

RF Test Data

For

Project No.:	ZKT-250929123789E-2
Client:	Autel Robotics Co., Ltd.
Manufacturer:	Autel Robotics Co., Ltd.
Product Description:	Autel Smart Controller V3
Model No.:	EF9-3A
Test Engineer:	Jim Liu
Test Date:	2026-03-02

Test Summary

Item	Result
Frequency Error	Pass
Occupied Bandwidth	Pass
Spread Bandwidth	Pass
Antenna Power	Pass
Spurious Emission Intensity	Pass
Secondary Radiated Emission	Pass

1. Frequency Error

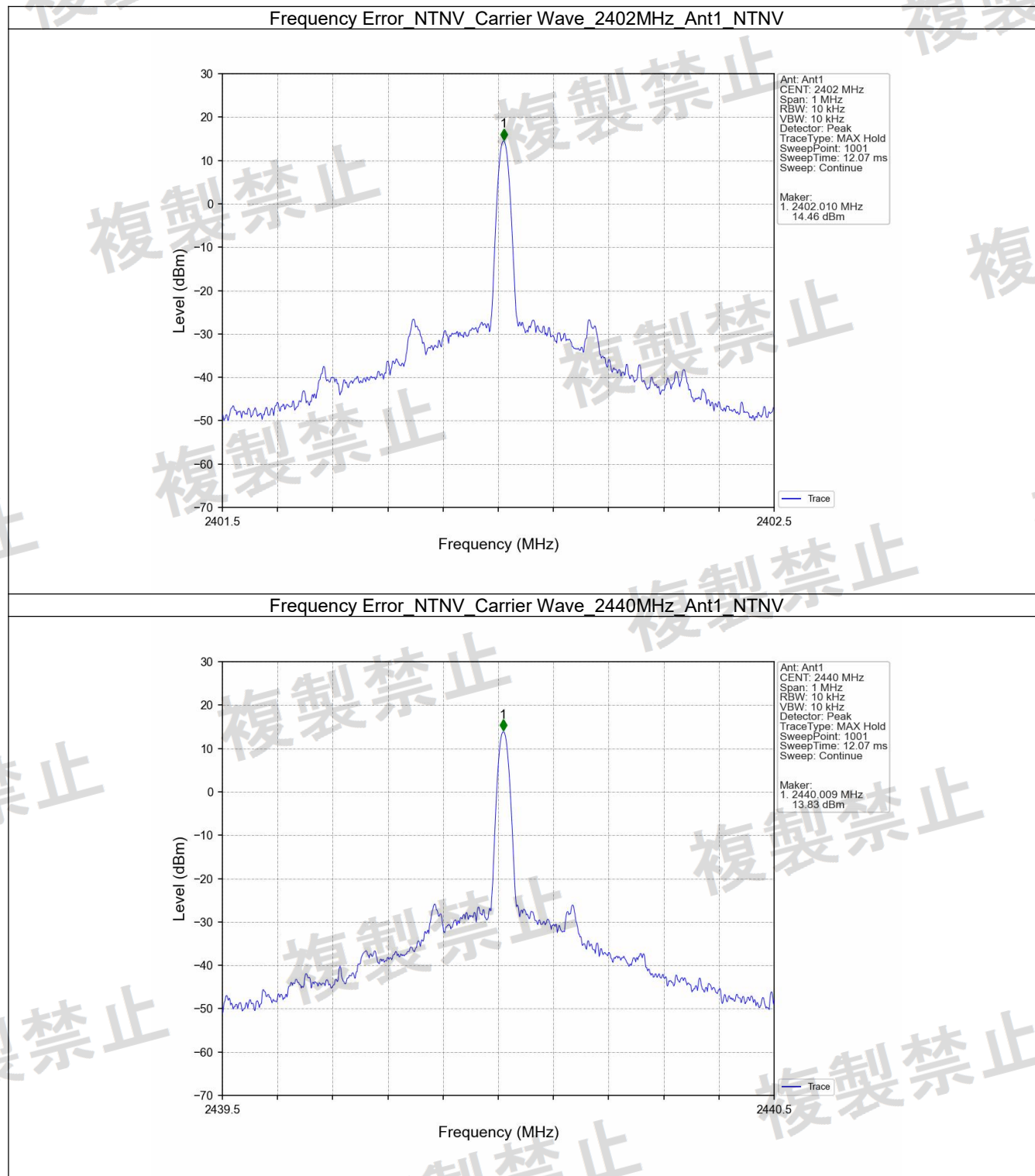
1.1 Test Result

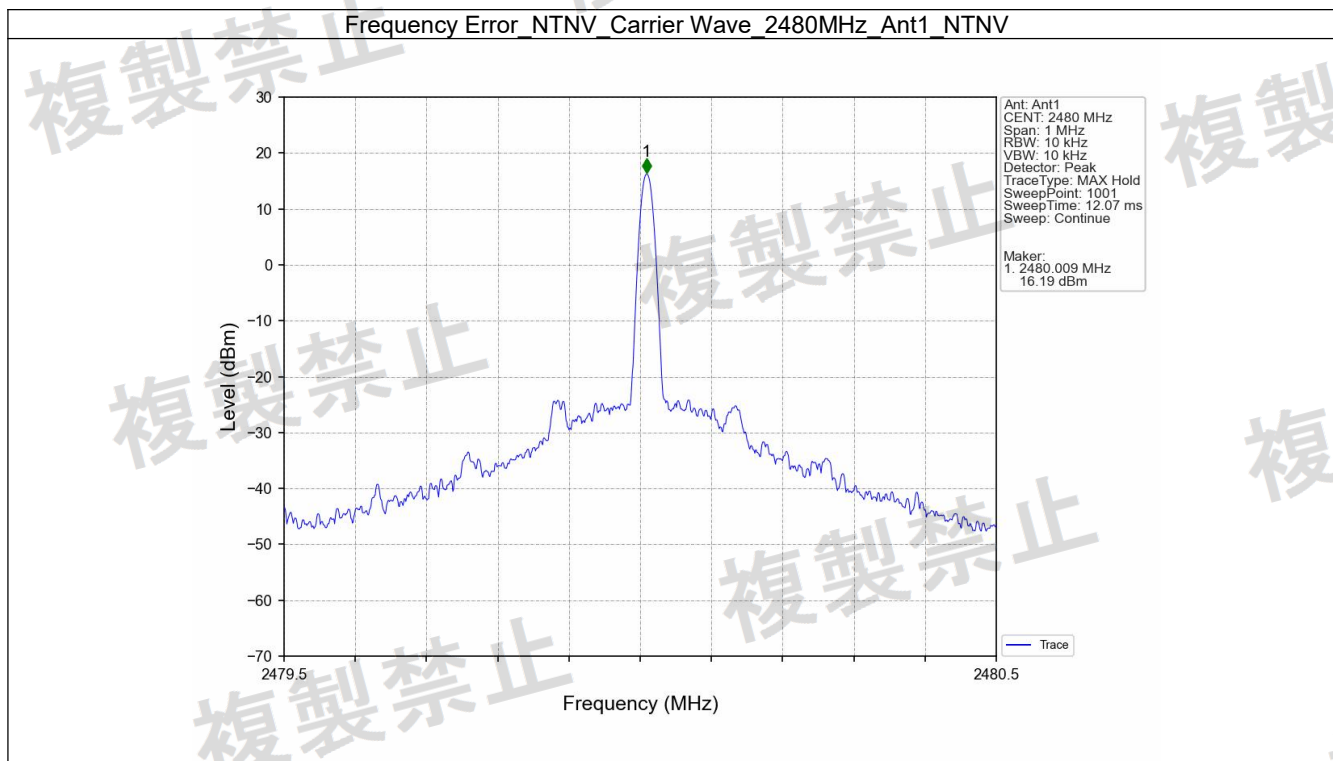
1.1.1 Ant1

Ant1							
ENV	Mode	TX Type	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
					Result	Limit	
NTNV	Carrier Wave	SISO	2402	2402.010	4.16	-50 to 50	Pass
			2440	2440.009	3.69	-50 to 50	Pass
			2480	2480.009	3.63	-50 to 50	Pass

1.2 Test Graph

1.2.1 Ant1





2. Occupied Bandwidth

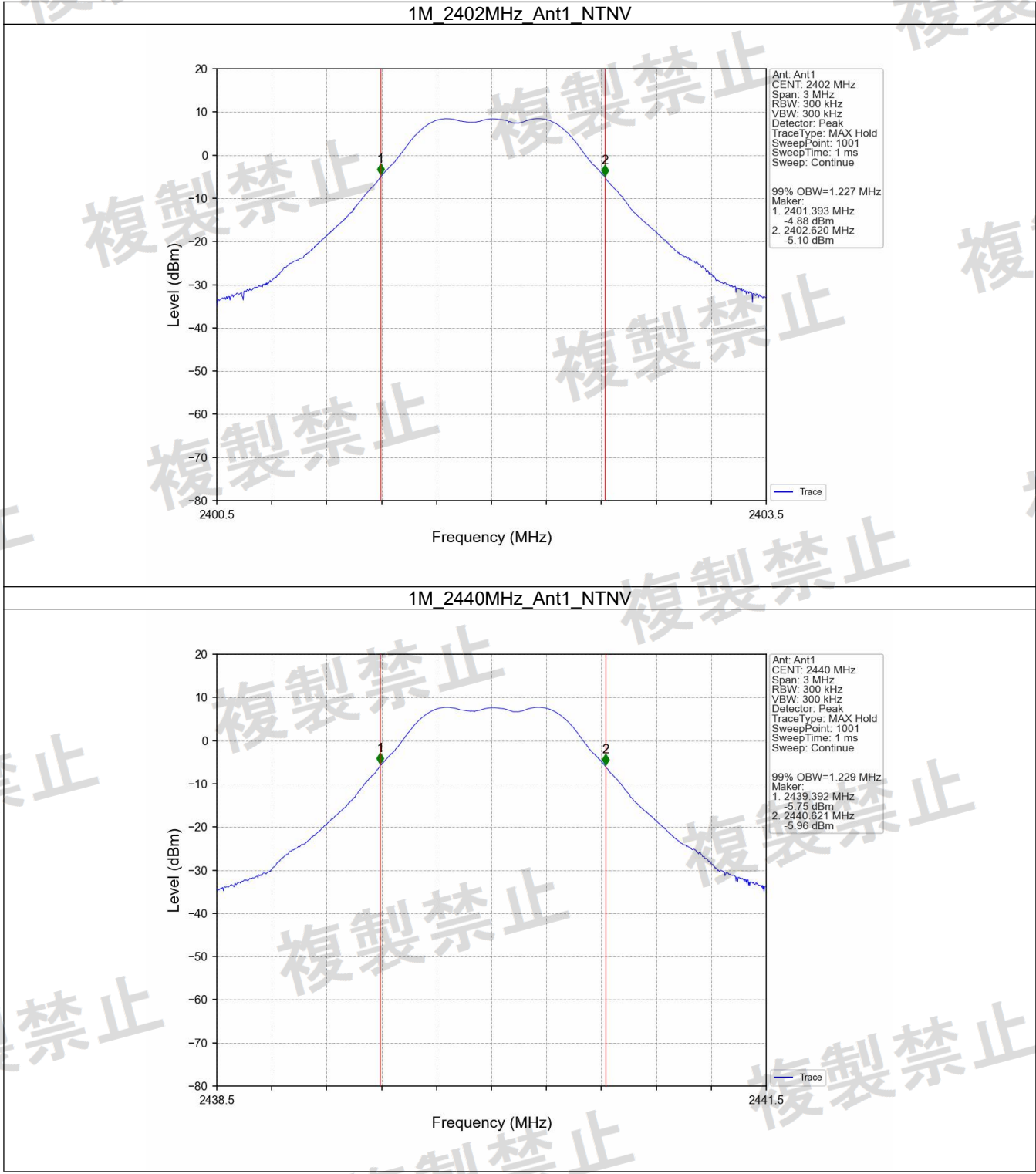
2.1 Test Result

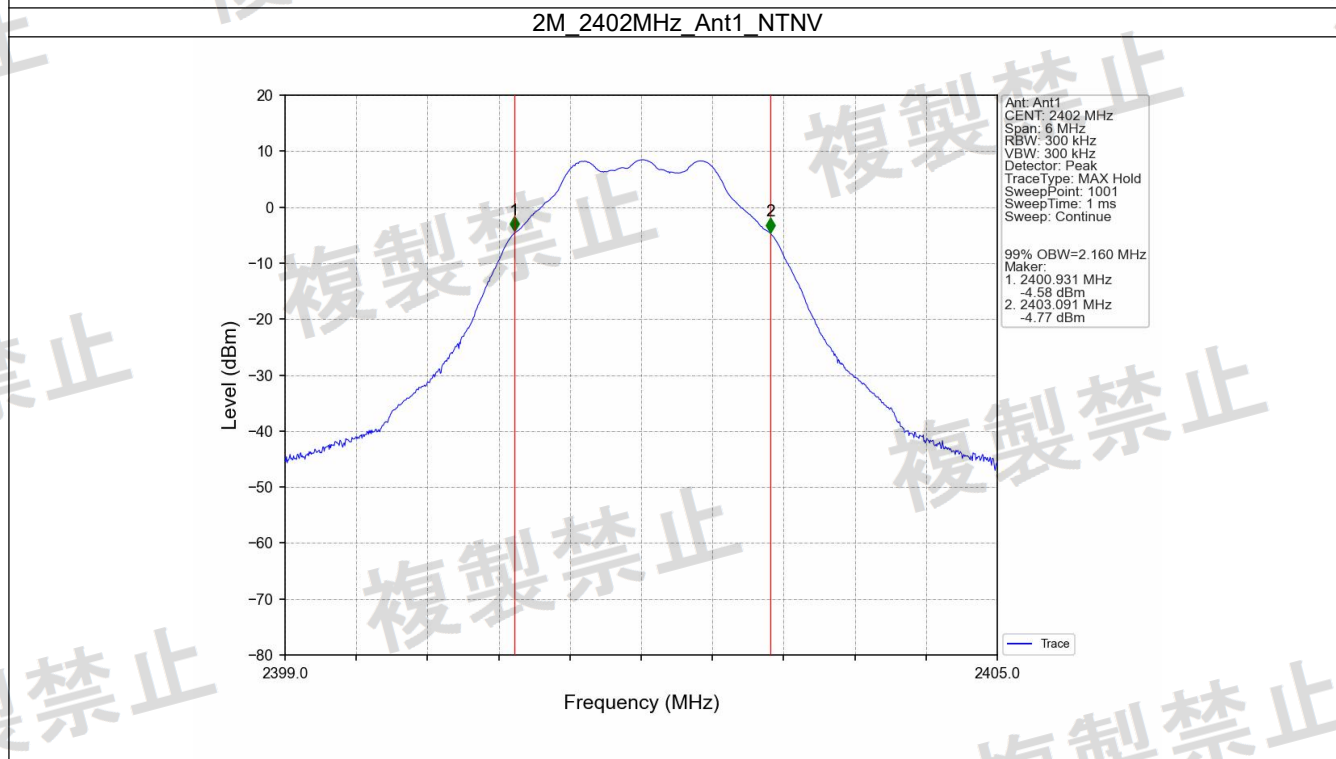
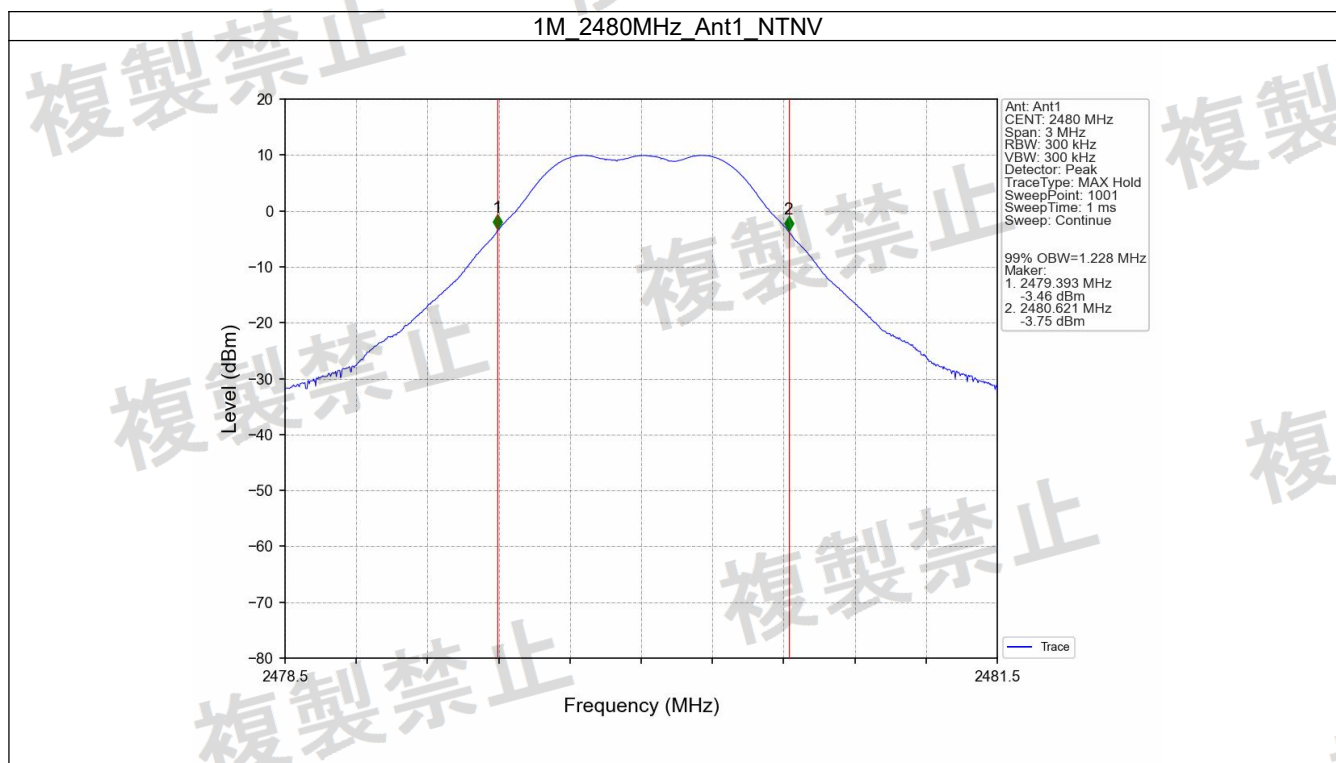
2.1.1 OBW

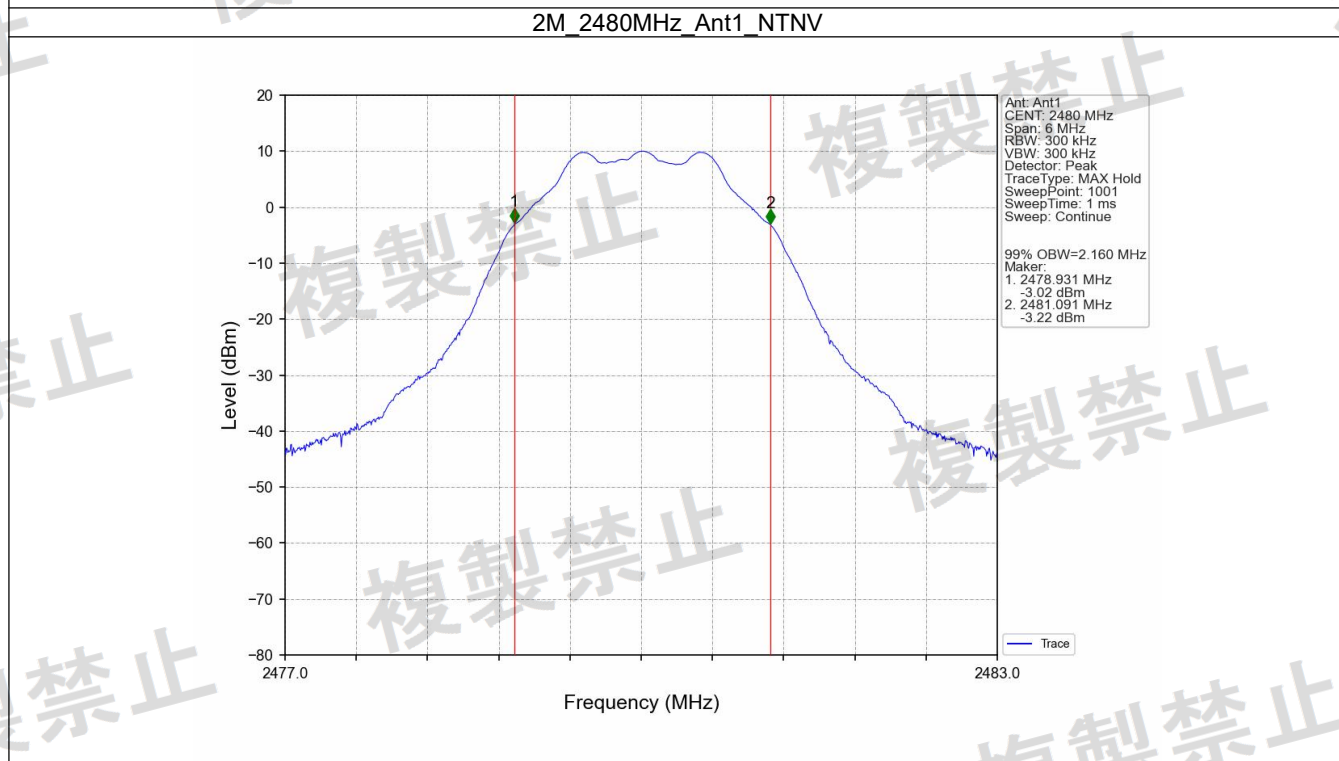
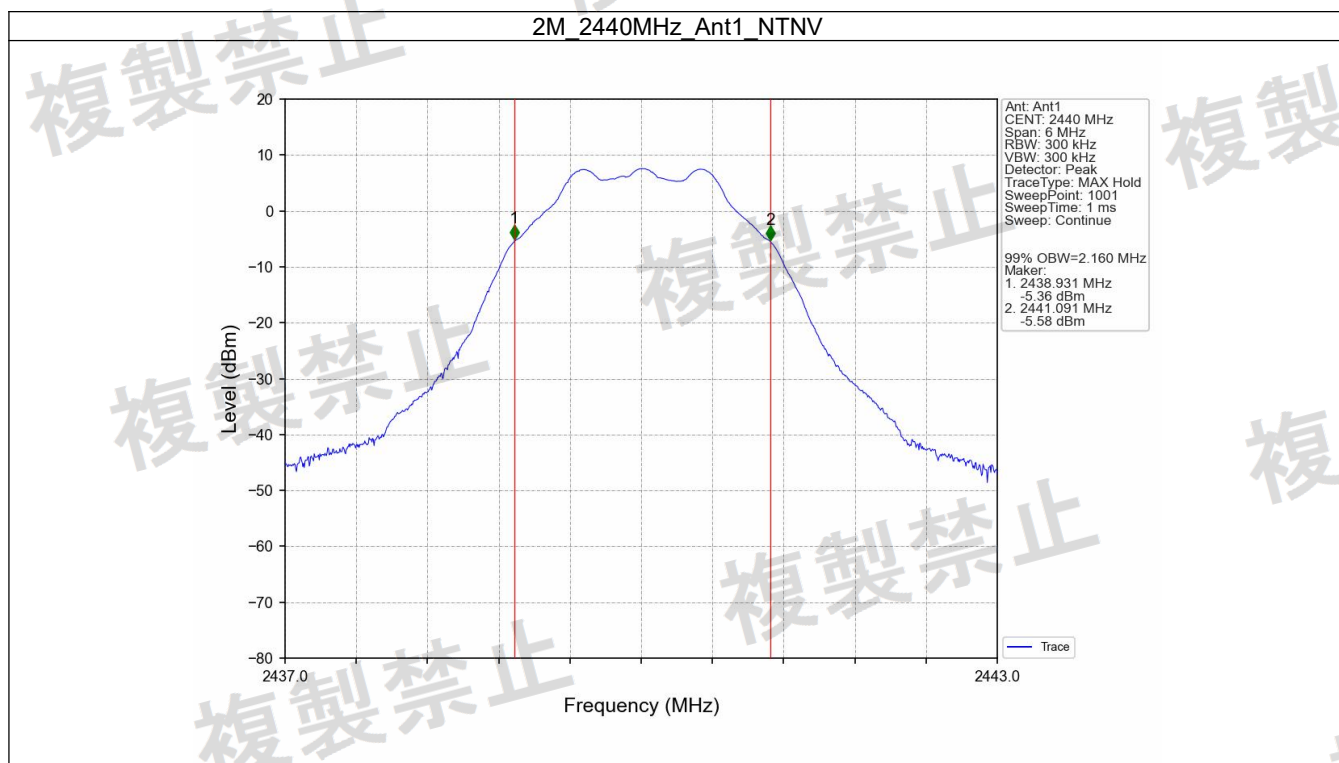
ENV	Mode	TX Type	Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
				ANT1	Limit	
NTNV	1M	SISO	2402	1.227	<=26	Pass
			2440	1.229	<=26	Pass
			2480	1.228	<=26	Pass
	2M	SISO	2402	2.160	<=26	Pass
			2440	2.160	<=26	Pass
			2480	2.160	<=26	Pass

2.2 Test Graph

2.2.1 OBW







3. Spread Bandwidth

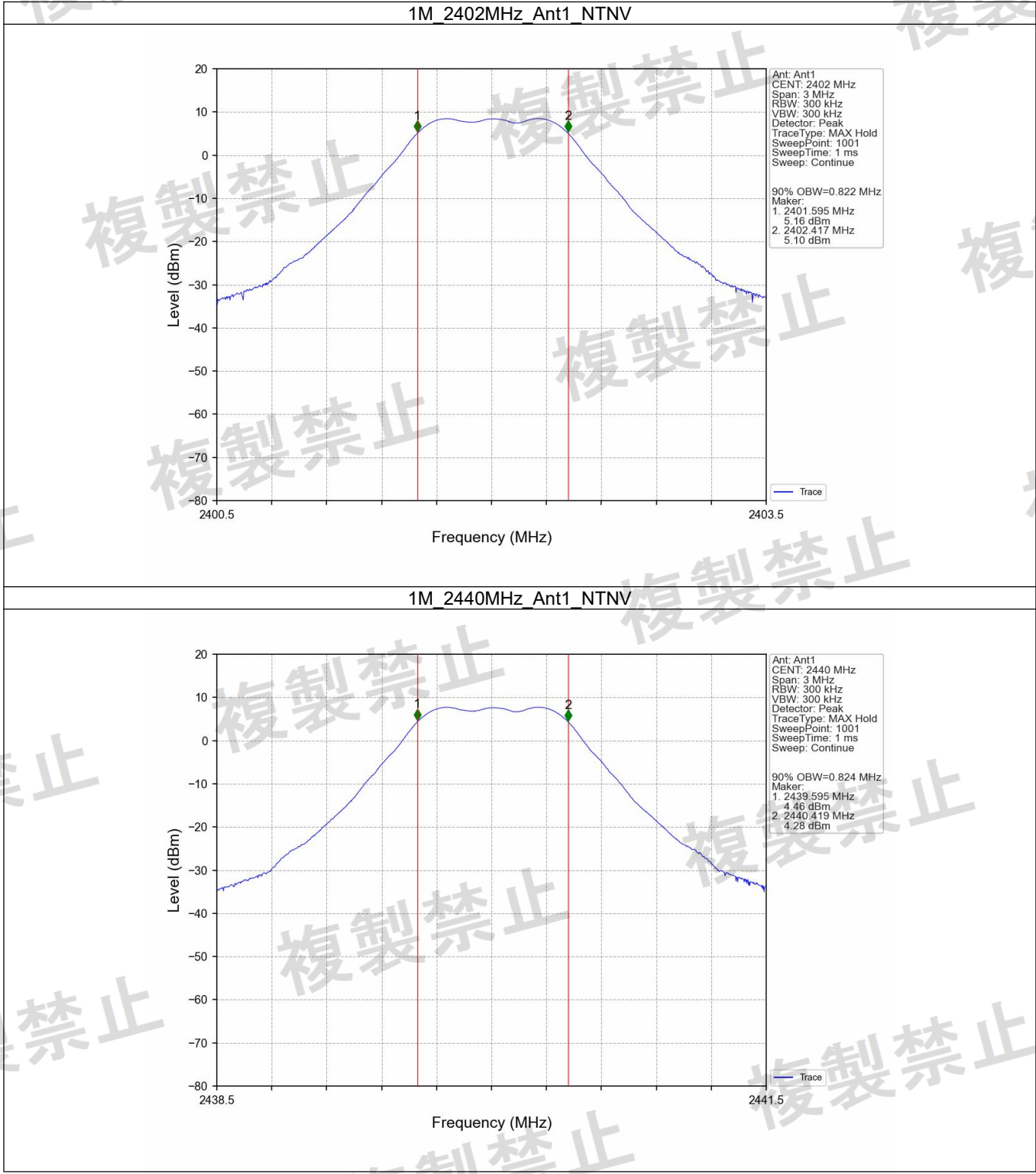
3.1 Test Result

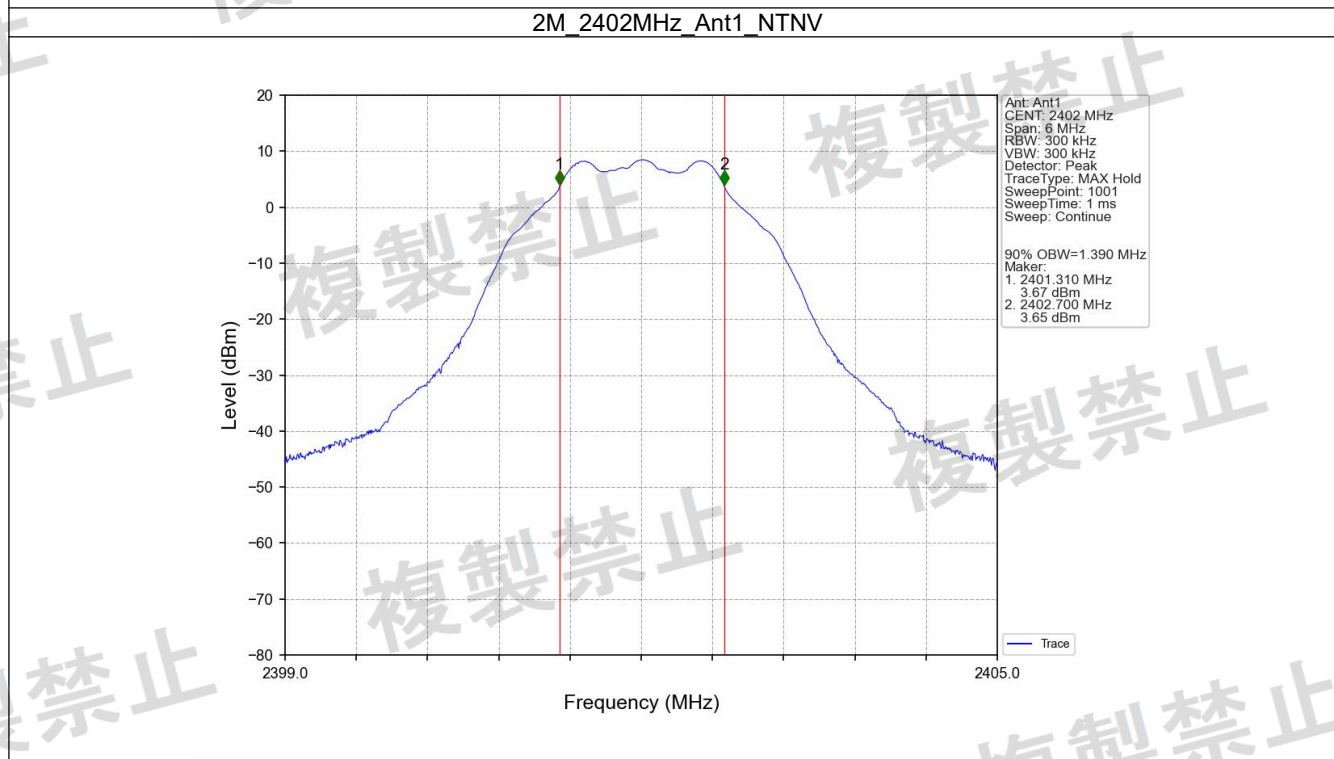
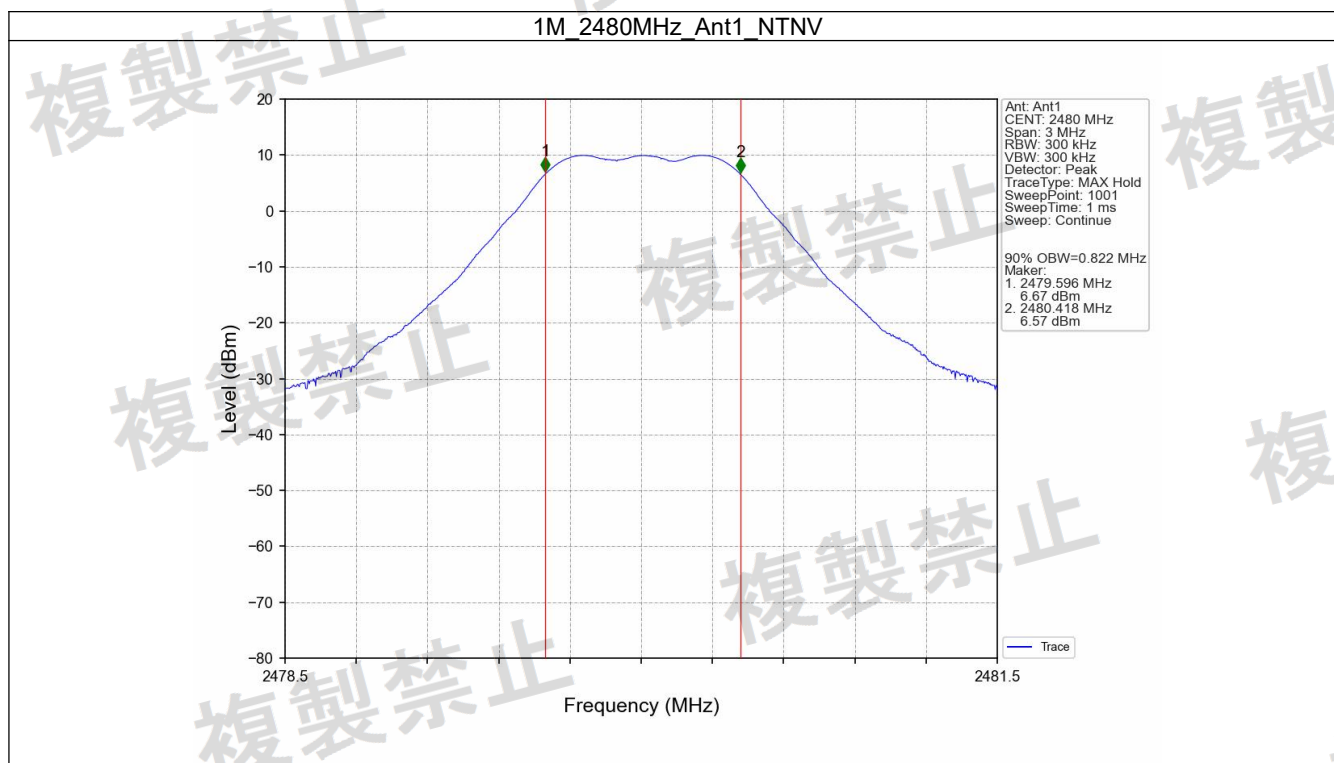
3.1.1 SPBW

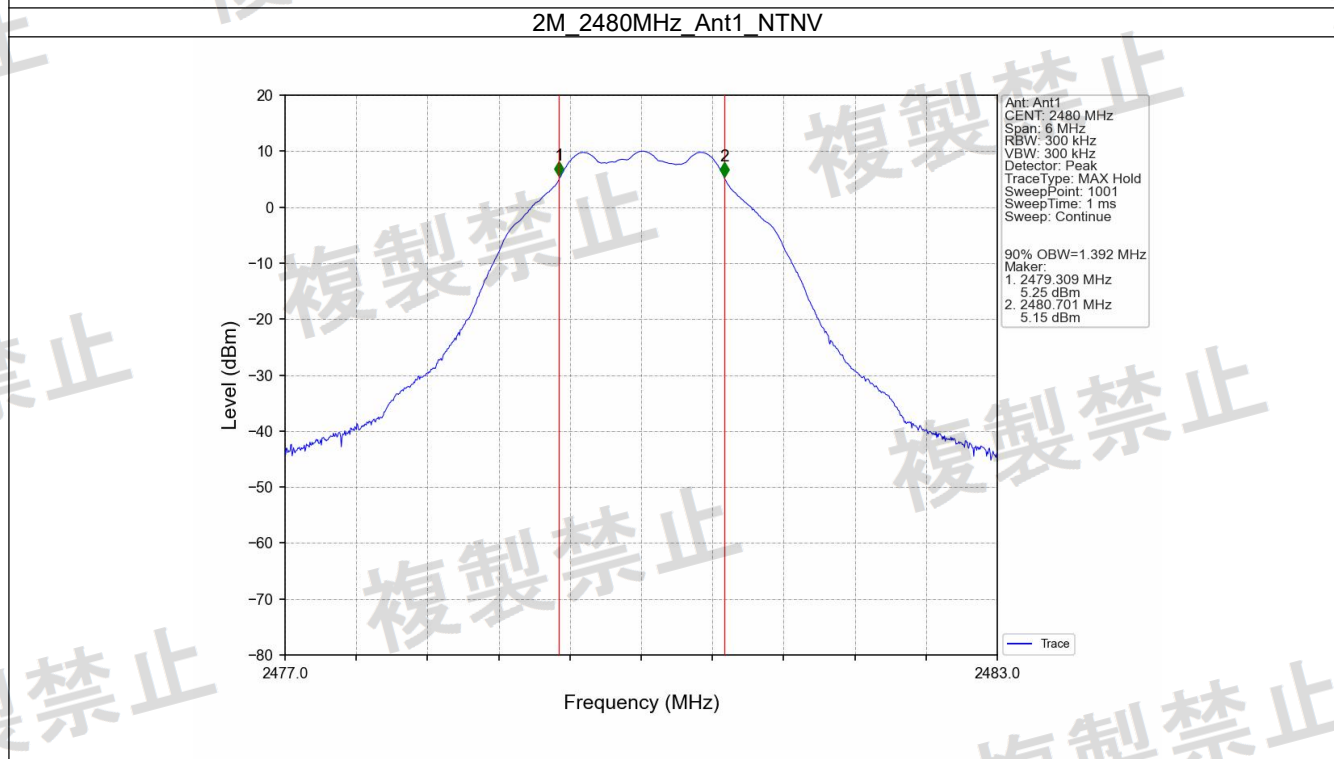
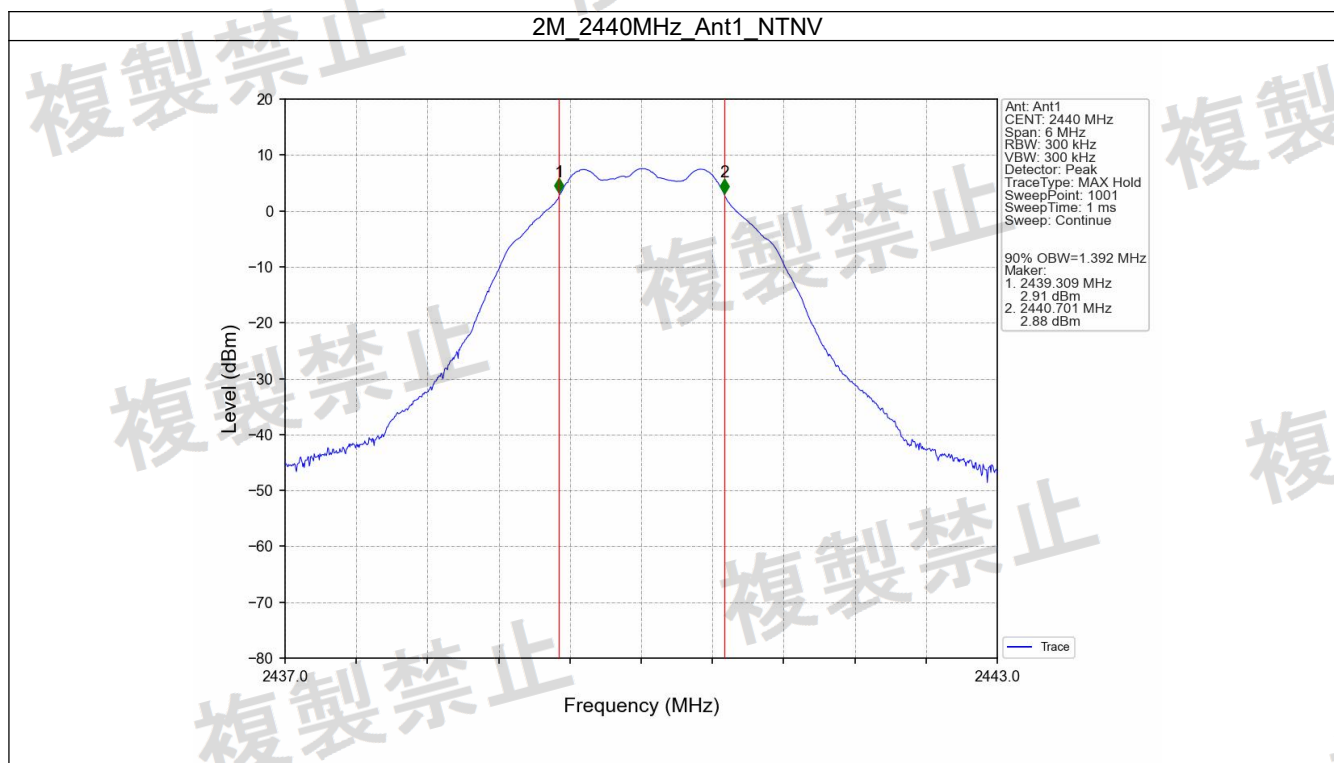
ENV	Mode	TX Type	Frequency (MHz)	Spread Bandwidth (MHz)		Verdict
				ANT1	Limit	
NTNV	1M	SISO	2402	0.822	≥ 0.5	Pass
			2440	0.824	≥ 0.5	Pass
			2480	0.822	≥ 0.5	Pass
	2M	SISO	2402	1.390	≥ 0.5	Pass
			2440	1.392	≥ 0.5	Pass
			2480	1.392	≥ 0.5	Pass

3.2 Test Graph

3.2.1 SPBW







4. Antenna Power

4.1 Test Result

4.1.1 Power

ENV	Mode	TX Type	Frequency (MHz)	ANT	Antenna Power (mW)		Nominal Power (mW)	Tolerance (%)		Verdict
					Measured	Limit		Measured	Limit	
NTNV	1M	SISO	2402	1	6.632	<=10.00	6.500	2.03	20	Pass
			2440	1	5.580	<=10.00	6.500	-14.15	20	Pass
			2480	1	5.305	<=10.00	6.500	-18.38	20	Pass
	2M	SISO	2402	1	6.502	<=10.00	6.000	8.37	20	Pass
			2440	1	5.956	<=10.00	6.000	-0.73	20	Pass
			2480	1	5.613	<=10.00	6.000	-6.45	20	Pass

4.1.2 EIRP

ENV	Mode	TX Type	Frequency (MHz)	ANT	Gain (dBi)	Antenna Power (dBm)	EIRP (dBm)		Verdict
							Result	Limit	
NTNV	1M	SISO	2402	1	2.7	8.22	10.92	<=12.14	Pass
			2440	1	2.7	7.47	10.17	<=12.14	Pass
			2480	1	2.7	7.25	9.95	<=12.14	Pass
	2M	SISO	2402	1	2.7	8.13	10.83	<=12.14	Pass
			2440	1	2.7	7.75	10.45	<=12.14	Pass
			2480	1	2.7	7.49	10.19	<=12.14	Pass

EIRP(dBm)=Antenna Power (dBm)+Gain (dBi)

5. Spurious Emission Intensity

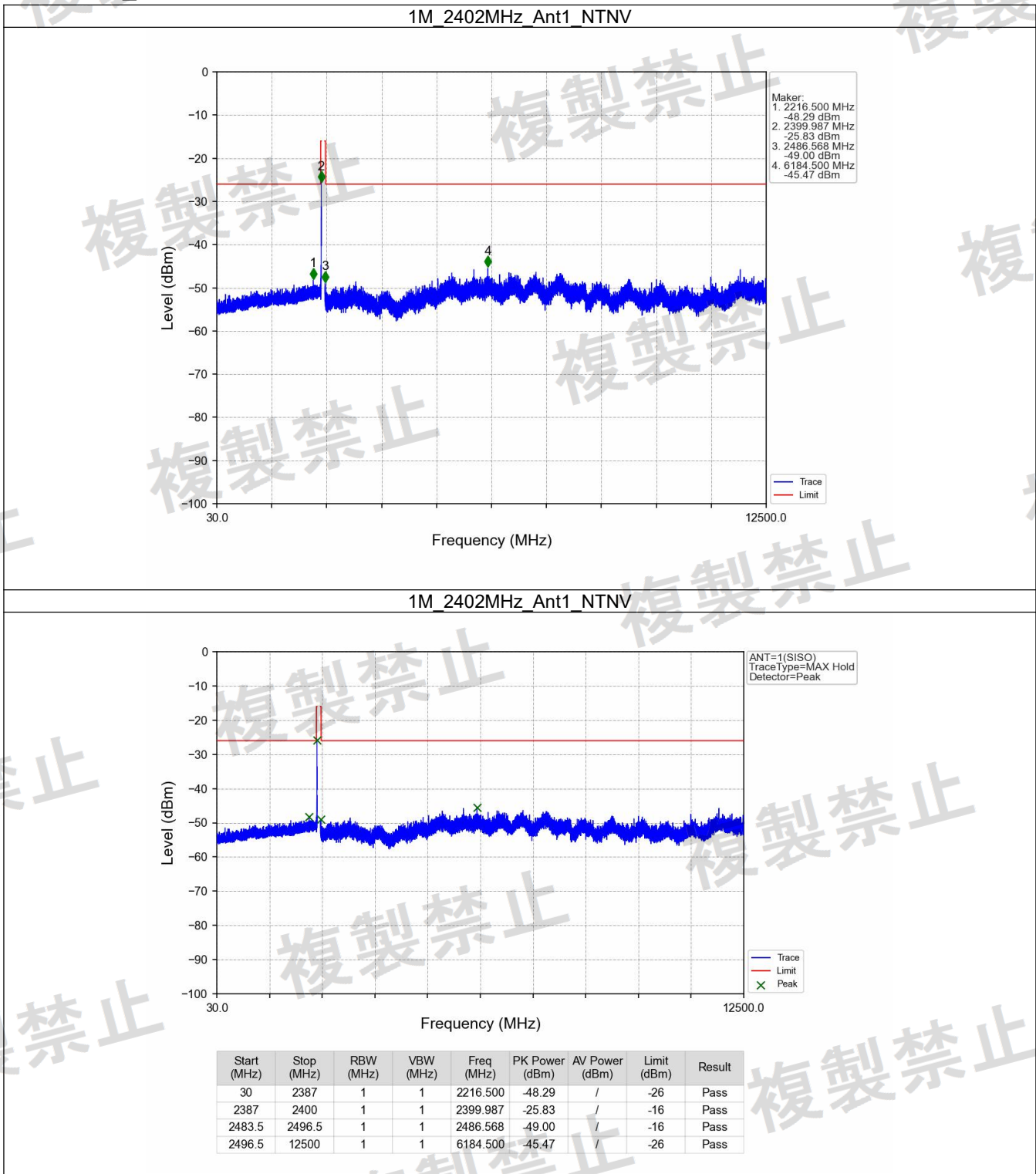
5.1 Test Result

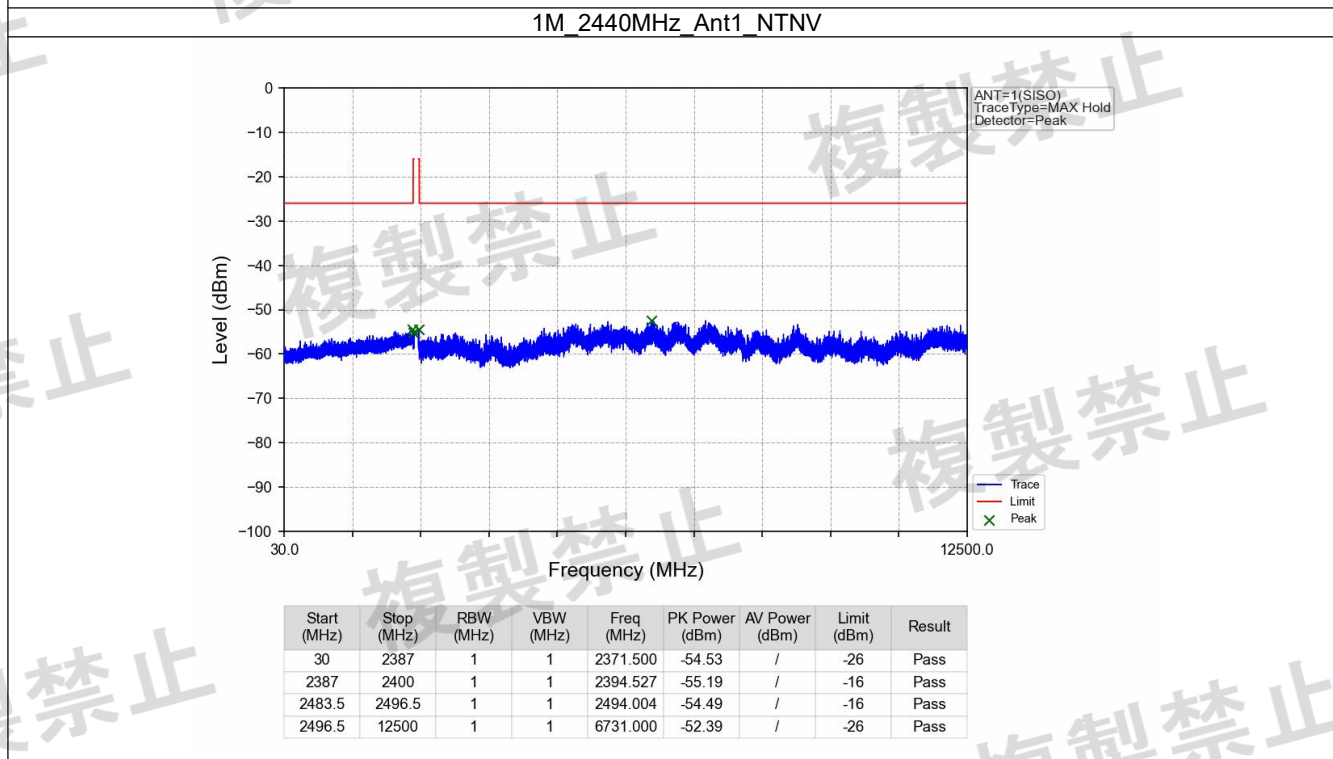
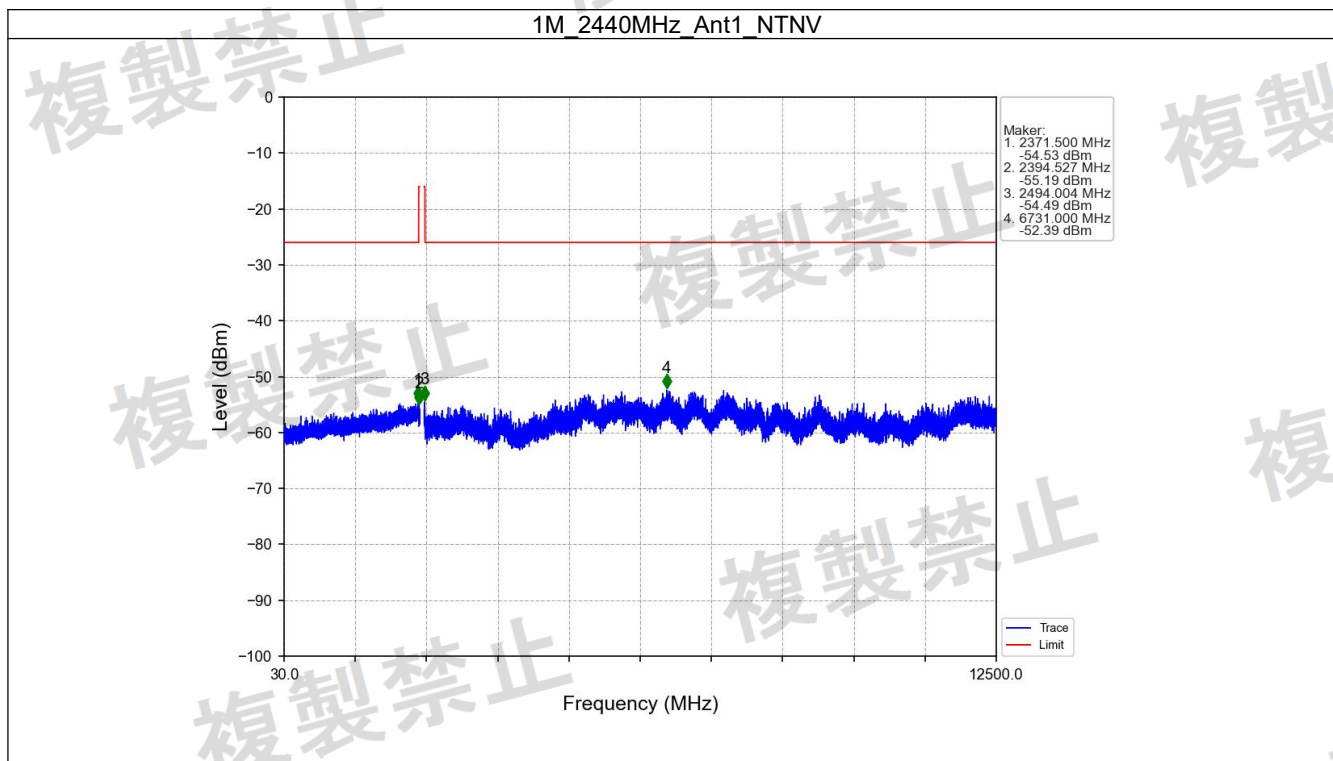
5.1.1 TxSe_NTNV

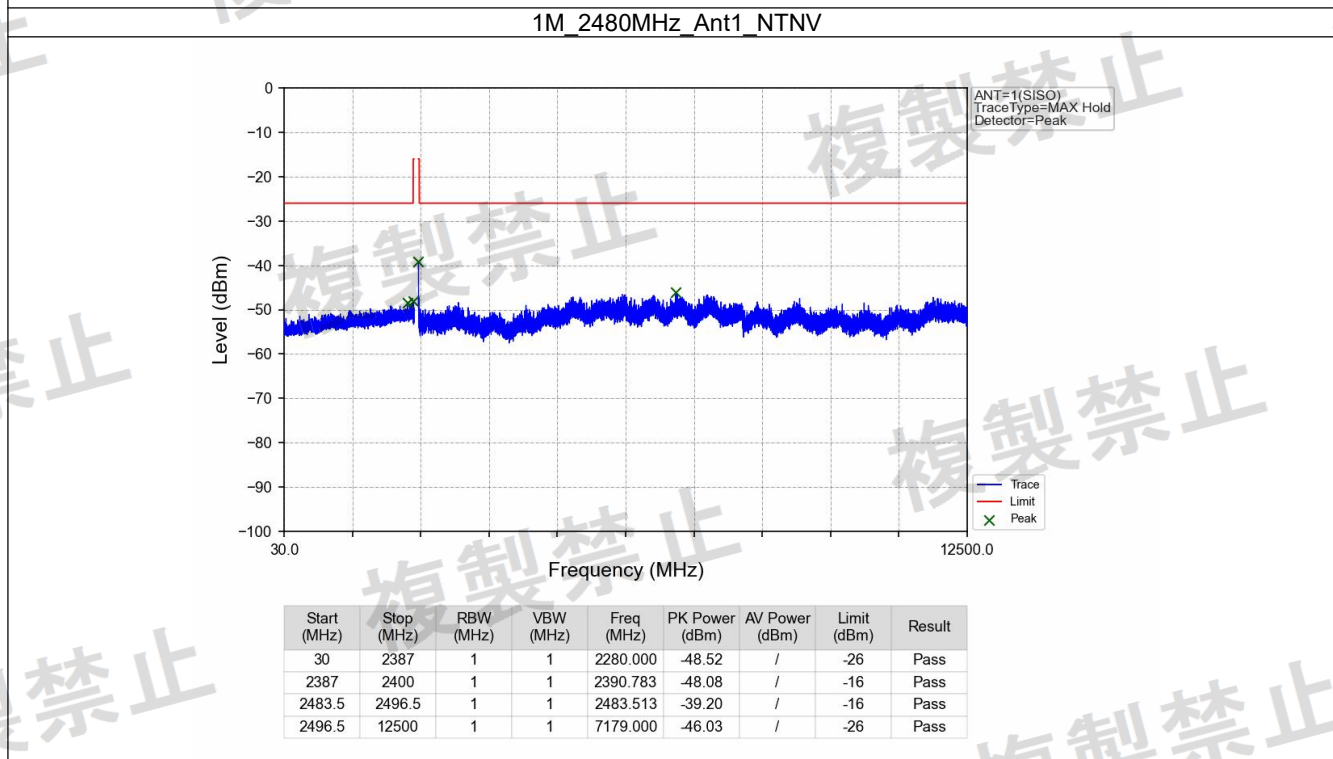
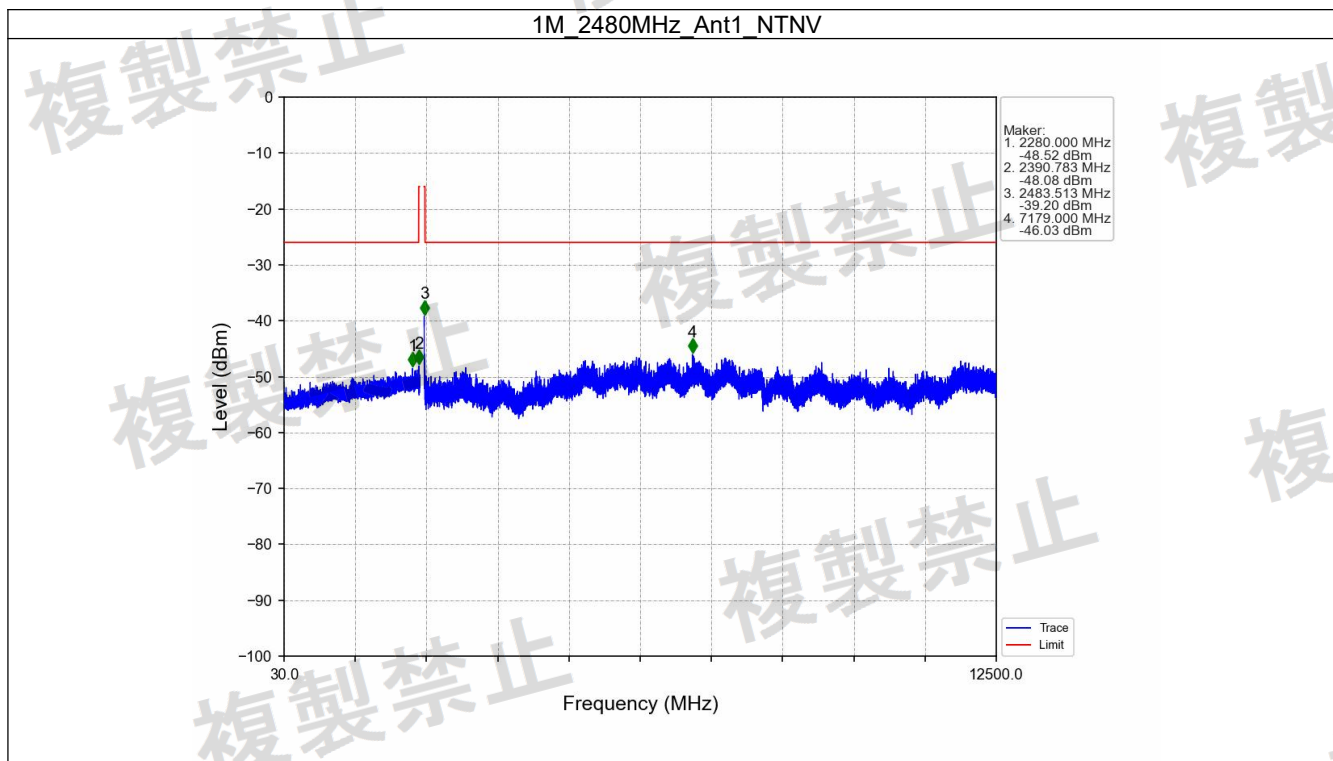
NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
1M	SISO	2402	1	30	2387	2216.5	-48.29	0.015	/	/	2.5	Pass
				2387	2400	2399.987	-25.83	2.612	/	/	25	Pass
				2483.5	2496.5	2486.568	-49.00	0.013	/	/	25	Pass
				2496.5	12500	6184.5	-45.47	0.028	/	/	2.5	Pass
		2440	1	30	2387	2371.5	-54.53	0.004	/	/	2.5	Pass
				2387	2400	2394.527	-55.19	0.003	/	/	25	Pass
				2483.5	2496.5	2494.004	-54.49	0.004	/	/	25	Pass
				2496.5	12500	6731	-52.39	0.006	/	/	2.5	Pass
		2480	1	30	2387	2280	-48.52	0.014	/	/	2.5	Pass
				2387	2400	2390.783	-48.08	0.016	/	/	25	Pass
				2483.5	2496.5	2483.513	-39.20	0.120	/	/	25	Pass
				2496.5	12500	7179	-46.03	0.025	/	/	2.5	Pass
2M	SISO	2402	1	30	2387	2116.5	-48.76	0.013	/	/	2.5	Pass
				2387	2400	2399.987	-15.90	25.704	-19.33	11.668	25	Pass
				2483.5	2496.5	2486.061	-48.30	0.015	/	/	25	Pass
				2496.5	12500	7789	-46.06	0.025	/	/	2.5	Pass
		2440	1	30	2387	2169	-48.56	0.014	/	/	2.5	Pass
				2387	2400	2398.18	-49.53	0.011	/	/	25	Pass
				2483.5	2496.5	2491.261	-47.99	0.016	/	/	25	Pass
				2496.5	12500	7221	-44.64	0.034	/	/	2.5	Pass
		2480	1	30	2387	2018.5	-48.04	0.016	/	/	2.5	Pass
				2387	2400	2392.018	-48.66	0.014	/	/	25	Pass
				2483.5	2496.5	2483.552	-36.03	0.249	/	/	25	Pass
				2496.5	12500	7797	-45.72	0.027	/	/	2.5	Pass

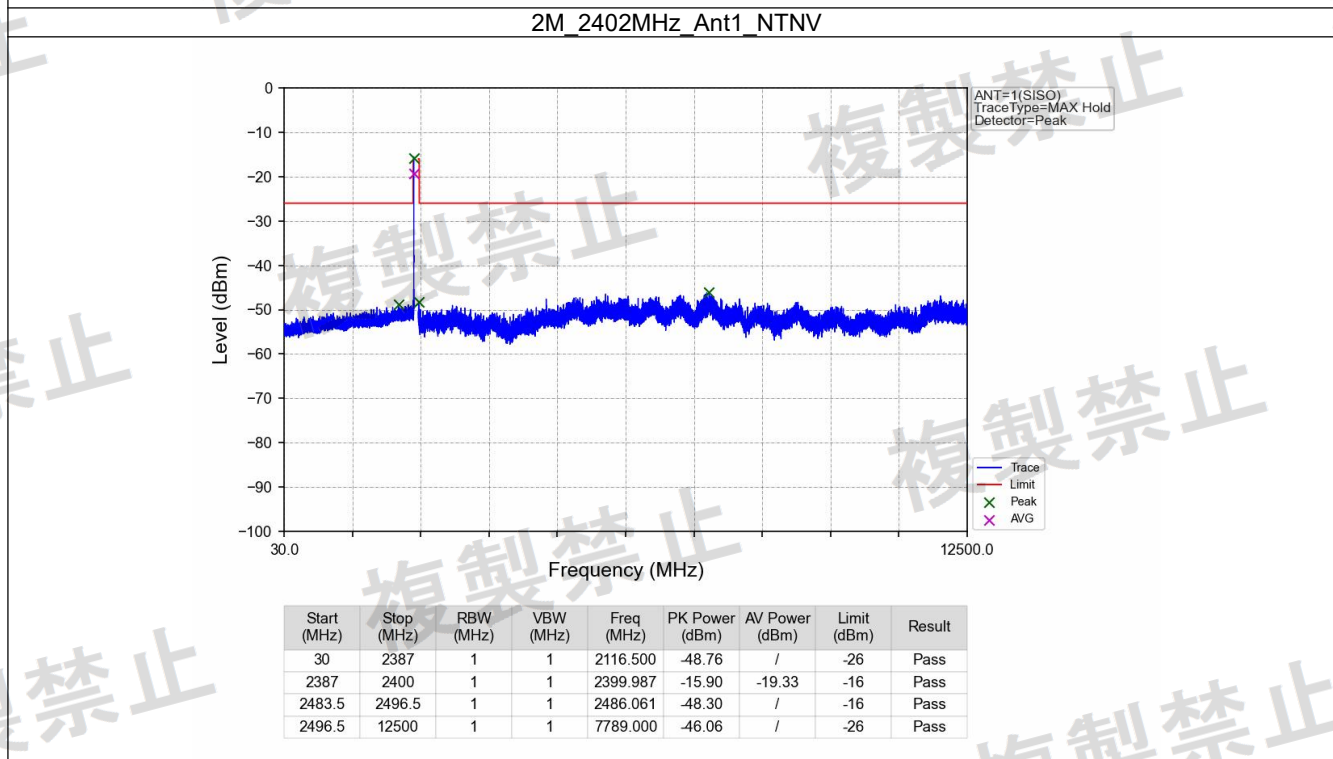
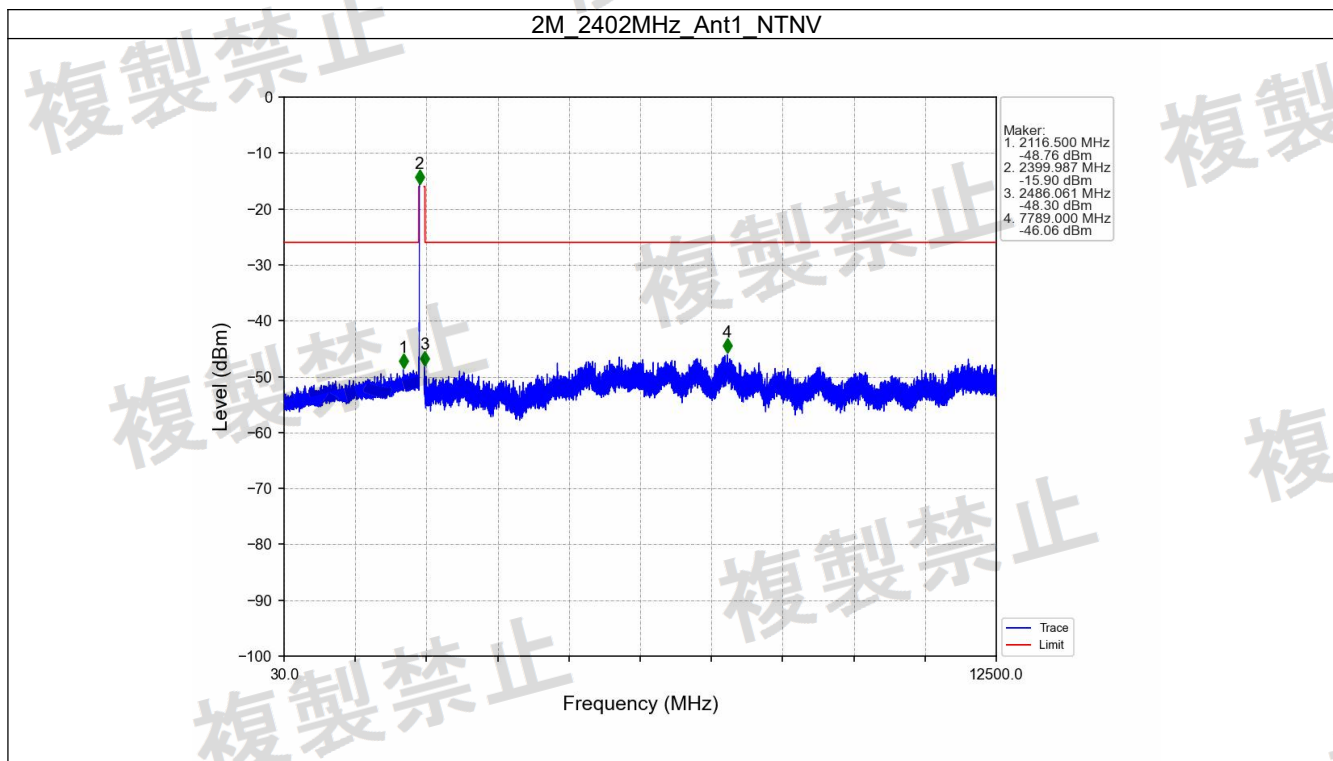
5.2 Test Graph

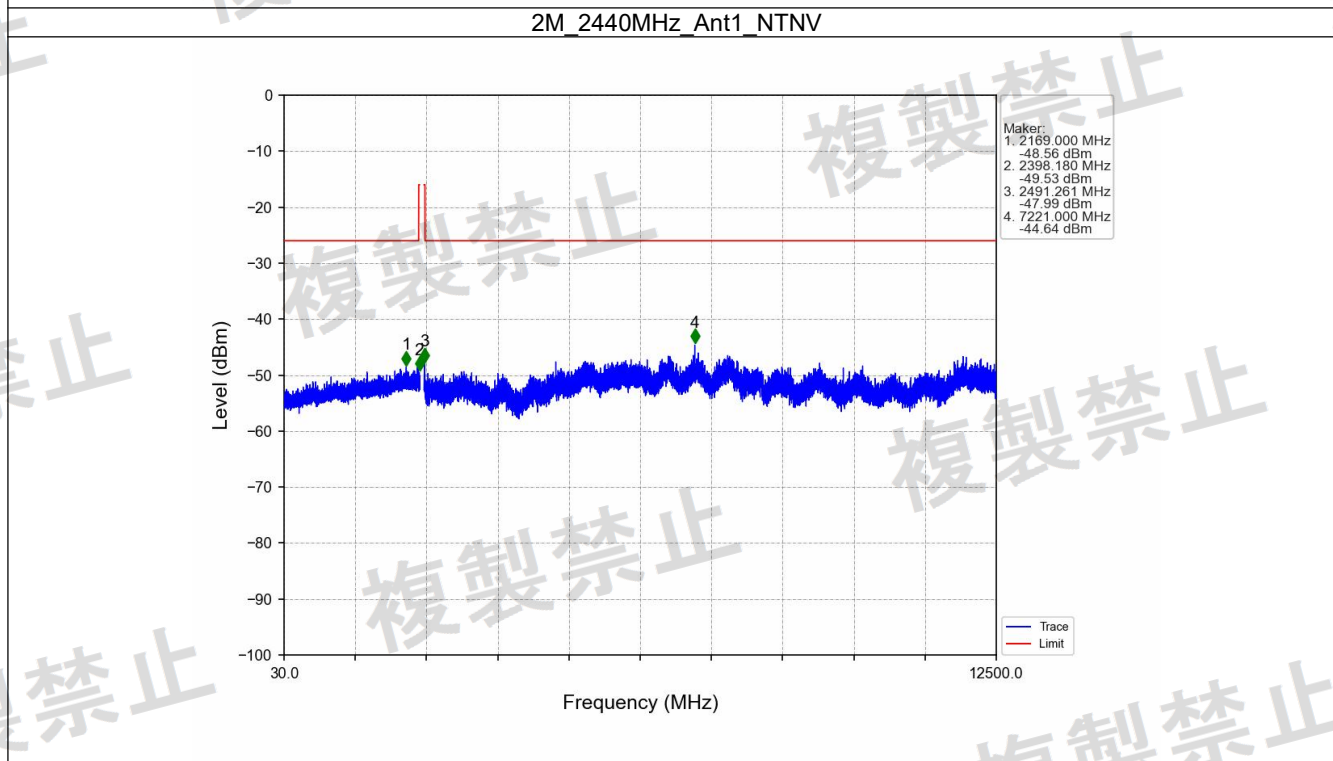
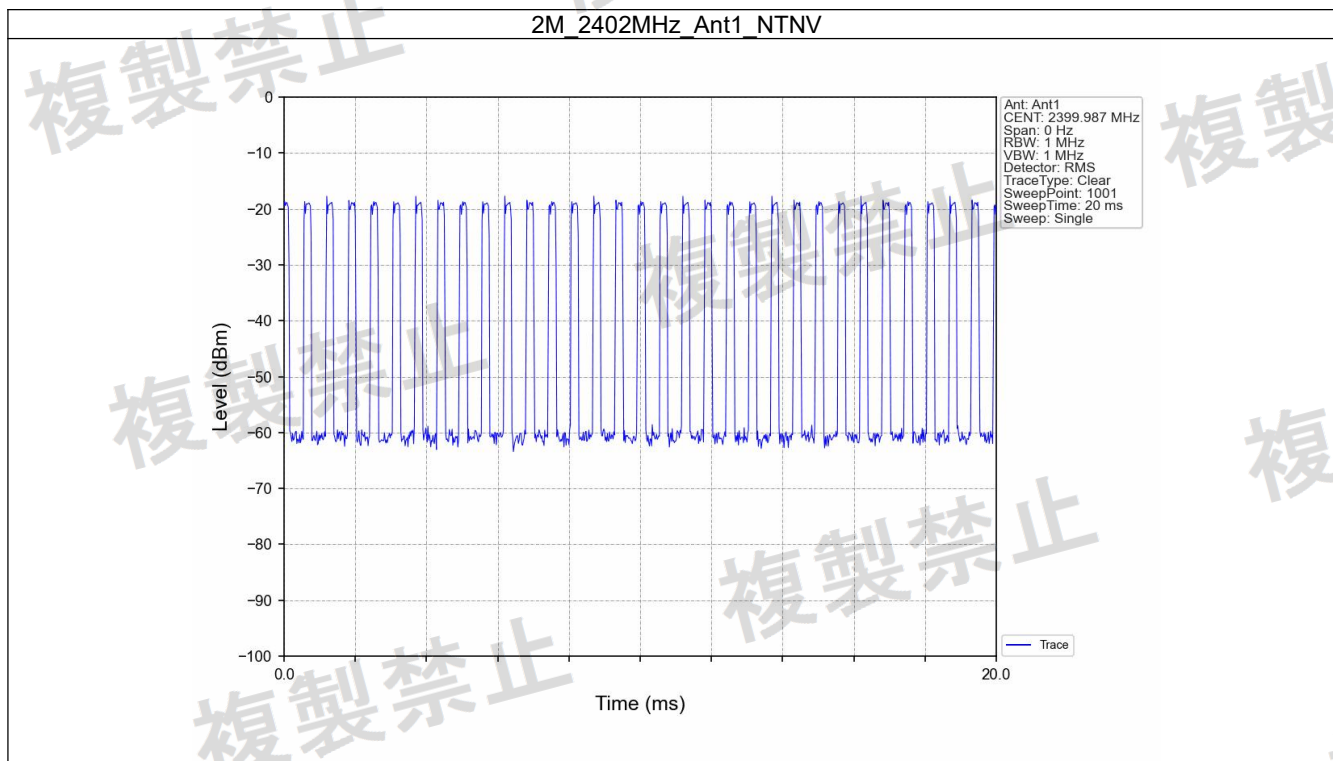
5.2.1 TxSe_NTNV

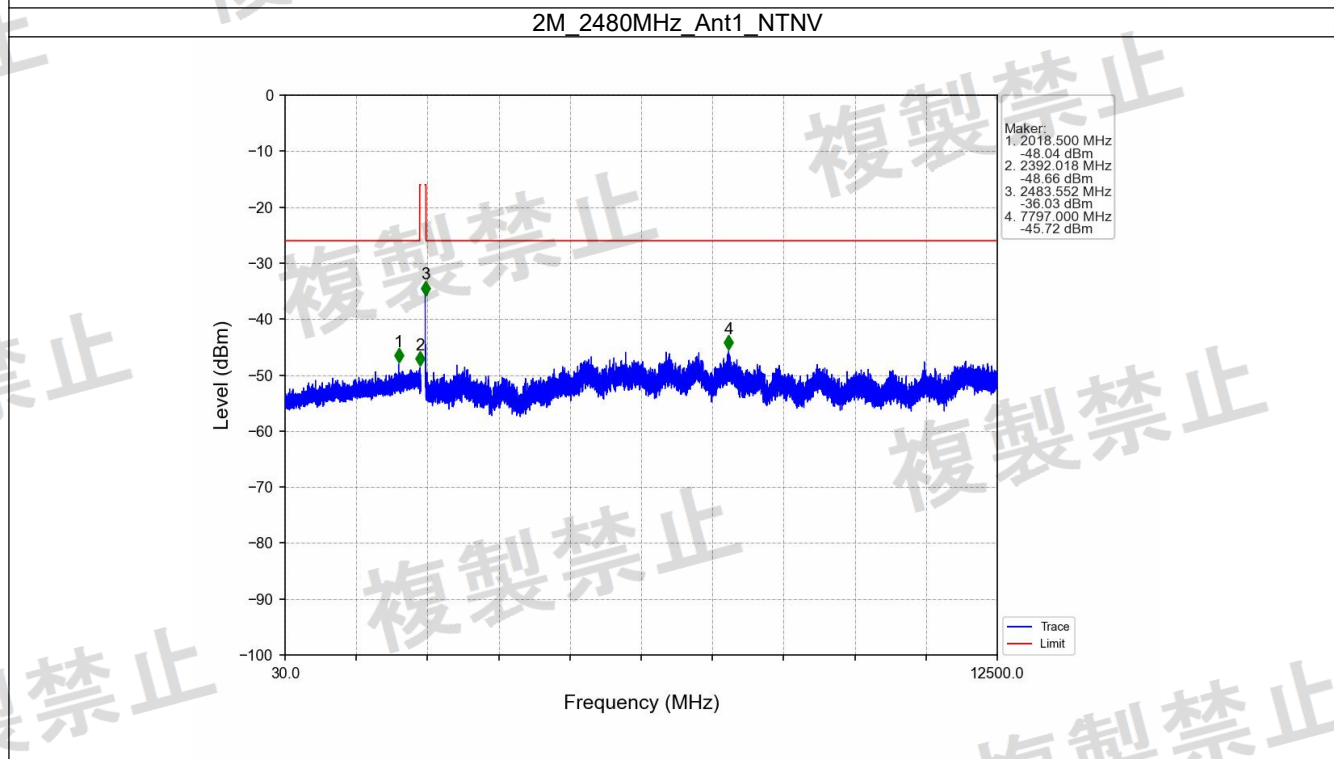
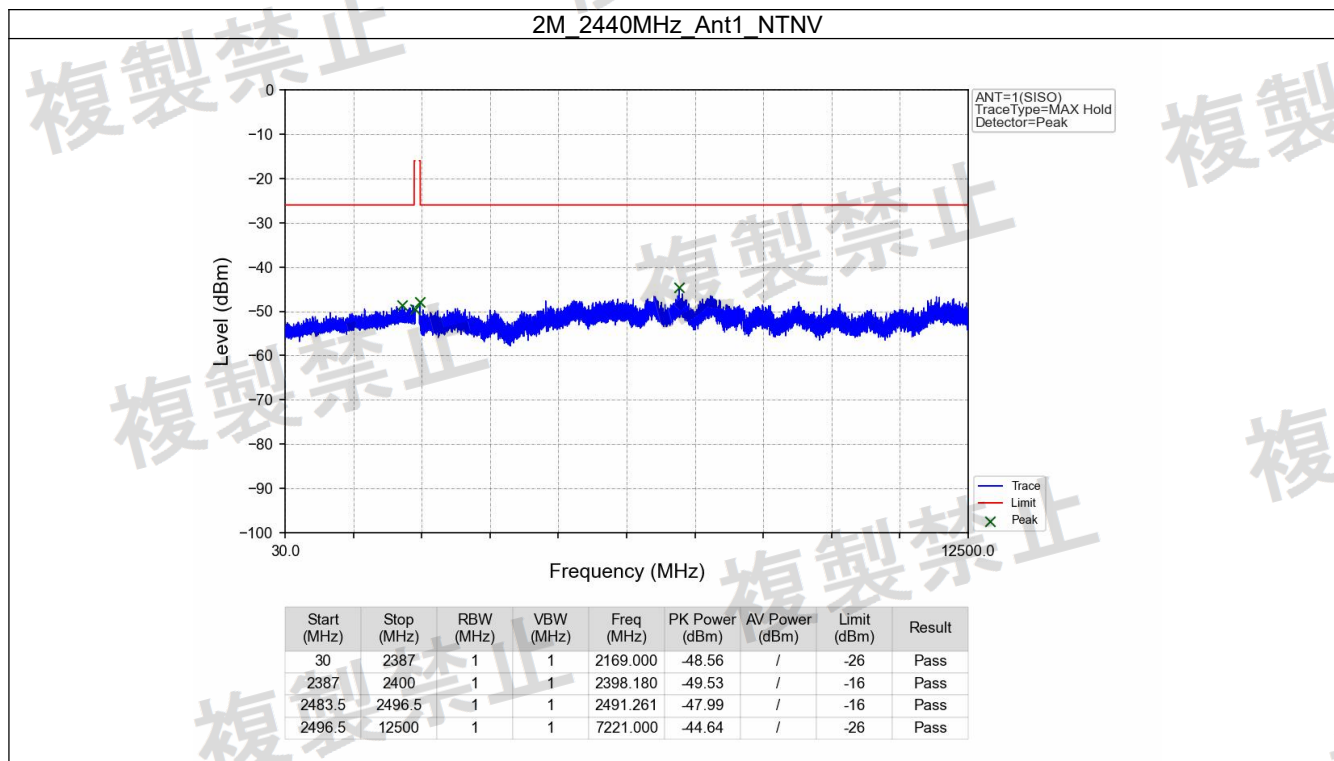


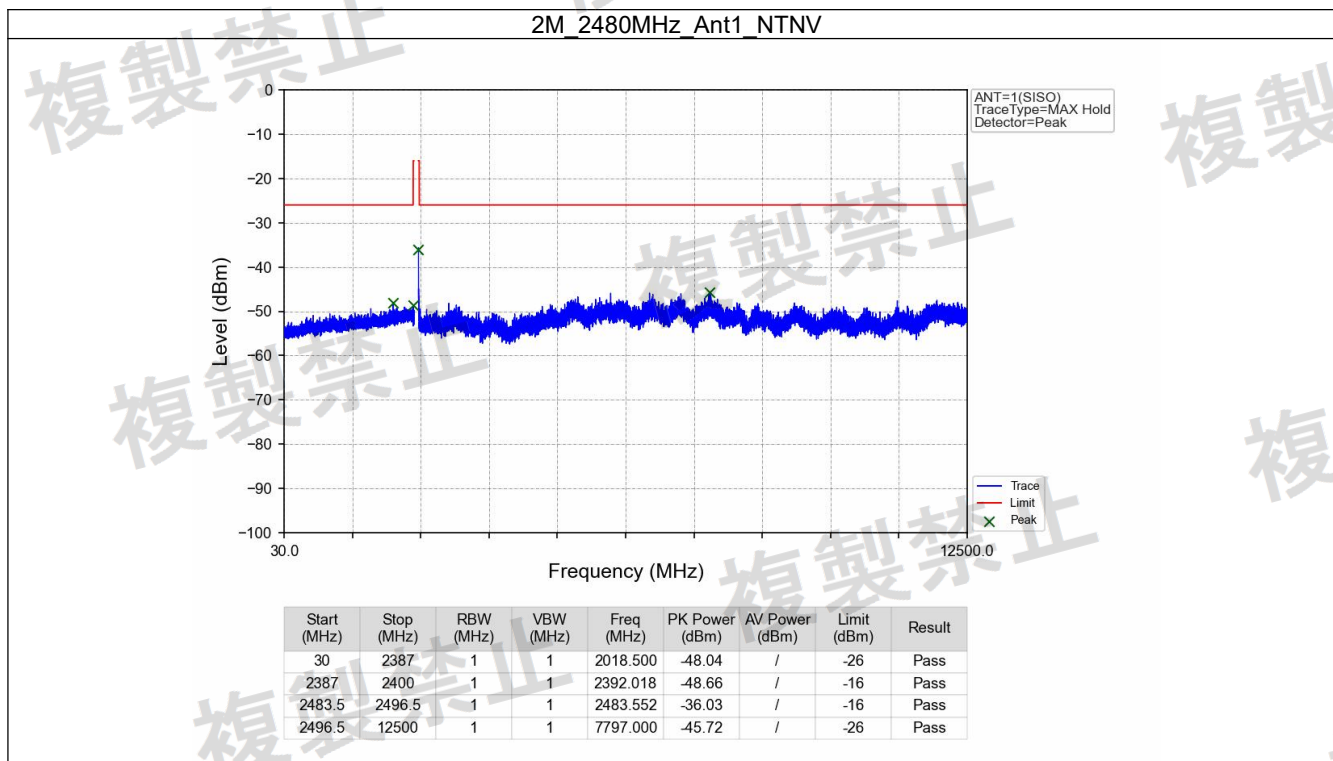












6. Secondary Radiated Emission

6.1 Test Result

6.1.1 RxSe_NTNV

NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
1M	SISO	2402	1	30	1000	948.45	-72.90	0.051	/	/	4	Pass
				1000	12500	2471	-62.07	0.621	/	/	20	Pass
		2440	1	30	1000	948.4	-70.10	0.098	/	/	4	Pass
				1000	12500	5227	-60.38	0.916	/	/	20	Pass
		2480	1	30	1000	948.4	-72.17	0.061	/	/	4	Pass
				1000	12500	1754	-57.12	1.941	/	/	20	Pass
2M	SISO	2402	1	30	1000	948.45	-72.93	0.051	/	/	4	Pass
				1000	12500	5204.5	-59.29	1.178	/	/	20	Pass
		2440	1	30	1000	948.5	-72.86	0.052	/	/	4	Pass
				1000	12500	5197	-61.20	0.759	/	/	20	Pass
		2480	1	30	1000	948.35	-71.20	0.076	/	/	4	Pass
				1000	12500	5198	-58.25	1.496	/	/	20	Pass

6.2 Test Graph

6.2.1 RxSe_NTNV

