

Appendix A for BT LE Test Data

Product Name: Smart Bath Mat

Test Model: SBM26W01XJ

Environmental Conditions

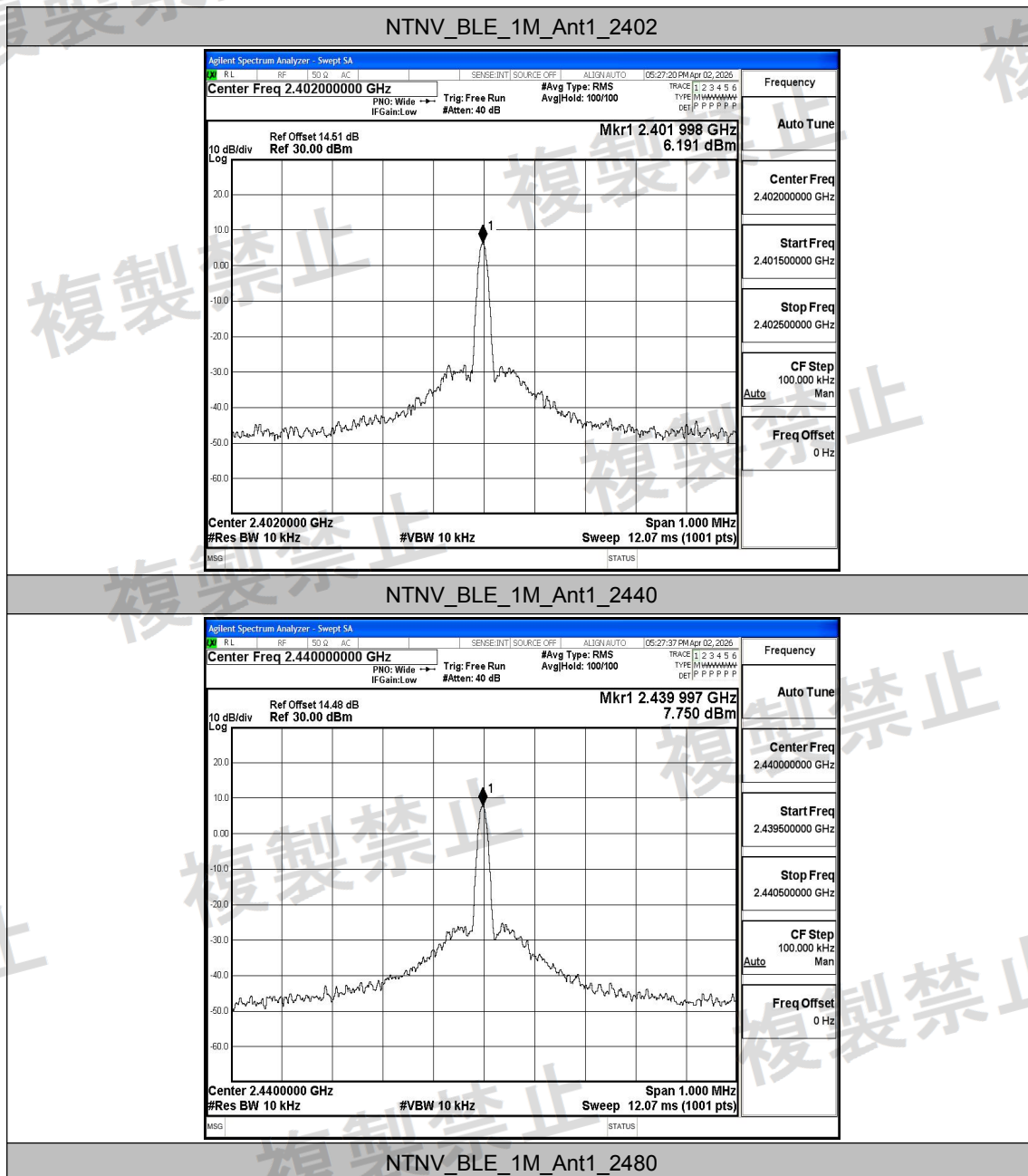
Temperature:	23.1° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

A.1 Frequency Error

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency Error	Ant1	2402	-0.83264	±50	PASS
			2440	-1.22951	±50	PASS
			2480	-1.20968	±50	PASS

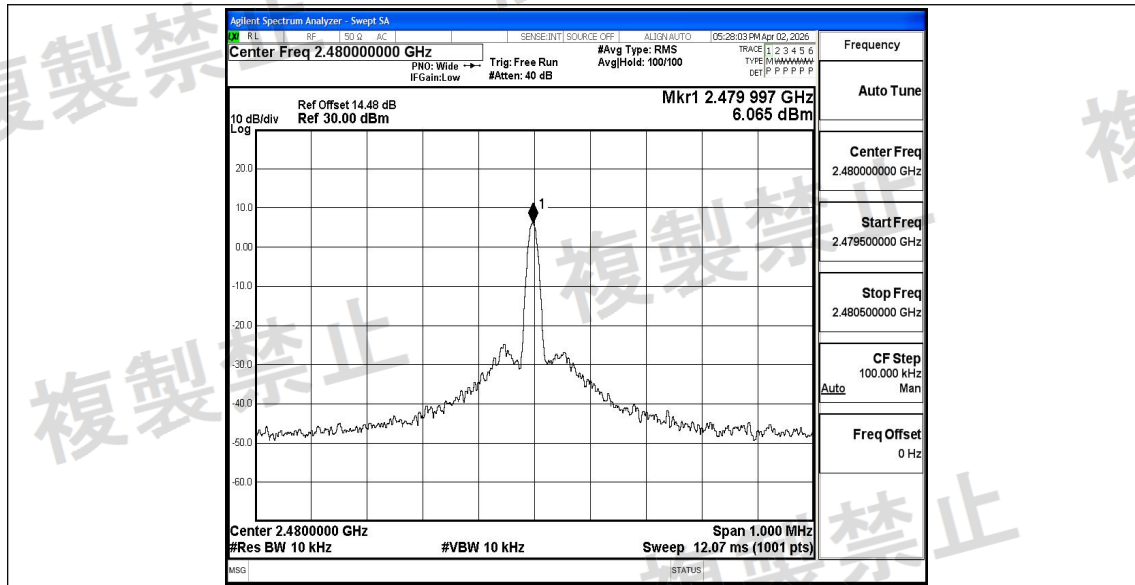
Test Graphs



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A.2 Antenna Power & EIRP

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant	2402	6.46	4.43	≤10	PASS
			2440	5.46	3.52	≤10	PASS
			2480	5.62	3.65	≤10	PASS
	BLE_2M	Ant	2402	6.01	3.99	≤10	PASS
			2440	6.74	4.72	≤10	PASS
			2480	6.72	4.70	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power [mW]	Rated Power [mW]	Result [%]	Limit [%]	Verdict
NTNV	BLE_1M	Ant	2402	4.43	5.0	-11.40	+20	PASS
			2440	3.52	5.0	-29.60	+20	PASS
			2480	3.65	5.0	-27.00	+20	PASS
	BLE_2M	Ant	2402	3.99	5.0	-20.20	+20	PASS
			2440	4.72	5.0	-5.60	+20	PASS
			2480	4.70	5.0	-6.00	+20	PASS

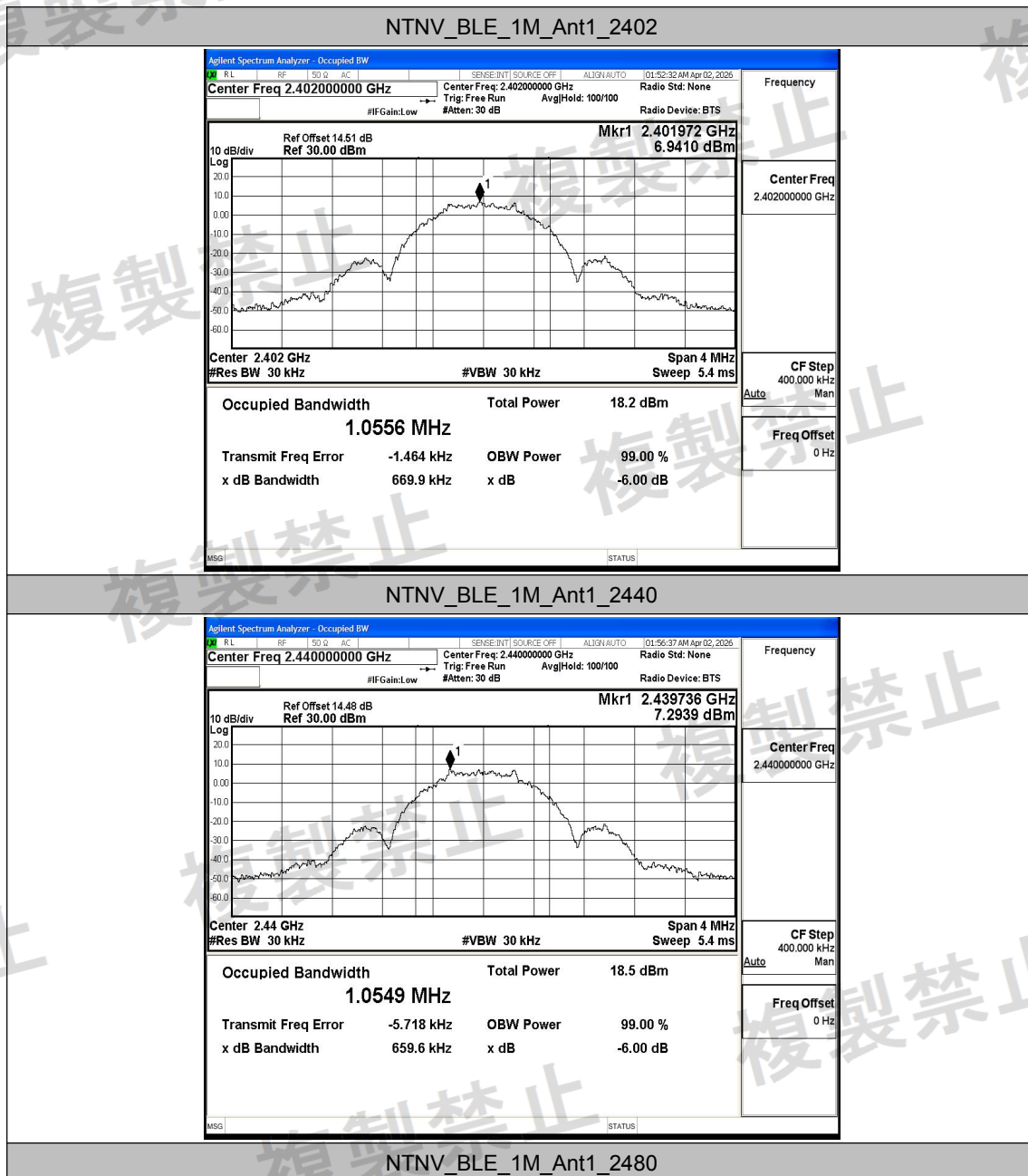
EIRP								
TestCondition	TestMode	Antenna	Frequency [MHz]	Measured Power (dBm)	Antenna gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
NTNV	BLE_1M	Ant	2402	6.46	3.34	9.80	≤12.14	PASS
			2440	5.46	3.34	8.80	≤12.14	PASS
			2480	5.62	3.34	8.96	≤12.14	PASS
	BLE_2M	Ant	2402	6.01	3.34	9.35	≤12.14	PASS
			2440	6.74	3.34	10.08	≤12.14	PASS
			2480	6.72	3.34	10.06	≤12.14	PASS

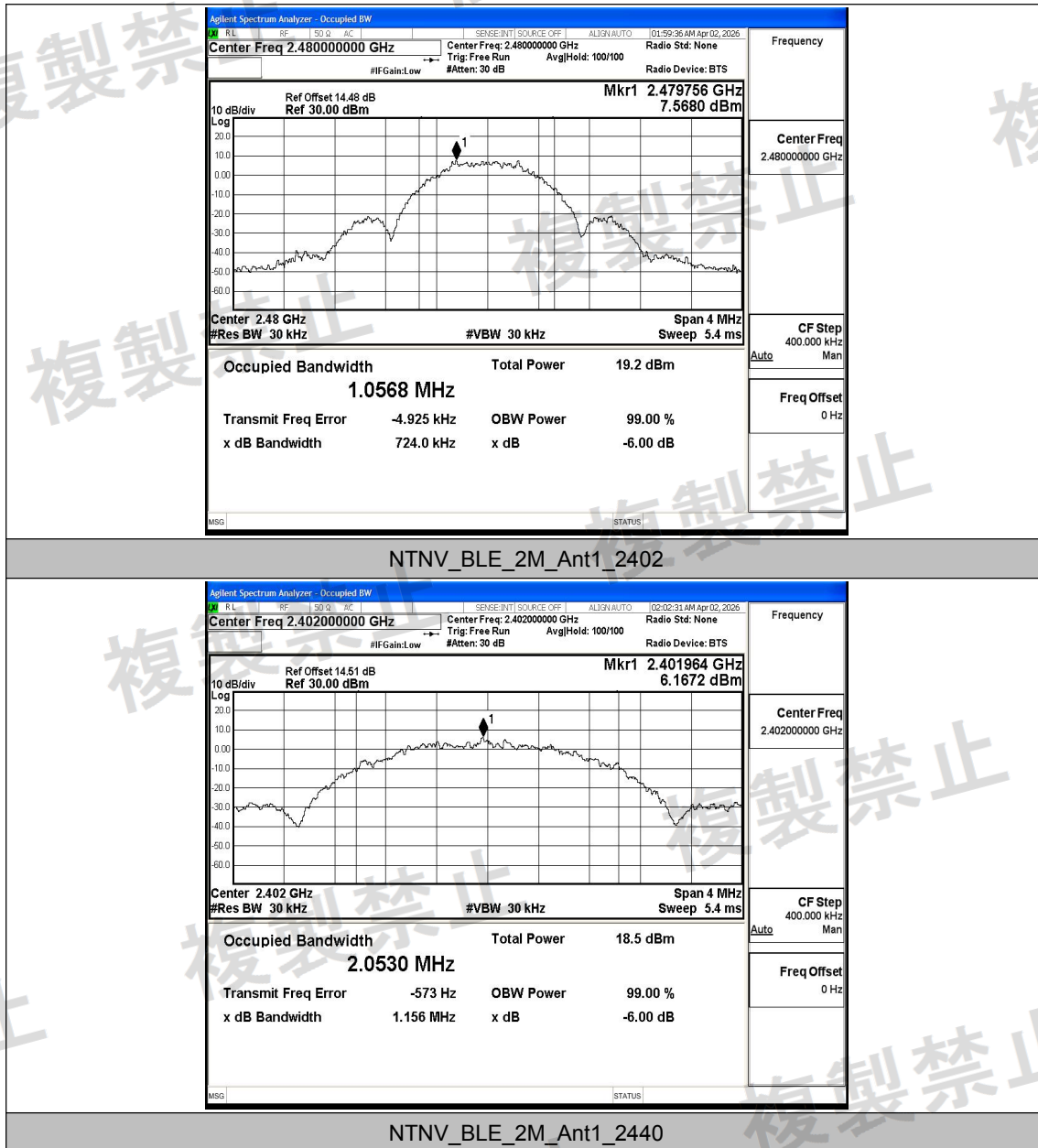
A.3 Occupied Bandwidth

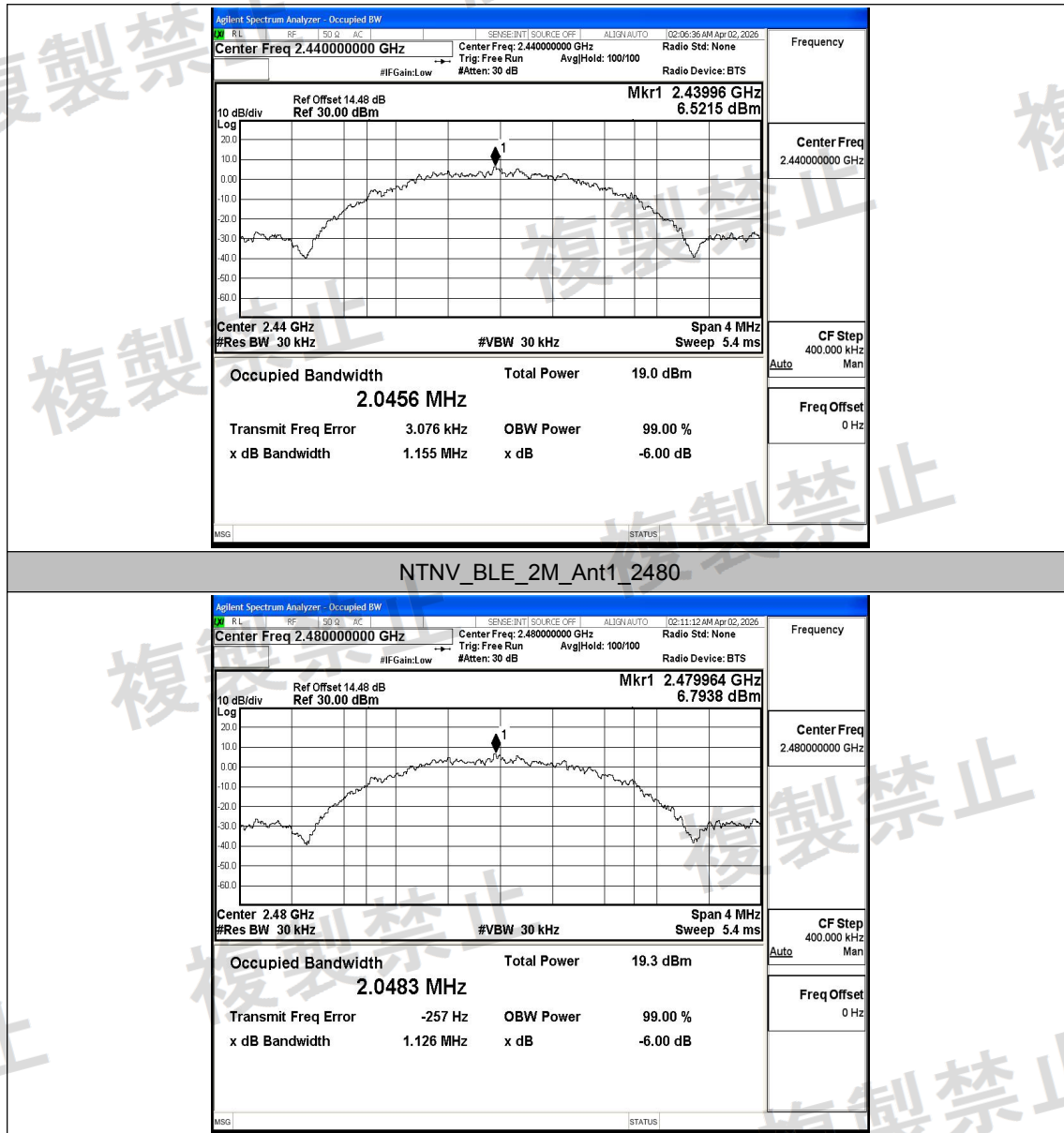
Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.056	≤26	PASS
			2440	1.055	≤26	PASS
			2480	1.057	≤26	PASS
	BLE_2M	Ant1	2402	2.053	≤26	PASS
			2440	2.046	≤26	PASS
			2480	2.048	≤26	PASS

Test Graphs





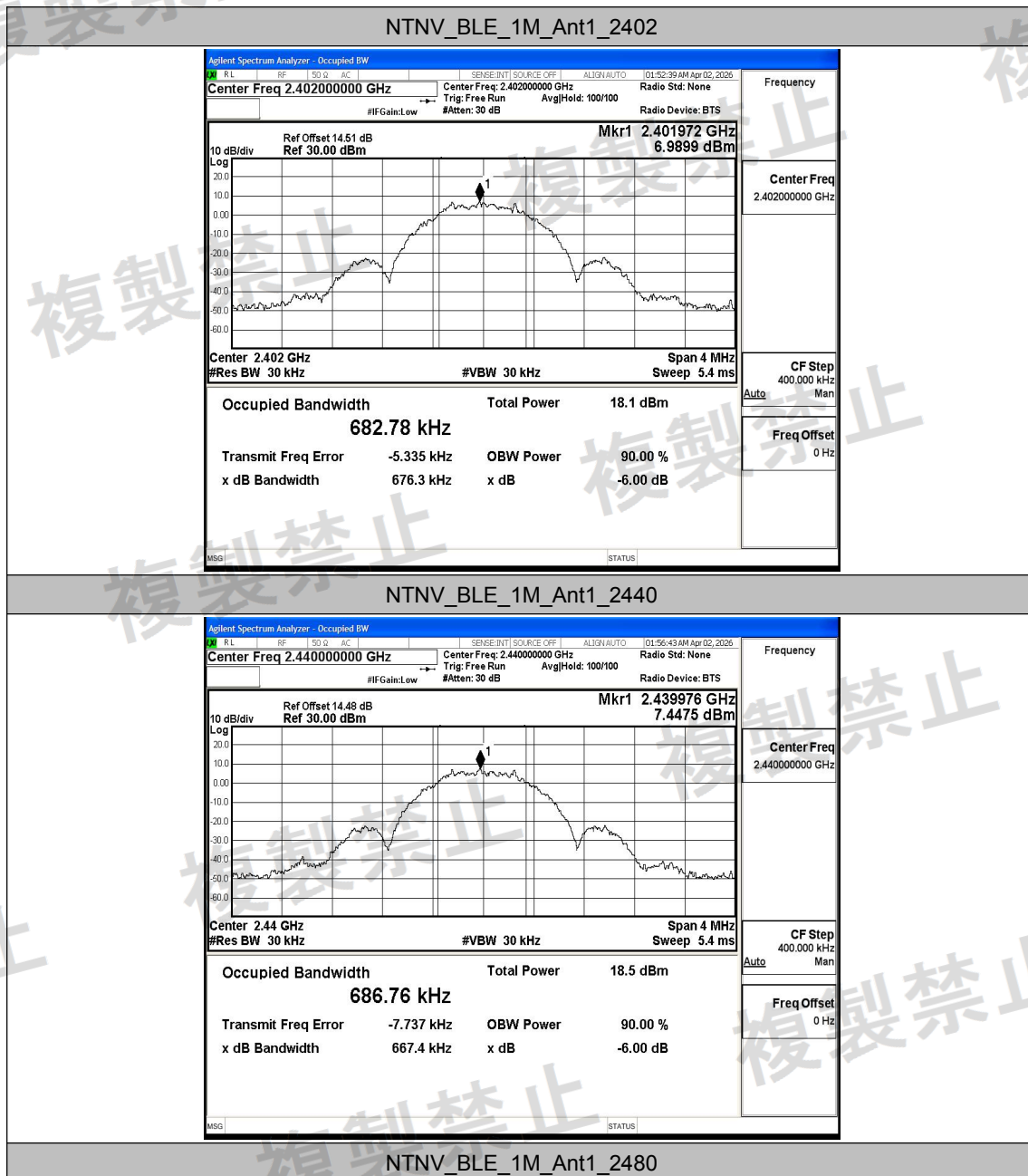


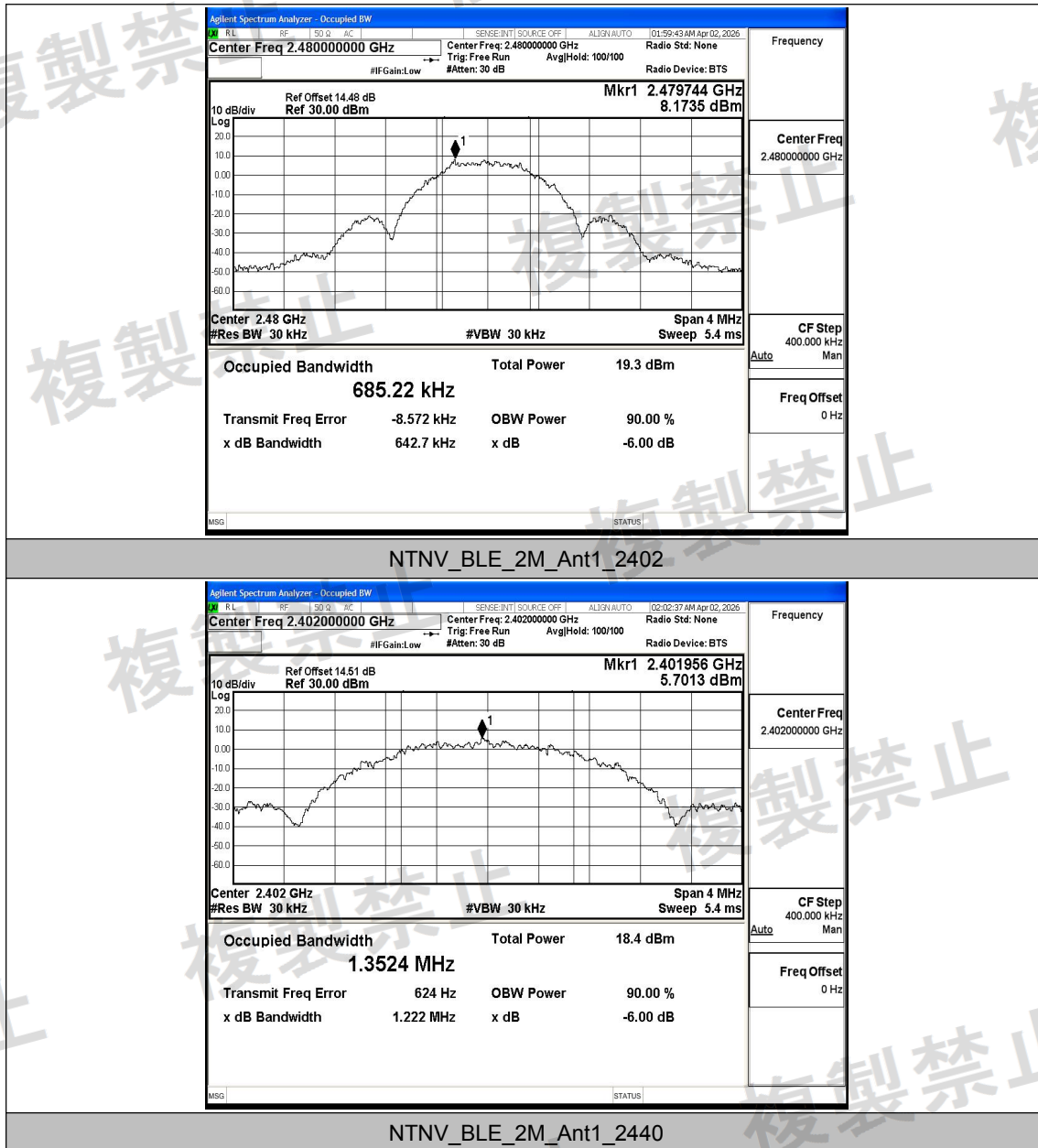
A.4 Spread Bandwidth

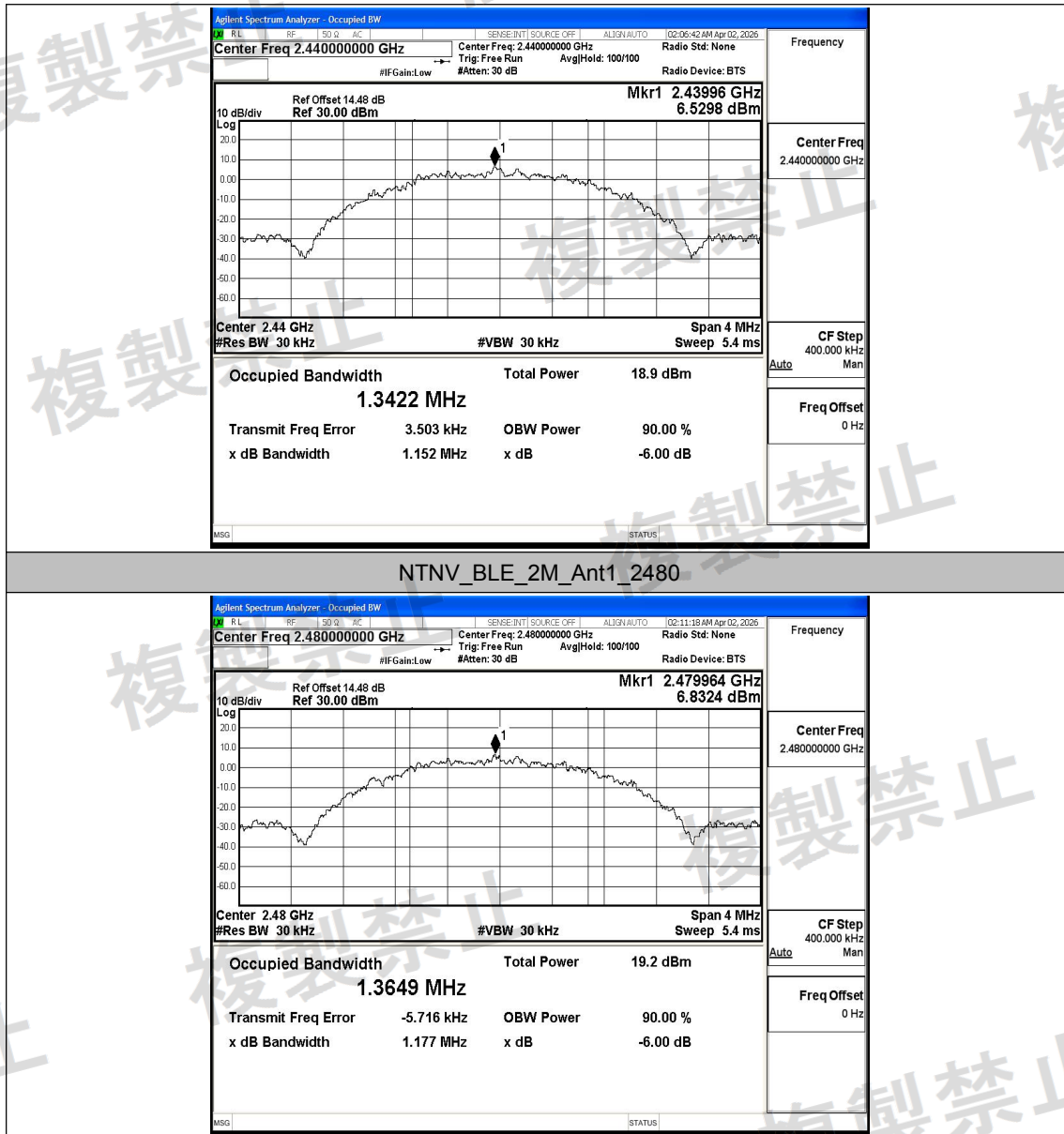
Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.683	≥0.5	PASS
			2440	0.687	≥0.5	PASS
			2480	0.685	≥0.5	PASS
	BLE_2M	Ant1	2402	1.352	≥0.5	PASS
			2440	1.342	≥0.5	PASS
			2480	1.365	≥0.5	PASS

Test Graphs





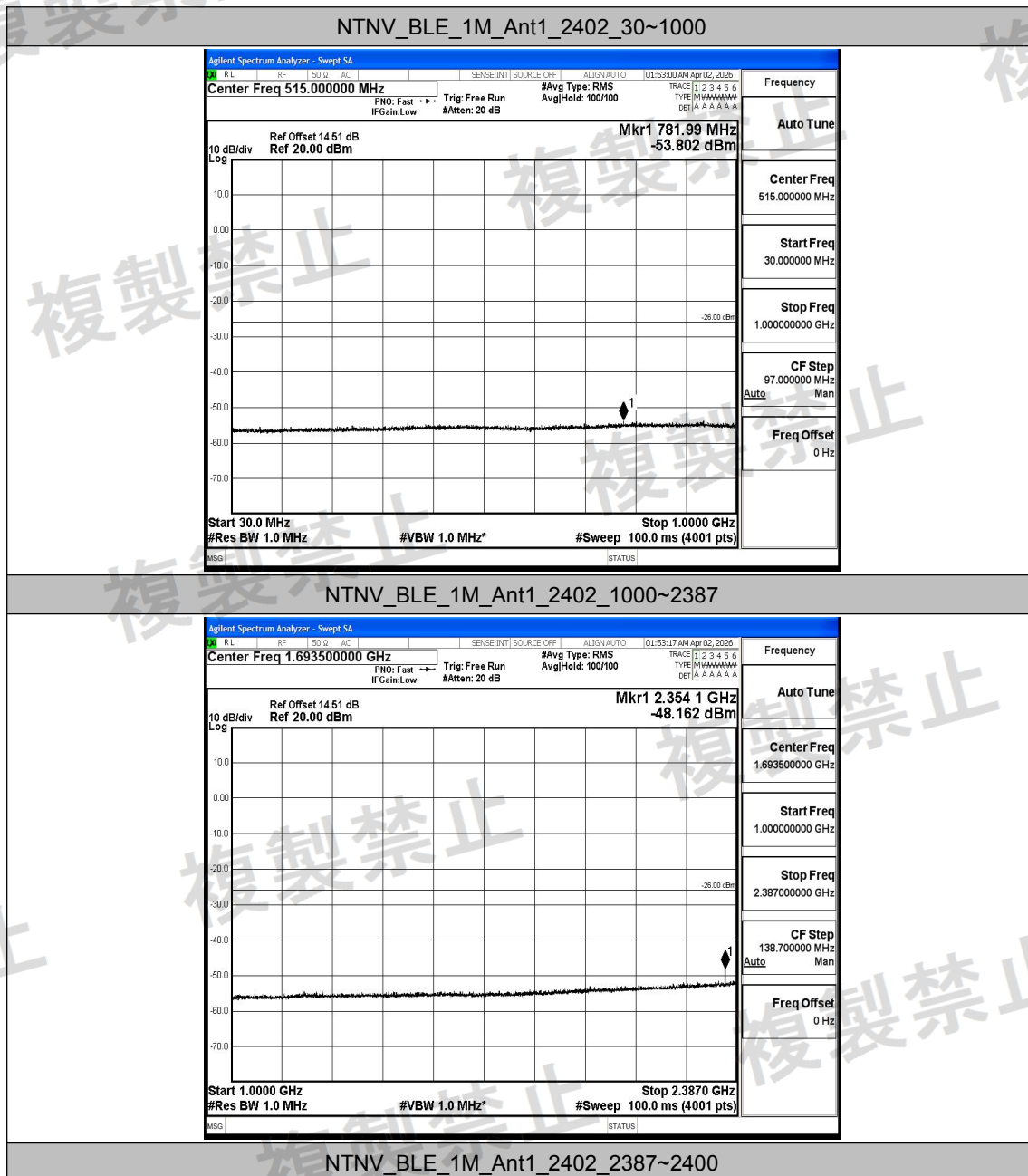


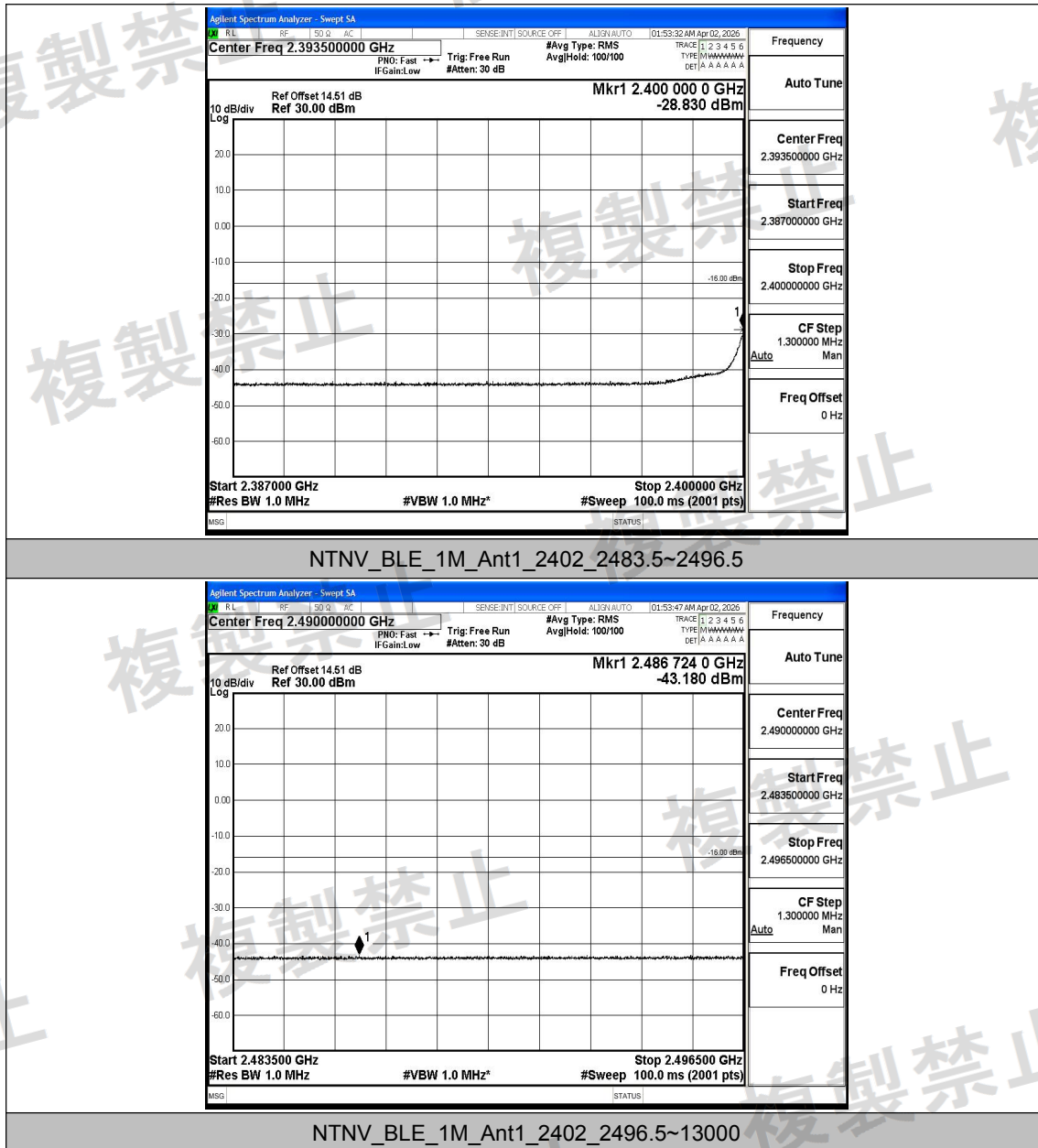
A.5 Spurious Emission of TX

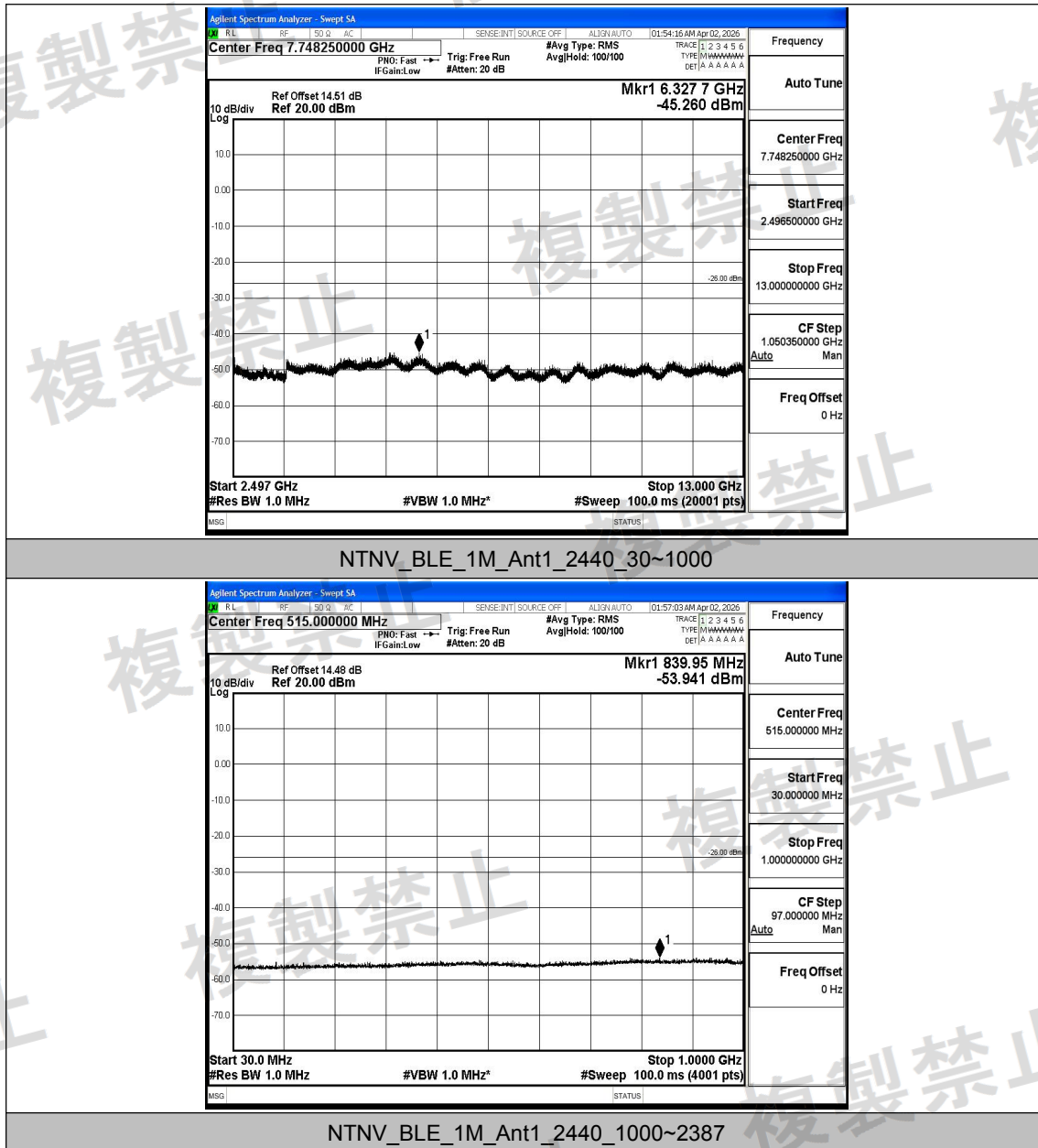
Test Result

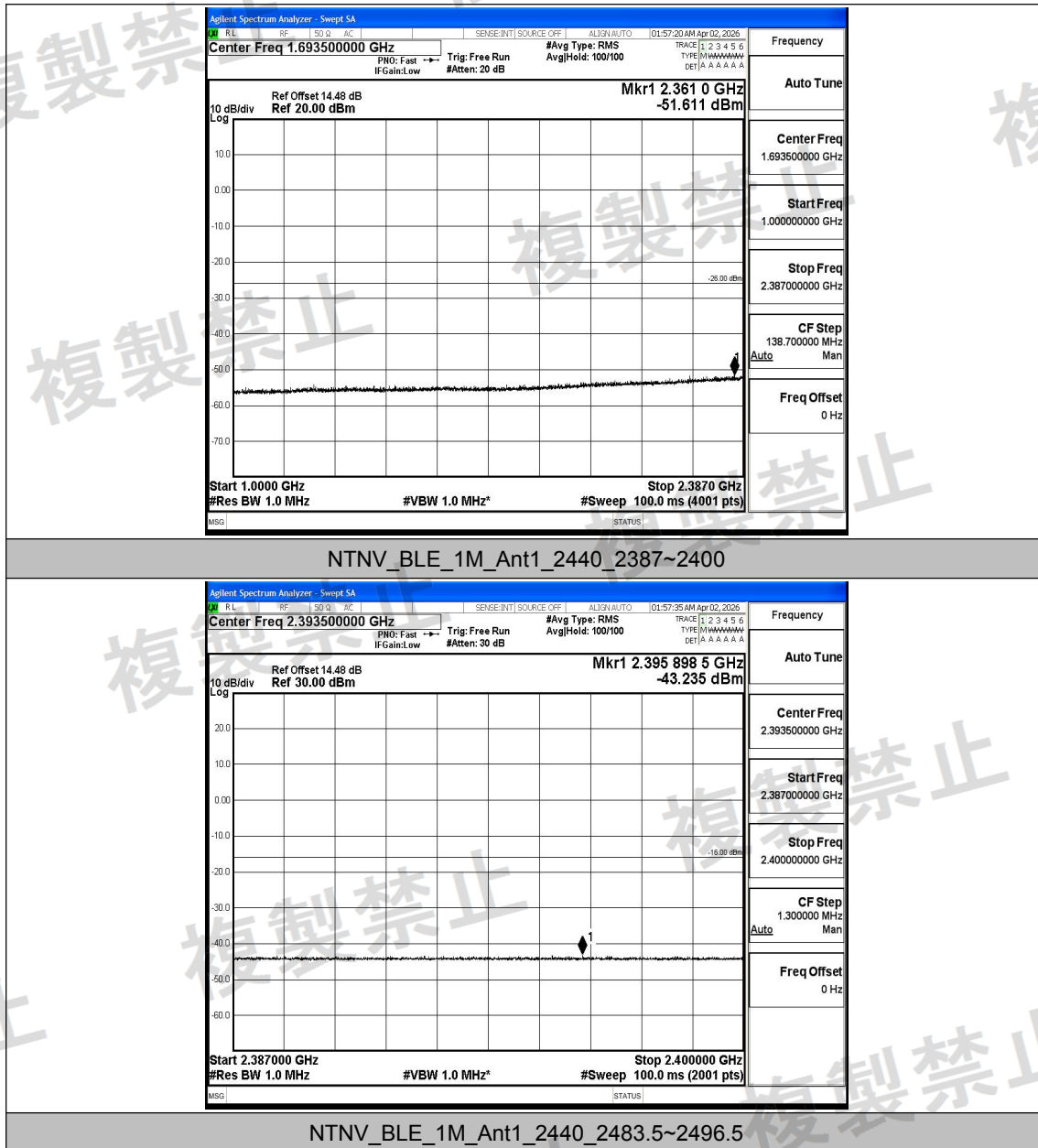
TestCondition	TestMode	Antenna	Channel	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-53.80	≤-26	0.00417	≤2.5	PASS
				1000~2387	-48.16	≤-26	0.01528	≤2.5	PASS
				2387~2400	-28.83	≤-16	1.30918	≤25	PASS
				2483.5~2496.5	-43.18	≤-16	0.04808	≤25	PASS
				2496.5~13000	-45.26	≤-26	0.02979	≤2.5	PASS
			2440	30~1000	-53.94	≤-26	0.00404	≤2.5	PASS
				1000~2387	-51.61	≤-26	0.00690	≤2.5	PASS
				2387~2400	-43.24	≤-16	0.04742	≤25	PASS
				2483.5~2496.5	-43.22	≤-16	0.04764	≤25	PASS
				2496.5~13000	-45.35	≤-26	0.02917	≤2.5	PASS
			2480	30~1000	-53.81	≤-26	0.00416	≤2.5	PASS
				1000~2387	-52.15	≤-26	0.00610	≤2.5	PASS
				2387~2400	-43.45	≤-16	0.04519	≤25	PASS
				2483.5~2496.5	-42.87	≤-16	0.05164	≤25	PASS
				2496.5~13000	-45.46	≤-26	0.02844	≤2.5	PASS
	BLE_2M	Ant1	2402	30~1000	-54.04	≤-26	0.00394	≤2.5	PASS
				1000~2387	-52.45	≤-26	0.00569	≤2.5	PASS
				2387~2400	-24.23	≤-16	3.77572	≤25	PASS
				2483.5~2496.5	-43.42	≤-16	0.04550	≤25	PASS
				2496.5~13000	-45.52	≤-26	0.02805	≤2.5	PASS
			2440	30~1000	-53.87	≤-26	0.00410	≤2.5	PASS
				1000~2387	-52.44	≤-26	0.00570	≤2.5	PASS
				2387~2400	-43.43	≤-16	0.04539	≤25	PASS
				2483.5~2496.5	-43.23	≤-16	0.04753	≤25	PASS
				2496.5~13000	-44.83	≤-26	0.03289	≤2.5	PASS
			2480	30~1000	-53.77	≤-26	0.00420	≤2.5	PASS
				1000~2387	-52.48	≤-26	0.00565	≤2.5	PASS
				2387~2400	-43.45	≤-16	0.04519	≤25	PASS
				2483.5~2496.5	-43.33	≤-16	0.04645	≤25	PASS
				2496.5~13000	-44.75	≤-26	0.03350	≤2.5	PASS

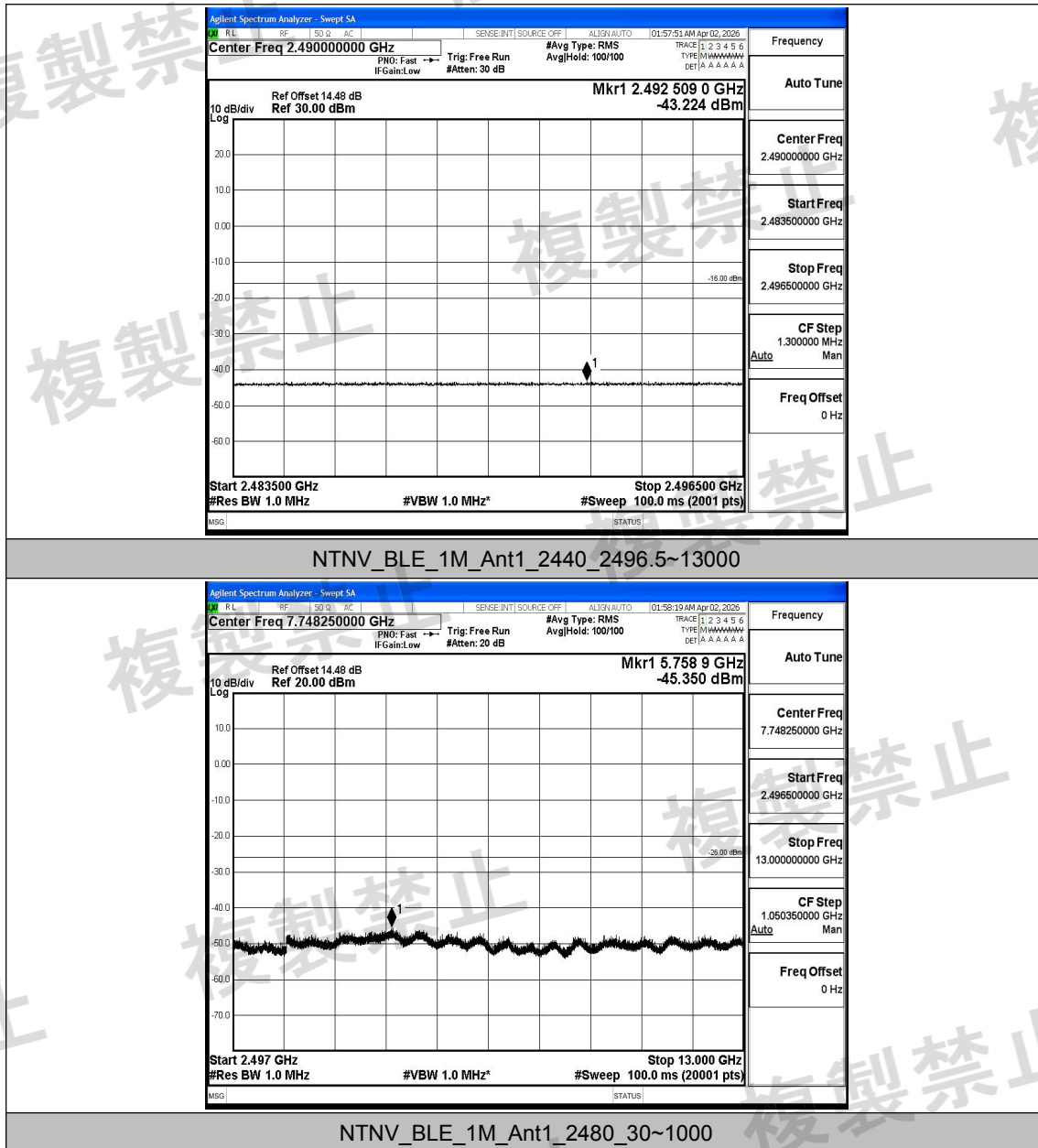
Test Graphs

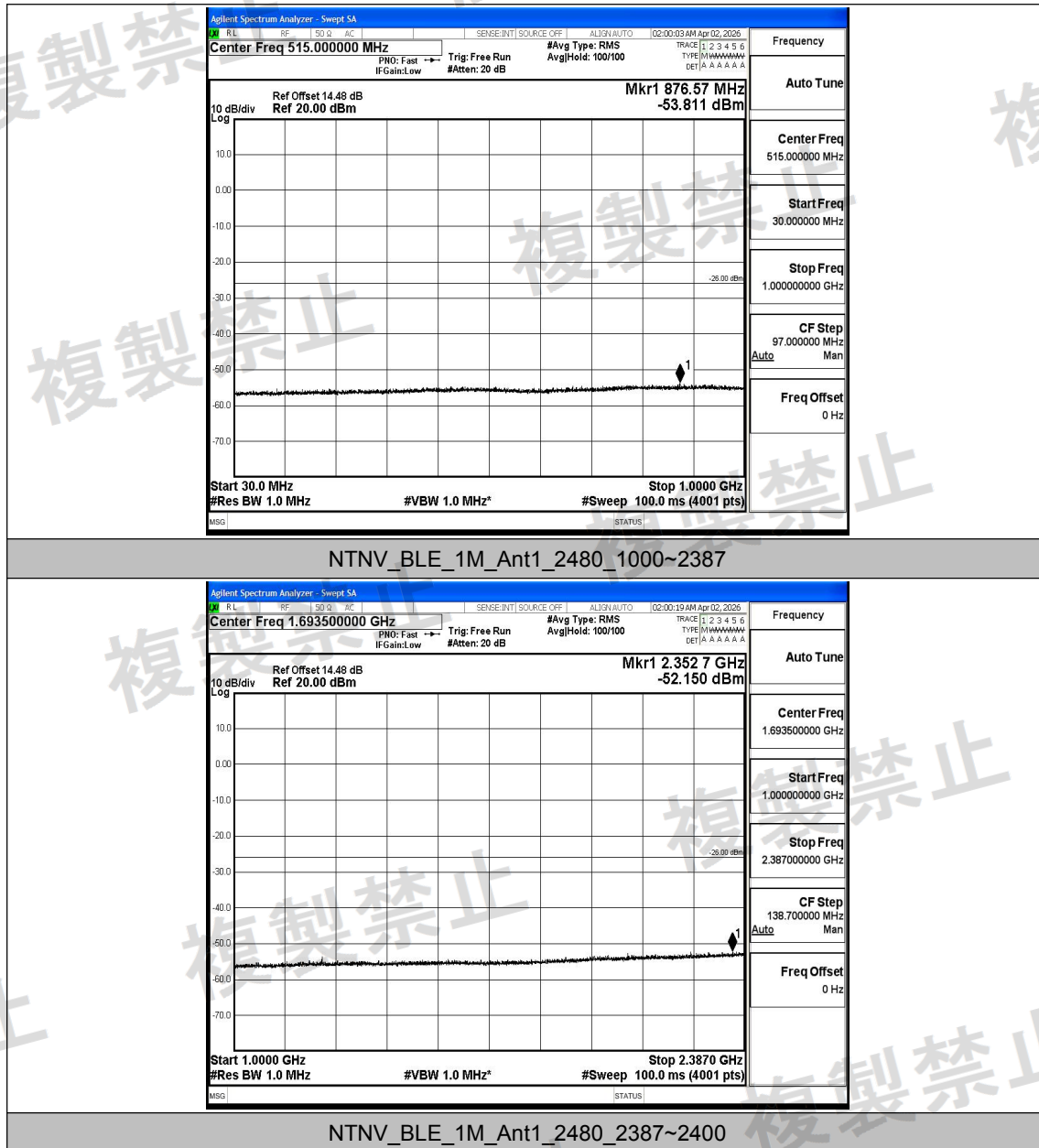


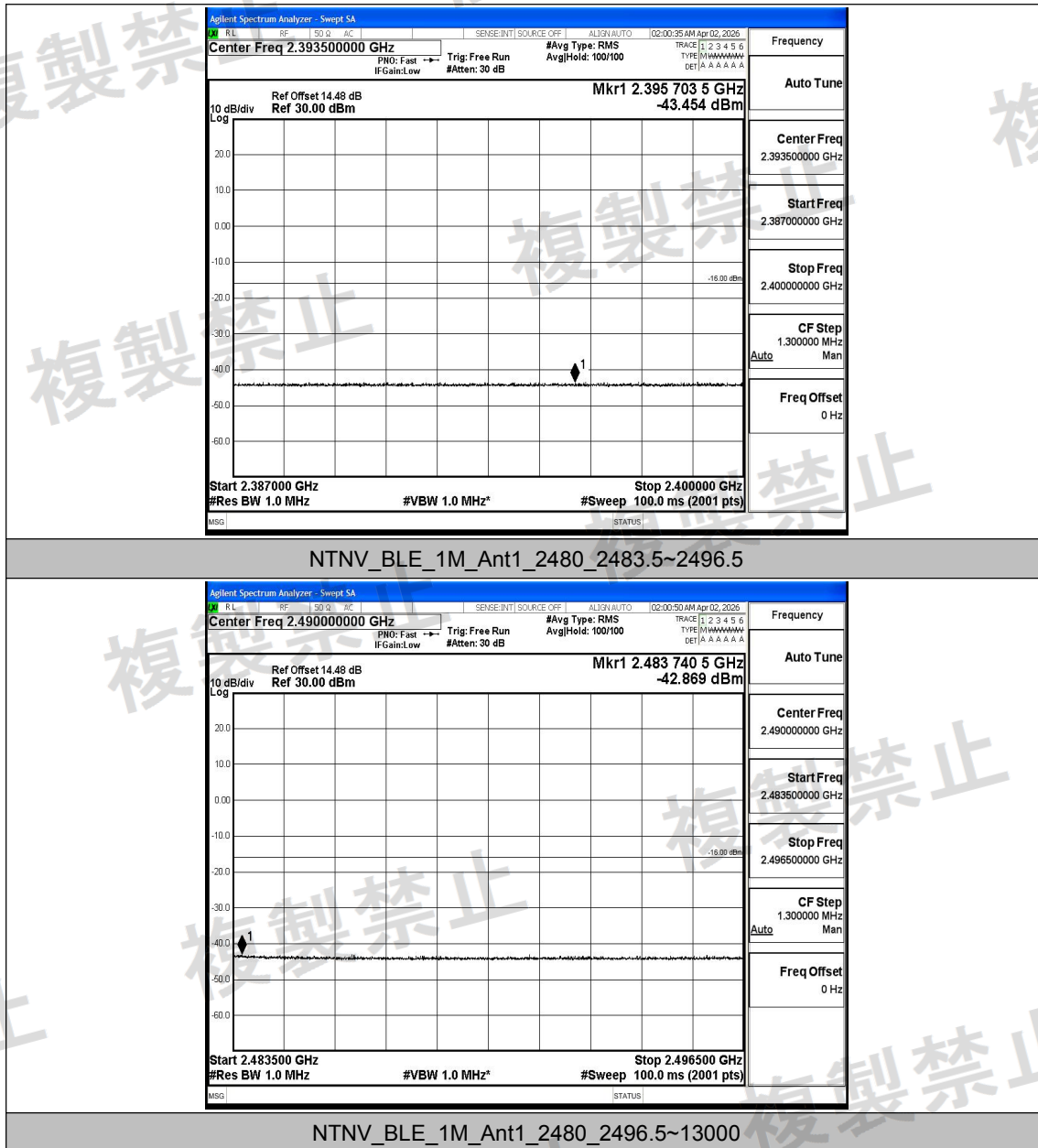


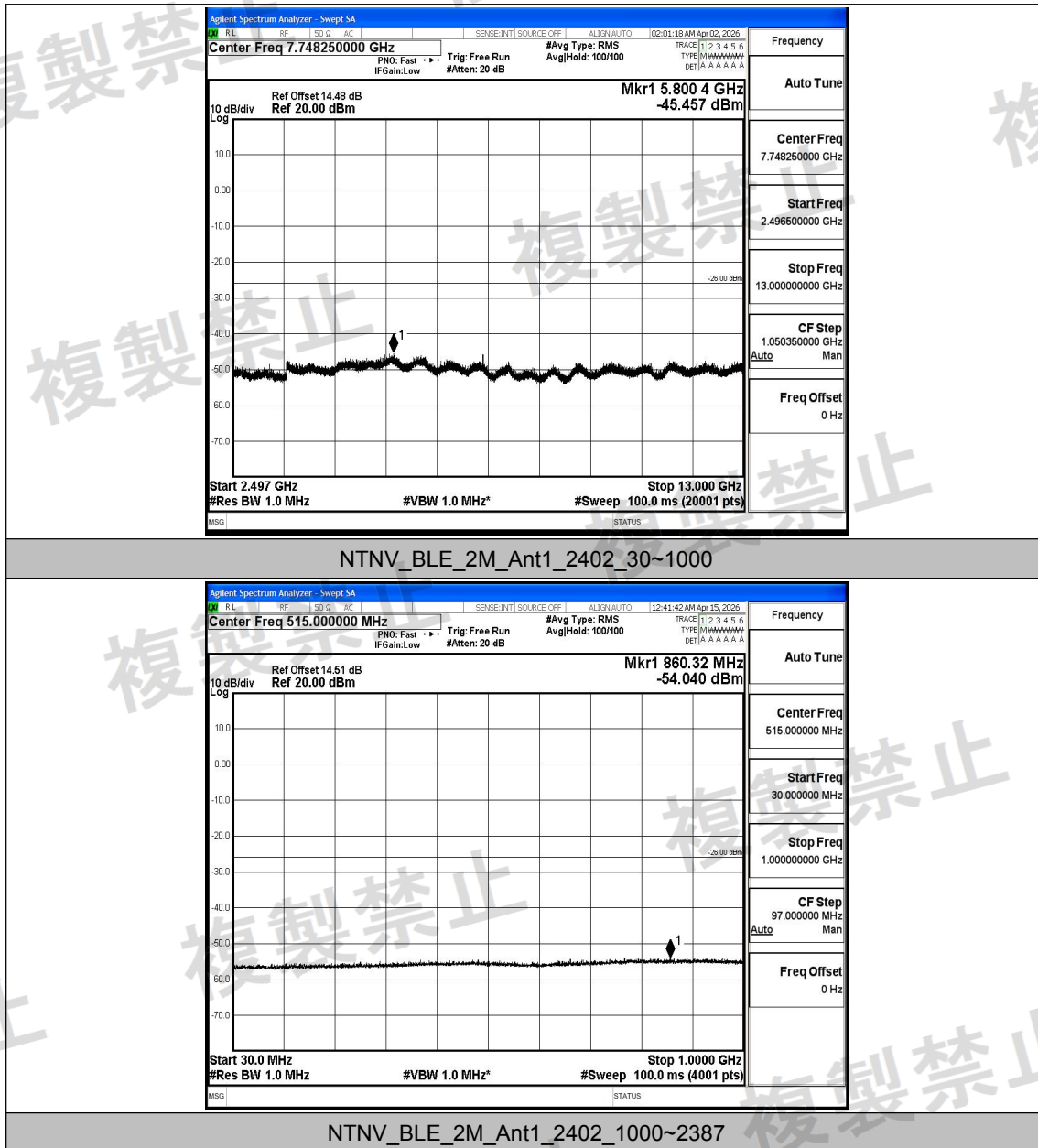


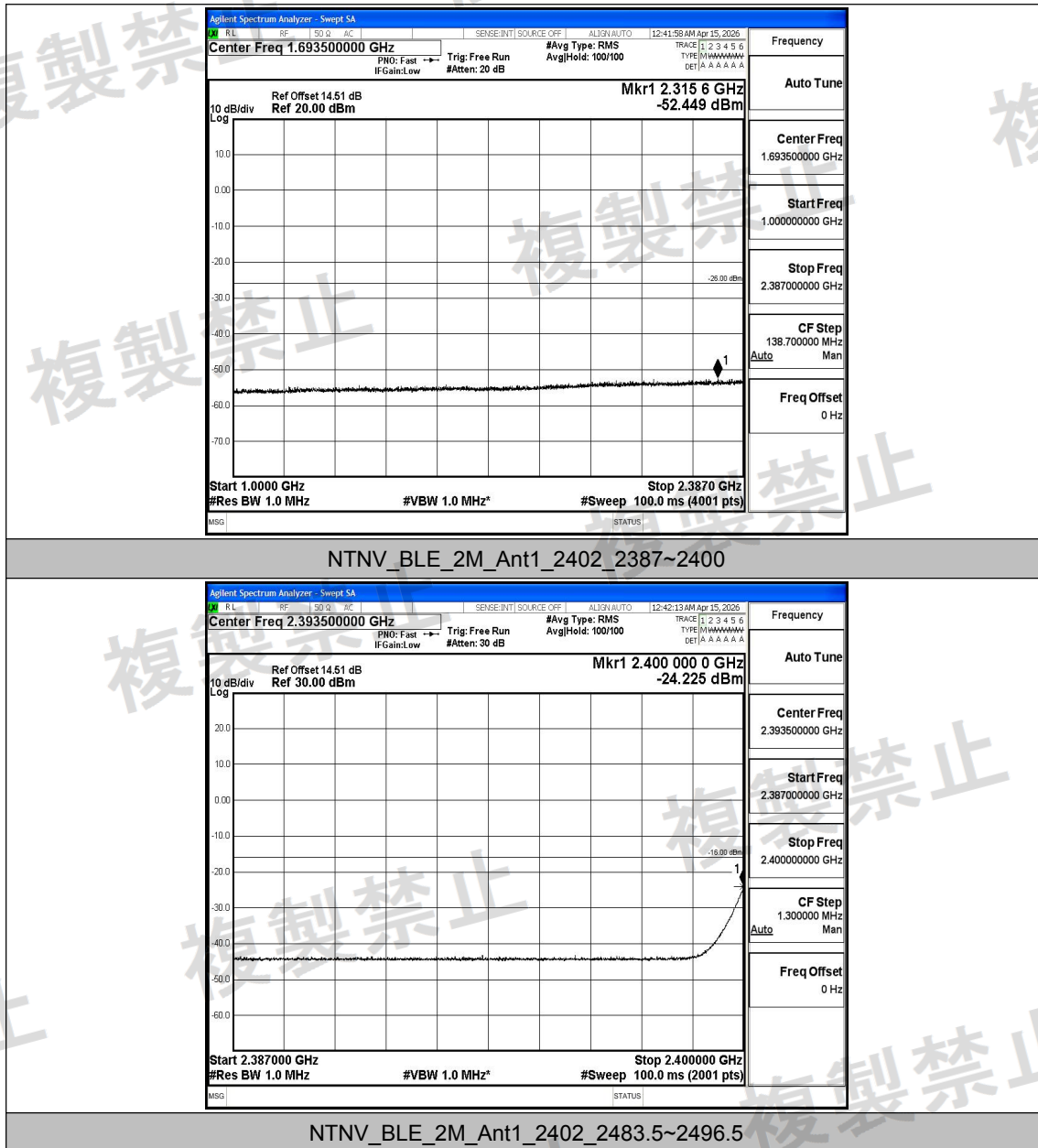


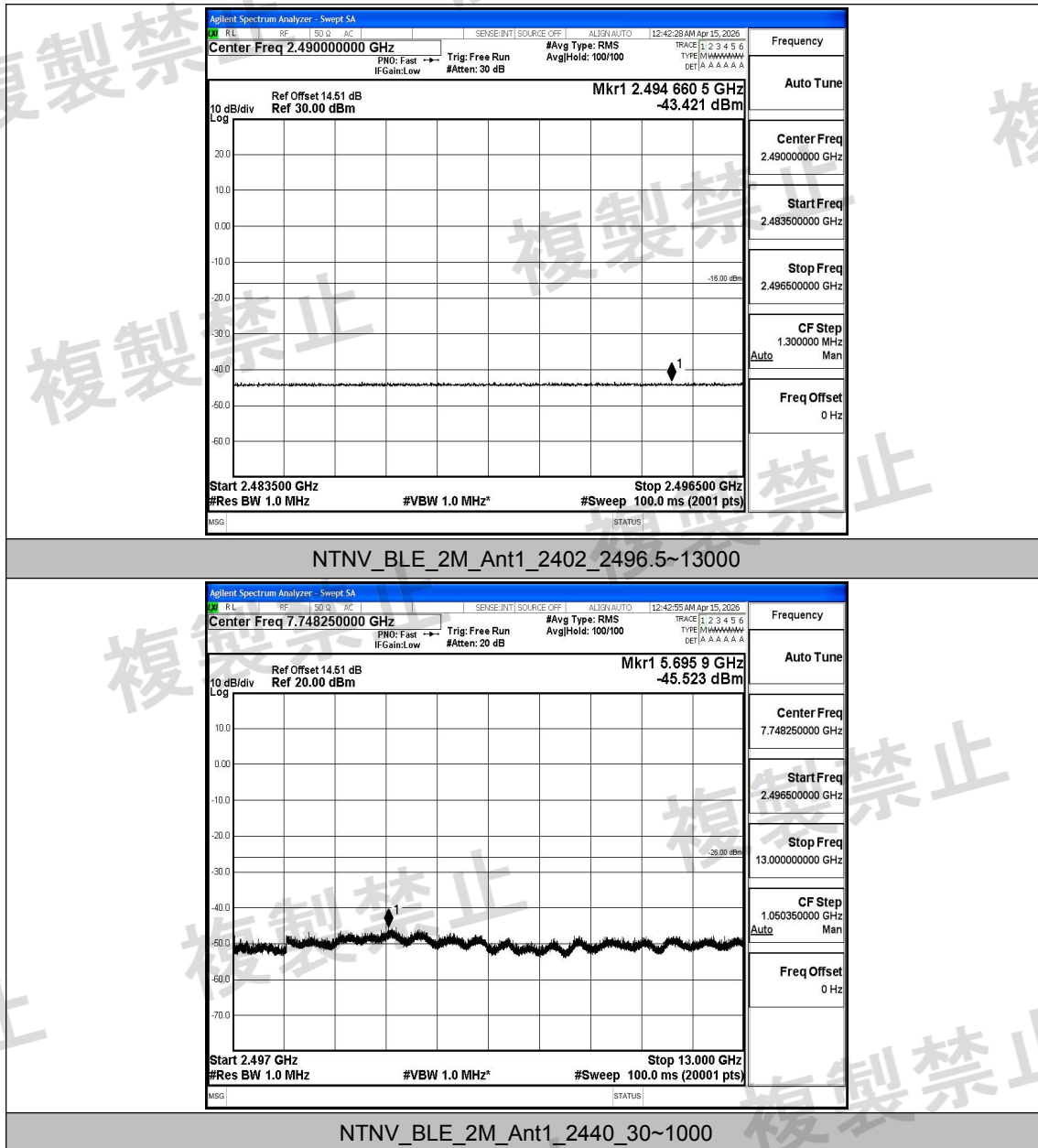


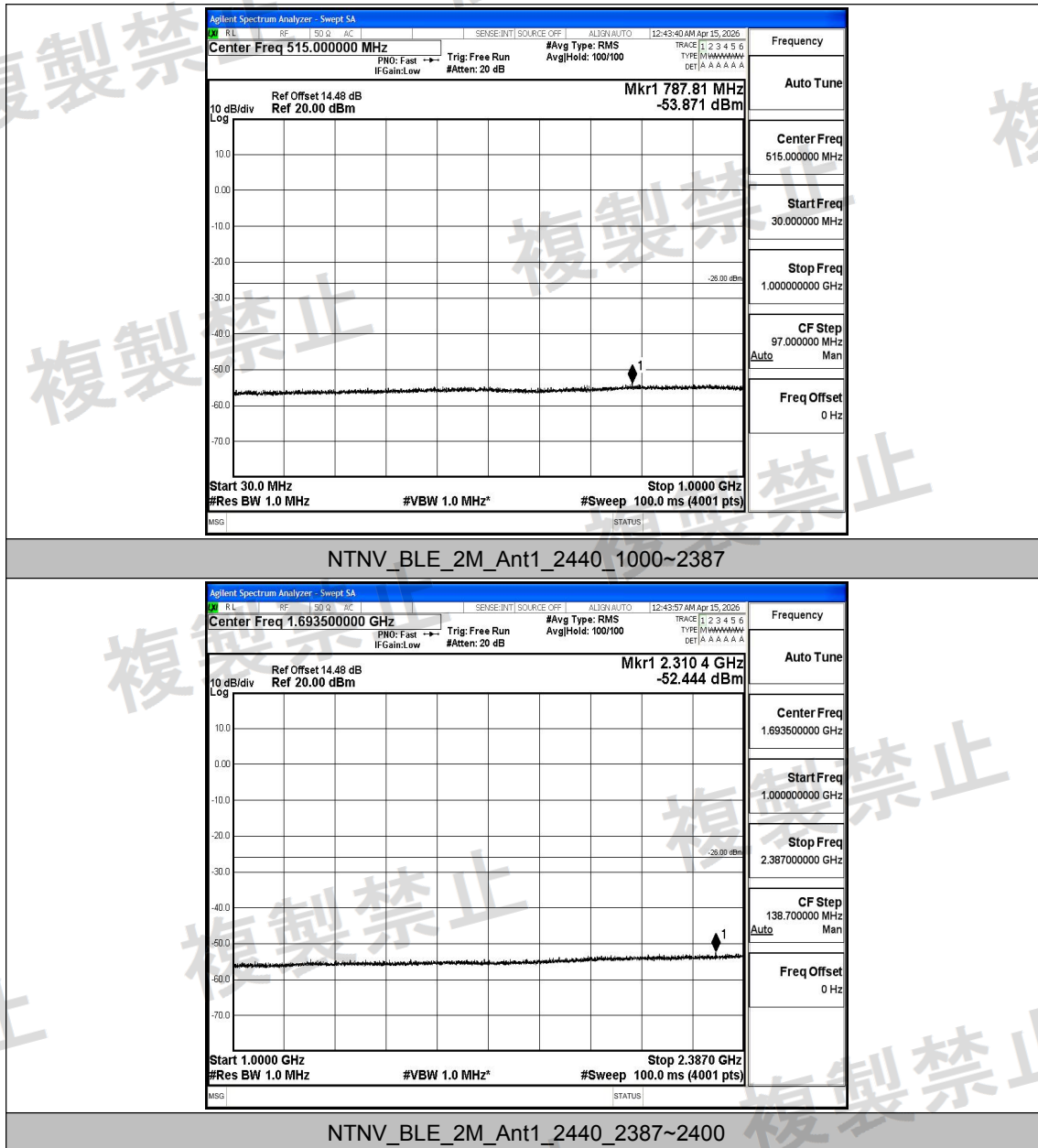


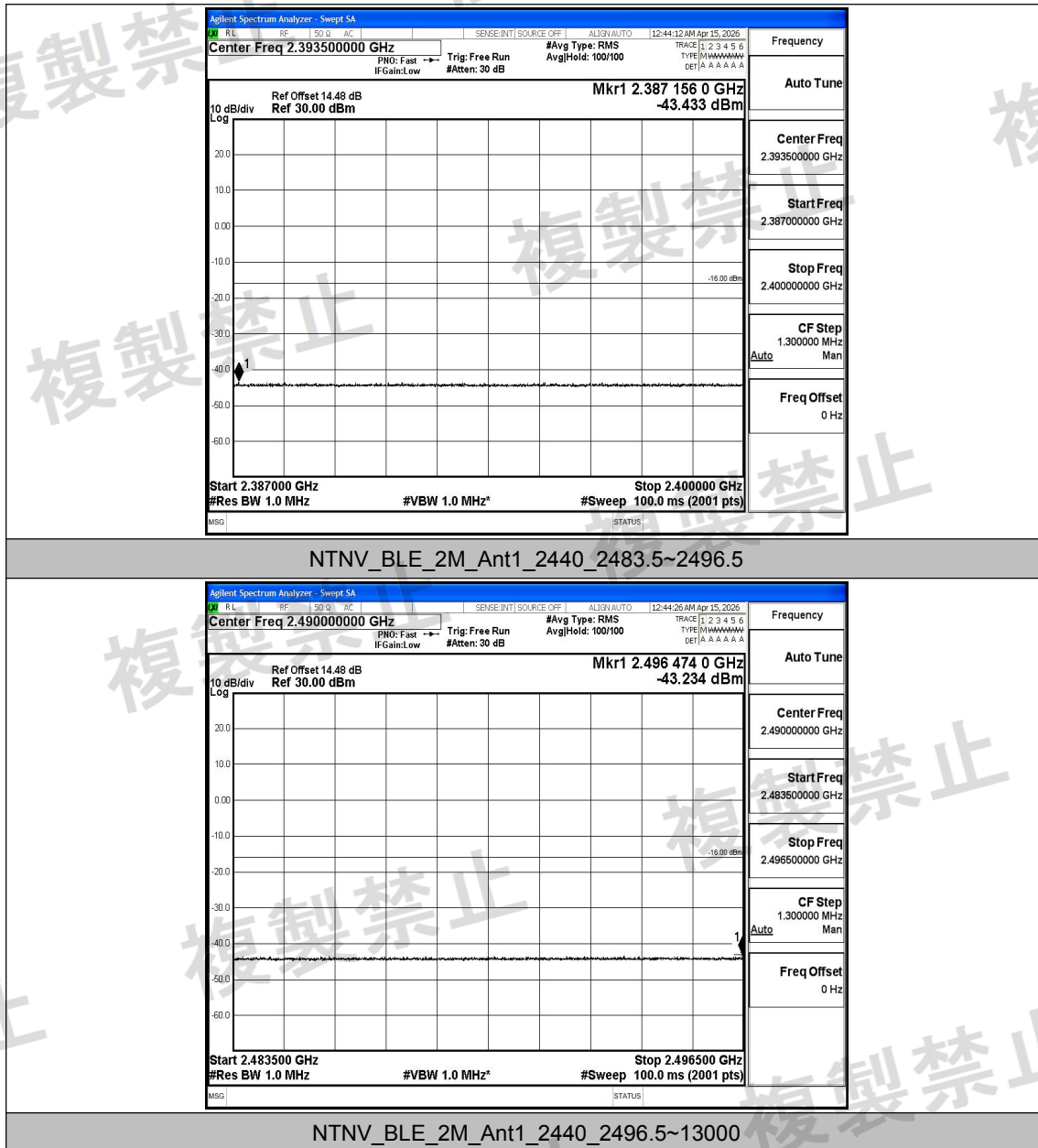


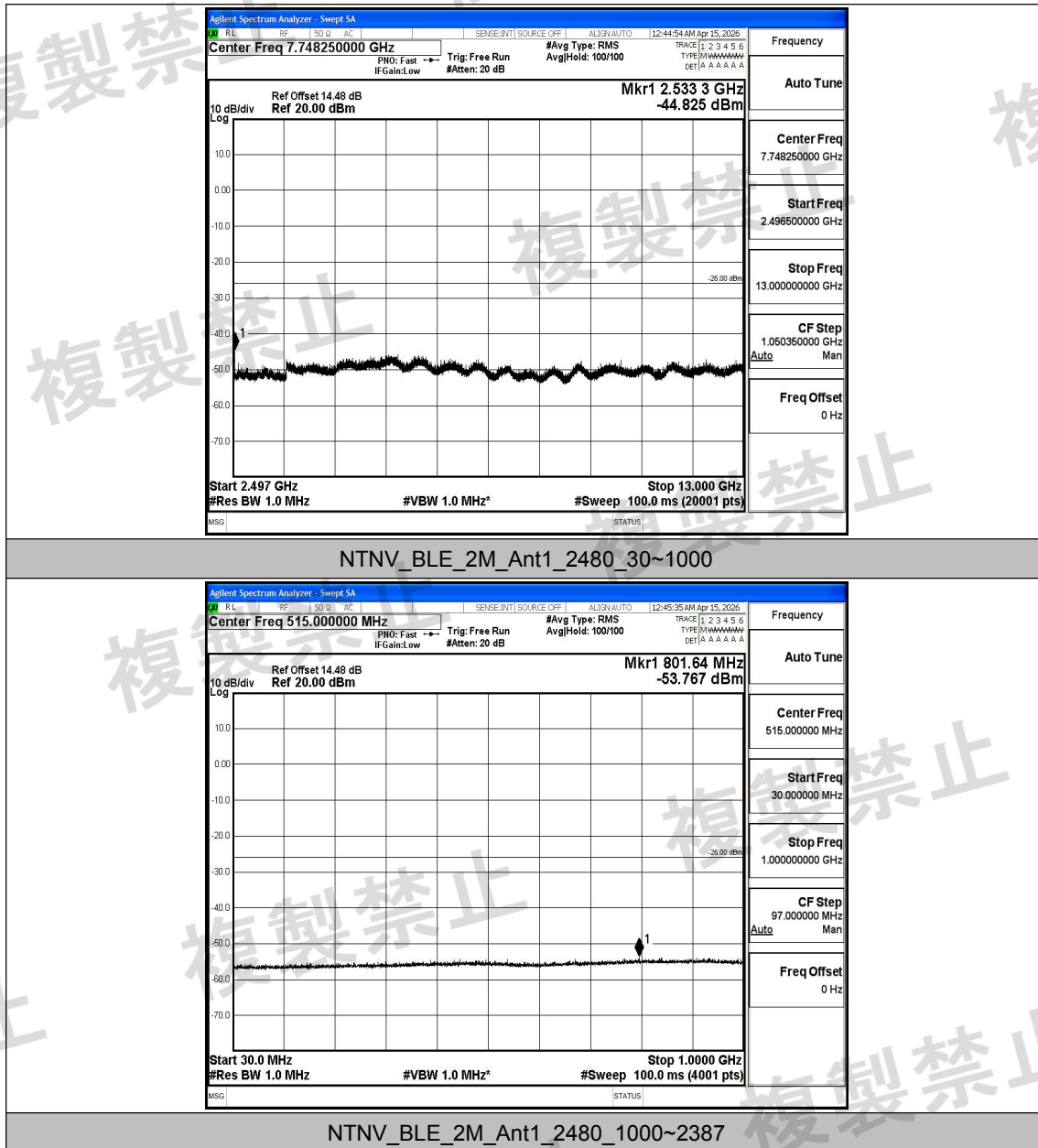


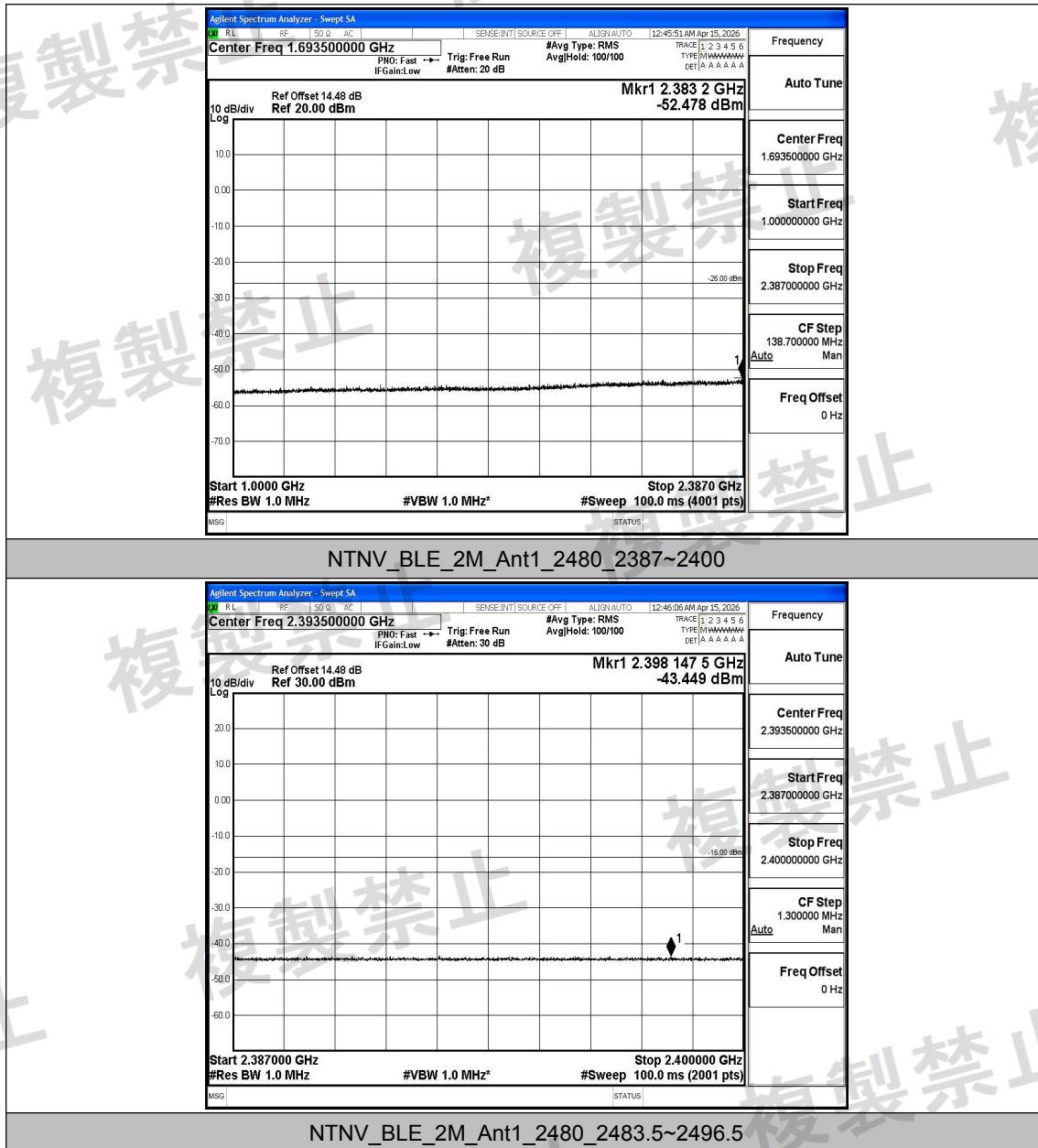


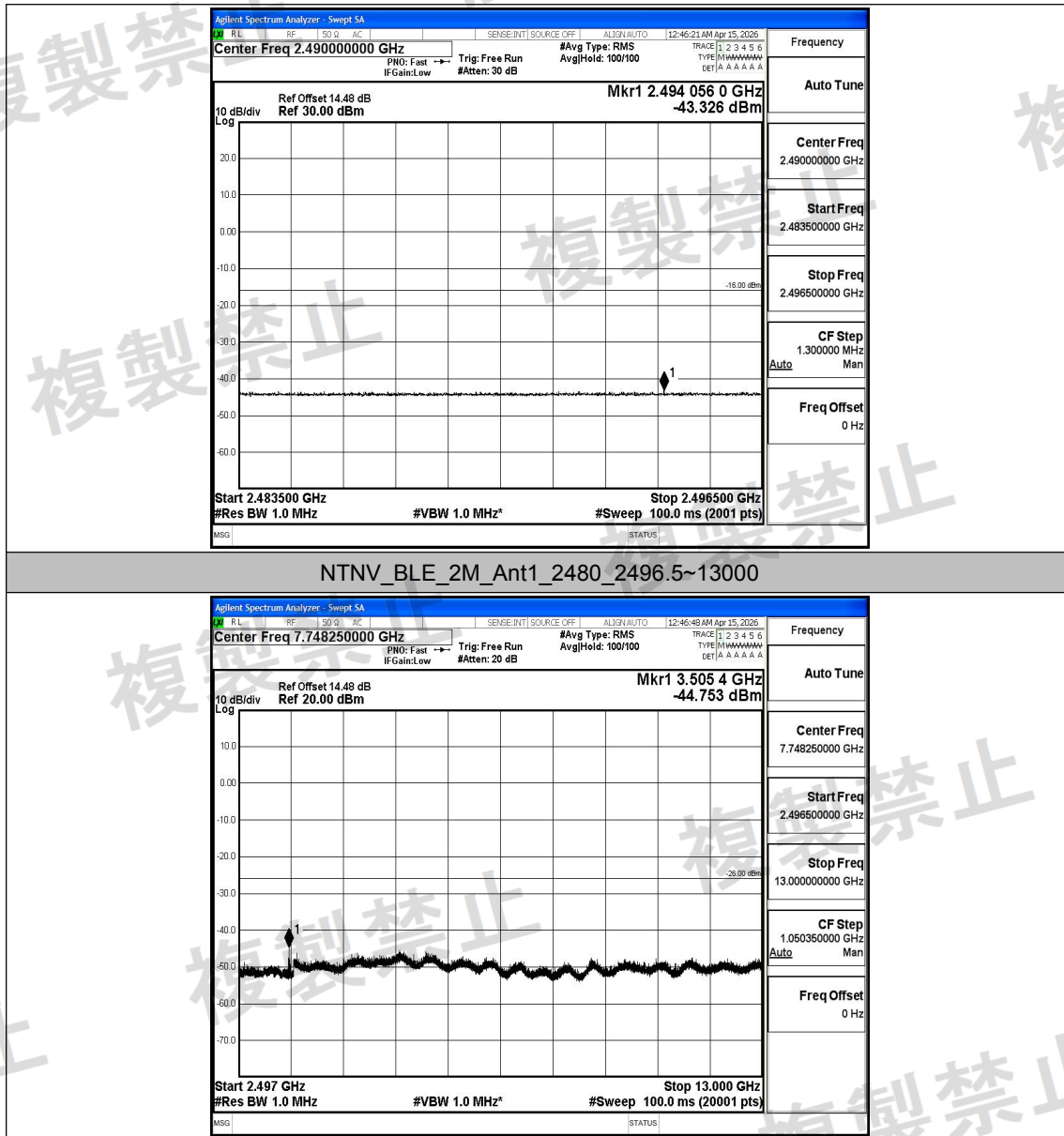












A.6 Spurious Emission of RX

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	-83.84	≤-54	0.00413	≤4	PASS
				1000~12500	-59.48	≤-47	1.12720	≤20	PASS
			2440	30~1000	-83.51	≤-54	0.00446	≤4	PASS
				1000~12500	-57.99	≤-47	1.58855	≤20	PASS
			2480	30~1000	-84.23	≤-54	0.00378	≤4	PASS
				1000~12500	-66.77	≤-47	0.21038	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	-84.16	≤-54	0.00384	≤4	PASS
				1000~12500	-66.88	≤-47	0.20512	≤20	PASS
			2440	30~1000	-84.27	≤-54	0.00374	≤4	PASS
				1000~12500	-66.96	≤-47	0.20137	≤20	PASS
			2480	30~1000	-84.39	≤-54	0.00364	≤4	PASS
				1000~12500	-67.12	≤-47	0.19409	≤20	PASS

Test Graphs

