

Appendix A for BT Test Data

Product Name: Enya INSPIRE PRO Electric Guitar

Test Model: Inspire Pro

Environmental Conditions

Temperature:	23.2° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

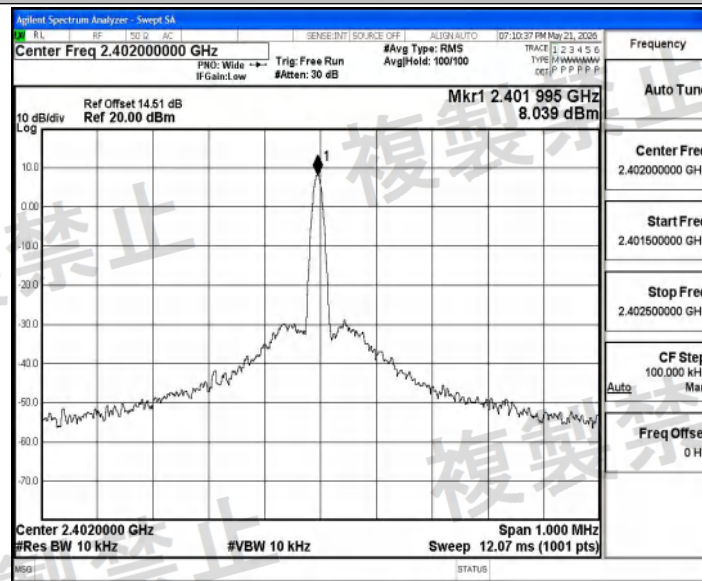
A.1 Frequency_Error

Test Result

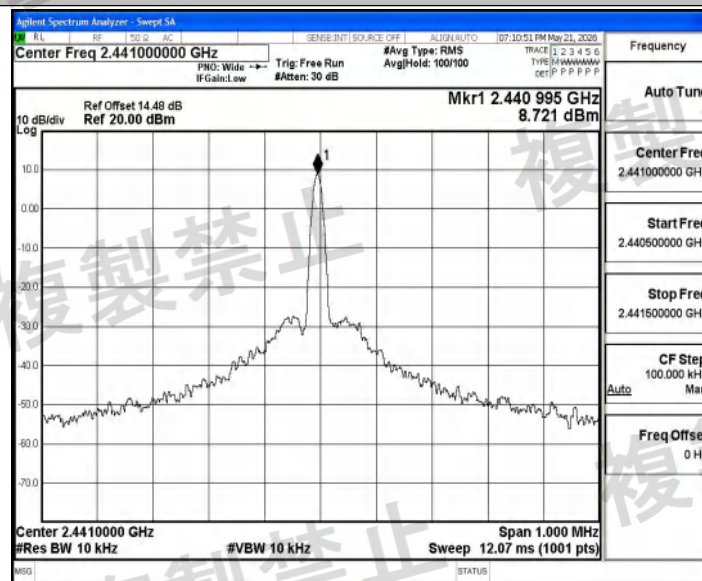
TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency_Error	Ant1	2402	-2.08160	±50	PASS
			2441	-2.04834	±50	PASS
			2480	-2.01613	±50	PASS

Test Graphs

NTNV_Ant1_2402



NTNV_Ant1_2441

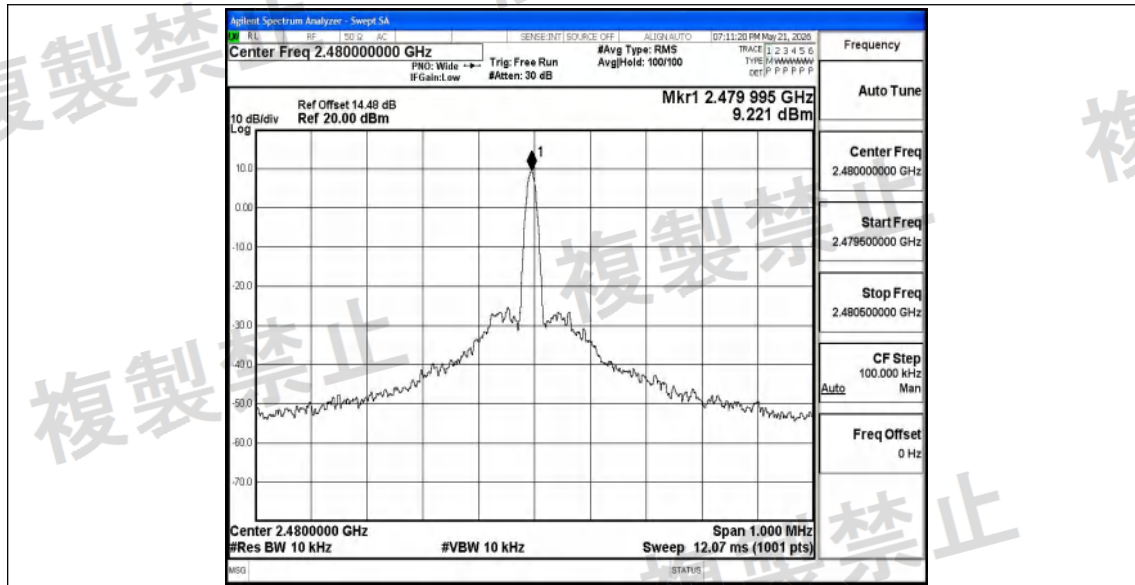


NTNV_Ant1_2480

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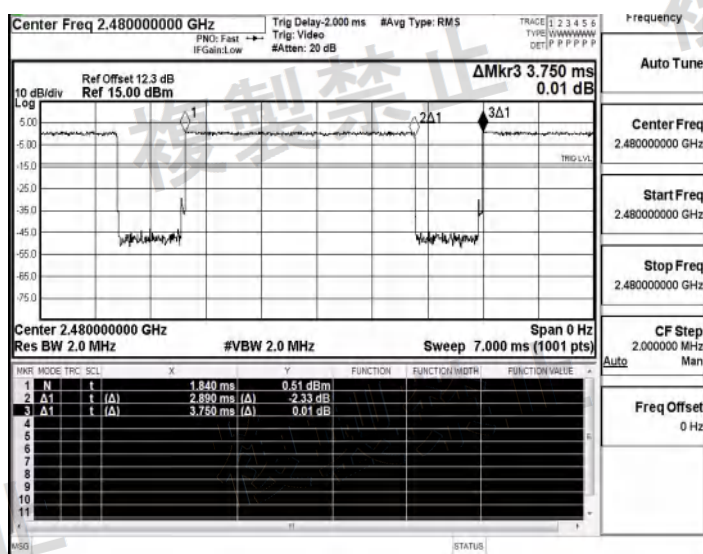
Test Result

Test Voltage				Normal Voltage			
Mode	Declared power	Average Result	Average Result	Result	Limit	Tolerance	Limit
	(mW/MHz)	(dBm)	(mW)	(mW/MHz)	(mW/MHz)	/	/
Hoping-Tx (1Mbps)	0.03	1.62	1.452	0.026	3	-13.97	+20%
Hoping-Tx (2Mbps)	0.03	1.10	1.288	0.023	3	-23.77	+20%
Hoping-Tx (3Mbps)	0.03	1.42	1.387	0.025	3	-17.76	+20%
Conclusion: PASS							

BT ANTenna power Result = Measured Power / Spreading bandwidth

Spread Bandwidth (3DH5) = 72.898MHz

Duty cycle=77.07%

$$\text{Duty cycle} = [T_{on} / (T_{on} + T_{off})] * 100\% = 2.89 / 3.75 * 100\% = 77.07\%$$


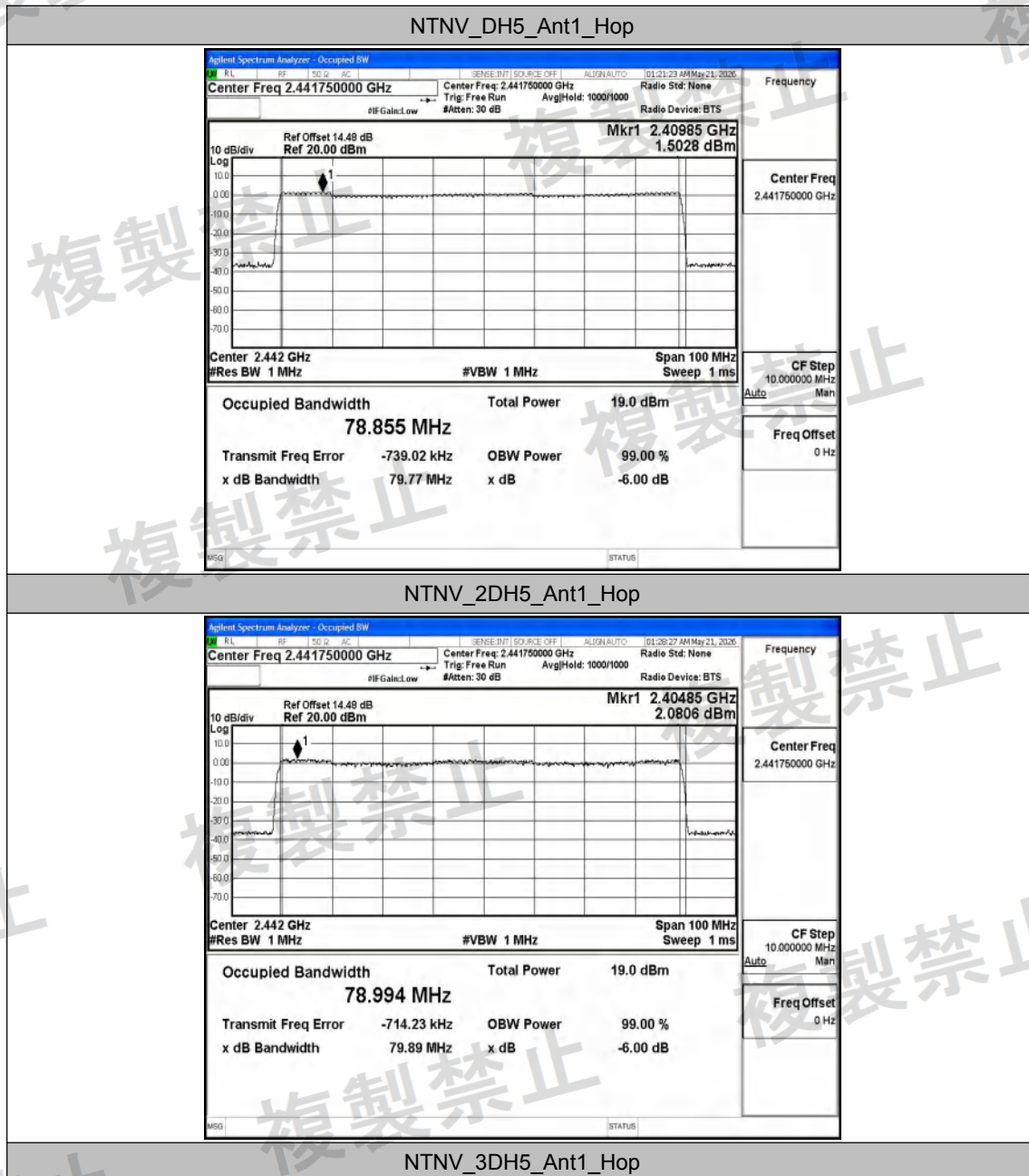
EIRP								
Test Condition	TestMode	Antenna	Result (mW/MHz)	Result (dBm/MHz)	Antenna Gain(dBi)	EIRP (dBm/MHz)	Limit (dBm/MHz)	Verdict
NTNV	Hopping-Tx (1Mbps)	Ant	0.026	-15.85	1.75	-14.10	≤6.91	PASS
NTNV	Hopping-Tx (2Mbps)	Ant	0.023	-16.38	1.75	-14.63	≤6.91	PASS
NTNV	Hopping-Tx (3Mbps)	Ant	0.025	-16.02	1.75	-14.27	≤6.91	PASS

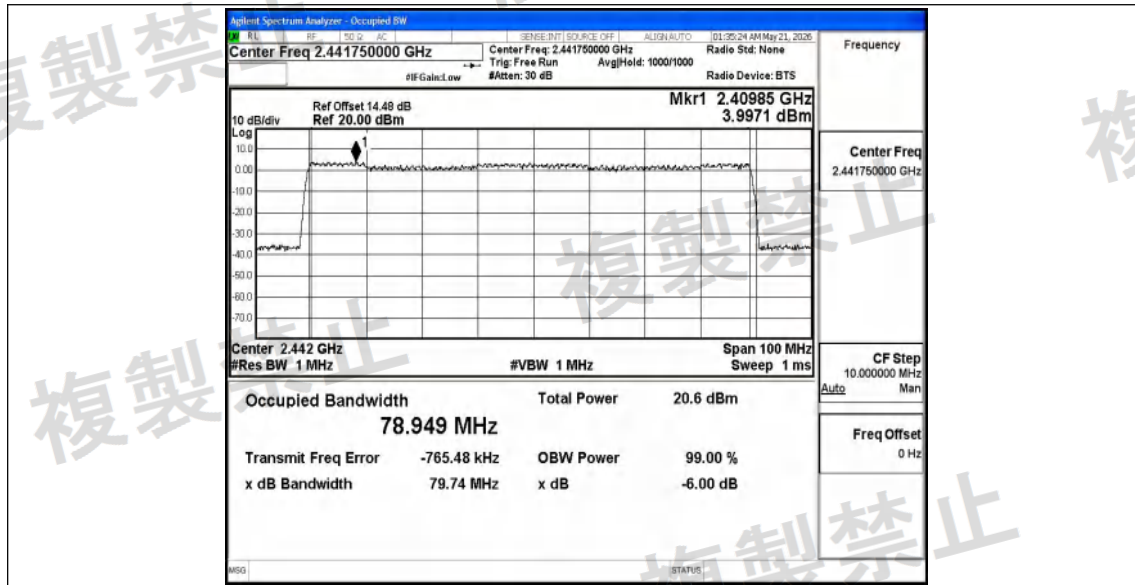
A.3 Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.855	≤83.5	PASS
	2DH5	Ant1	Hop	78.994	≤83.5	PASS
	3DH5	Ant1	Hop	78.949	≤83.5	PASS

Test Graphs





A.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]
NTNV	DH5	Ant1	Hop	72.976
	2DH5	Ant1	Hop	73.066
	3DH5	Ant1	Hop	72.898

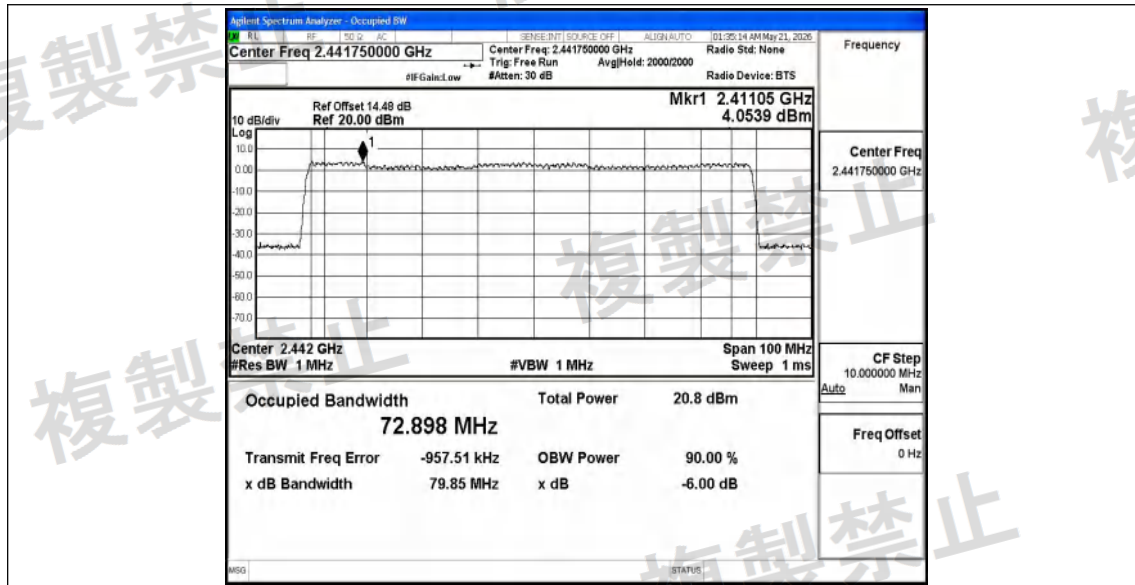
Test Graphs



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A.5 Spurious Emission of TX

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-53.93	≤-26	0.00405	≤2.5	PASS
				1000~2387	-52.22	≤-26	0.00600	≤2.5	PASS
				2387~2400	-39.32	≤-16	0.11695	≤25	PASS
				2483.5~2496.5	-42.89	≤-16	0.05140	≤25	PASS
				2496.5~13000	-45.43	≤-26	0.02864	≤2.5	PASS
			2441	30~1000	-53.91	≤-26	0.00406	≤2.5	PASS
				1000~2387	-52.36	≤-26	0.00581	≤2.5	PASS
				2387~2400	-43.21	≤-16	0.04775	≤25	PASS
				2483.5~2496.5	-43.49	≤-16	0.04477	≤25	PASS
				2496.5~13000	-45.61	≤-26	0.02748	≤2.5	PASS
			2480	30~1000	-53.90	≤-26	0.00407	≤2.5	PASS
				1000~2387	-52.35	≤-26	0.00582	≤2.5	PASS
				2387~2400	-43.45	≤-16	0.04519	≤25	PASS
				2483.5~2496.5	-43.21	≤-16	0.04775	≤25	PASS
				2496.5~13000	-45.35	≤-26	0.02917	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	-53.59	≤-26	0.00438	≤2.5	PASS
				1000~2387	-52.72	≤-26	0.00535	≤2.5	PASS
				2387~2400	-32.18	≤-16	0.60534	≤25	PASS
				2483.5~2496.5	-43.36	≤-16	0.04613	≤25	PASS
				2496.5~13000	-45.66	≤-26	0.02716	≤2.5	PASS
			2441	30~1000	-54.10	≤-26	0.00389	≤2.5	PASS
				1000~2387	-52.80	≤-26	0.00525	≤2.5	PASS
				2387~2400	-43.20	≤-16	0.04786	≤25	PASS
				2483.5~2496.5	-43.11	≤-16	0.04887	≤25	PASS
				2496.5~13000	-44.92	≤-26	0.03221	≤2.5	PASS
			2480	30~1000	-53.87	≤-26	0.00410	≤2.5	PASS
				1000~2387	-52.82	≤-26	0.00522	≤2.5	PASS
				2387~2400	-43.34	≤-16	0.04634	≤25	PASS
				2483.5~2496.5	-43.19	≤-16	0.04797	≤25	PASS
				2496.5~13000	-45.43	≤-26	0.02864	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	-53.87	≤-26	0.00410	≤2.5	PASS
				1000~2387	-52.73	≤-26	0.00533	≤2.5	PASS
				2387~2400	-34.48	≤-16	0.35645	≤25	PASS

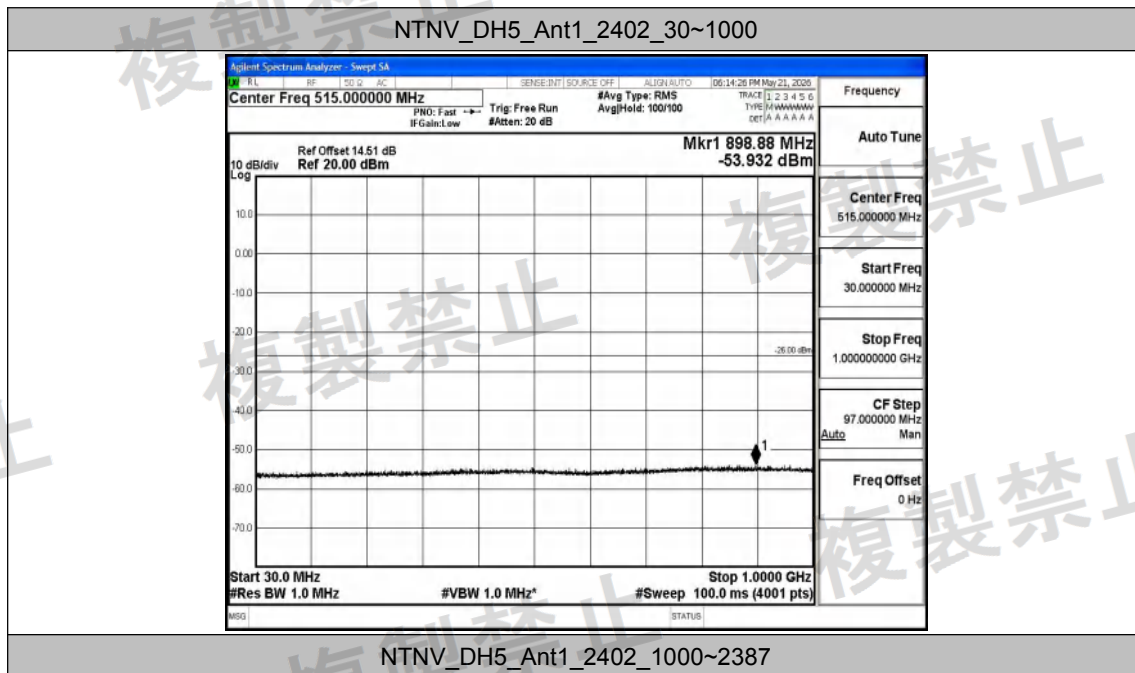
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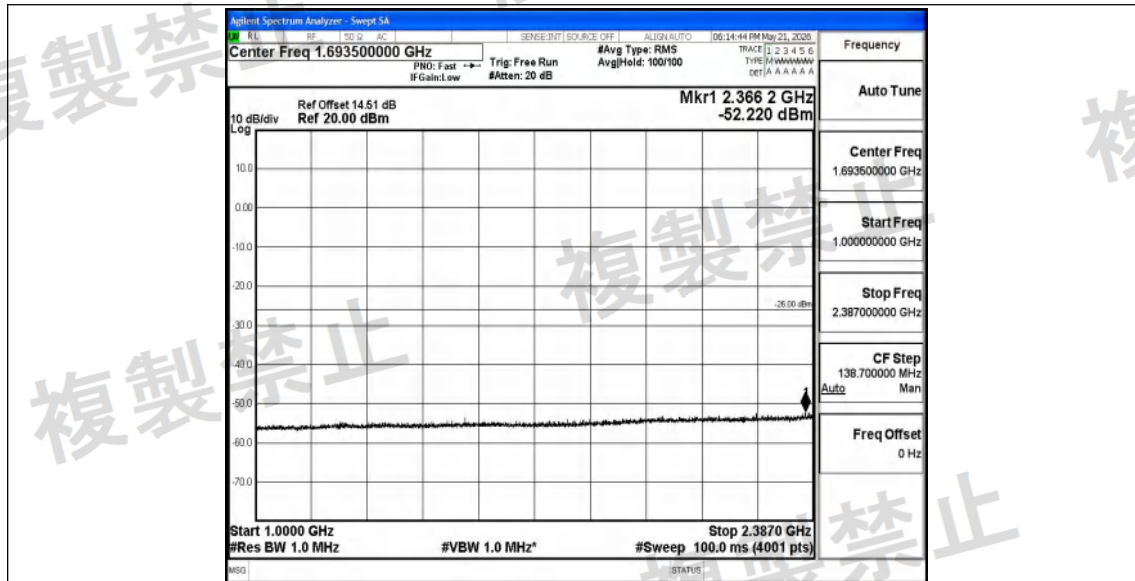
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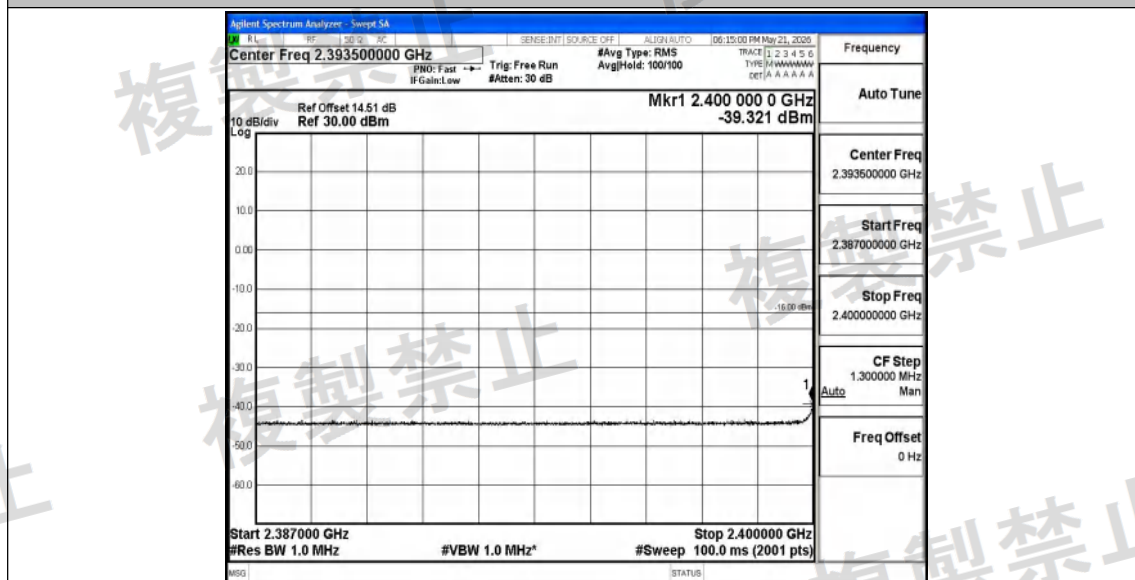
				2483.5~2496.5	-43.46	≤-16	0.04508	≤25	PASS
				2496.5~13000	-44.88	≤-26	0.03251	≤2.5	PASS
			2441	30~1000	-54.00	≤-26	0.00398	≤2.5	PASS
				1000~2387	-52.94	≤-26	0.00508	≤2.5	PASS
				2387~2400	-43.43	≤-16	0.04539	≤25	PASS
				2483.5~2496.5	-43.38	≤-16	0.04592	≤25	PASS
				2496.5~13000	-45.56	≤-26	0.02780	≤2.5	PASS
			2480	30~1000	-53.72	≤-26	0.00425	≤2.5	PASS
				1000~2387	-52.76	≤-26	0.00530	≤2.5	PASS
				2387~2400	-43.31	≤-16	0.04667	≤25	PASS
				2483.5~2496.5	-43.20	≤-16	0.04786	≤25	PASS
				2496.5~13000	-45.05	≤-26	0.03126	≤2.5	PASS

Test Graphs

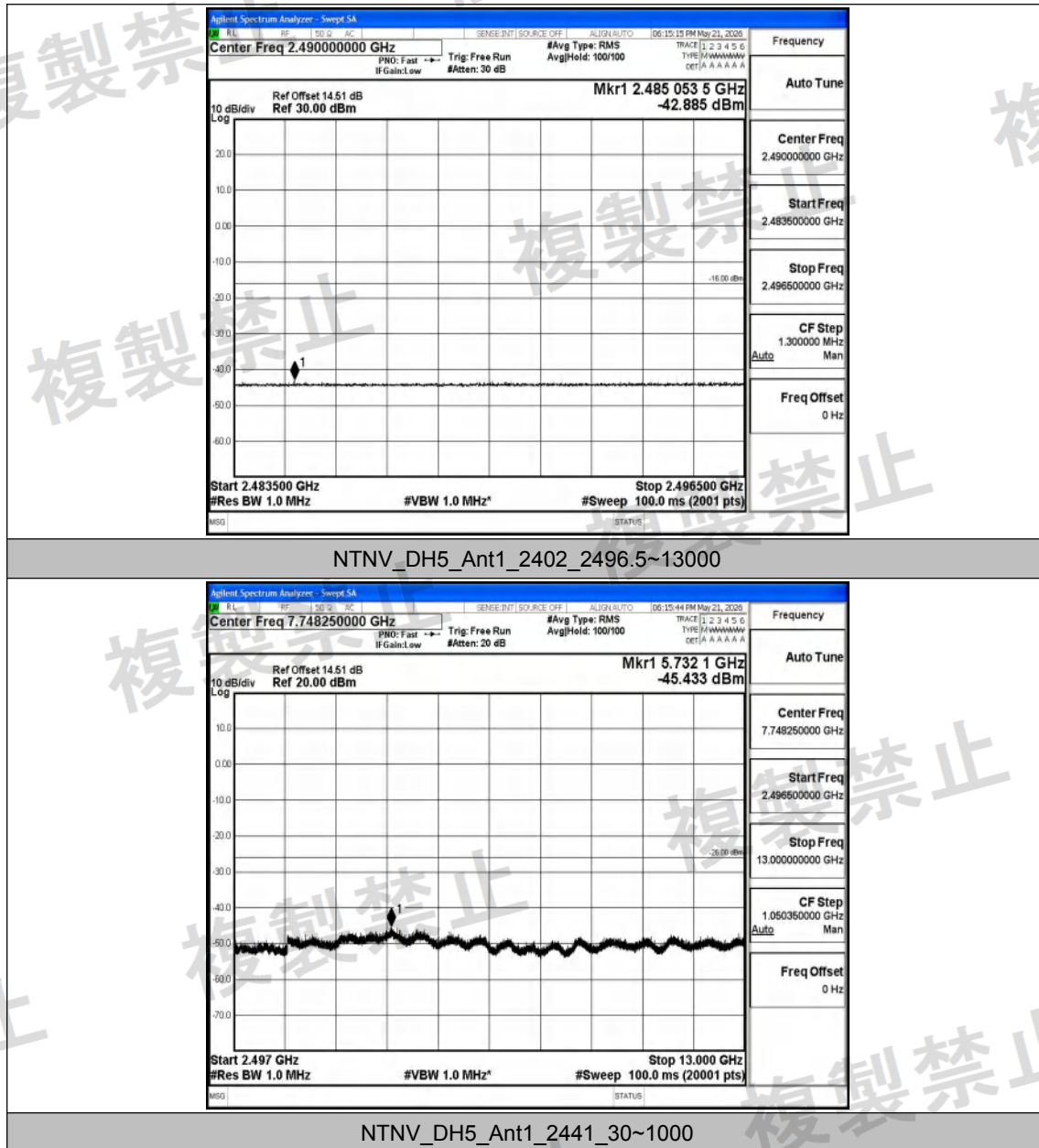


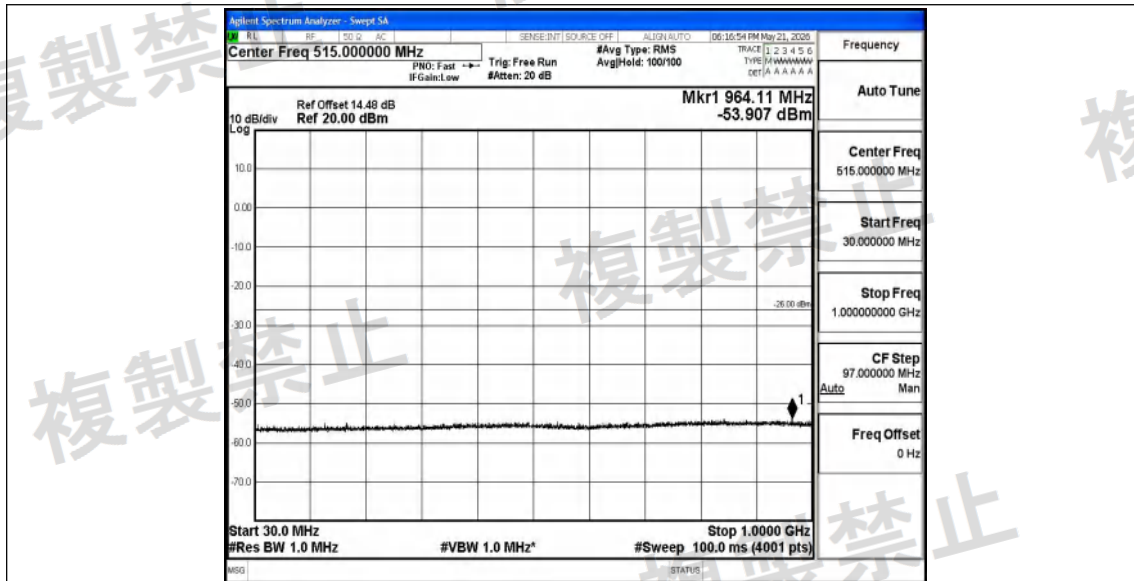


NTNV_DH5_Ant1_2402_2387~2400

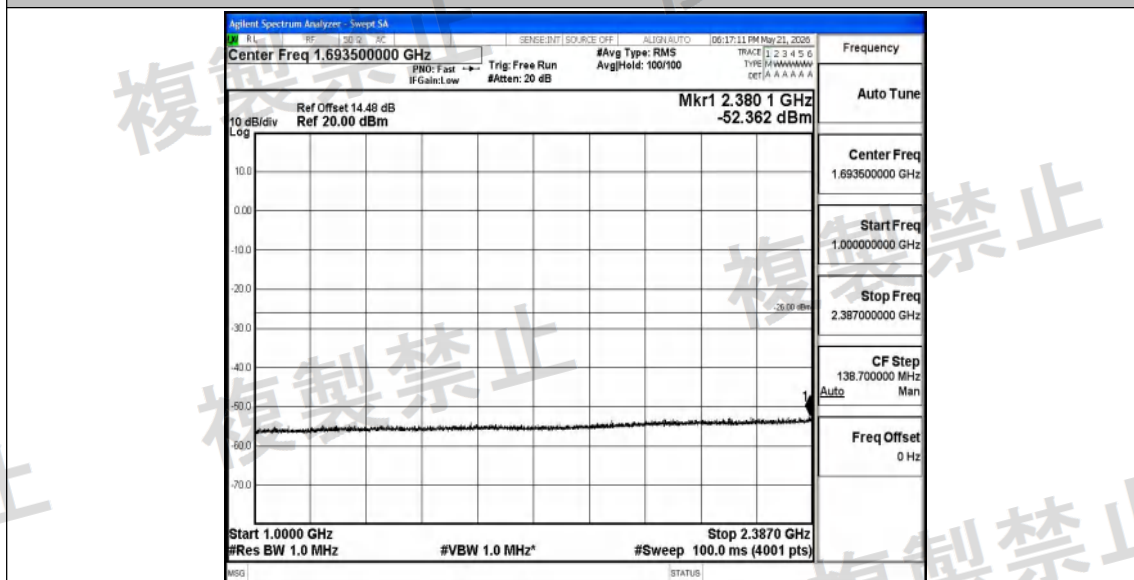


NTNV_DH5_Ant1_2402_2483.5~2496.5

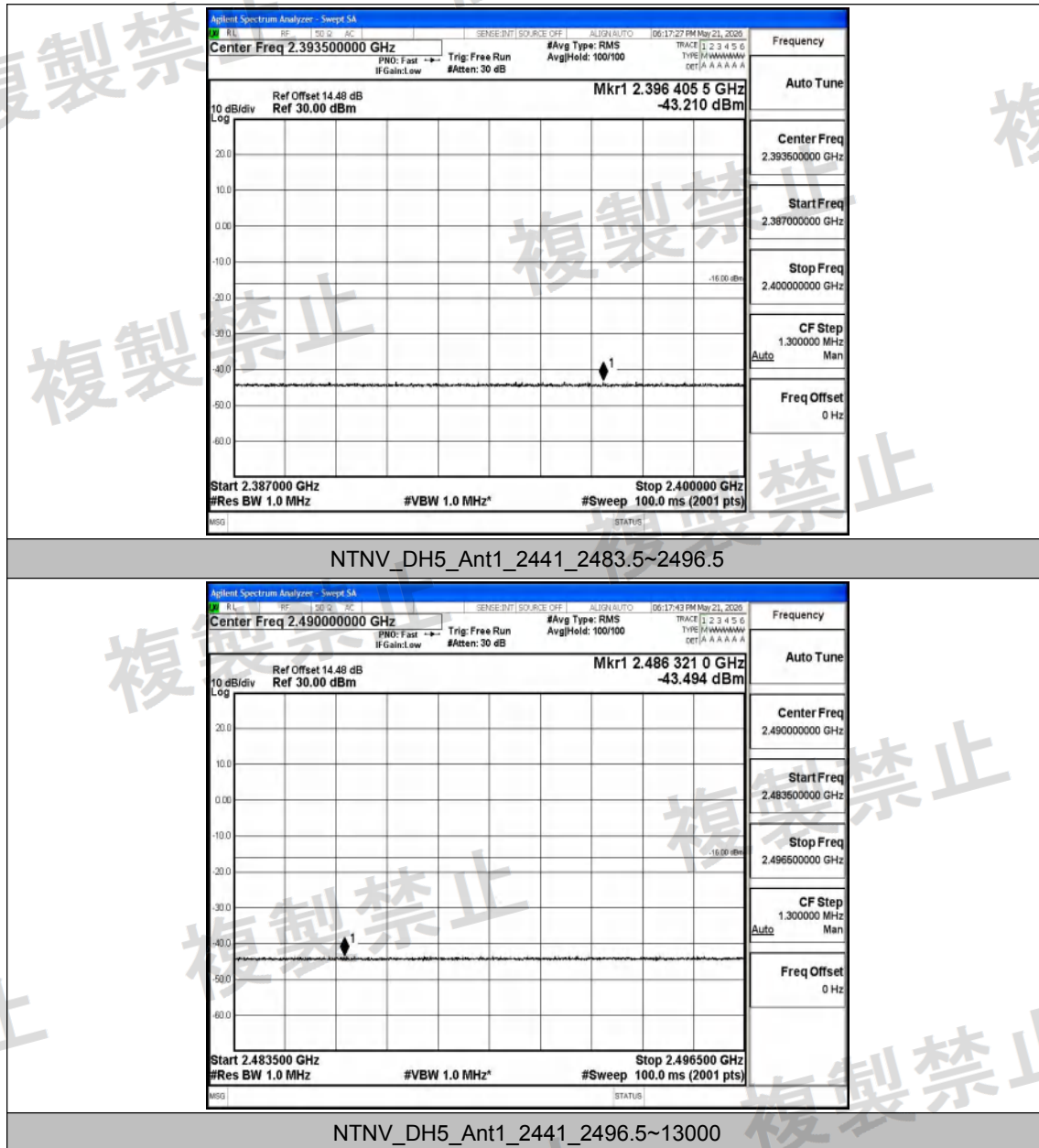


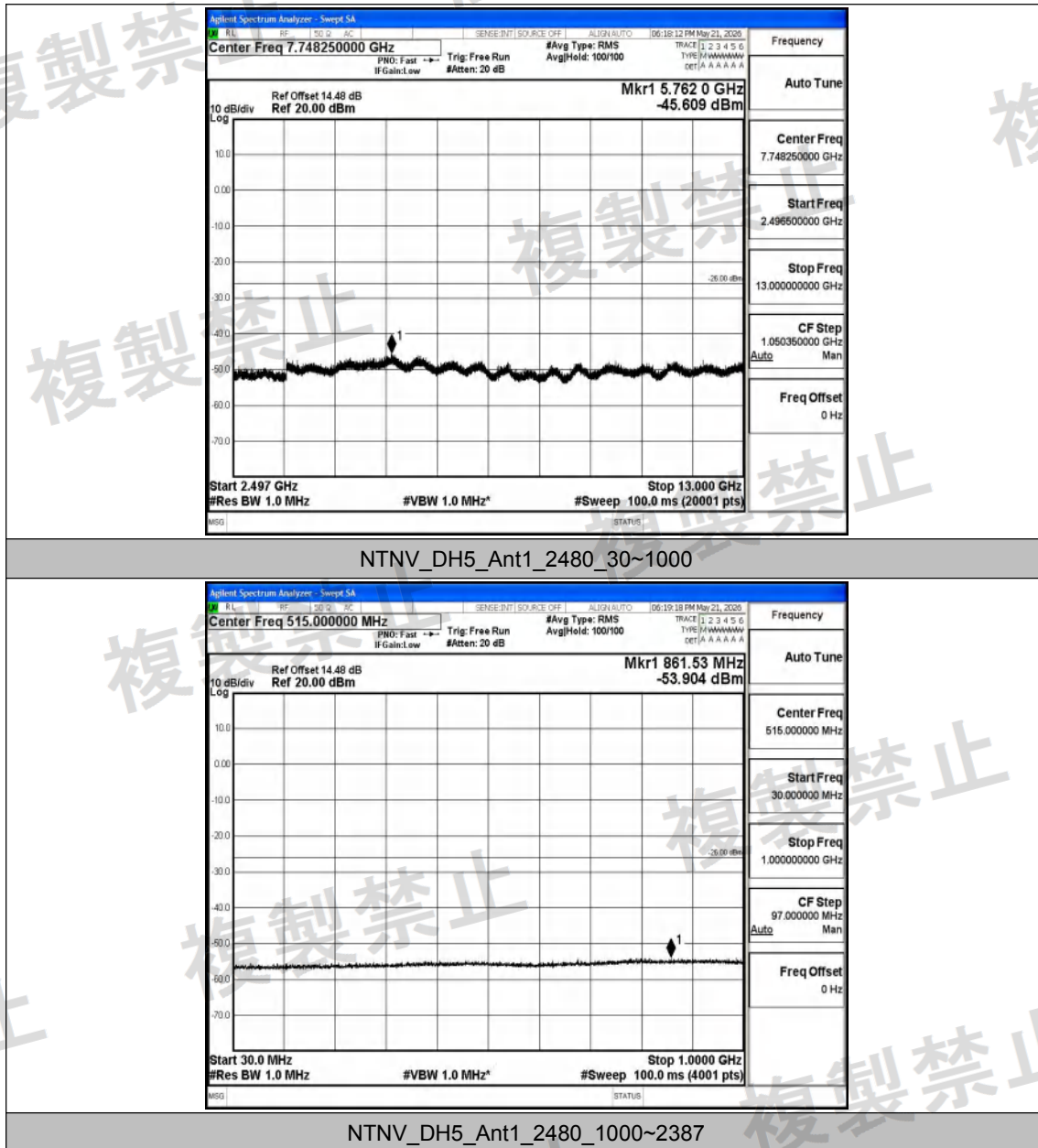


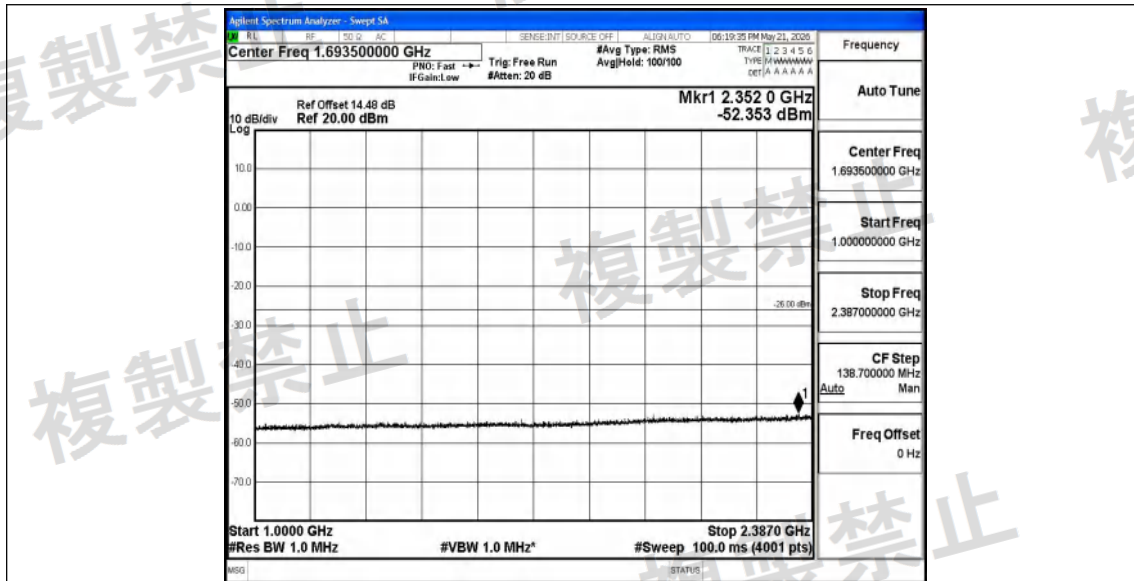
NTNV_DH5_Ant1_2441_1000~2387



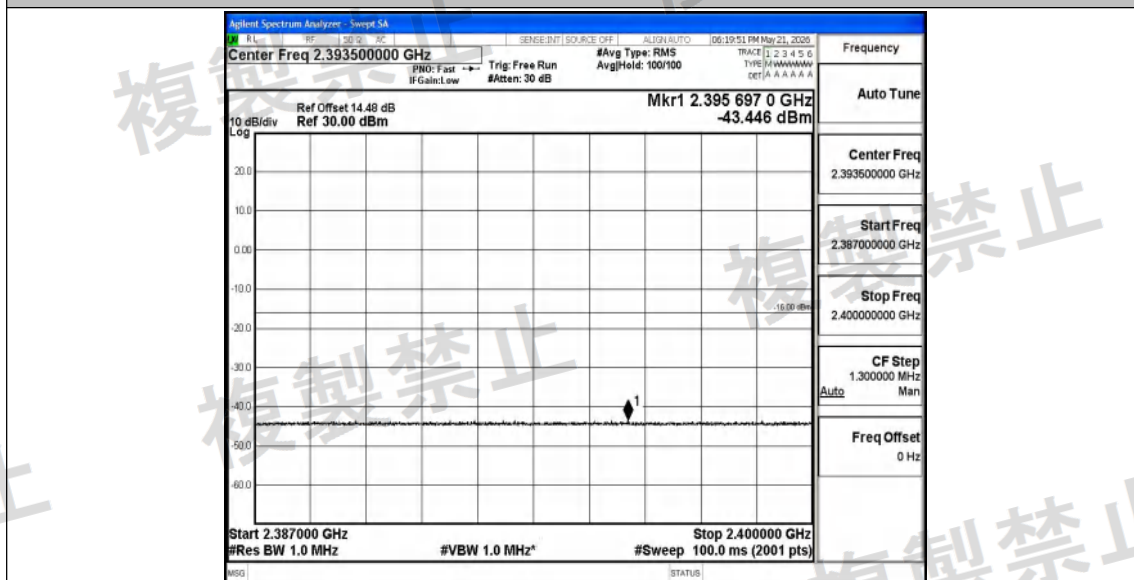
NTNV_DH5_Ant1_2441_2387~2400



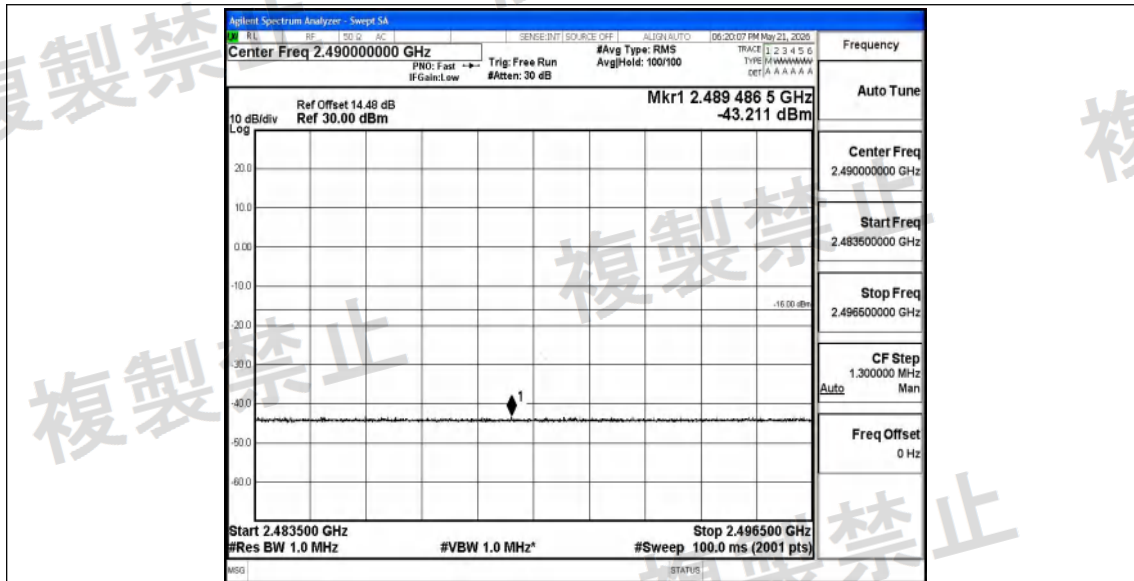




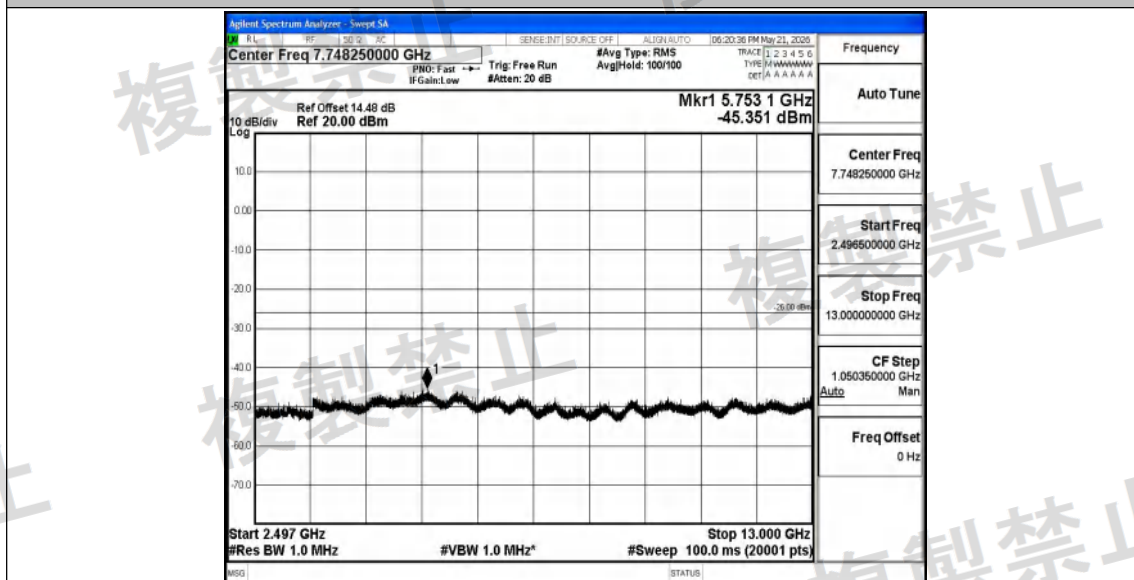
NTNV_DH5_Ant1_2480_2387~2400



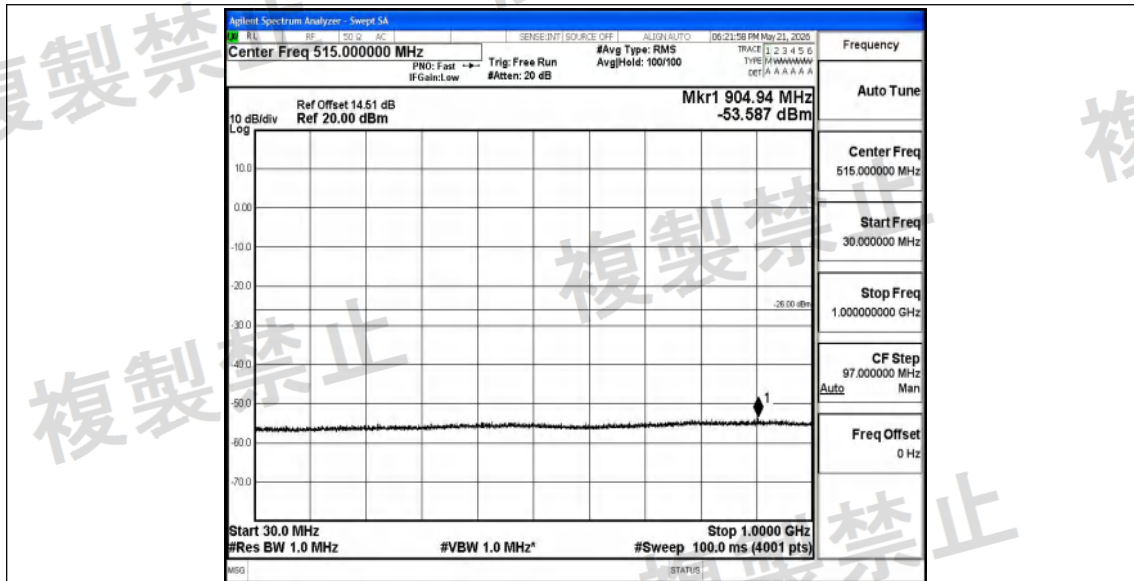
NTNV_DH5_Ant1_2480_2483.5~2496.5



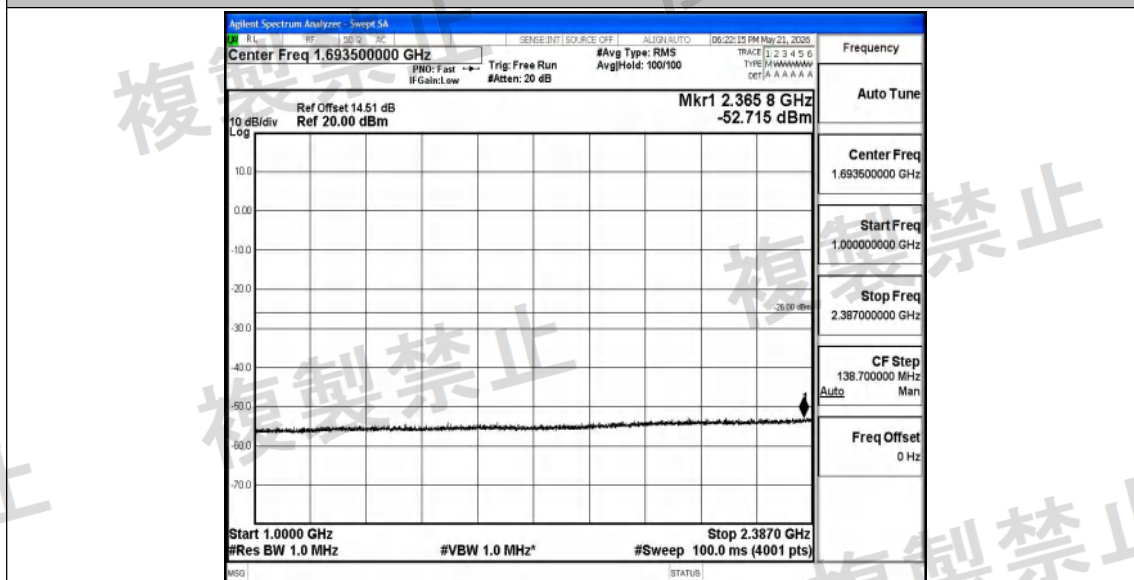
NTNV_DH5_Ant1_2480_2496.5~13000



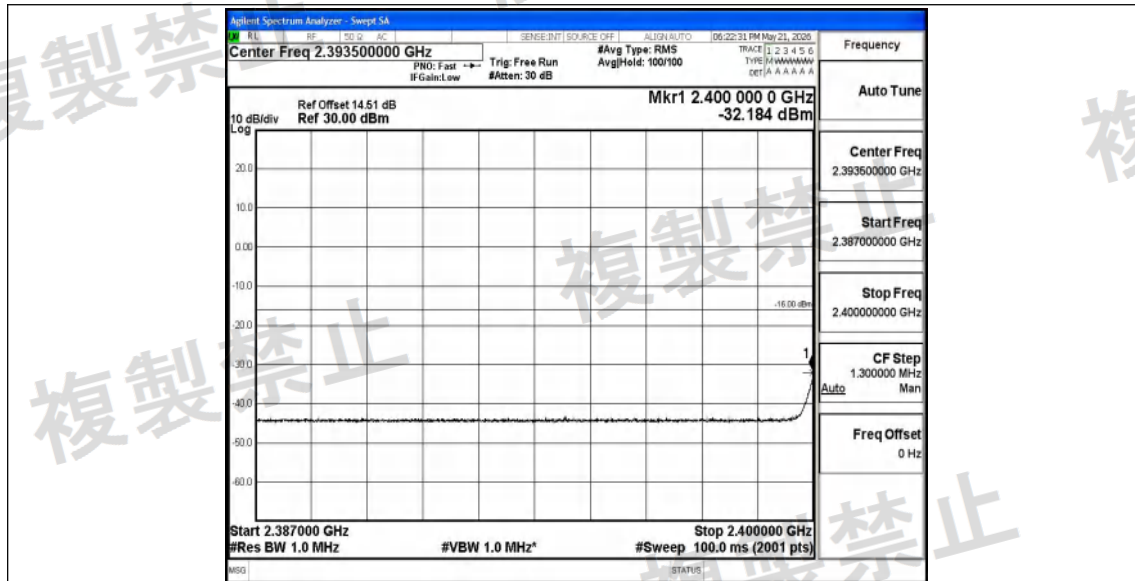
NTNV_2DH5_Ant1_2402_30~1000



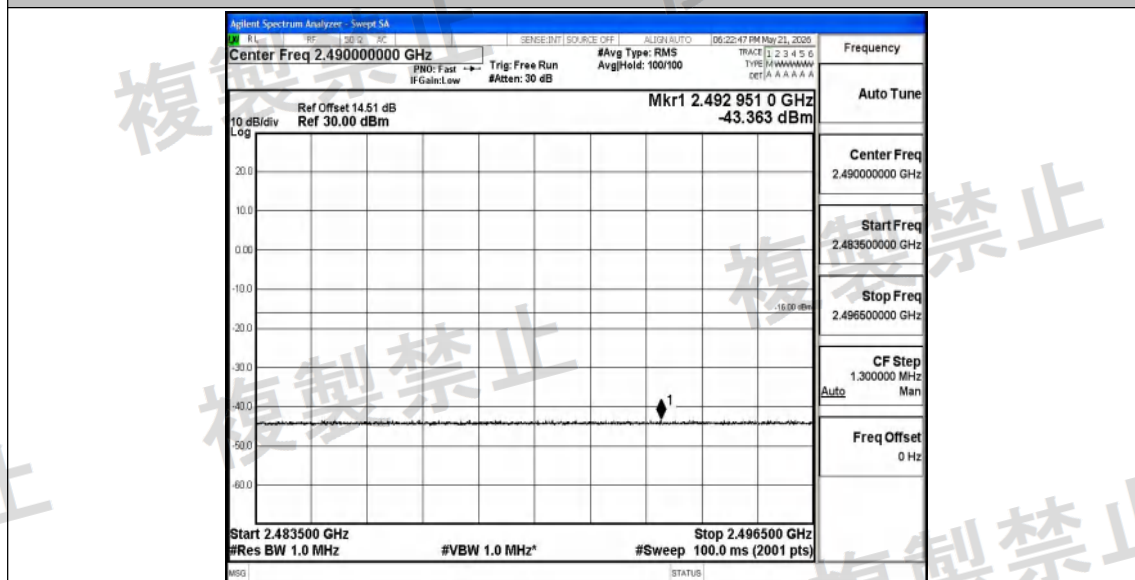
NTNV_2DH5_Ant1_2402_1000~2387



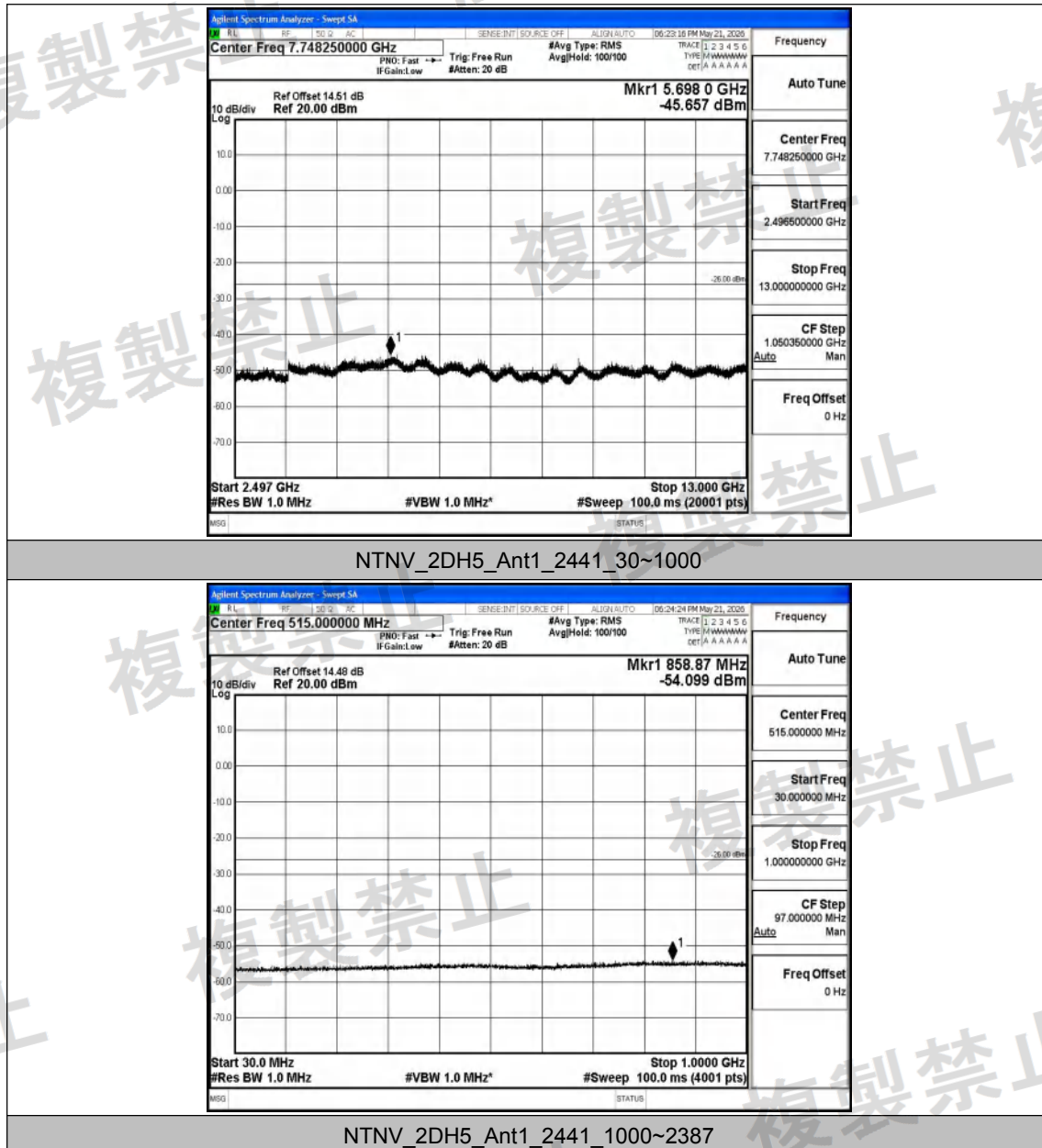
NTNV_2DH5_Ant1_2402_2387~2400

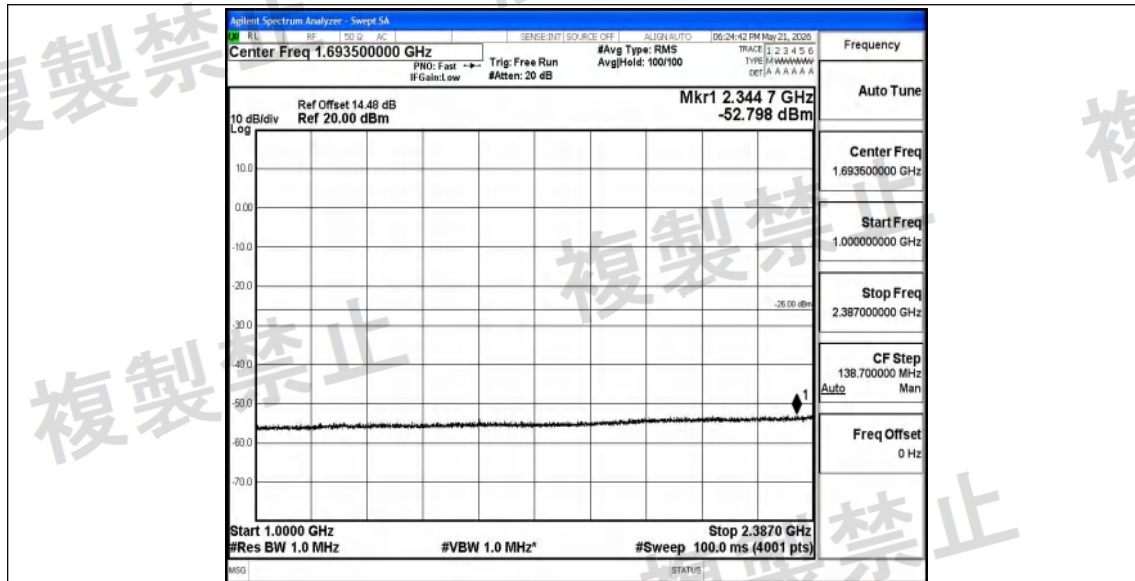


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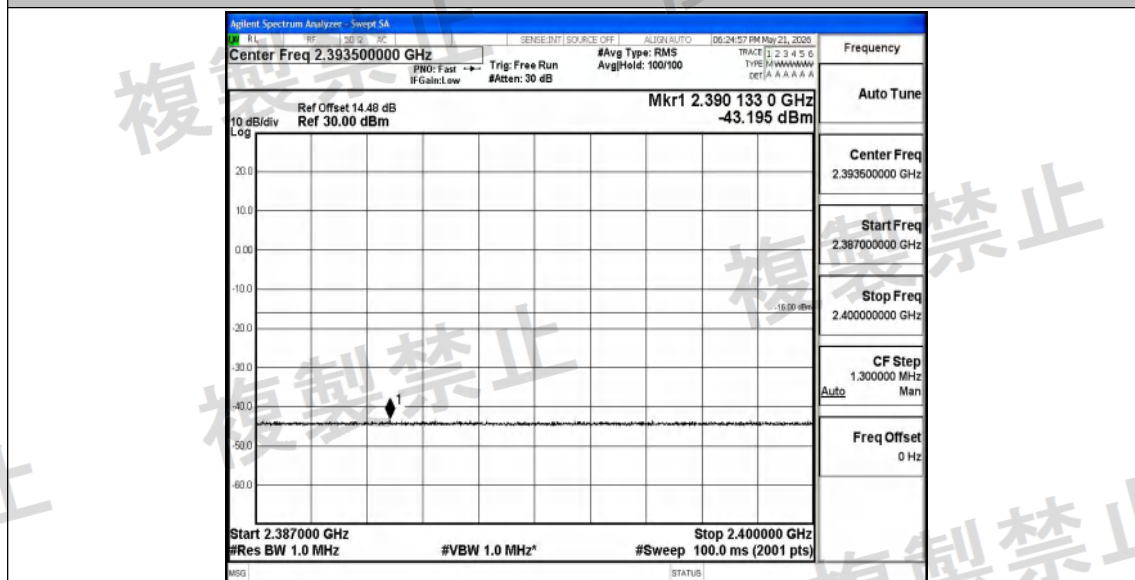


NTNV_2DH5_Ant1_2402_2496.5~13000

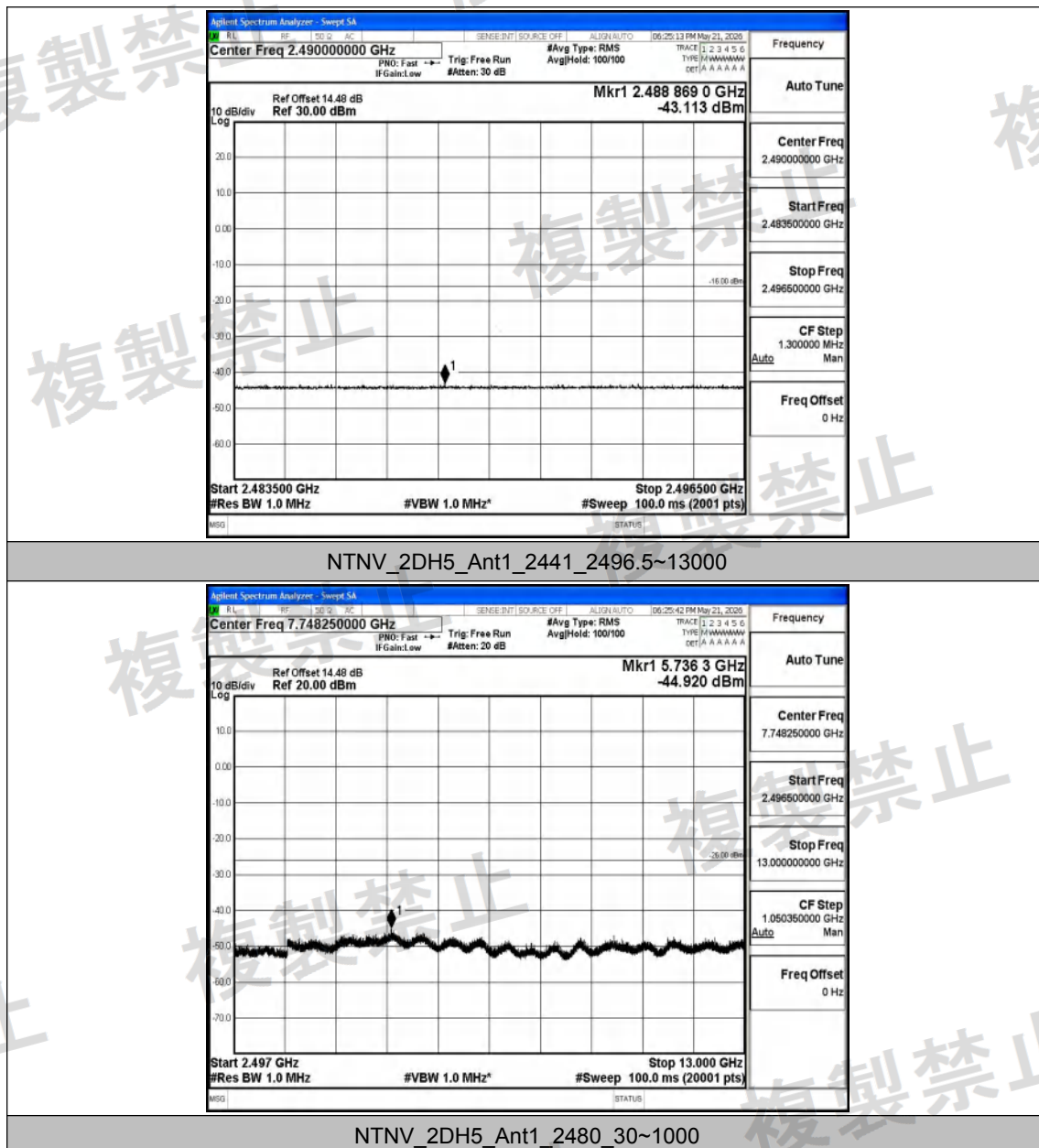


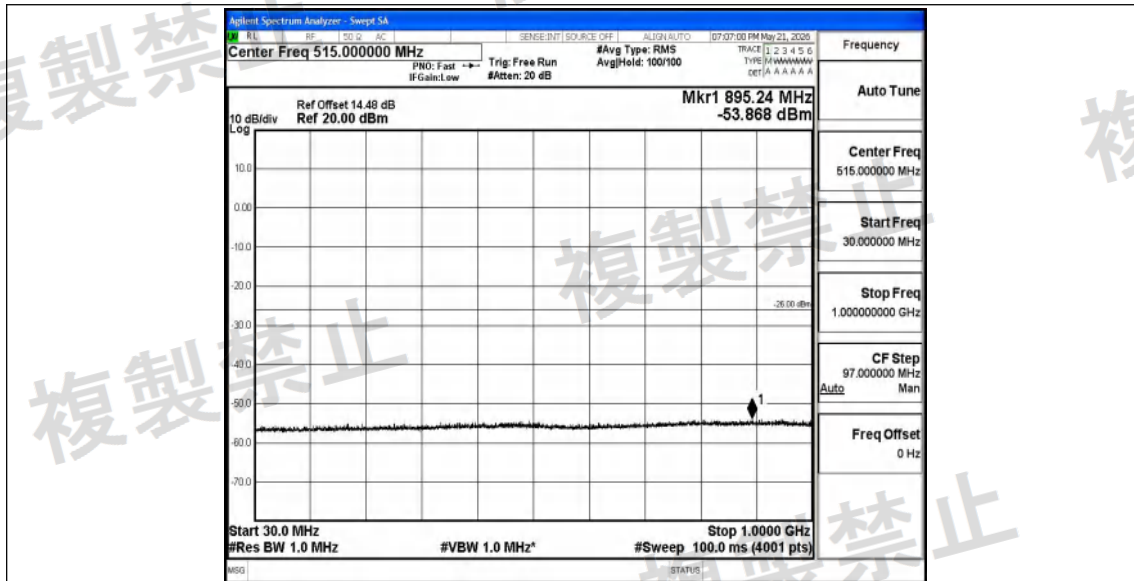


NTNV_2DH5_Ant1_2441_2387~2400

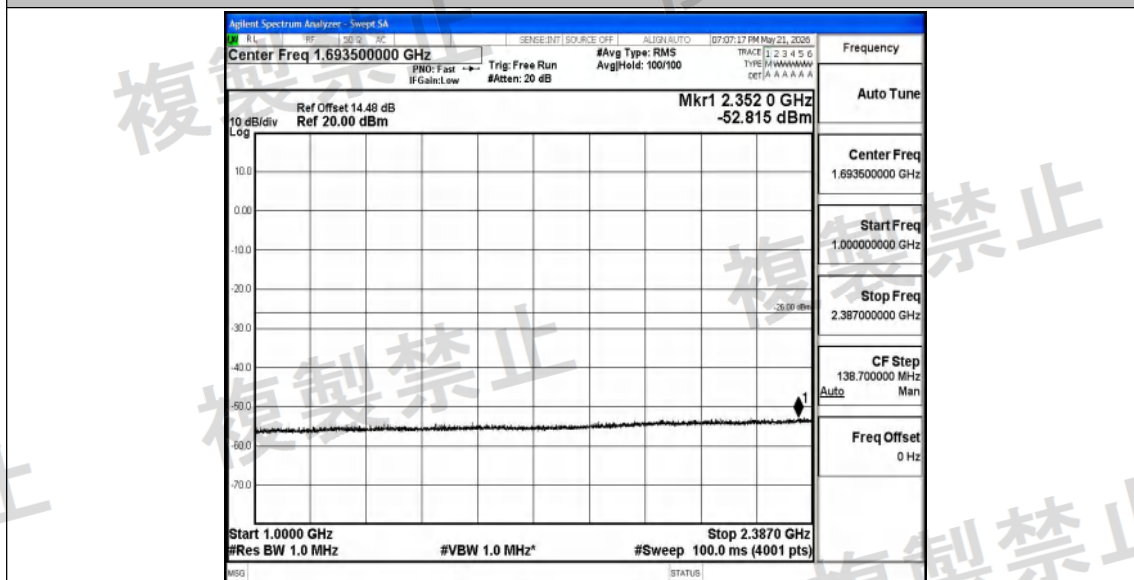


NTNV_2DH5_Ant1_2441_2483.5~2496.5

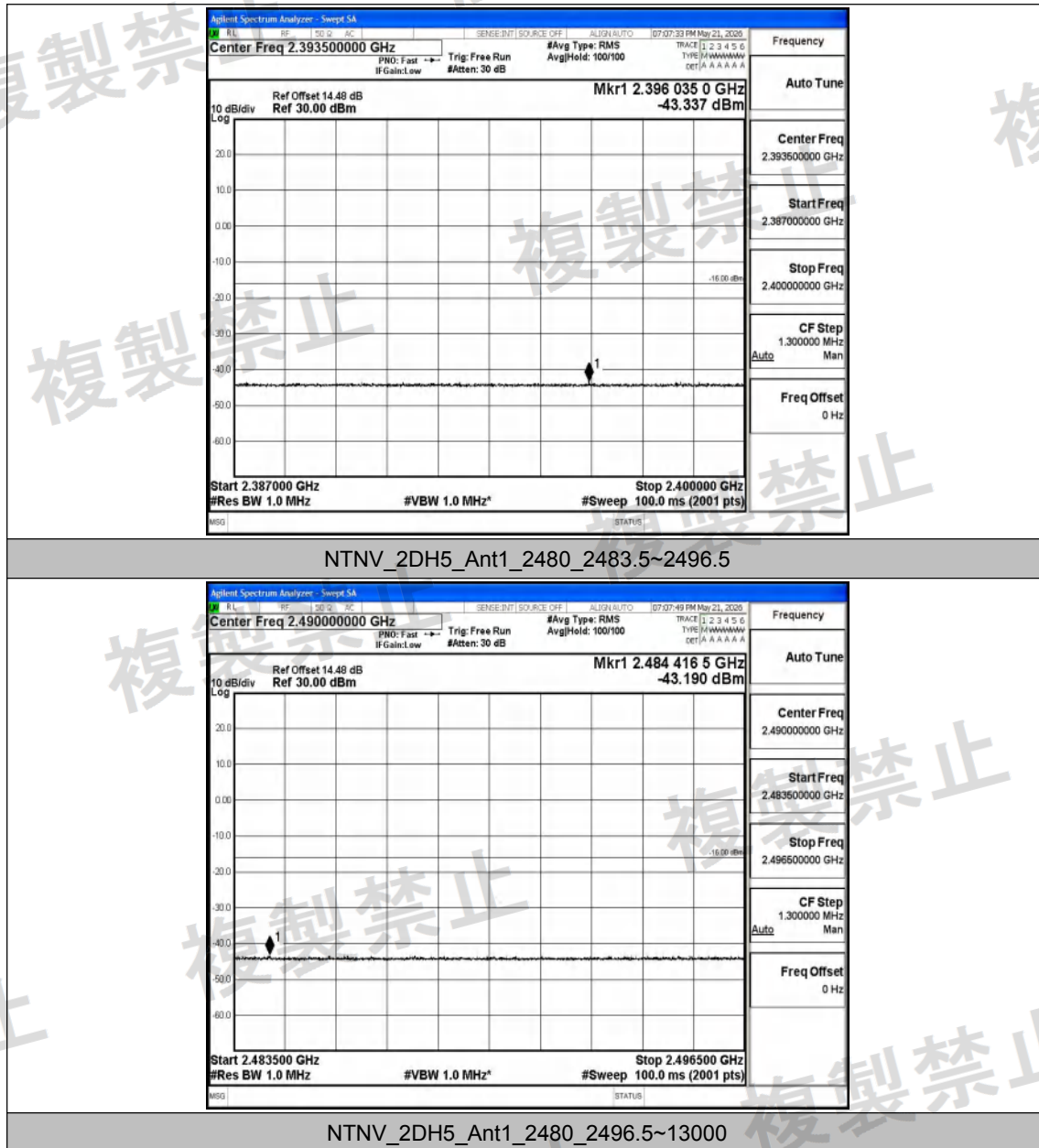


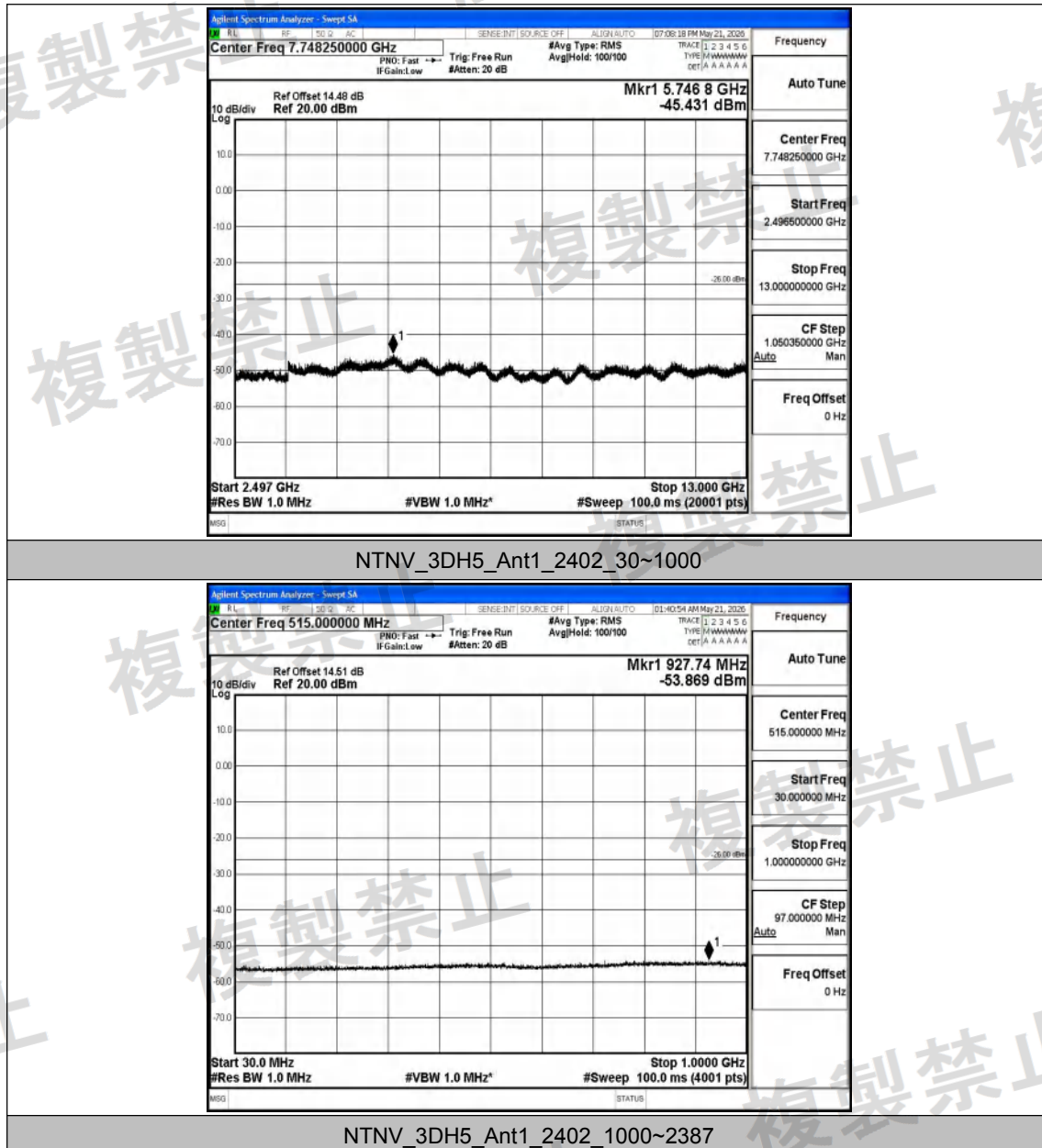


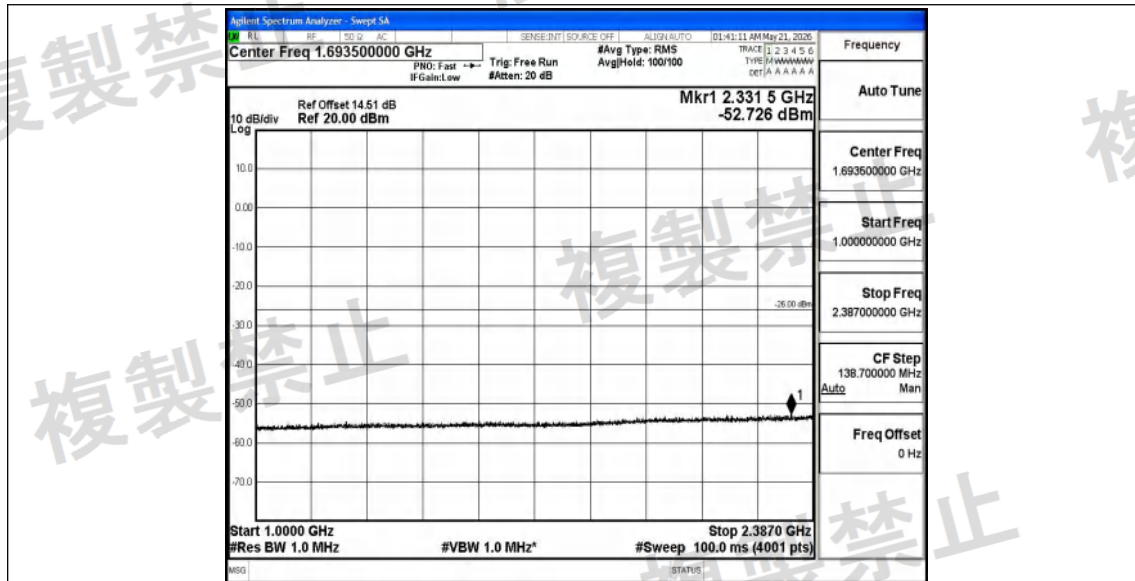
NTNV_2DH5_Ant1_2480_1000~2387



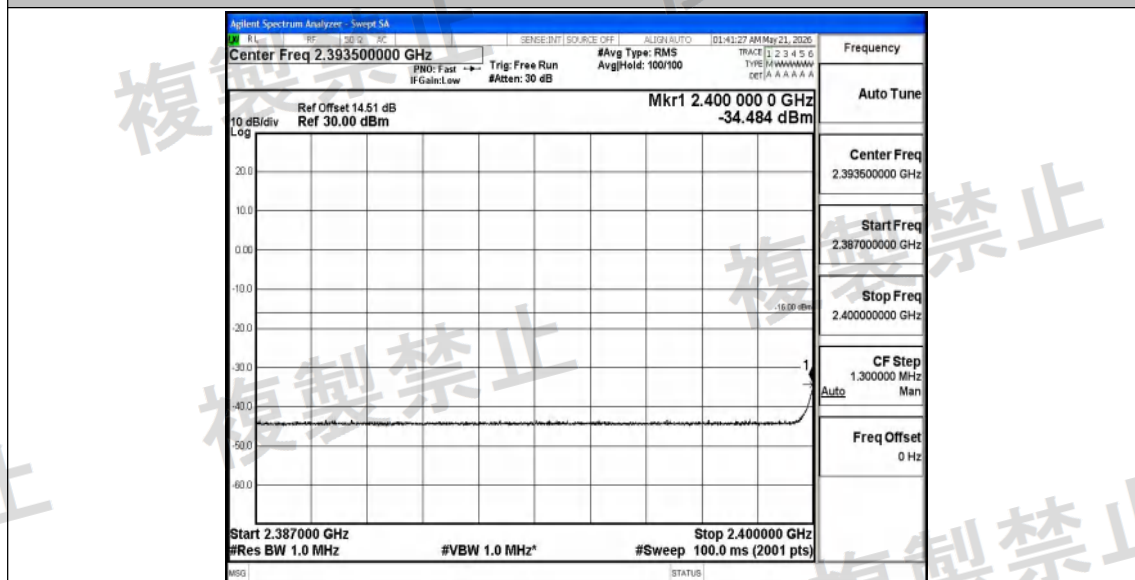
NTNV_2DH5_Ant1_2480_2387~2400



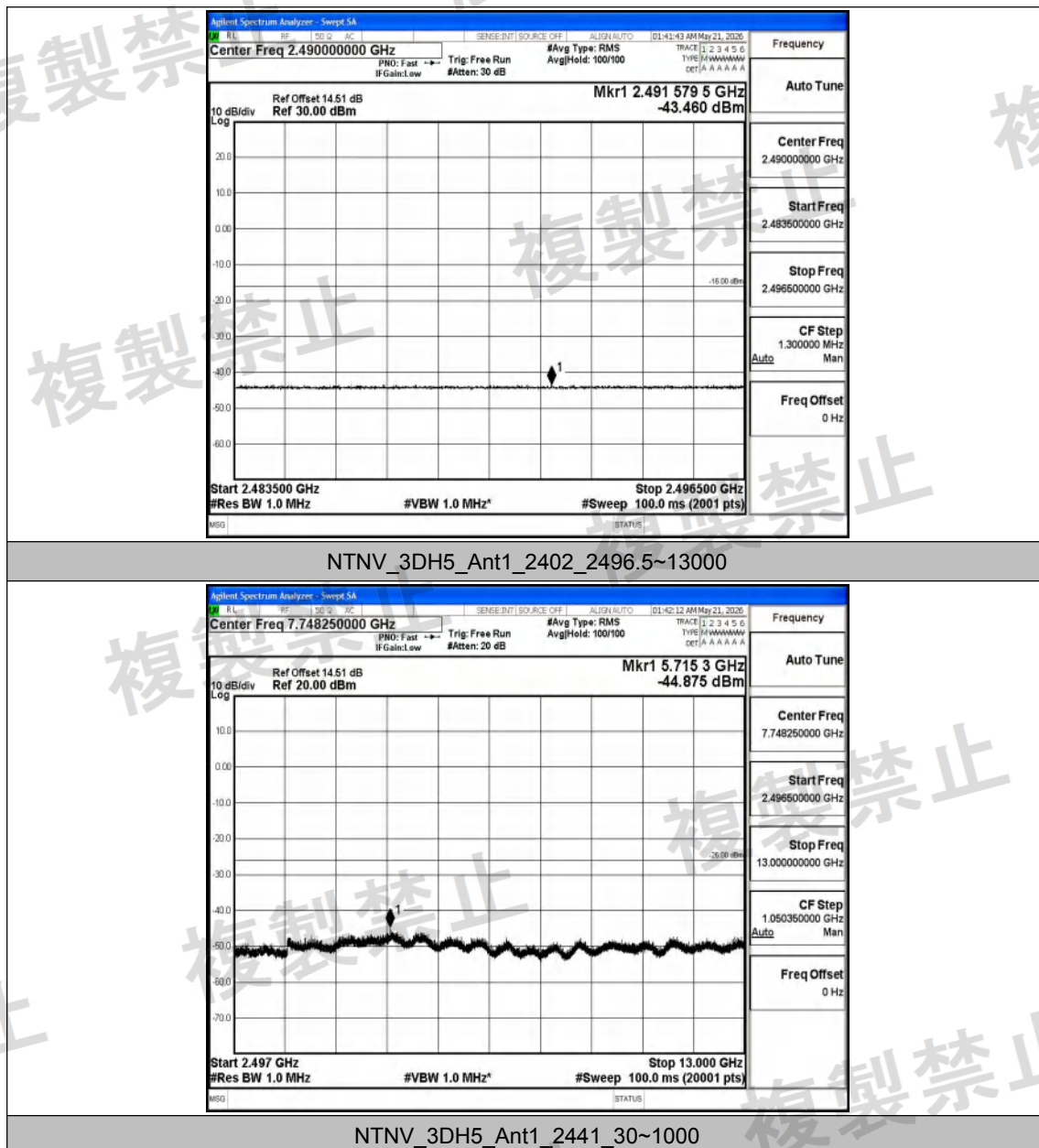


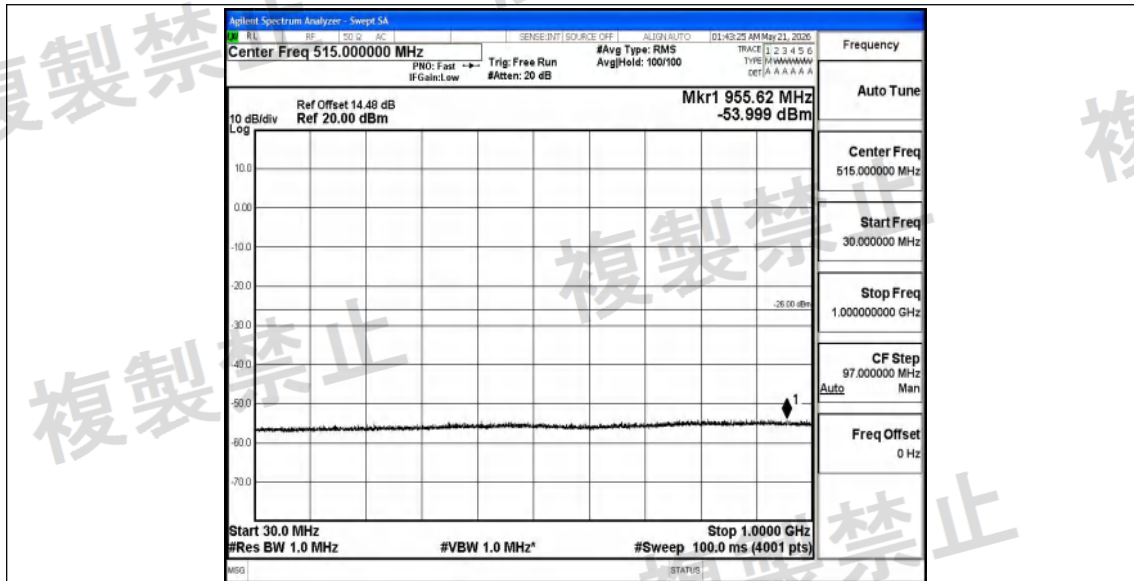


NTNV_3DH5_Ant1_2402_2387~2400

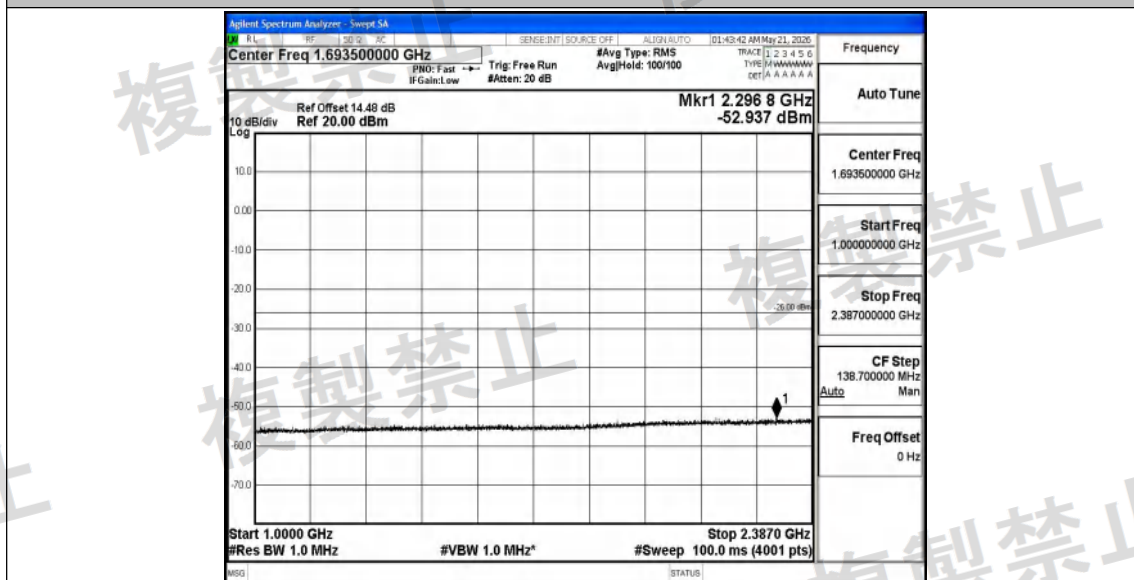


NTNV_3DH5_Ant1_2402_2483.5~2496.5

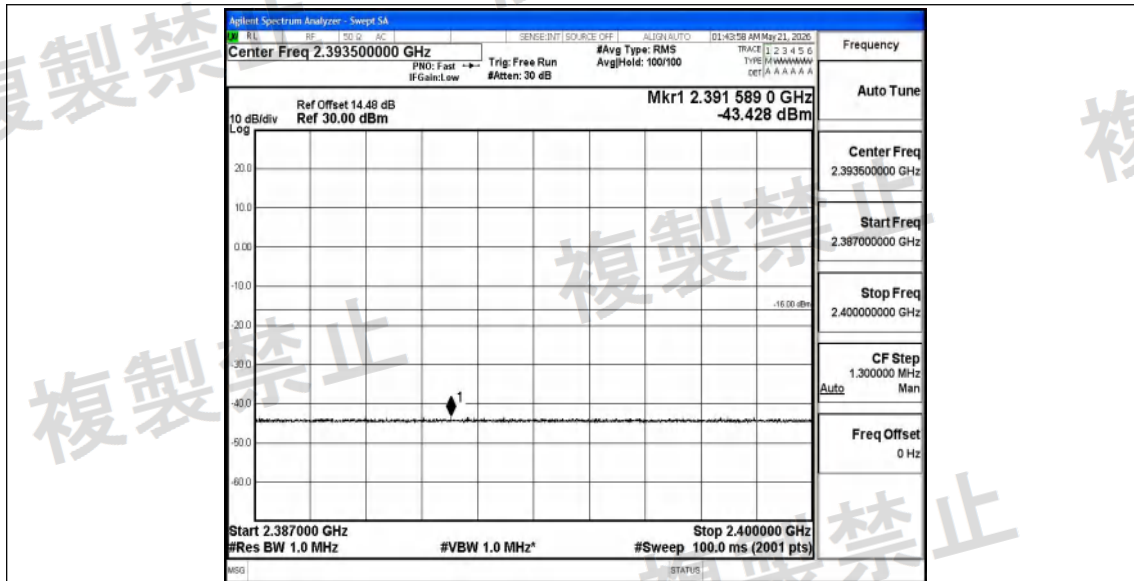




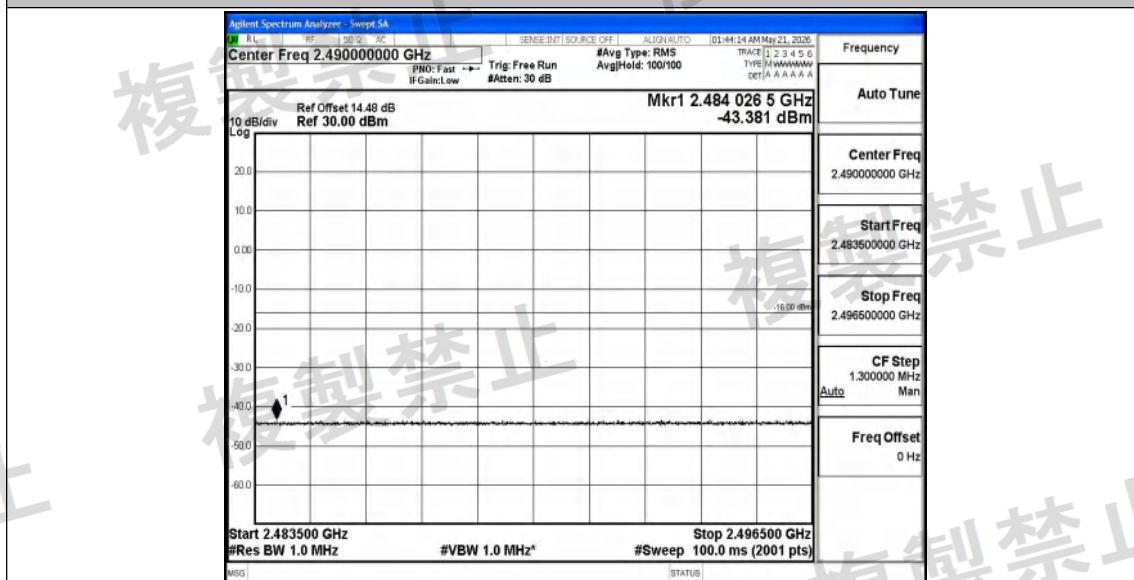
NTNV_3DH5_Ant1_2441_1000~2387



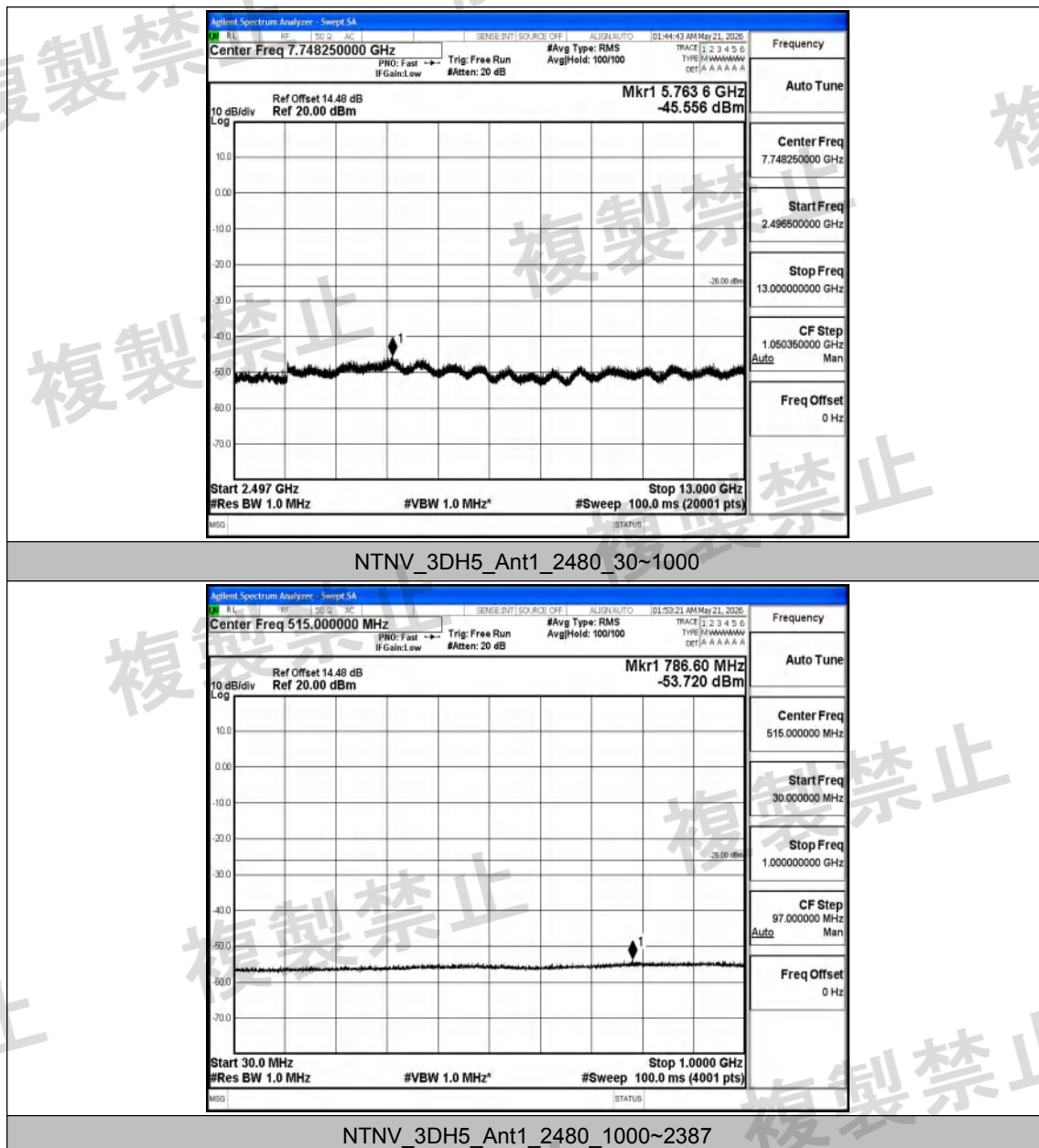
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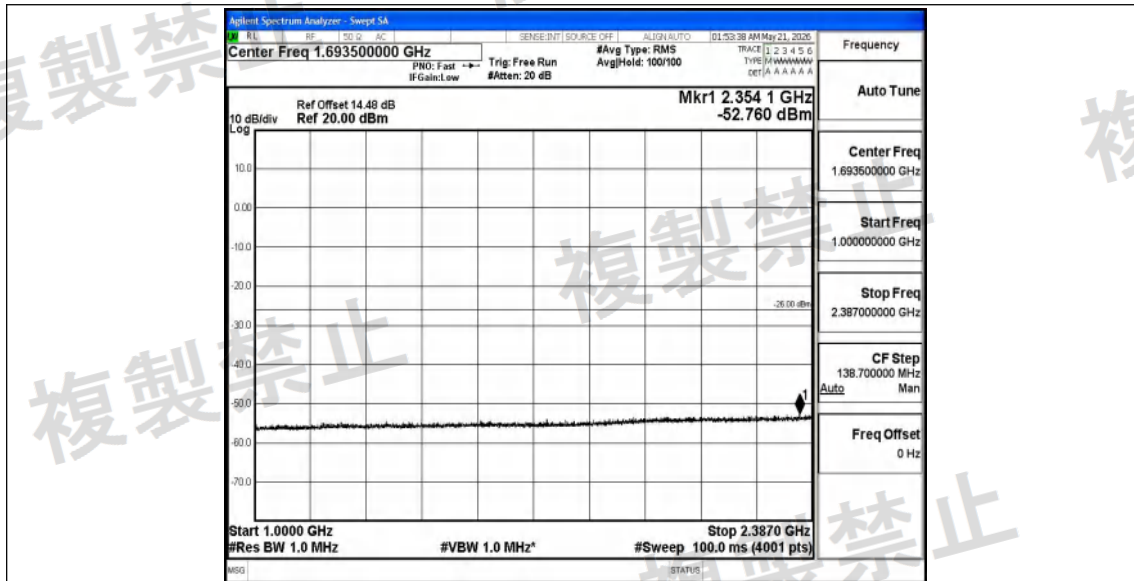


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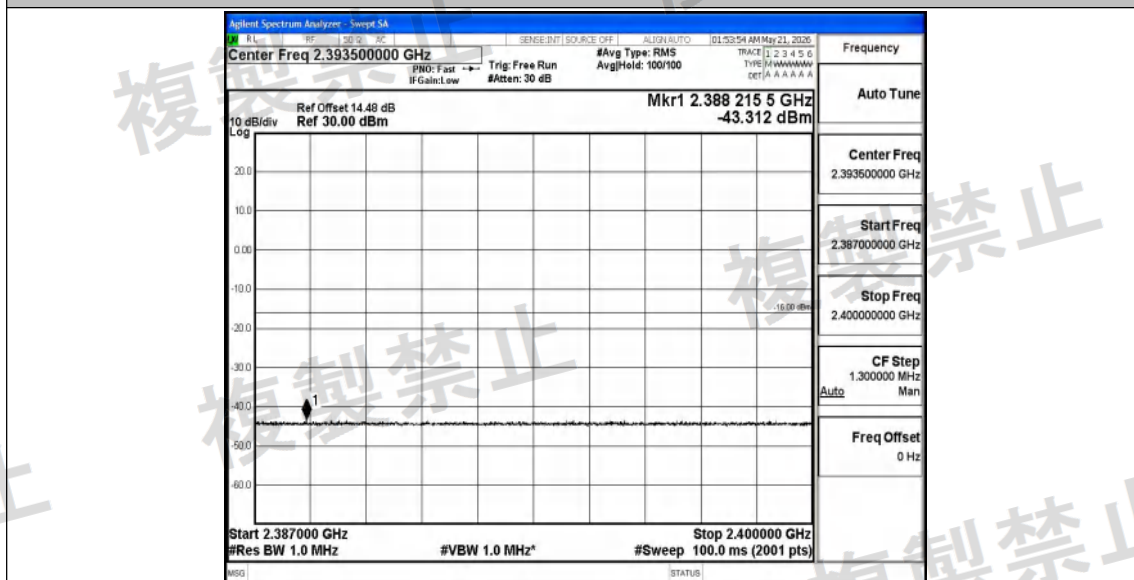


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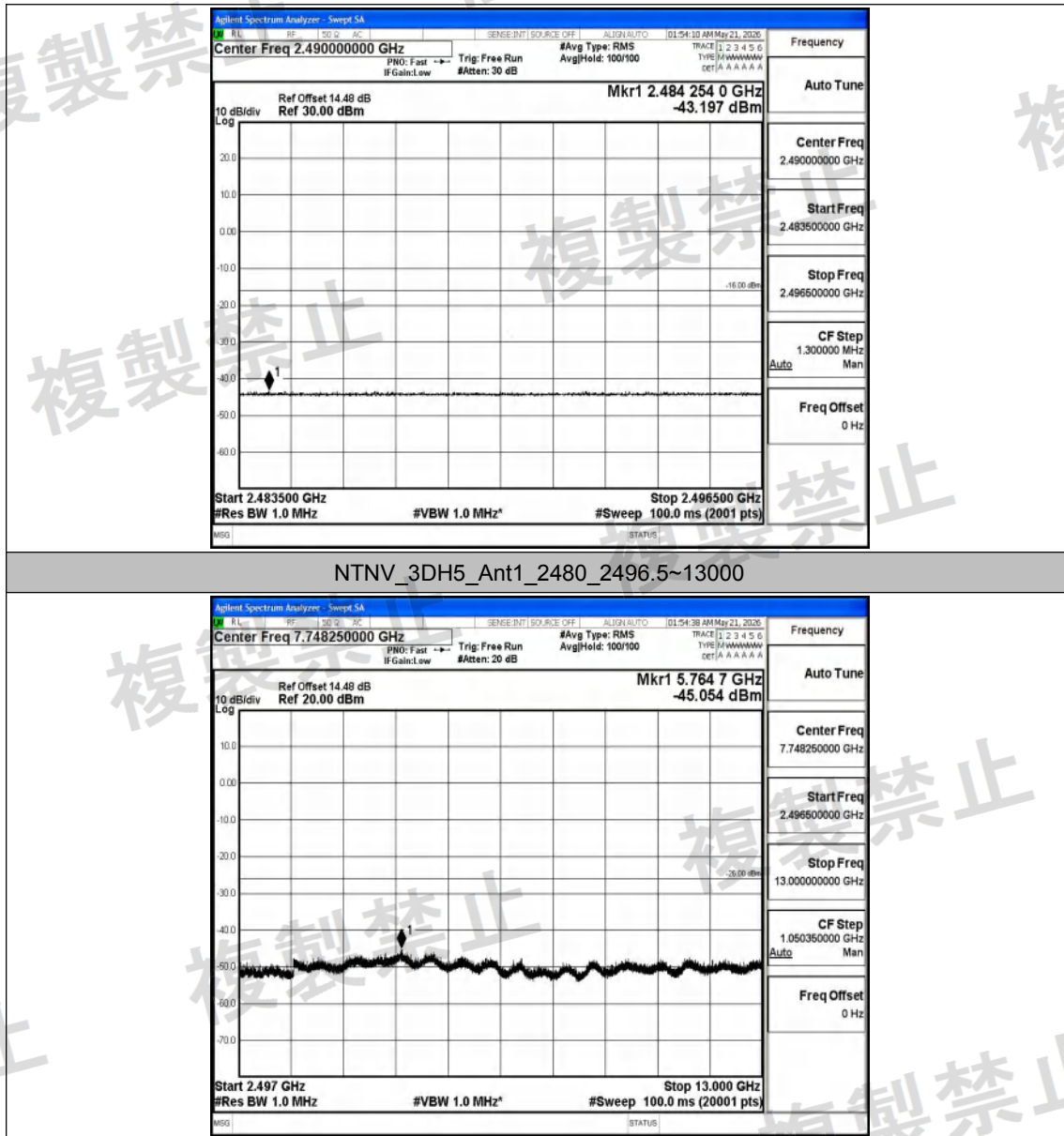




NTNV_3DH5_Ant1_2480_2387~2400



NTNV_3DH5_Ant1_2480_2483.5~2496.5



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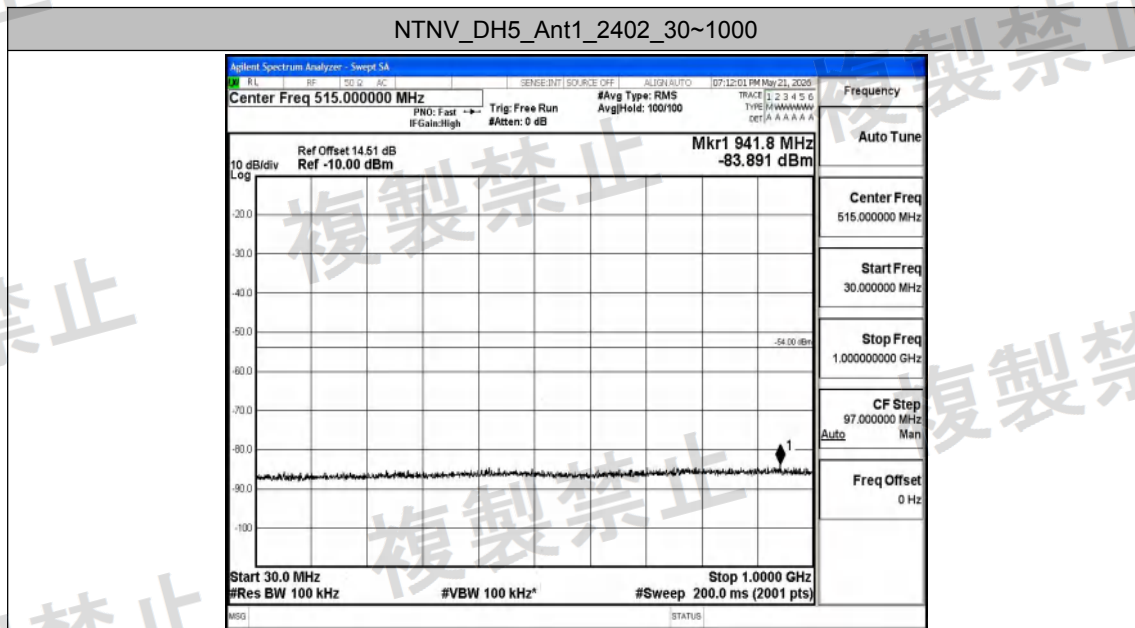
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A.6 Spurious Emission of RX

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-83.89	≤-54	0.00408	≤4	PASS
				1000~12500	-66.6	≤-47	0.21878	≤20	PASS
			2441	30~1000	-84.47	≤-54	0.00357	≤4	PASS
				1000~12500	-66.98	≤-47	0.20045	≤20	PASS
			2480	30~1000	-84.06	≤-54	0.00393	≤4	PASS
				1000~12500	-67.07	≤-47	0.19634	≤20	PASS
	2DH5	Ant1	2402	30~1000	-84.22	≤-54	0.00378	≤4	PASS
				1000~12500	-66.57	≤-47	0.22029	≤20	PASS
			2441	30~1000	-84.04	≤-54	0.00394	≤4	PASS
				1000~12500	-66.51	≤-47	0.22336	≤20	PASS
			2480	30~1000	-84.08	≤-54	0.00391	≤4	PASS
				1000~12500	-66.85	≤-47	0.20654	≤20	PASS
	3DH5	Ant1	2402	30~1000	-84.03	≤-54	0.00395	≤4	PASS
				1000~12500	-66.84	≤-47	0.20701	≤20	PASS
			2441	30~1000	-83.84	≤-54	0.00413	≤4	PASS
				1000~12500	-67.04	≤-47	0.19770	≤20	PASS
			2480	30~1000	-84.29	≤-54	0.00372	≤4	PASS
				1000~12500	-67.03	≤-47	0.19815	≤20	PASS

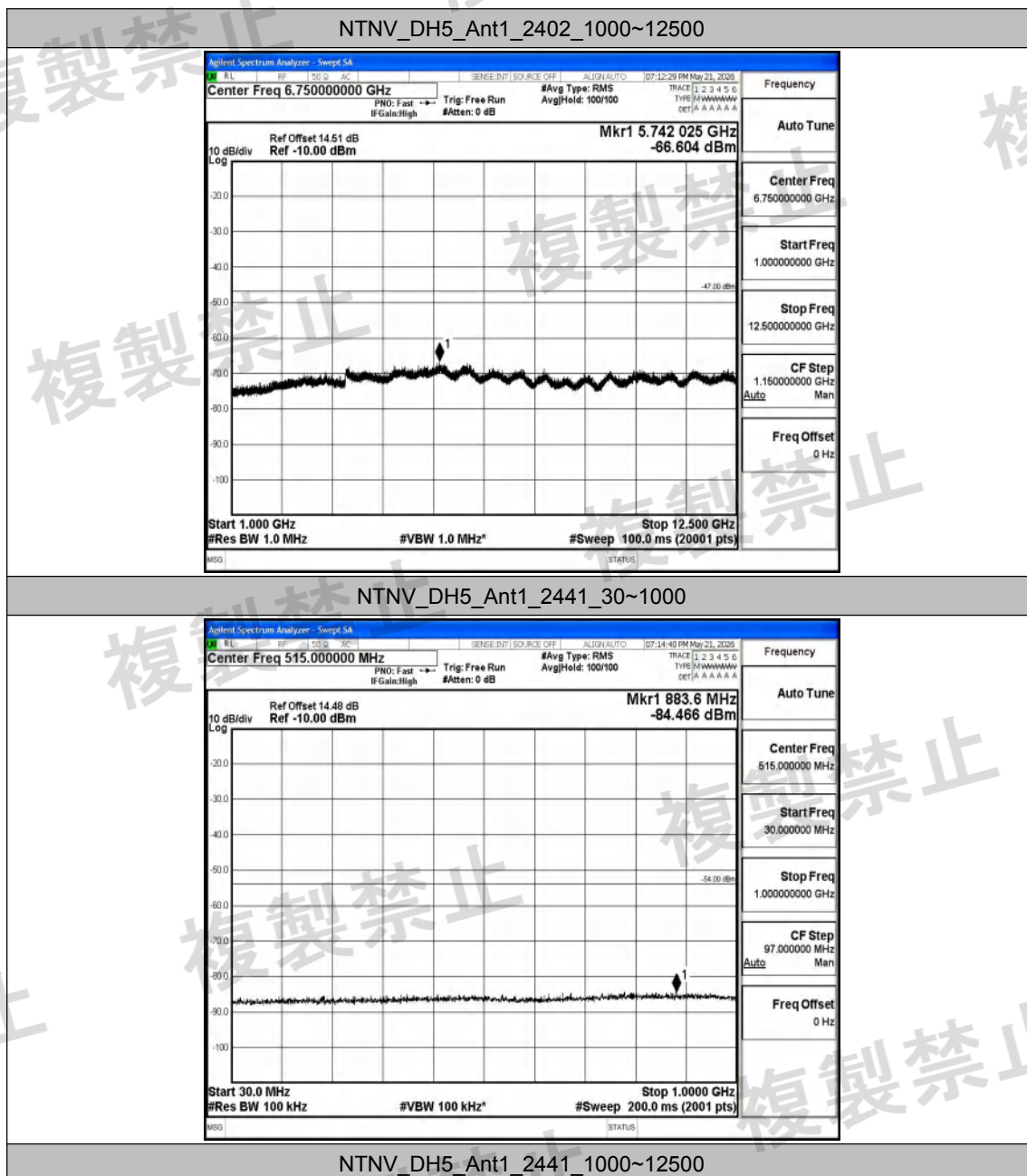
Test Graphs

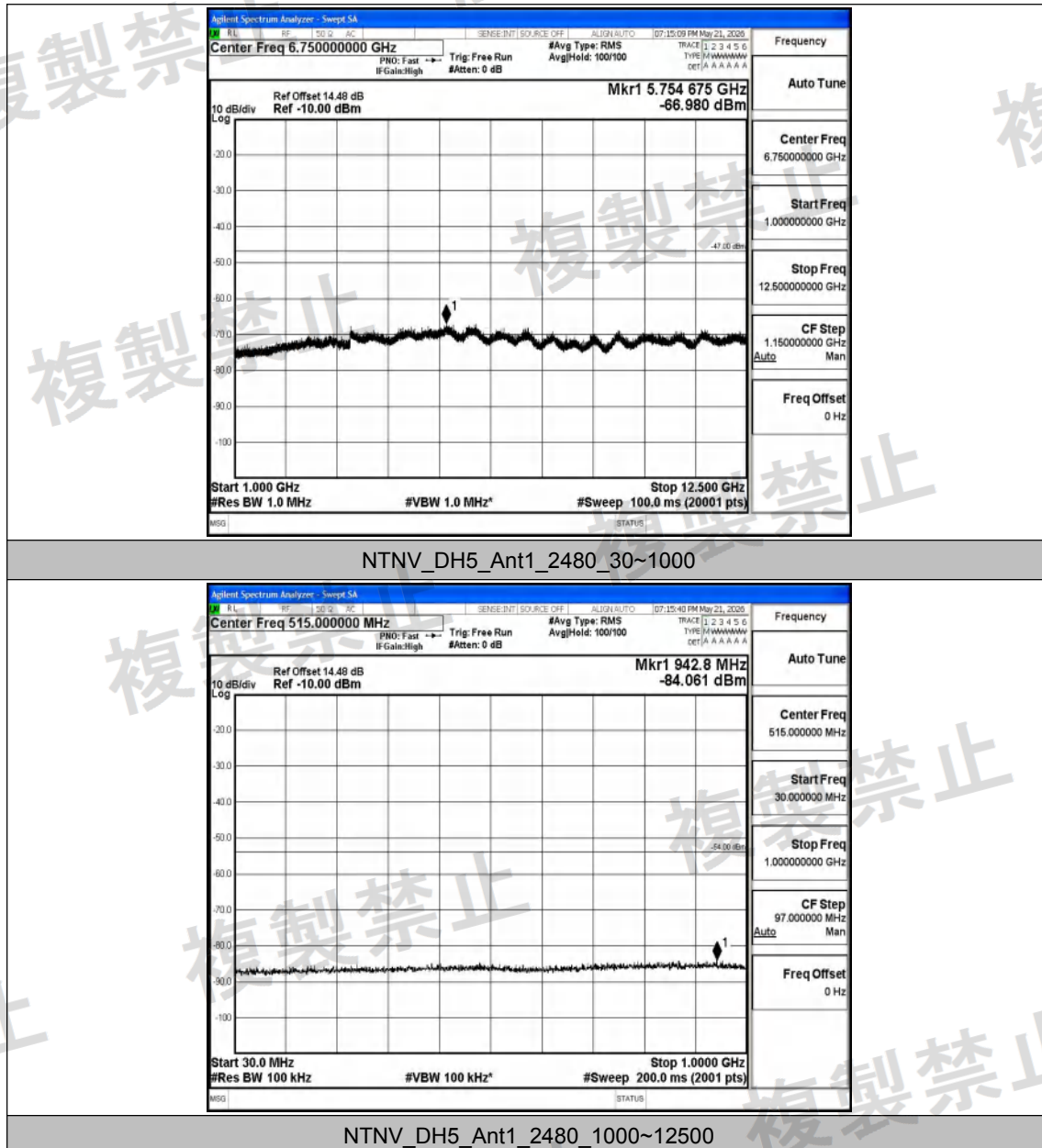


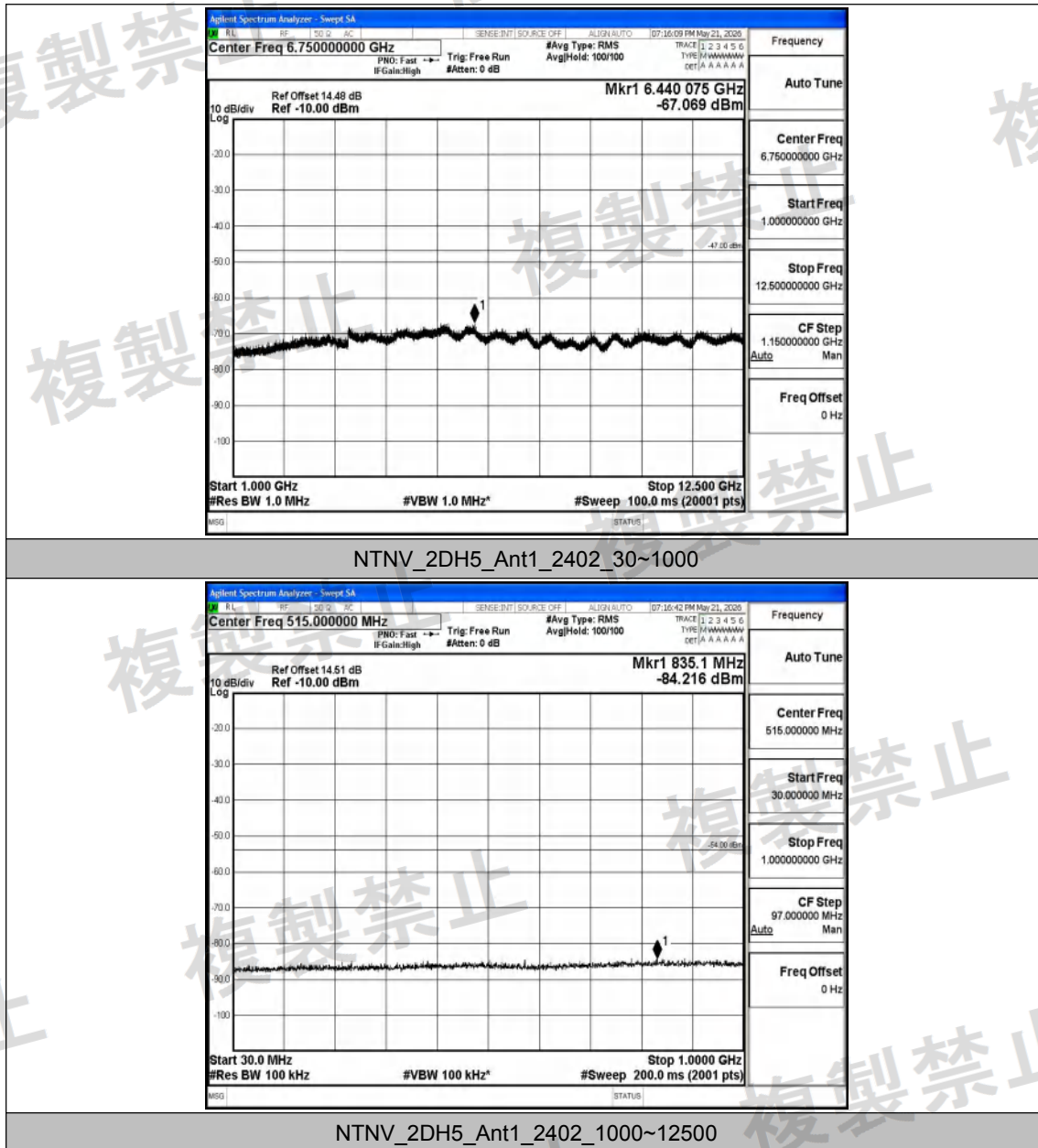
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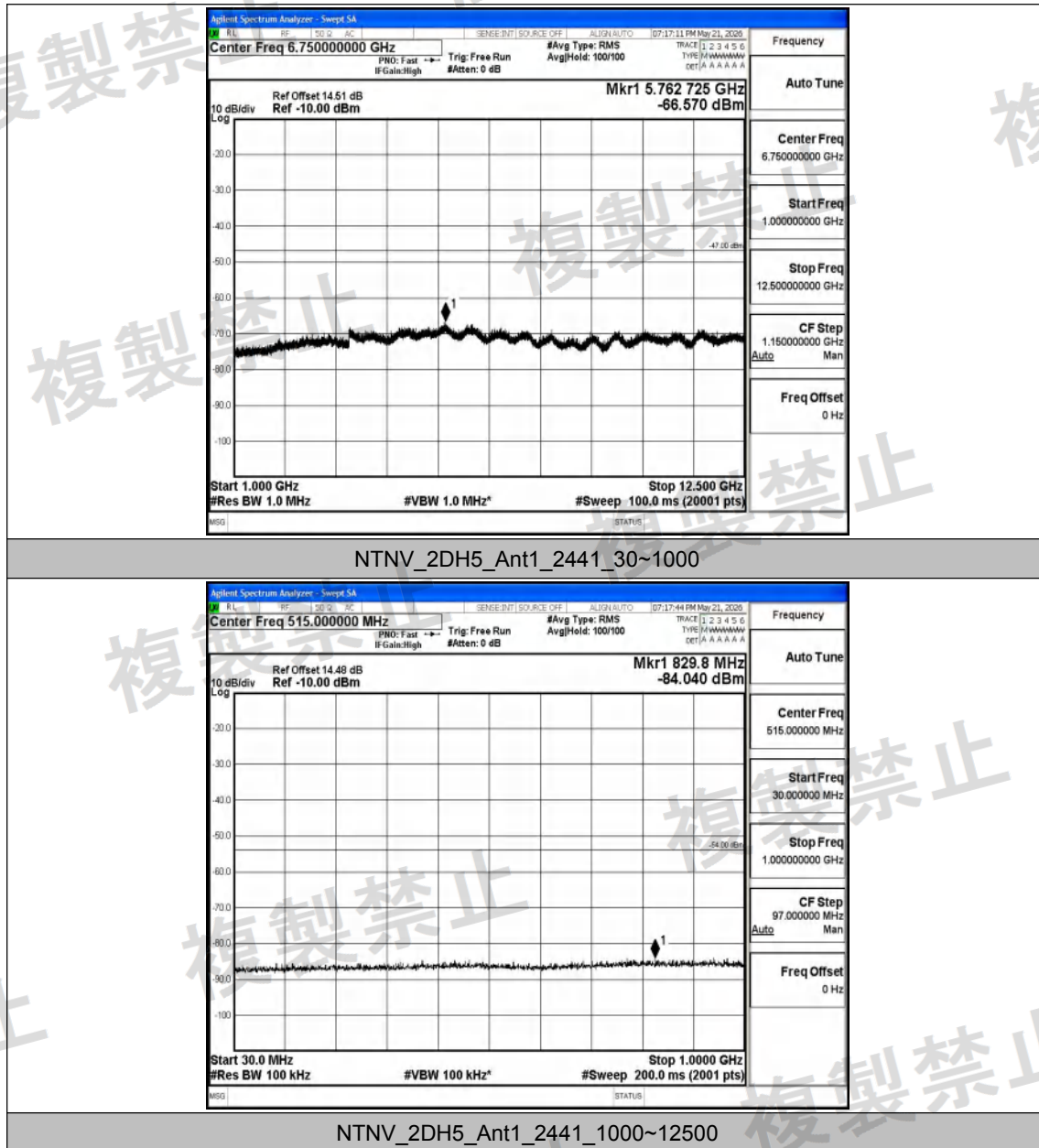
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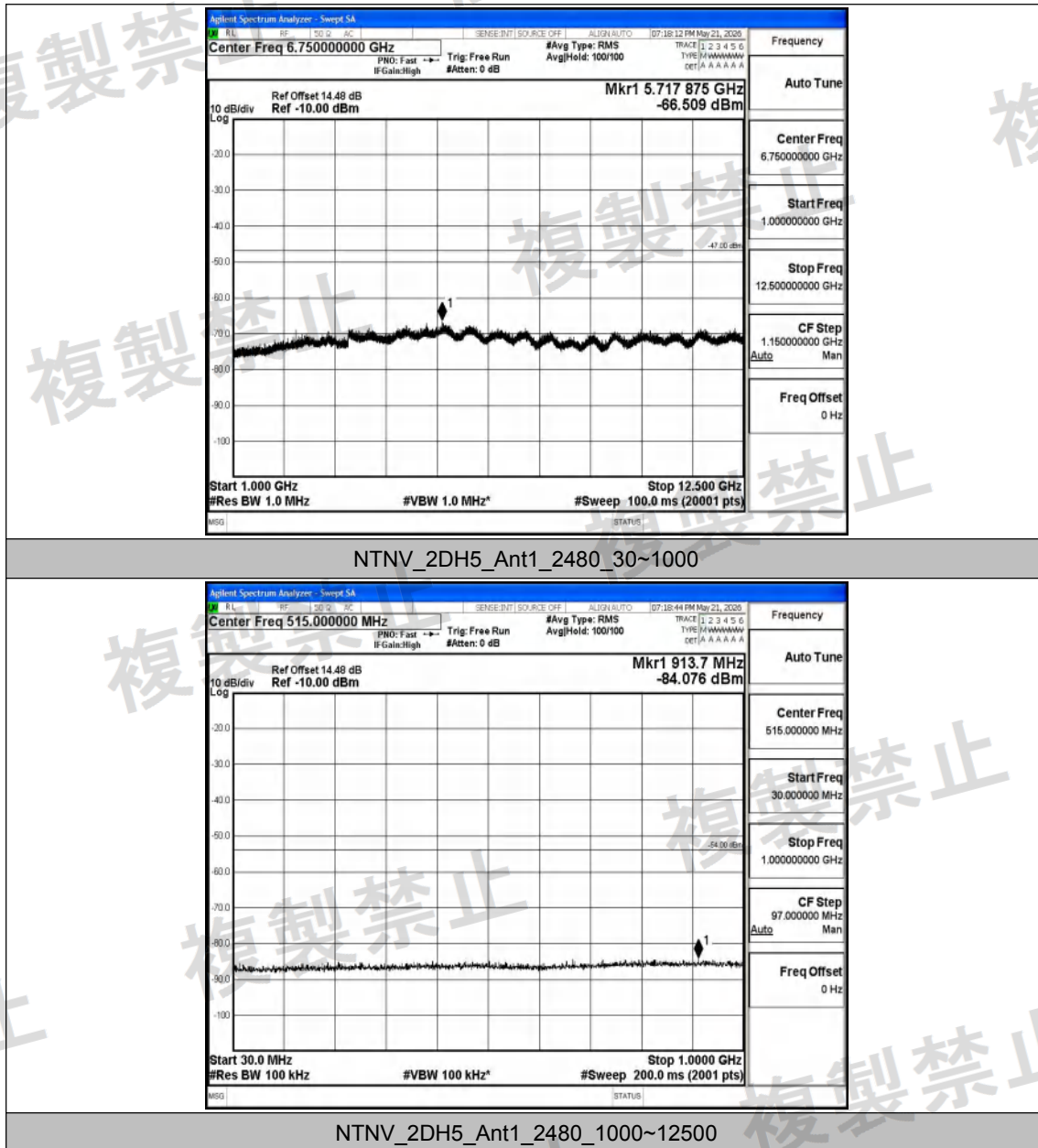
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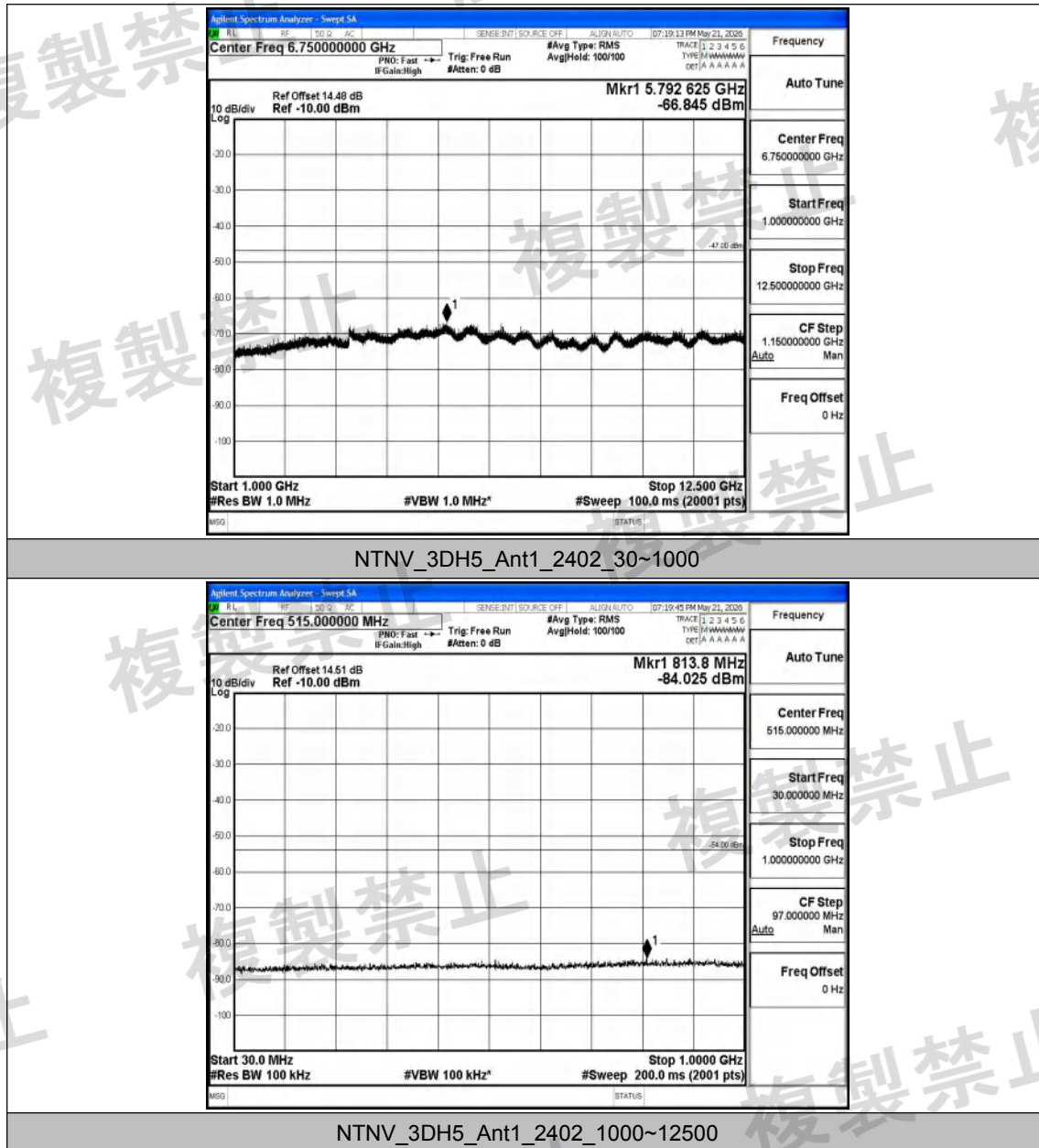


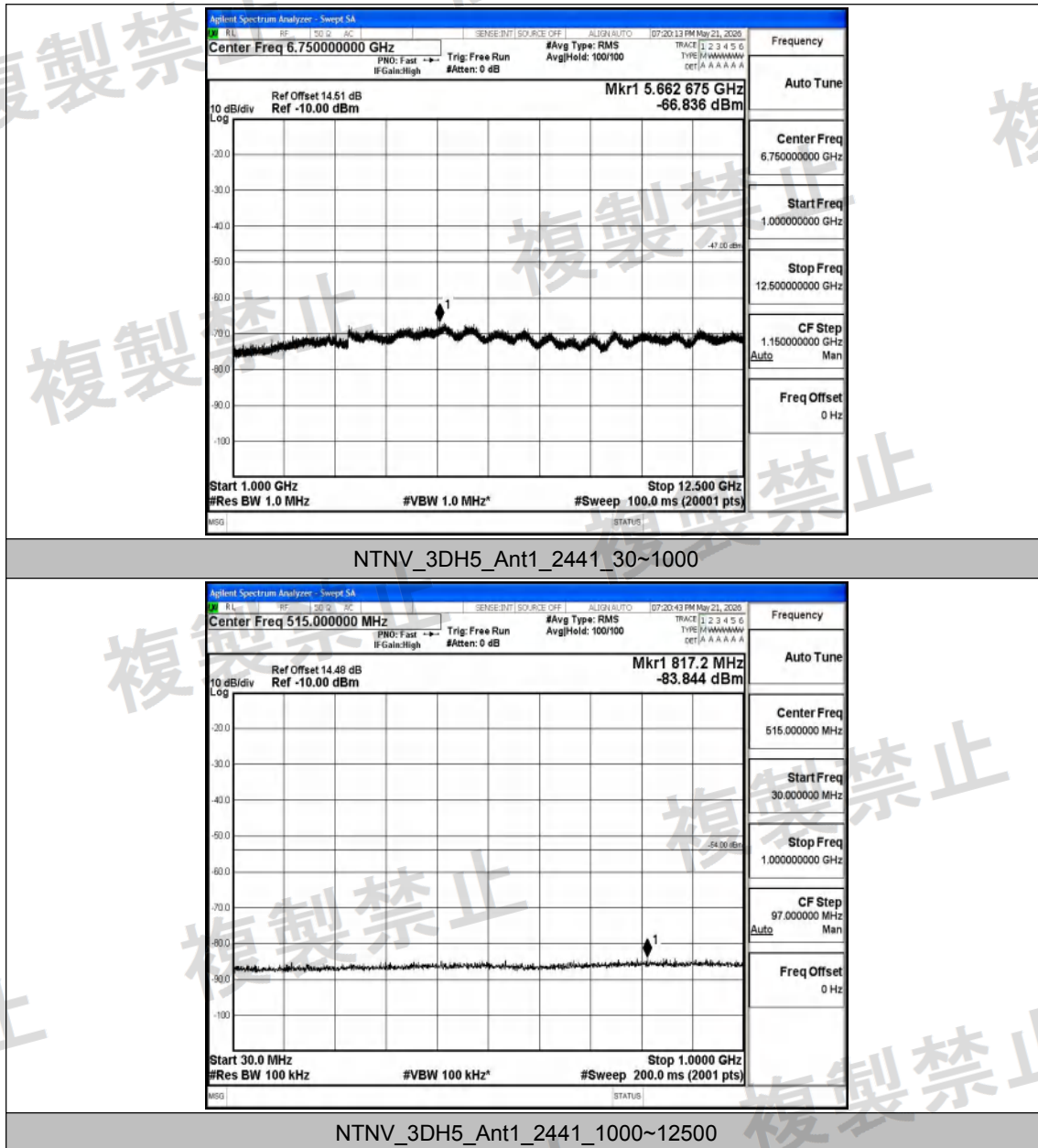


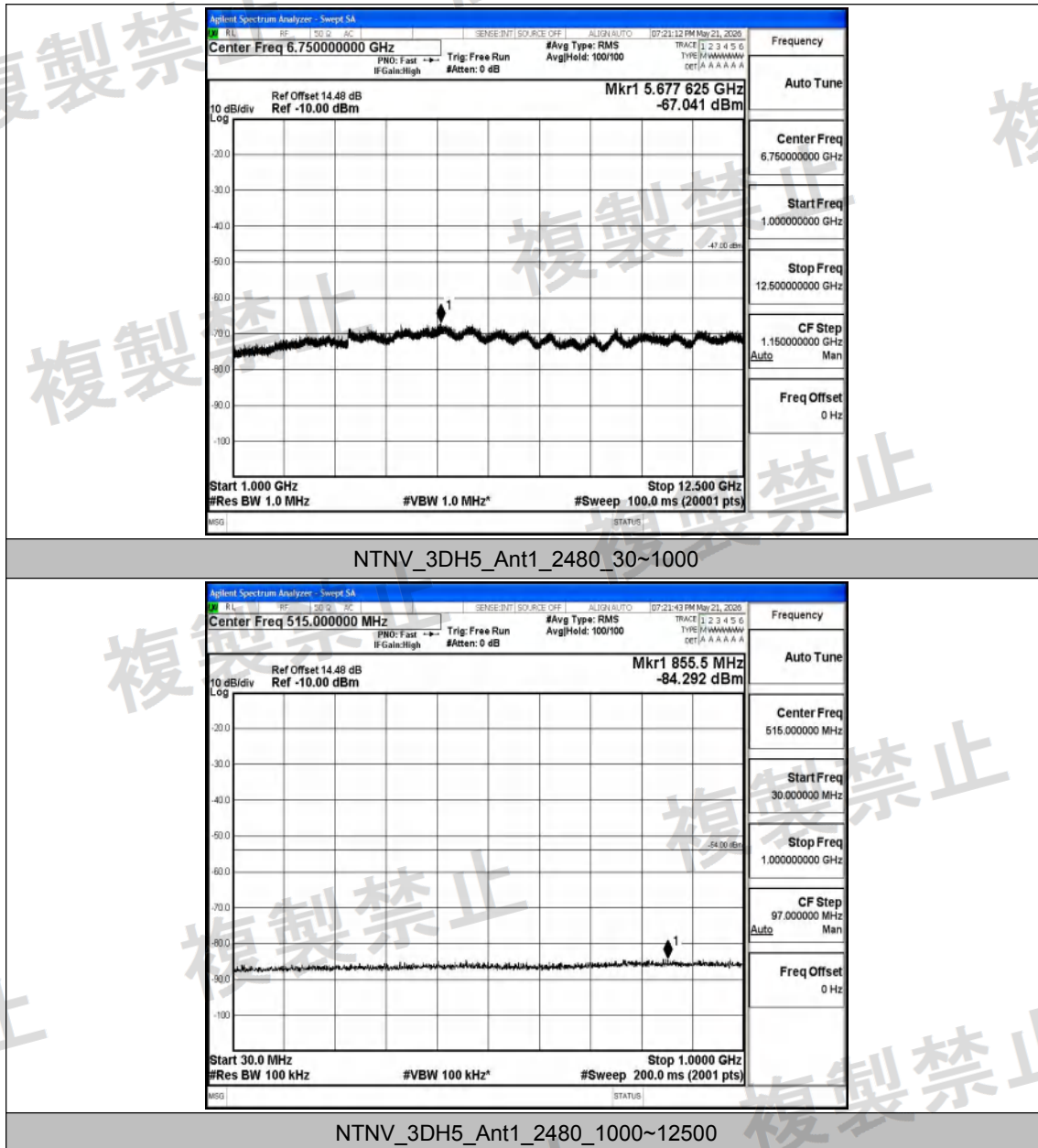


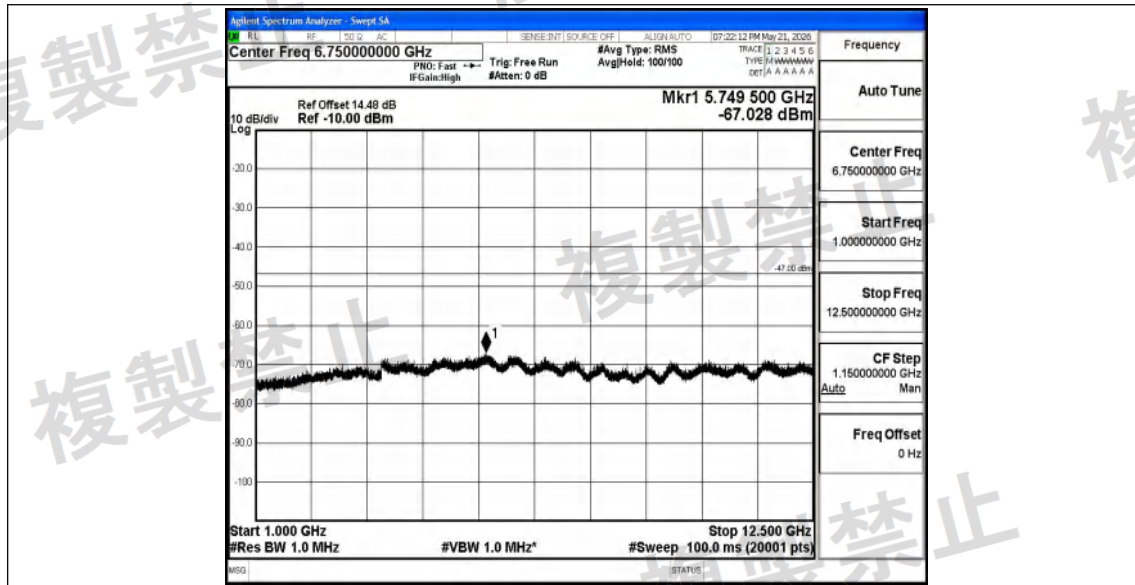












A.7 Dwell Time

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH5	Ant1	Hop	2.91	130	0.378	≤0.4	PASS
	2DH5	Ant1	Hop	2.90	90	0.261	≤0.4	PASS
	3DH5	Ant1	Hop	2.90	90	0.261	≤0.4	PASS

Test Graphs

