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Annex for Bluetooth low Energy

Test Report No.: CTL2606052112-MIC

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MIC: 219-269340

1. Frequency Error

1.1 Test Result

1.1.1 Ant1

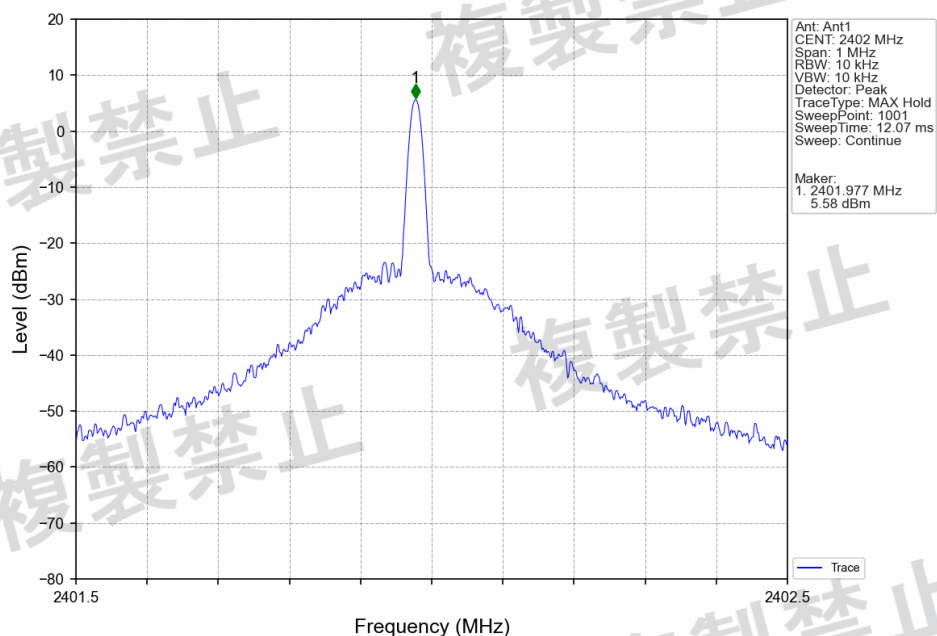
Ant1							
ENV	Mode	TX Type	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
					Result	Limit	
NTNV	Carrier Wave	SISO	2402	2401.977	-9.58	-50 to 50	Pass
			2480	2479.977	-9.27	-50 to 50	Pass

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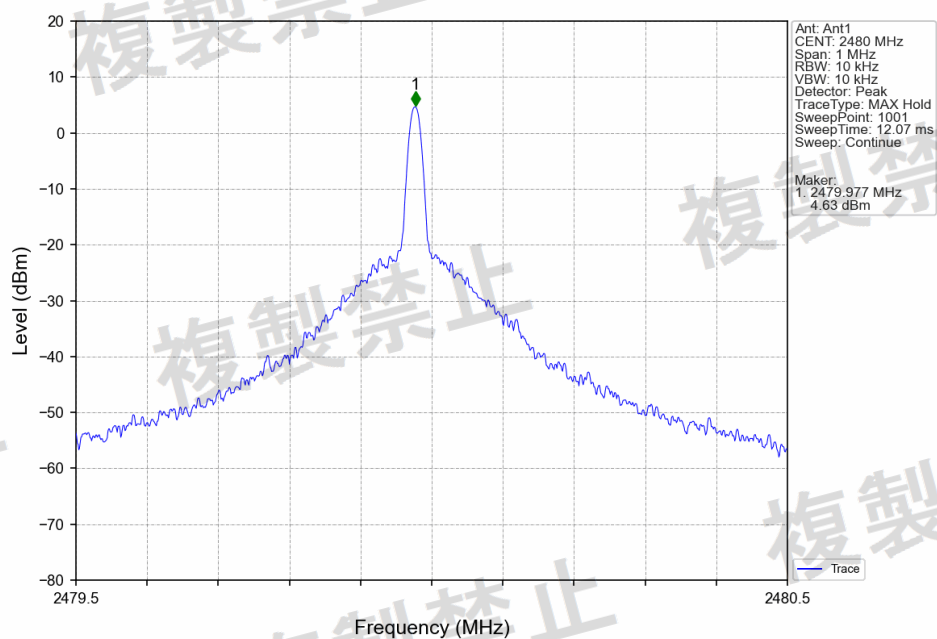
1.2 Test Graph

1.2.1 Ant1

Frequency Error_NTNV_Carrier Wave_2402MHz_Ant1_NTNV



Frequency Error_NTNV_Carrier Wave_2480MHz_Ant1_NTNV



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2. Occupied Bandwidth

2.1 Test Result

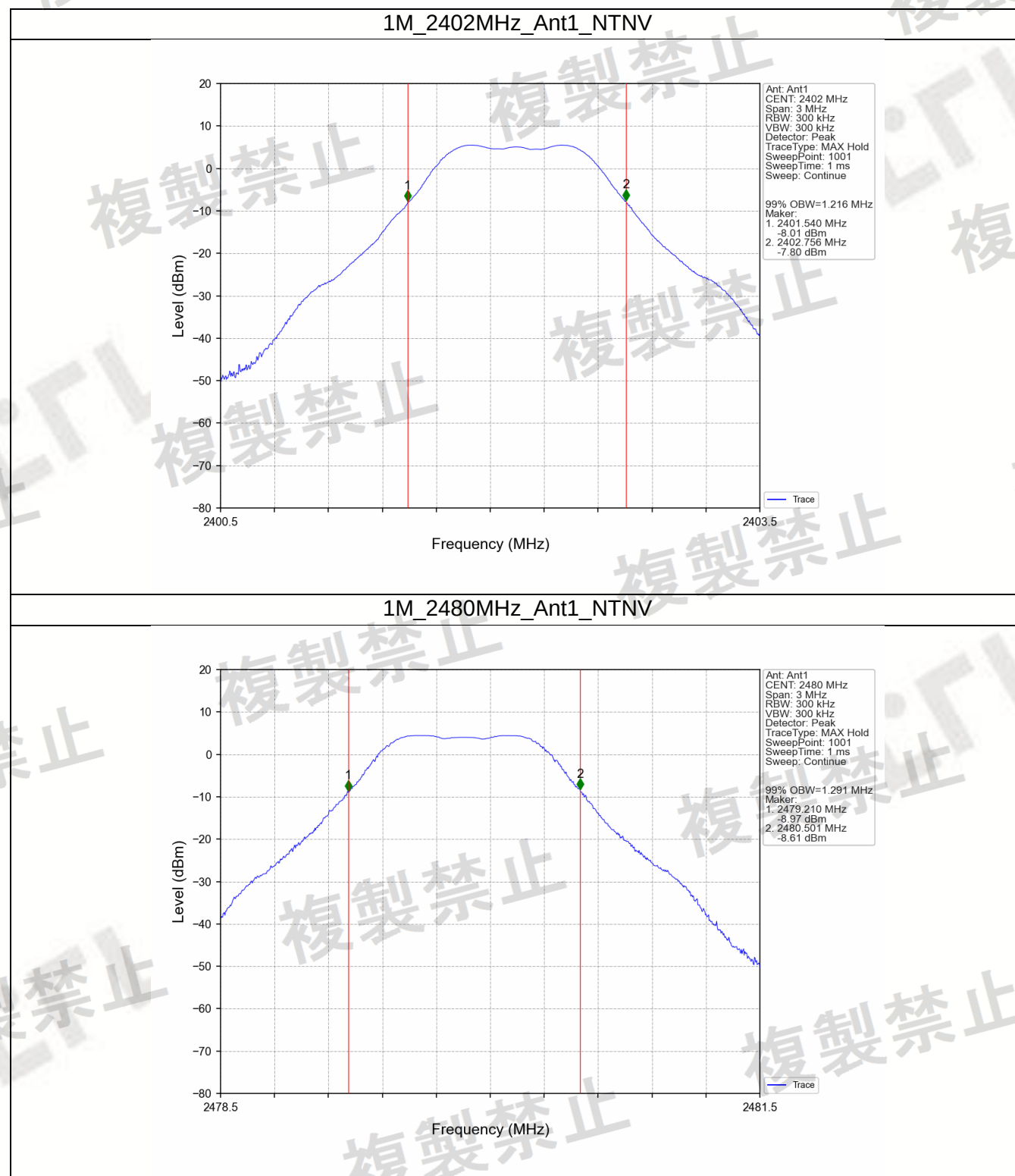
2.1.1 OBW

ENV	Mode	TX Type	Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
				ANT1	Limit	
NTNV	1M	SISO	2402	1.216	≤ 26	Pass
			2480	1.291	≤ 26	Pass

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2.2 Test Graph

2.2.1 OBW



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3. Antenna Power

3.1 Test Result

3.1.1 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	3.464	<=10.00	3.500	-1.03	<=20	Pass
			2480	1	2.674	<=10.00	3.500	-23.60	<=20	Pass

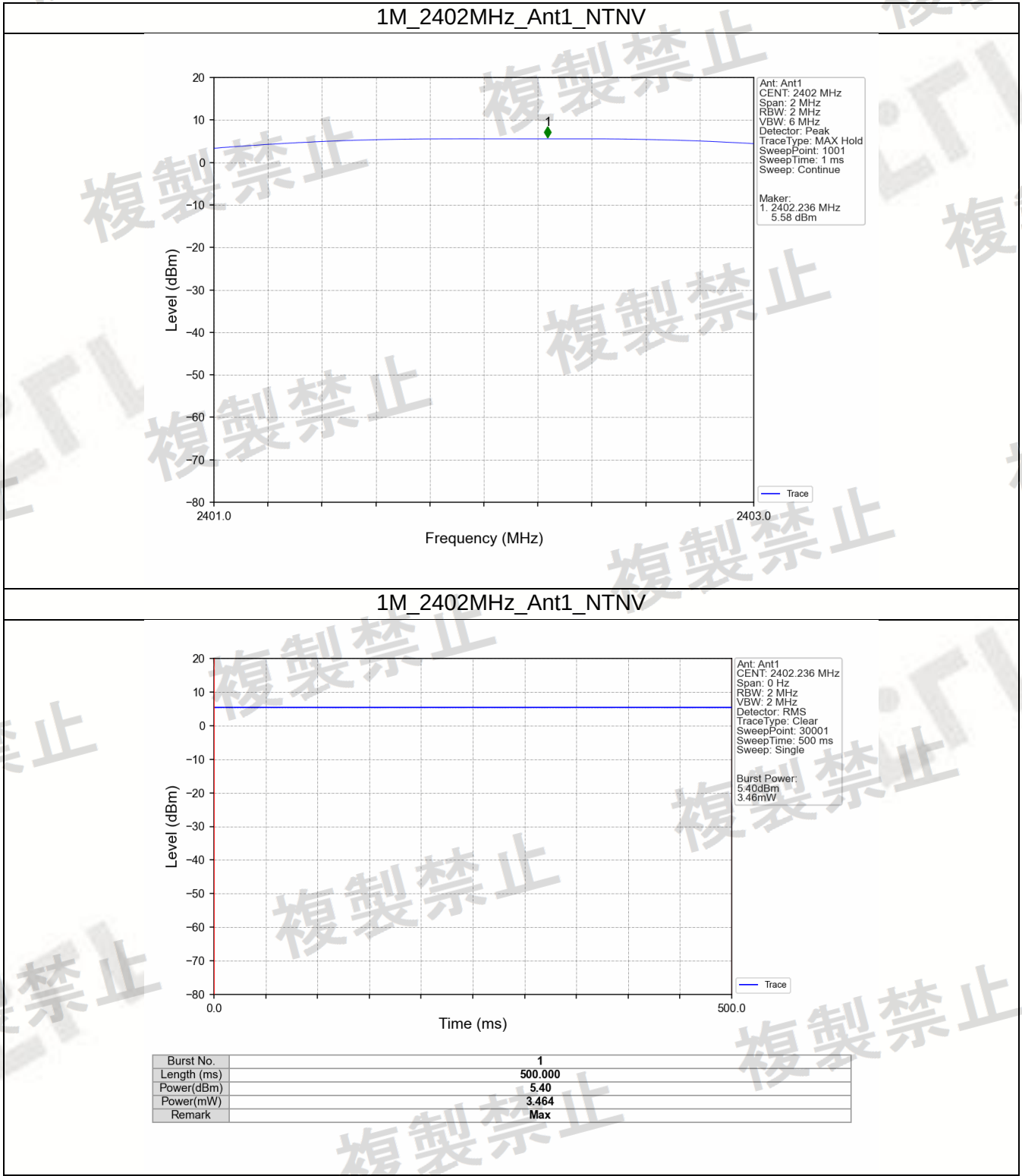
3.1.2 EIRP

ENV	Mode	TX Type	Frequency (MHz)	ANT	Gain (dBi)	EIRP (dBm)		Verdict
						Result	Limit	
NTNV	1M	SISO	2402	1	-3.07	2.33	<=12.14	Pass
			2480	1	-3.07	1.20	<=12.14	Pass

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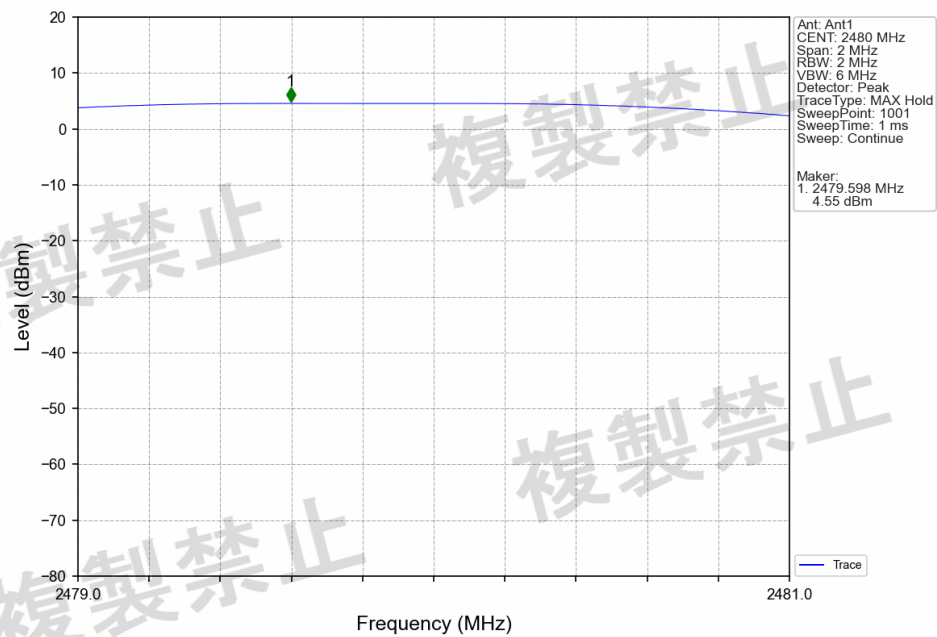
3.2 Test Graph

3.2.1 Power

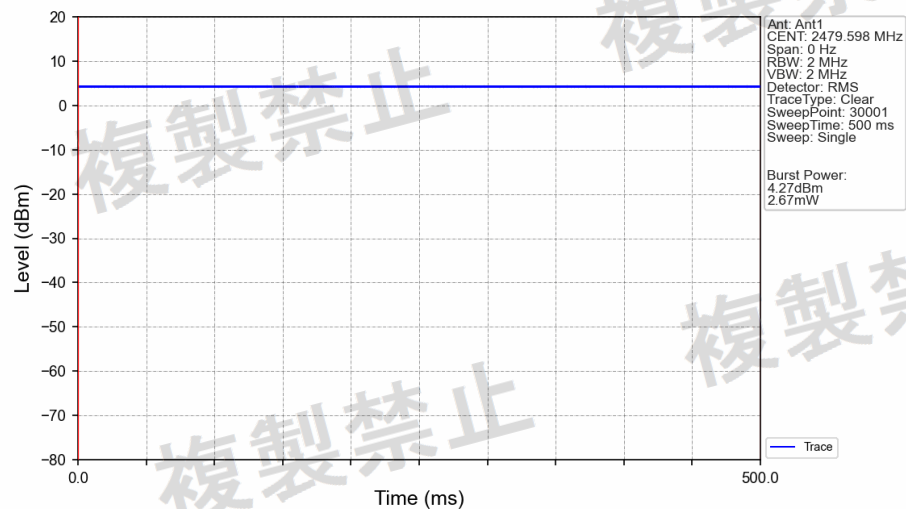


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1M_2480MHz_Ant1_NTNV



1M_2480MHz_Ant1_NTNV



Burst No.	1
Length (ms)	500.000
Power(dBm)	4.27
Power(mW)	2.674
Remark	Max

MIC: 219-269340

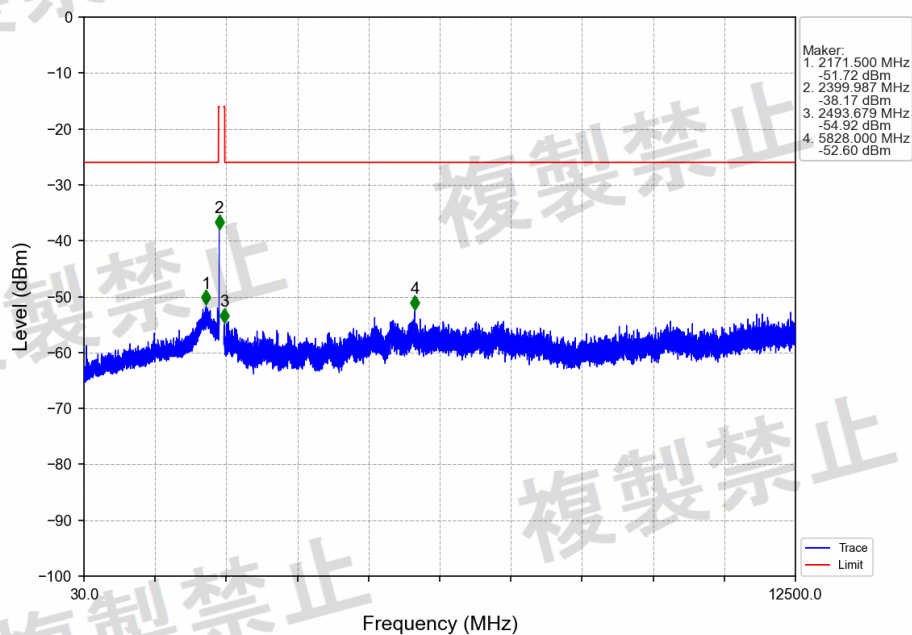
4. Spurious Emission Intensity**4.1 Test Result****4.1.1 TxSe_NTNV**

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	2171.5	-51.72	0.007	/	/	2.5	Pass
				2387	2400	2399.987	-38.17	0.152	/	/	25	Pass
				2483.5	2496.5	2493.679	-54.92	0.003	/	/	25	Pass
				2496.5	12500	5828	-52.60	0.005	/	/	2.5	Pass
		2480	1	30	2387	2193.5	-52.13	0.006	/	/	2.5	Pass
				2387	2400	2398.102	-54.22	0.004	/	/	25	Pass
				2483.5	2496.5	2483.578	-52.27	0.006	/	/	25	Pass
				2496.5	12500	12401.5	-52.83	0.005	/	/	2.5	Pass

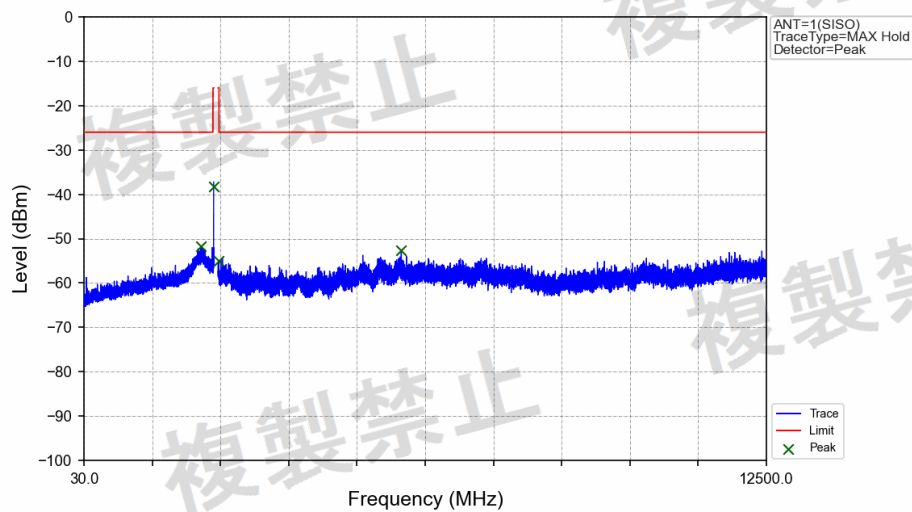
4.2 Test Graph**4.2.1 TxSe_NTNV**

1M_2402MHz_Ant1_NTNV

MIC: 219-269340



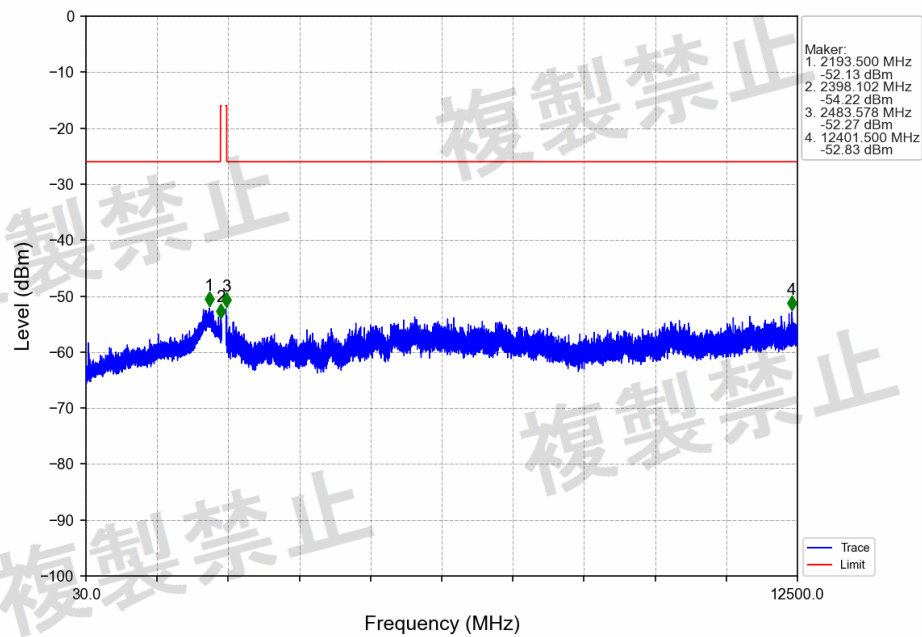
1M_2402MHz_Ant1_NTNV



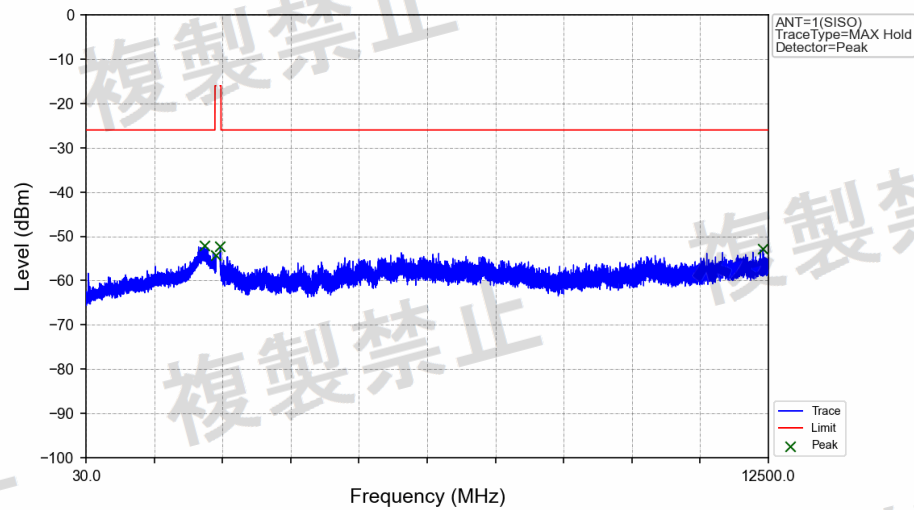
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2171.500	-51.72	/	-26	Pass
2387	2400	1	1	2399.987	-38.17	/	-16	Pass
2483.5	2496.5	1	1	2493.679	-54.92	/	-16	Pass
2496.5	12500	1	1	5828.000	-52.60	/	-26	Pass

MIC: 219-269340

1M_2480MHz_Ant1_NTNV



1M_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2193.500	-52.13	/	-26	Pass
2387	2400	1	1	2398.102	-54.22	/	-16	Pass
2483.5	2496.5	1	1	2483.578	-52.27	/	-16	Pass
2496.5	12500	1	1	12401.500	-52.83	/	-26	Pass

MIC: 219-269340

5. Secondary Radiated Emission

5.1 Test Result

5.1.1 RxSe_NTNV

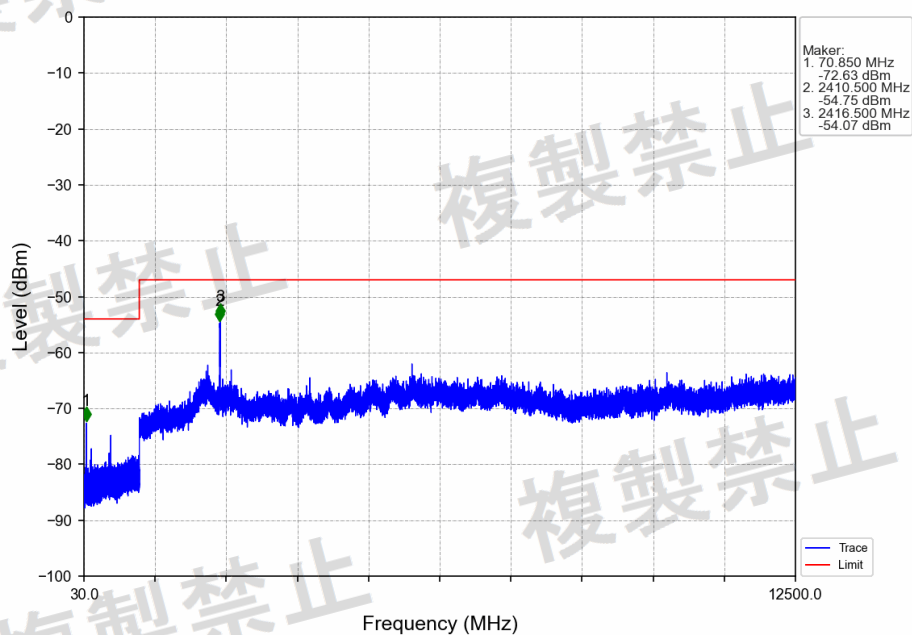
NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
1M	SISO	2402	1	30	1000	70.85	-72.63	0.055	/	/	4	Pass
				1000	12500	2410.5	-54.75	3.350	-71.12	0.077	20	Pass
						2416.5	-54.07	3.917	-79.24	0.012	20	Pass
		2480	1	30	1000	71.15	-71.82	0.066	/	/	4	Pass
				1000	12500	2408.5	-52.48	5.649	-79.32	0.012	20	Pass
						2411.5	-49.26	11.858	-79.33	0.012	20	Pass
						2416.5	-54.08	3.908	-74.10	0.039	20	Pass

5.2 Test Graph

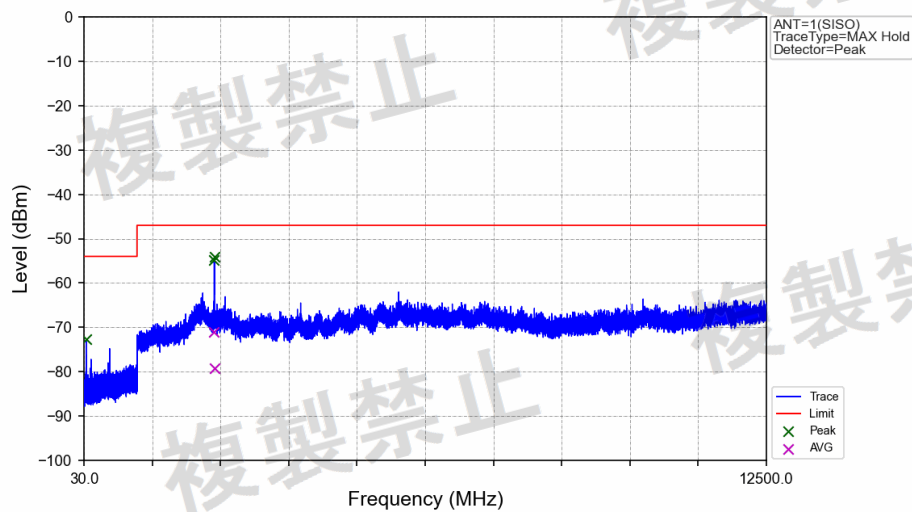
5.2.1 RxSe_NTNV

1M_2402MHz_Ant1_NTNV

MIC: 219-269340



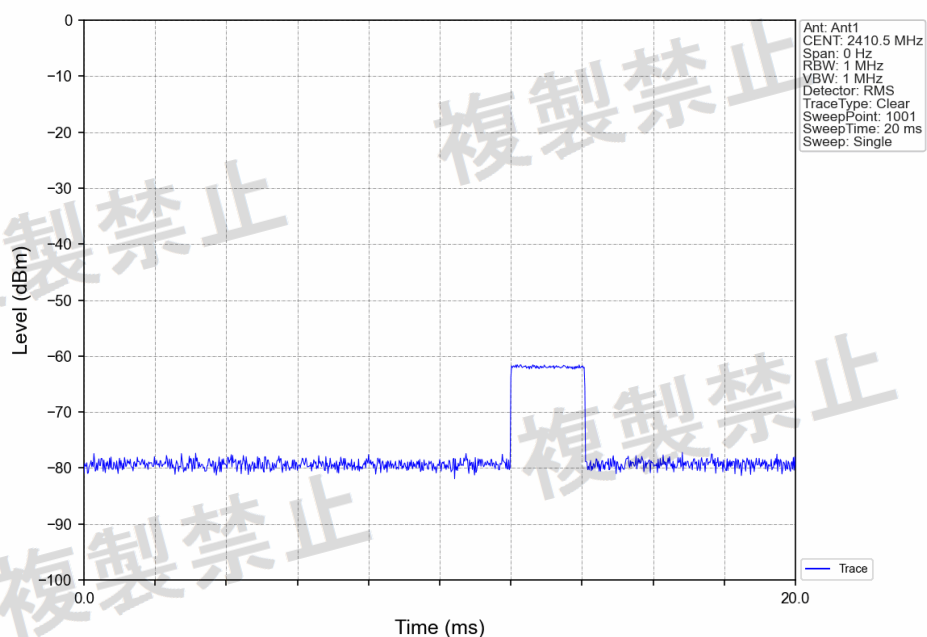
1M_2402MHz_Ant1_NTNV



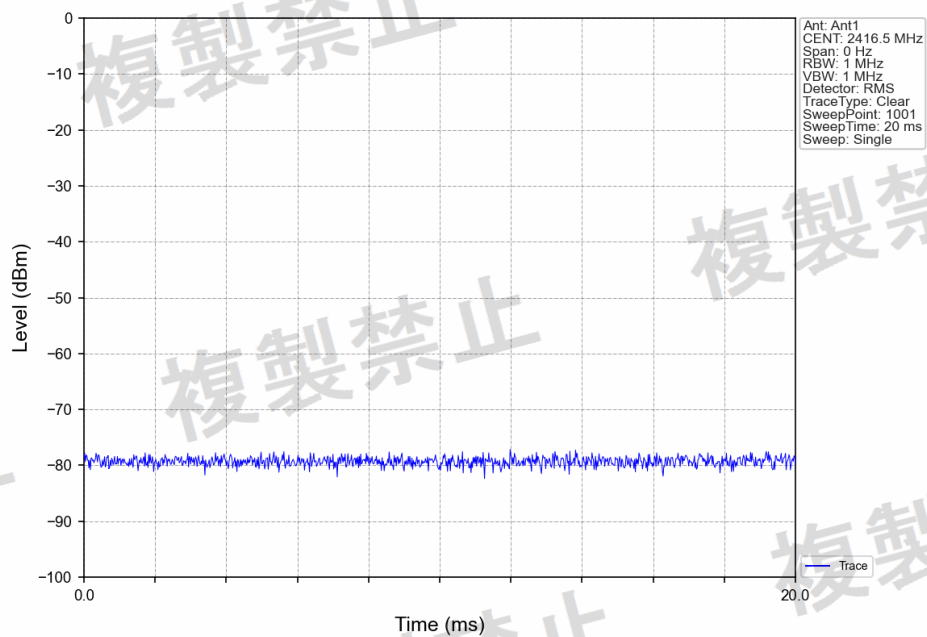
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	70.850	-72.63	/	-54	Pass
1000	12500	1	1	2410.500	-54.75	-71.12	-47	Pass
1000	12500	1	1	2416.500	-54.07	-79.24	-47	Pass

MIC: 219-269340

1M_2402MHz_Ant1_NTNV

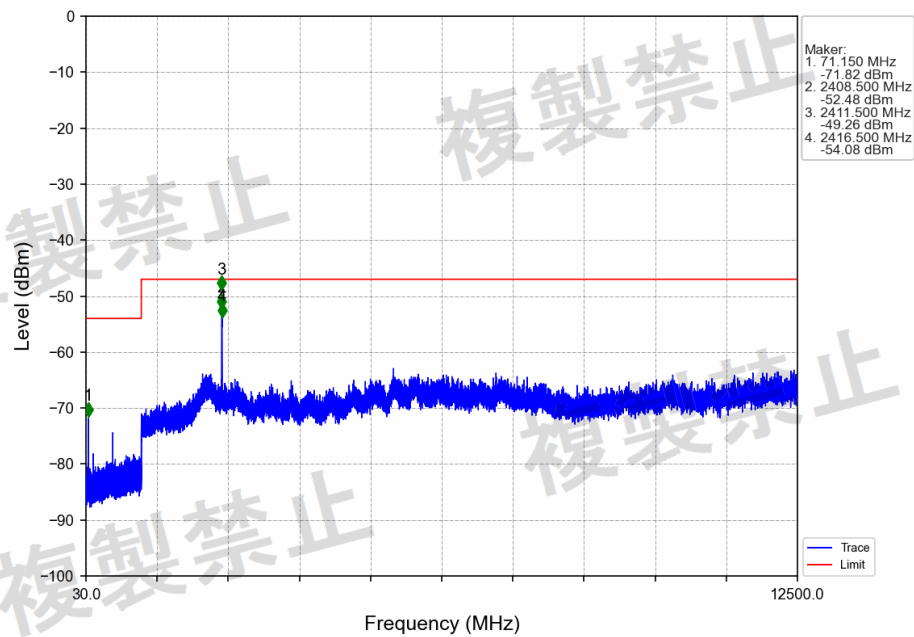


1M_2402MHz_Ant1_NTNV

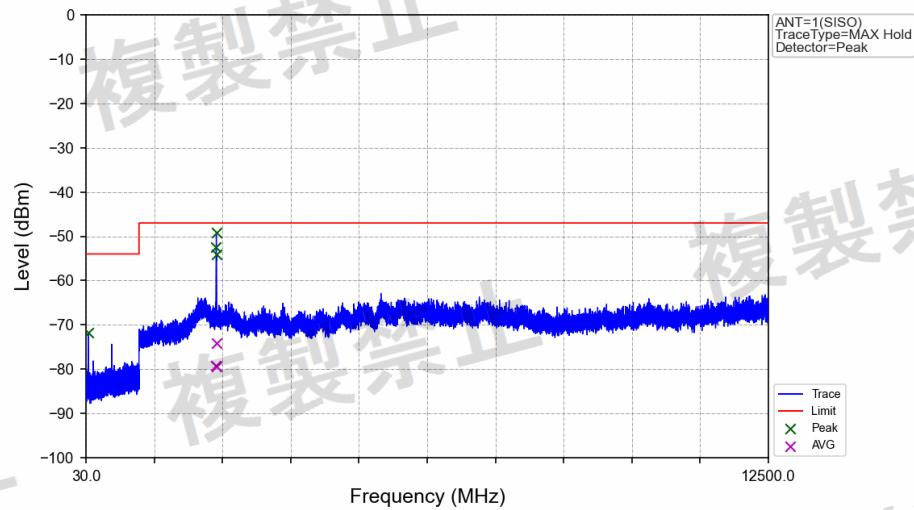


MIC: 219-269340

1M_2480MHz_Ant1_NTNV



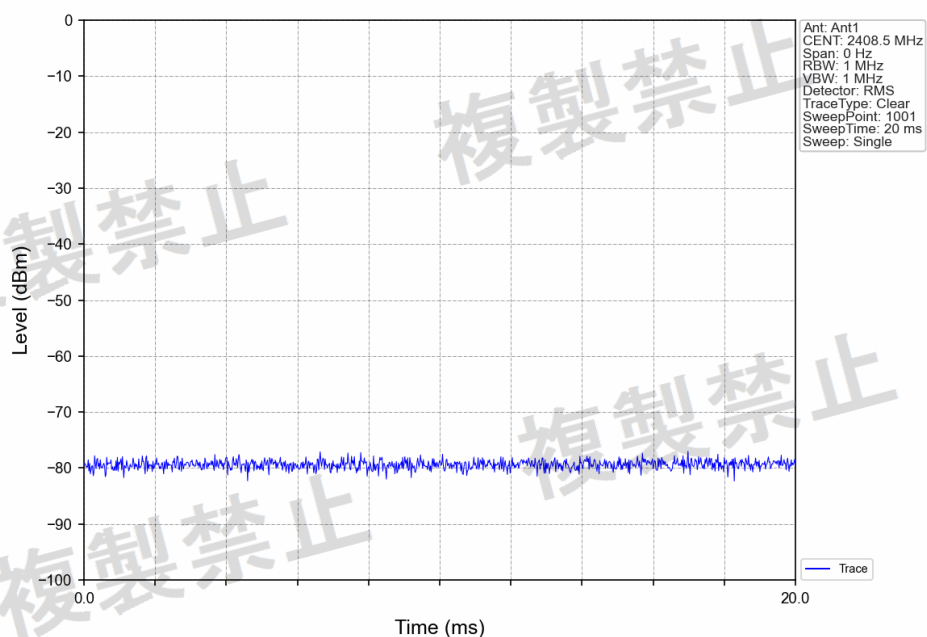
1M_2480MHz_Ant1_NTNV



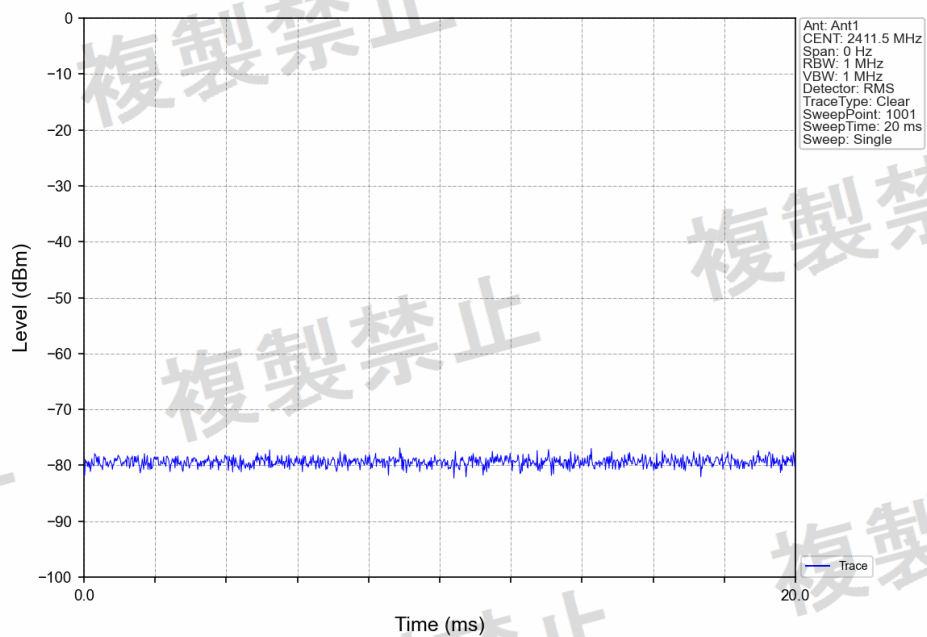
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	71.150	-71.82	/	-54	Pass
1000	12500	1	1	2408.500	-52.48	-79.32	-47	Pass
1000	12500	1	1	2411.500	-49.26	-79.33	-47	Pass
1000	12500	1	1	2416.500	-54.08	-74.10	-47	Pass

MIC: 219-269340

1M_2480MHz_Ant1_NTNV



1M_2480MHz_Ant1_NTNV



MIC: 219-269340

