

Appendix A for BT LE Test Data

Product Name: SMART BT MACARON RGB OSRAM

Test Model: SMART BT MACARON RGB YELLOW

Environmental Conditions

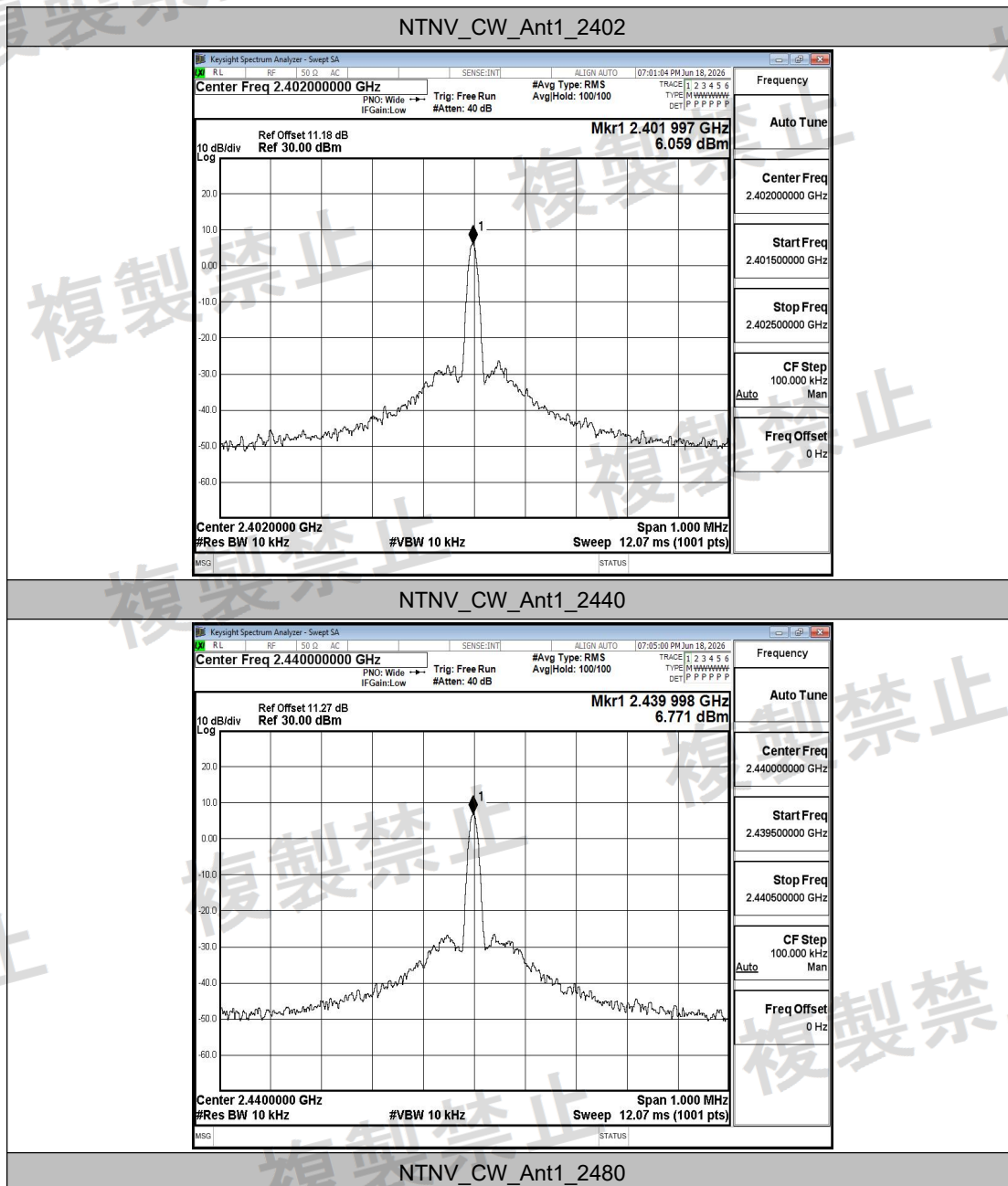
Temperature:	23.2° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

A.1 Frequency Error

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	CW	Ant1	2402	-1.24896	±50	PASS
			2440	-0.81967	±50	PASS
			2480	-0.80645	±50	PASS

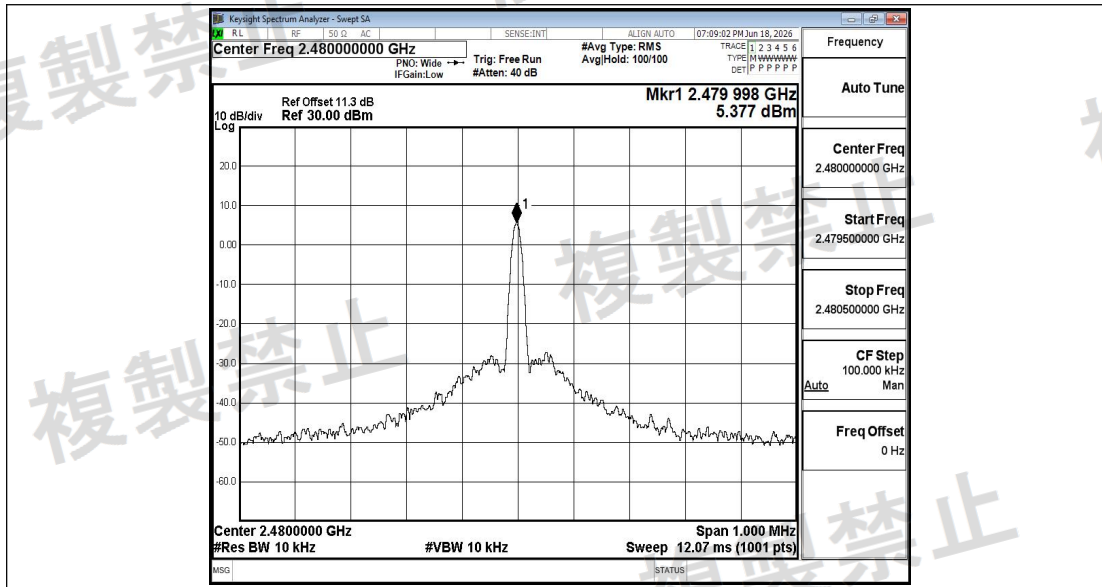
Test Graphs



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A.2 Antenna Power & EIRP

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Freq(MHz)	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTNV	BLE_1M	Ant1	2402	0.95	1.2445	≤10	PASS
			2440	1.70	1.4791	≤10	PASS
			2480	0.56	1.1376	≤10	PASS

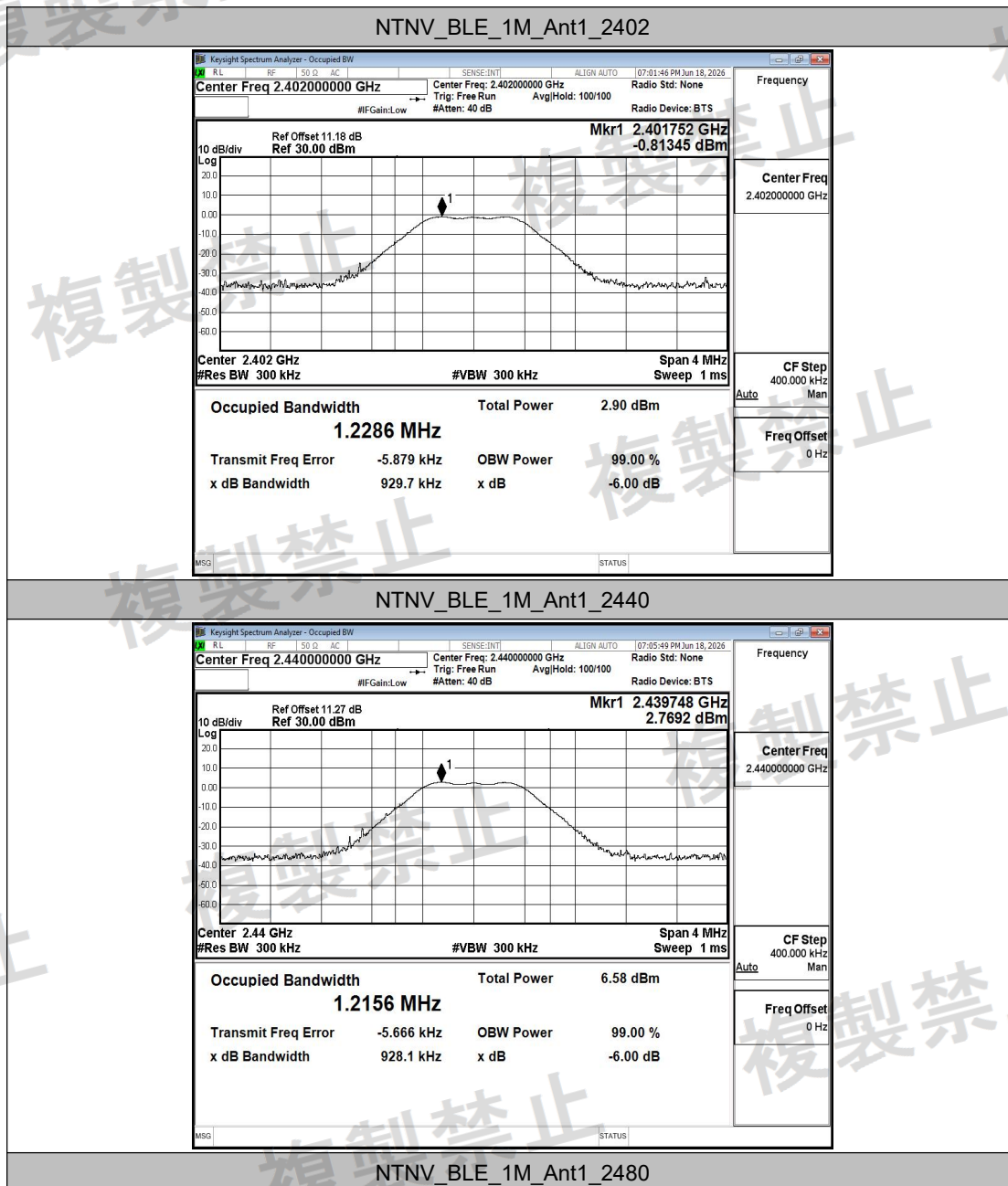
Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power (mW)	Rated Power (mW)	Result (%)	Limit (%)	Verdict
NTNV	BLE_1M	Ant1	2402	1.2445	2	-37.78%	20	PASS
			2440	1.4791	2	-26.05%	20	PASS
			2480	1.1376	2	-43.12%	20	PASS

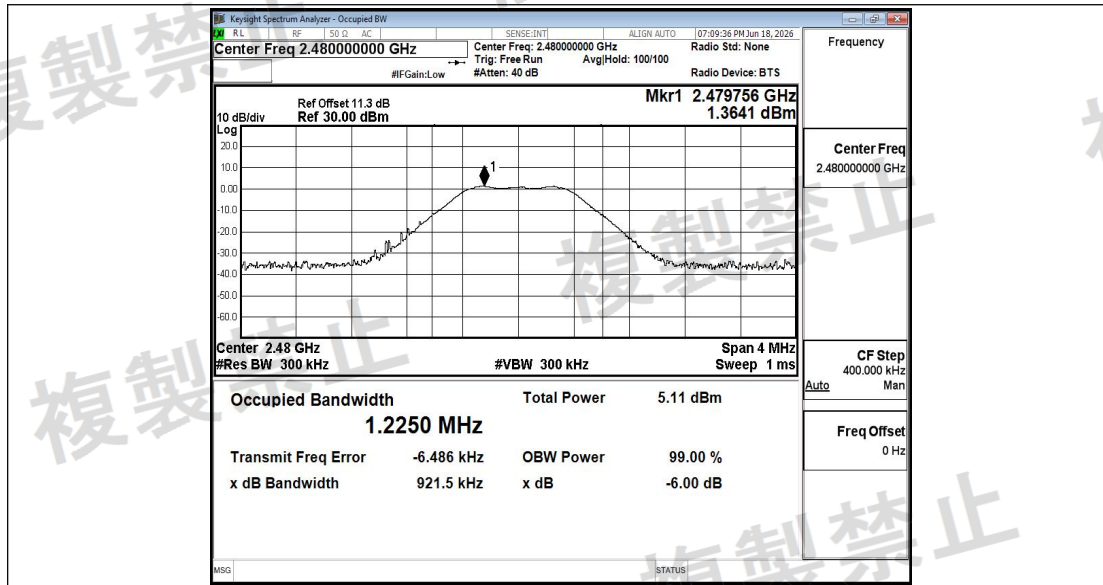
A.3 Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.229	≤26	PASS
			2440	1.216	≤26	PASS
			2480	1.225	≤26	PASS

Test Graphs



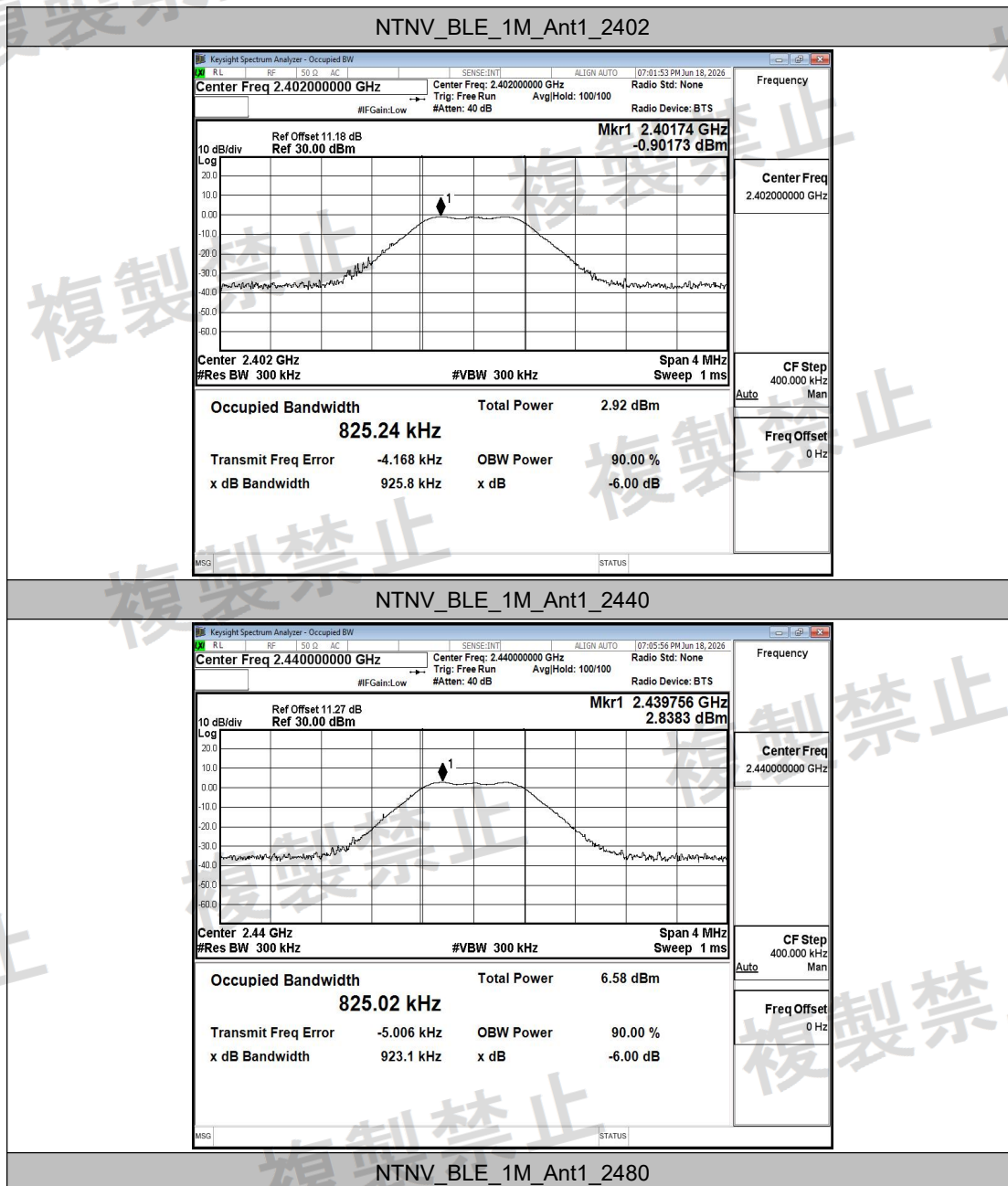


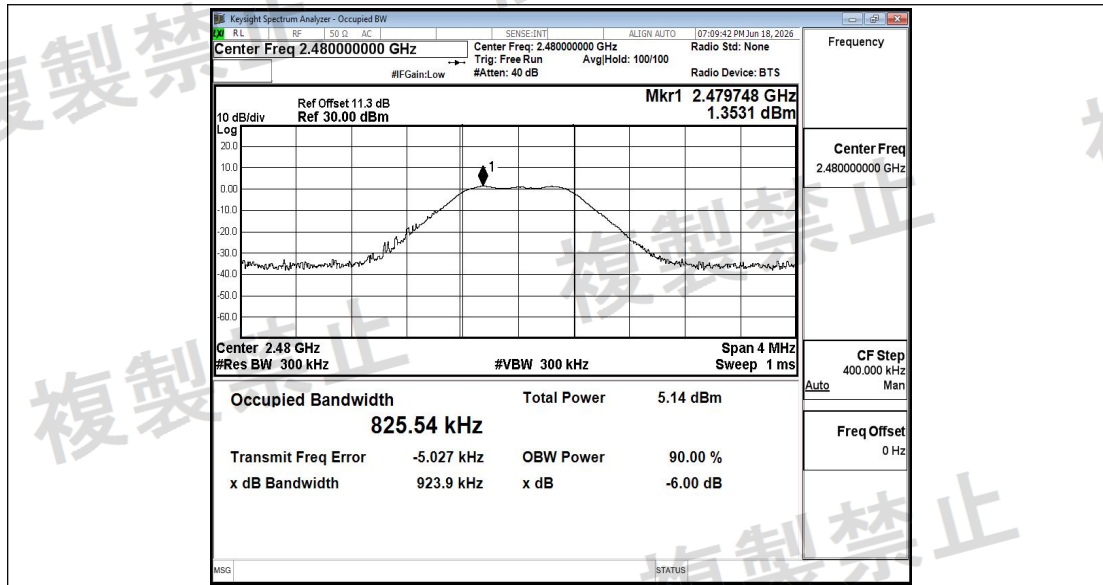
A.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.825	---	PASS
			2440	0.825	---	PASS
			2480	0.826	---	PASS

Test Graphs



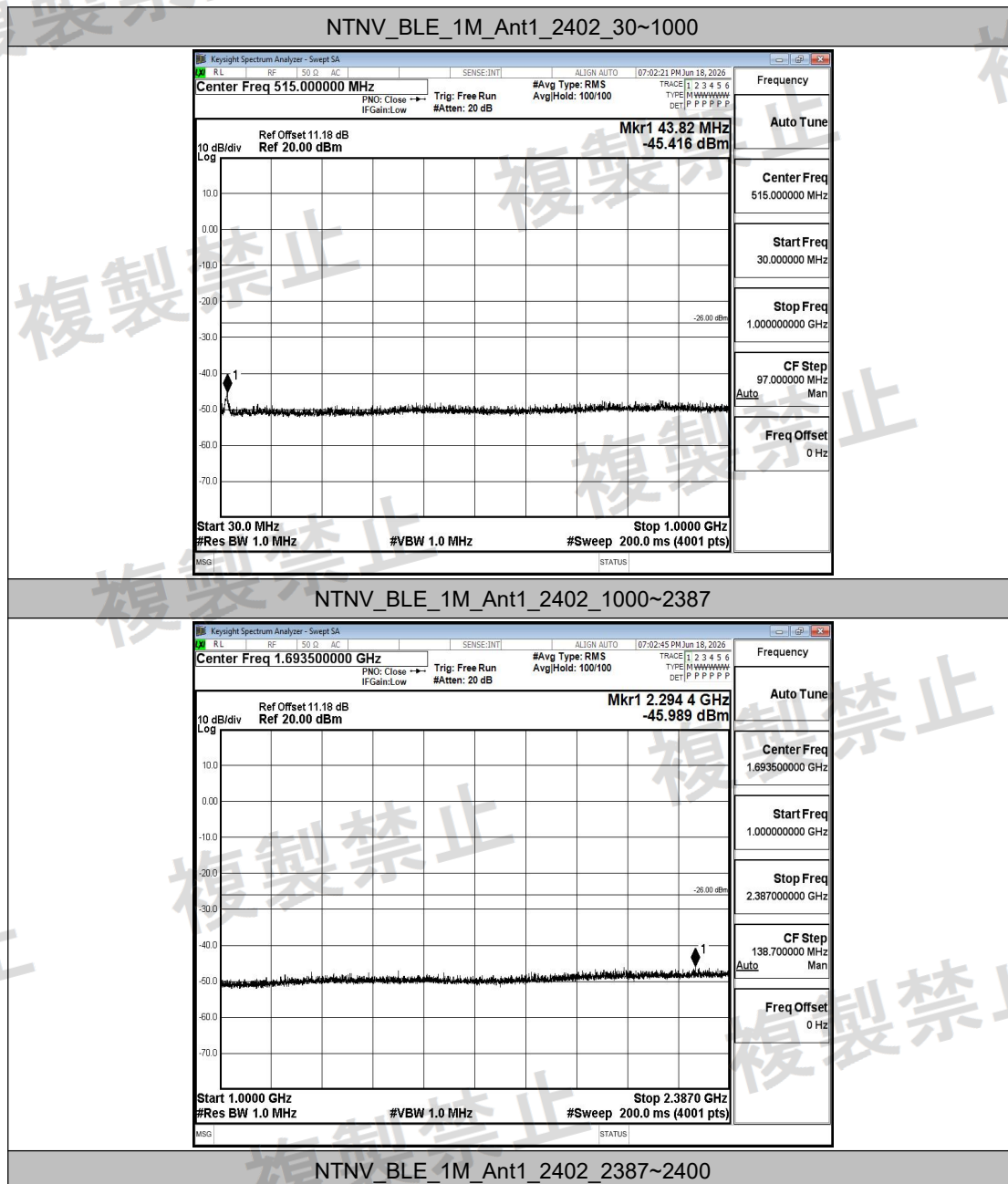


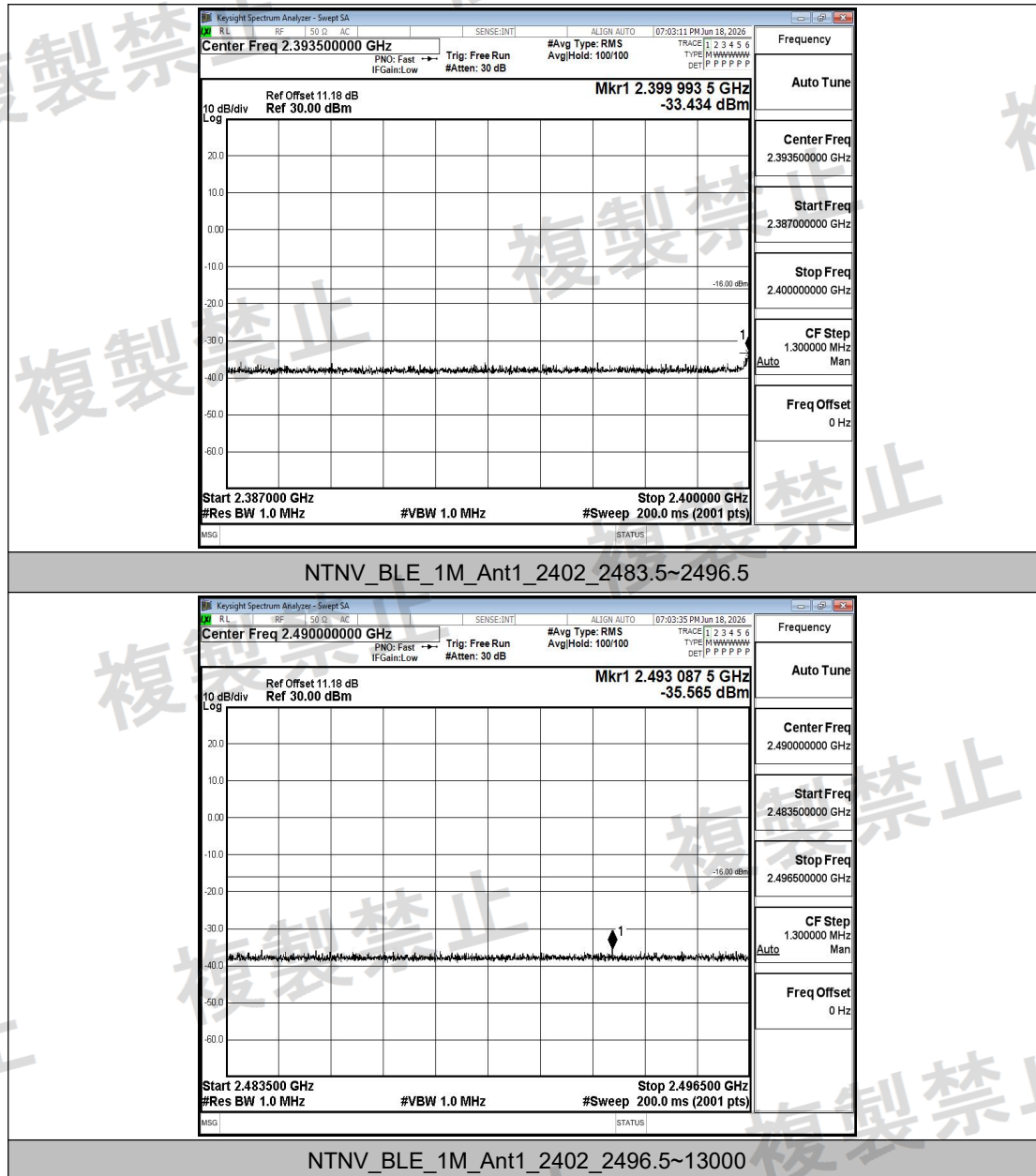
A.5 Spurious Emission of TX

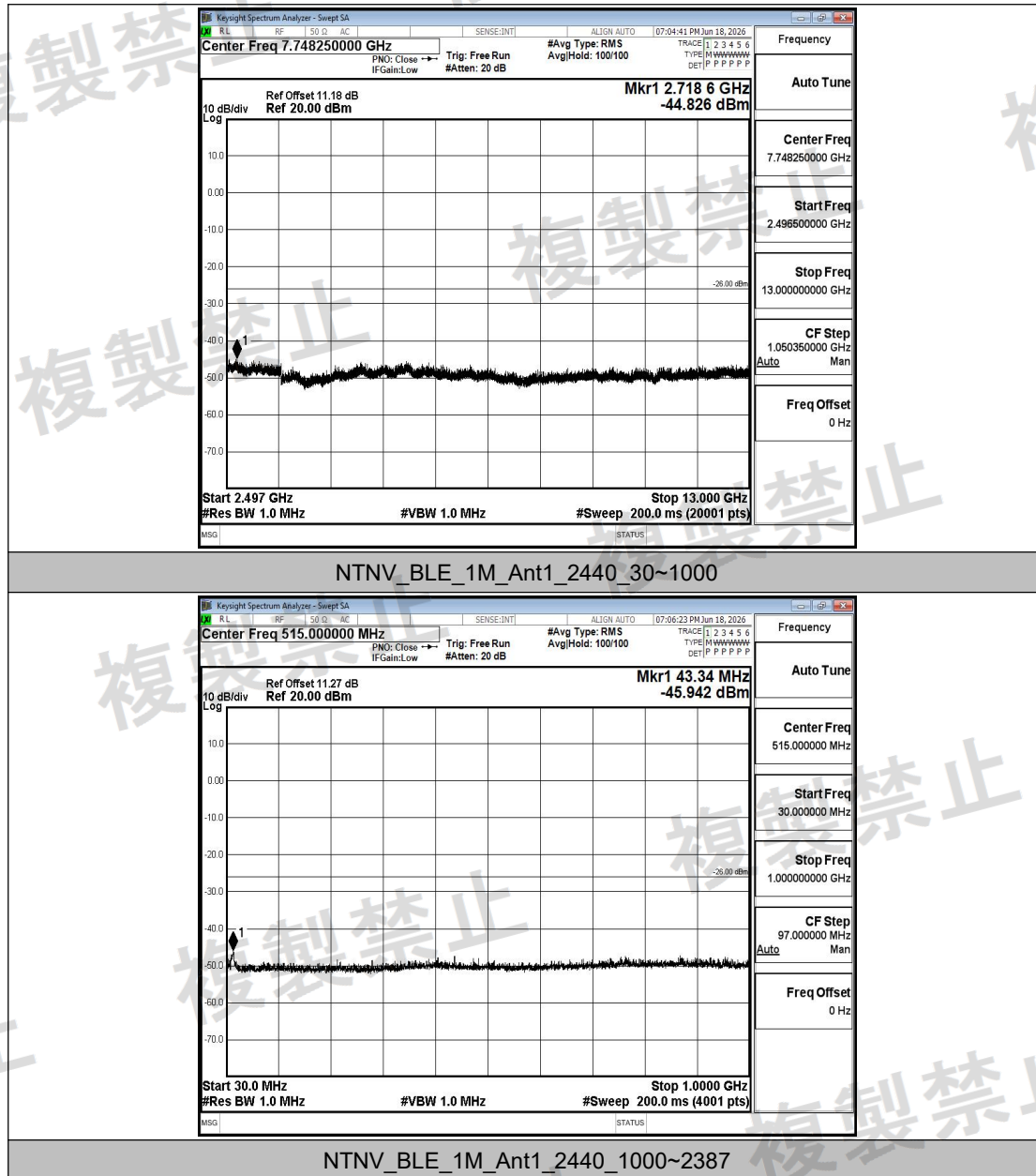
Test Result

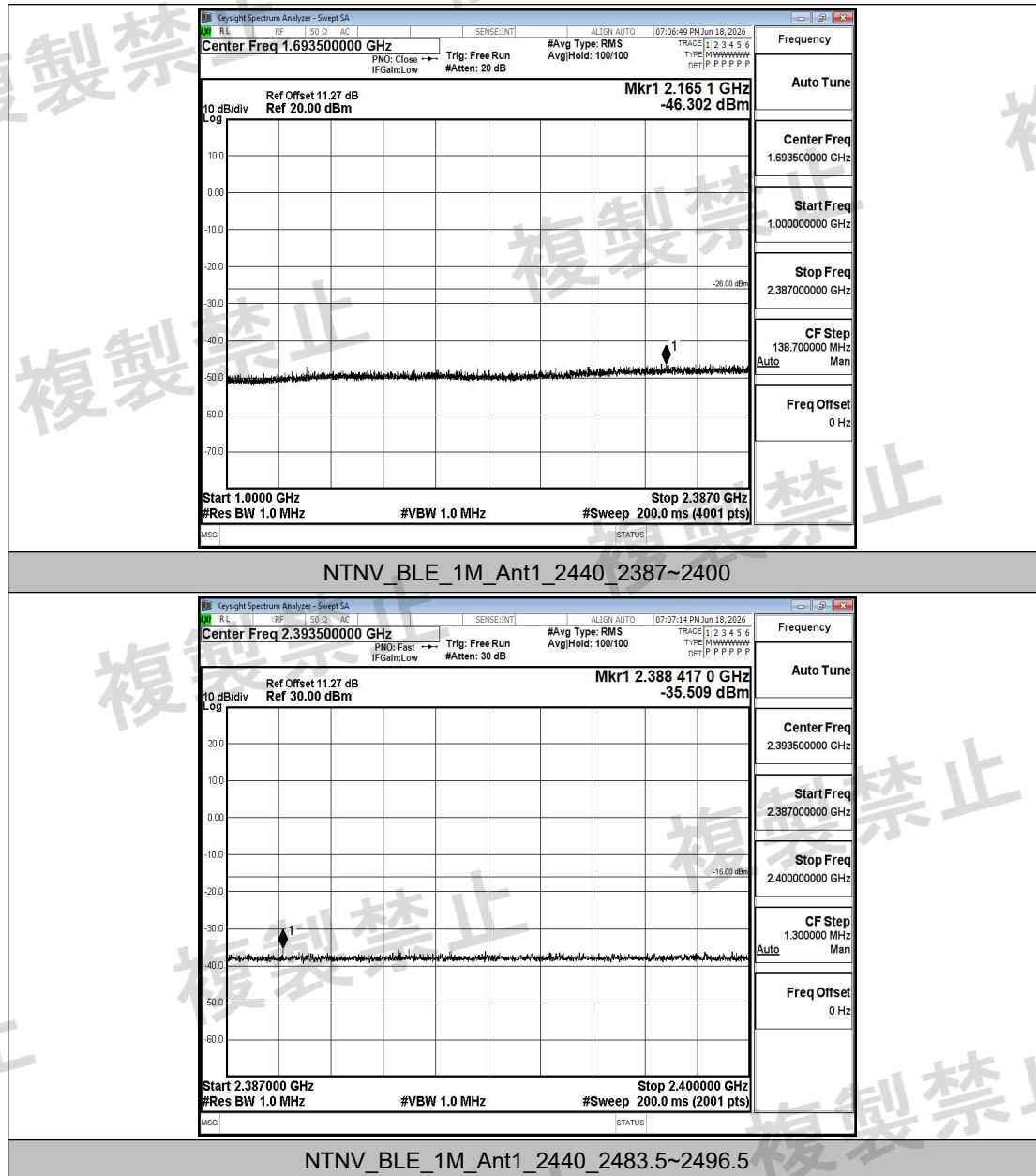
TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	43.82	-45.42	≤-26	0.02871	≤2.5	PASS
				1000~2387	2294.42	-45.99	≤-26	0.02518	≤2.5	PASS
				2387~2400	2399.99	-33.43	≤-16	0.45394	≤25	PASS
				2483.5~2496.5	2493.09	-35.57	≤-16	0.27733	≤25	PASS
				2496.5~13000	2718.65	-44.83	≤-26	0.03289	≤2.5	PASS
			2440	30~1000	43.34	-45.94	≤-26	0.02547	≤2.5	PASS
				1000~2387	2165.08	-46.30	≤-26	0.02344	≤2.5	PASS
				2387~2400	2388.42	-35.51	≤-16	0.28119	≤25	PASS
				2483.5~2496.5	2488.03	-35.49	≤-16	0.28249	≤25	PASS
				2496.5~13000	3121.46	-44.85	≤-26	0.03273	≤2.5	PASS
			2480	30~1000	43.10	-45.28	≤-26	0.02965	≤2.5	PASS
				1000~2387	2323.54	-45.90	≤-26	0.02570	≤2.5	PASS
				2387~2400	2387.05	-35.44	≤-16	0.28576	≤25	PASS
				2483.5~2496.5	2484.34	-35.54	≤-16	0.27925	≤25	PASS
				2496.5~13000	2672.43	-44.71	≤-26	0.03381	≤2.5	PASS

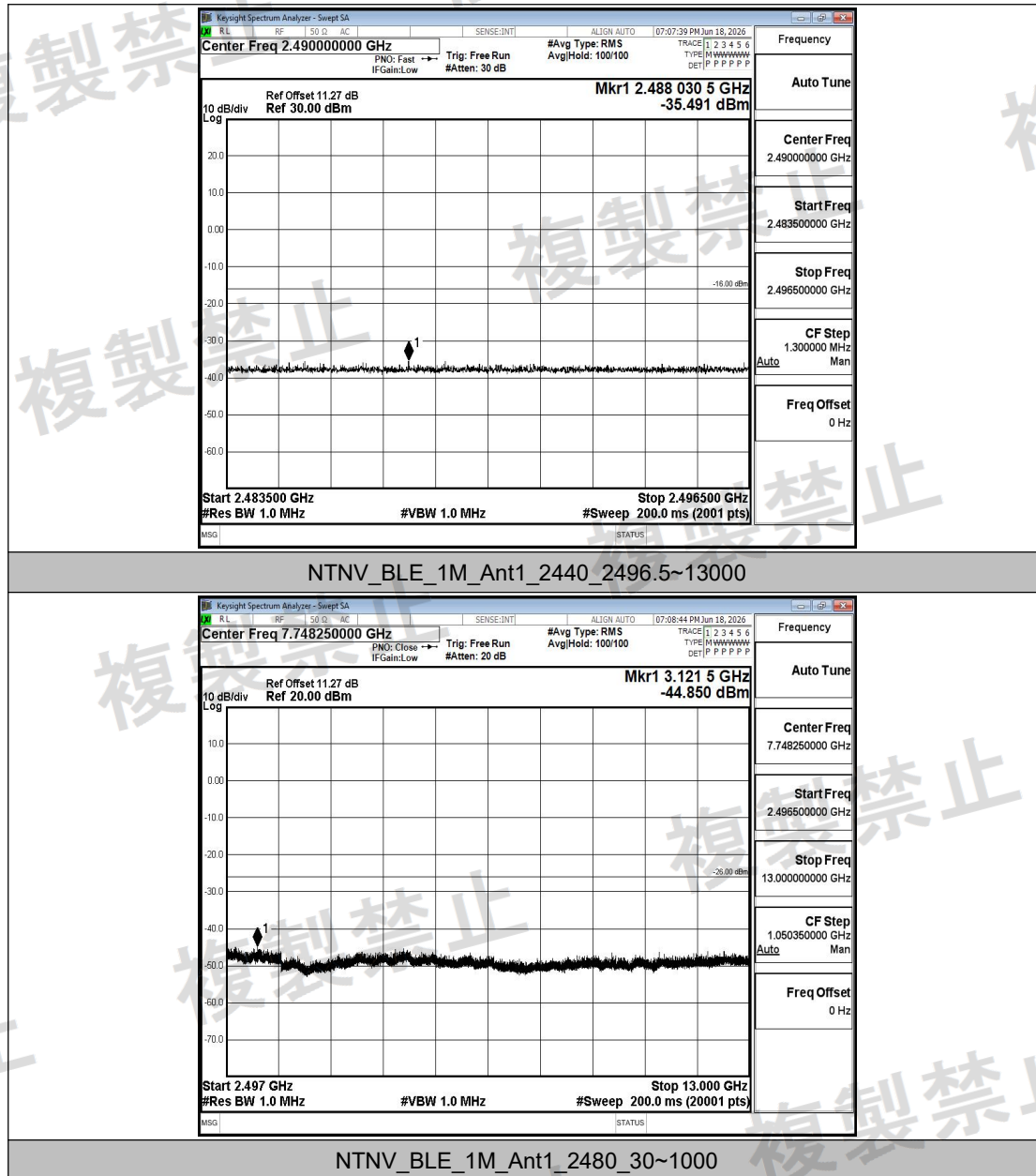
Test Graphs

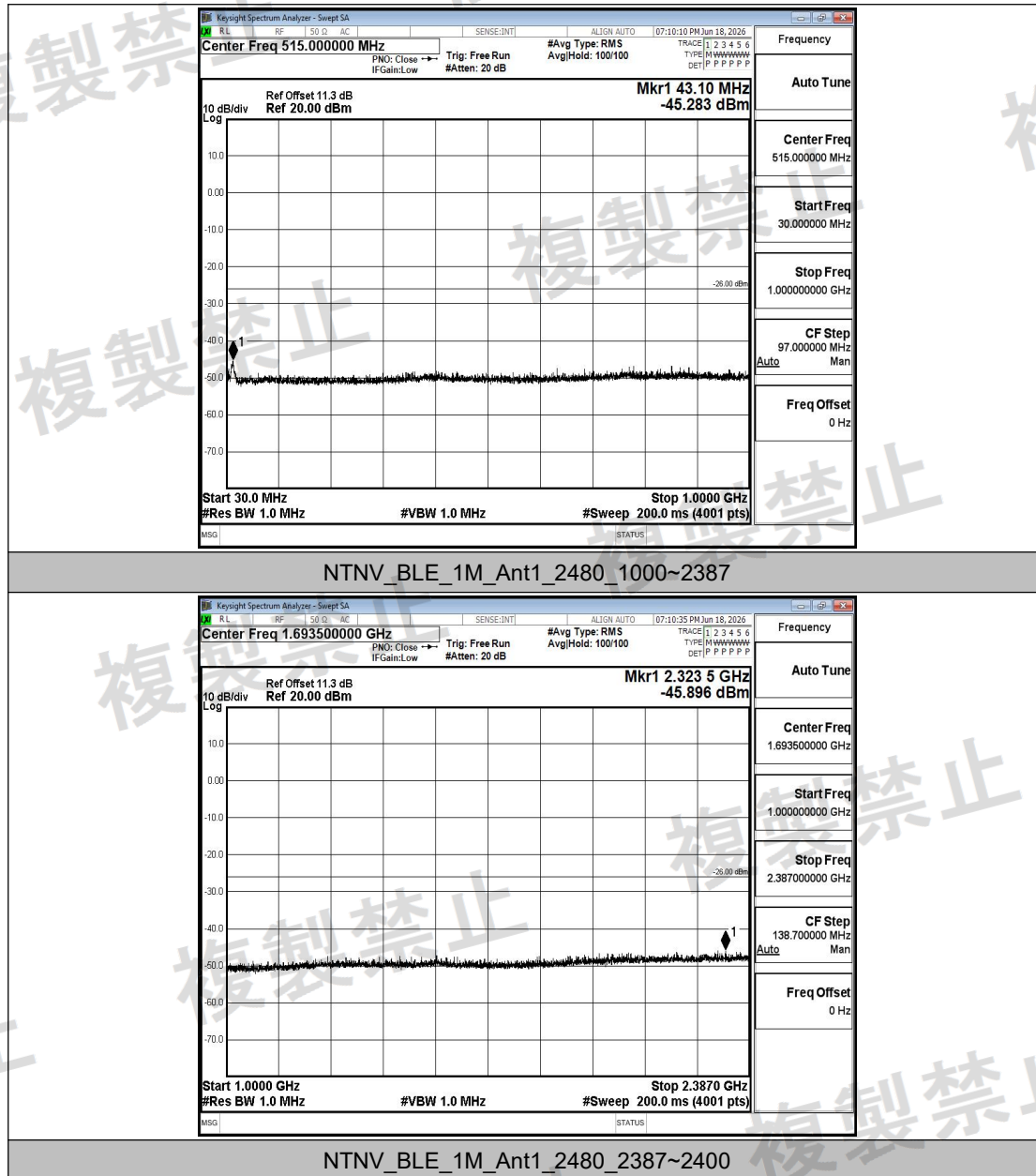


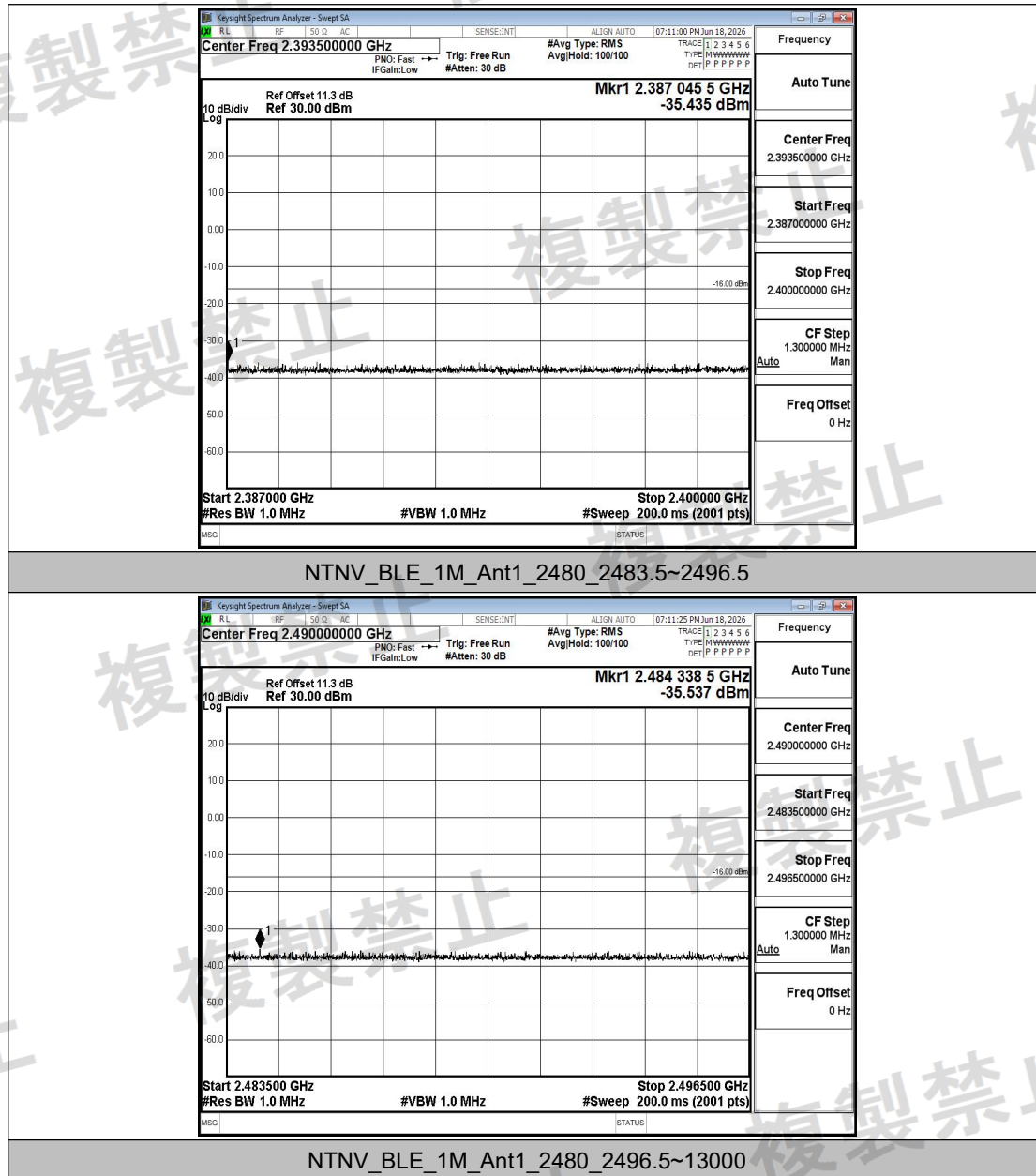


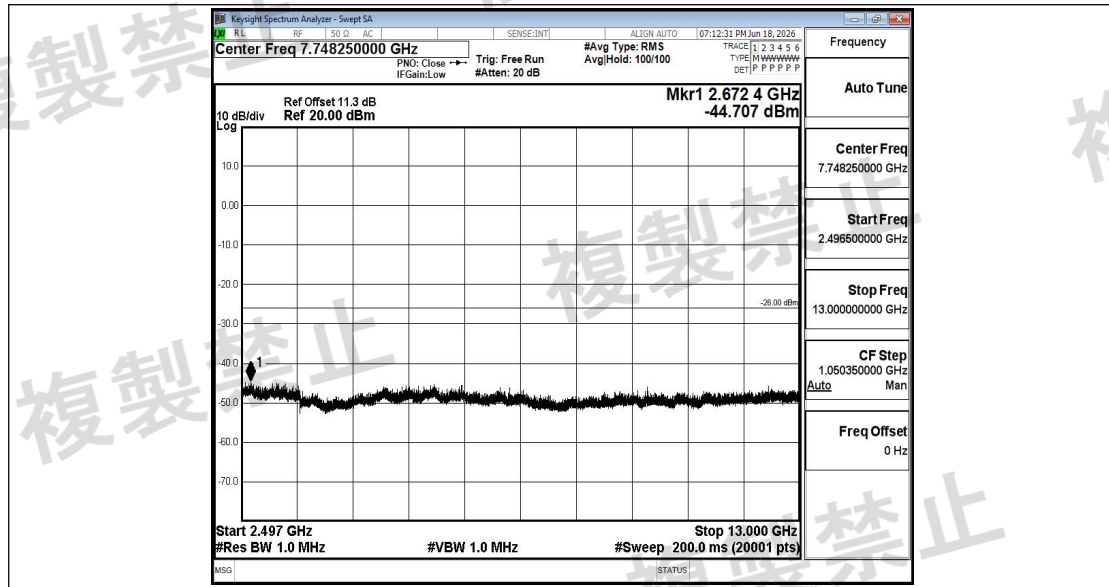












A.6 Spurious Emission of RX

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	863.23	-78.78	≤-54	0.01324	≤4	PASS
				1000~12500	2656.00	-65.96	≤-47	0.25351	≤20	PASS
			2440	30~1000	790.97	-79.34	≤-54	0.01164	≤4	PASS
				1000~12500	3284.48	-66.18	≤-47	0.24099	≤20	PASS
			2480	30~1000	777.39	-79.70	≤-54	0.01072	≤4	PASS
				1000~12500	3594.40	-65.90	≤-47	0.25704	≤20	PASS

Test Graphs

