	31.398	---	---	---	PASS
			2462	31.094	---	---	---	PASS

Test Graphs

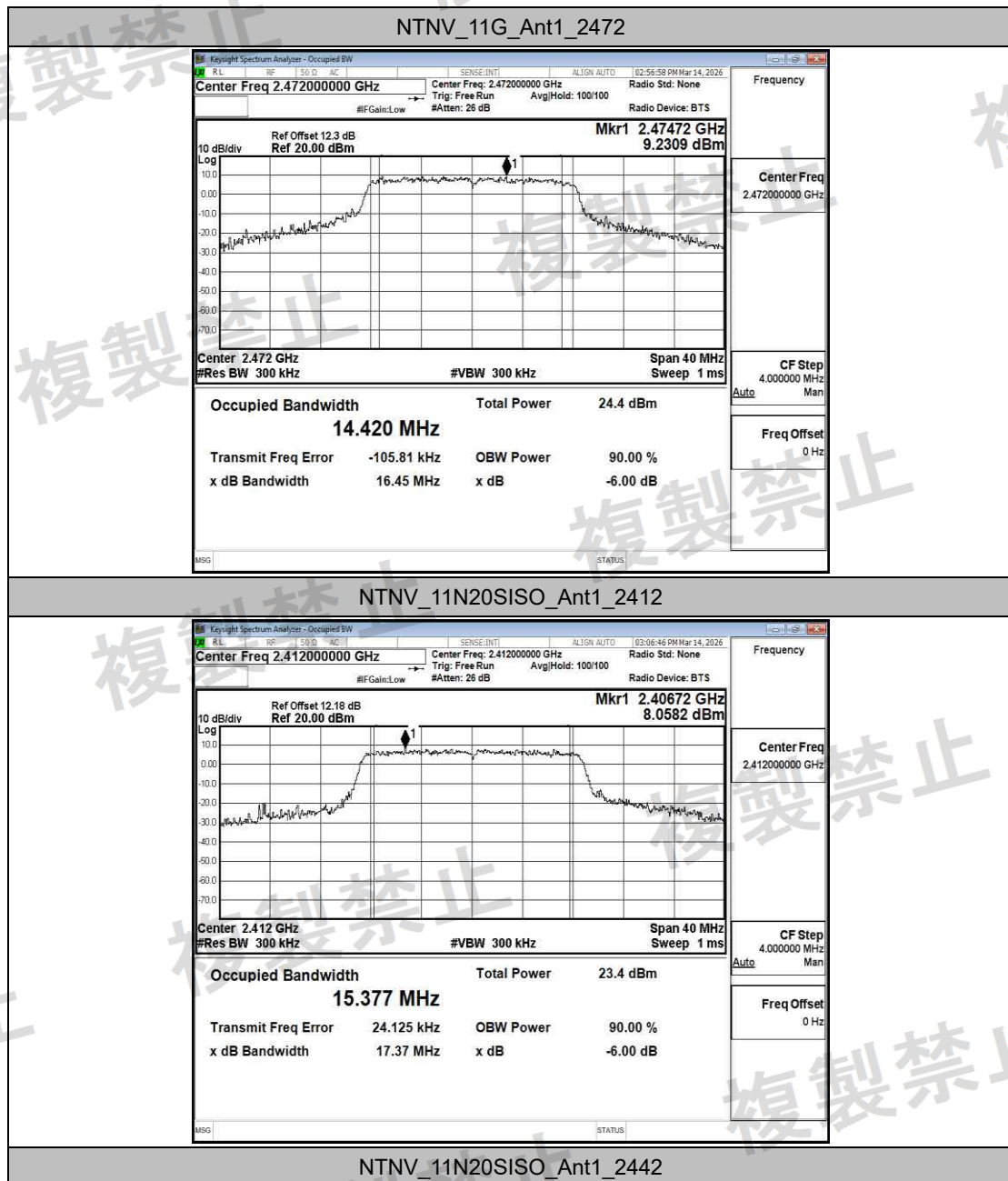


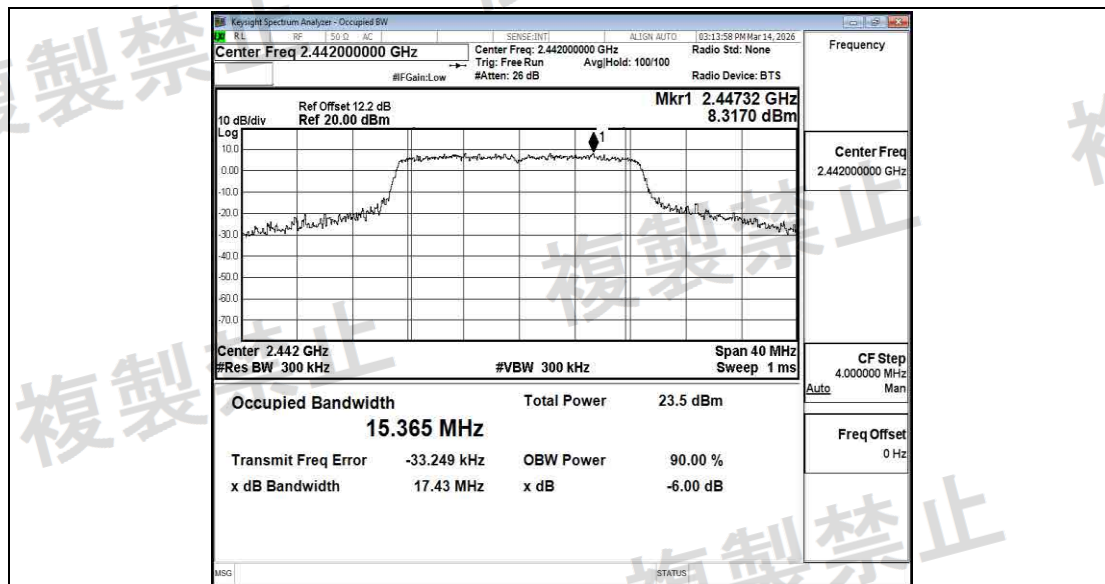


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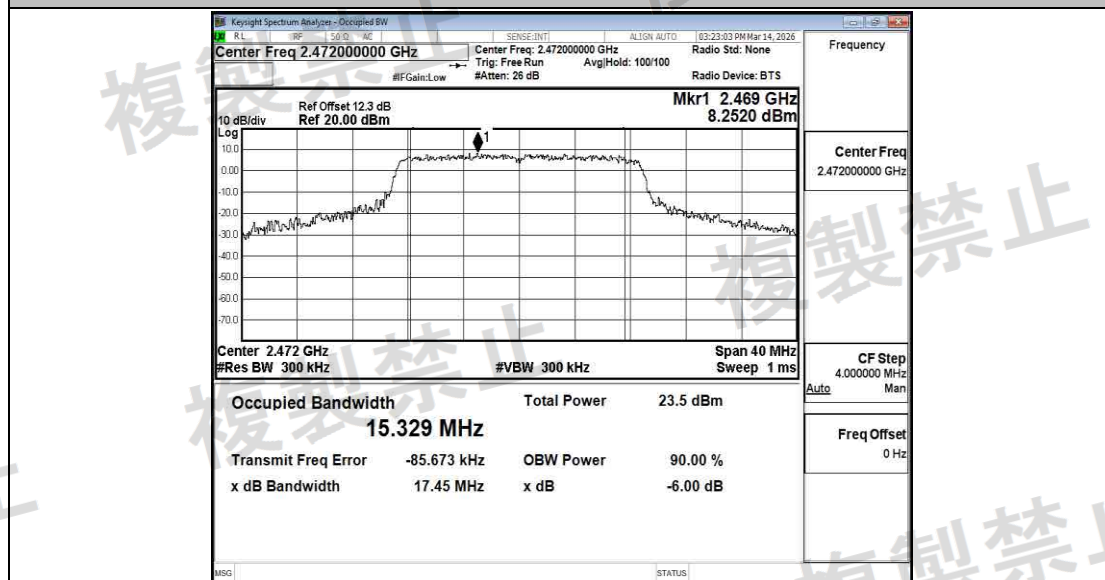
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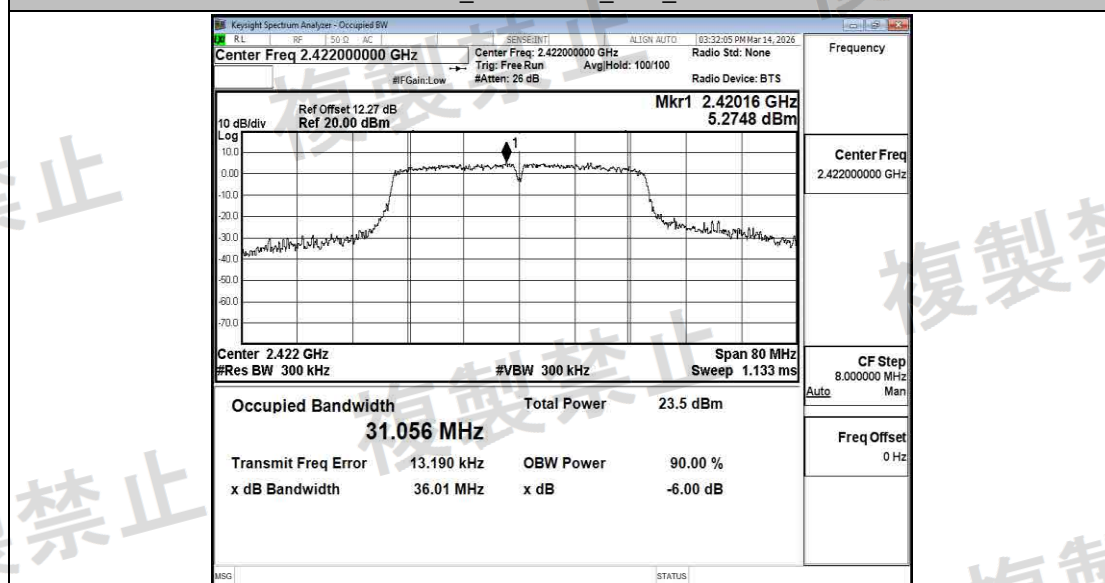


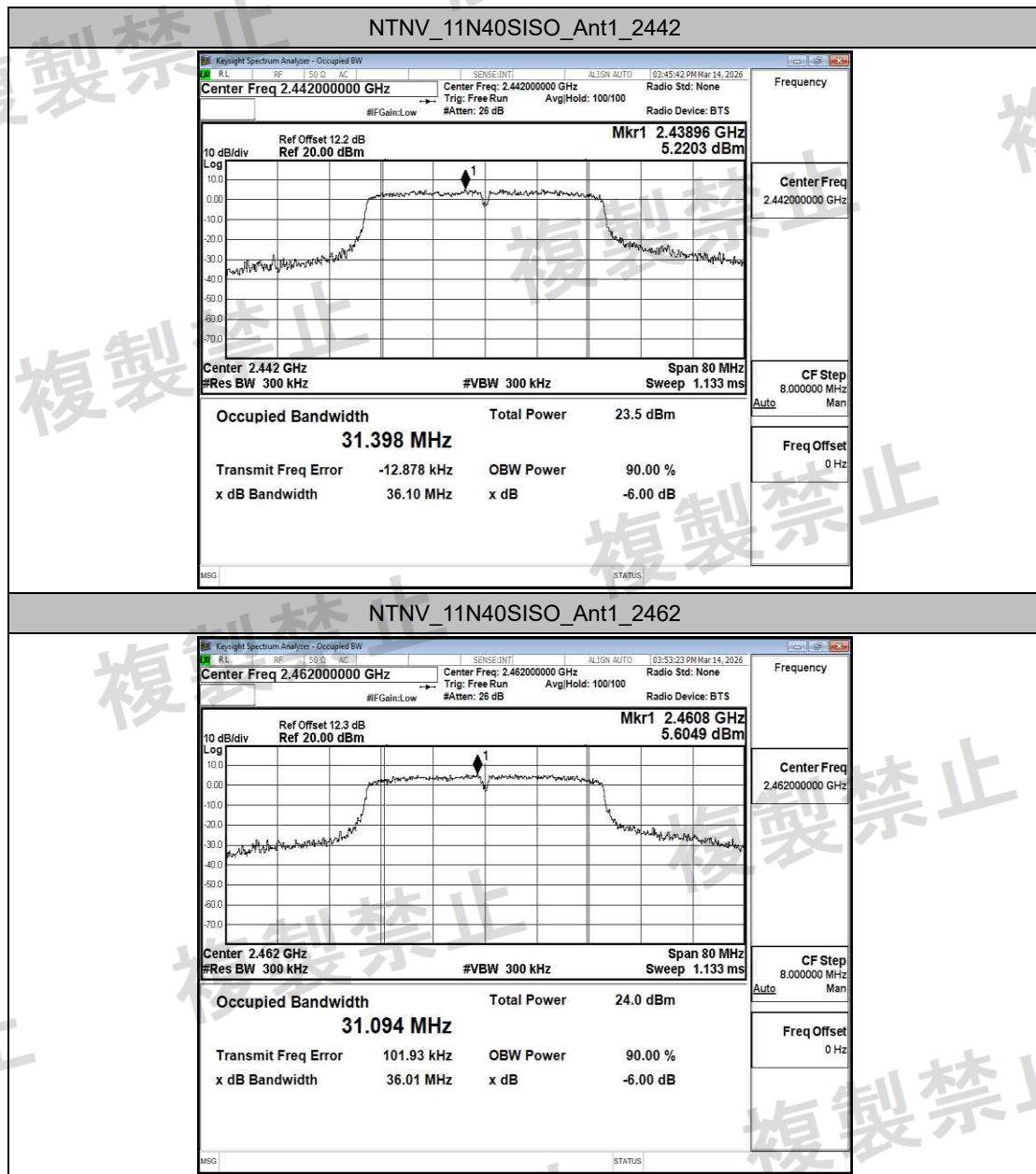


NTNV_11N20SISO_Ant1_2472



NTNV_11N40SISO_Ant1_2422





B.5 Spurious Emission of TX

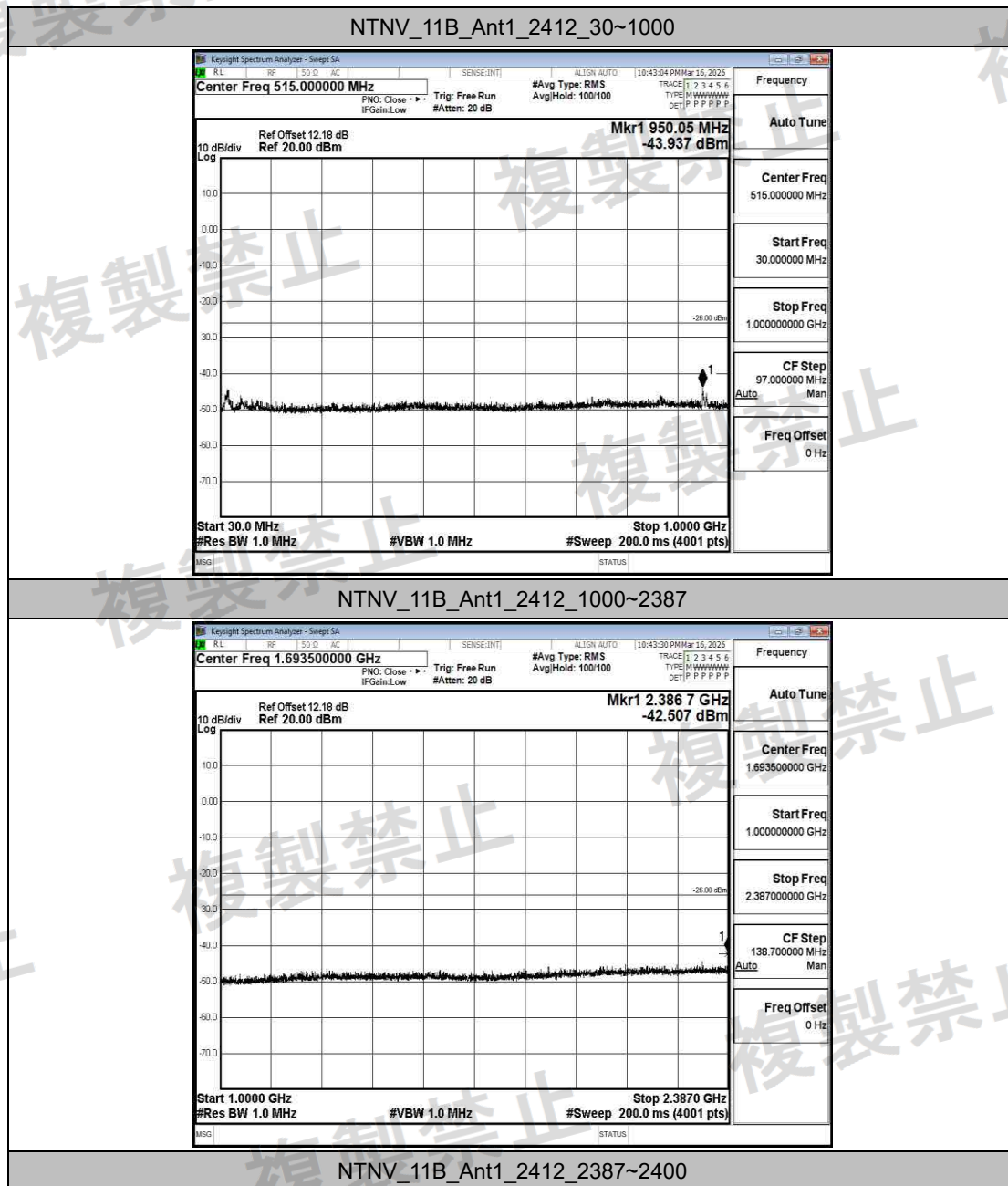
Test Result

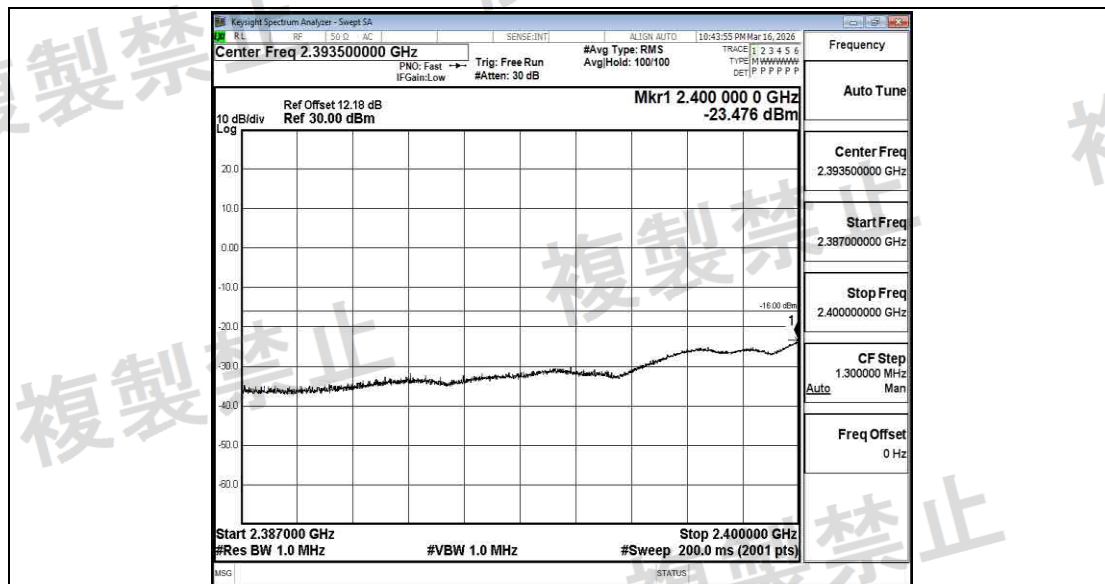
TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	950.05	-43.94	≤-26	0.04036	≤2.5	PASS
				1000~2387	2386.65	-42.51	≤-26	0.05610	≤2.5	PASS
				2387~2400	2400.00	-23.48	≤-16	4.48745	≤25	PASS
				2483.5~2496.5	2486.56	-34.54	≤-16	0.35156	≤25	PASS
				2496.5~13000	2691.87	-43.19	≤-26	0.04797	≤2.5	PASS
			2442	30~1000	31.21	-37.35	≤-26	0.18408	≤2.5	PASS
				1000~2387	2157.80	-44.96	≤-26	0.03192	≤2.5	PASS
				2387~2400	2387.17	-34.69	≤-16	0.33963	≤25	PASS
				2483.5~2496.5	2493.46	-34.53	≤-16	0.35237	≤25	PASS
				2496.5~13000	2697.12	-43.84	≤-26	0.04130	≤2.5	PASS
			2472	30~1000	951.02	-43.84	≤-26	0.04130	≤2.5	PASS
				1000~2387	2084.63	-44.77	≤-26	0.03334	≤2.5	PASS
				2387~2400	2399.24	-34.58	≤-16	0.34834	≤25	PASS
				2483.5~2496.5	2483.55	-21.18	≤-16	7.62079	≤25	PASS
				2496.5~13000	2714.45	-43.32	≤-26	0.04656	≤2.5	PASS
	11G	Ant1	2412	30~1000	30.49	-42.45	≤-26	0.05689	≤2.5	PASS
				1000~2387	2387.00	-41.62	≤-26	0.06887	≤2.5	PASS
				2387~2400	2399.97	-30.83	≤-16	0.82604	≤25	PASS
				2483.5~2496.5	2493.00	-34.53	≤-16	0.35237	≤25	PASS
				2496.5~13000	4818.82	-32.73	≤-26	0.53333	≤2.5	PASS
			2442	30~1000	953.44	-41.35	≤-26	0.07328	≤2.5	PASS

				1000~2387	2371.0 5	-44.39	≤-26	0.03639	≤2.5	PASS
				2387~2400	2397.2 2	-34.69	≤-16	0.33963	≤25	PASS
				2483.5~2496.5	2495.7 8	-33.46	≤-16	0.45082	≤25	PASS
				2496.5~13000	4885.0 0	-29.88	≤-26	1.02802	≤2.5	PASS
				30~1000	30.73	-42.17	≤-26	0.06067	≤2.5	PASS
				1000~2387	2353.0 2	-44.61	≤-26	0.03459	≤2.5	PASS
				2387~2400	2392.3 5	-34.51	≤-16	0.35400	≤25	PASS
				2483.5~2496.5	2483.5 7	-28.00	≤-16	1.58489	≤25	PASS
				2496.5~13000	4946.4 4	-33.54	≤-26	0.44259	≤2.5	PASS
				30~1000	30.24	-41.45	≤-26	0.07161	≤2.5	PASS
	11N20SI SO	Ant1	2412	1000~2387	2387.0 0	-43.42	≤-26	0.04550	≤2.5	PASS
				2387~2400	2399.9 4	-31.02	≤-16	0.79068	≤25	PASS
				2483.5~2496.5	2488.5 4	-34.31	≤-16	0.37068	≤25	PASS
				2496.5~13000	4825.6 5	-33.99	≤-26	0.39902	≤2.5	PASS
				30~1000	30.49	-42.29	≤-26	0.05902	≤2.5	PASS
			2442	1000~2387	2362.0 3	-44.61	≤-26	0.03459	≤2.5	PASS
				2387~2400	2399.8 6	-35.01	≤-16	0.31550	≤25	PASS
				2483.5~2496.5	2485.1 6	-34.26	≤-16	0.37497	≤25	PASS
				2496.5~13000	4885.5 2	-32.20	≤-26	0.60256	≤2.5	PASS
				30~1000	30.24	-42.09	≤-26	0.06180	≤2.5	PASS
			2472	1000~2387	2328.0 5	-43.44	≤-26	0.04529	≤2.5	PASS
				2387~2400	2394.4 5	-34.47	≤-16	0.35727	≤25	PASS
				2483.5~2496.5	2486.7 0	-23.05	≤-16	4.95450	≤25	PASS
				2496.5~13000	4945.9	-31.68	≤-26	0.67920	≤2.5	PASS

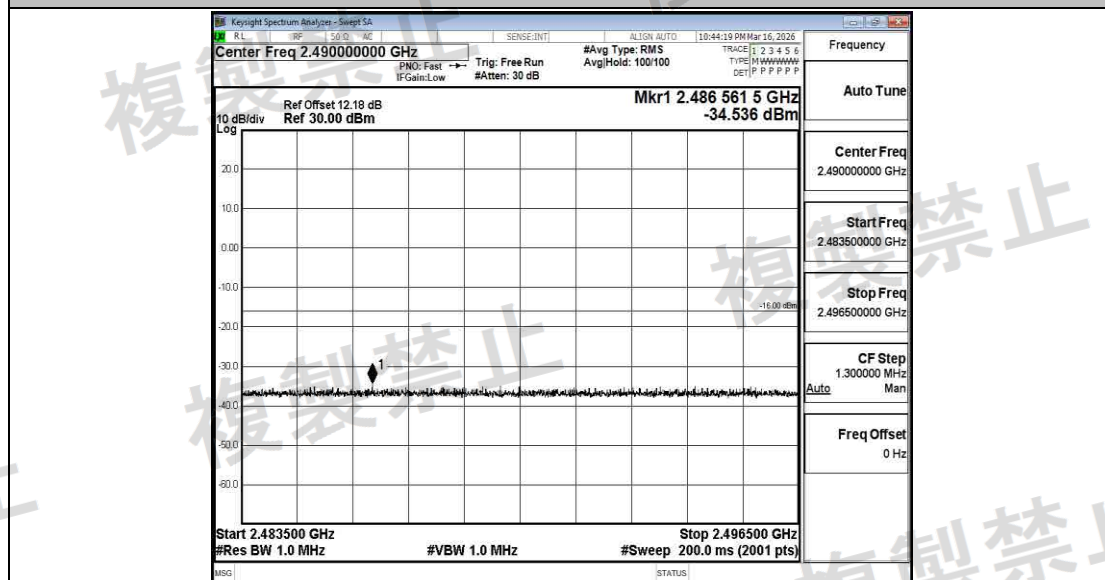
	11N40SI SO	Ant1	2422		2					
				30~1000	31.21	-41.08	≤-26	0.07798	≤2.5	PASS
				1000~2387	2387.0 0	-38.96	≤-26	0.12706	≤2.5	PASS
				2387~2400	2399.8 6	-30.10	≤-16	0.97724	≤25	PASS
				2483.5~2496.5	2495.9 7	-34.08	≤-16	0.39084	≤25	PASS
			2442	2496.5~13000	4842.9 8	-36.11	≤-26	0.24491	≤2.5	PASS
				30~1000	30.73	-42.16	≤-26	0.06081	≤2.5	PASS
				1000~2387	2380.4 1	-43.42	≤-26	0.04550	≤2.5	PASS
				2387~2400	2396.7 8	-33.64	≤-16	0.43251	≤25	PASS
				2483.5~2496.5	2486.2 9	-32.69	≤-16	0.53827	≤25	PASS
				2496.5~13000	4884.4 7	-34.40	≤-26	0.36308	≤2.5	PASS
			2462	30~1000	30.49	-41.41	≤-26	0.07228	≤2.5	PASS
				1000~2387	2252.8 1	-44.53	≤-26	0.03524	≤2.5	PASS
				2387~2400	2394.0 1	-34.37	≤-16	0.36559	≤25	PASS
				2483.5~2496.5	2483.5 1	-24.39	≤-16	3.63915	≤25	PASS
				2496.5~13000	4921.2 3	-33.29	≤-26	0.46881	≤2.5	PASS

Test Graphs

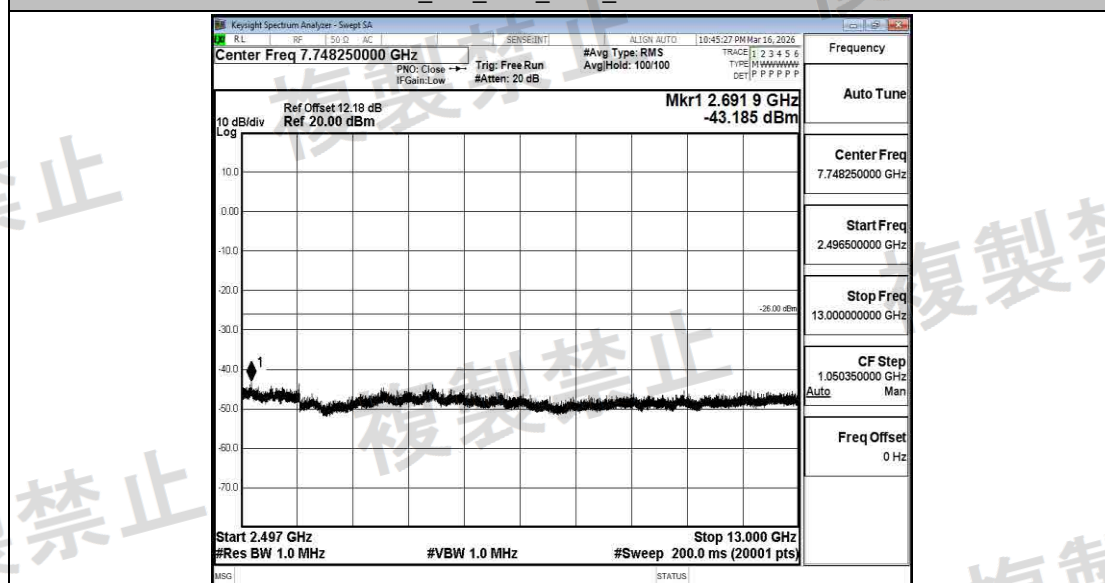




NTNV_11B_Ant1_2412_2483.5~2496.5



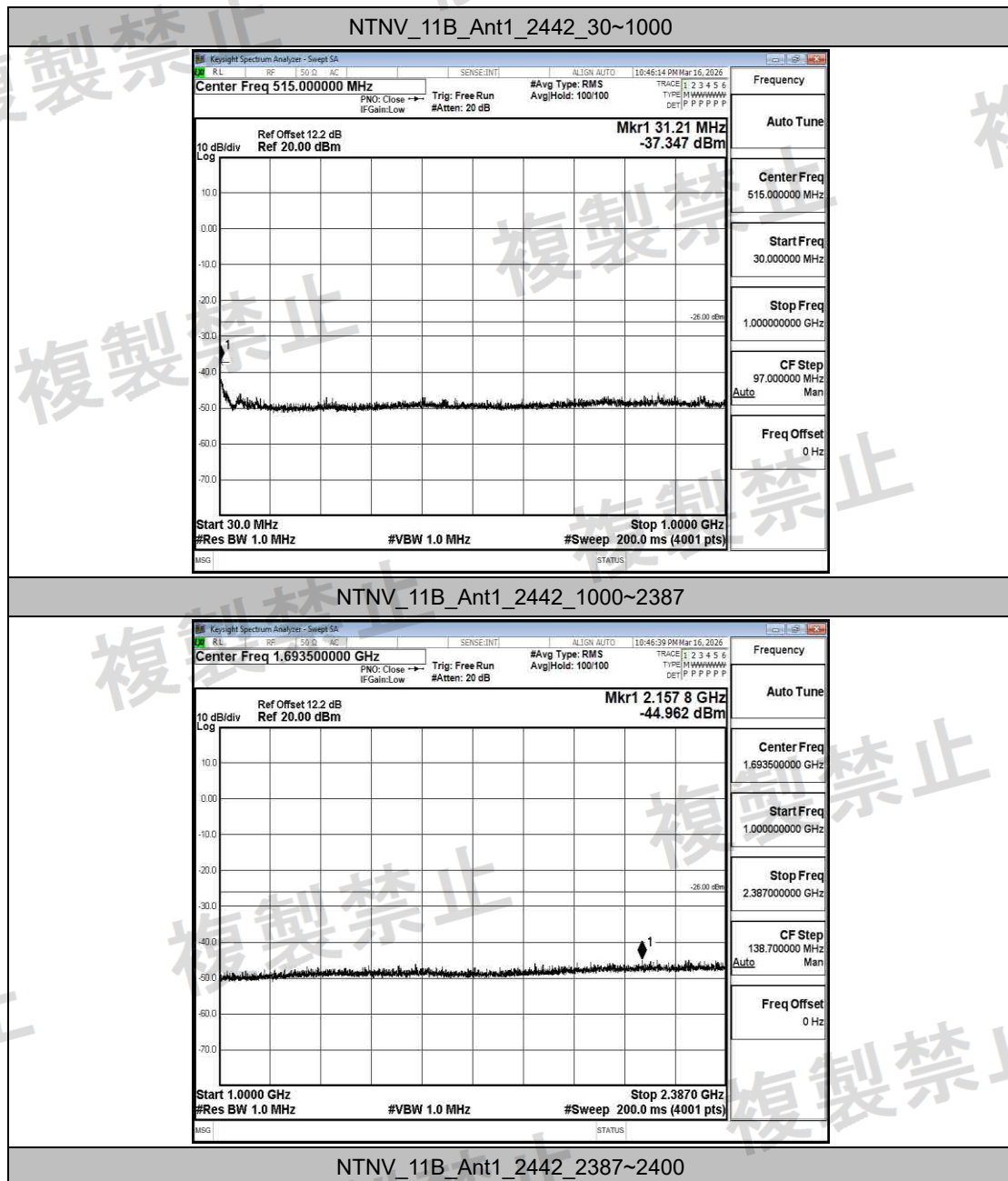
NTNV_11B_Ant1_2412_2496.5~13000



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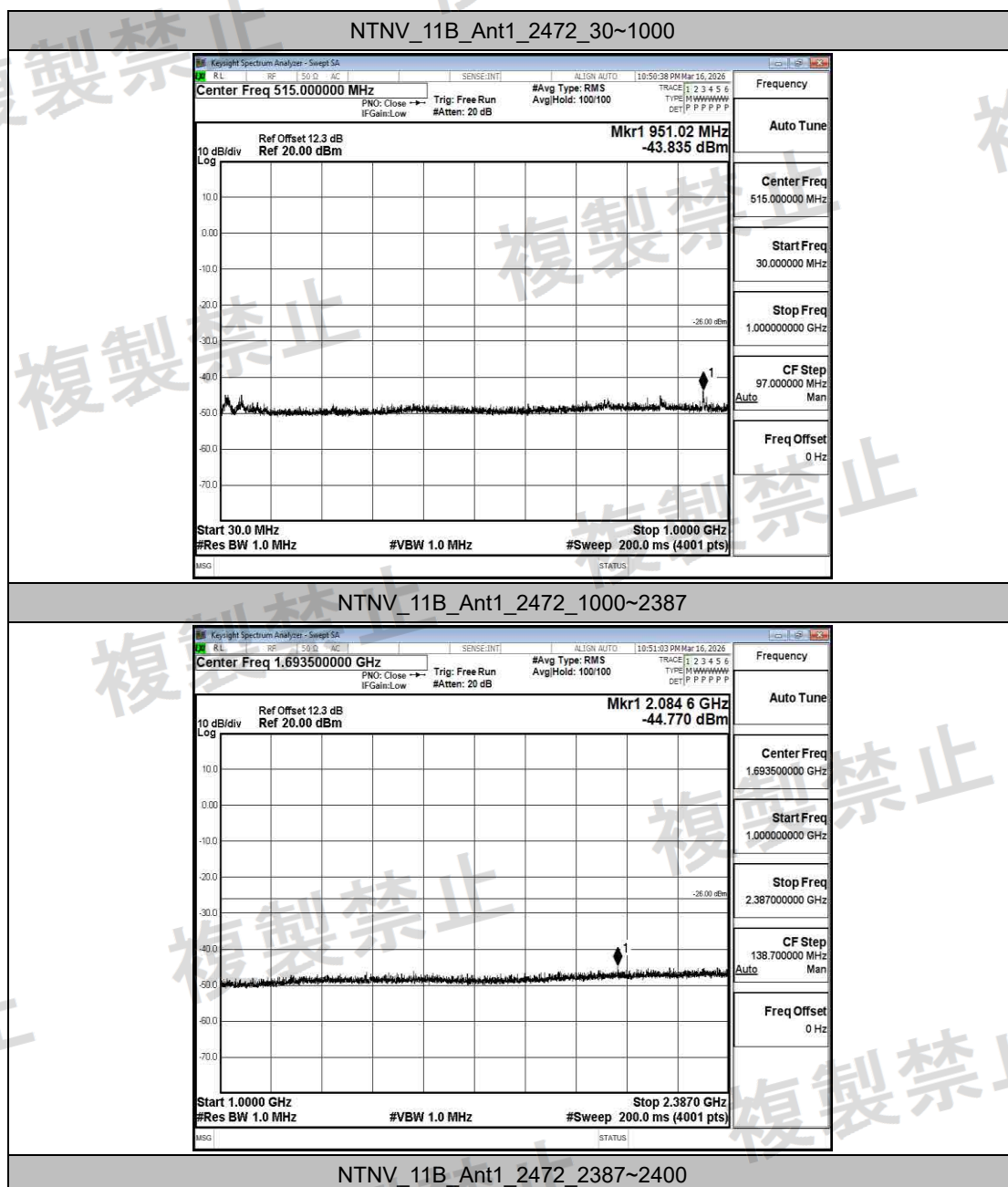


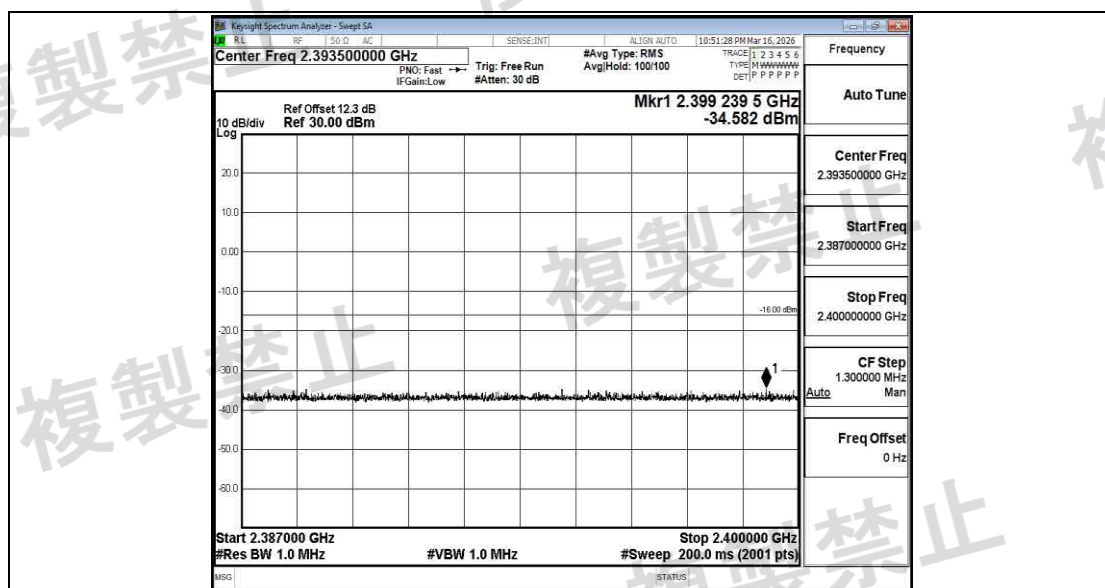


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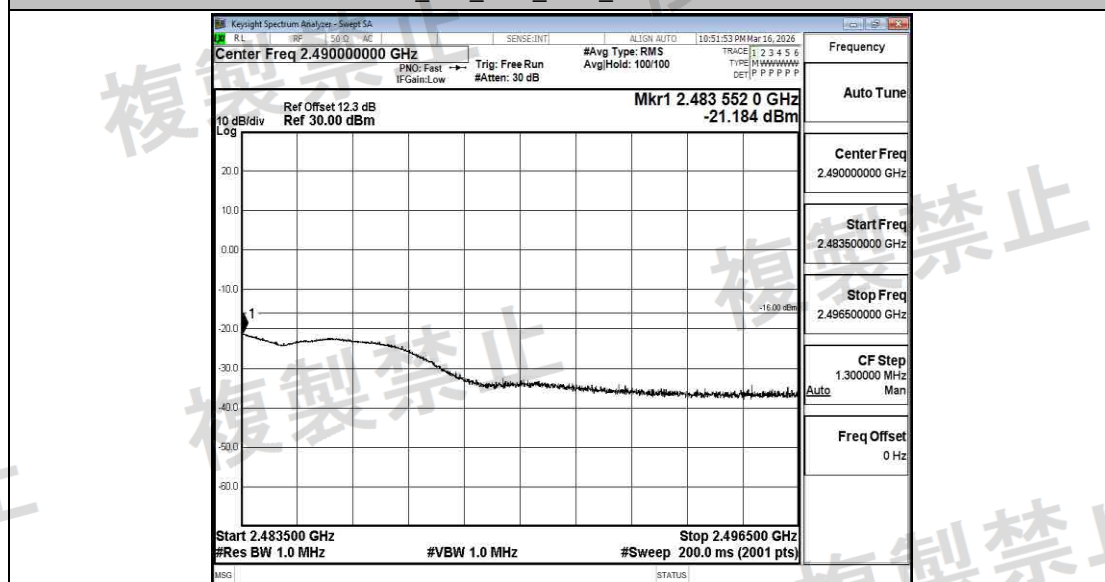
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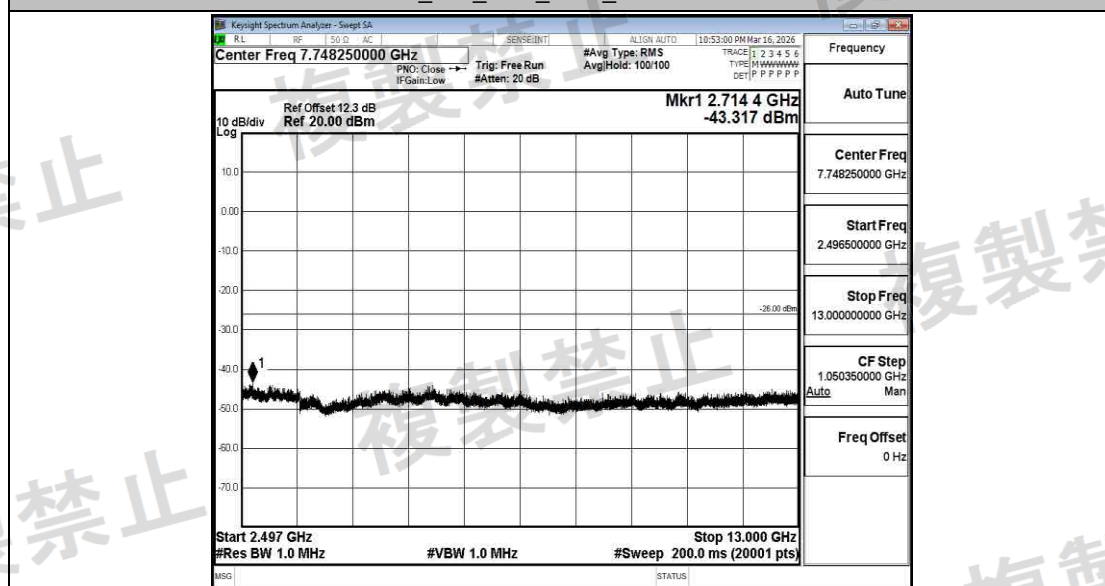




NTNV_11B_Ant1_2472_2483.5~2496.5



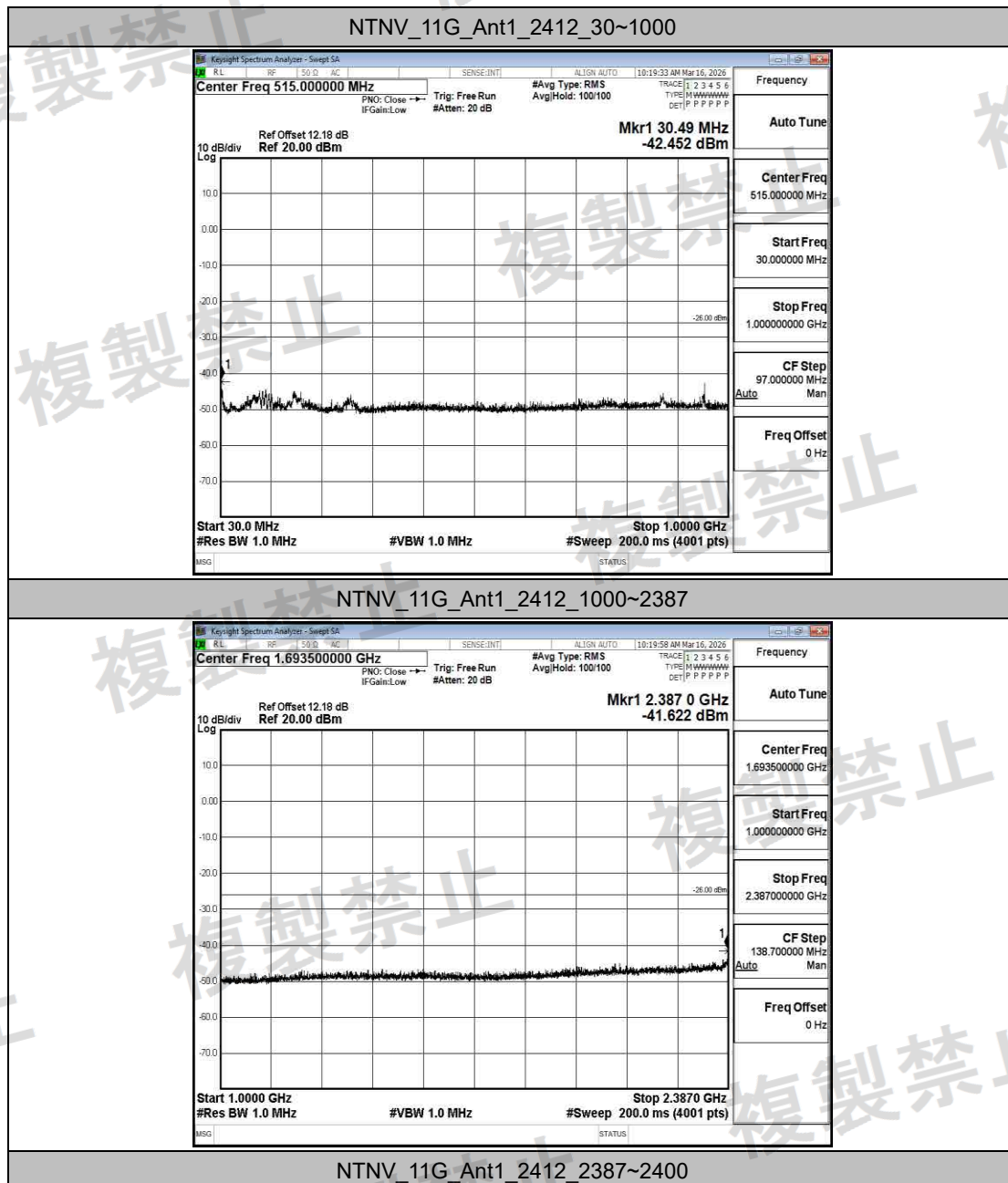
NTNV_11B_Ant1_2472_2496.5~13000

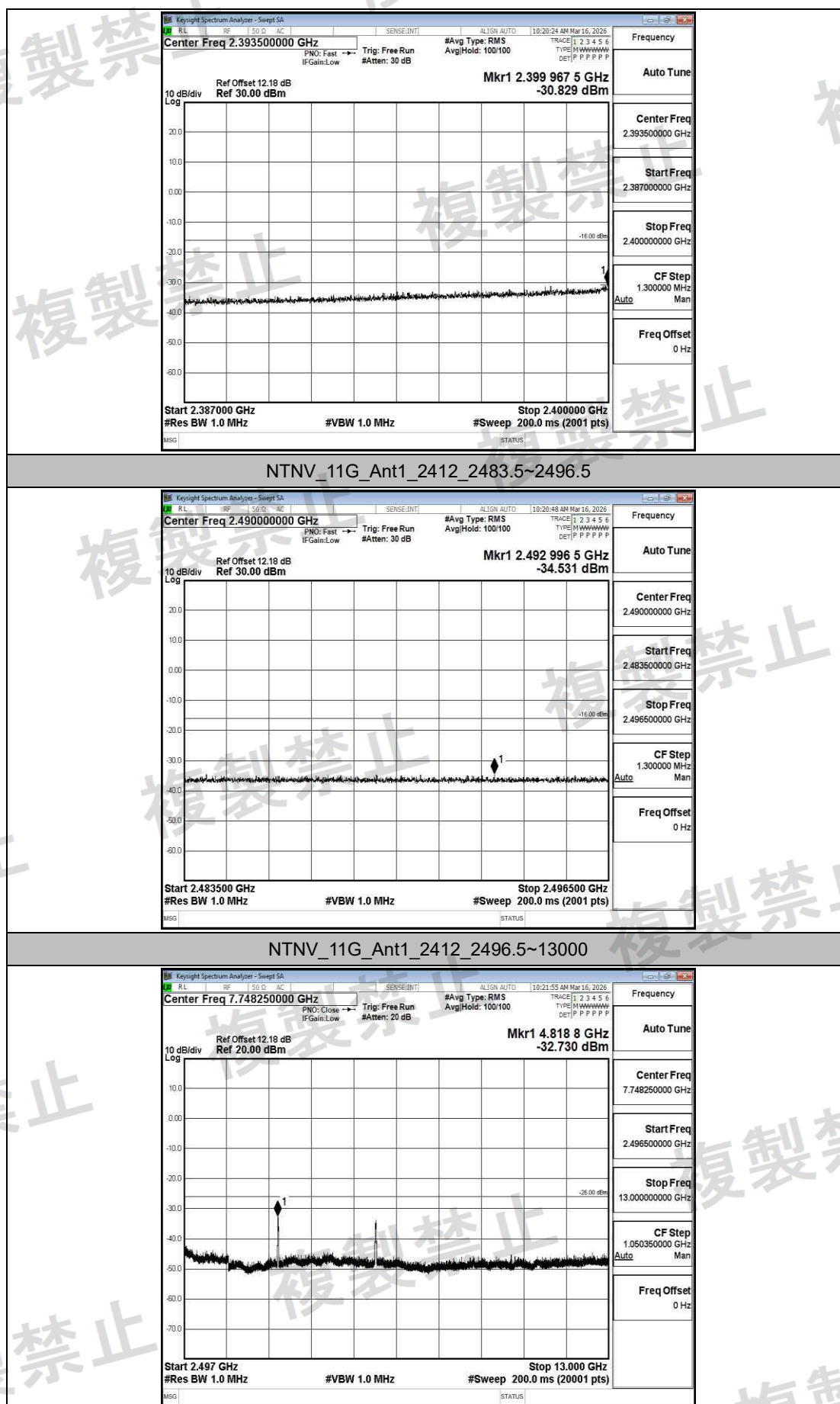


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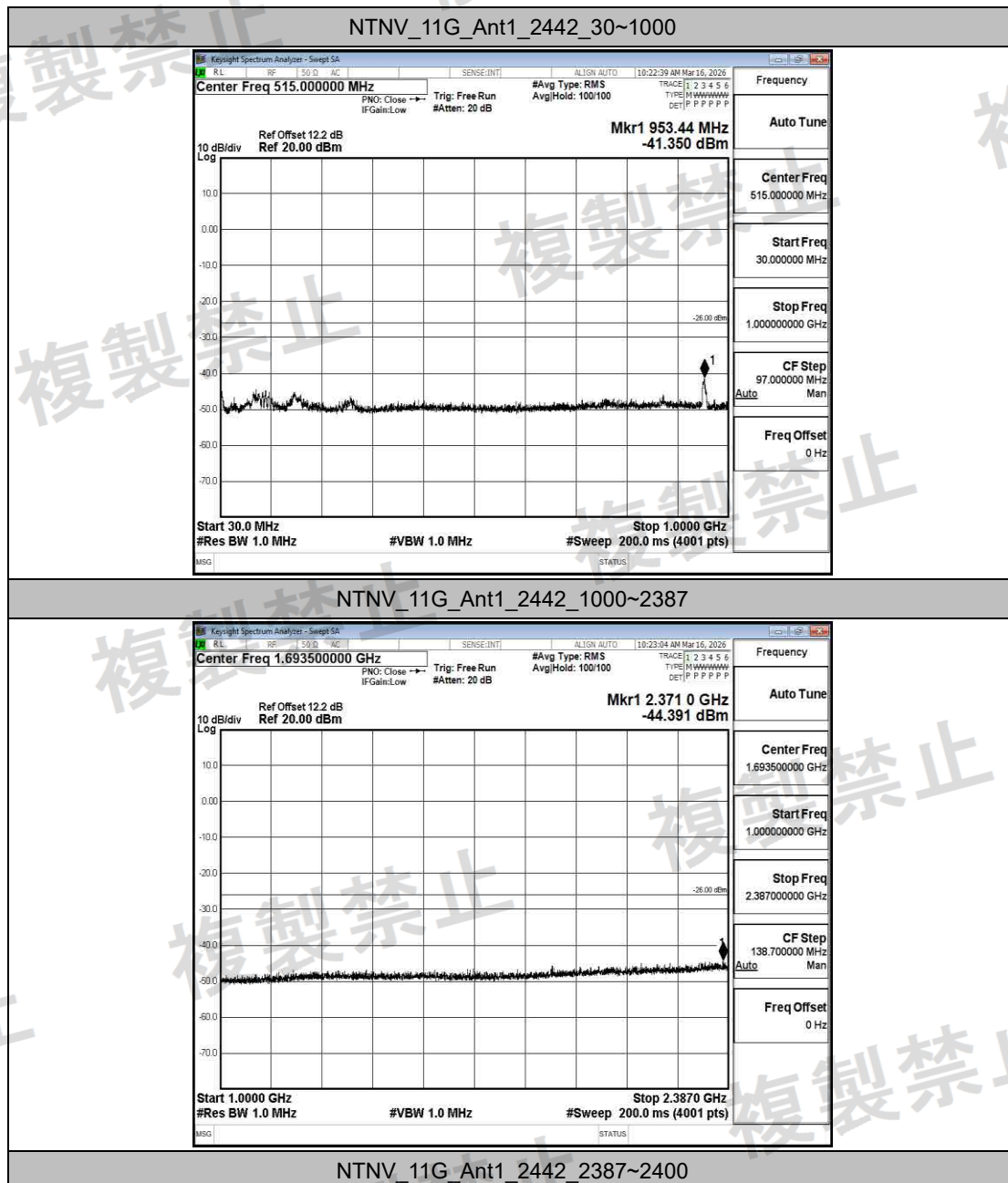


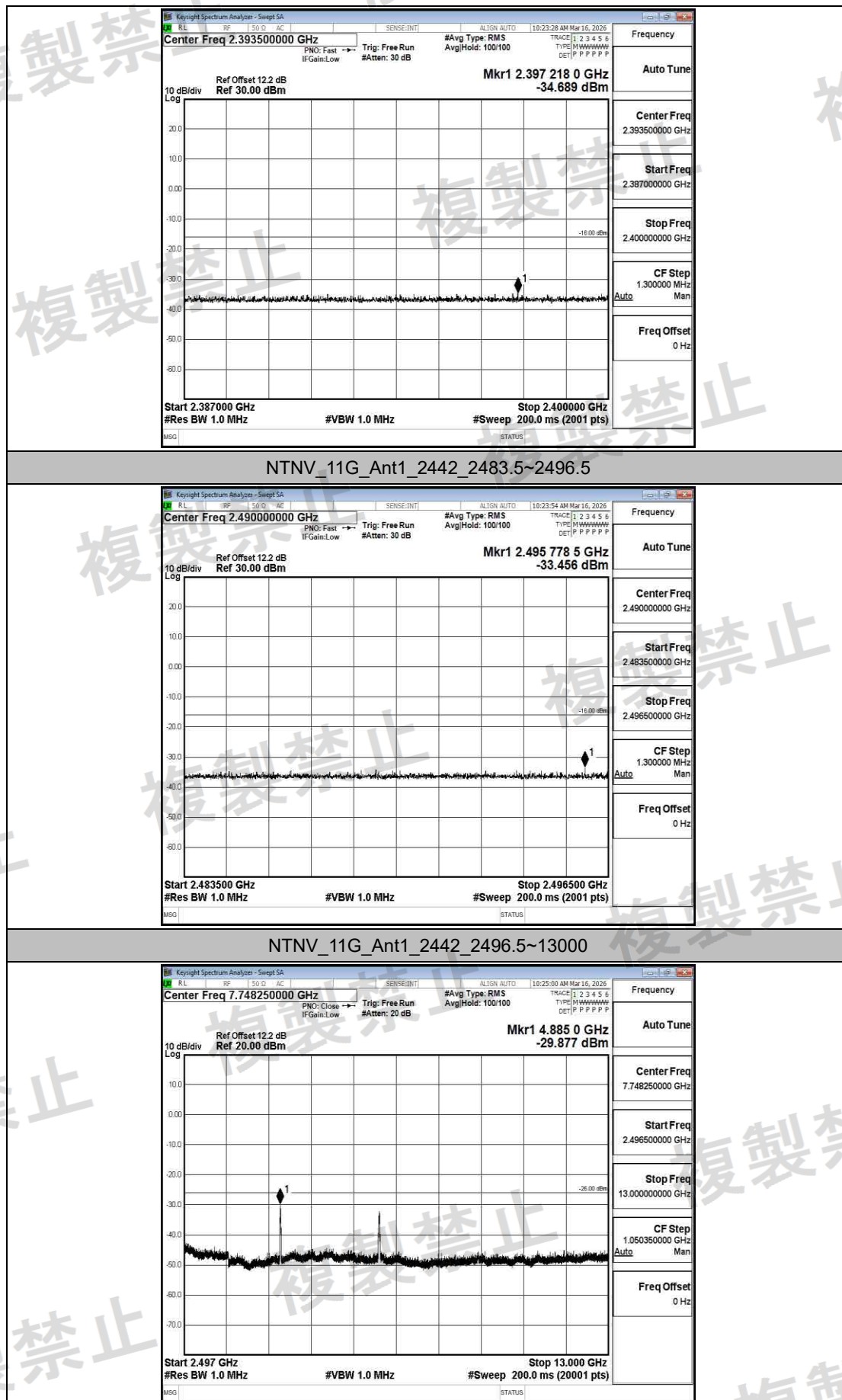


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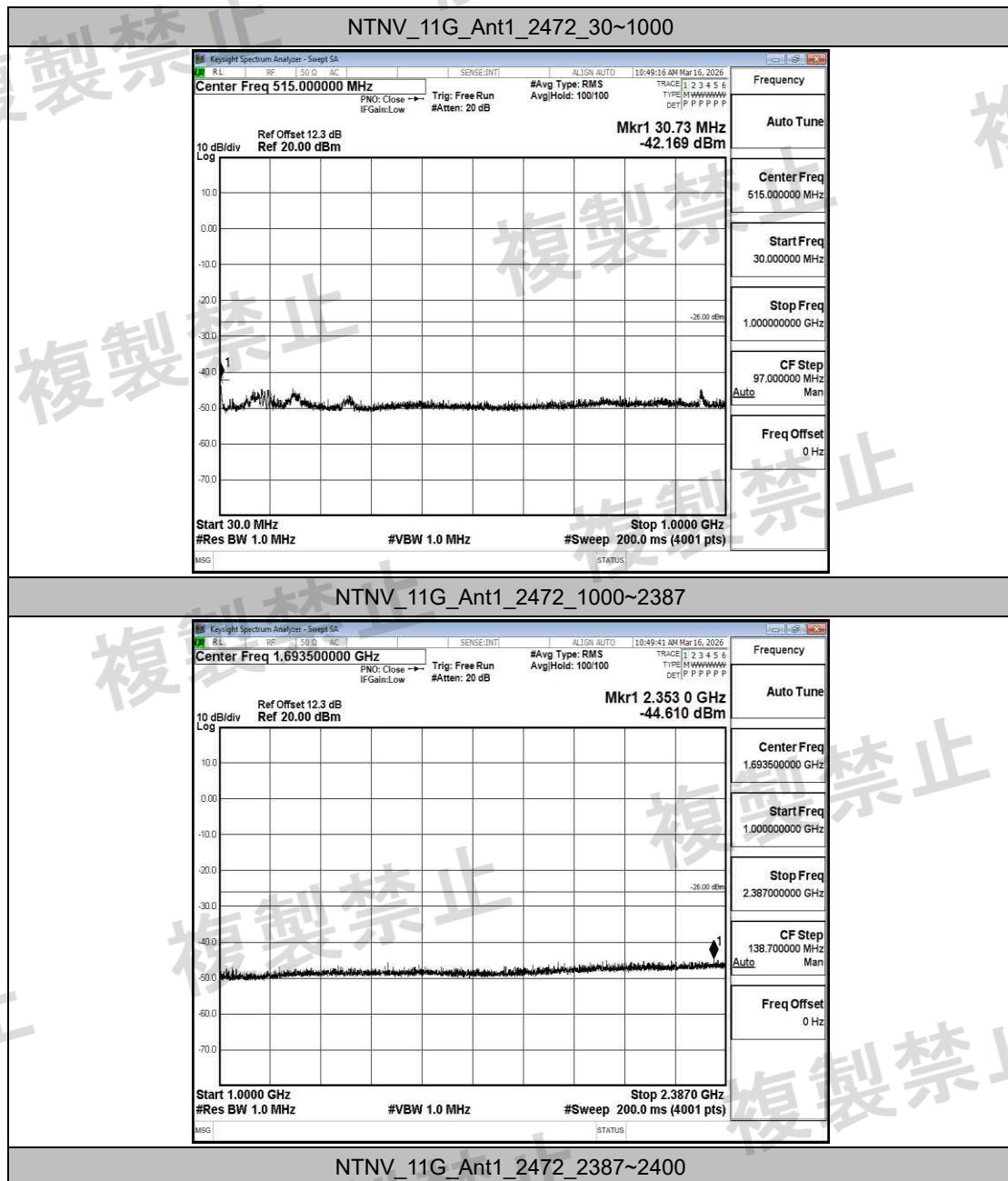


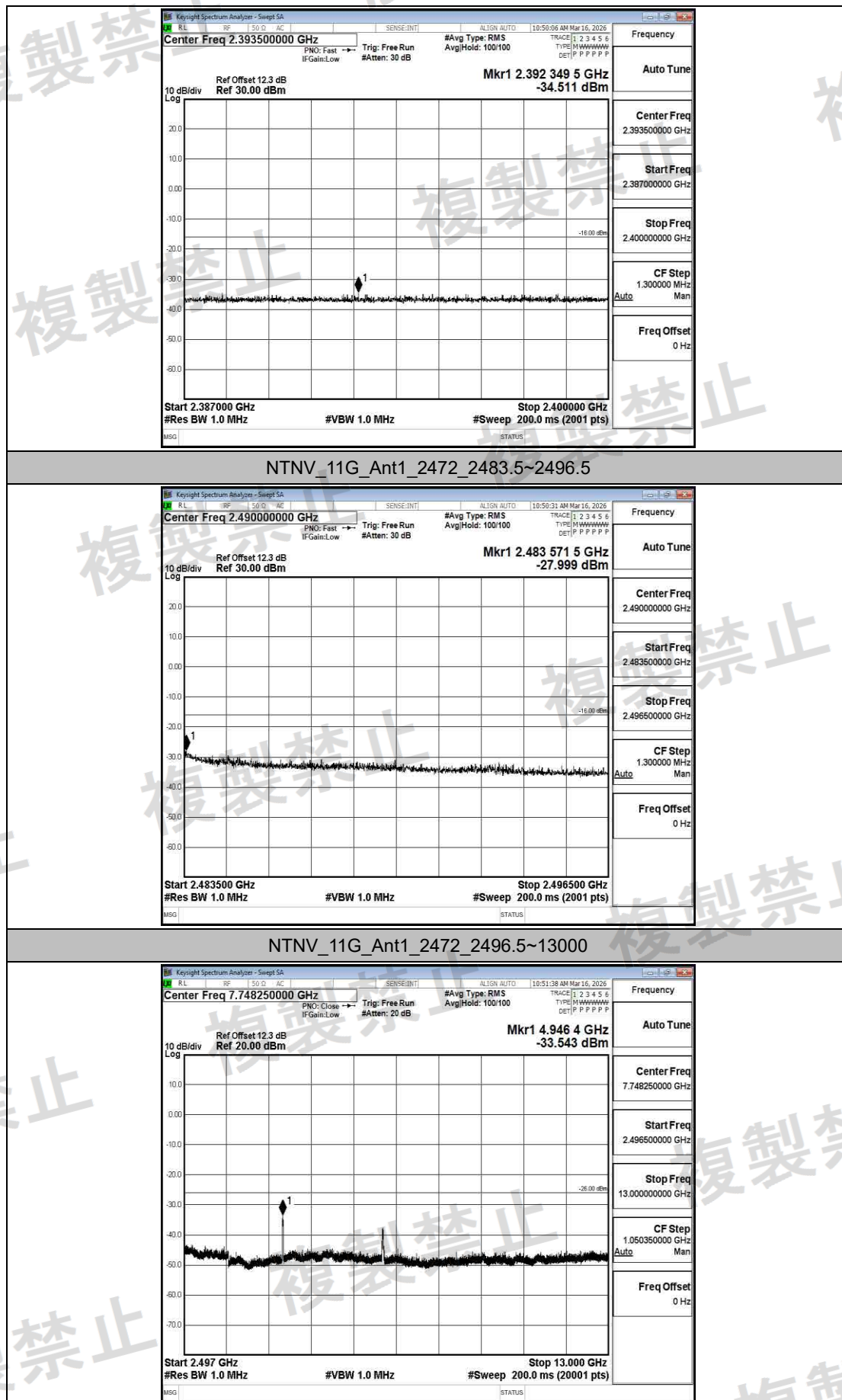


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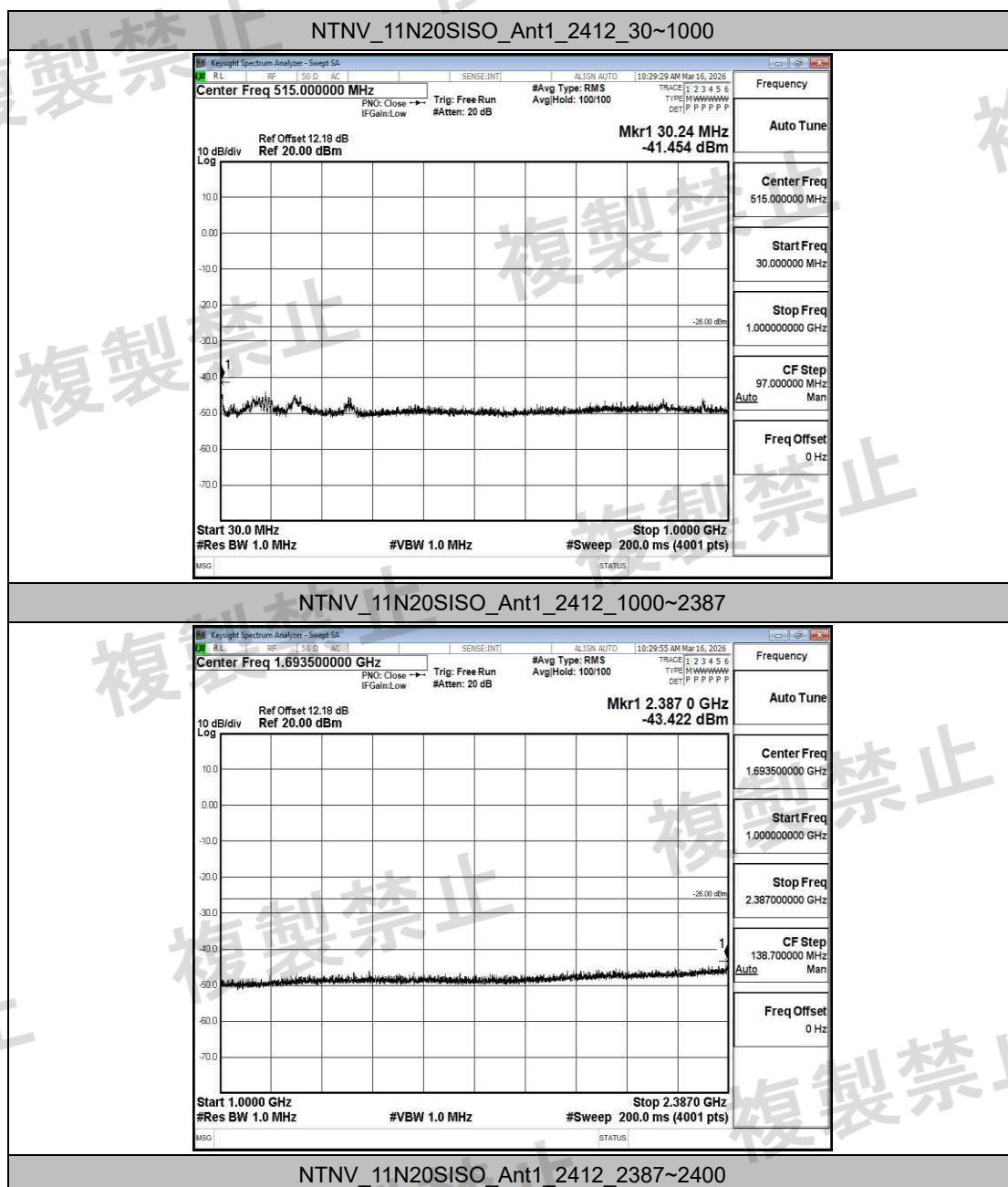


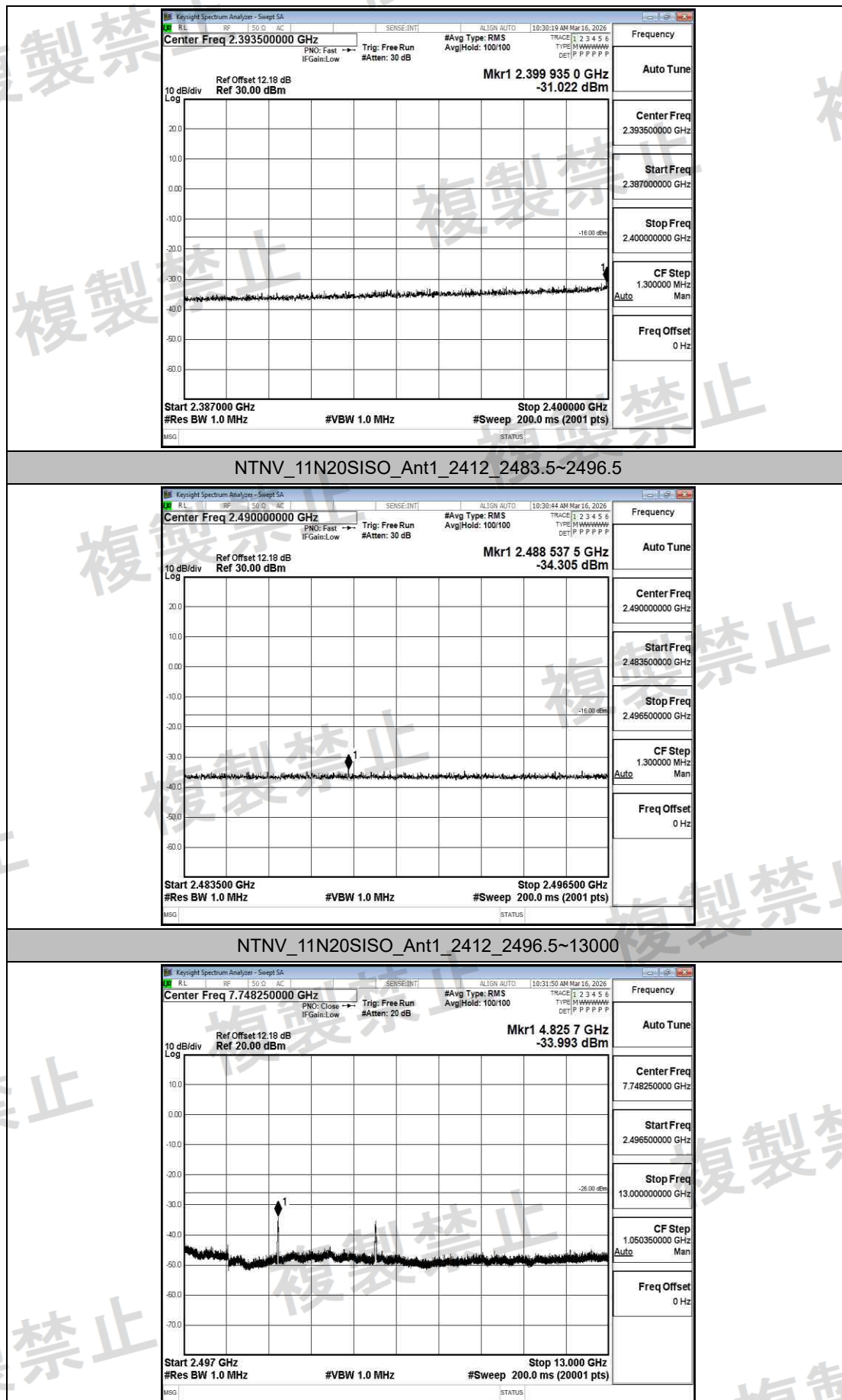


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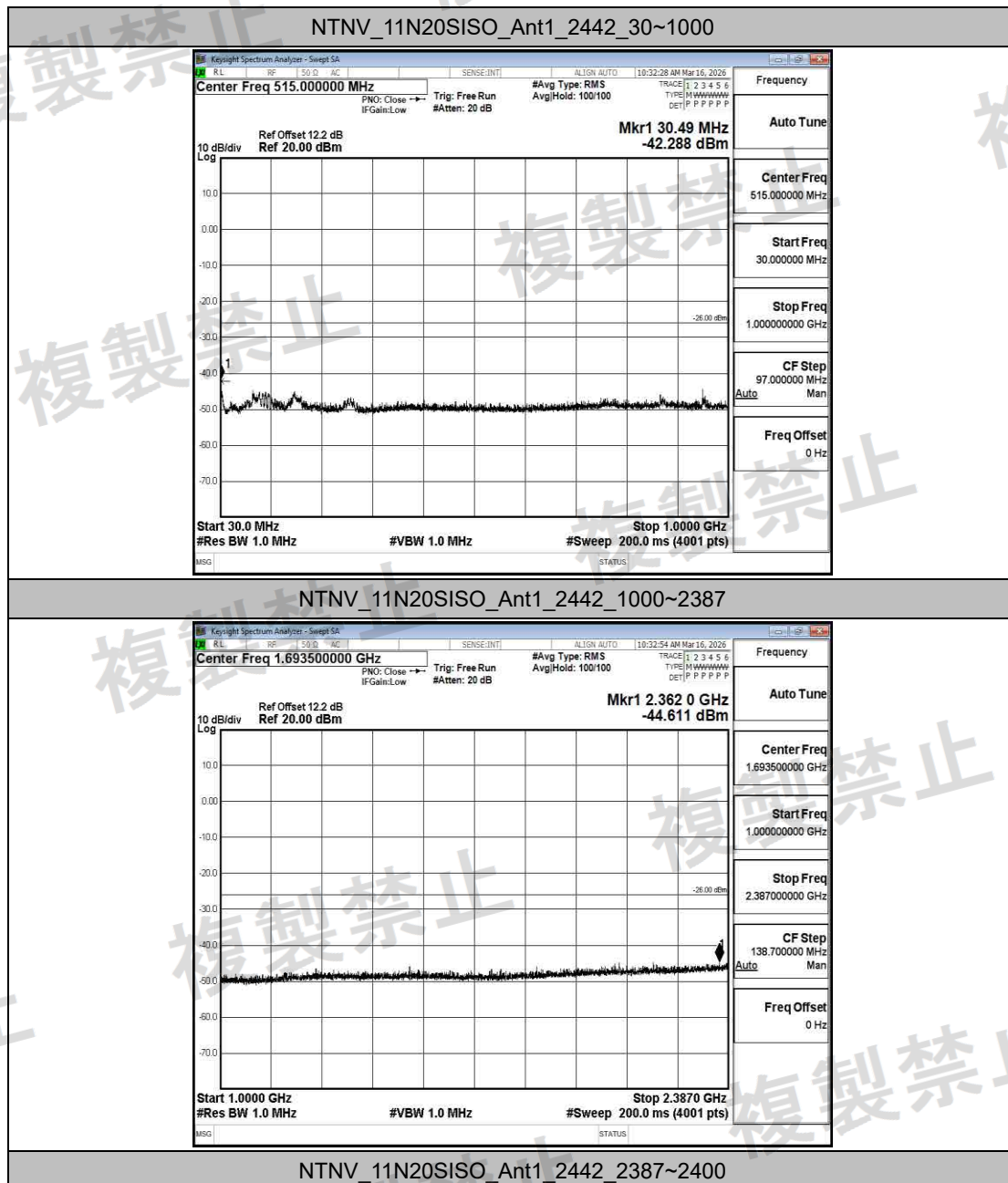


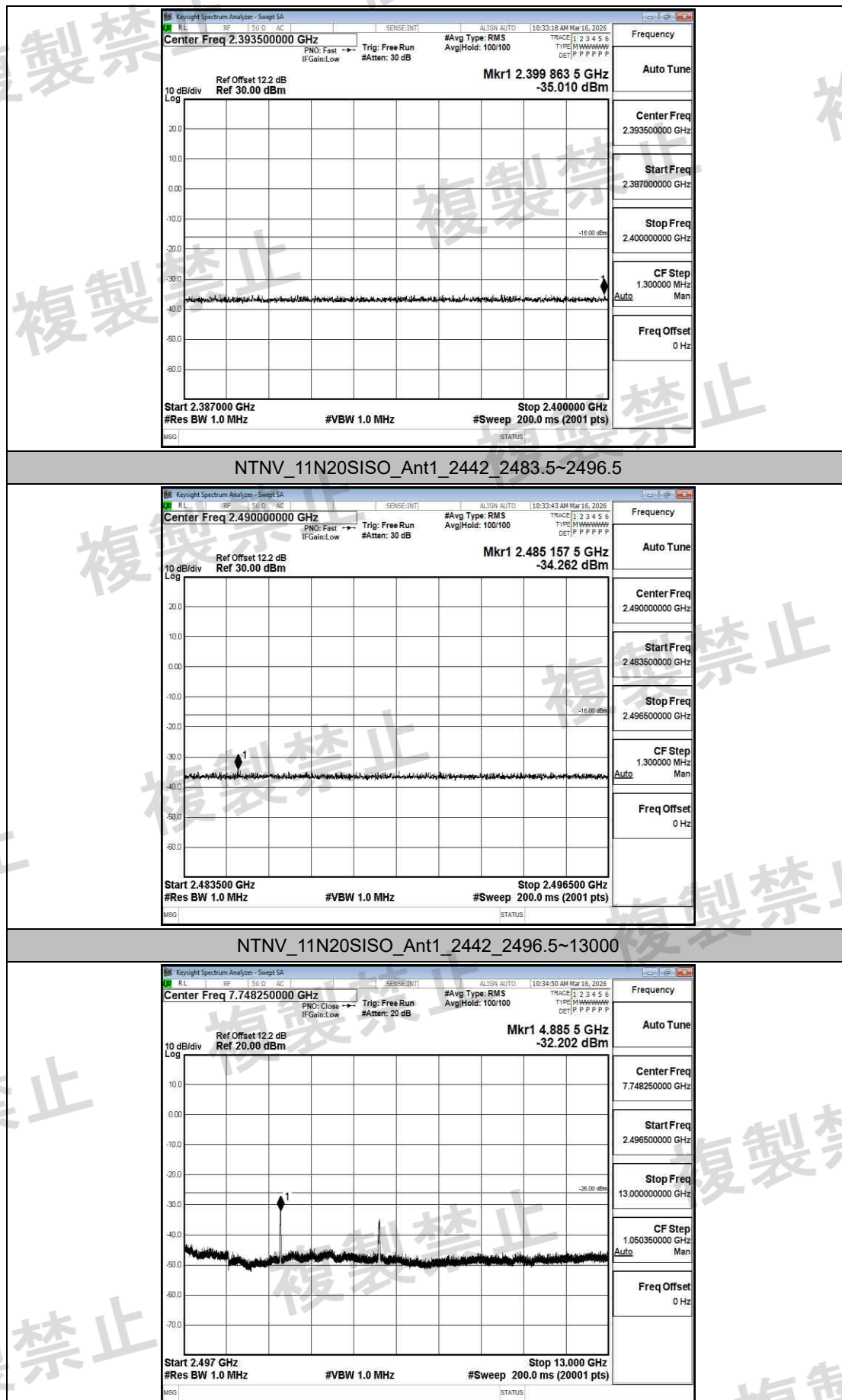


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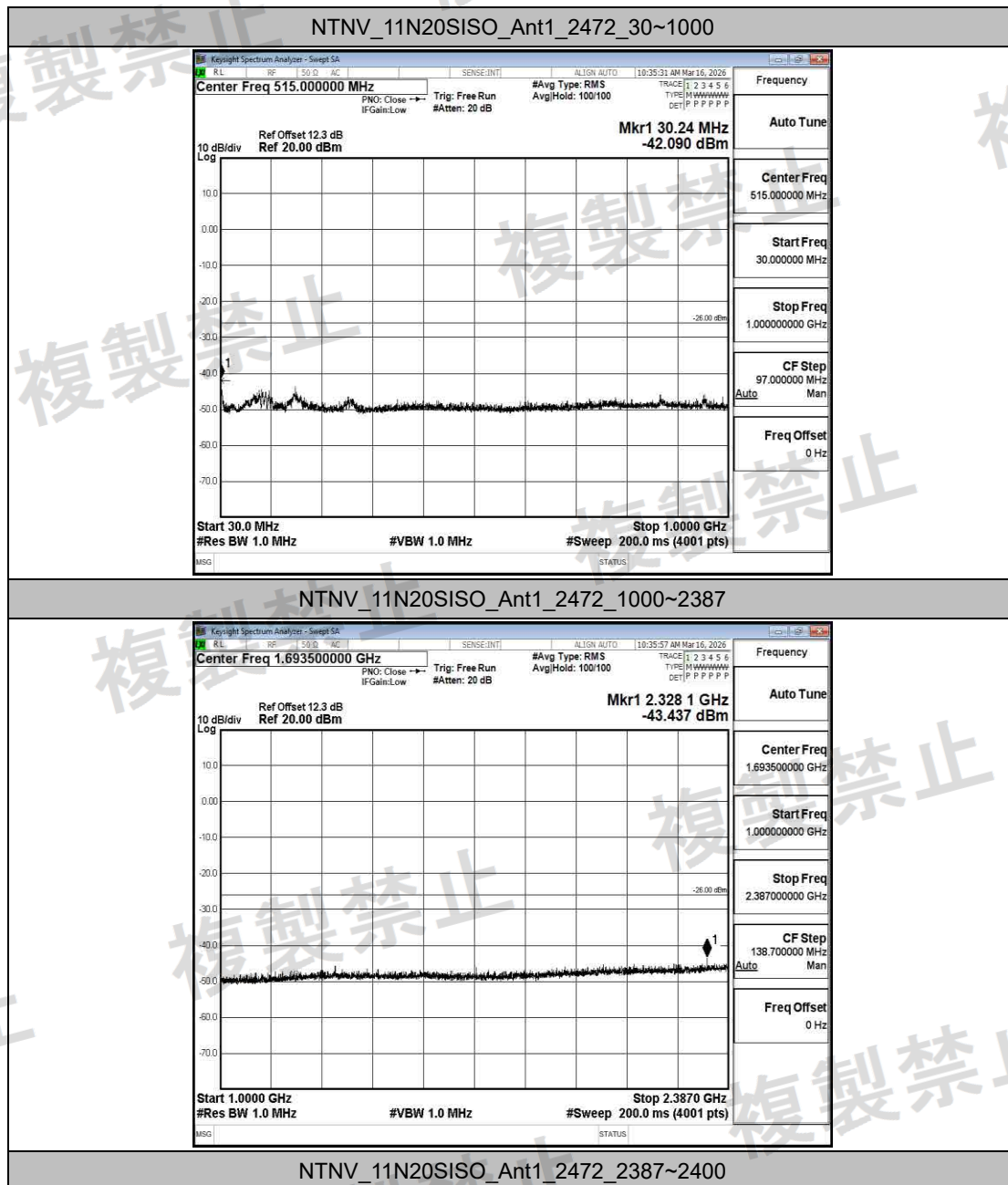


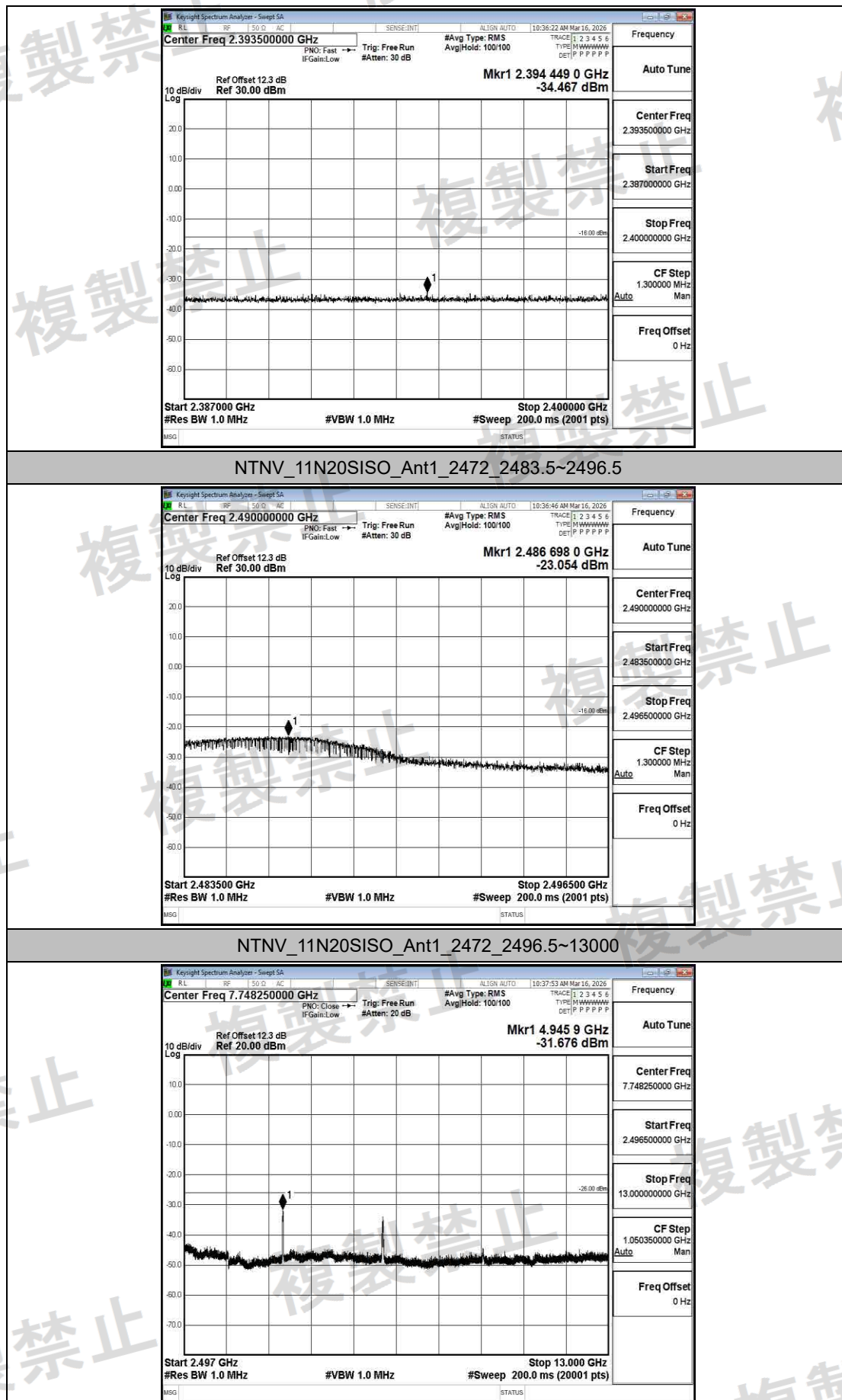


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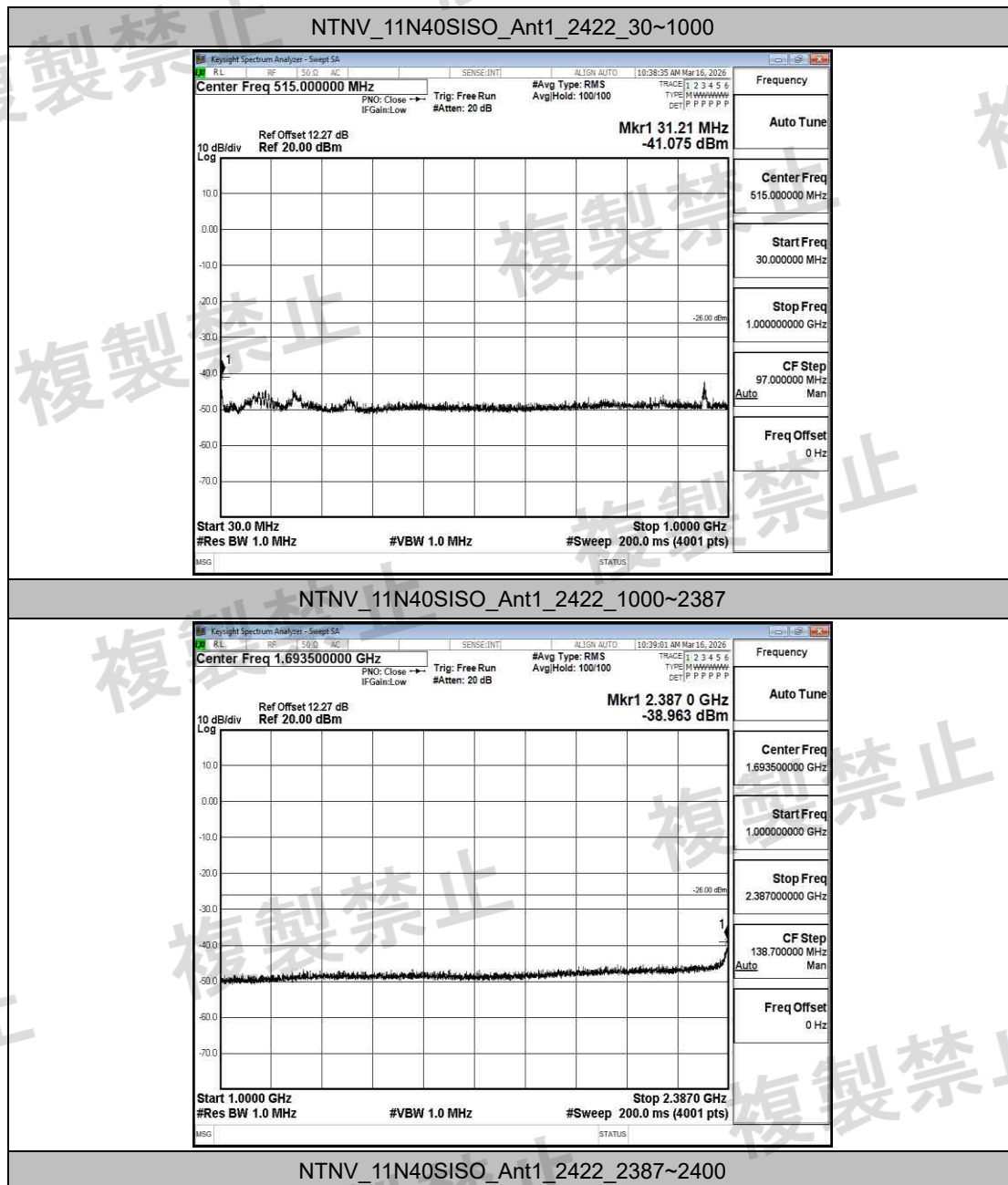


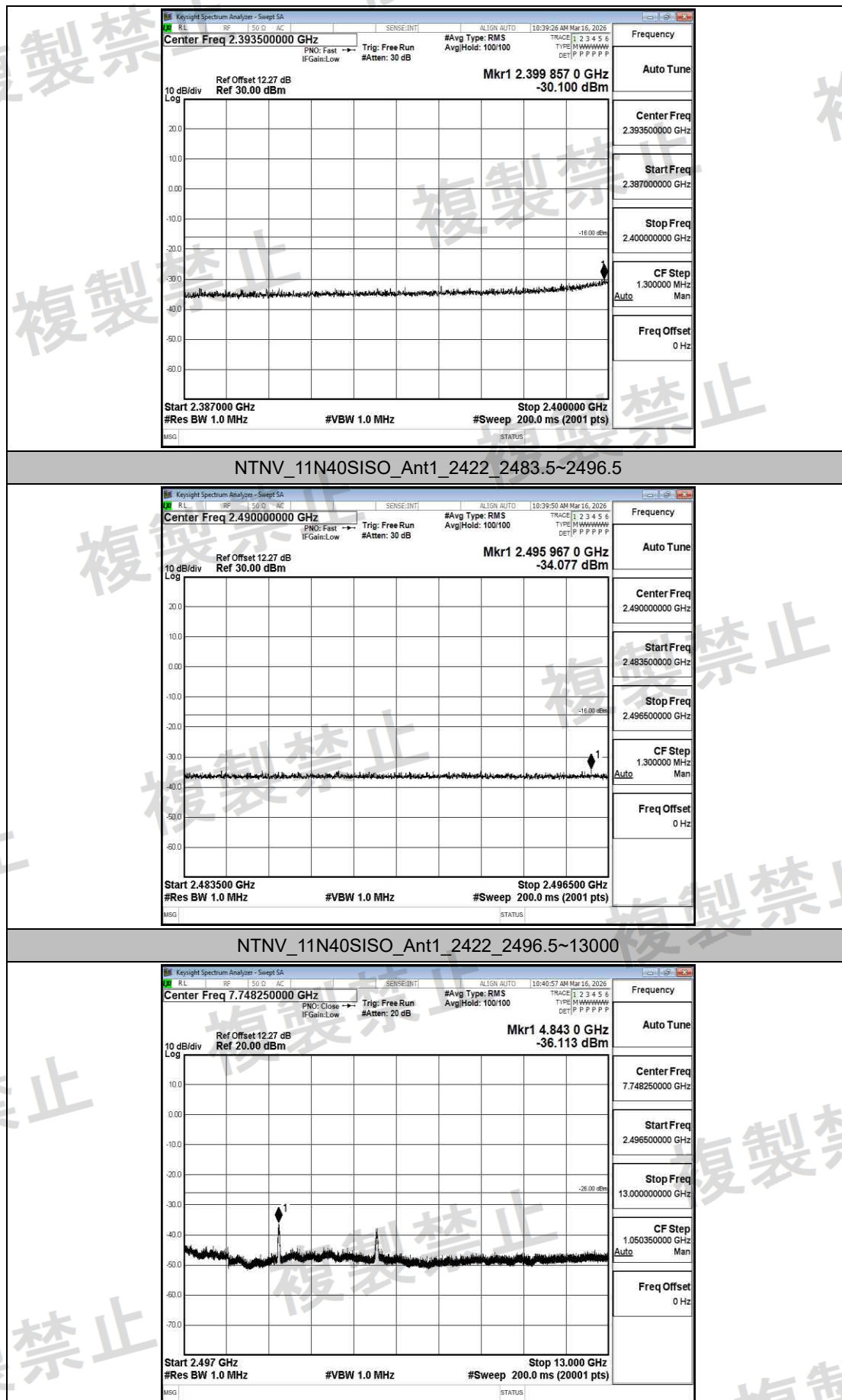


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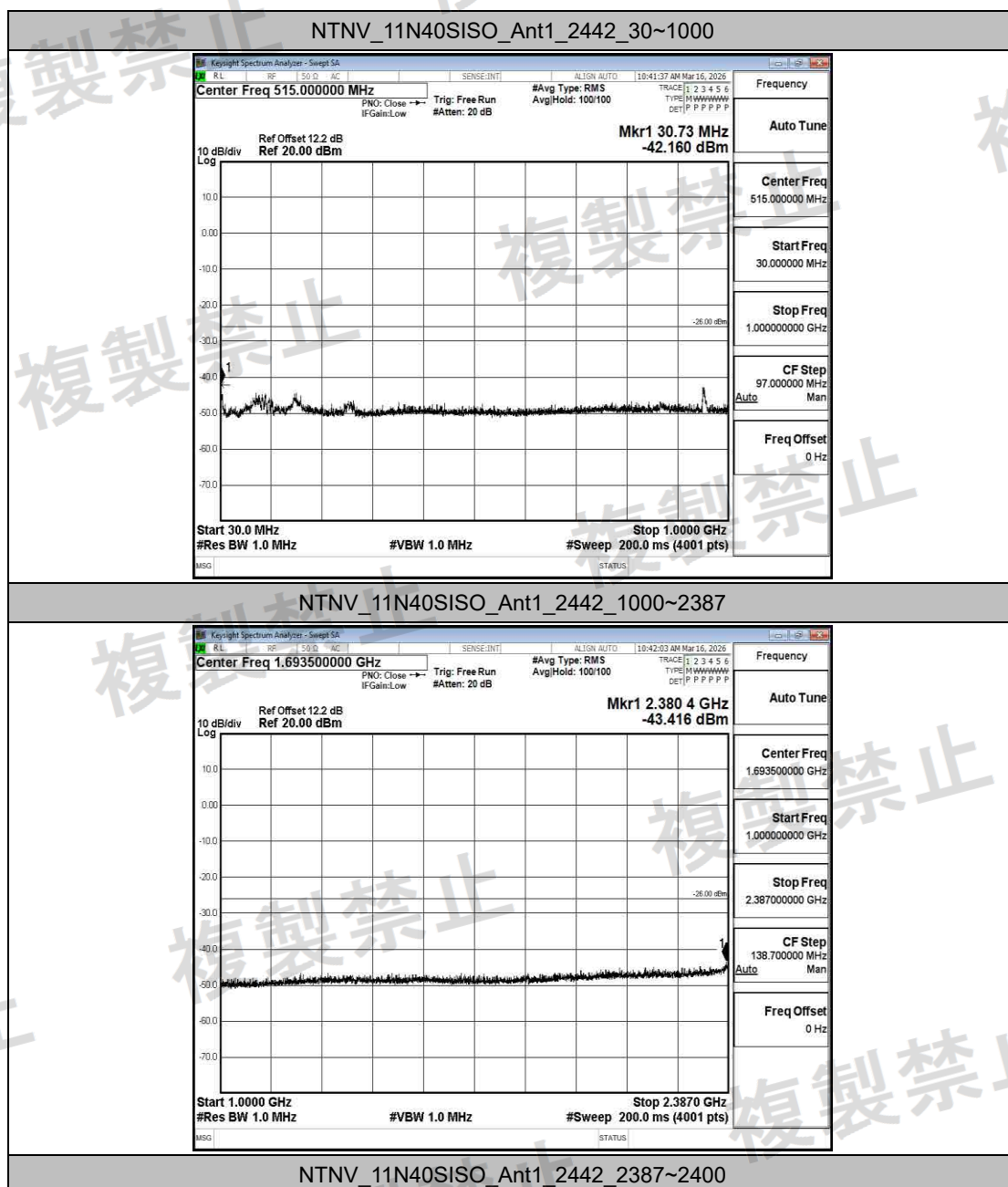


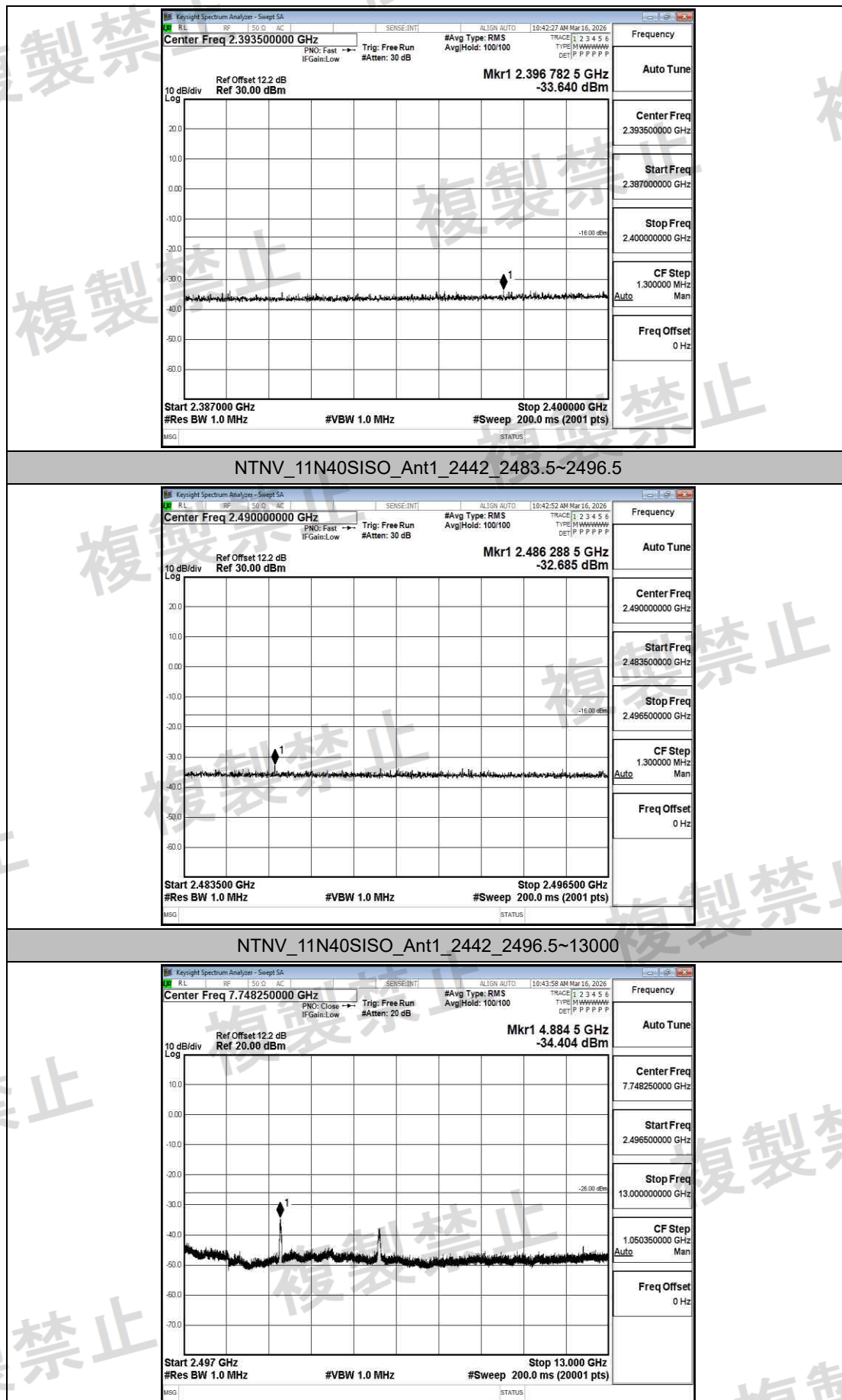


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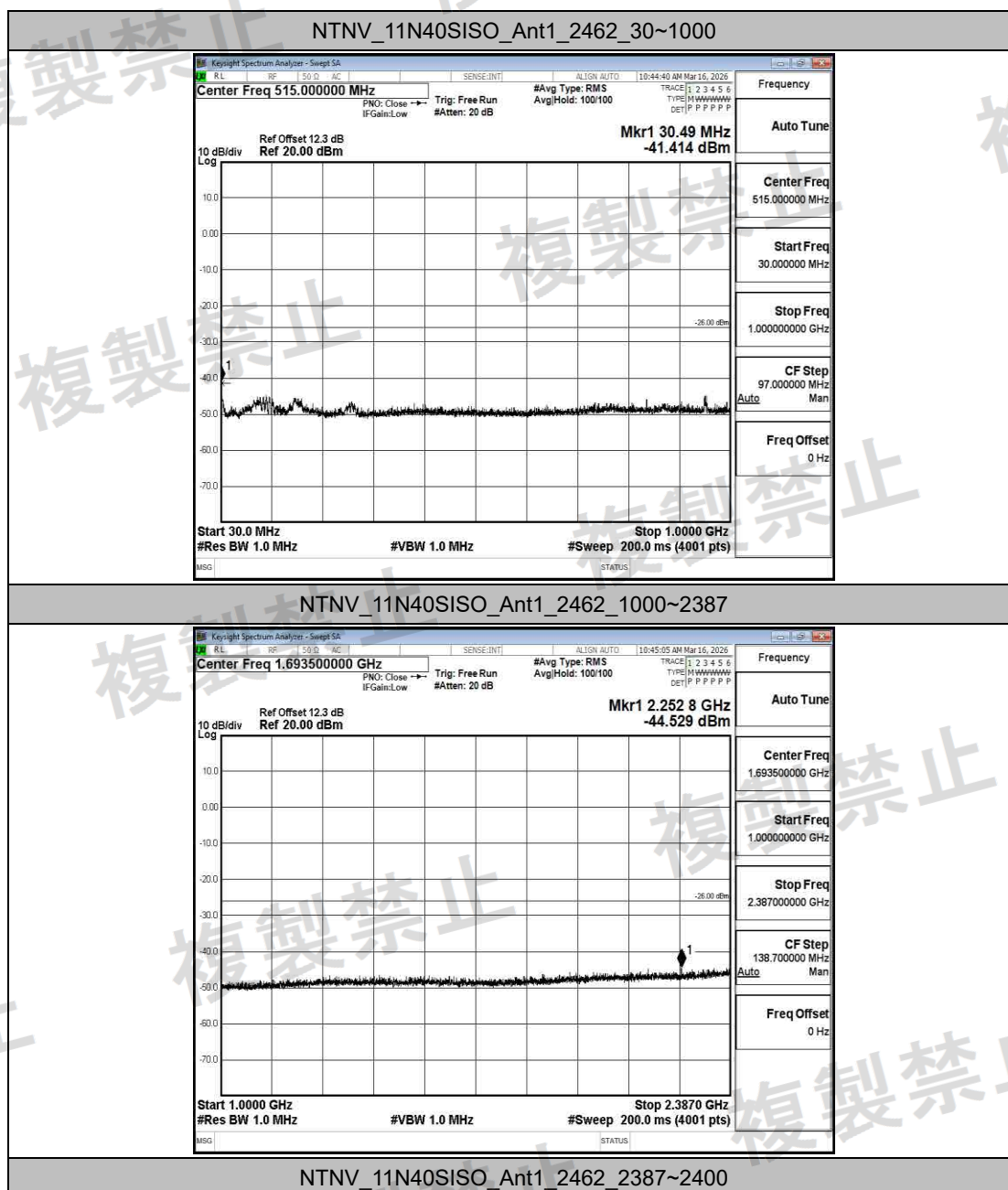


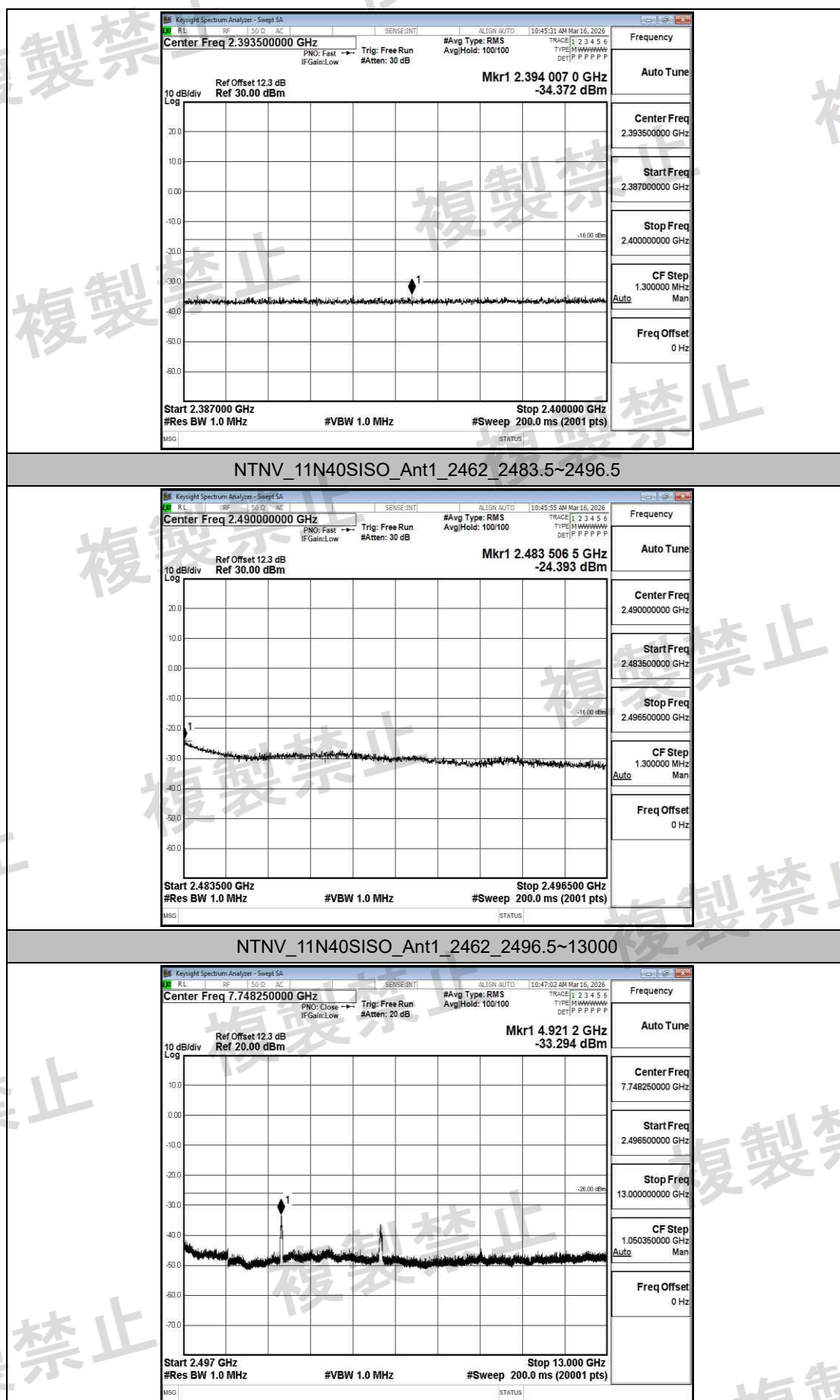


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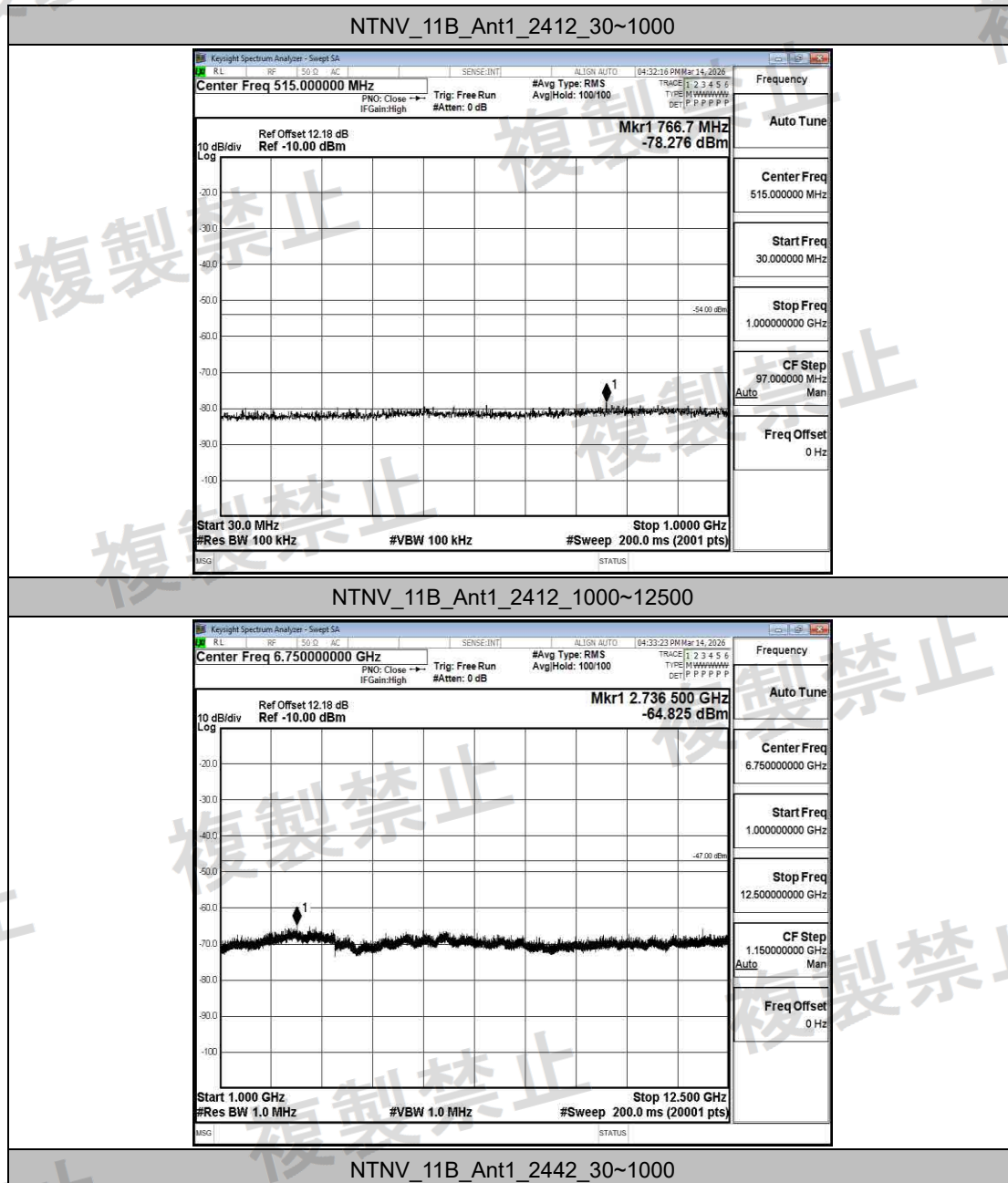
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B.6 Spurious Emission of RX

Test Result

TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11B	Ant1	2412	30~1000	766.72	-78.28	≤-54	0.01486	≤4	PASS
				1000~12500	2736.50	-64.83	≤-47	0.32885	≤20	PASS
			2442	30~1000	897.18	-78.70	≤-54	0.01349	≤4	PASS
				1000~12500	2716.95	-65.00	≤-47	0.31623	≤20	PASS
			2472	30~1000	840.44	-77.56	≤-54	0.01754	≤4	PASS
				1000~12500	2633.00	-65.28	≤-47	0.29648	≤20	PASS
	11G	Ant1	2412	30~1000	781.75	-77.95	≤-54	0.01603	≤4	PASS
				1000~12500	2660.03	-65.21	≤-47	0.30130	≤20	PASS
			2442	30~1000	882.15	-78.22	≤-54	0.01507	≤4	PASS
				1000~12500	3037.23	-65.45	≤-47	0.28510	≤20	PASS
			2472	30~1000	948.59	-78.34	≤-54	0.01466	≤4	PASS
				1000~12500	2688.20	-65.23	≤-47	0.29992	≤20	PASS
	11N20SI SO	Ant1	2412	30~1000	911.25	-78.47	≤-54	0.01422	≤4	PASS
				1000~12500	2496.73	-64.67	≤-47	0.34119	≤20	PASS
			2442	30~1000	466.50	-78.63	≤-54	0.01371	≤4	PASS
				1000~12500	2745.13	-64.20	≤-47	0.38019	≤20	PASS
			2472	30~1000	882.63	-78.27	≤-54	0.01489	≤4	PASS
				1000~12500	3162.00	-65.03	≤-47	0.31405	≤20	PASS
	11N40SI SO	Ant1	2422	30~1000	881.18	-78.14	≤-54	0.01535	≤4	PASS
				1000~12500	2680.15	-65.52	≤-47	0.28054	≤20	PASS
			2442	30~1000	997.58	-78.00	≤-54	0.01585	≤4	PASS
				1000~12500	6111.18	-65.09	≤-47	0.30974	≤20	PASS
			2462	30~1000	829.28	-78.22	≤-54	0.01507	≤4	PASS
				1000~12500	2697.40	-64.52	≤-47	0.35318	≤20	PASS

Test Graphs

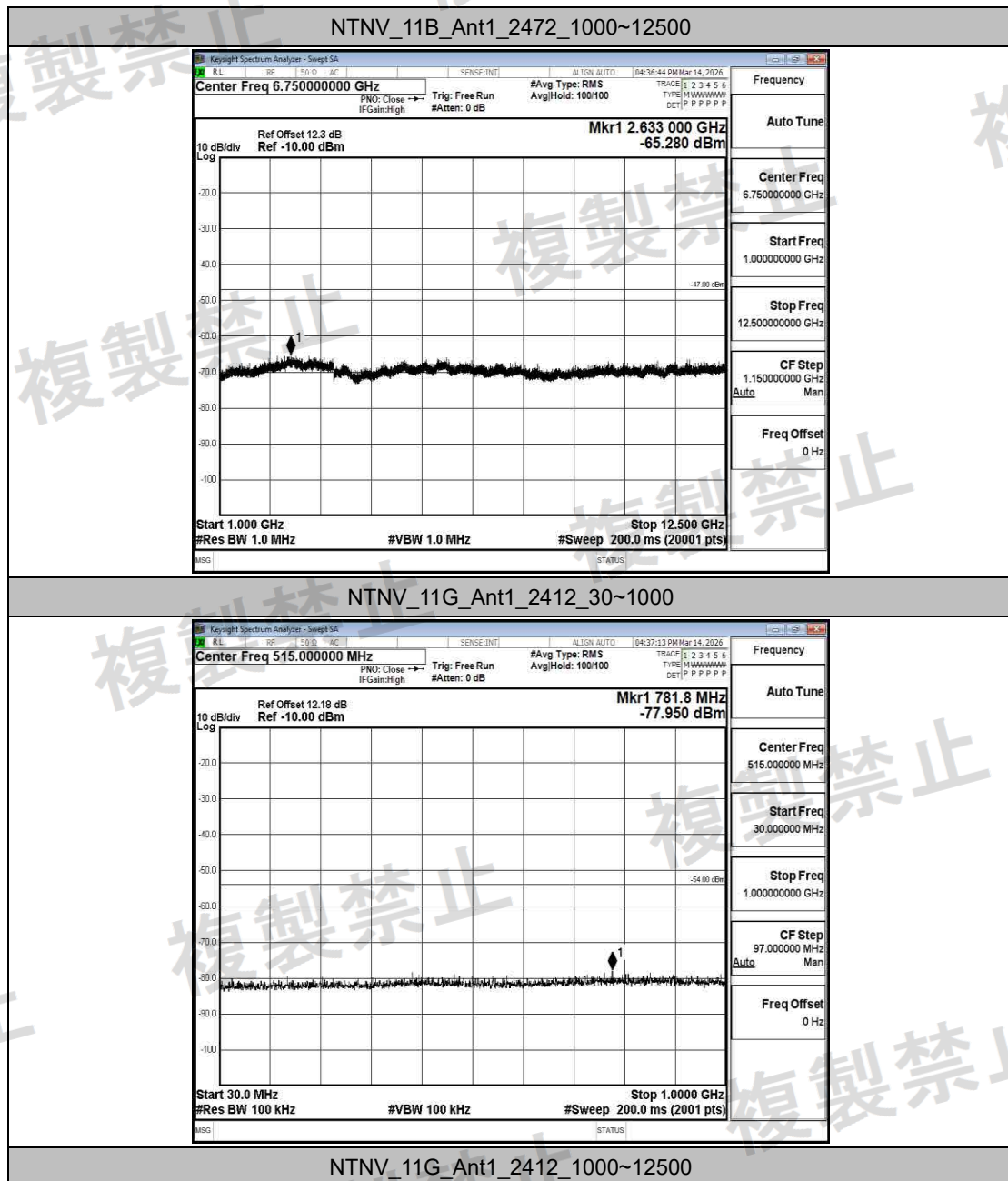


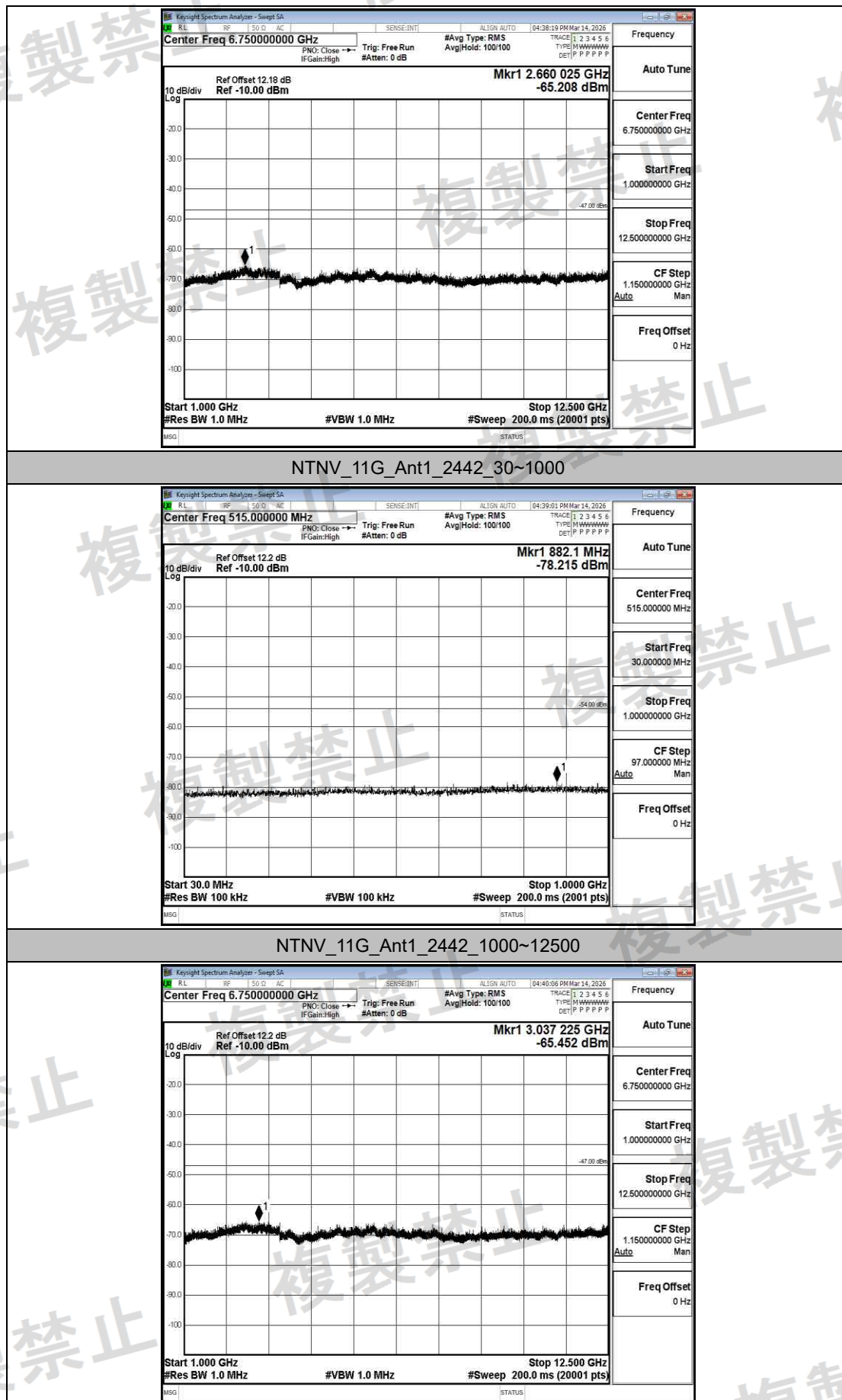


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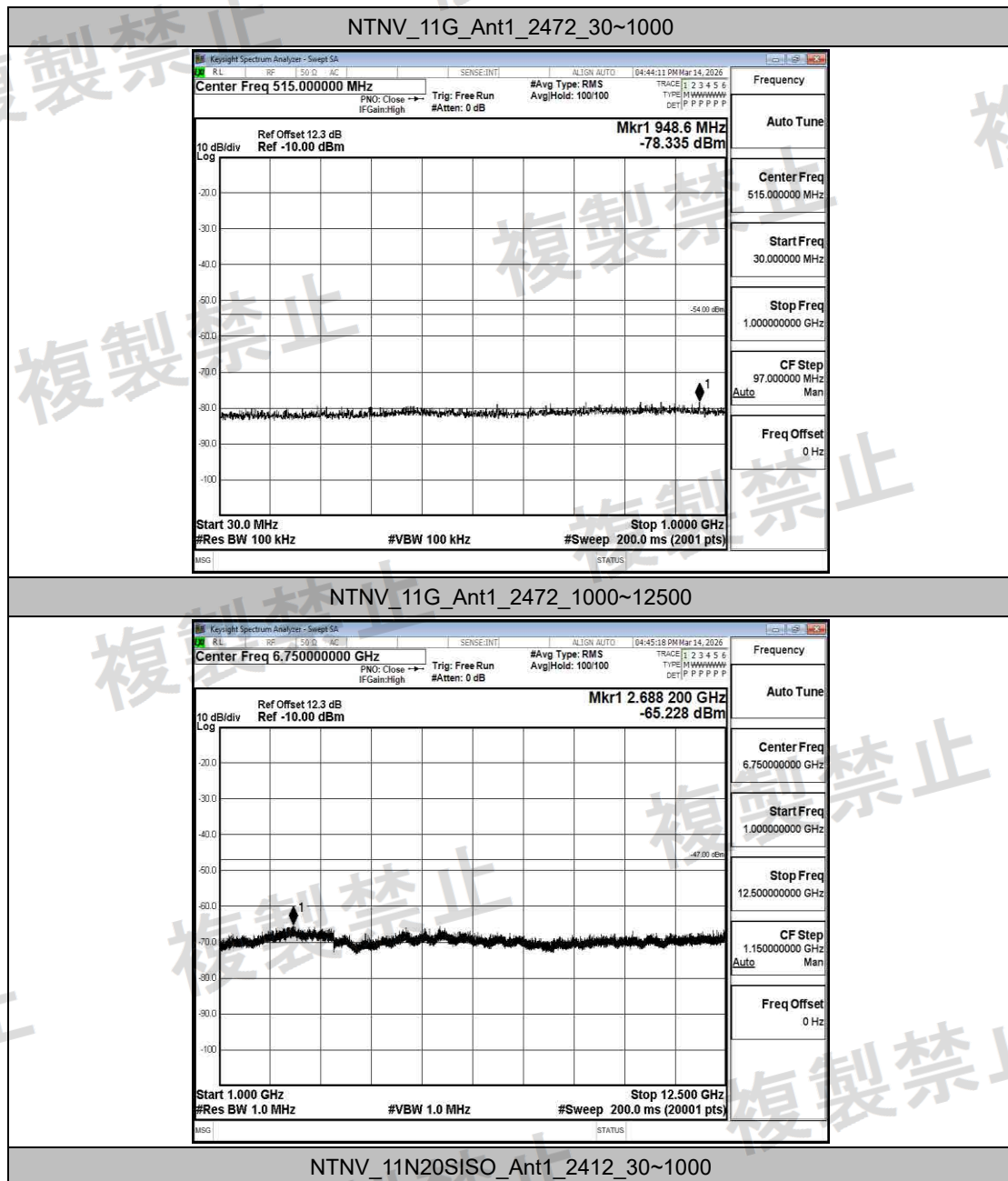




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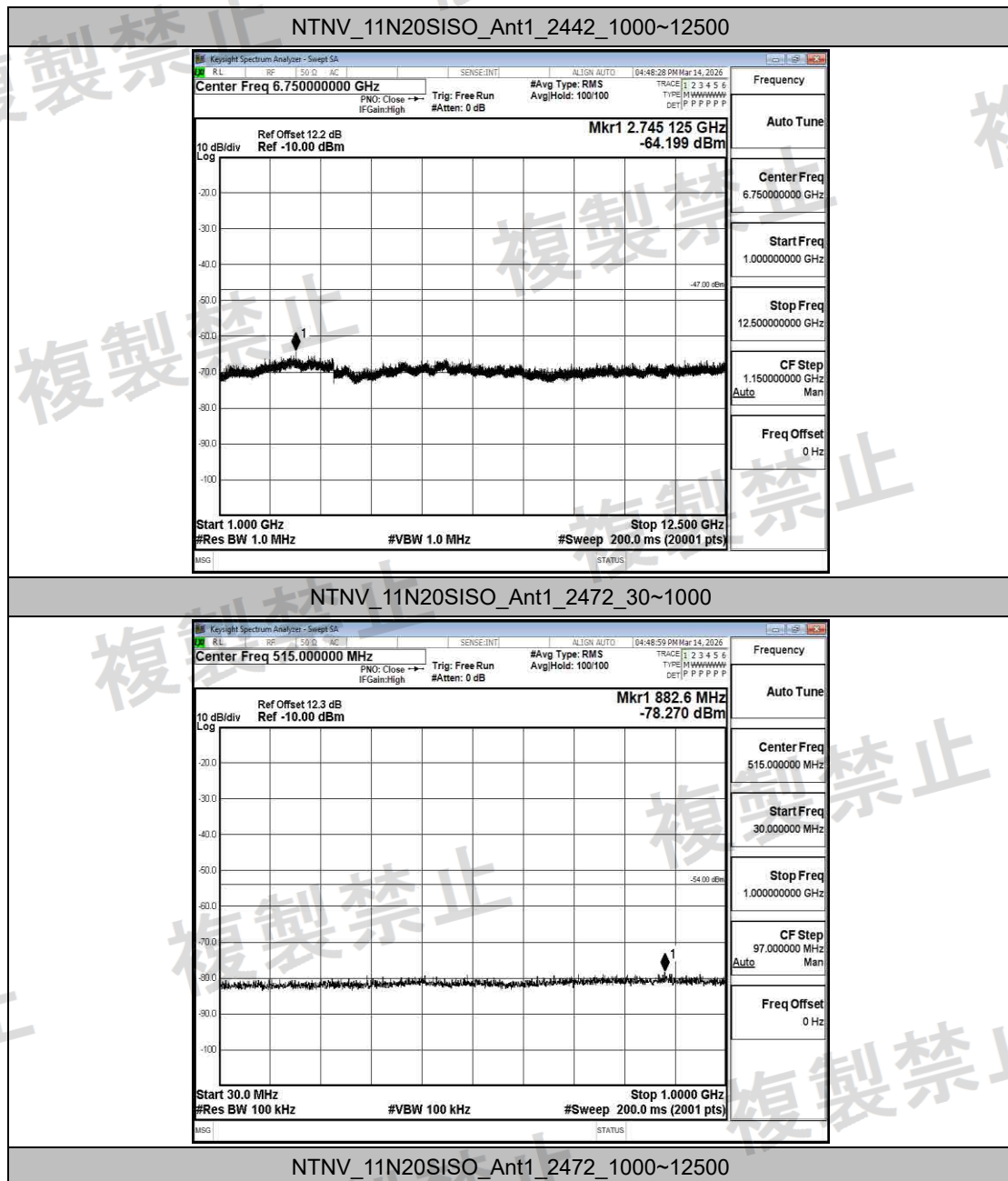


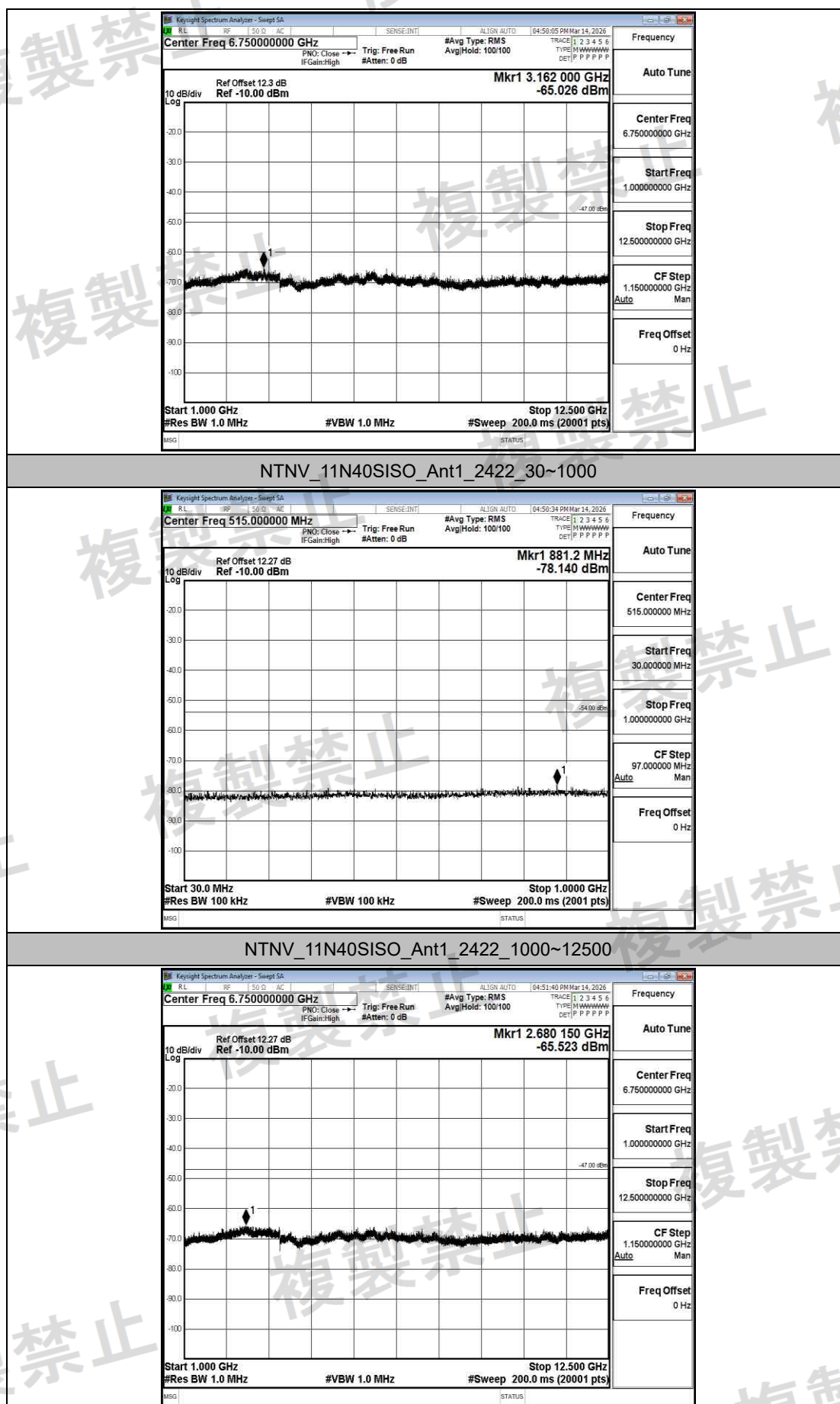


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