



Appendix B for 2.4G Test Data

Product Name: keyboard

Test Model: VM87-J

Environmental Conditions

Temperature:	22.2°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Paddi Chen



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B.1 Frequency Error

Test Result

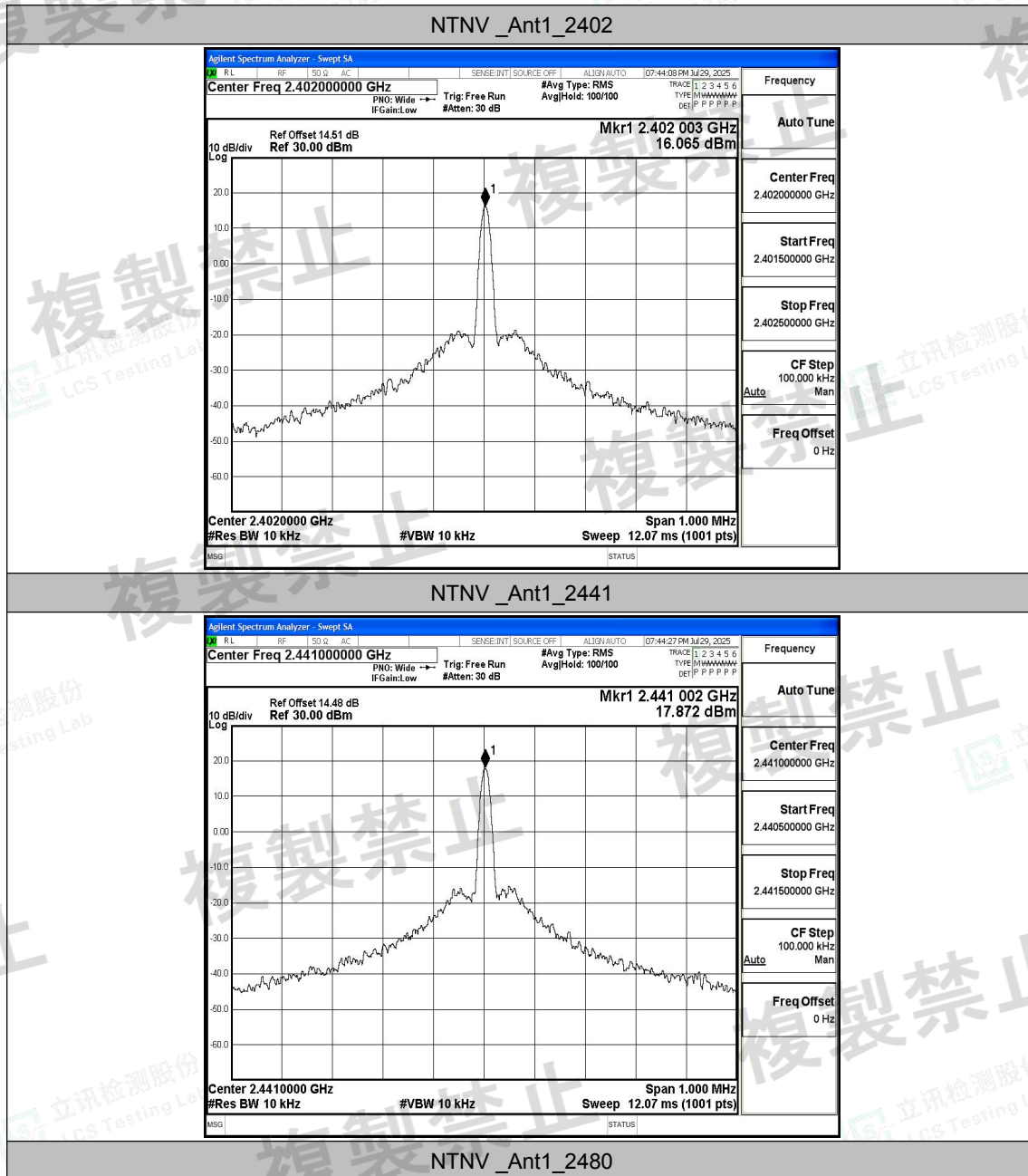
TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency Error	Ant1	2402	1.24896	±50	PASS
			2441	0.81934	±50	PASS
			2480	0.80645	±50	PASS



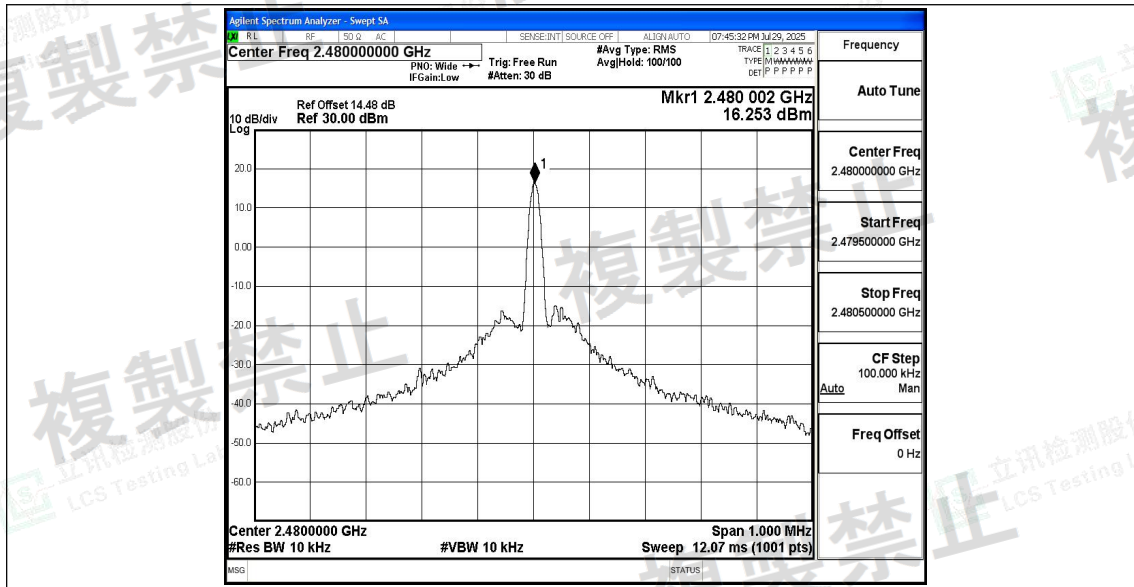
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Test Graphs



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B.2 Antenna Power & EIRP

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	2.4G SRD	Ant1	2402	4.57	2.86	≤10	PASS
			2441	4.11	2.58	≤10	PASS
			2480	4.80	3.02	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	2.4G SRD	Ant1	2402	2.86	3.0	-4.67	+20	PASS
			2441	2.58	3.0	-14.00	+20	PASS
			2480	3.02	3.0	0.67	+20	PASS

EIRP							
TestMode	Antenna	Frequency [MHz]	Measured Power [dBm]	Antenna gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
2.4G SRD	Ant1	2402	4.57	2.59	7.16	≤12.14	PASS
		2441	4.11	2.59	6.70	≤12.14	PASS
		2480	4.80	2.59	7.39	≤12.14	PASS





B.3 Occupied Bandwidth

Test Result

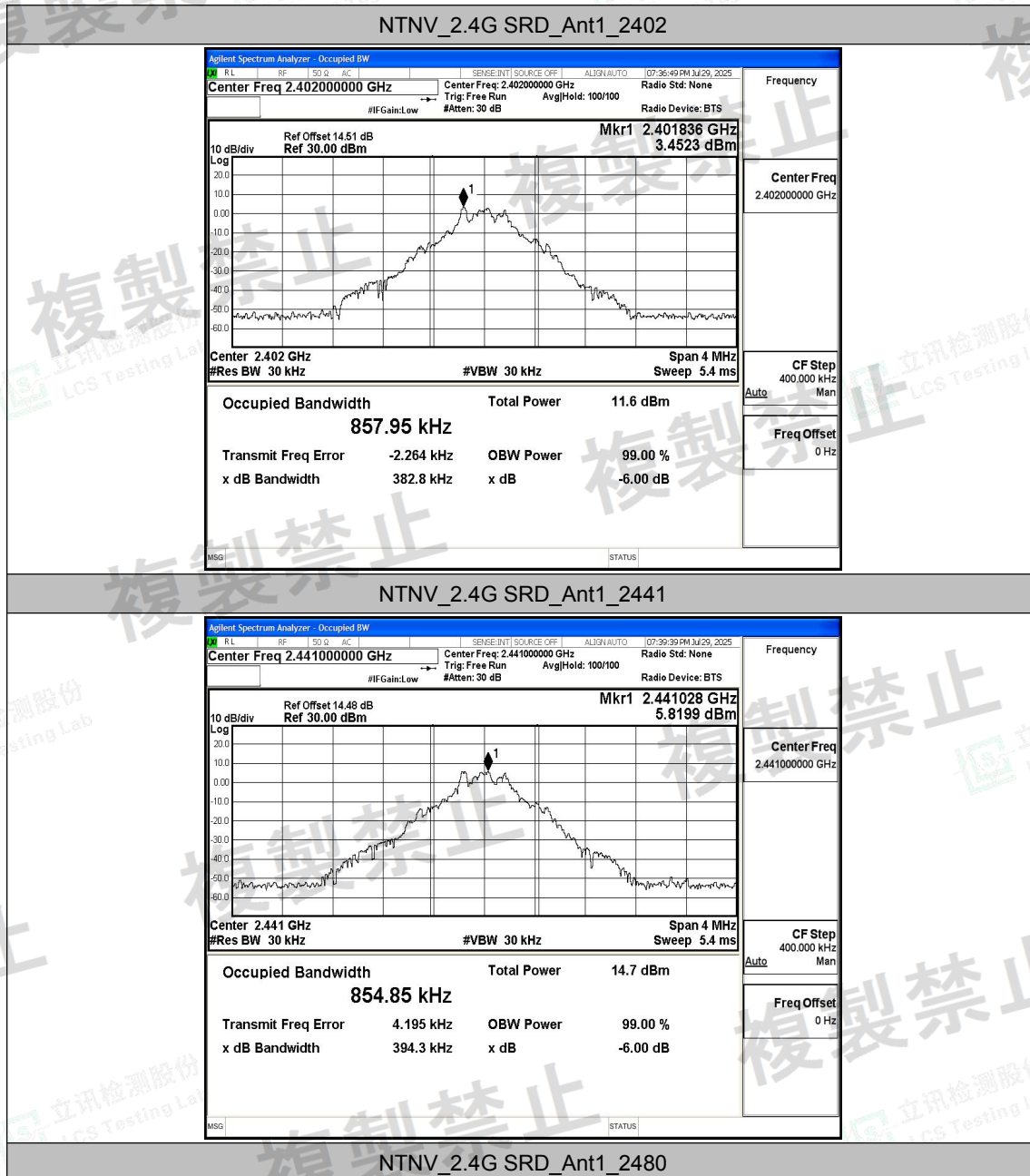
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	2.4G SRD	Ant1	2402	0.858	≤26	PASS
			2441	0.855	≤26	PASS
			2480	0.866	≤26	PASS



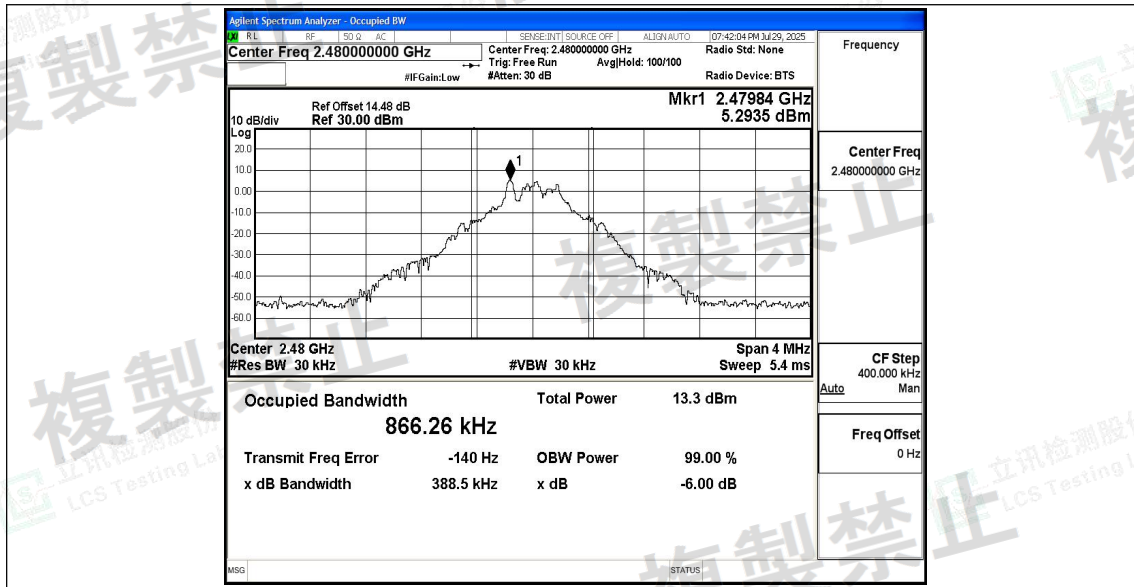
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B.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	2.4G SRD	Ant1	2402	0.830	---	PASS
			2441	0.827	---	PASS
			2480	0.819	---	PASS

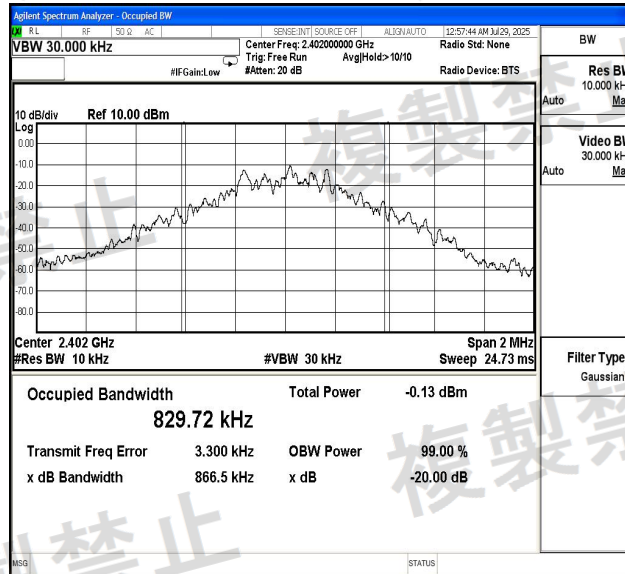


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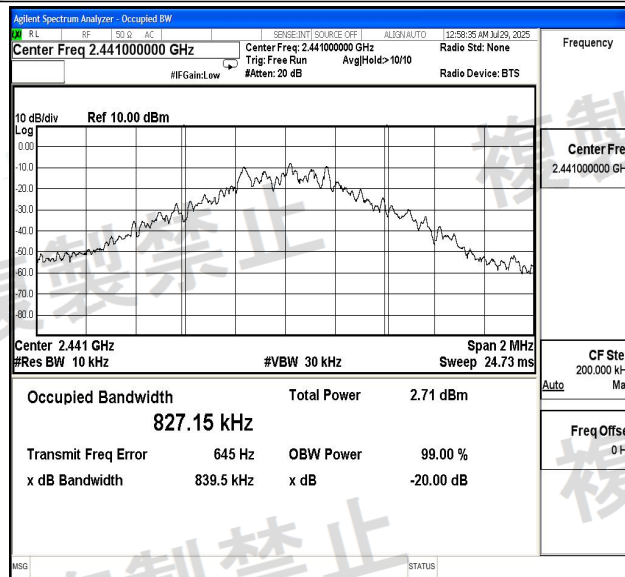


Test Graphs

NTNV_2.4G SRD_Ant1_2402



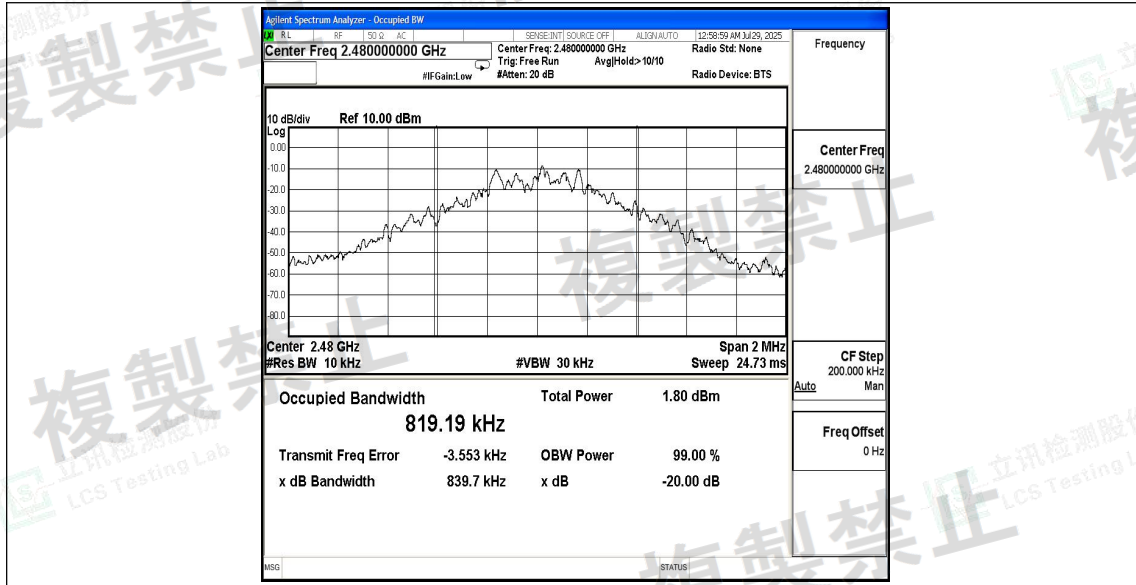
NTNV_2.4G SRD_Ant1_2441



NTNV_2.4G SRD_Ant1_2480



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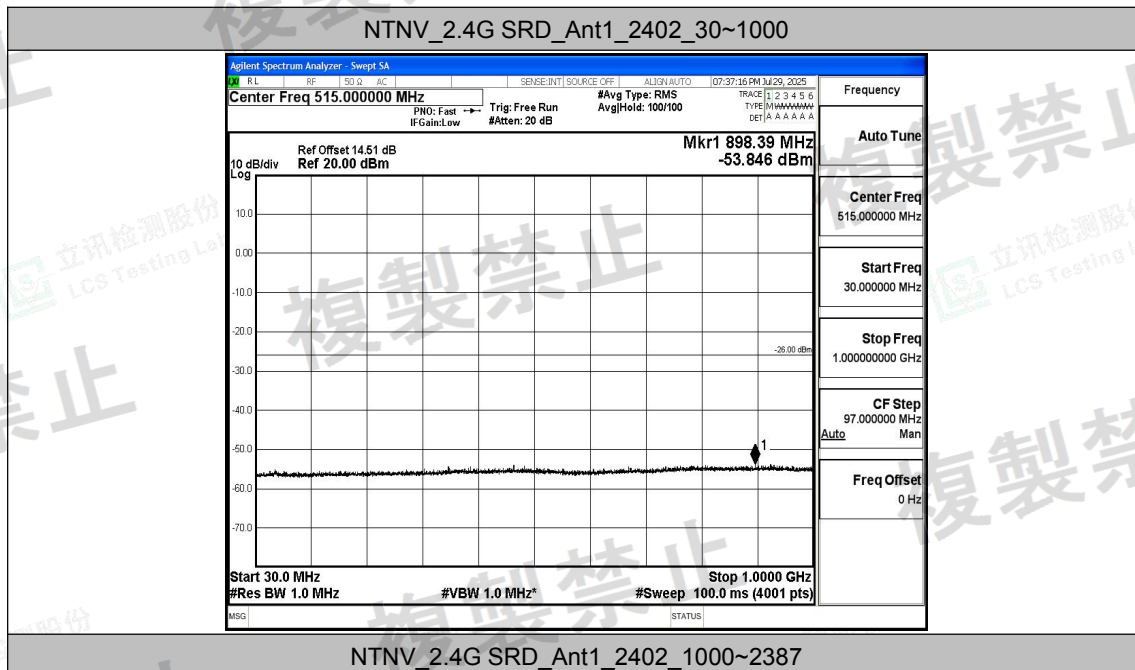


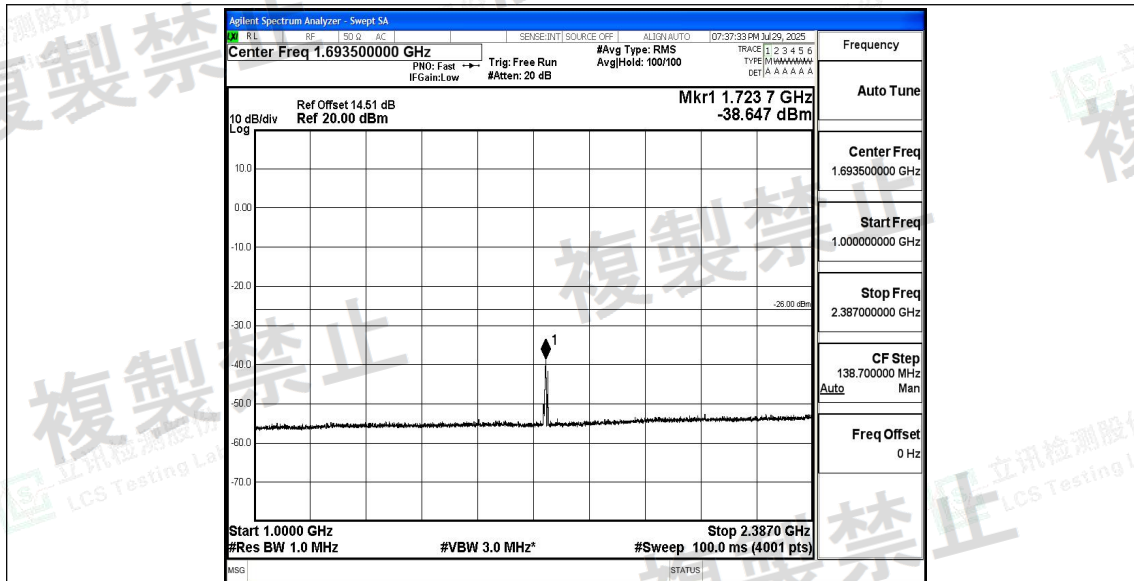
B.5 Spurious Emission of TX

Test Result

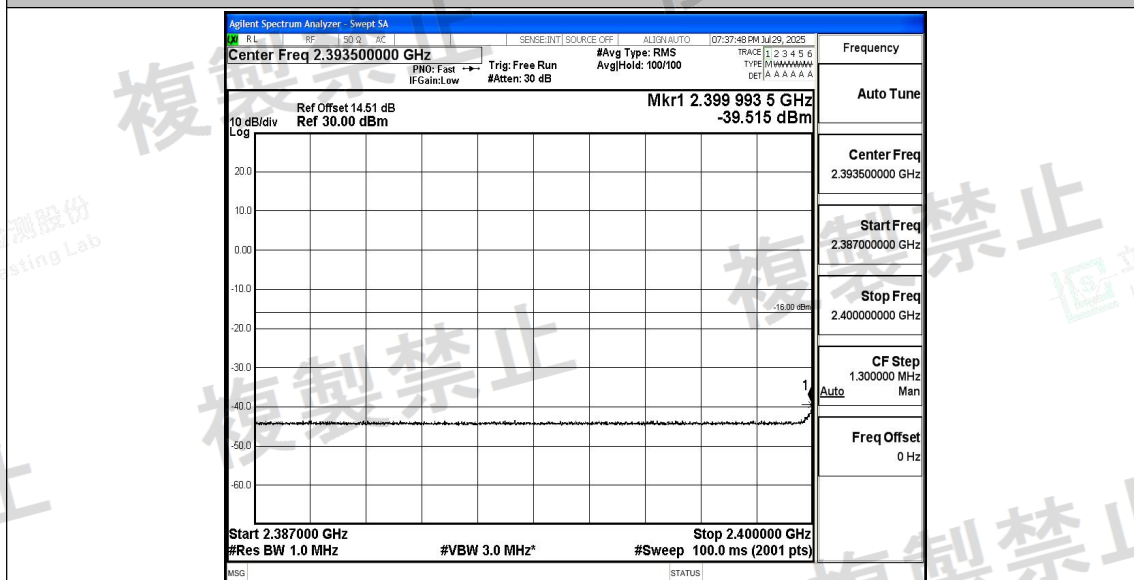
TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	2.4G SRD	Ant1	2402	30~1000	-53.85	≤-26	0.00412	≤2.5	PASS
				1000~2387	-38.65	≤-26	0.13646	≤2.5	PASS
				2387~2400	-39.52	≤-16	0.11169	≤25	PASS
				2483.5~2496.5	-43.21	≤-16	0.04775	≤25	PASS
				2496.5~13000	-45.30	≤-26	0.02951	≤2.5	PASS
			2441	30~1000	-53.84	≤-26	0.00413	≤2.5	PASS
				1000~2387	-41.30	≤-26	0.07413	≤2.5	PASS
				2387~2400	-43.41	≤-16	0.04560	≤25	PASS
				2483.5~2496.5	-43.29	≤-16	0.04688	≤25	PASS
				2496.5~13000	-45.53	≤-26	0.02799	≤2.5	PASS
			2480	30~1000	-53.75	≤-26	0.00422	≤2.5	PASS
				1000~2387	-45.58	≤-26	0.02767	≤2.5	PASS
				2387~2400	-43.46	≤-16	0.04508	≤25	PASS
				2483.5~2496.5	-43.33	≤-16	0.04645	≤25	PASS
				2496.5~13000	-45.53	≤-26	0.02799	≤2.5	PASS

Test Graphs





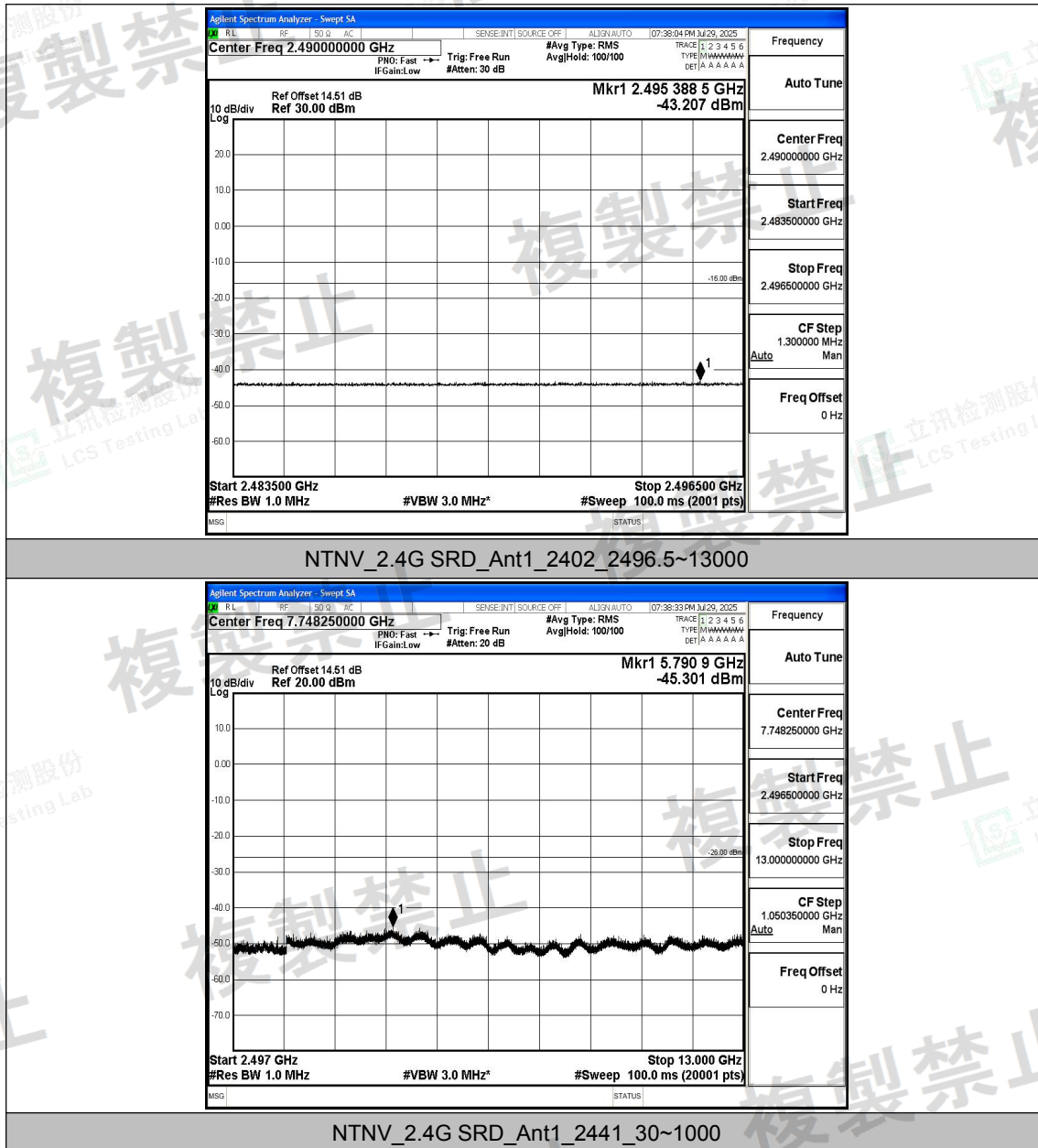
NTNV_2.4G SRD_Ant1_2402_2387~2400



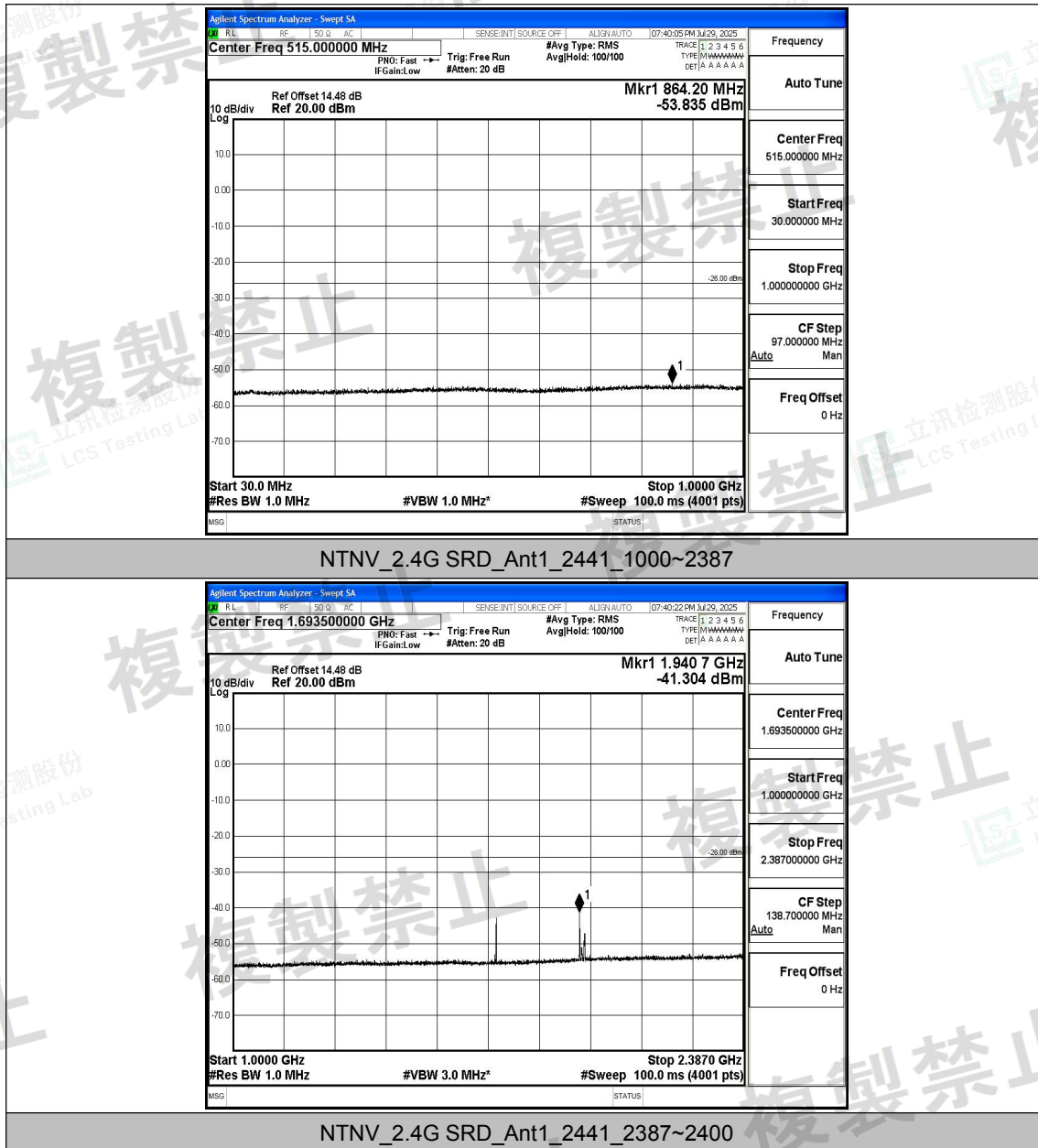
NTNV_2.4G SRD_Ant1_2402_2483.5~2496.5



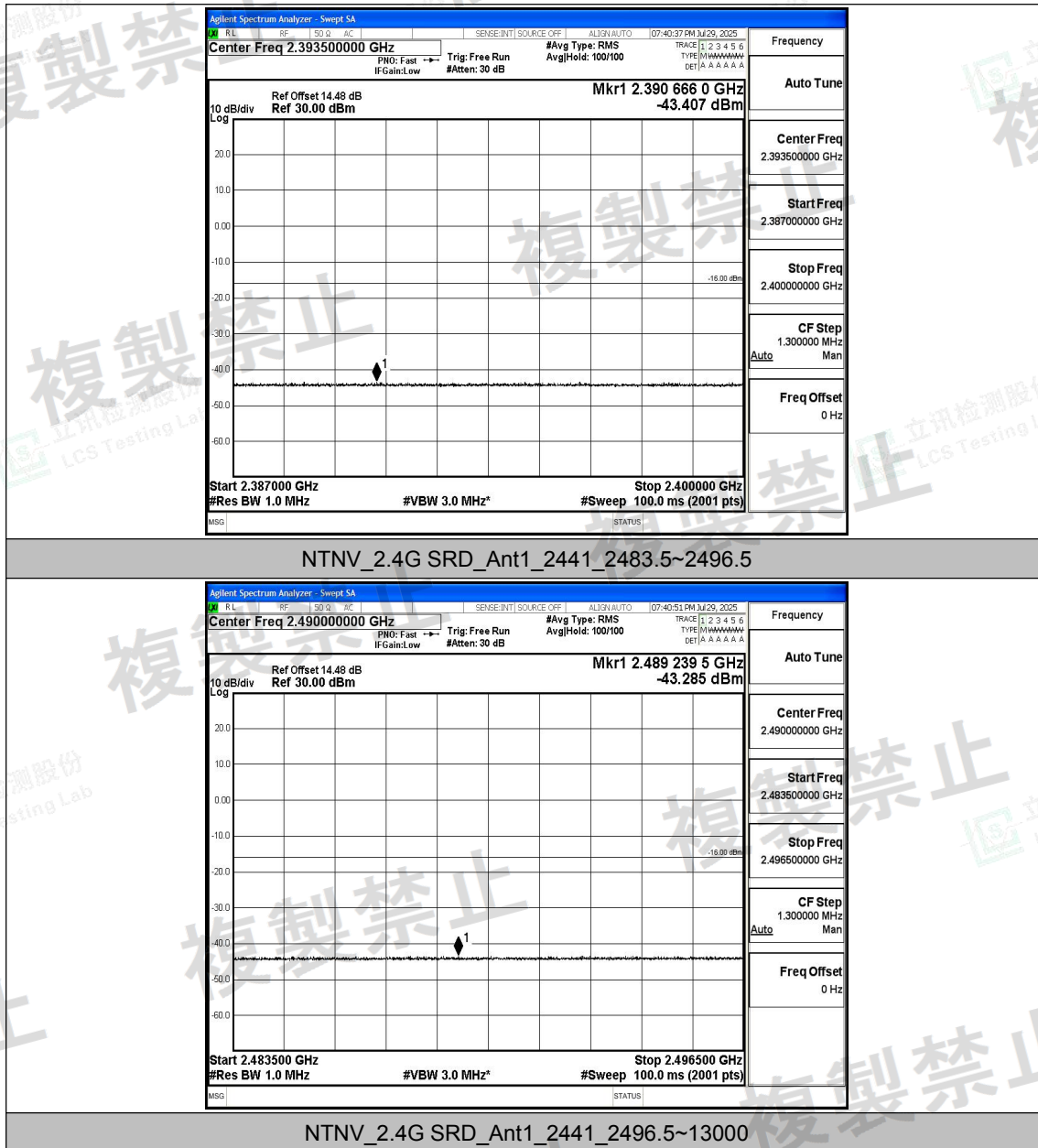
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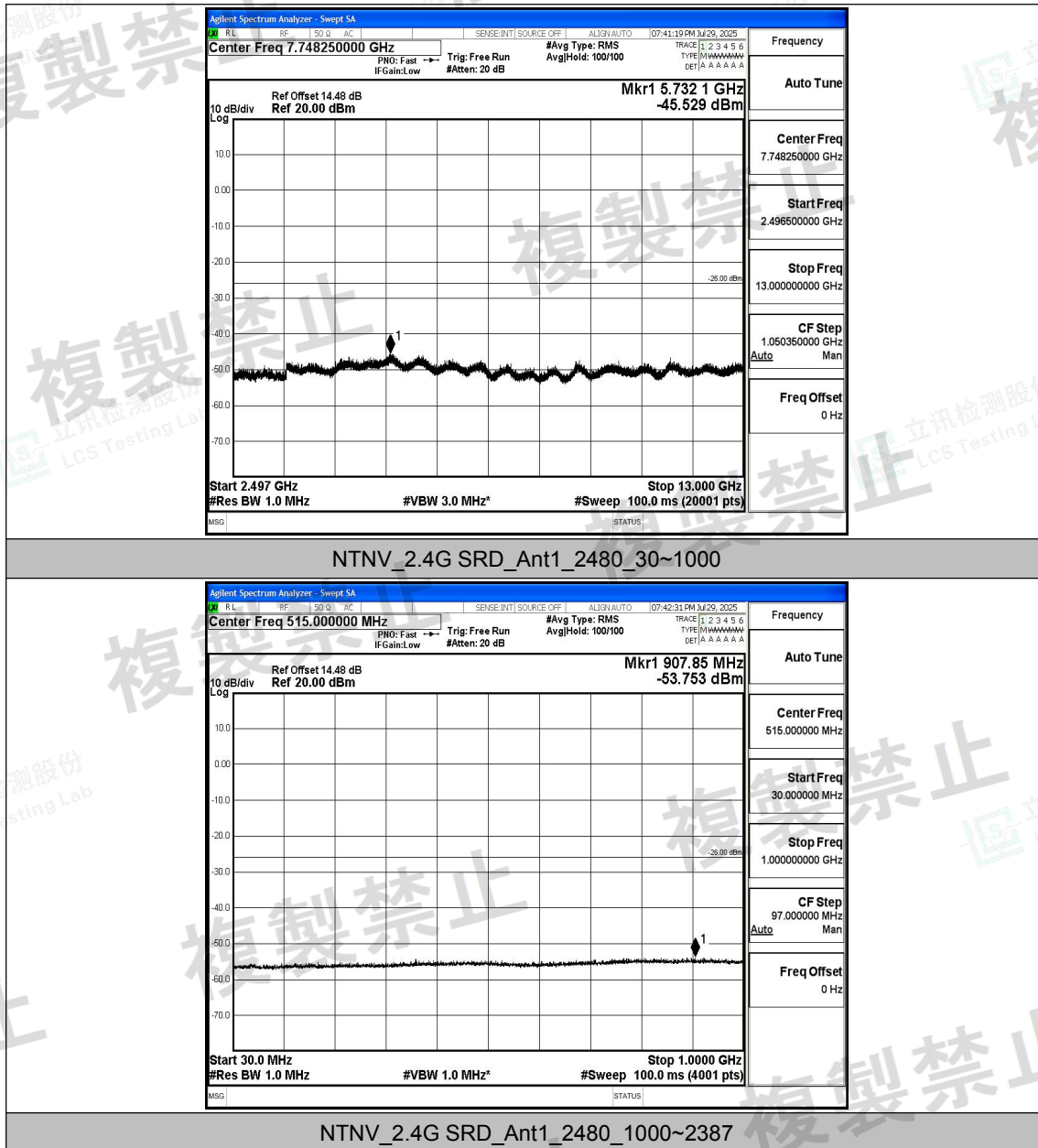
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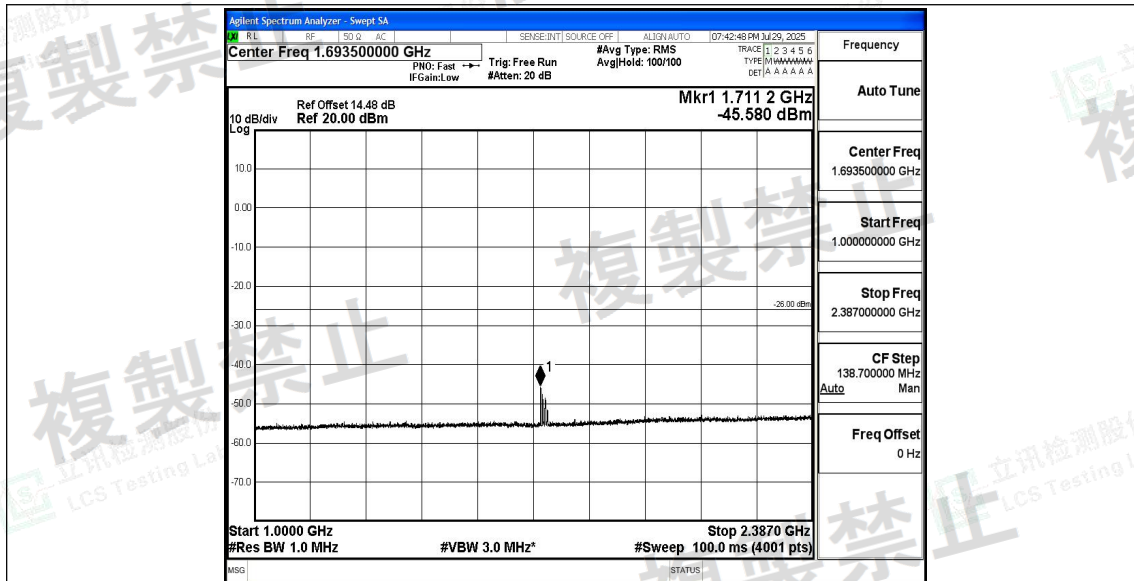
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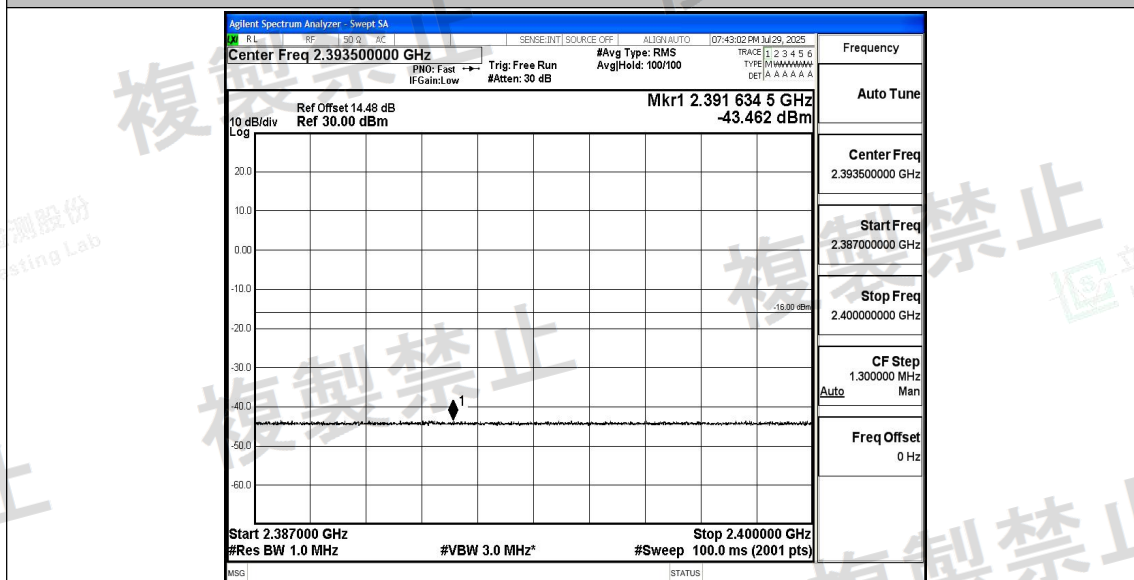
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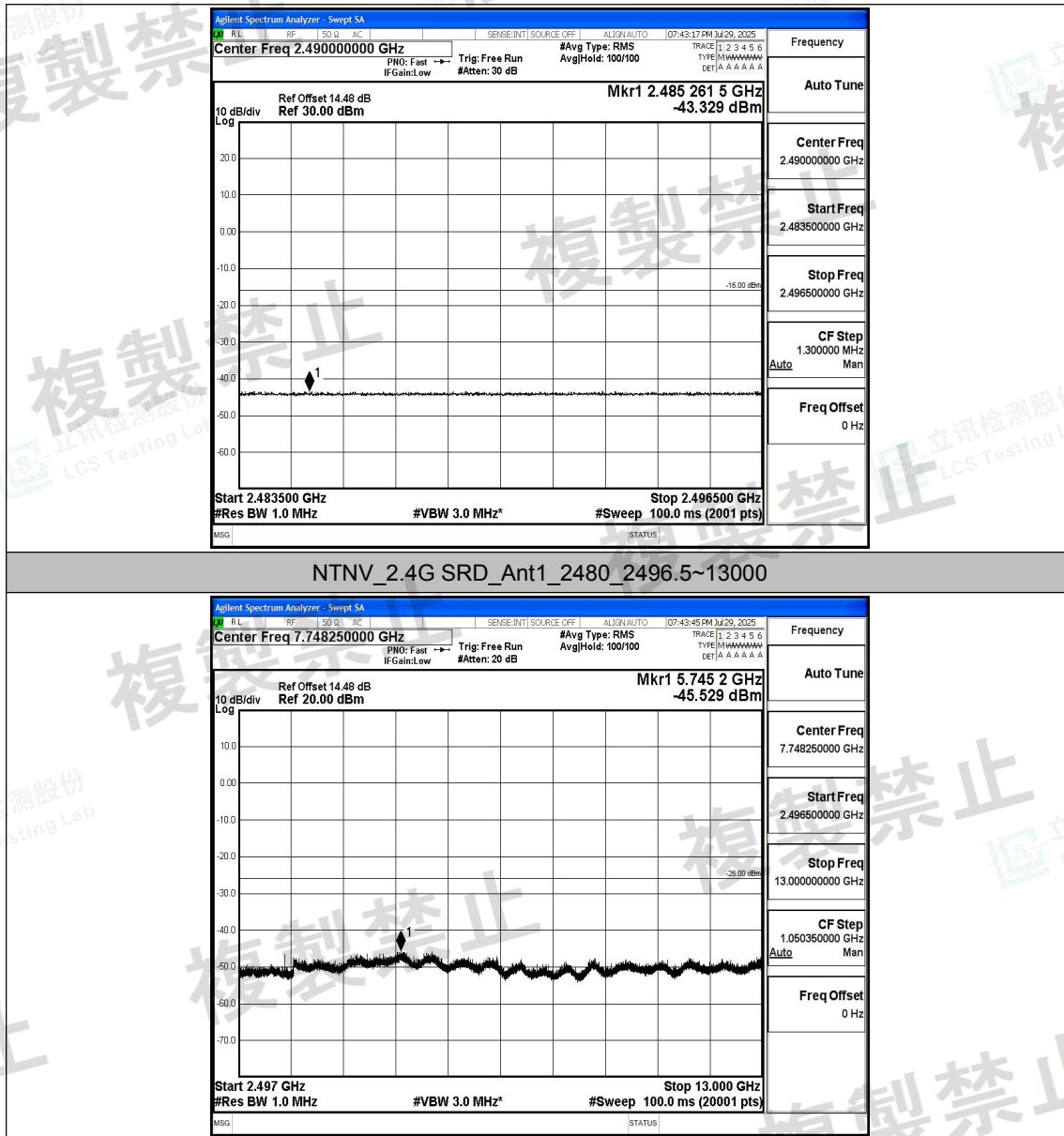
NTNV_2.4G SRD_Ant1_2480_2387~2400



NTNV_2.4G SRD_Ant1_2480_2483.5~2496.5



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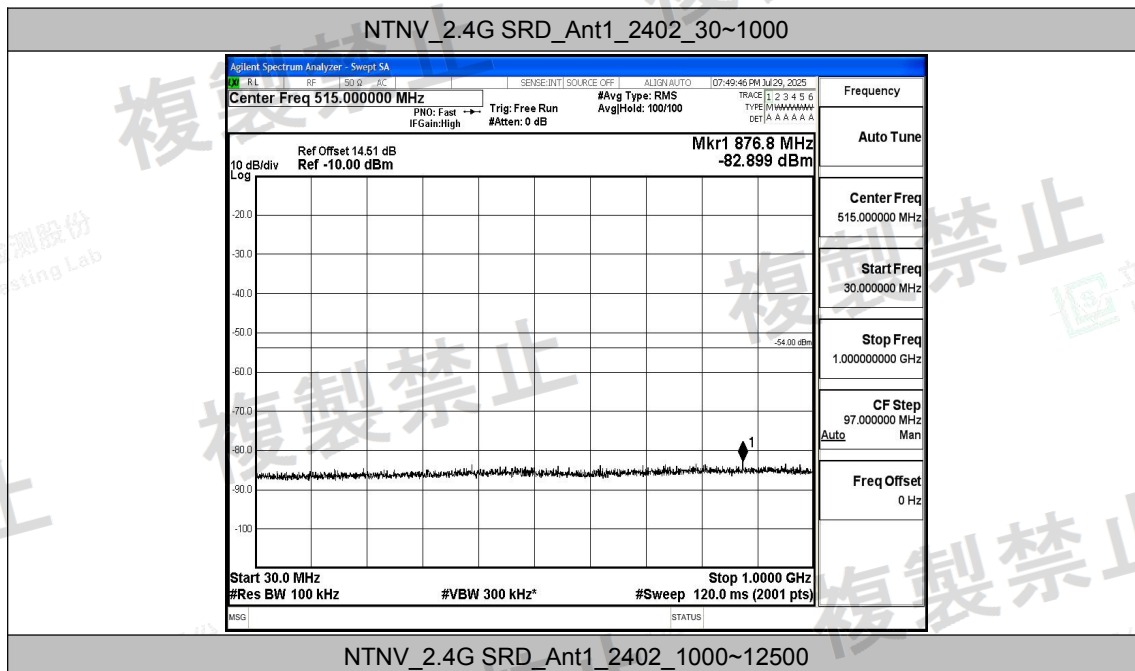


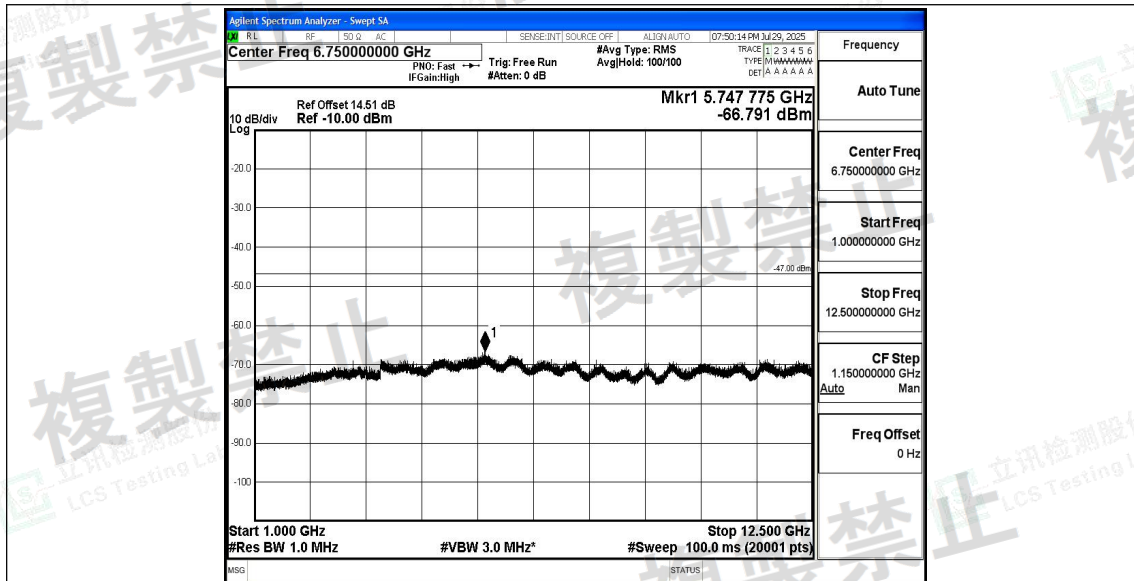
B.6 Spurious Emission of RX

Test Result

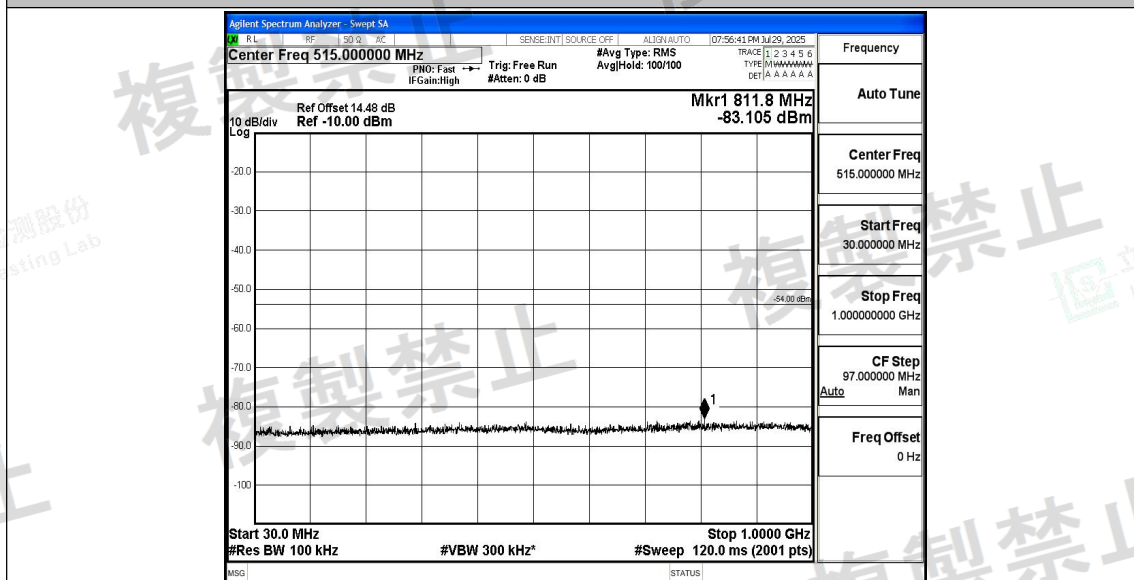
TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	2.4G SRD	Ant1	2402	30~1000	-82.9	≤-54	0.00513	≤4	PASS
				1000~12500	-66.79	≤-47	0.20941	≤20	PASS
			2441	30~1000	-83.11	≤-54	0.00489	≤4	PASS
				1000~12500	-66.85	≤-47	0.20654	≤20	PASS
			2480	30~1000	-83.4	≤-54	0.00457	≤4	PASS
				1000~12500	-66.18	≤-47	0.24099	≤20	PASS

Test Graphs





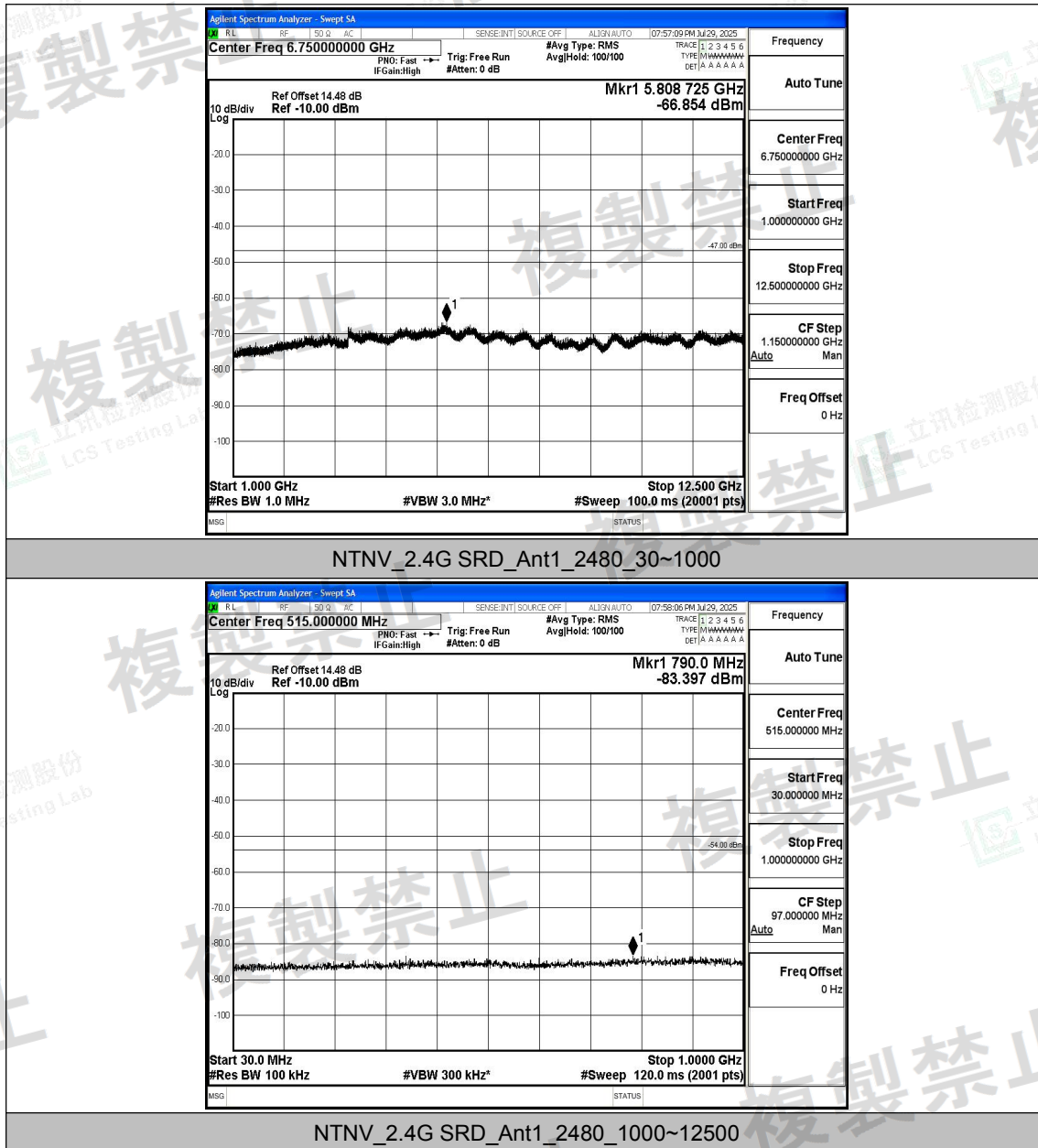
NTNV_2.4G SRD_Ant1_2441_30~1000



NTNV_2.4G SRD_Ant1_2441_1000~12500



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