

Test report No: 6250448.50

TEST REPORT

Radio Spectrum Matters (RF)

Identification of item tested	Robot Vacuum Cleaner
Trademark	JONR
Model and /or type reference	X9, W1, W1 Max, W1 Pro, X9 Max, X9 Pro, XT3512
Features	Robot Vacuum Cleaner: 14,4 Vdc, 55 W, IPX4 Clean station: Class I Input: 100-120 V~, 50/60 Hz; Dust collection power: 600W Charging and Drying power: 115 W Hot water wash power: 1000-1350 W Output: 19,6 Vdc, 1,2 A
Applicant's name / address	Suzhou JONR Technology Co., Ltd Unit A0403, International Science Park Phase IV, 1355 Jinjihu Avenue, Suzhou Industrial Park, Jiangsu Province, China
Test method requested, standard	Article 2, Paragraph 1, Item 19 MIC Notice No.88 Appendix No.43
Verdict Summary	IN COMPLIANCE
Prepared by (name / position & signature)	Adrian Shi Technical Supervisor 
Approved by (name / position & signature)	Lei Chen Senior Project Manager 
Date of issue	2026-04-09
Report template No	TRF_STDT66_RF01 V1.2

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.
5. The information provided by the customer in this report may affect the validity of the results, the test lab is not responsible for it.
6. This report will not be used for social proof function in China market.

UNCERTAINTY

For all measurements where guidance for the calculation of the instrumentation uncertainty of a measurement is specified in the product standard, the measurement instrumentation uncertainty has been calculated and applied in accordance with these standards.

Uncertainties have been calculated according to the Dekra internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. Refer to the Annex 1 for further information.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to calculate the uncertainty associated with the measurement result, unless the specification, standard or customer have special requirements.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	45% - 60%
Atmospheric pressure	86 kPa – 106 kPa

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

DEFINITION OF SYMBOLS USED IN THIS TEST REPORT

☒ Indicates that the listed condition, standard or equipment is applicable for this report/test/EUT.			
☐ Indicates that the listed condition, standard or equipment is not applicable for this report/test/EUT.			
Decimal separator used in this report	☒	Comma (,)	☐ Point (.)

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
Tx	: Transmitter
Rx	: Receiver
N/A	: Not Applicable

N/M : Not Measured

DOCUMENT HISTORY

Report nr.	Date	Description
6250448.50	2026-04-09	First release.

REMARKS AND COMMENTS

The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).

The test results relate only to the samples tested.

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According to the manufacturer, all models differ only in appearance and color, and the schematic design and other aspects are the same.

We selected X9 for testing, and the test results are also applicable to other models.

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Description of the item	Robot Vacuum Cleaner
Model / Type number	X9
Trademark	JONR
Manufacturer	Suzhou JONR Technology Co., Ltd Unit A0403, International Science Park Phase IV, 1355 Jinjihu Avenue, Suzhou Industrial Park, Jiangsu Province, China

Mode of Operation	WLAN 802.11b/g/n(20M/40M)
Operating frequency range(s)	802.11b/g/n(20M): 2412~2472 MHz 802.11n(40M): 2422~2462 MHz
Type of Modulation	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n(20M/40M): OFDM(64QAM, 16QAM, QPSK, BPSK)
Declared Power	5mW/MHz for 802.11b 4mW/MHz for 802.11g 4mW/MHz for 802.11 n(20M) 3mW/MHz for 802.11 n(40M)
Antenna type	FPC Antenna
Antenna gain	2.4 dBi
Number of channel	802.11b/g/n(20M): 13 Channels 802.11n(40M): 9 Channels

Note: Antenna information was provided from applicant.

Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	DC:					
	☒	Battery: 14.4V					
Mounting position	☐	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☒	Floor standing equipment					
	☐	Hand-held equipment					
	☐	Other:					

Intended use of the Equipment Under Test (EUT)
The product is Robot Vacuum Cleaner which supports 2.4G Wi-Fi function.

1.2 Test date

Test Location	DEKRA Testing and Certification (Shanghai) Ltd. Building 6, No. 1050, Xingxian Road, Jiading District, Shanghai, China
Date of receipt of test item	2025-12-01
Date (s) of performance of tests	2025-12-06 to 2026-04-09

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

Operating mode	Operating mode description	Used for methods	
		Conducted	Radiated
1	Transmitting	☒	☐
2	Receiving	☒	☐
Supplemental information: ---			

2.2 Support / Auxiliary equipment / unit / software for the EUT

The EUT has been tested with the following auxiliary equipment / unit / software:

Auxiliary equipment / unit / software	Type / Version	Manufacturer	Supplied by
Ipop	/	/	Applicant
Laptop	Latitude 5488	DELL	DEKRA
Supplemental information: ---			

2.3 Power supply voltage fluctuation test

Voltage Fluctuation Test	Normal Voltage	High Voltage (Normal Voltage +10%)	Low Voltage (Normal Voltage -10%)
Input to EUT	DC 14.4V	DC 15.8V	DC 12V
Input voltage to the RF chip	DC 3.3V	DC 3.3V	DC 3.3V
Deviation (%)	/		

Note:

Changing the supply voltage of the EUT will not change the voltage of the RF module. During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF deviation of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

2.4 Test Configuration / Block diagram used for tests

Refer to Annex 3.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
MIC Notice No.88 Appendix No.43	2004	Low Power Data Communication System / Wireless LAN System

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

3.3 Overview of results

Test Item			
Requirement – Test case	Basic standard(s)	Verdict	Remark
Output Power and Output Power Tolerance	MIC Notification.No.88 of 2004, Appendix No.43 Section 6	PASS	---
Spread Bandwidth and Spread Factor	MIC Notification.No.88 of 2004, Appendix No.43 Section 4	PASS	---
Occupied Bandwidth	MIC Notification.No.88 of 2004, Appendix No.43 Section 4	PASS	---
Frequency Error	MIC Notification.No.88 of 2004, Appendix No.43 Section 3	PASS	---
Transmitter Spurious Emissions	MIC Notification.No.88 of 2004, Appendix No.43 Section 1	PASS	---
Receiver Spurious Emissions	MIC Notification.No.88 of 2004, Appendix No.43 Section 7	PASS	---
Interference Prevention Function Measurement	MIC Notification.No.88 of 2004, Appendix No.43 Section 12	PASS	---
Carrier Sense Measurement	MIC Notification.No.88 of 2004, Appendix No.43 Section 8	PASS	---
<u>Supplementary information:</u>			

3.4 Measurement procedure

The EUT was controlled by USB Cable provided by applicant which connected to laptop. After connected, run the software “Ipop” supplied by manufacturer to control the EUT work in required test mode as below table.

Mode	Modulation	Channel Number	Frequency (MHz)
802.11b	DSSS	01	2412
		07	2442
		13	2472
802.11g	OFDM	01	2412
		07	2442
		13	2472
802.11n(20M)	OFDM	01	2412
		07	2442
		13	2472
802.11n(40M)	OFDM	03	2422
		07	2442
		11	2462

Through Pre-scan under all rate at lowest channel, the data rate as below table described is the worst case, so we choose these data rate for test.

Type	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(20M)	MCS0
802.11n(40M)	MCS0

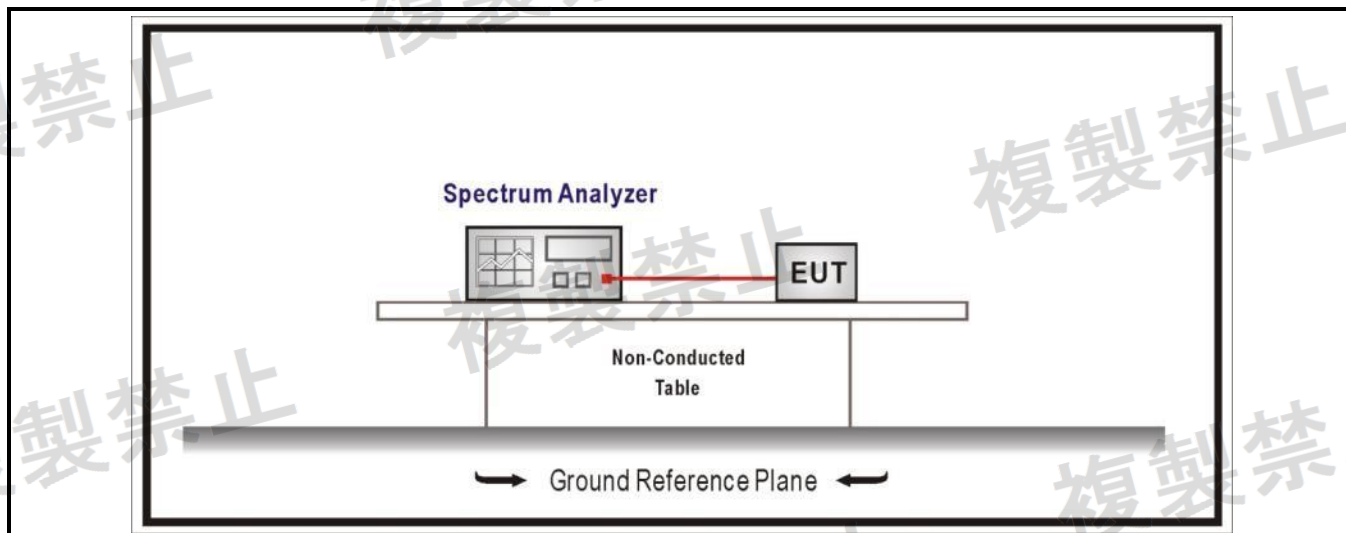
4 TEST RESULTS

4.1	Output Power and Output Power Tolerance	VERDICT: PASS
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Limit

Standard		MIC Notice No.88 Appendix No.43
Output Power		
☒	Channel Power of DSSS, the limit should $\leq$ 10mW/MHz	
☐	Channel Power of FHSS, the limit should $\leq$ 3mW/MHz	
☒	Channel Power of OFDM	
☒	Nominal Bandwidth = 20MHz, the limit should $\leq$ 10mW/MHz	
☒	Nominal Bandwidth = 40MHz, the limit should $\leq$ 5mW/MHz	
☐	Channel Power of other situation, the limit should $\leq$ 10mW	
E.I.R.P		
☒	Undirected	
☒	Nominal Bandwidth = 20MHz, 12.14dBm or less	
☒	Nominal Bandwidth = 40MHz, 9.14dBm or less	
☐	Directional	
☐	Nominal Bandwidth = 20MHz, 22.14dBm or less	
☐	Nominal Bandwidth = 40MHz, 19.14dBm or less	
Output Power Tolerance		
☒	$\leq$ 20%	

Test Configuration



Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Results

Mode	CH.	Test Freq. (MHz)	Power (dBm/MHz)	Antenna Power (mW/MHz)	Limit (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Limit (%)	Result
802.11b	01	2412	0.35	1.08	≤ 10	5	-75.80	≤ 20	Pass
	07	2442	-0.08	0.98	≤ 10	5	-74.40	≤ 20	Pass
	13	2472	0.65	1.16	≤ 10	5	-73.80	≤ 20	Pass
802.11g	01	2412	1.28	1.34	≤ 10	4	-66.50	≤ 20	Pass
	07	2442	1.70	1.48	≤ 10	4	-63.00	≤ 20	Pass
	13	2472	2.12	1.63	≤ 10	4	-59.25	≤ 20	Pass
802.11n (20M)	01	2412	1.24	1.33	≤ 10	4	-66.75	≤ 20	Pass
	07	2442	1.32	1.36	≤ 10	4	-66.00	≤ 20	Pass
	13	2472	1.29	1.35	≤ 10	4	-66.25	≤ 20	Pass
802.11n (40M)	03	2422	-2.19	0.60	≤ 5	3	-80.00	≤ 20	Pass
	07	2442	-1.91	0.64	≤ 5	3	-78.67	≤ 20	Pass
	11	2462	-1.90	0.65	≤ 5	3	-78.33	≤ 20	Pass

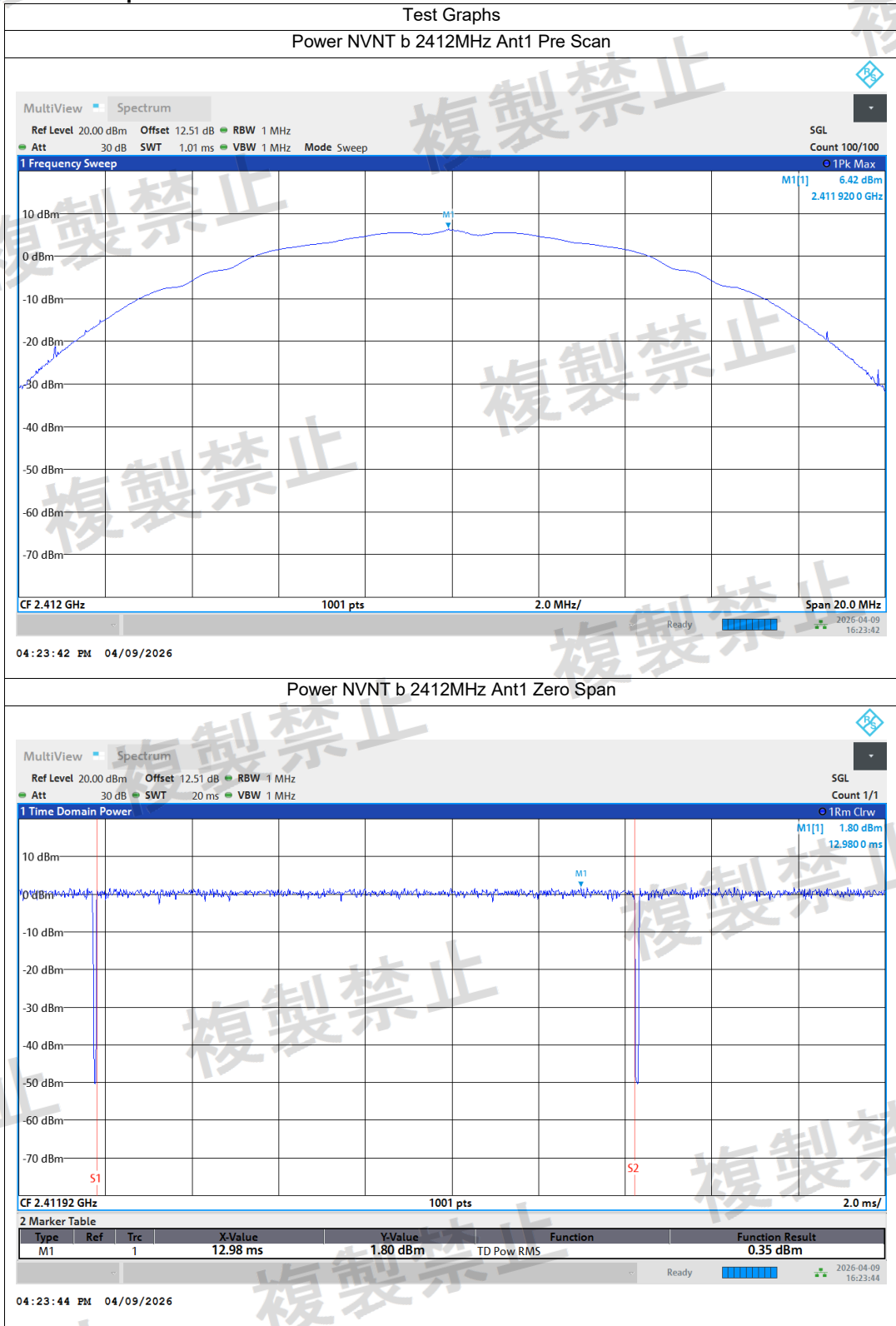
Note:

Deviation = (Antenna Power - Declared Power) / Declared Power * 100%

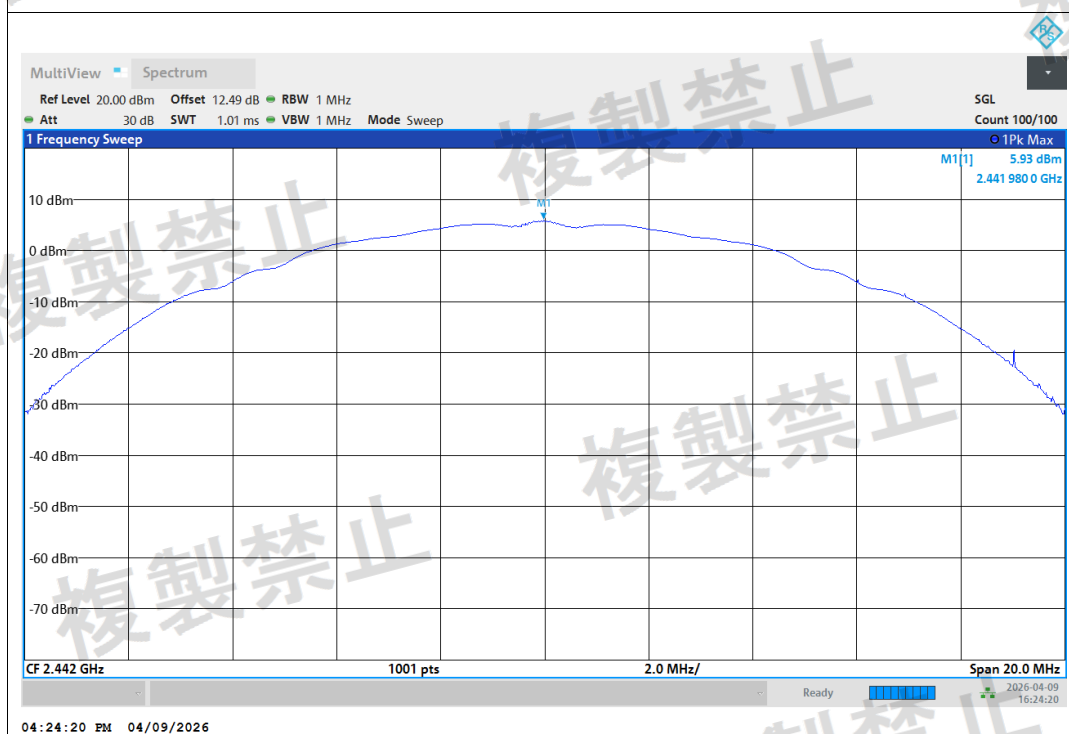
Mode	CH.	Test Freq. (MHz)	Antenna Power (dBm/MHz)	Gain (dBi)	E.I.R.P (dBm/MHz)	Limit (dBm/MHz)	Result
802.11b	01	2412	0.35	2.4	2.75	≤ 12.14	Pass
	07	2442	-0.08	2.4	2.32	≤ 12.14	Pass
	13	2472	0.65	2.4	3.05	≤ 12.14	Pass
802.11g	01	2412	1.28	2.4	3.68	≤ 12.14	Pass
	07	2442	1.70	2.4	4.10	≤ 12.14	Pass
	13	2472	2.12	2.4	4.52	≤ 12.14	Pass
802.11n (20M)	01	2412	1.24	2.4	3.64	≤ 12.14	Pass
	07	2442	1.32	2.4	3.72	≤ 12.14	Pass
	13	2472	1.29	2.4	3.69	≤ 12.14	Pass
802.11n (40M)	03	2422	-2.19	2.4	0.21	≤ 9.14	Pass
	07	2442	-1.91	2.4	0.49	≤ 9.14	Pass
	11	2462	-1.90	2.4	0.50	≤ 9.14	Pass

E.I.R.P= Antenna Power + Gain

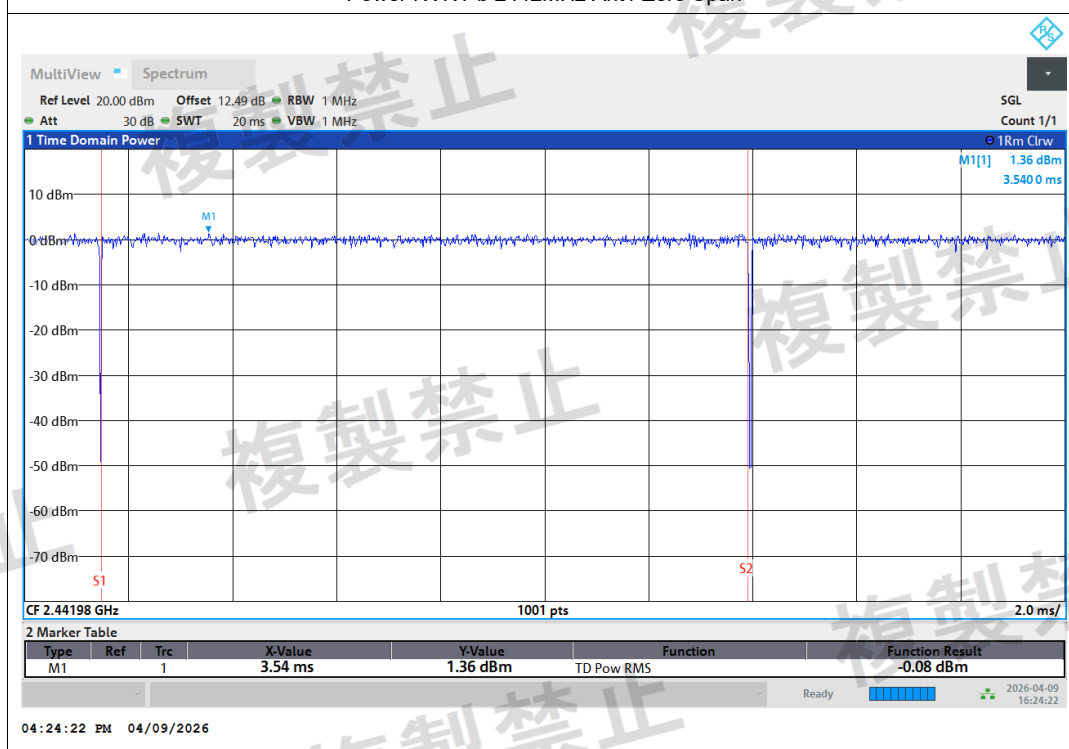
Output Power and Output Power Tolerance



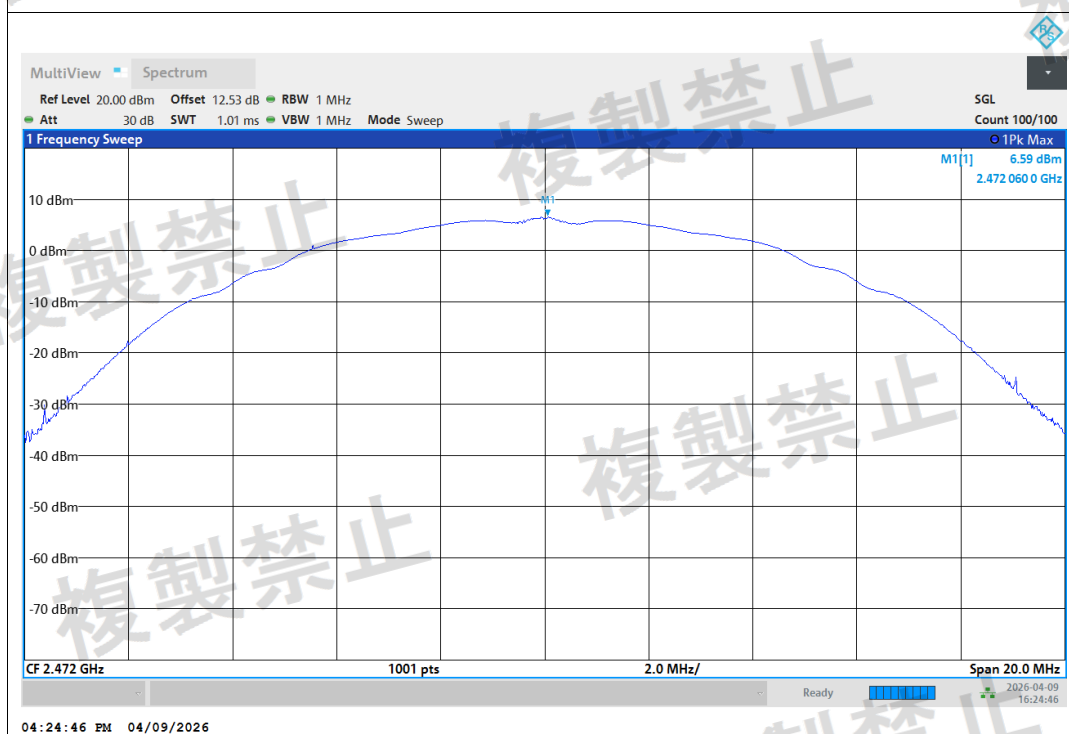
Power NVNT b 2442MHz Ant1 Pre Scan



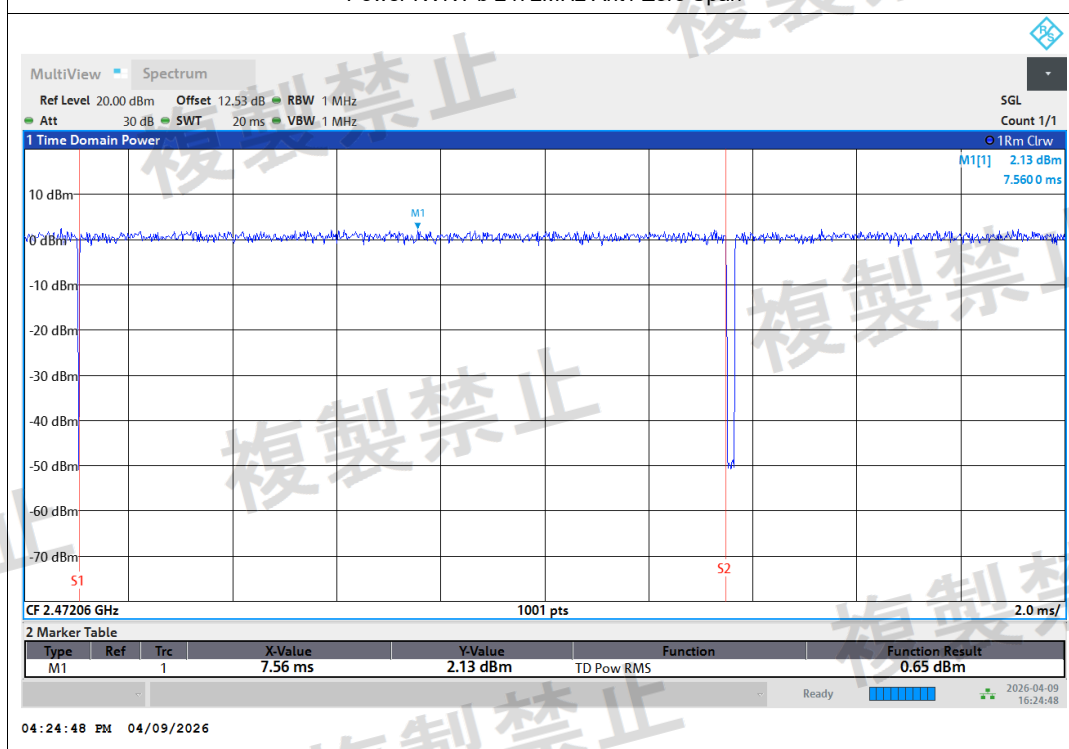
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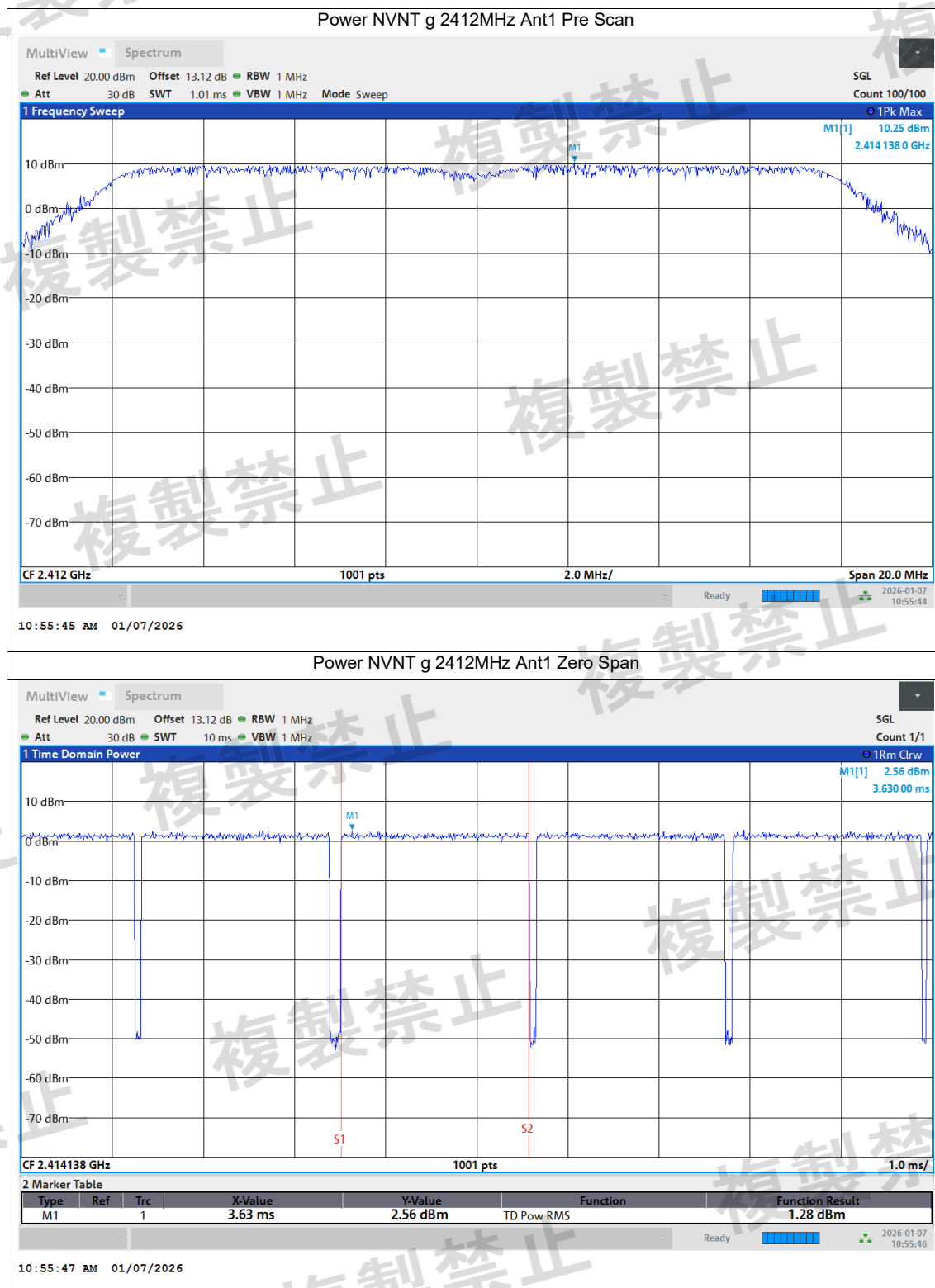


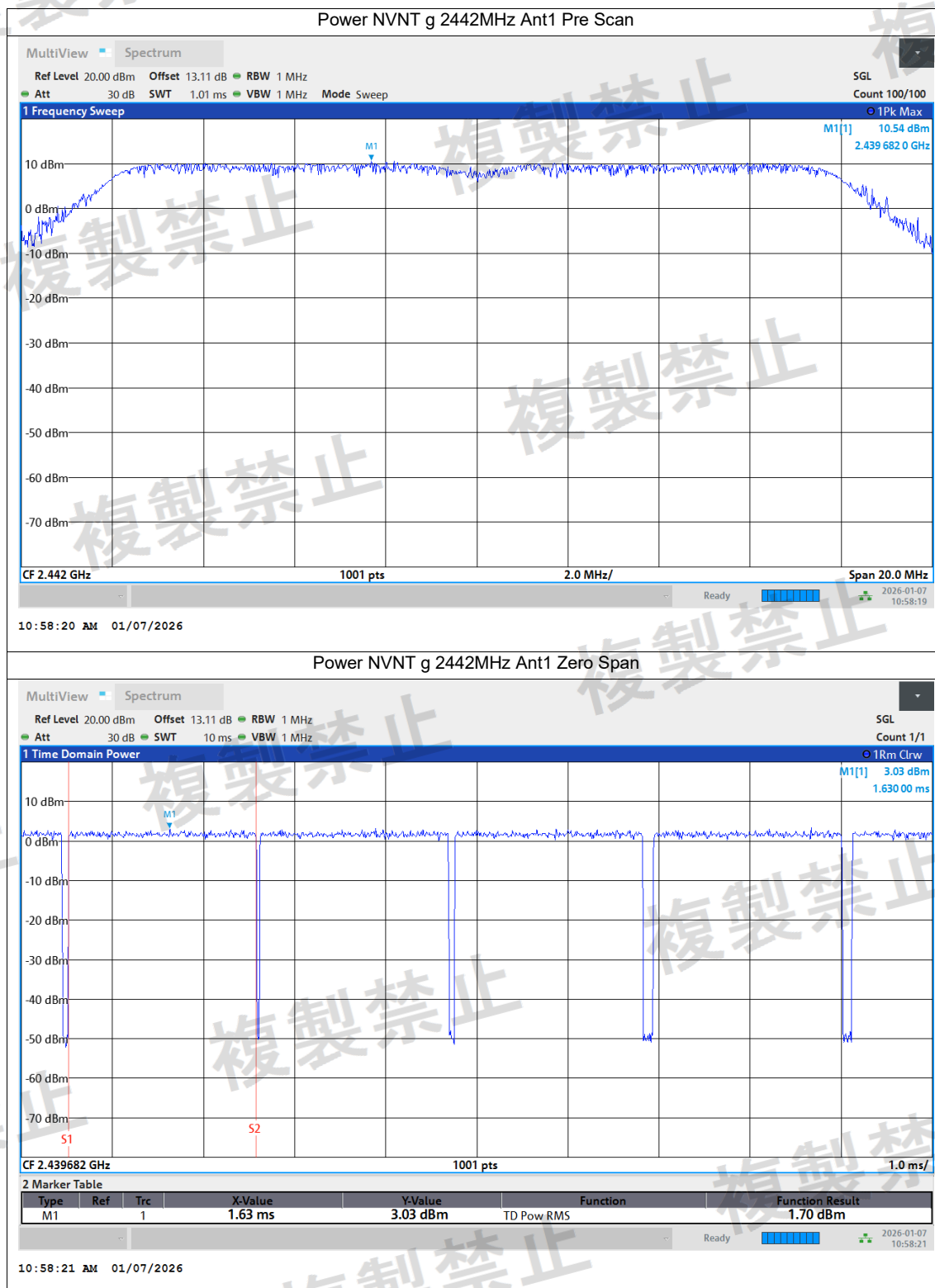
Power NVNT b 2472MHz Ant1 Pre Scan

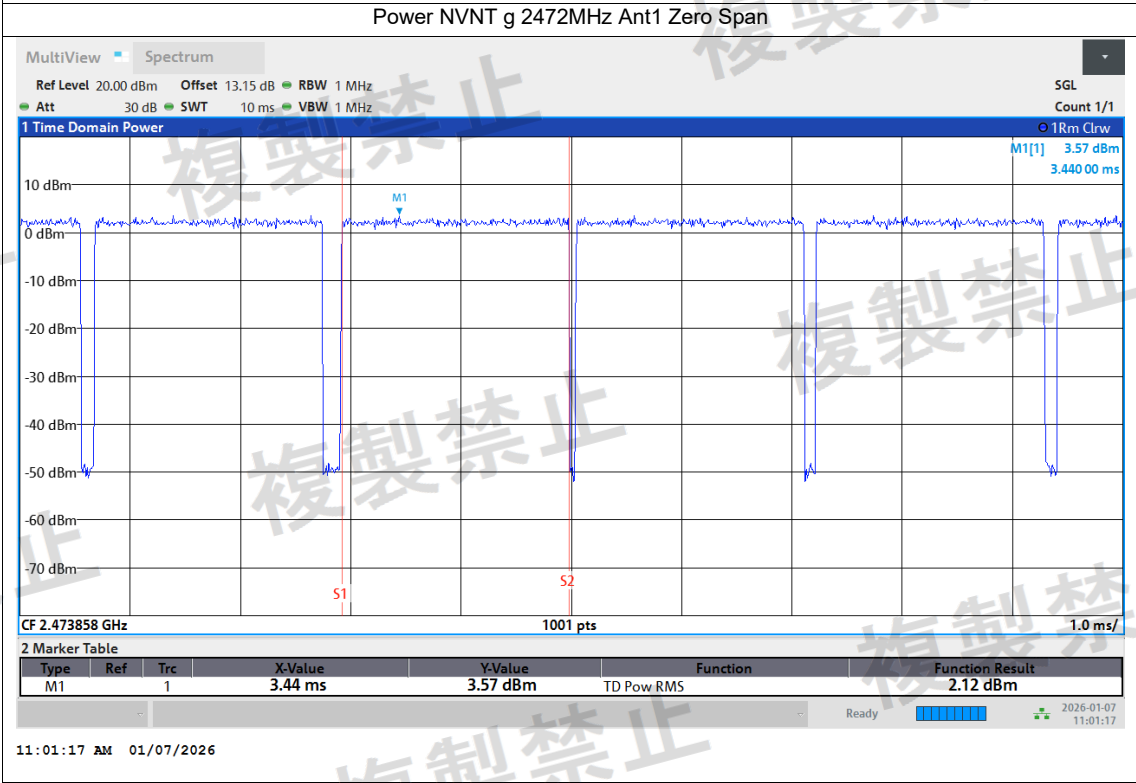
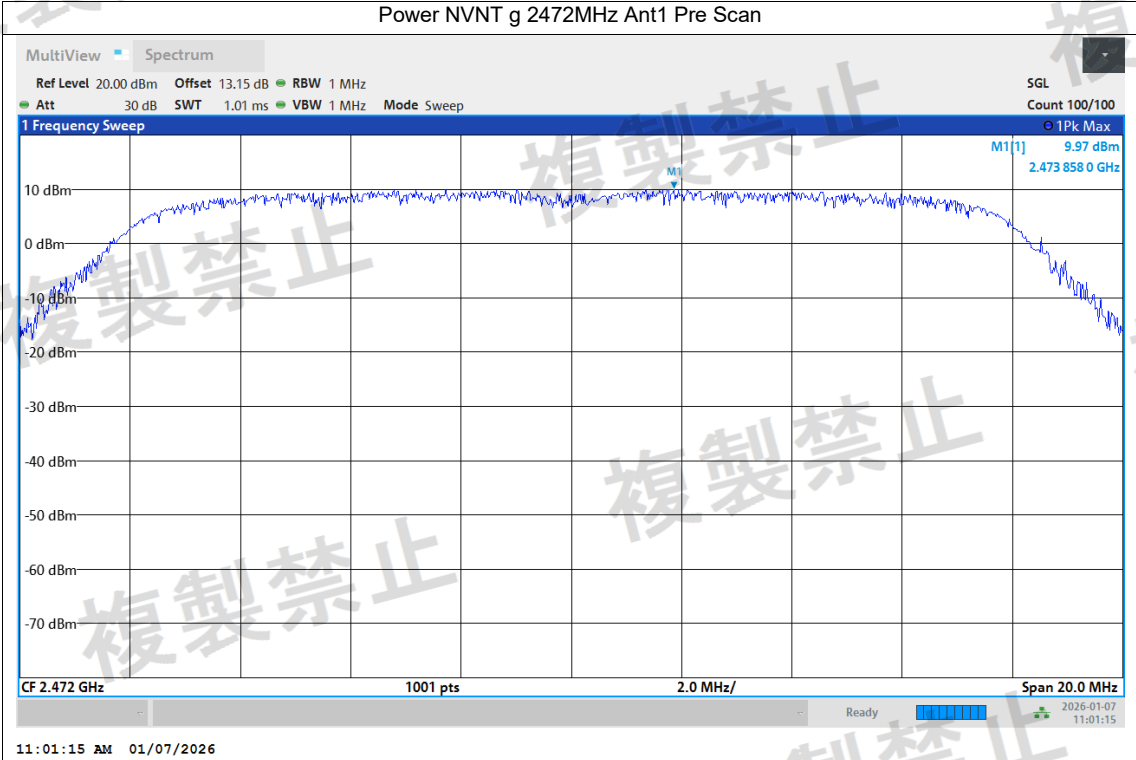


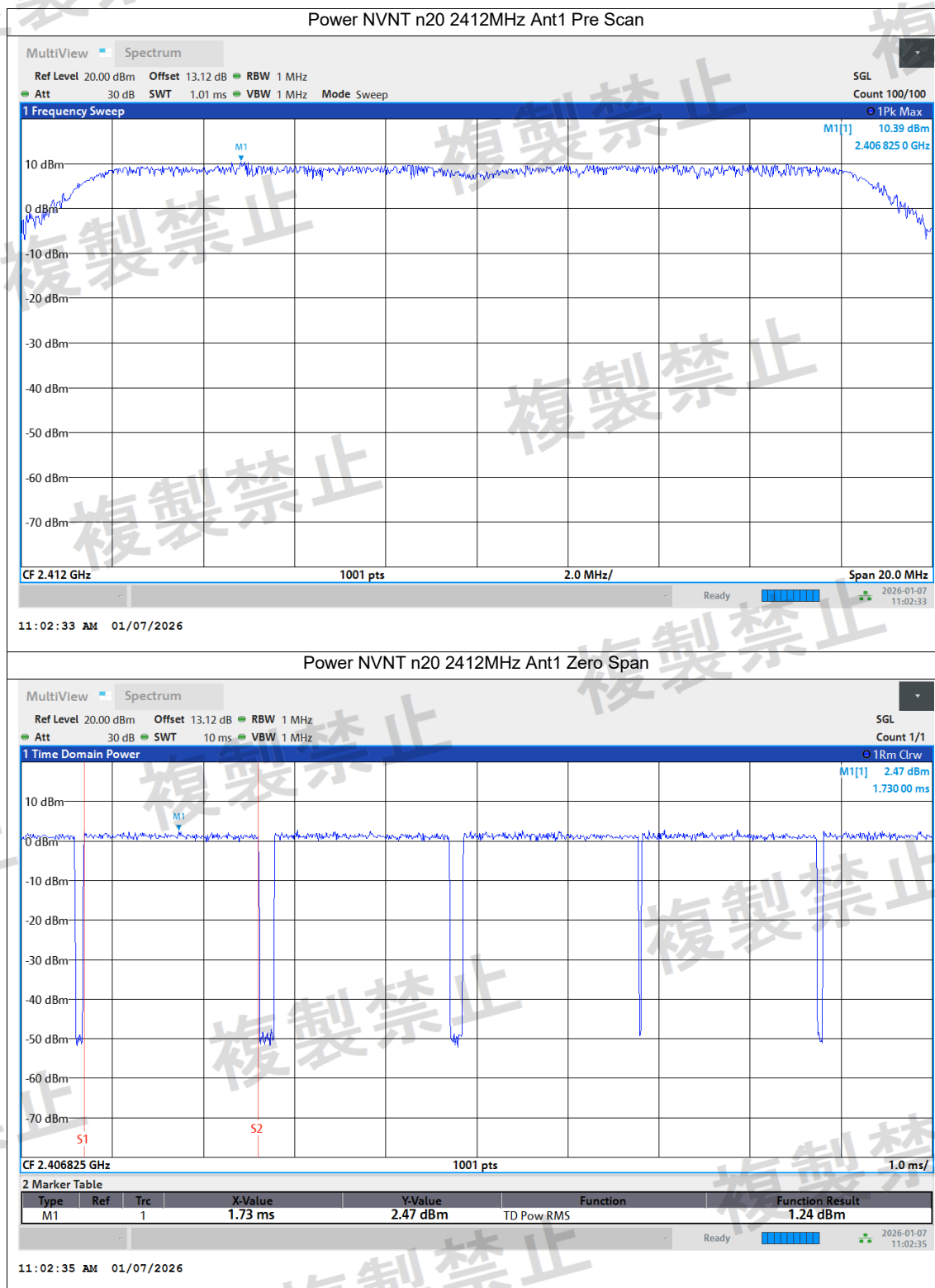
Power NVNT b 2472MHz Ant1 Zero Span

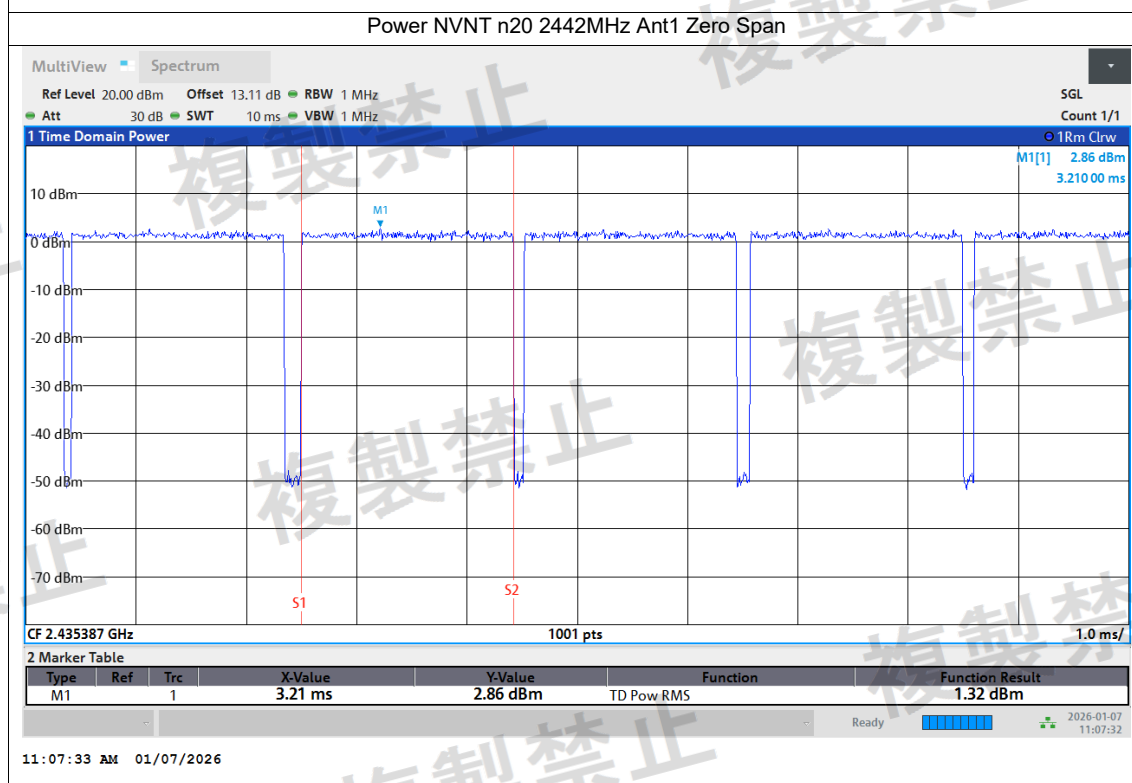
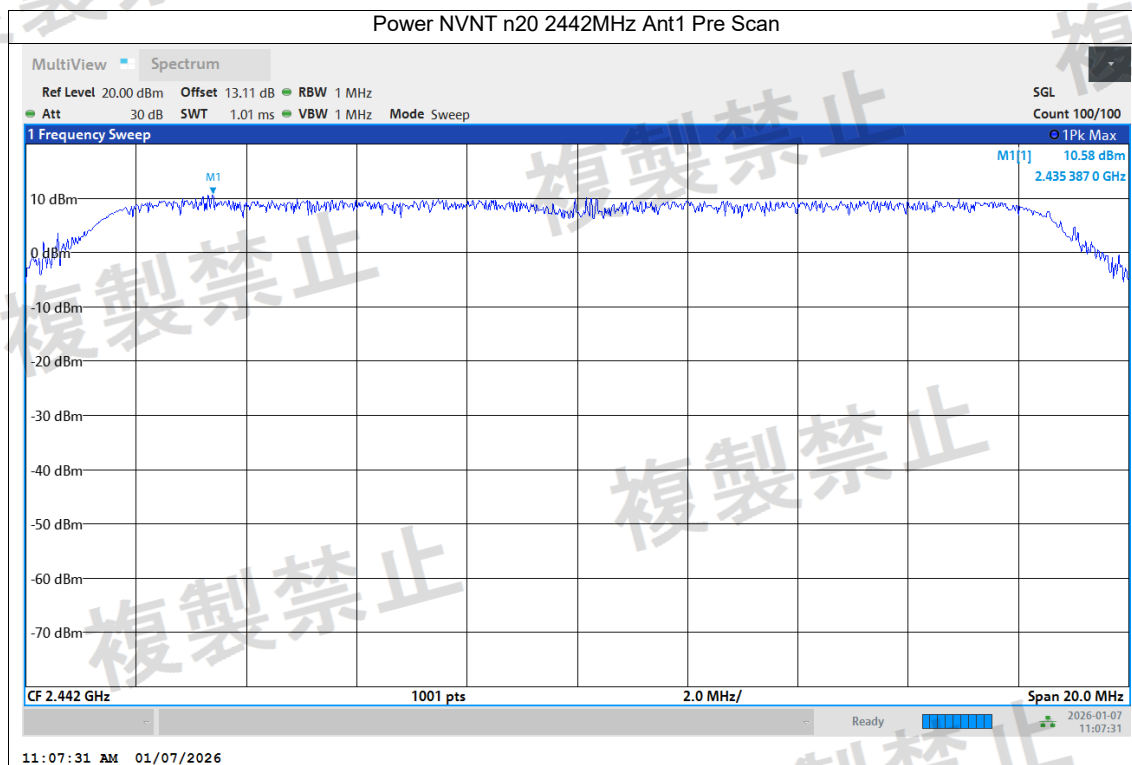


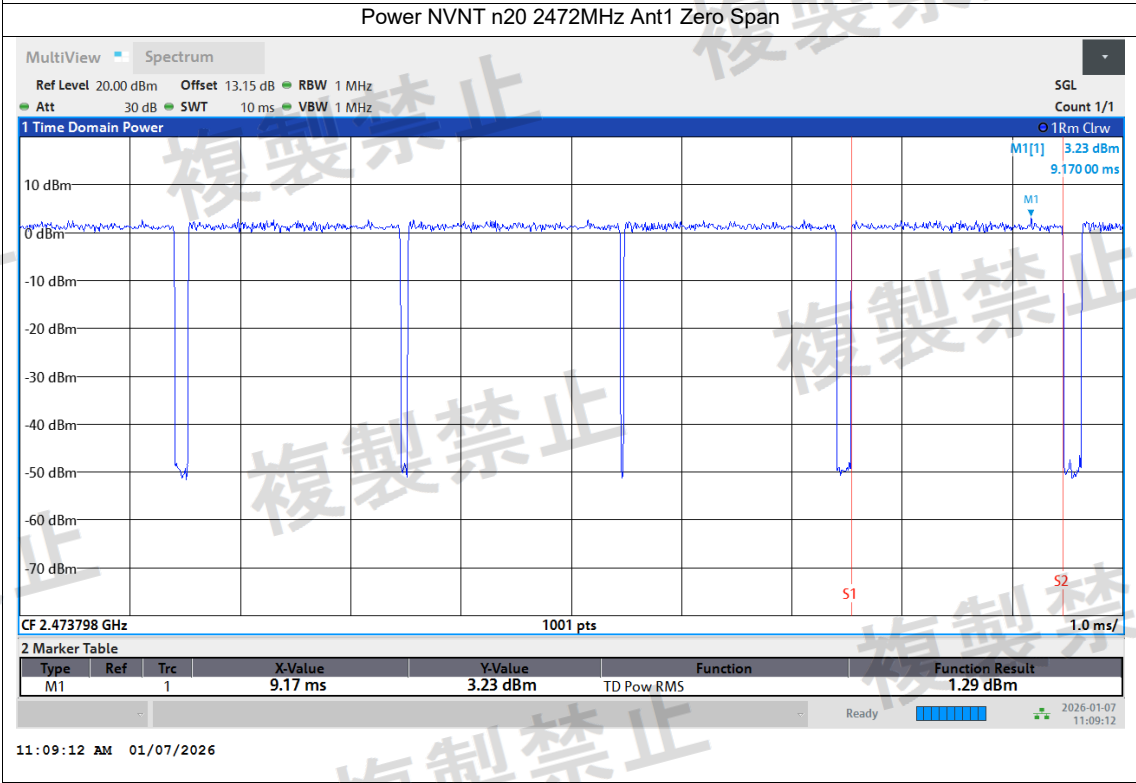
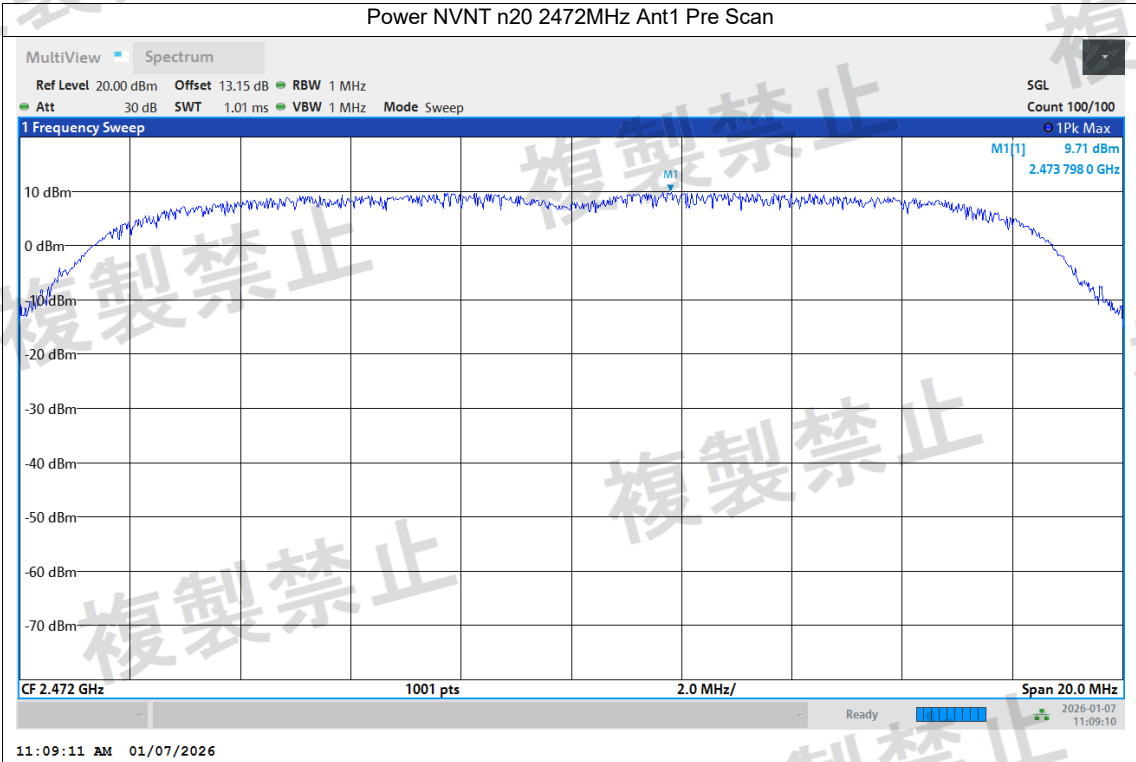


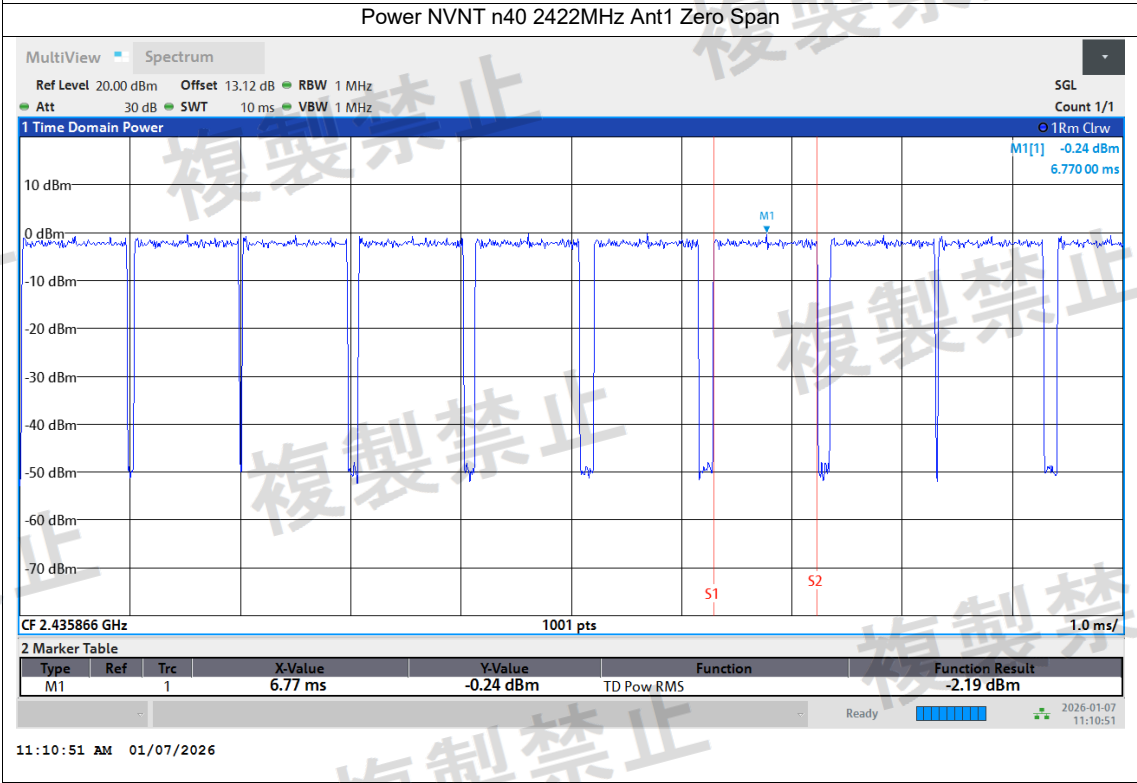
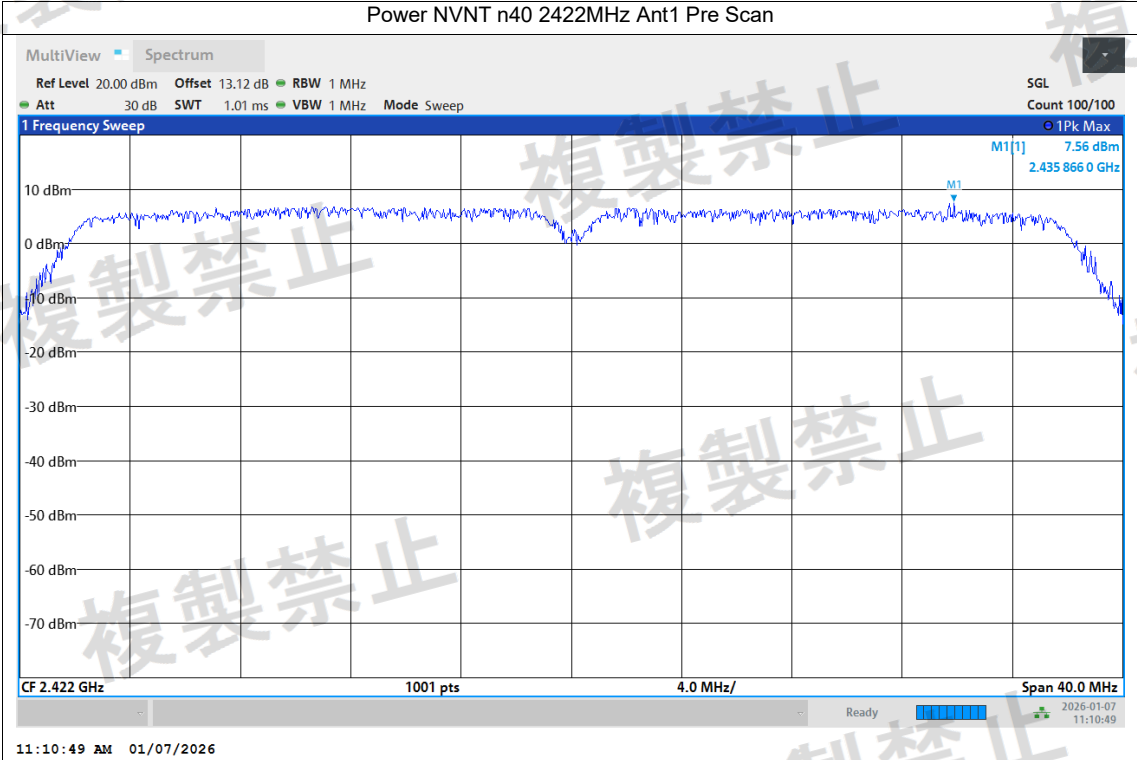


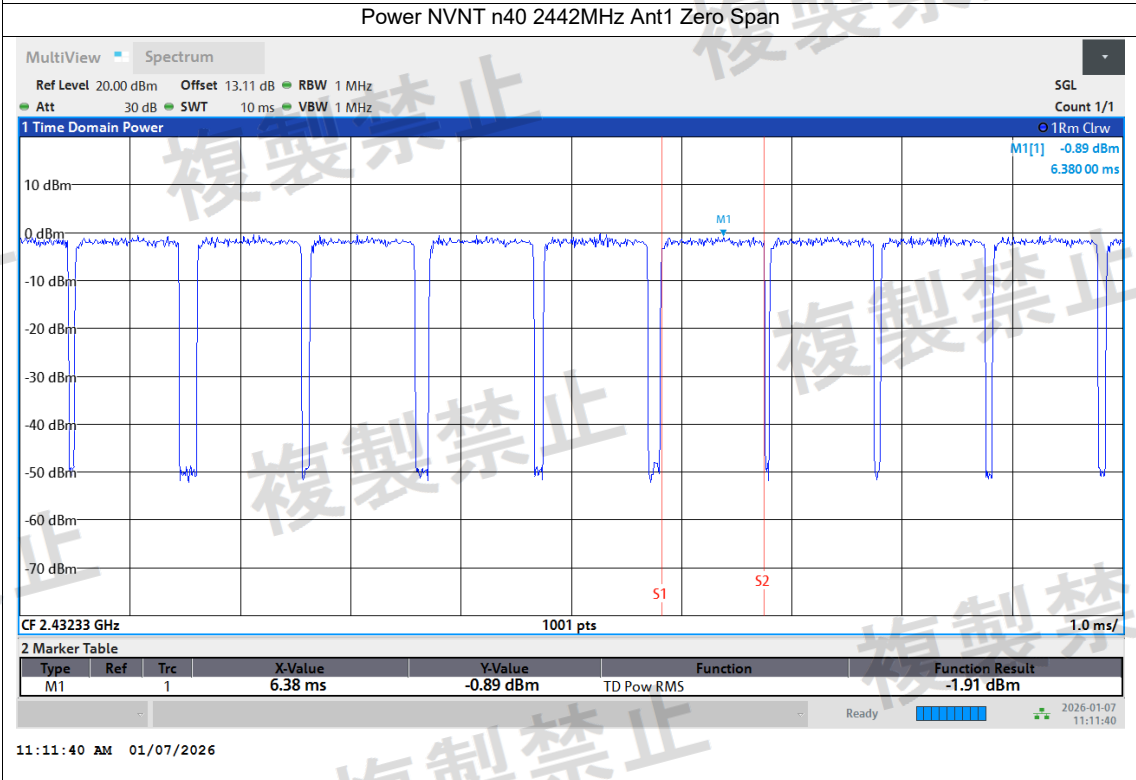
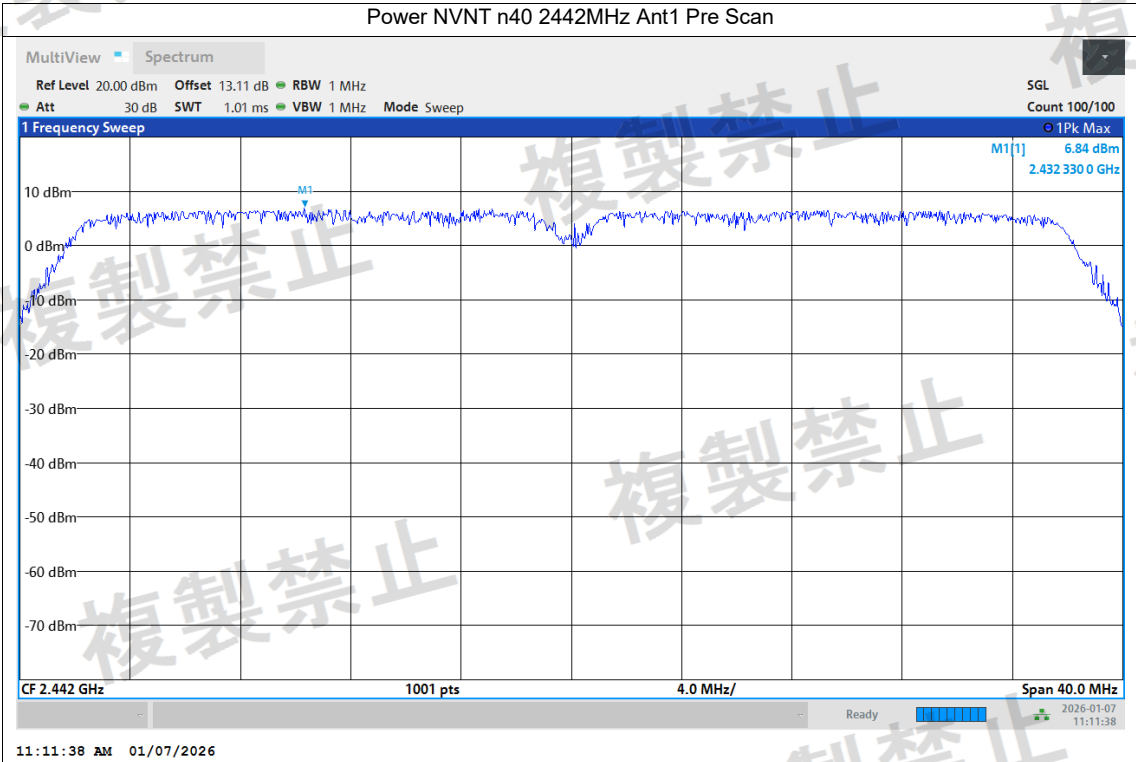


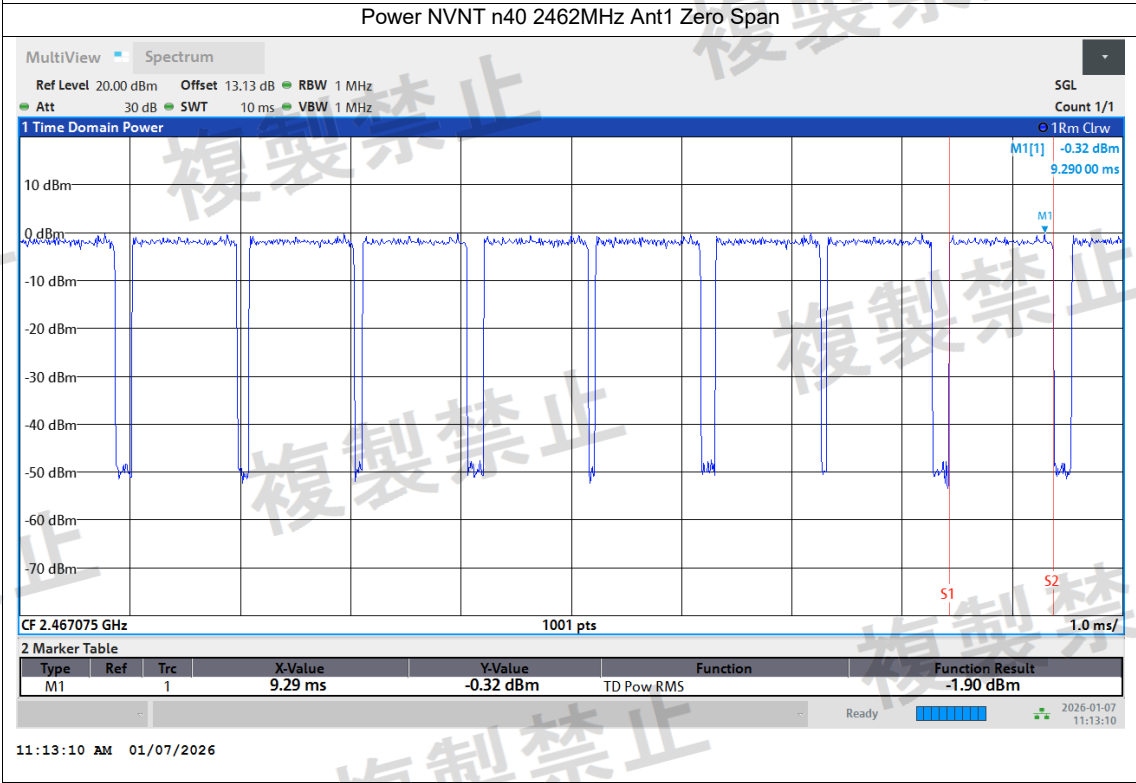
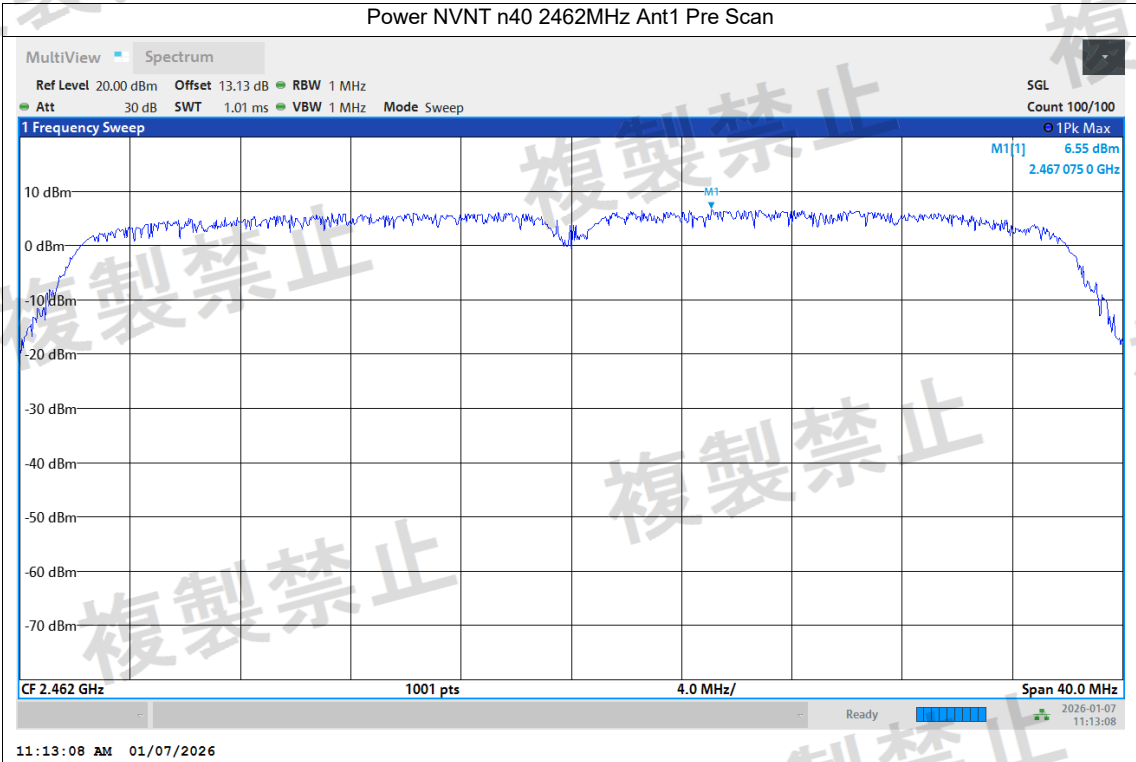










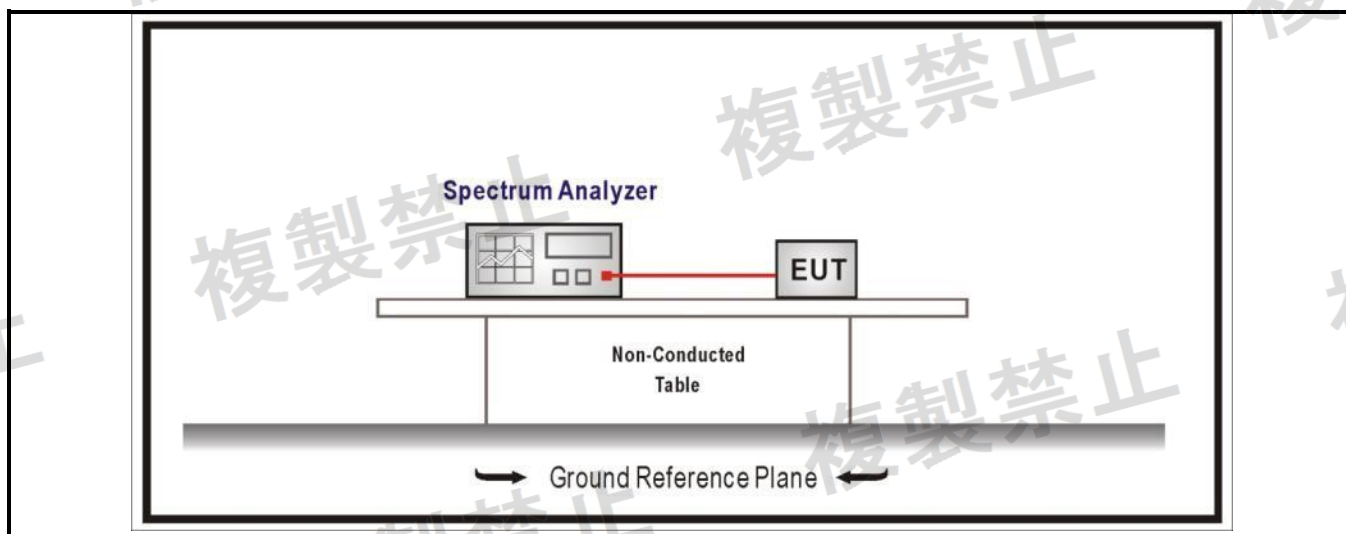


4.2	Spread Bandwidth and Spread Factor	VERDICT: PASS
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Limit

Standard	MIC Notice No.88 Appendix No.43

Test Configuration



Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	This test only apply for DSSS mode	

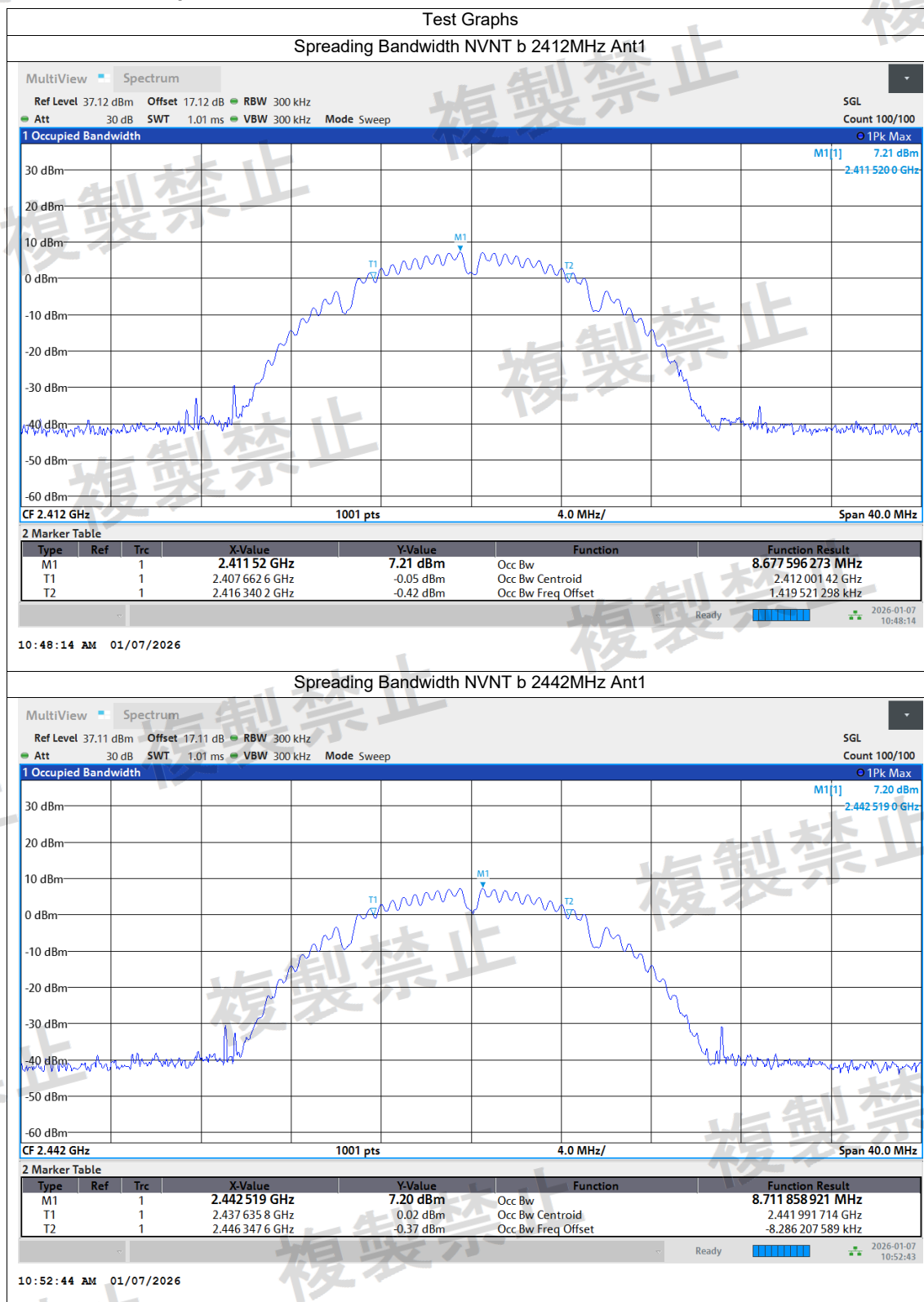
Results

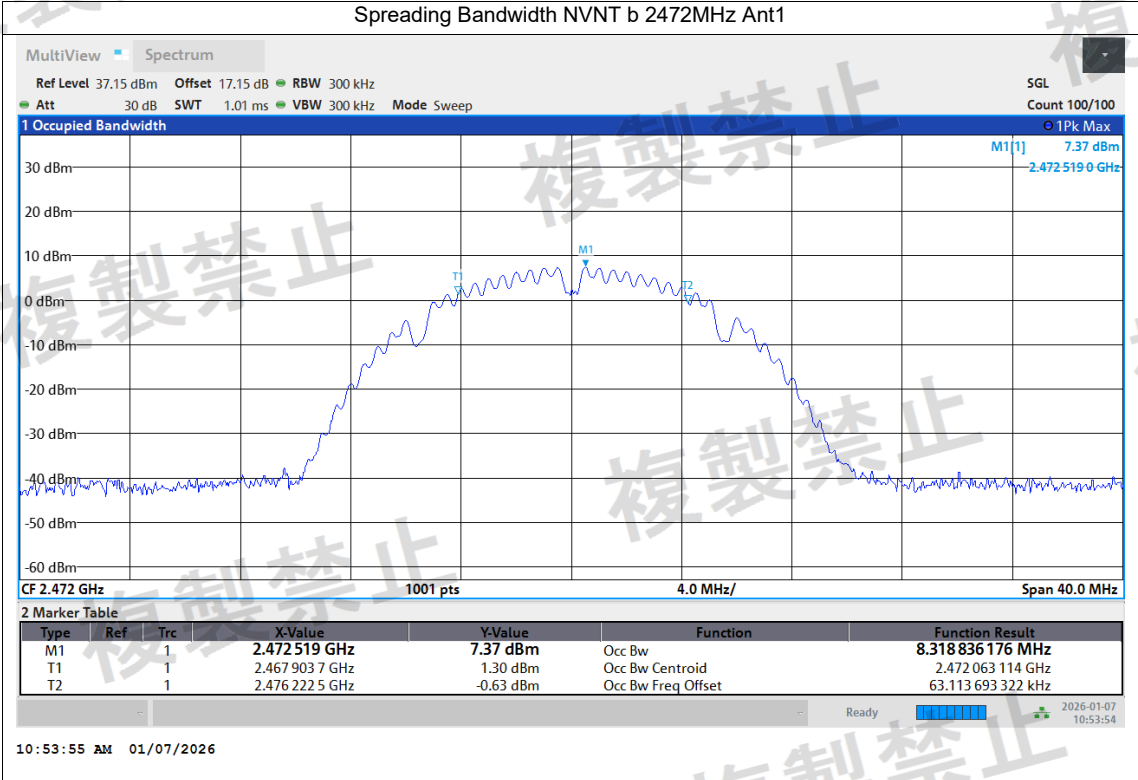
Mode	CH.	Test Freq. (MHz)	90% OBW (MHz)	Spread Factor	Result
802.11b	01	2412	8.678	6.311	Pass
	07	2442	8.712	6.336	Pass
	13	2472	8.319	6.050	Pass

Note:

Spread Factor = 90% OBW / modulation rate. The modulation rate: MR=1.375 for 802.11b.

Spread Bandwidth and Spread Factor



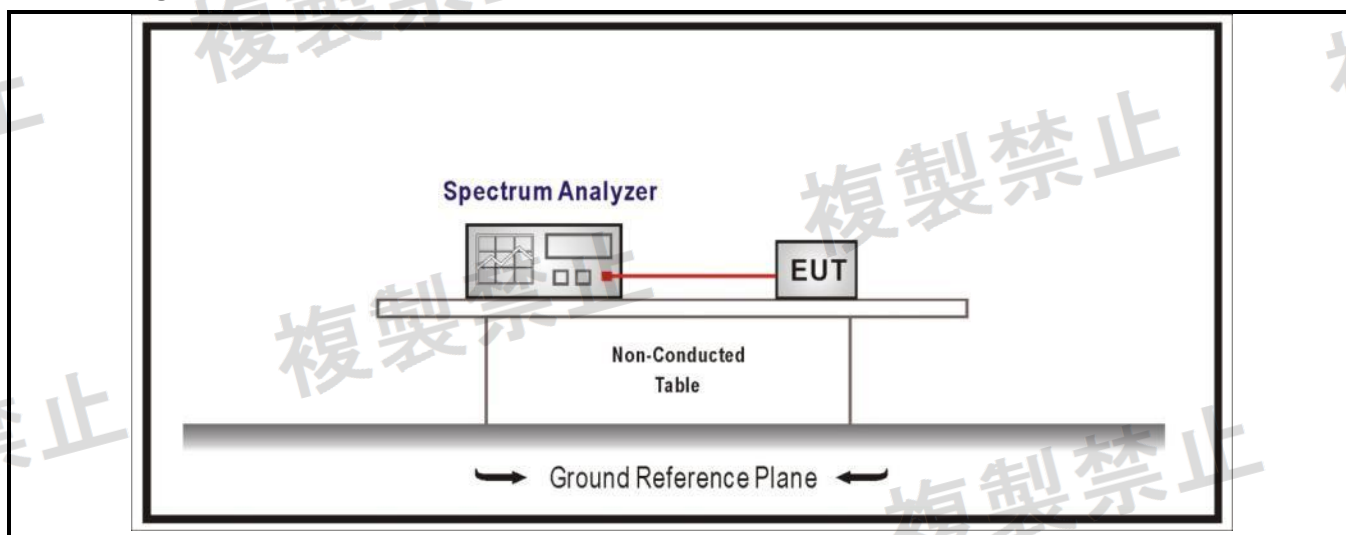


4.3	Occupied Bandwidth	VERDICT: PASS
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Limit

Standard		MIC NOTICE NO.88 APPENDIX NO.43
☒	Channel Power of DSSS, the limit should $\leq$ 26MHz	
☐	Channel Power of FHSS, the limit should $\leq$ 83.5MHz	
☒	Channel Power of OFDM	
☒	Nominal Bandwidth=20MHz, the limit should $\leq$ 26MHz	
☒	Nominal Bandwidth=40MHz, the limit should $\leq$ 40MHz	
☐	Channel Power of other situation, the limit should $\leq$ 26MHz	

Test Configuration



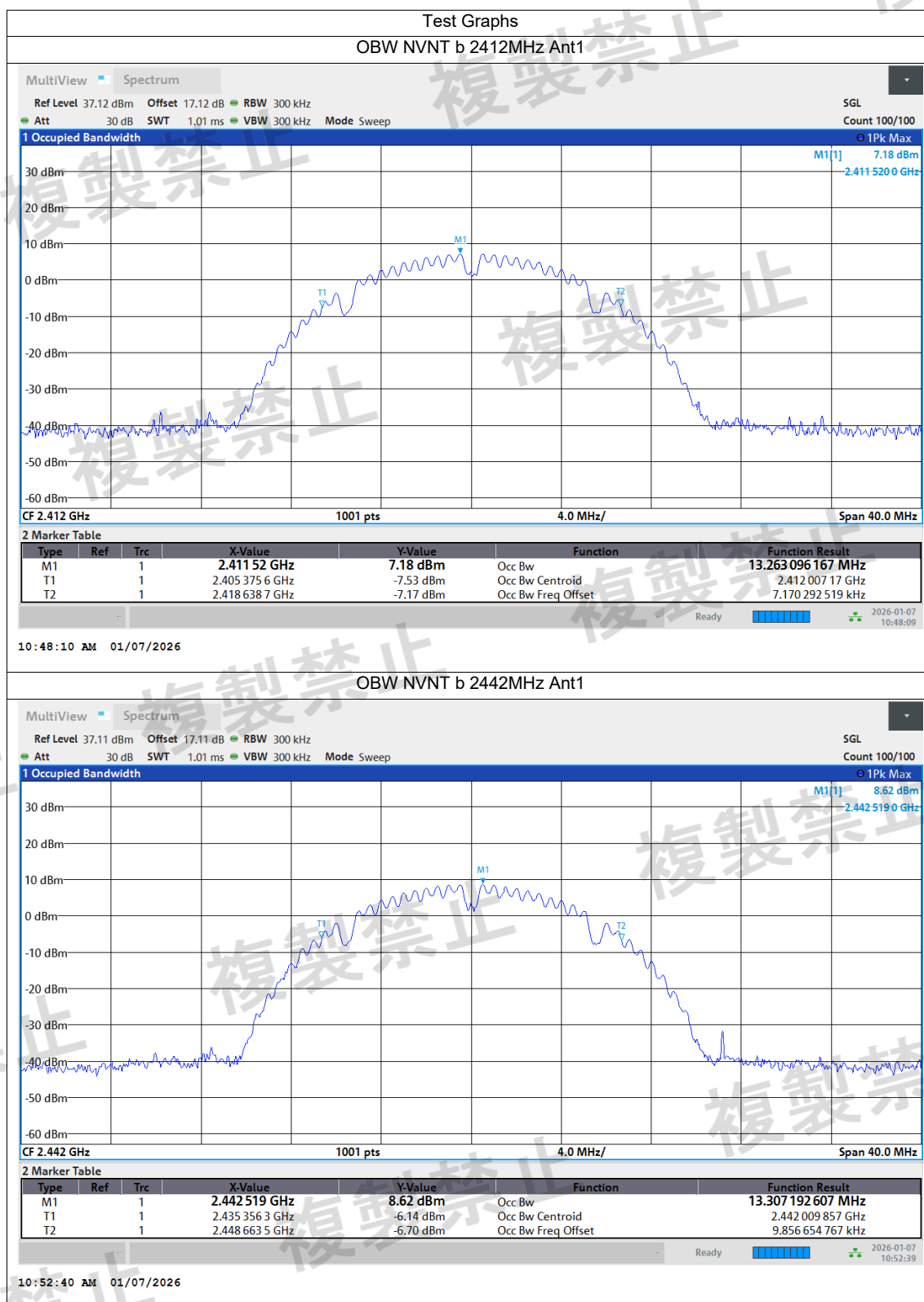
Performed measurements

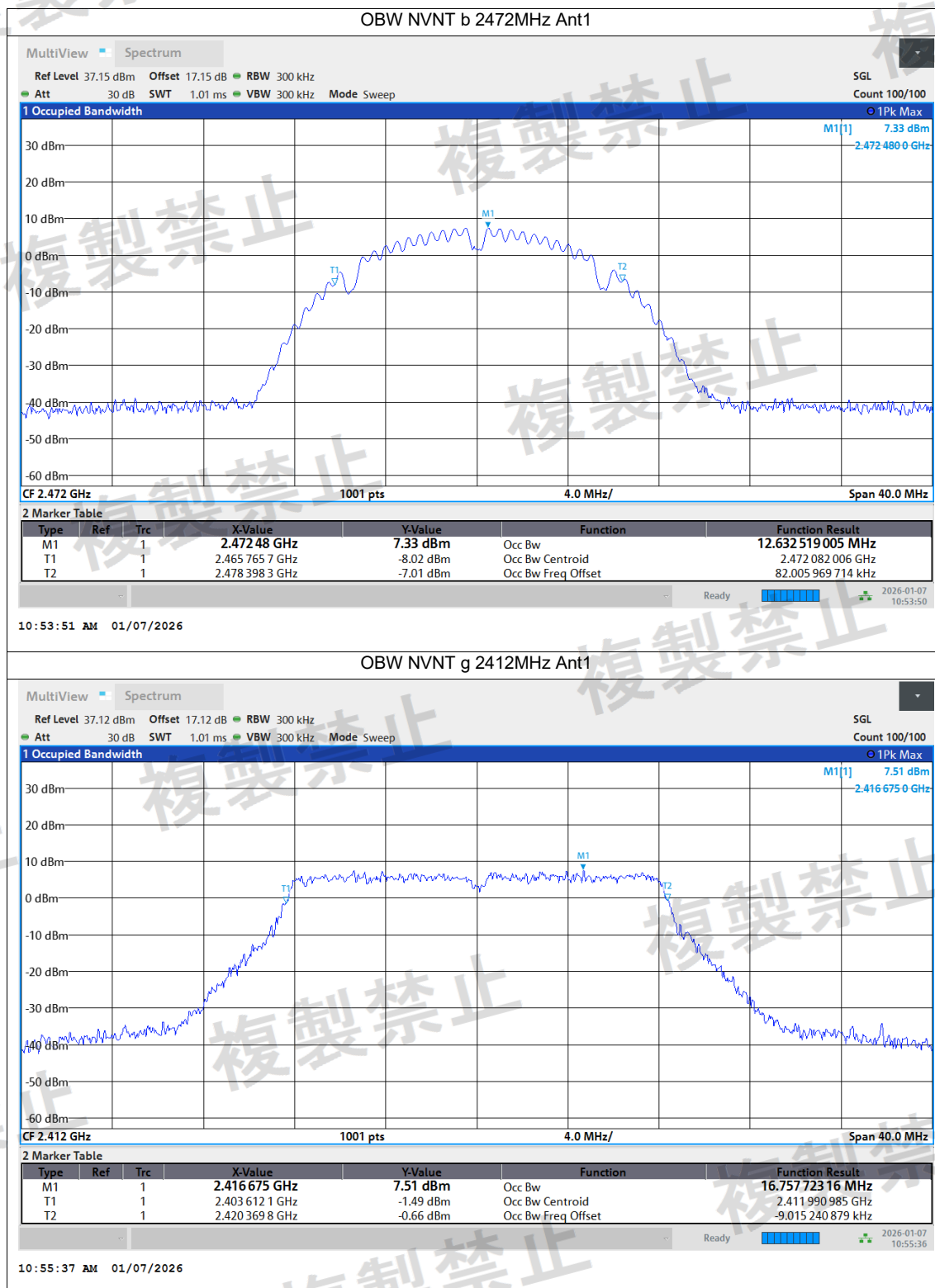
Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

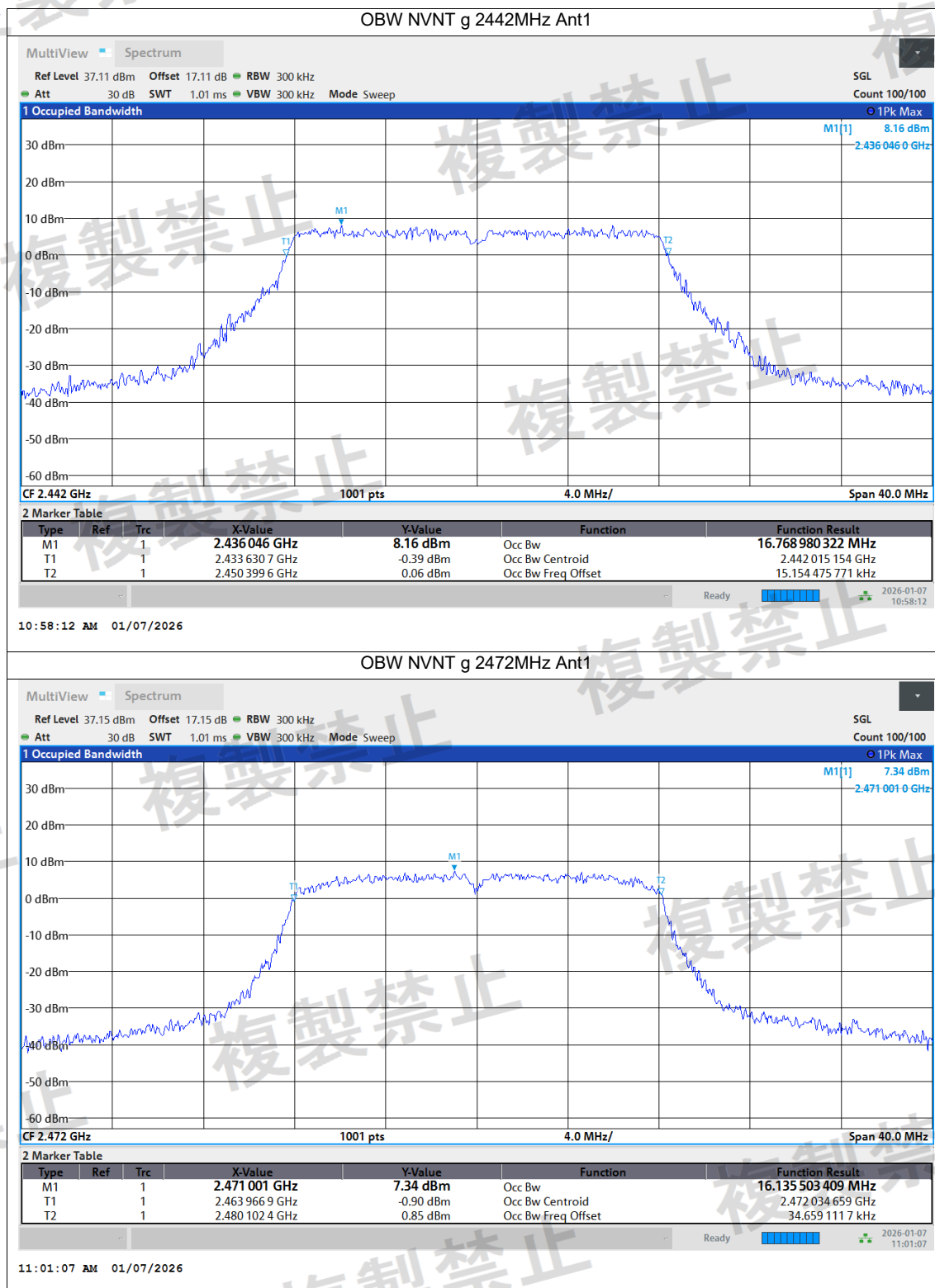
Results

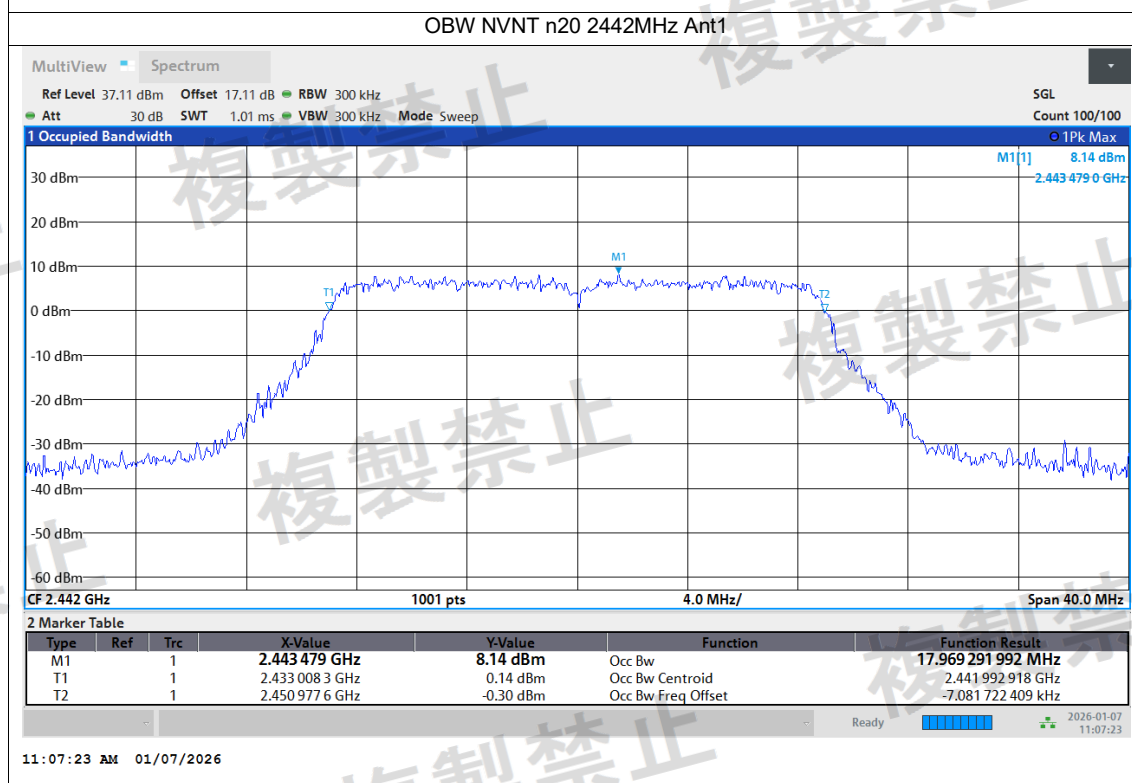
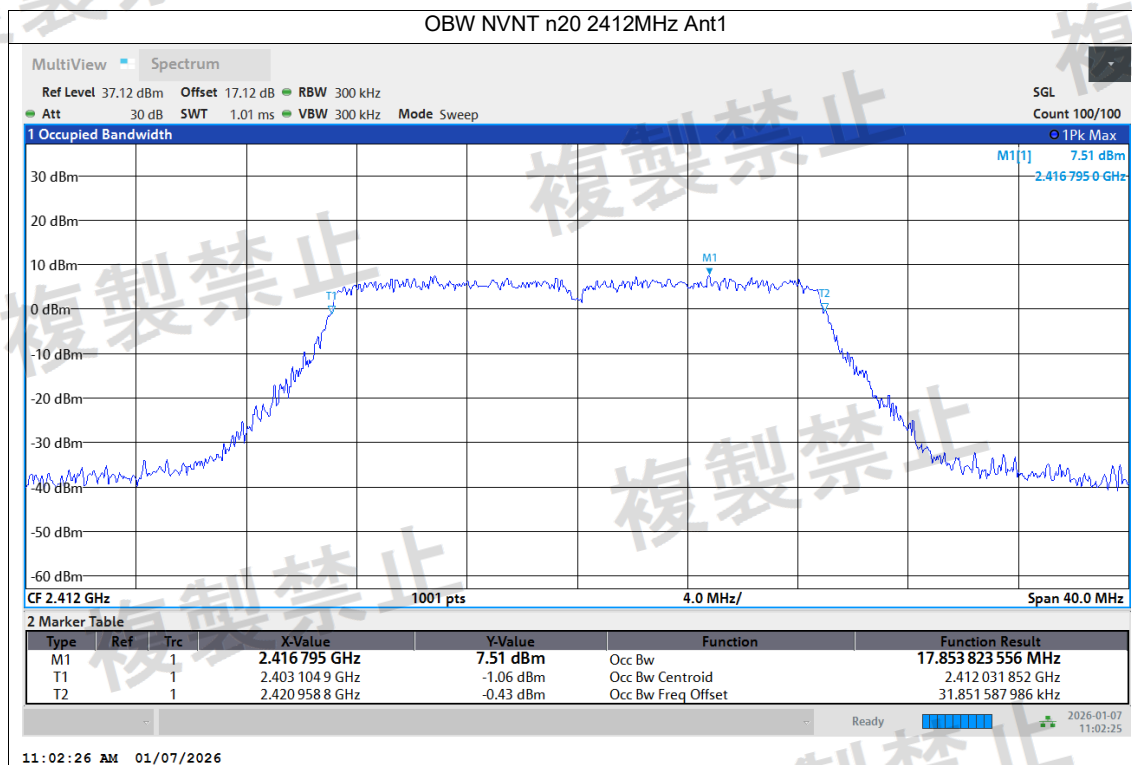
Mode	CH.	Test Freq. (MHz)	99% OBW (MHz)	Limit (MHz)	Result
802.11b	01	2412	13.263	≤ 26	Pass
	07	2442	13.307	≤ 26	Pass
	13	2472	12.633	≤ 26	Pass
802.11g	01	2412	16.758	≤ 26	Pass
	07	2442	16.769	≤ 26	Pass
	13	2472	16.136	≤ 26	Pass
802.11n (20M)	01	2412	17.854	≤ 26	Pass
	07	2442	17.969	≤ 26	Pass
	13	2472	17.013	≤ 26	Pass
802.11n (40M)	03	2422	36.106	≤ 38	Pass
	07	2442	36.11	≤ 38	Pass
	11	2462	35.56	≤ 38	Pass

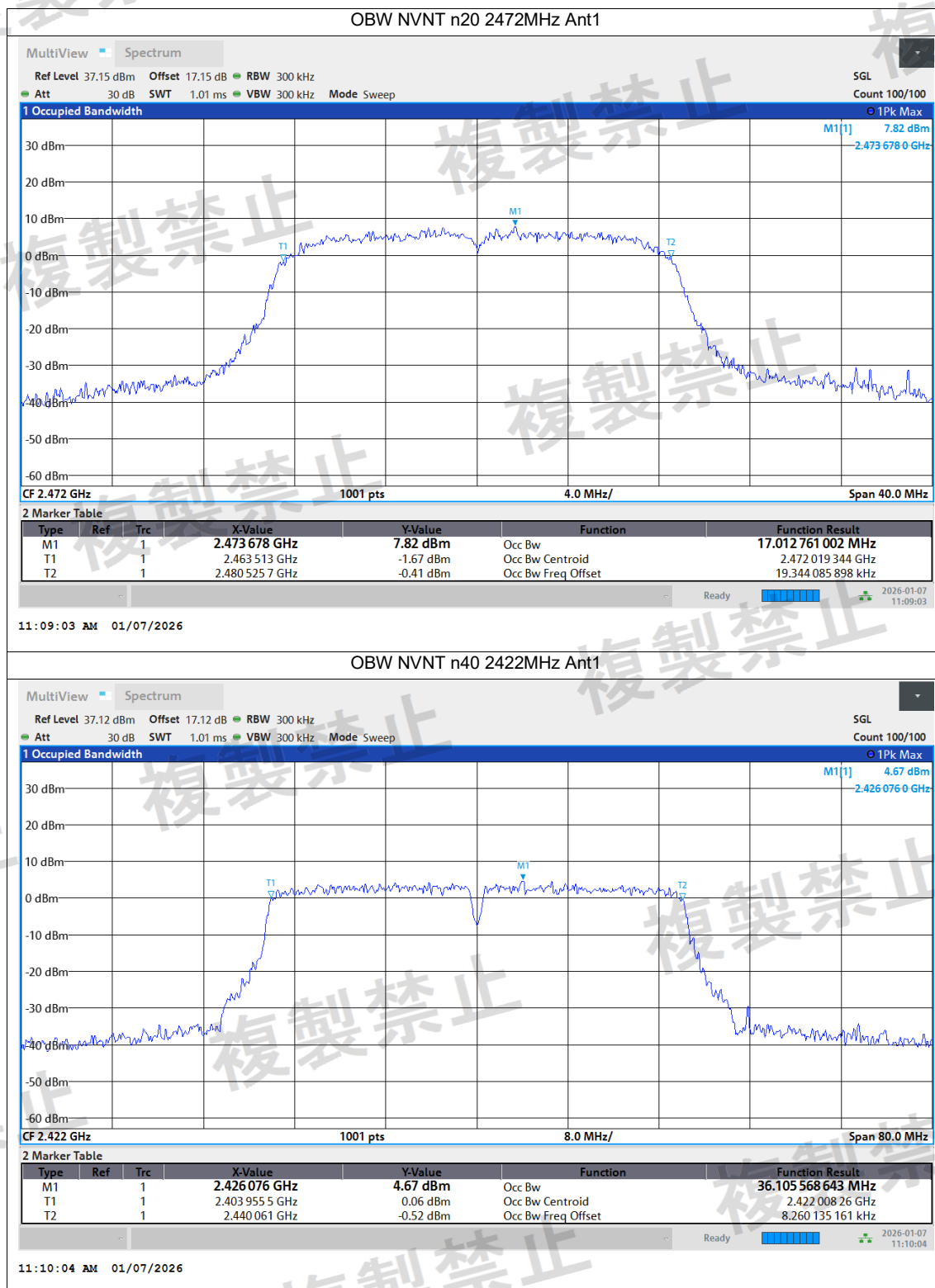
Occupied Bandwidth

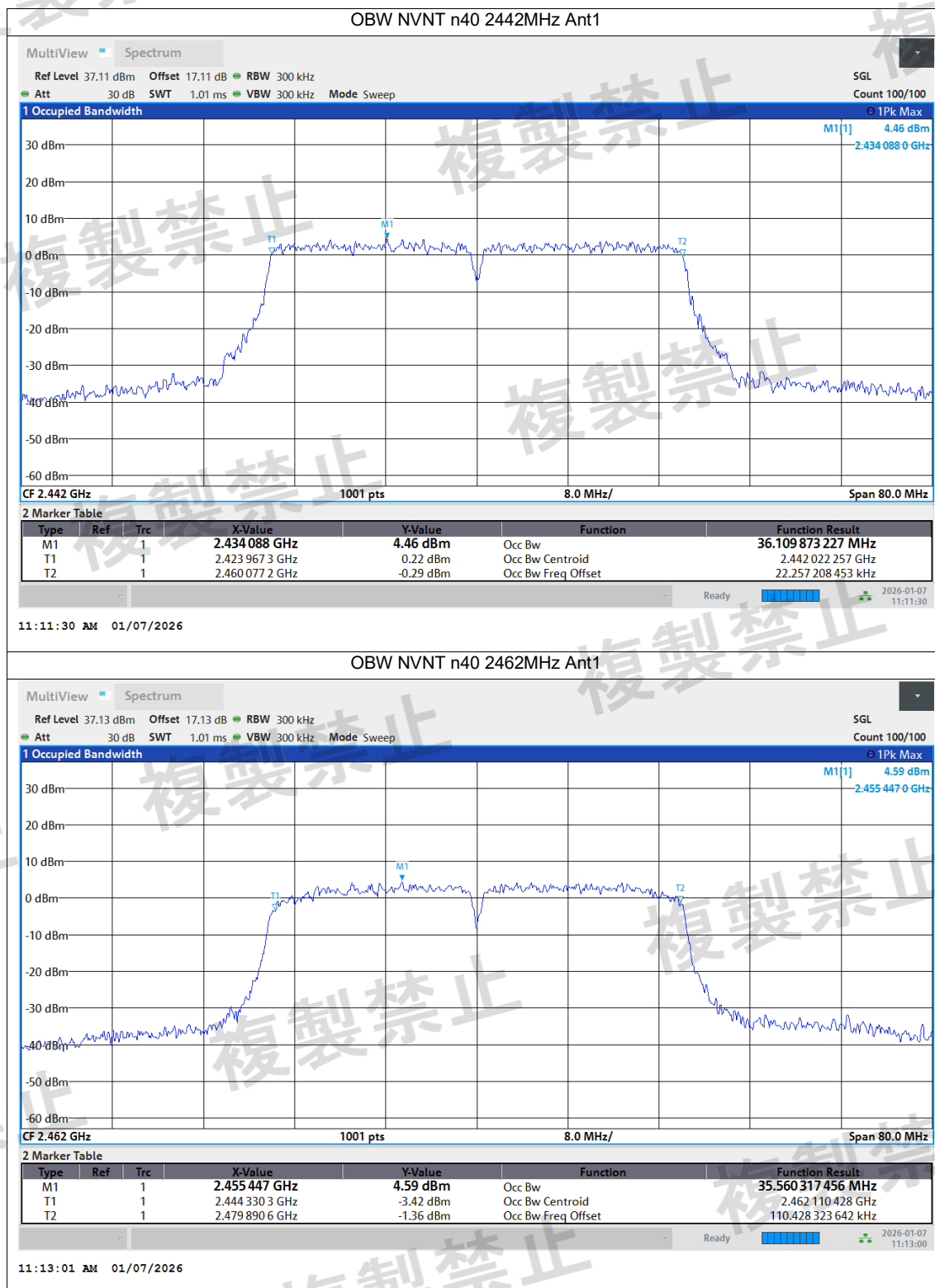










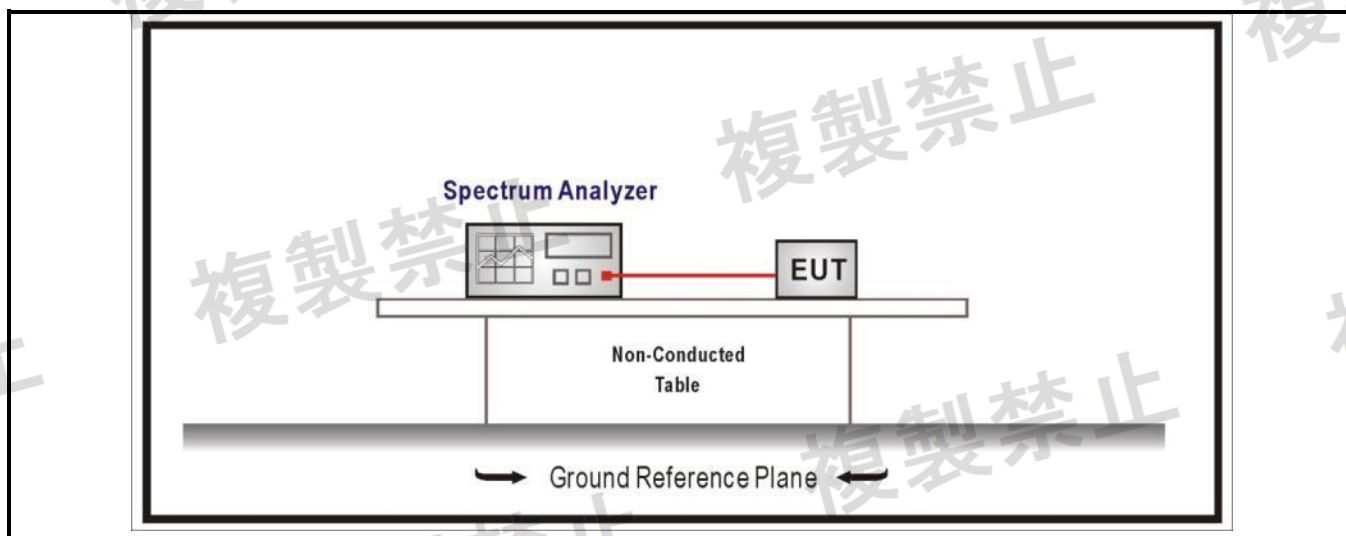


4.4	Frequency Error	VERDICT: PASS
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Limit

Standard	MIC NOTICE NO.88 APPENDIX NO.43
$\leq \pm 50\text{ppm}$	

Test Configuration



Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

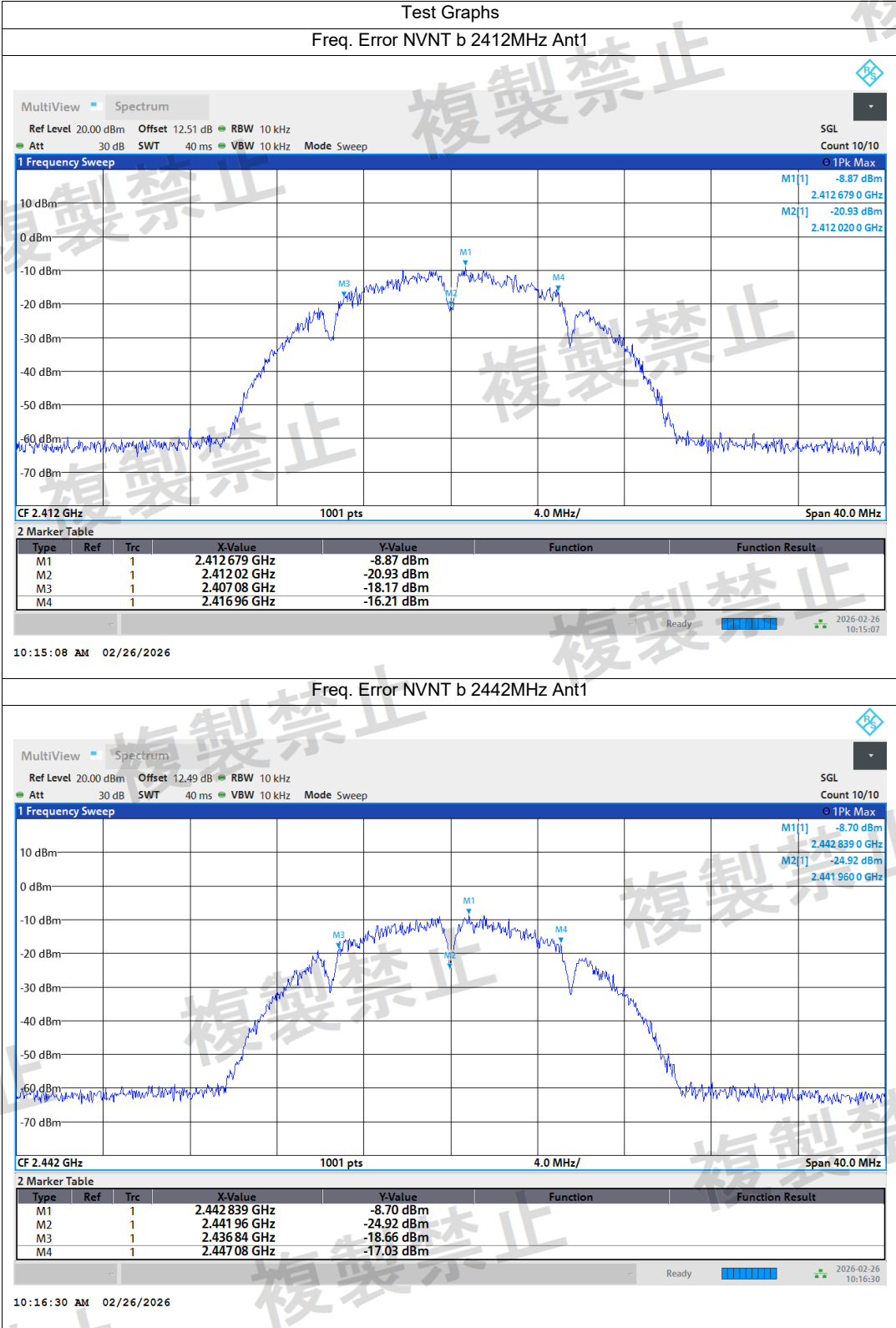
Results

Mode	CH.	Test Freq. (MHz)	Measure Frequency (MHz)		Deviation (ppm)	Limit (ppm)	Result
			F _L	F _H			
802.11b	01	2412	2407.08	2416.96	8.29	≤ ±50	PASS
	07	2442	2436.84	2447.08	-16.38	≤ ±50	PASS
	13	2472	2467.00	2477.00	0	≤ ±50	PASS
802.11g	01	2412	2403.72	2420.28	0	≤ ±50	PASS
	07	2442	2433.72	2450.28	0	≤ ±50	PASS
	13	2472	2463.76	2480.20	-8.09	≤ ±50	PASS
802.11n(20M)	01	2412	2403.12	2420.84	-8.29	≤ ±50	PASS
	07	2442	2433.08	2450.88	-8.19	≤ ±50	PASS
	13	2472	2463.48	2480.76	48.54	≤ ±50	PASS
802.11n(40M)	03	2422	2403.76	2440.24	0	≤ ±50	PASS
	07	2442	2423.76	2460.24	0	≤ ±50	PASS
	11	2462	2443.76	2480.24	0	≤ ±50	PASS

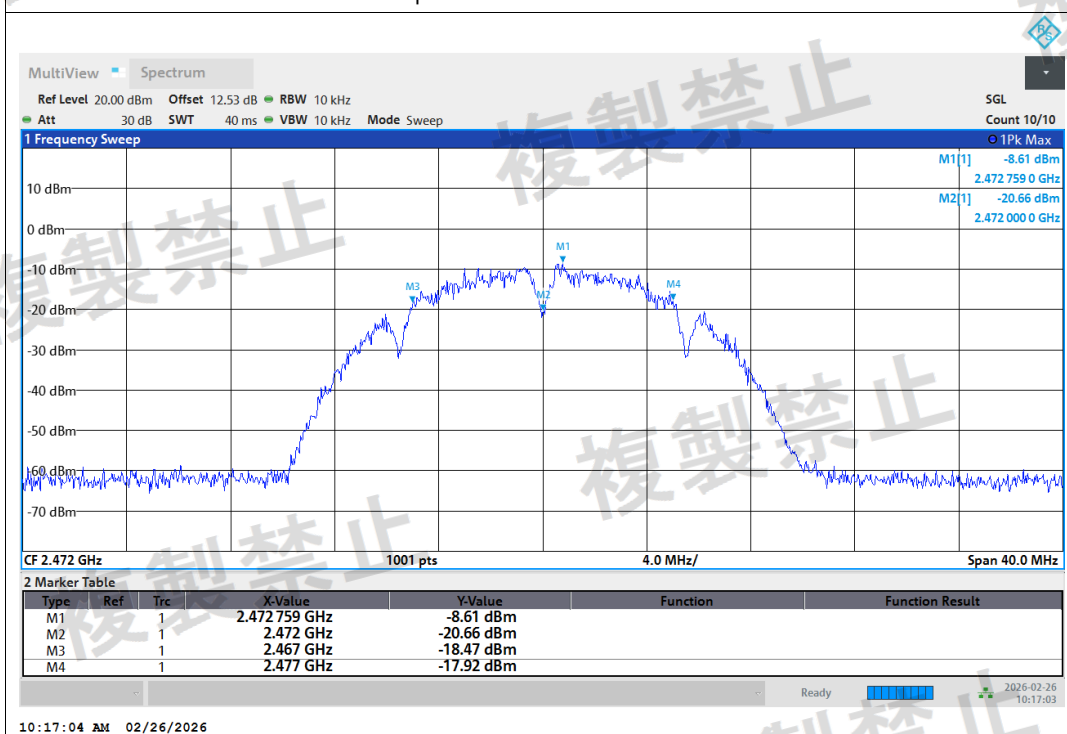
Note:

$$\text{Deviation} = [(F_L + F_H) / 2 - F] / F \times 10^6$$

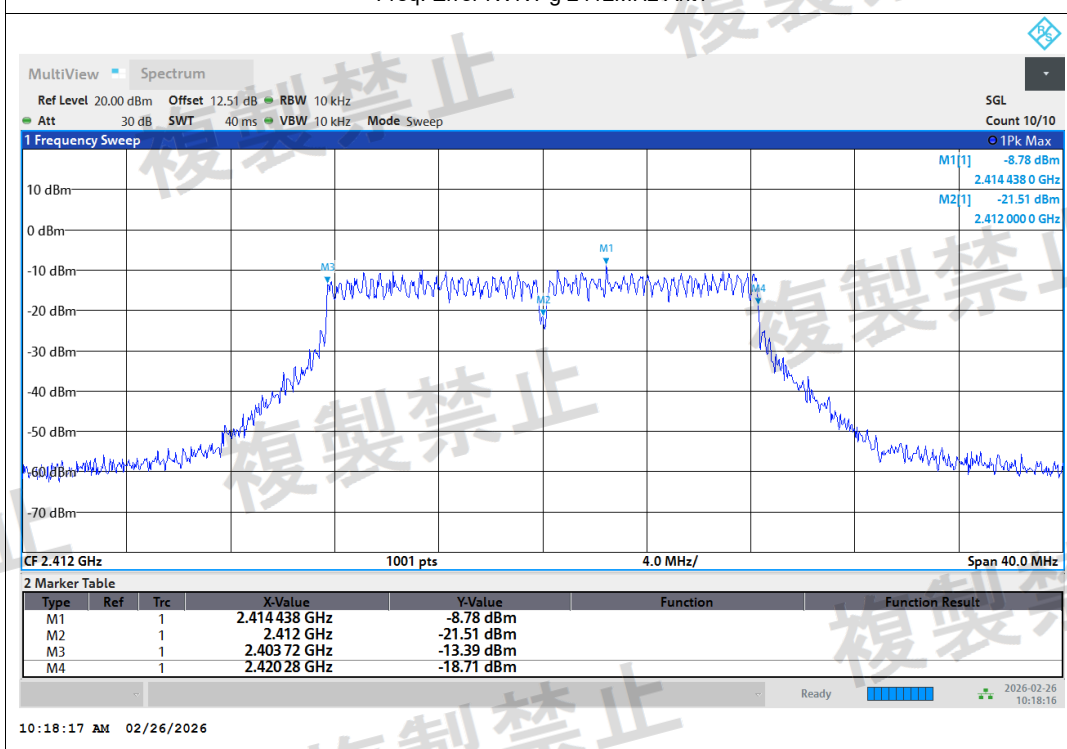
Frequency Error



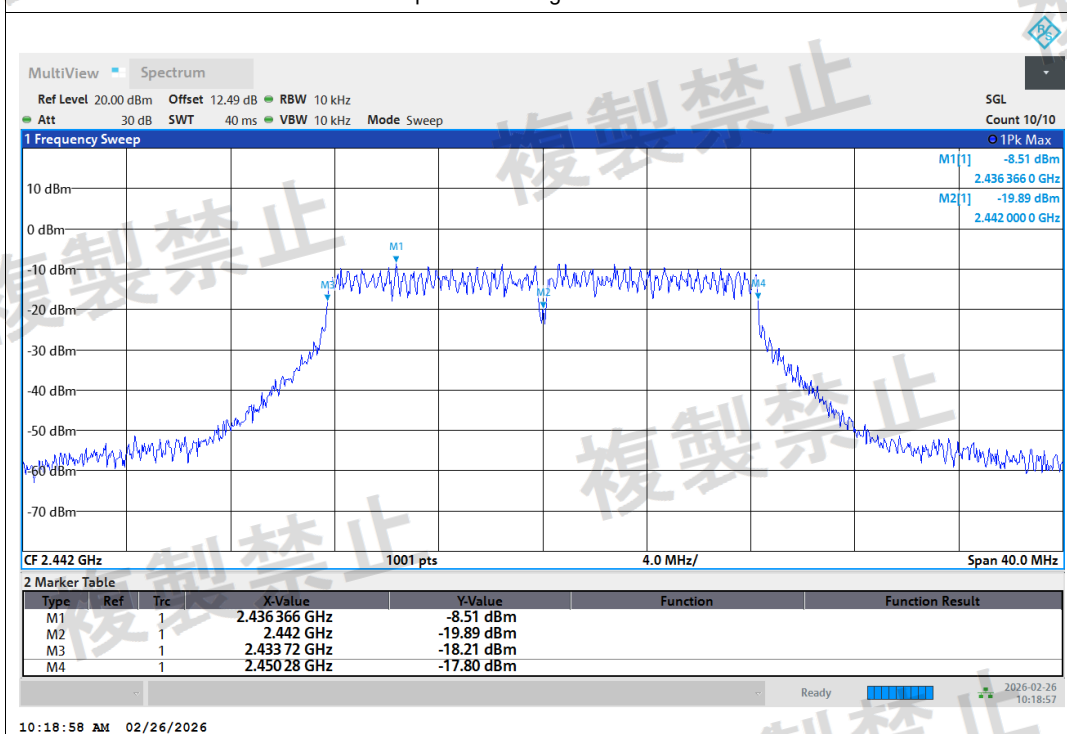
Freq. Error NVNT b 2472MHz Ant1



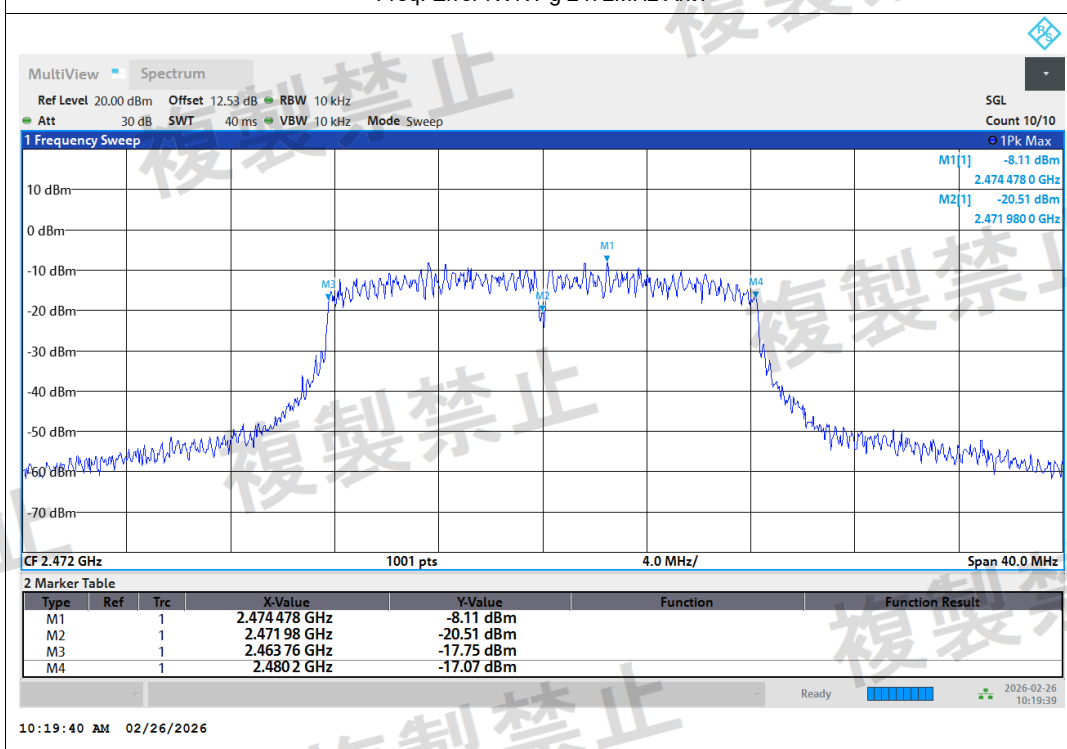
Freq. Error NVNT g 2412MHz Ant1

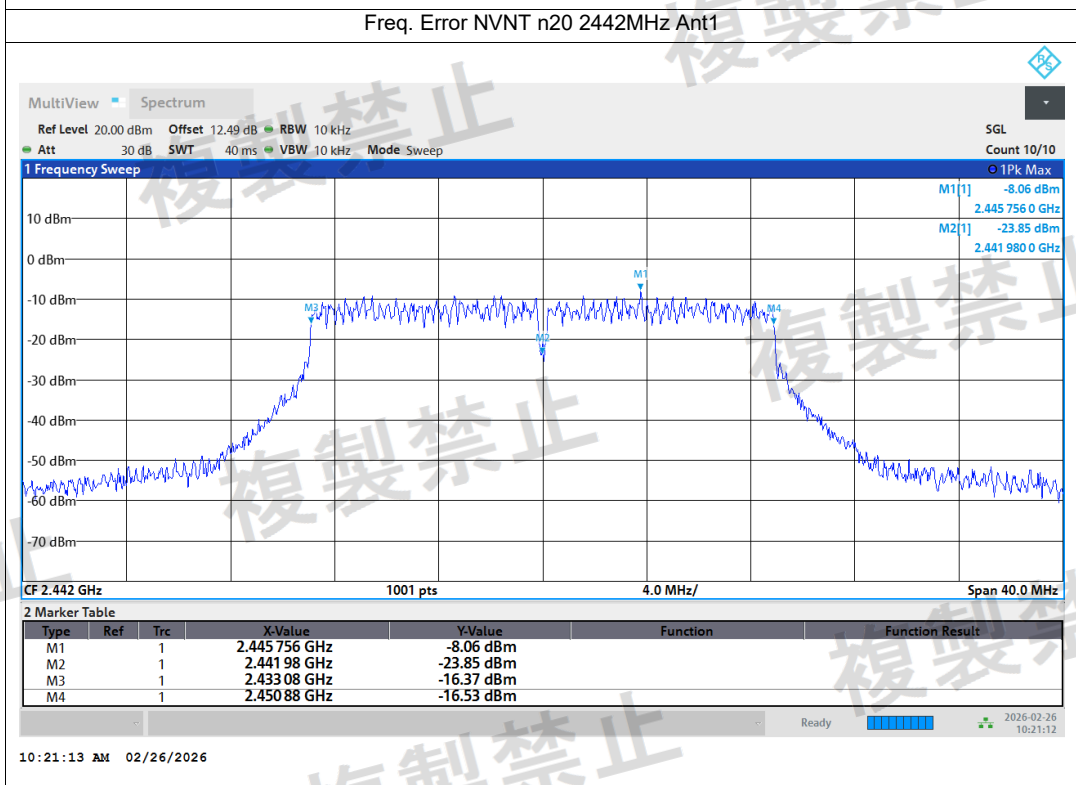
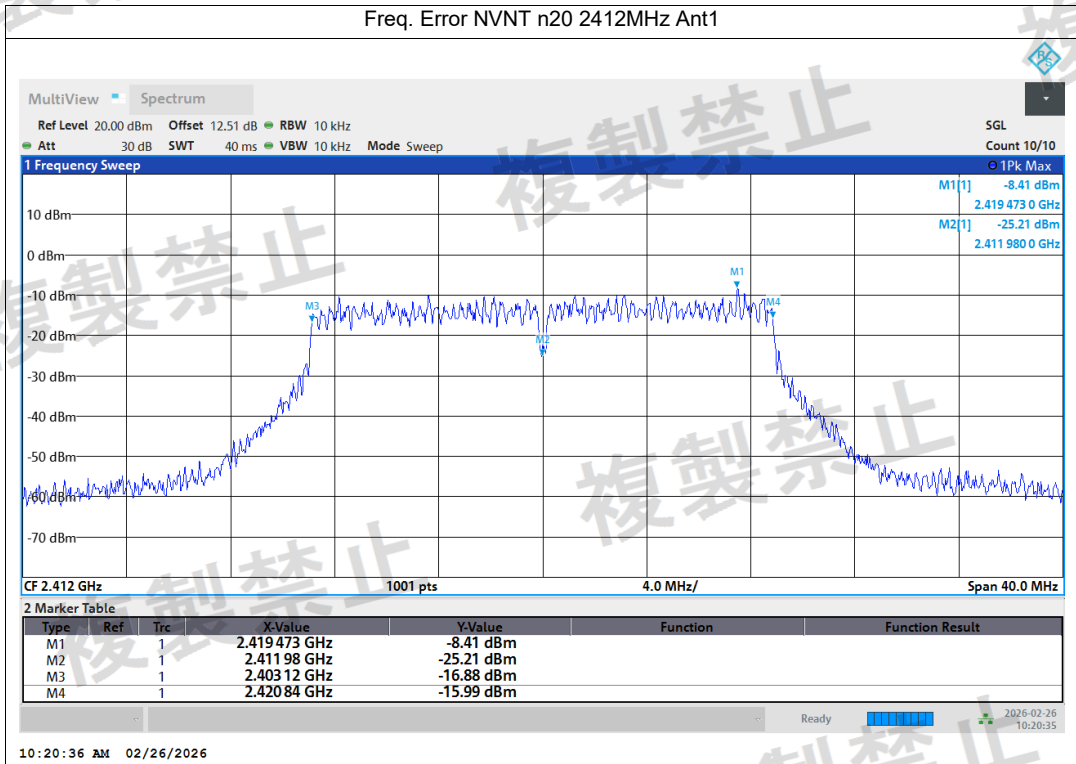


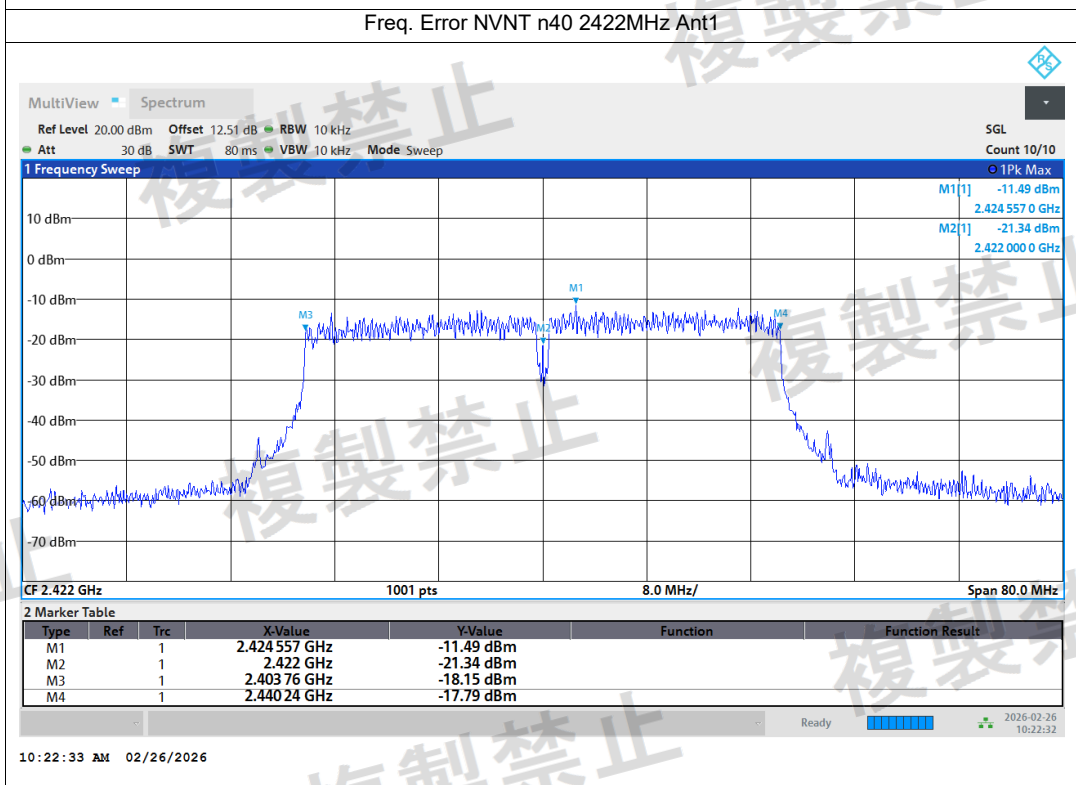
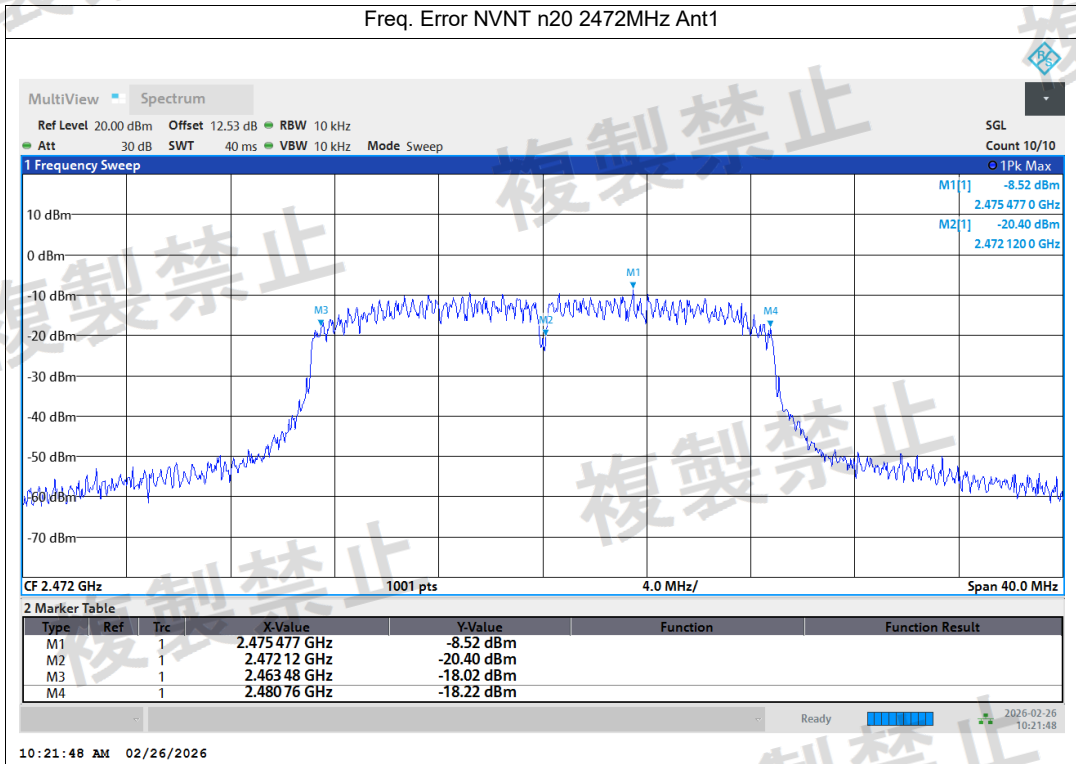
Freq. Error NVNT g 2442MHz Ant1

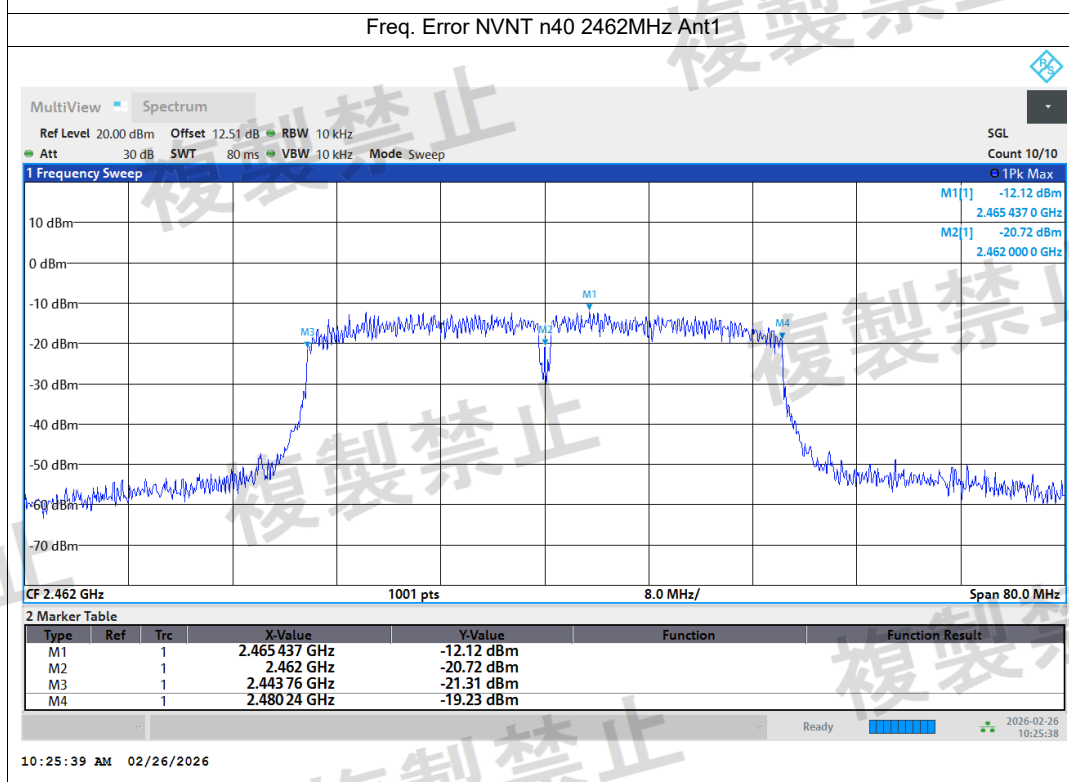
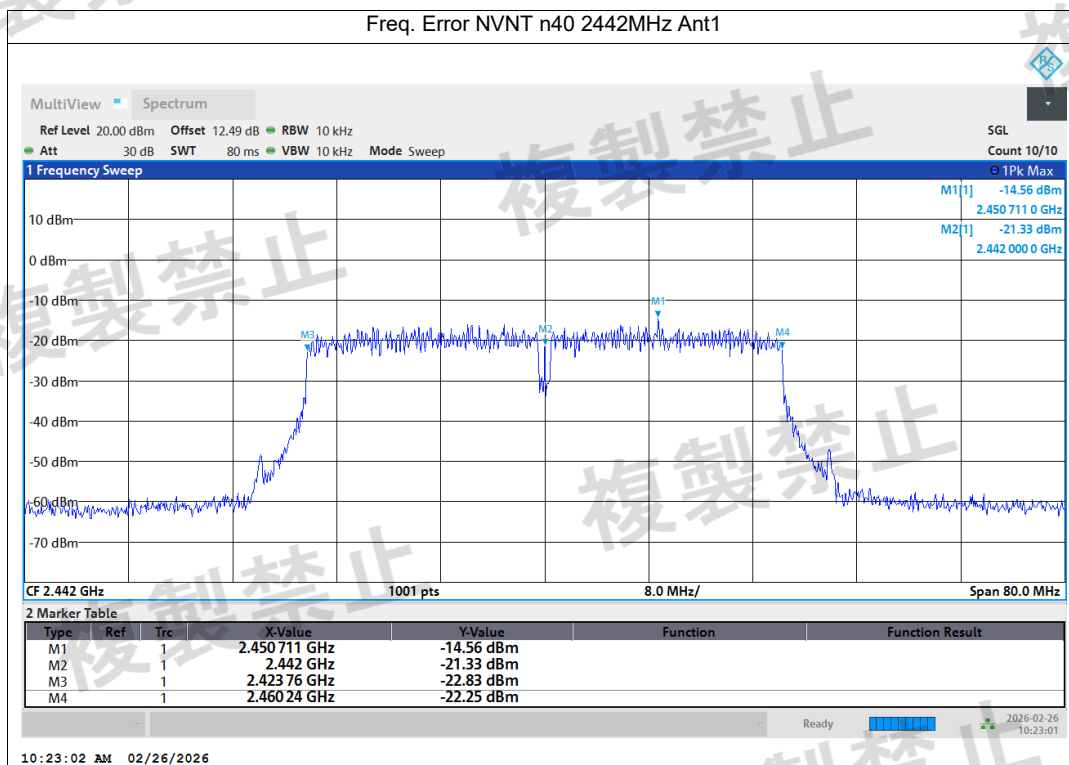


Freq. Error NVNT g 2472MHz Ant1







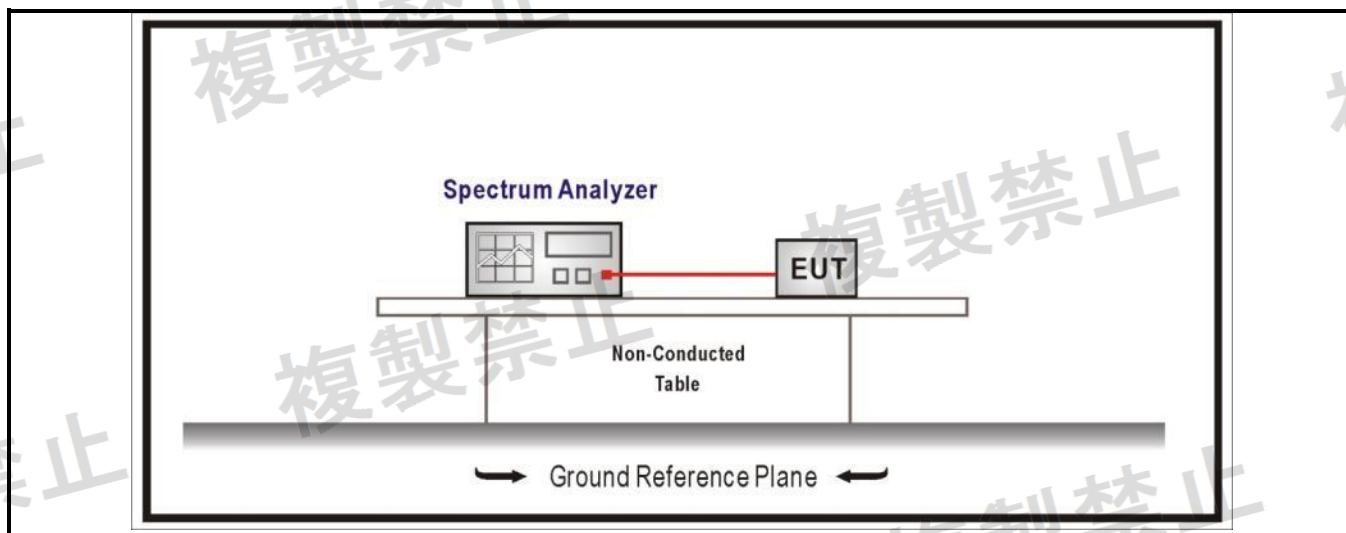


4.5	Transmitter Spurious Emission	VERDICT: PASS
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Limit

Standard	MIC NOTICE NO.88 APPENDIX NO.43
≤ -26 dBm/MHz for 30 – 1000 MHz ≤ -26 dBm/MHz for 1000 – 2387 MHz ≤ -16 dBm/MHz for 2387 – 2400 MHz ≤ -16 dBm/MHz for 2483.5 – 2496.5 MHz ≤ -26 dBm/MHz for 2496.5 – 12500 MHz	

Test Configuration



Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Results

Mode	CH.	Test Freq. (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Limit (dBm/MHz)	Result
802.11b	01	2412	30-1000	30.48	-43.46	-26	Pass
			1000-2387	2371.1	-42.66	-26	Pass
			2387-2400	2398.55	-29.27	-16	Pass
			2483.5-2496.5	2490.95	-40.43	-16	Pass
			2496.5-13000	4820.5	-37.13	-26	Pass
	07	2442	30-1000	35.33	-42.95	-26	Pass
			1000-2387	1563.3	-43.17	-26	Pass
			2387-2400	2399.73	-41.74	-16	Pass
			2483.5-2496.5	2491.65	-41.72	-16	Pass
			2496.5-13000	4883.5	-36.81	-26	Pass
	13	2472	30-1000	35.33	-42.11	-26	Pass
			1000-2387	2362.8	-43.37	-26	Pass
			2387-2400	2393.4	-42.43	-16	Pass
			2483.5-2496.5	2484.44	-38.22	-16	Pass
			2496.5-13000	6373.5	-38.37	-26	Pass
802.11g	01	2412	30-1000	32.42	-33.65	-26	Pass
			1000-2387	2136.9	-33.37	-26	Pass
			2387-2400	2399.89	-16.12	-16	Pass
			2483.5-2496.5	2491.09	-33.59	-16	Pass
			2496.5-13000	7422.5	-28.02	-26	Pass
	07	2442	30-1000	34.36	-30.91	-26	Pass
			1000-2387	2142.4	-33.59	-26	Pass
			2387-2400	2396.36	-34.22	-16	Pass
			2483.5-2496.5	2485.82	-32.45	-16	Pass
			2496.5-13000	7422.5	-27.98	-26	Pass
	13	2472	30-1000	35.33	-32.68	-26	Pass
			1000-2387	2304.6	-33.19	-26	Pass
			2387-2400	2390.15	-33.64	-16	Pass
			2483.5-2496.5	2483.56	-21.89	-16	Pass
			2496.5-13000	2501.5	-27.57	-26	Pass
802.11n (20M)	01	2412	30-1000	30.48	-43.44	-26	Pass
			1000-2387	2386.3	-36.44	-26	Pass
			2387-2400	2399.96	-16.35	-16	Pass
			2483.5-2496.5	2484.19	-38.5	-16	Pass
			2496.5-13000	4820.5	-35.52	-26	Pass
	07	2442	30-1000	32.42	-43.01	-26	Pass
			1000-2387	2358.6	-41.14	-26	Pass
			2387-2400	2399.94	-35.67	-16	Pass

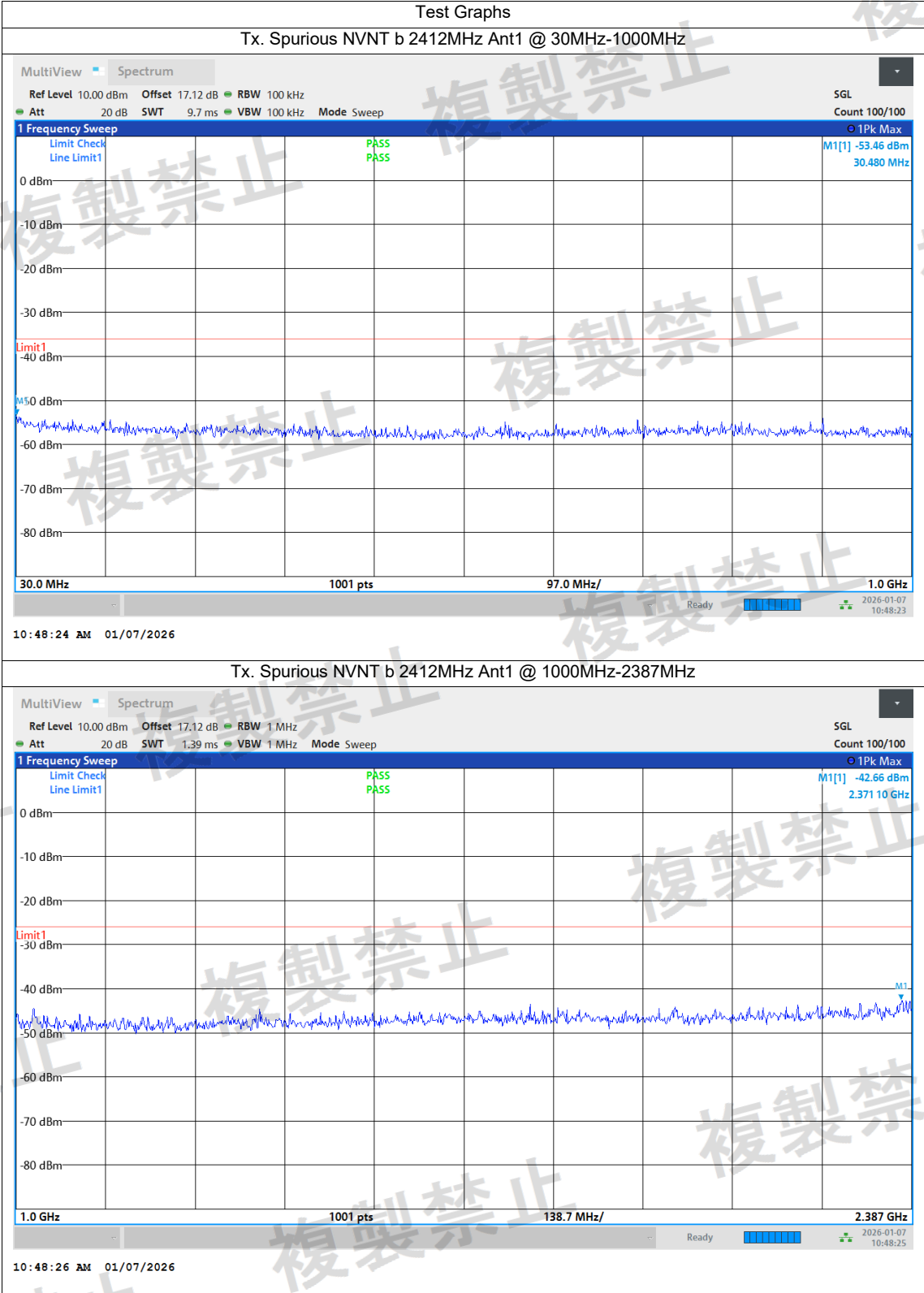
	13	2472	2483.5-2496.5	2494.64	-33.99	-16	Pass
			2496.5-13000	4883.5	-36.71	-26	Pass
			30-1000	75.06	-43.41	-26	Pass
			1000-2387	2386.3	-43.18	-26	Pass
			2387-2400	2392.16	-40.46	-16	Pass
			2483.5-2496.5	2483.56	-20.01	-16	Pass
			2496.5-13000	2501.5	-30.71	-26	Pass
802.11n (40M)	03	2422	30-1000	82.81	-42.39	-26	Pass
			1000-2387	2386.3	-36.82	-26	Pass
			2387-2400	2392.66	-19.5	-16	Pass
			2483.5-2496.5	2483.55	-35.44	-16	Pass
			2496.5-13000	4841.5	-38.5	-26	Pass
	07	2442	30-1000	30.48	-40.92	-26	Pass
			1000-2387	2383.5	-38.72	-26	Pass
			2387-2400	2395.98	-31.46	-16	Pass
			2483.5-2496.5	2484.13	-27.79	-16	Pass
			2496.5-13000	2501.5	-33.96	-26	Pass
	11	2462	30-1000	30.48	-42.89	-26	Pass
			1000-2387	2379.4	-42.13	-26	Pass
			2387-2400	2398.73	-39.95	-16	Pass
			2483.5-2496.5	2483.99	-20.42	-16	Pass
			2496.5-13000	2501.5	-28.54	-26	Pass

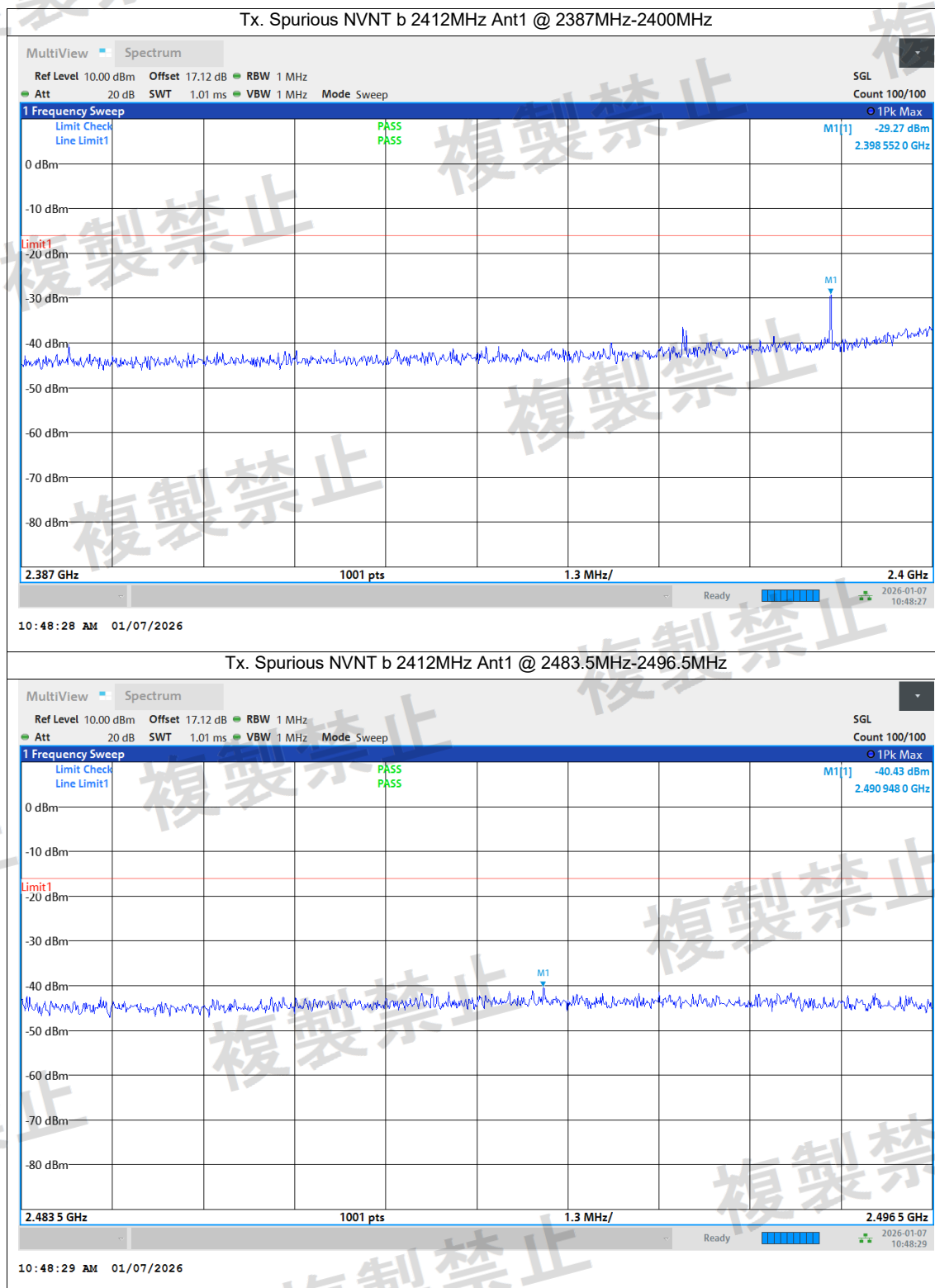
Note:

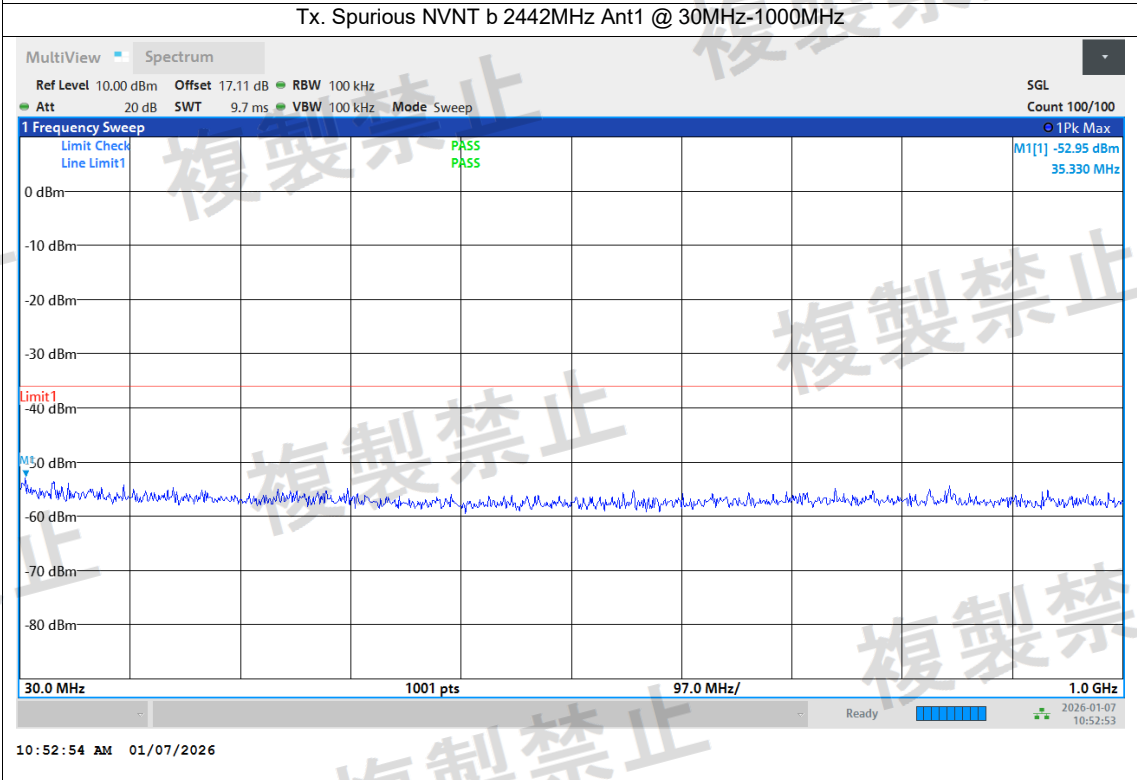
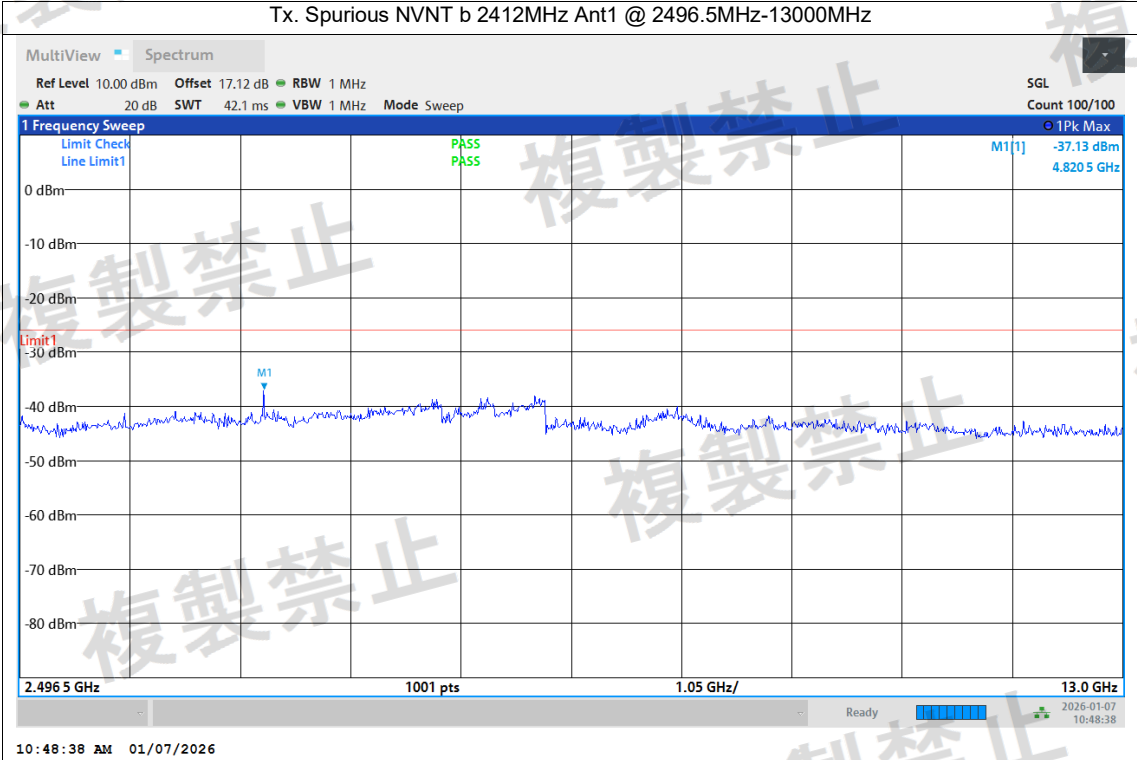
For 30MHz-1GHz,

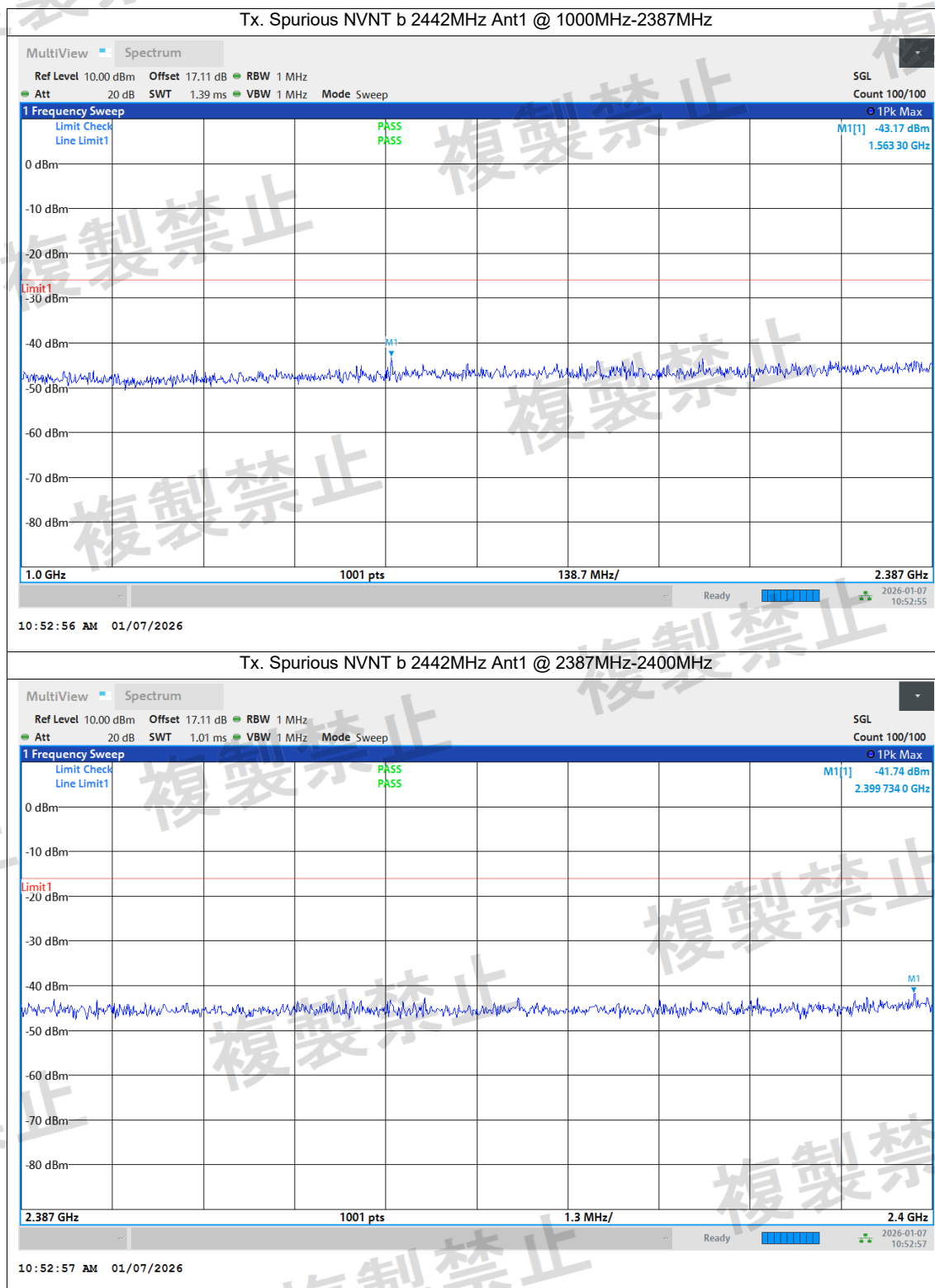
the final test result (dBm/MHz) = SA test level + 10*log (1000kHz/100kHz)

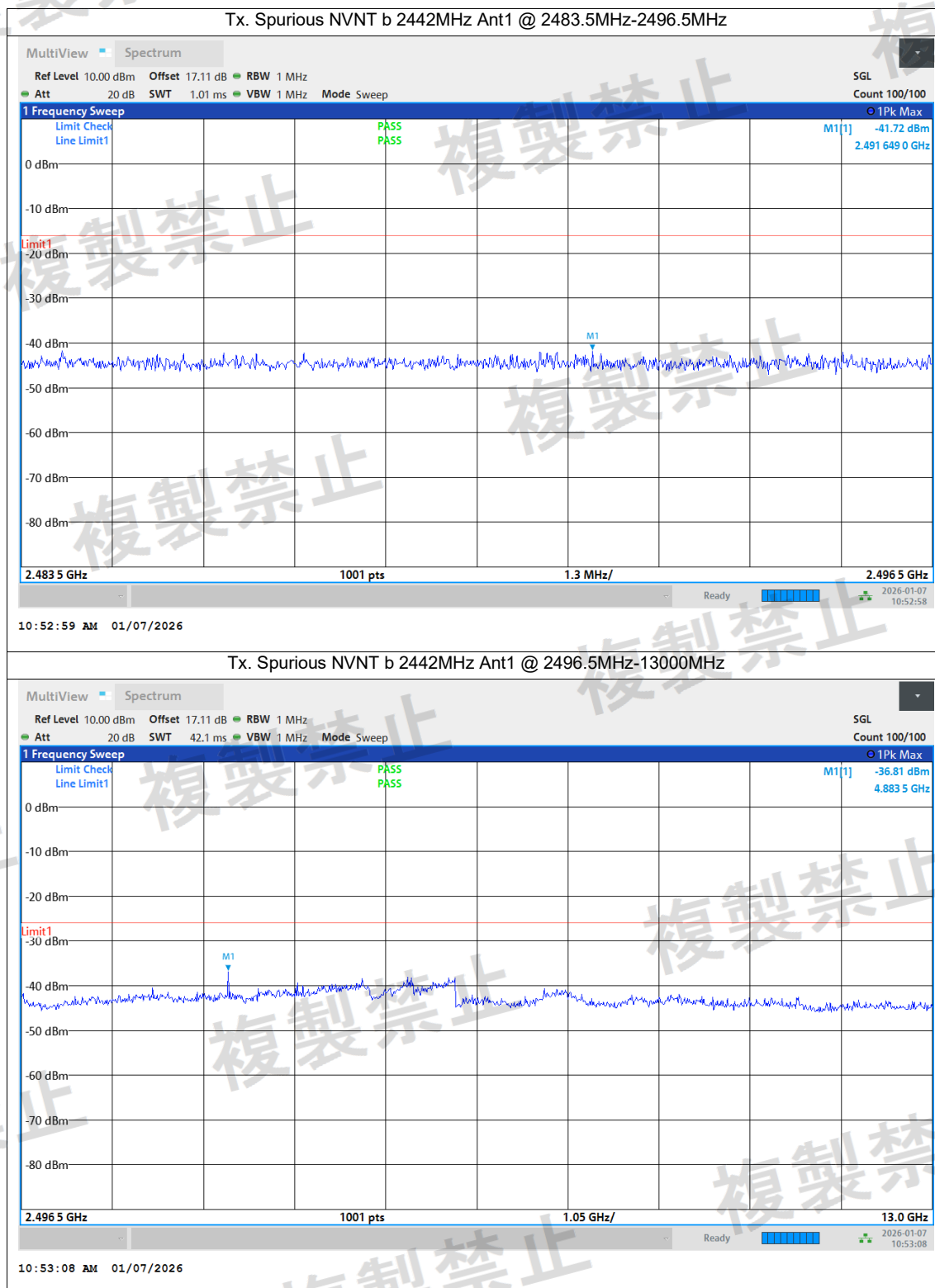
Transmitter Spurious Emission

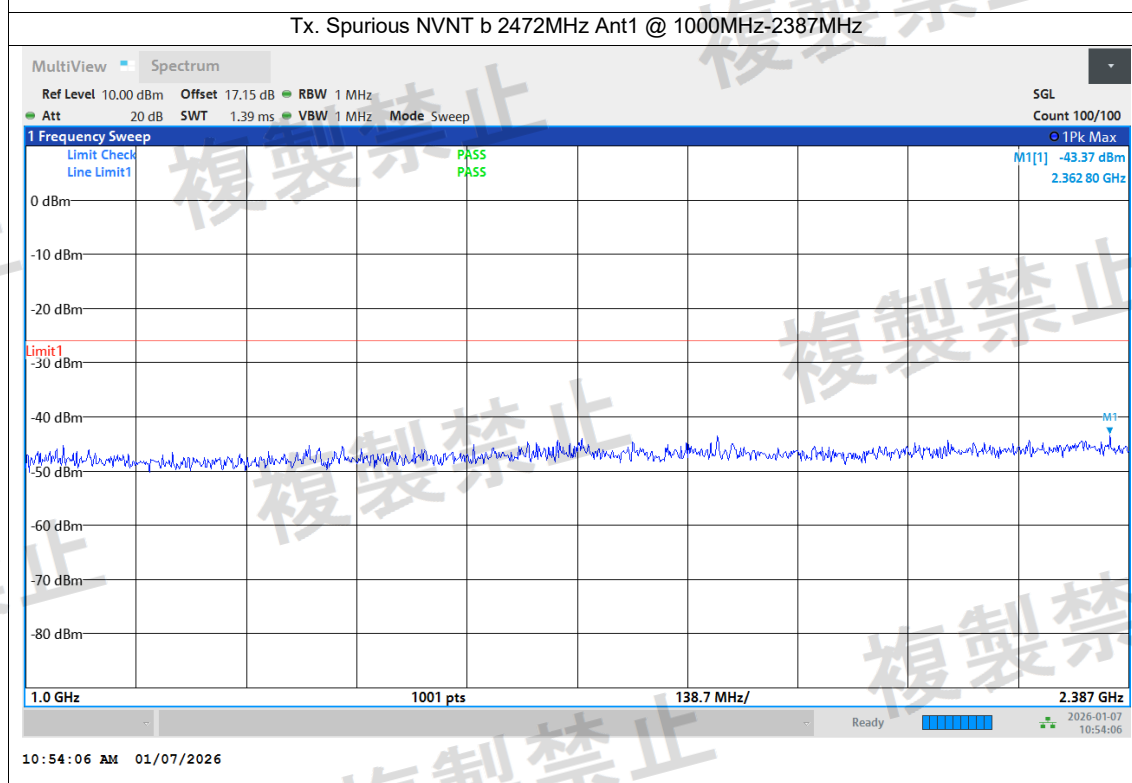
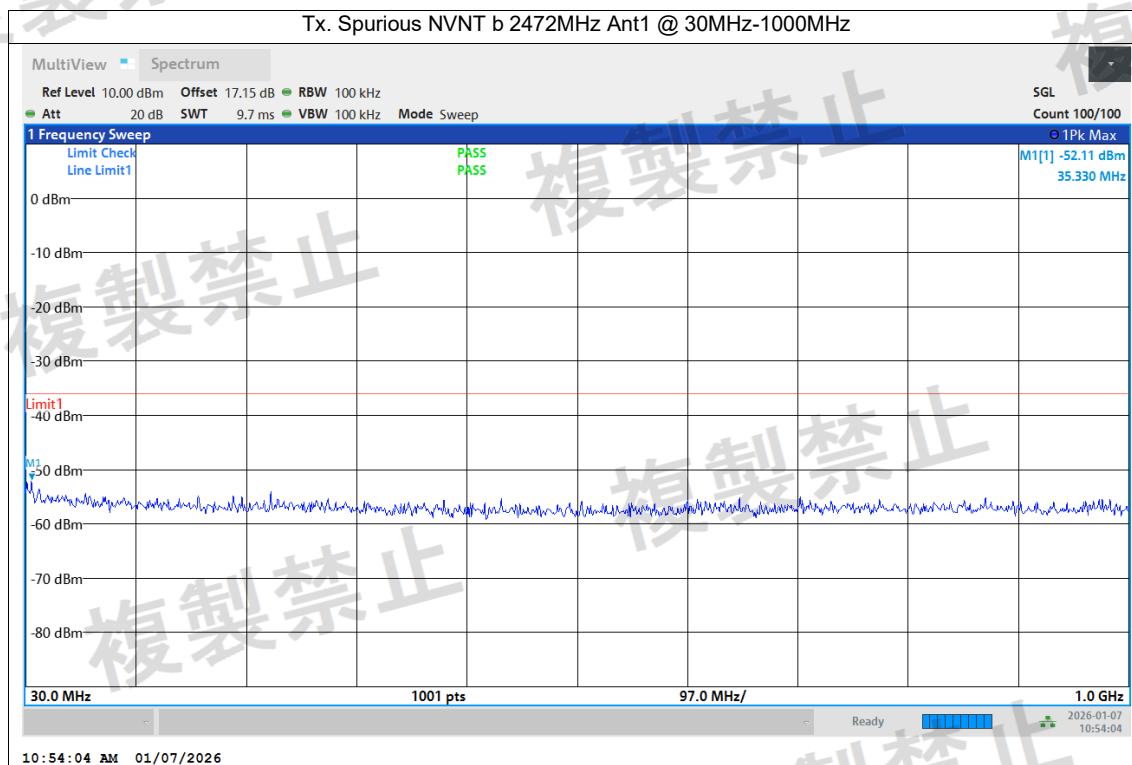


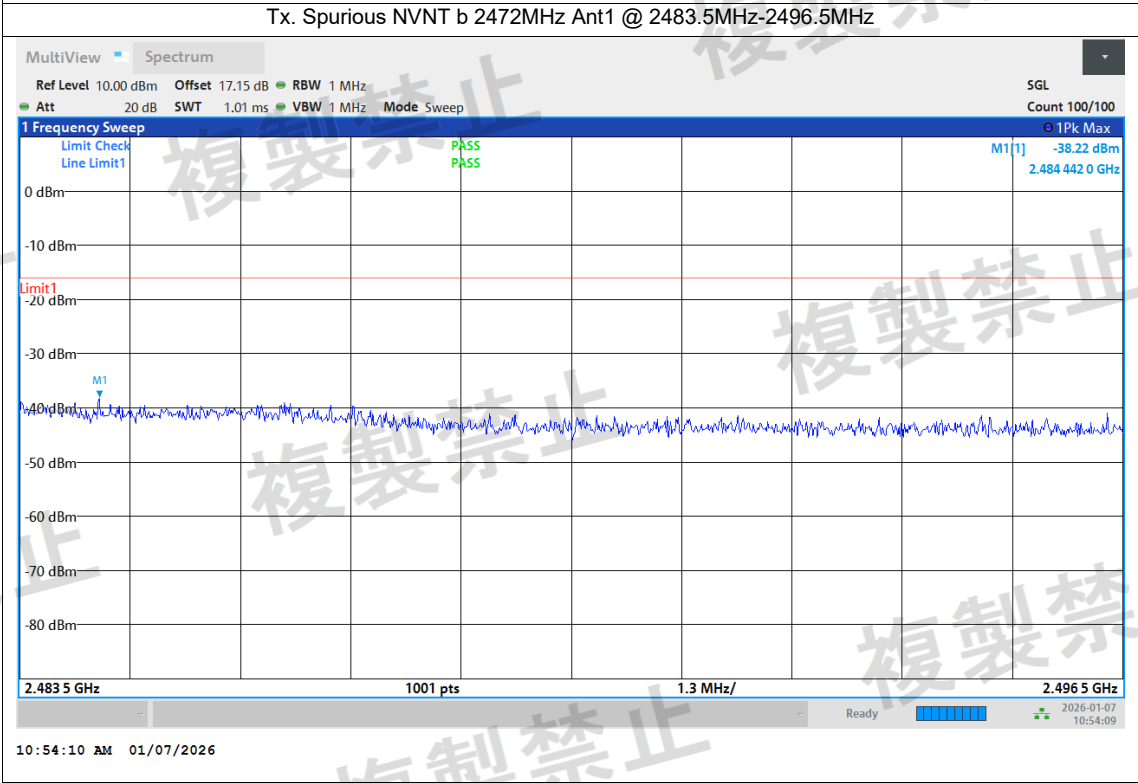
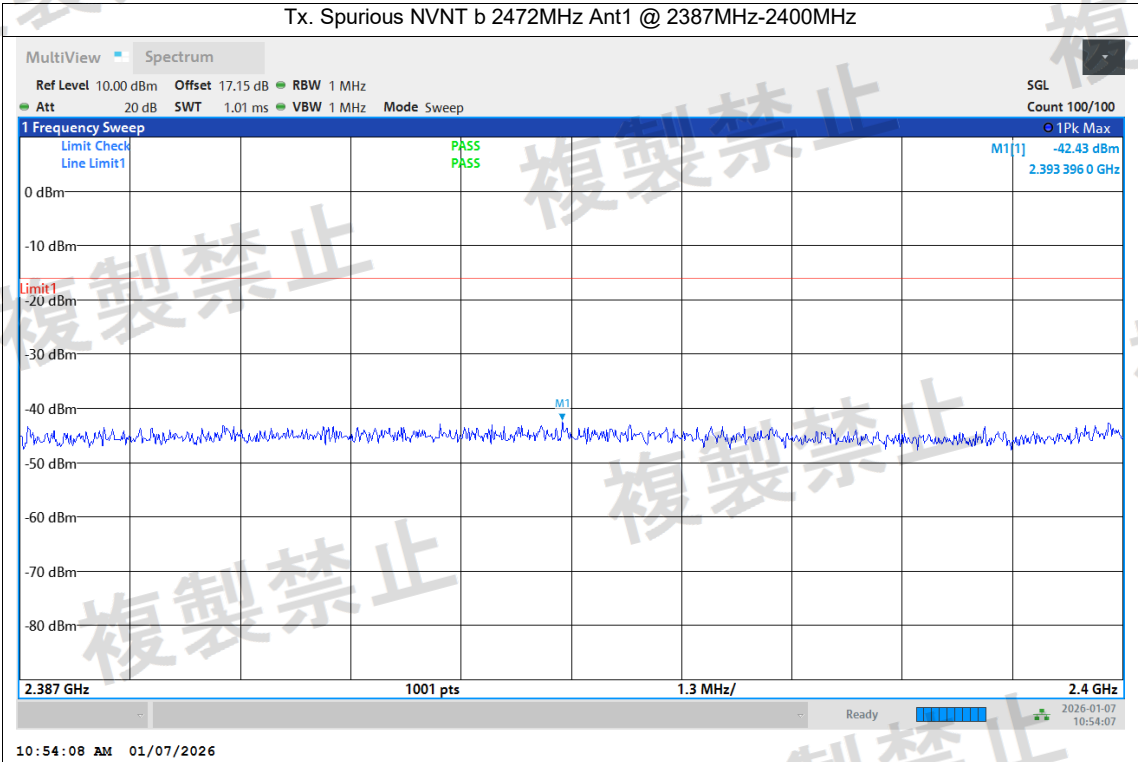


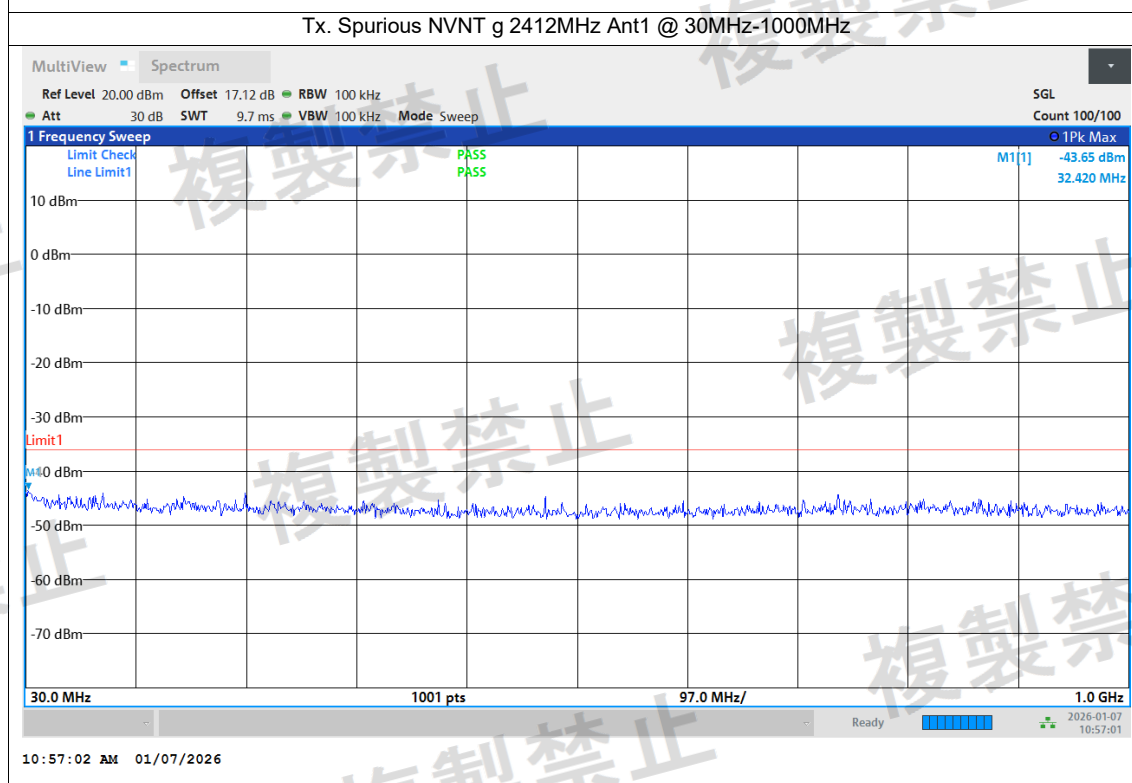
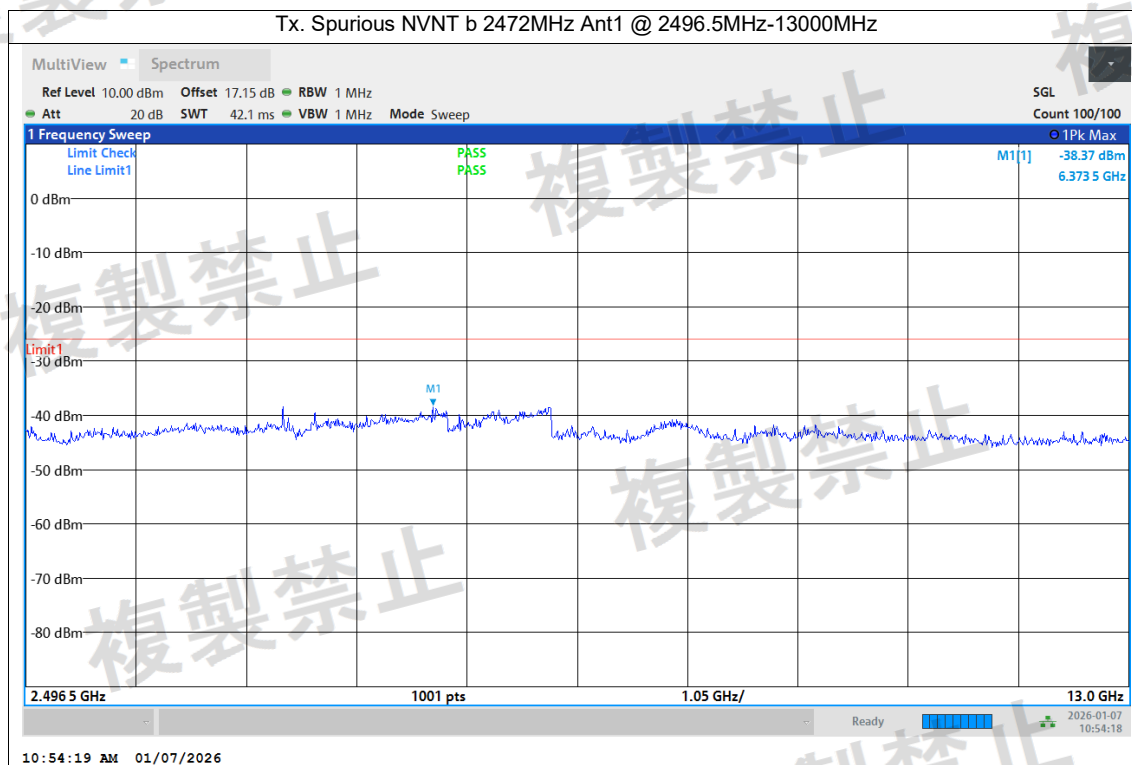


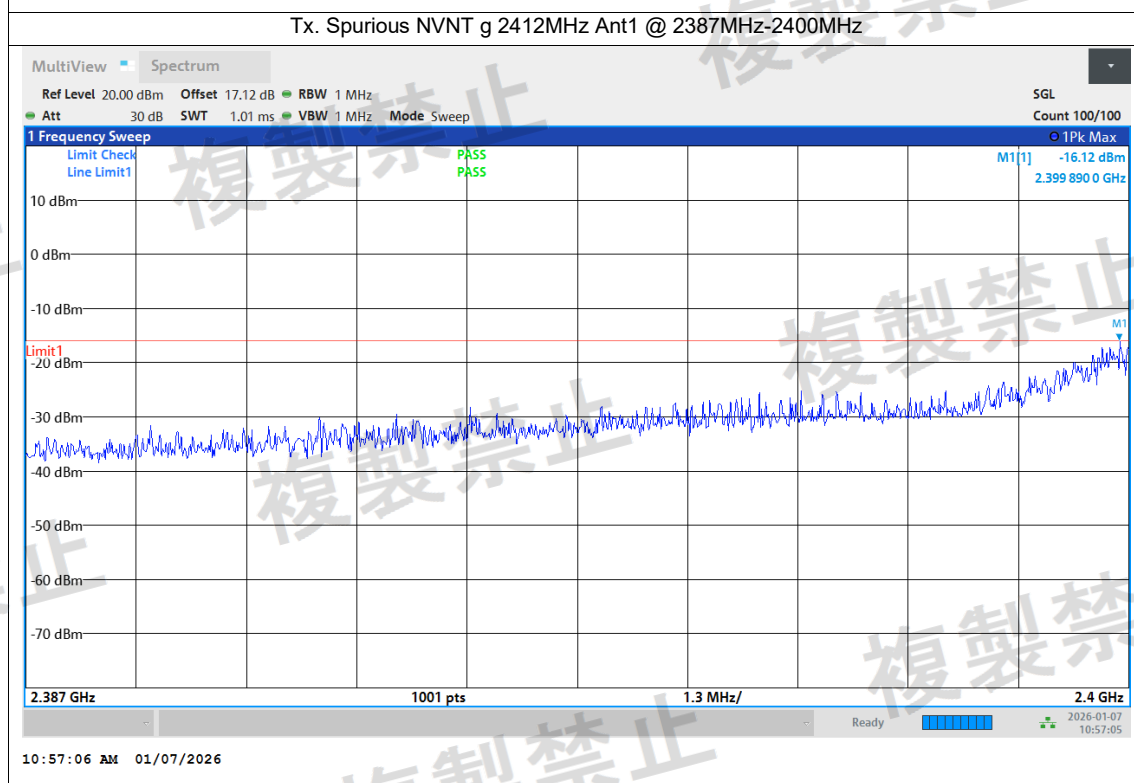
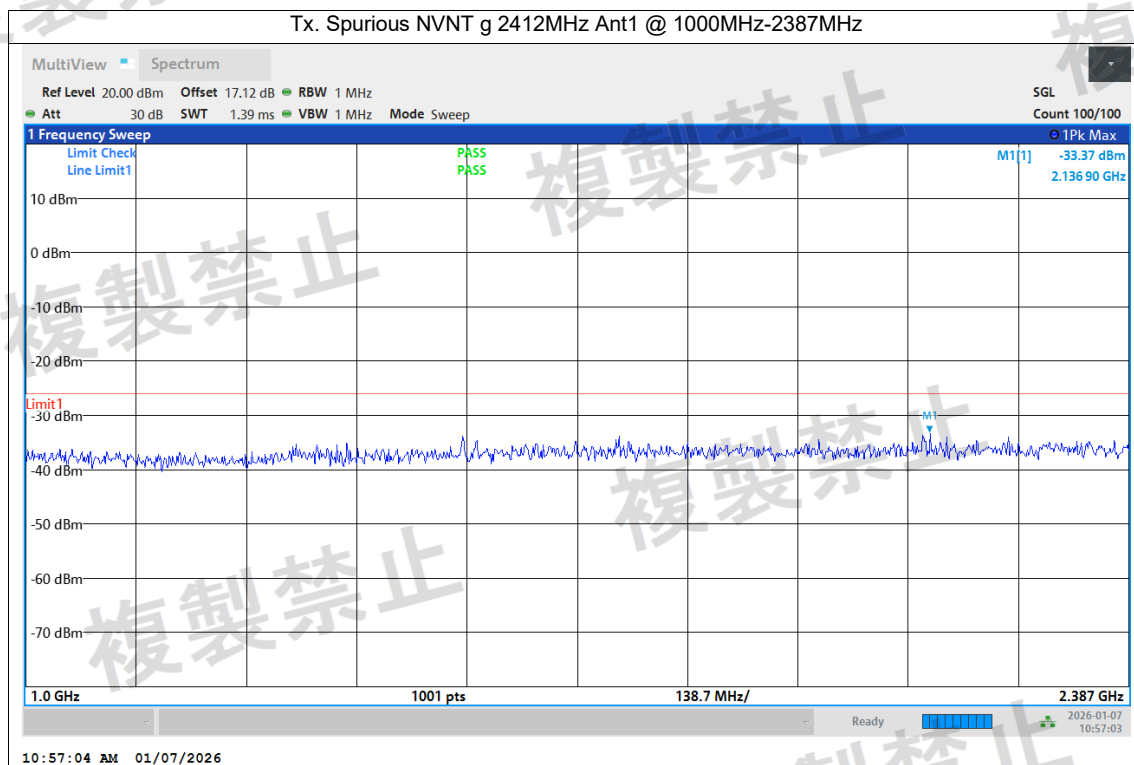


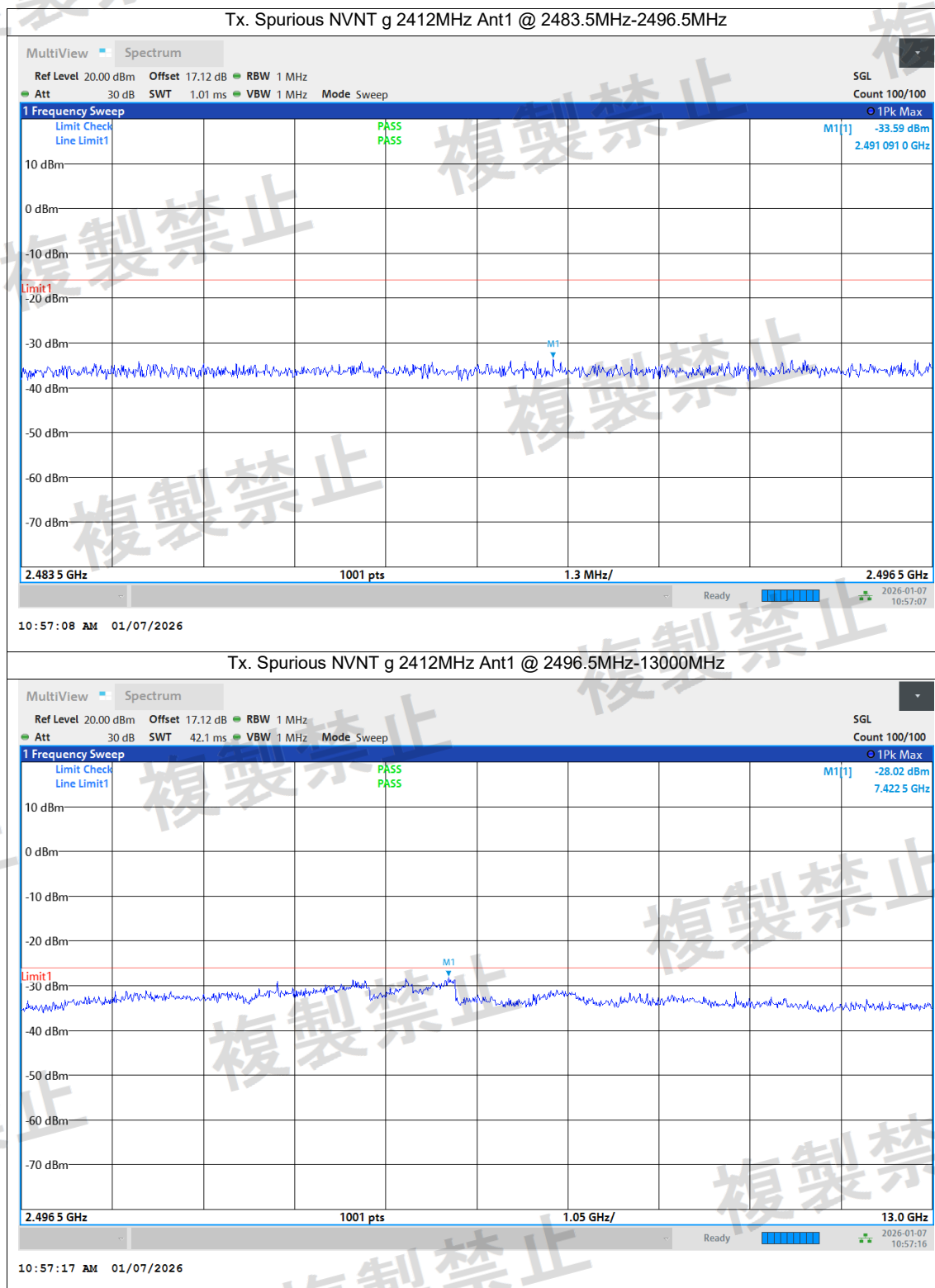


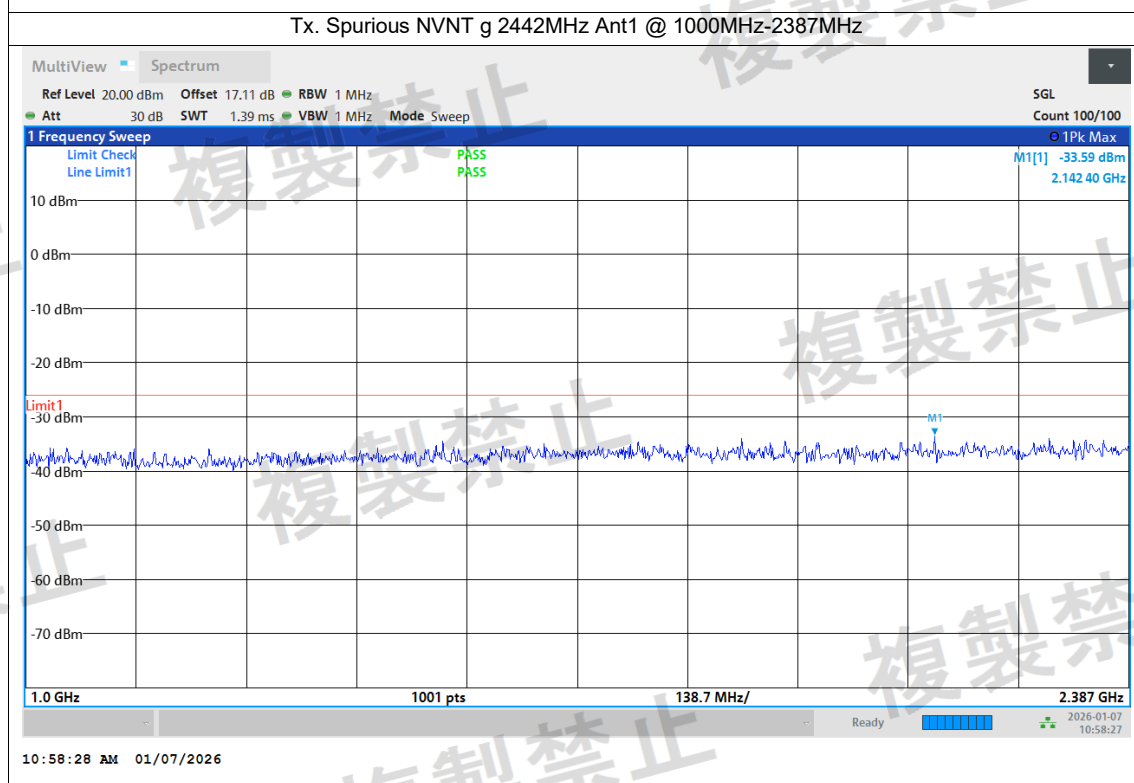
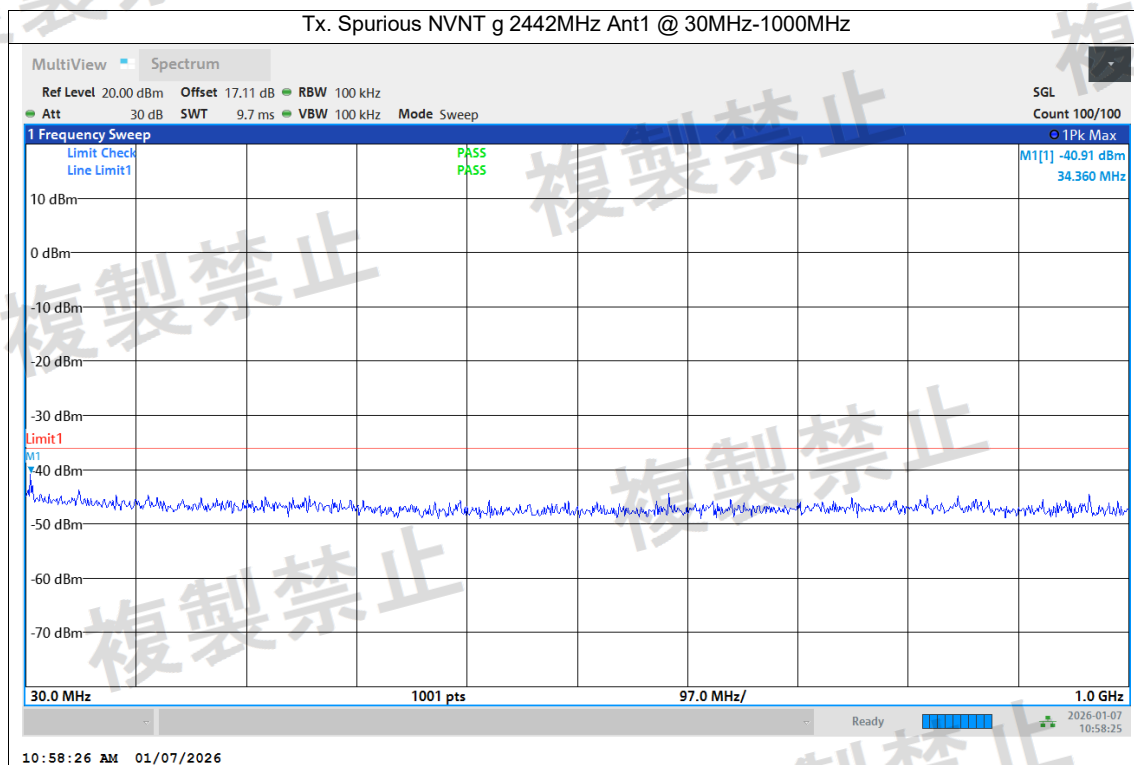


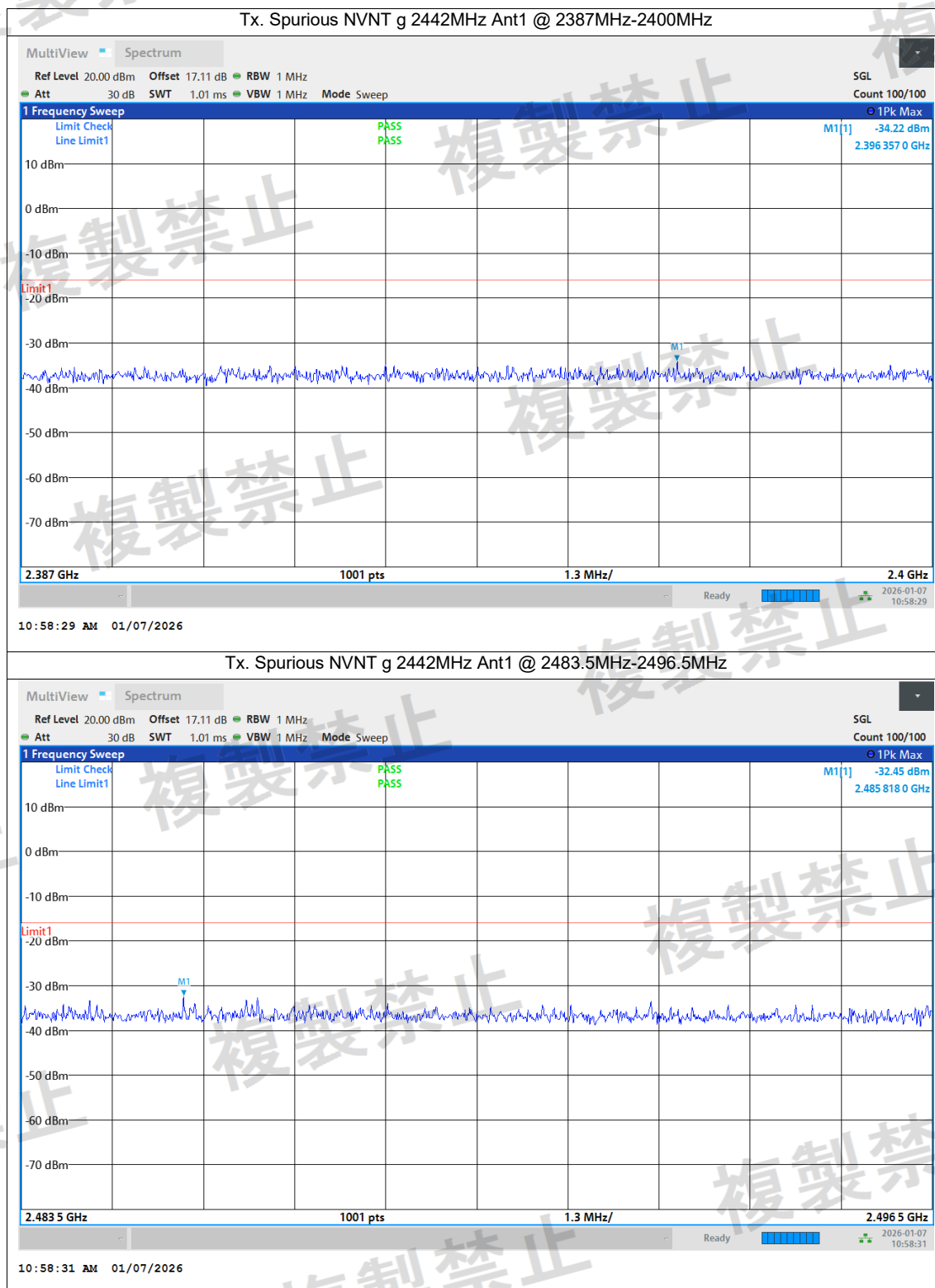


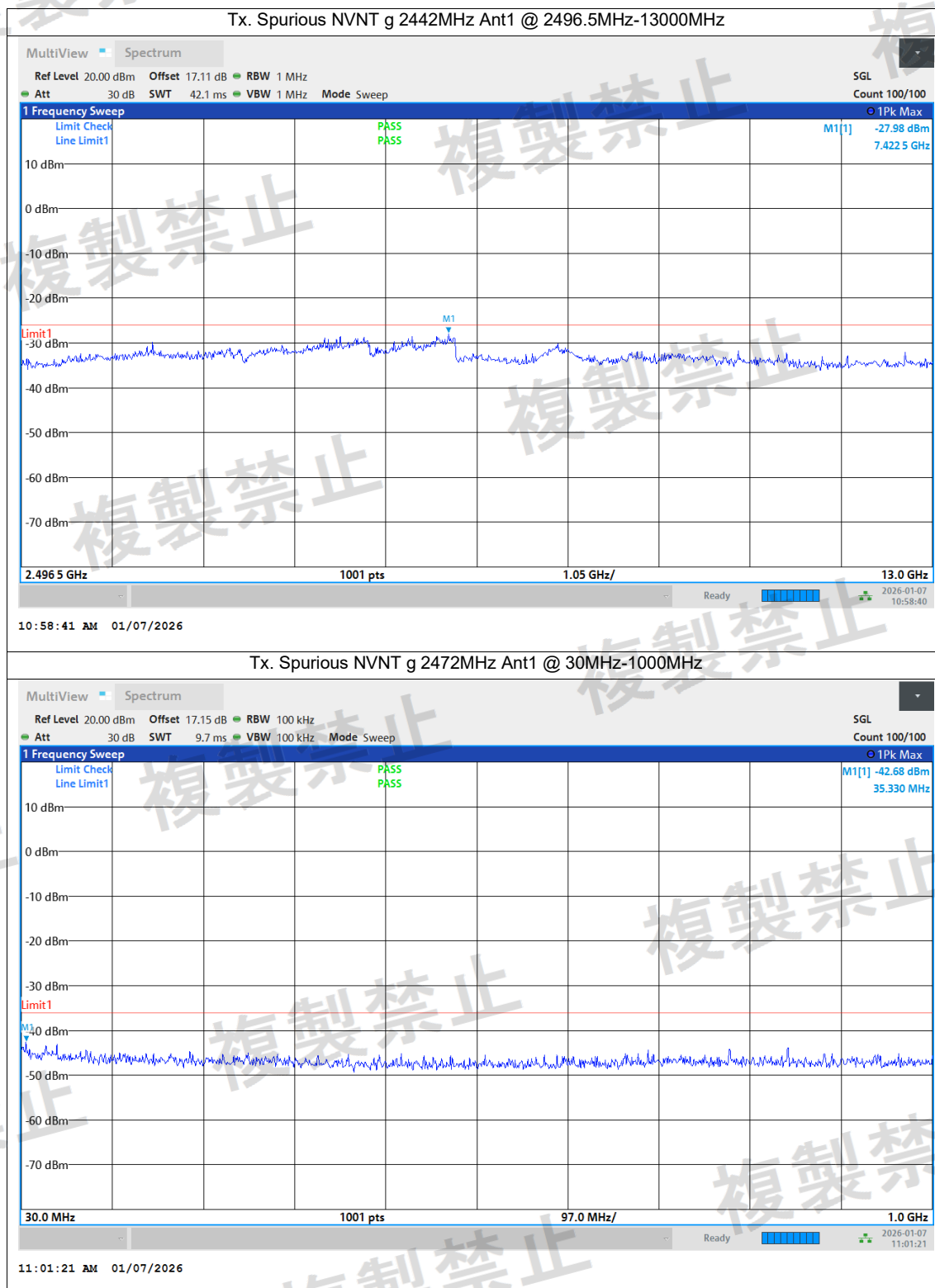


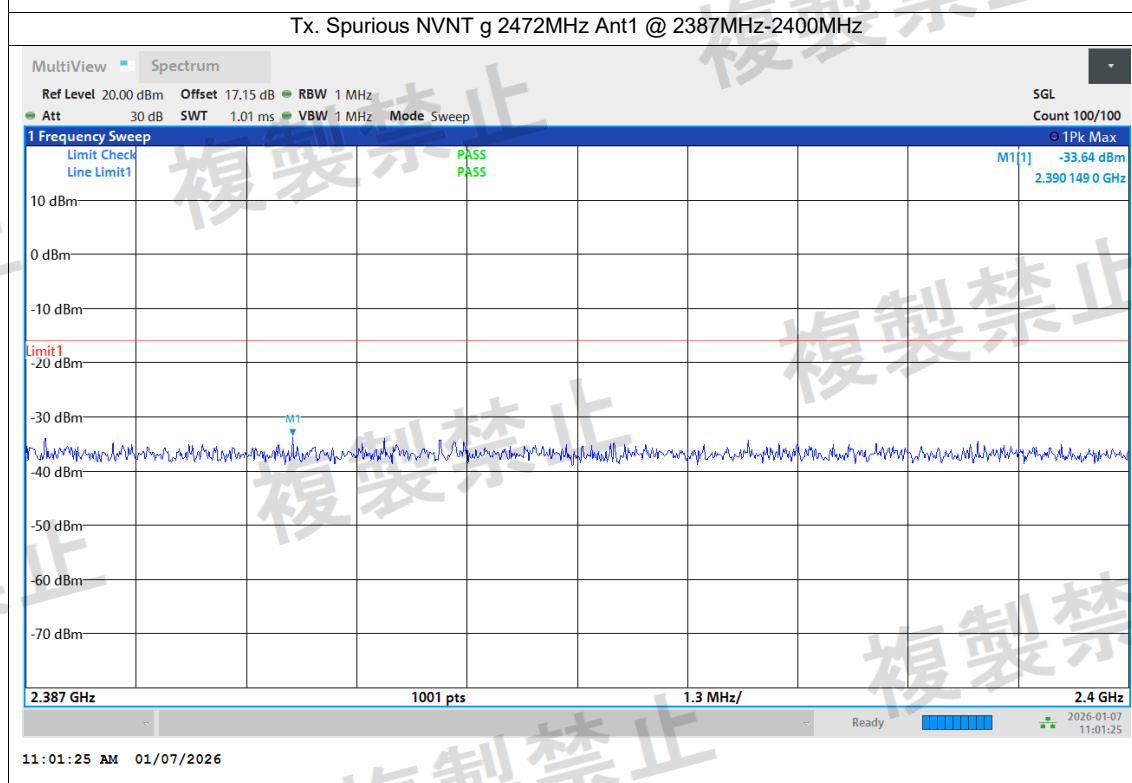
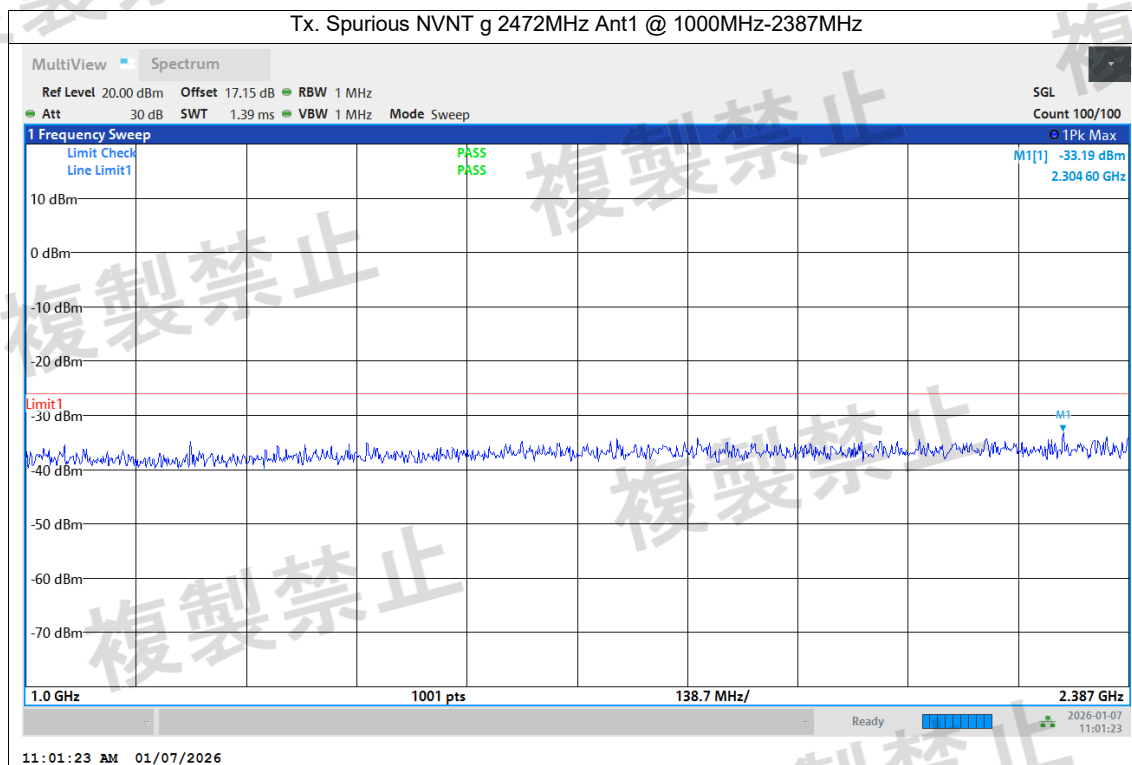


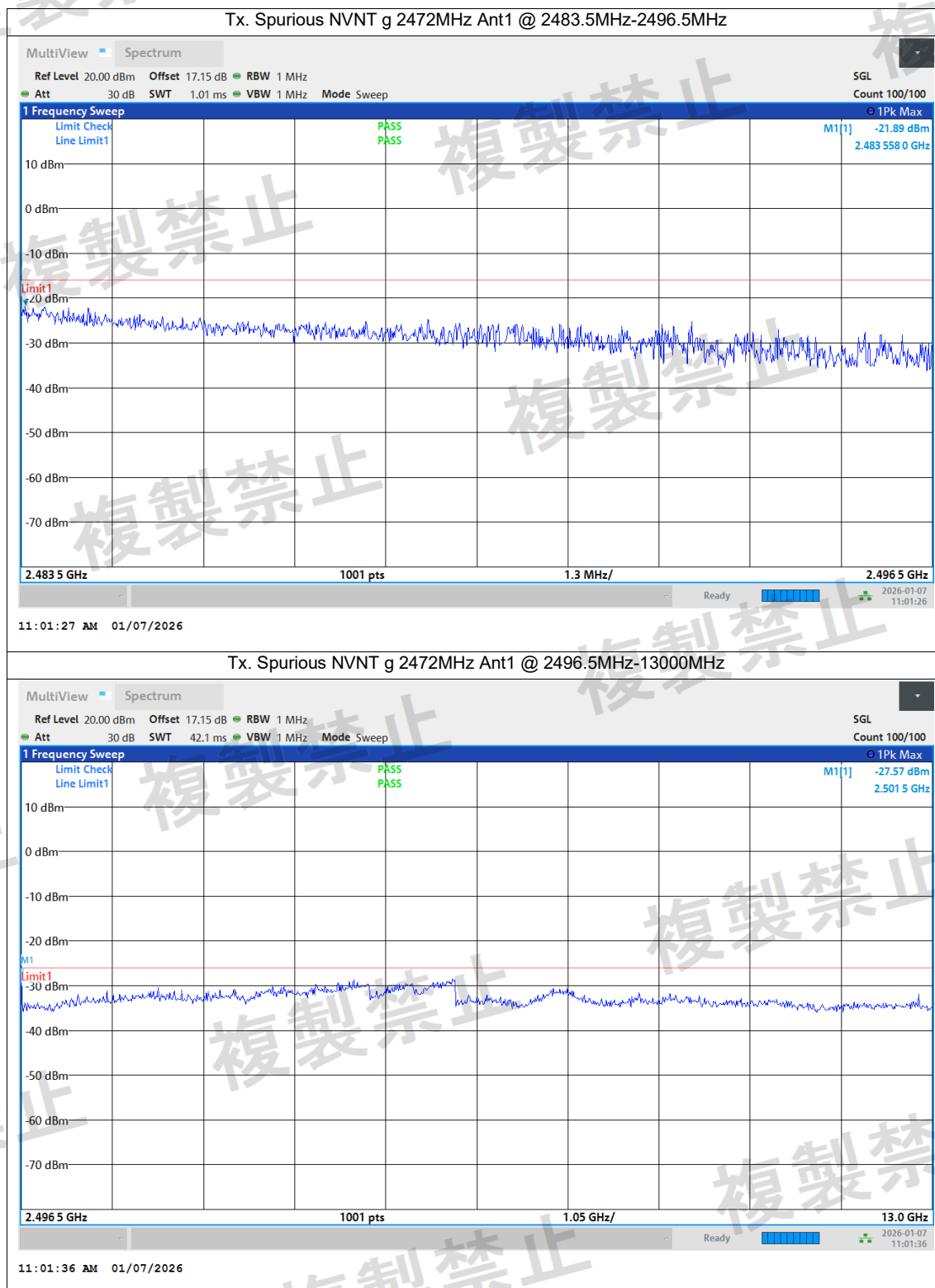


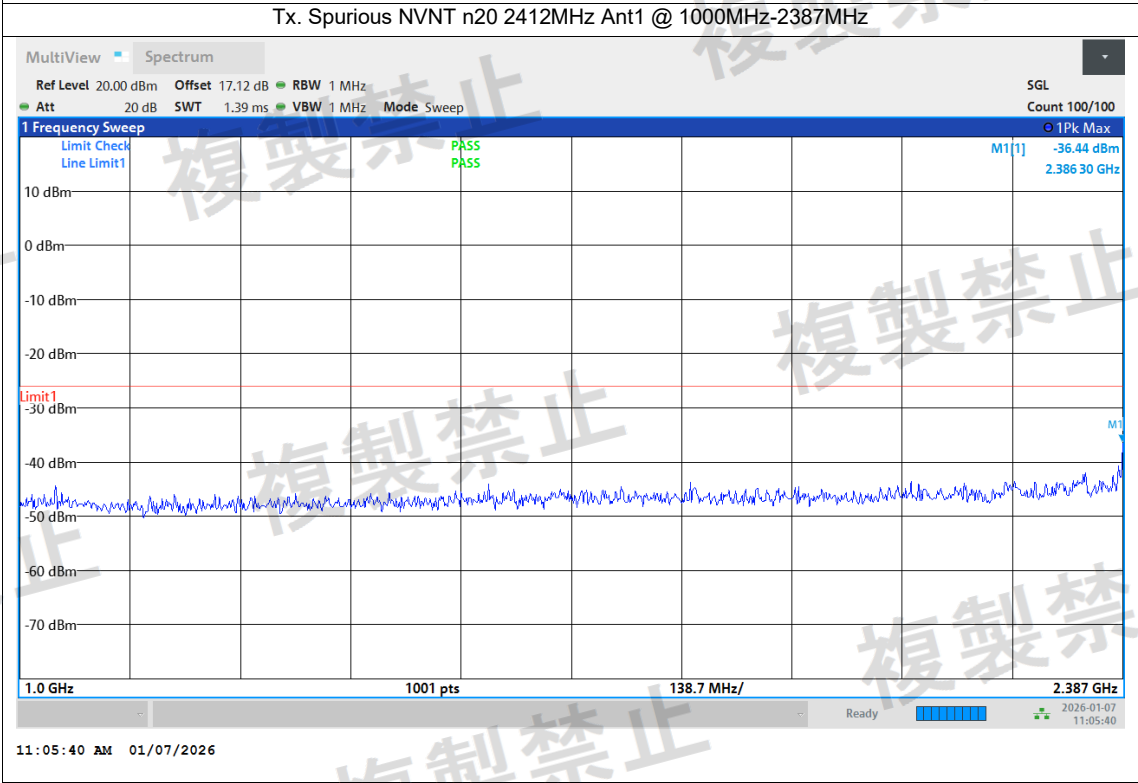
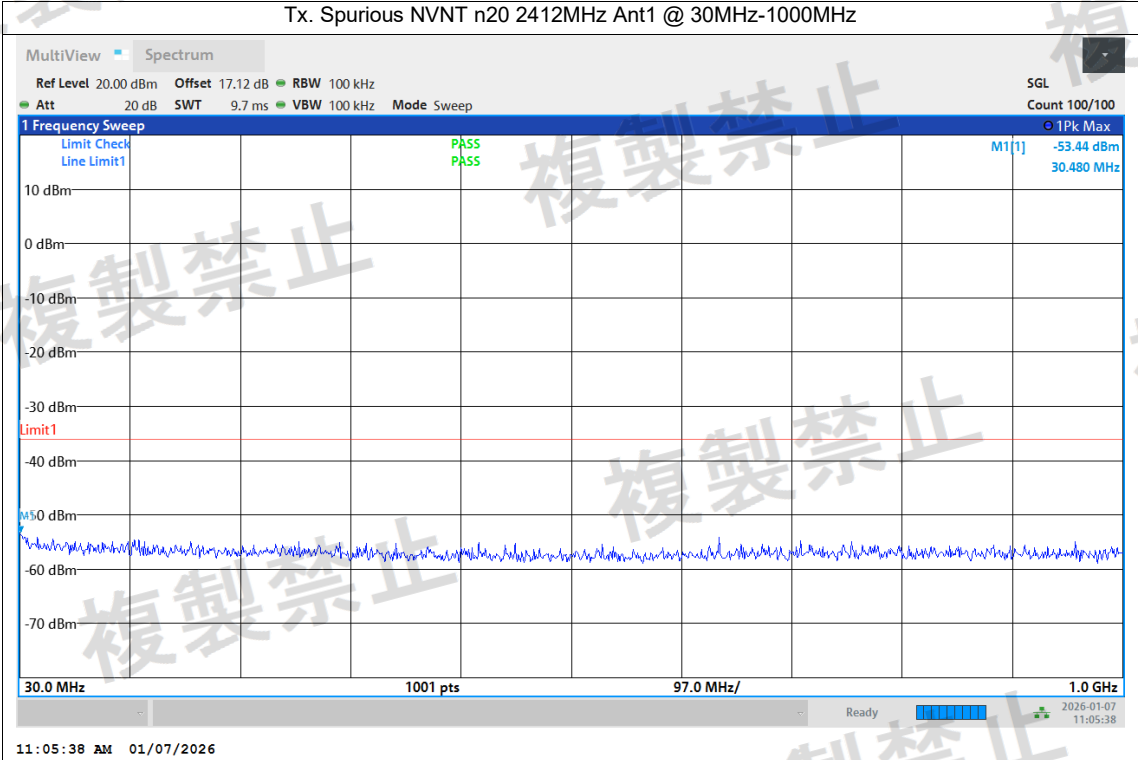


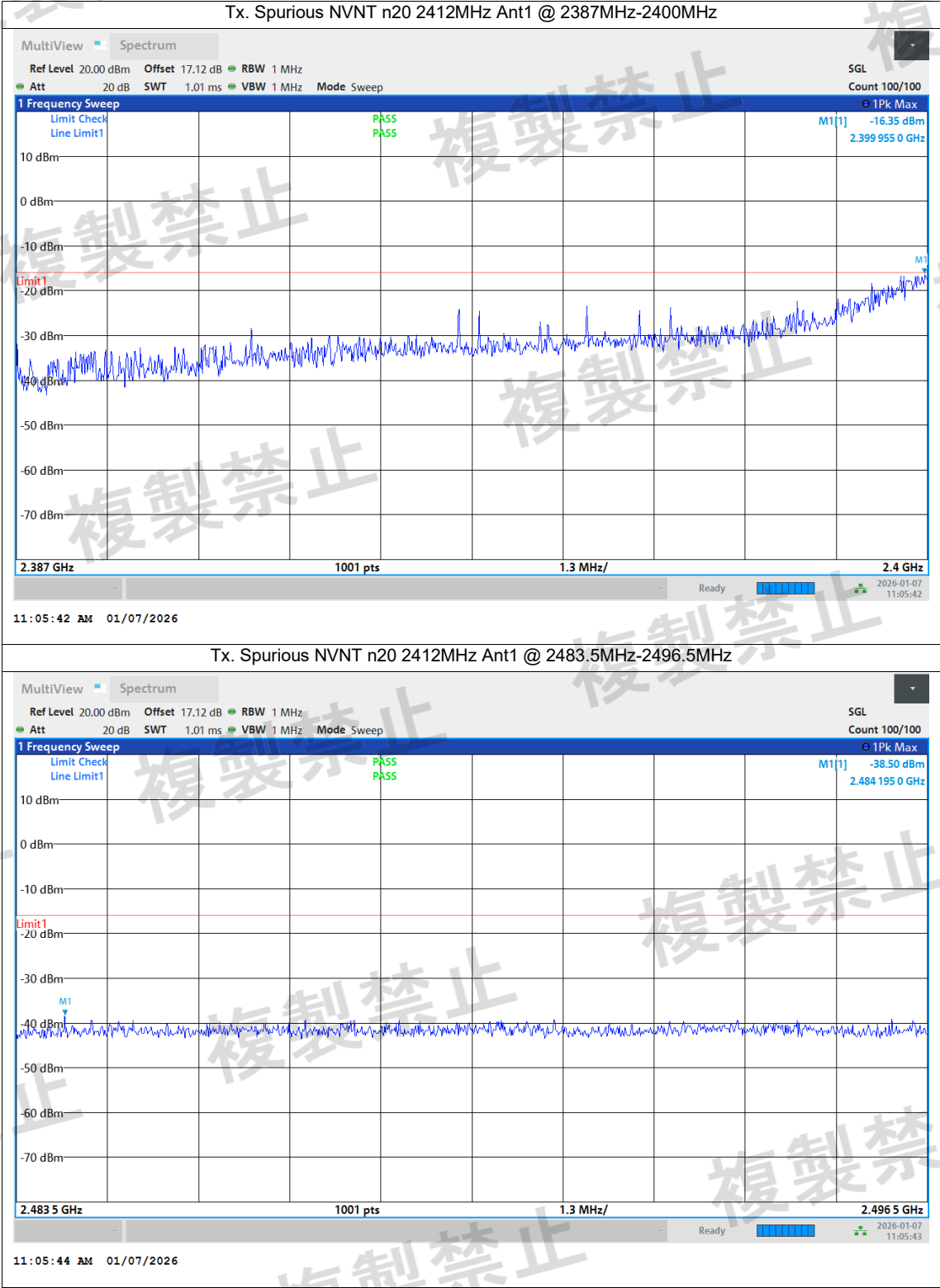


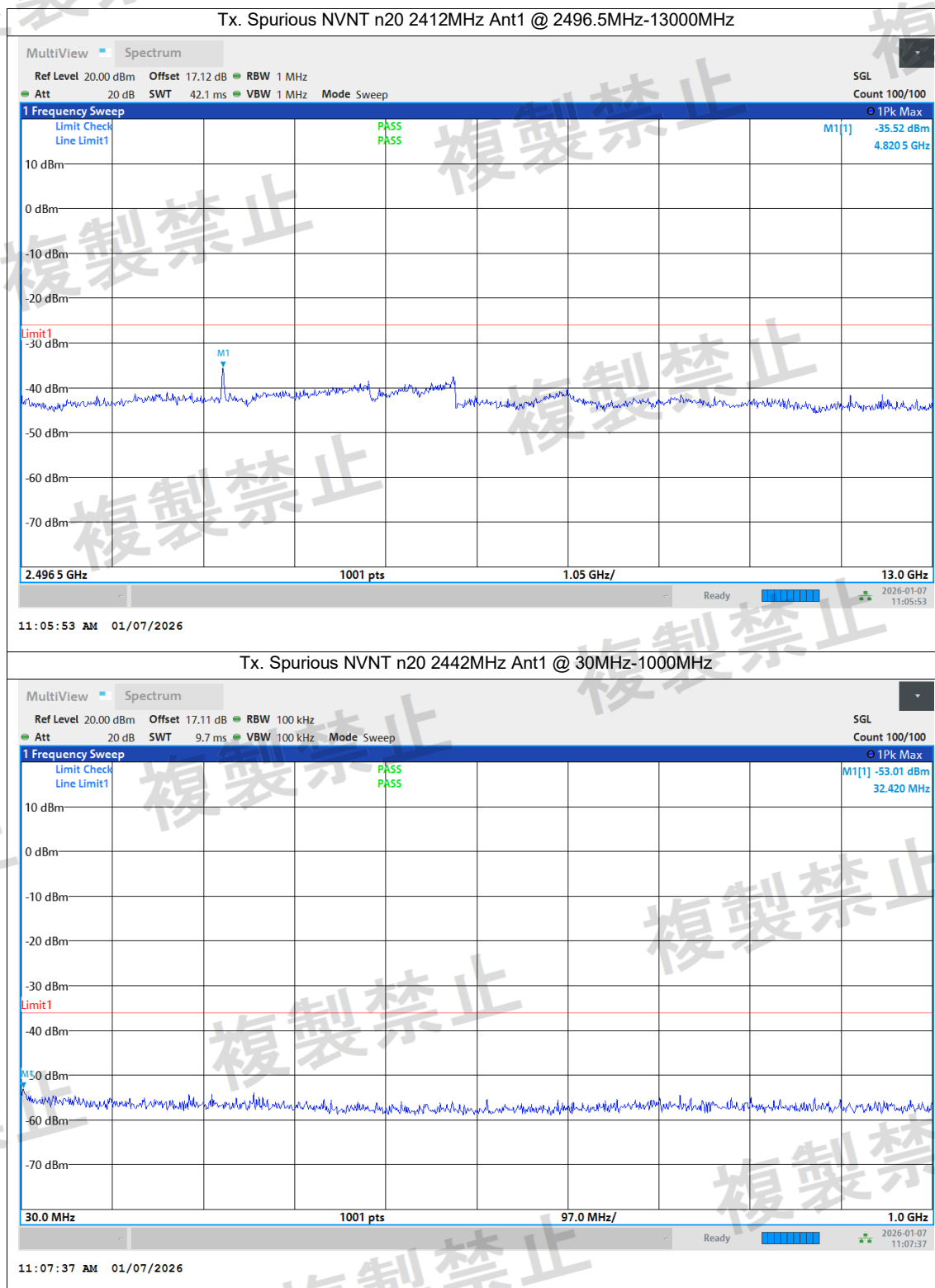


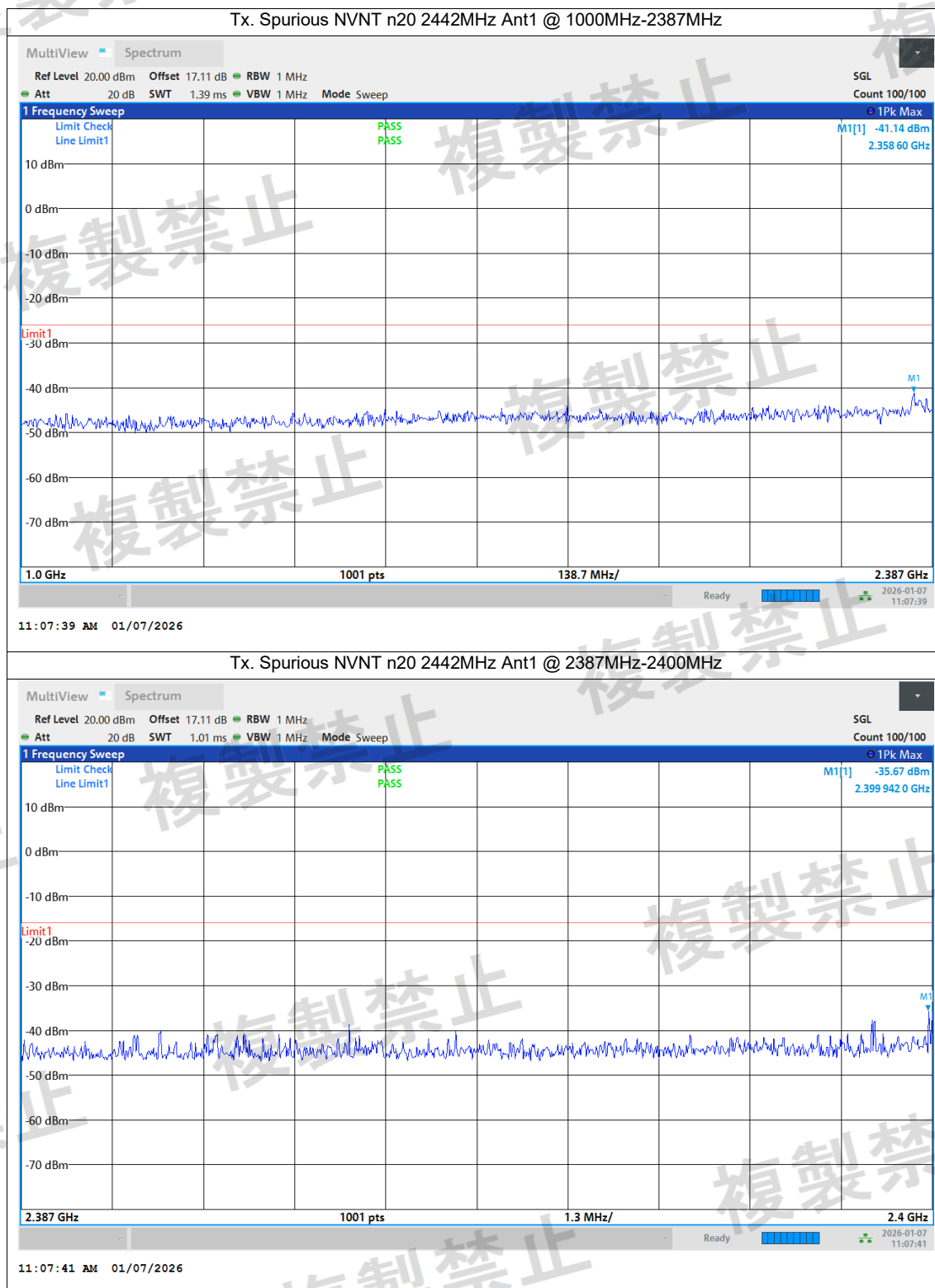


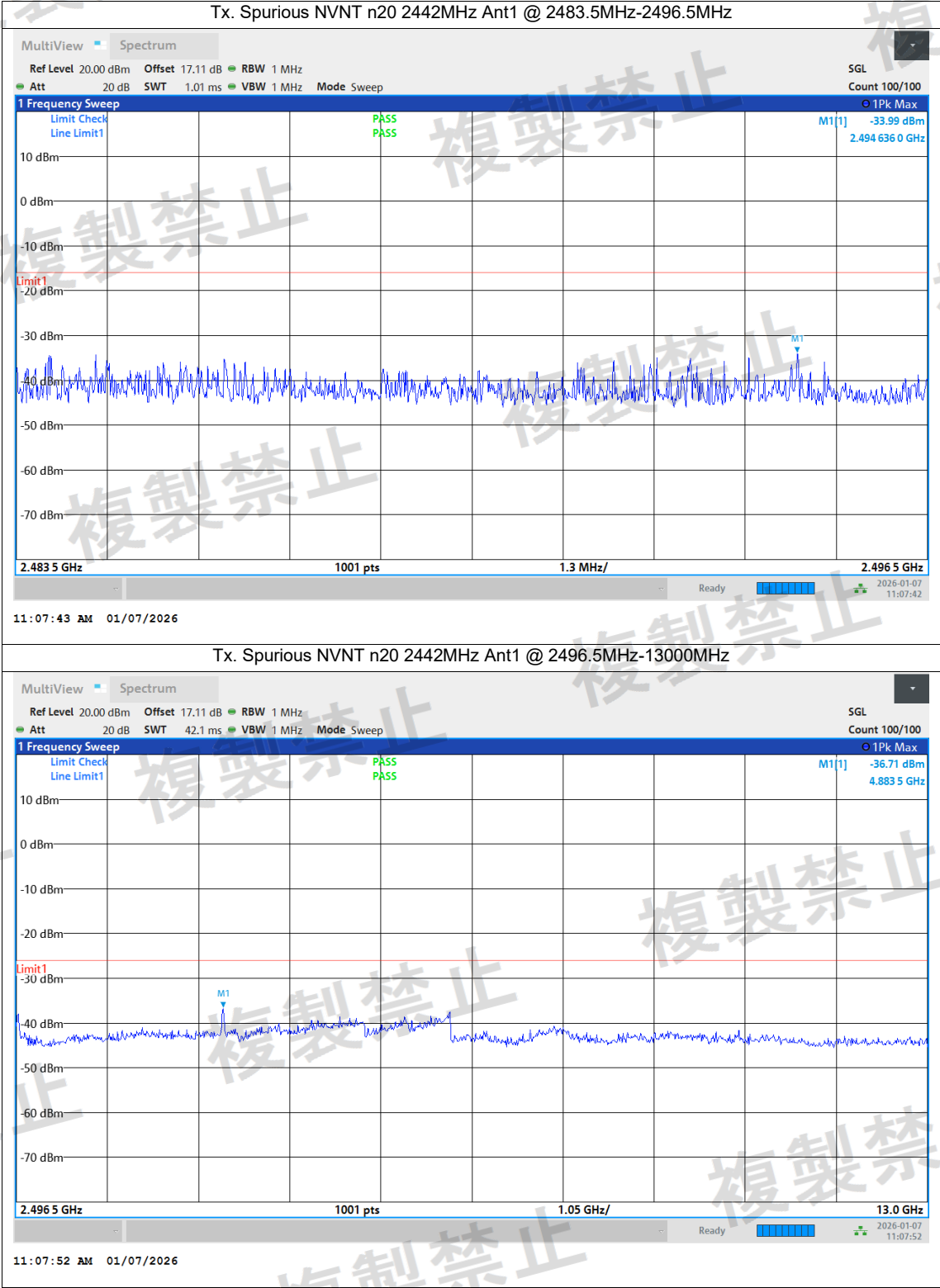


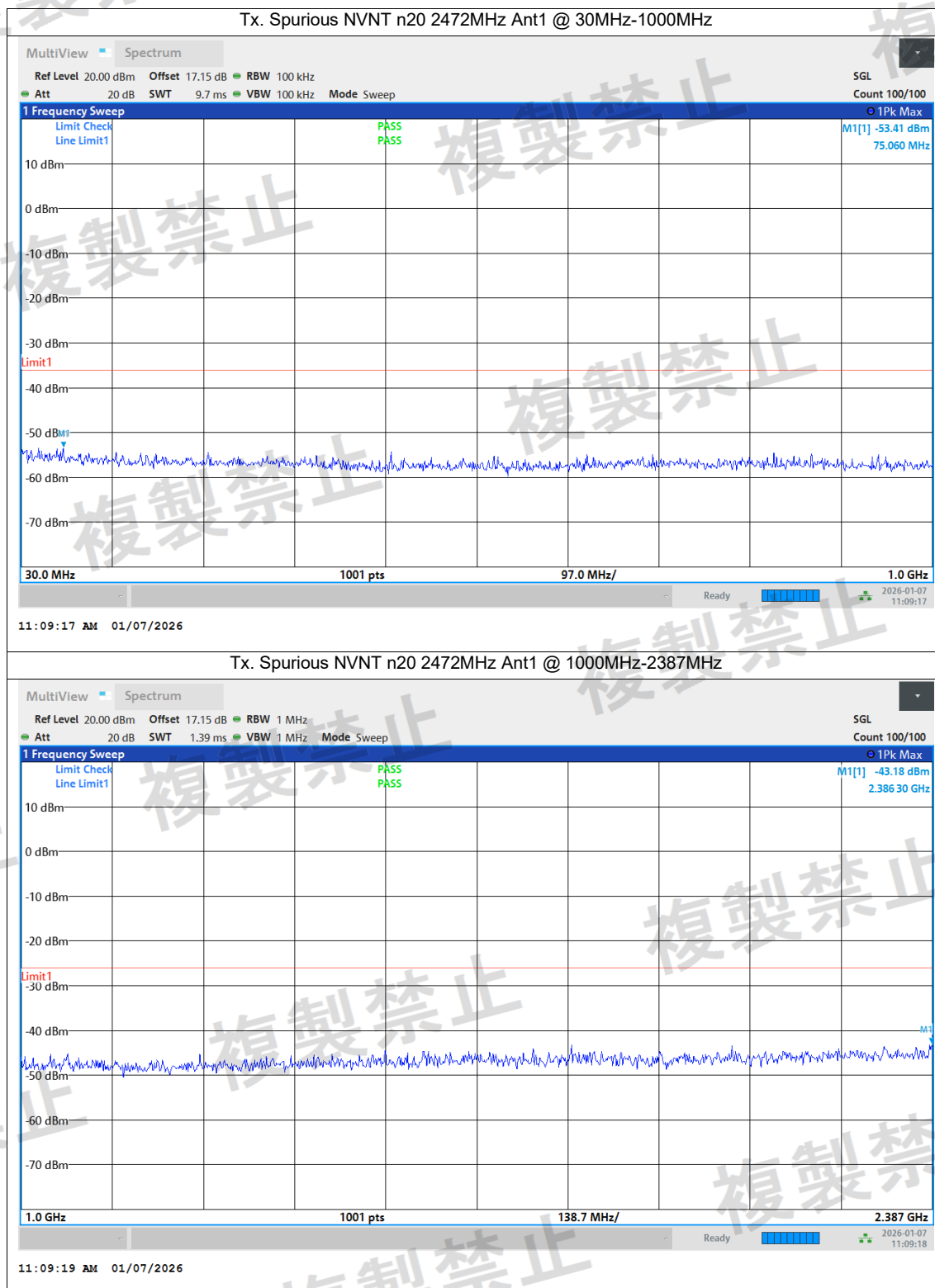


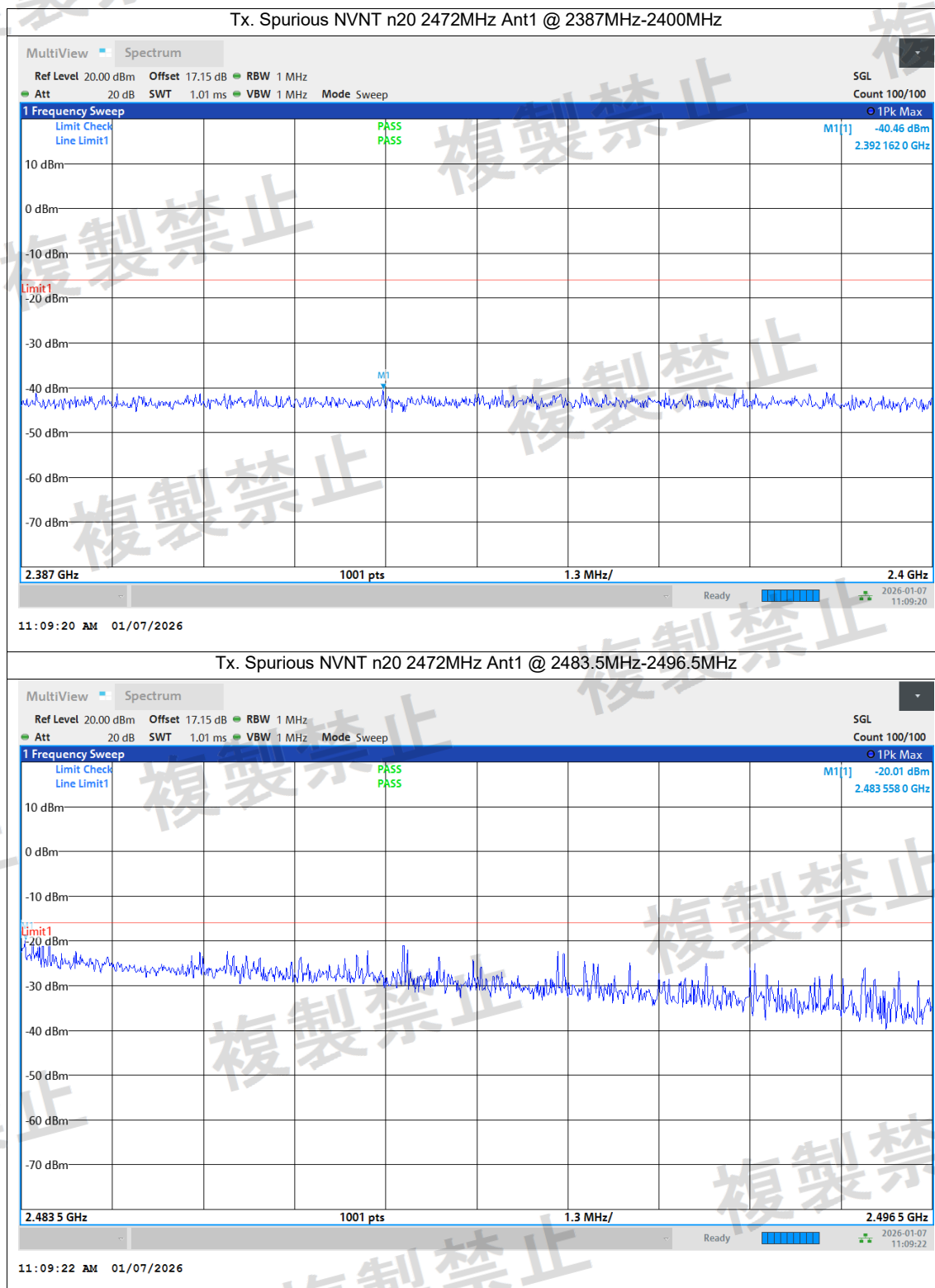


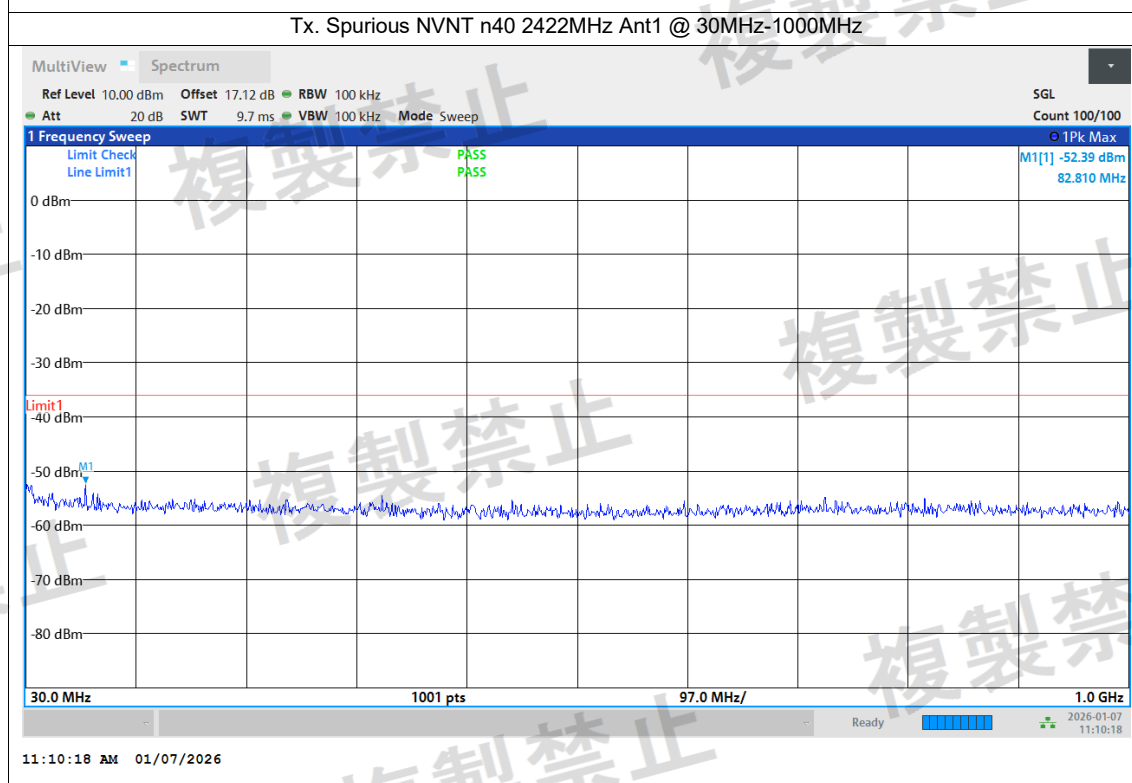
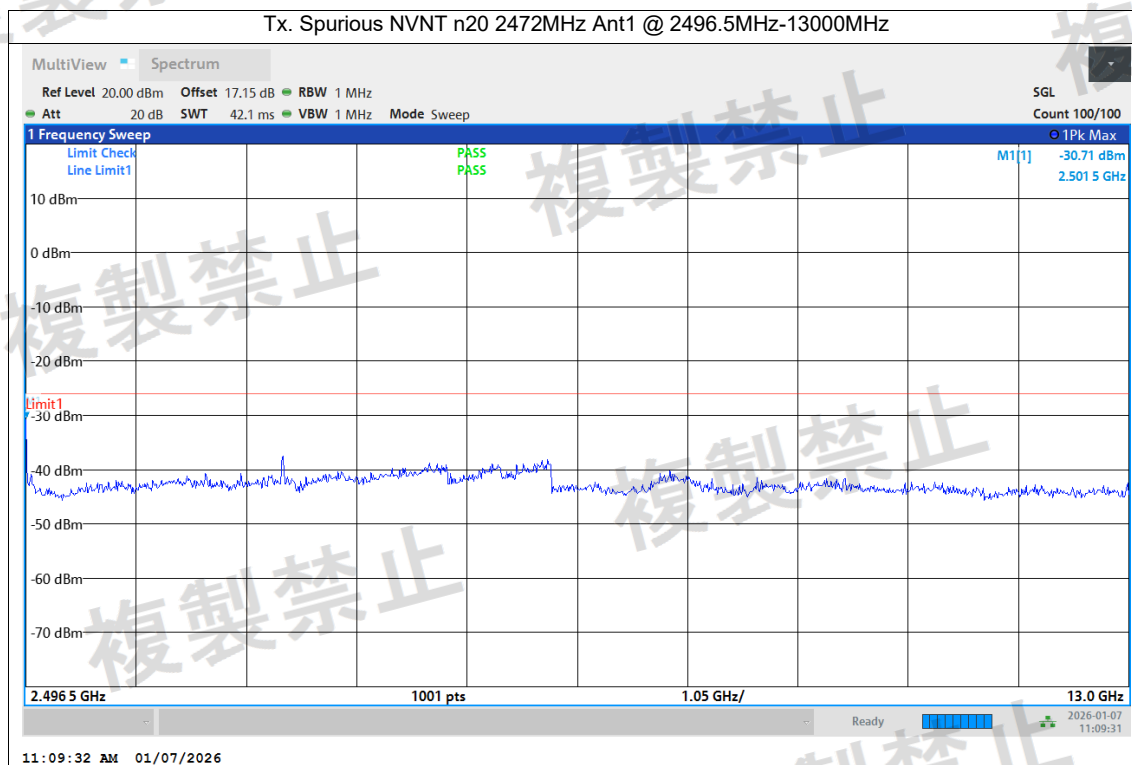


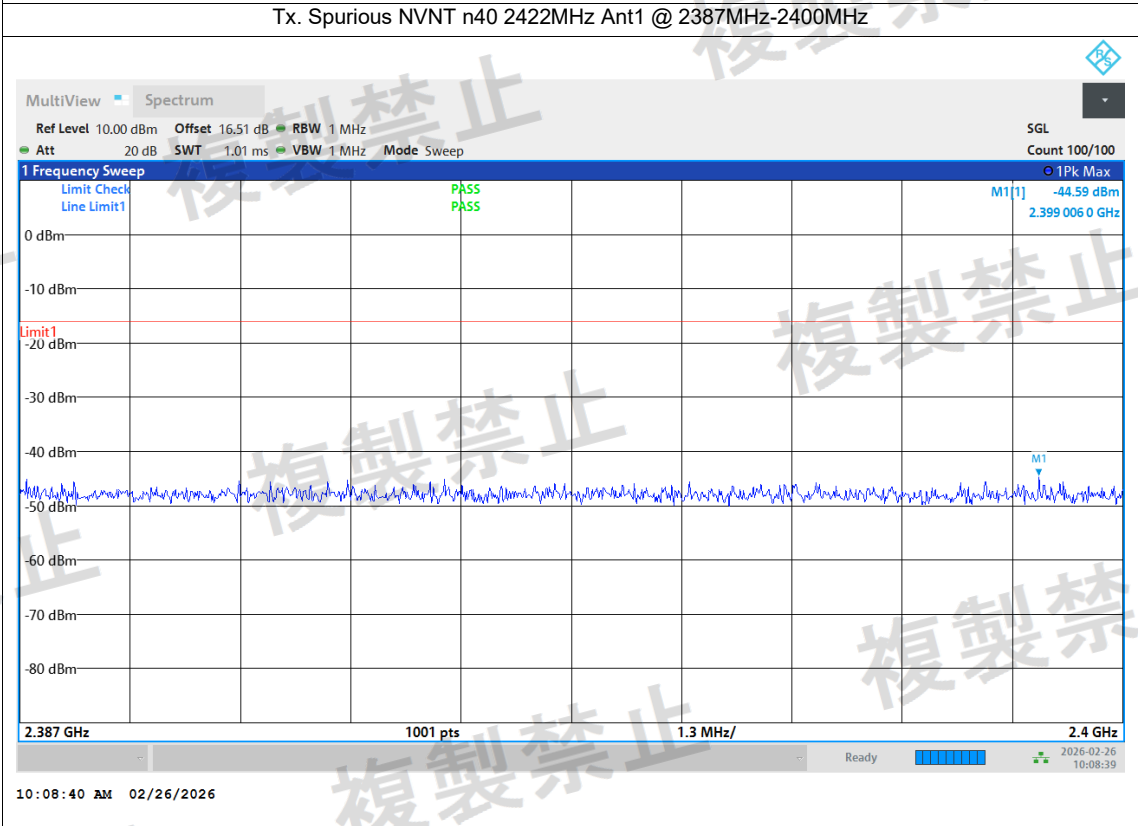
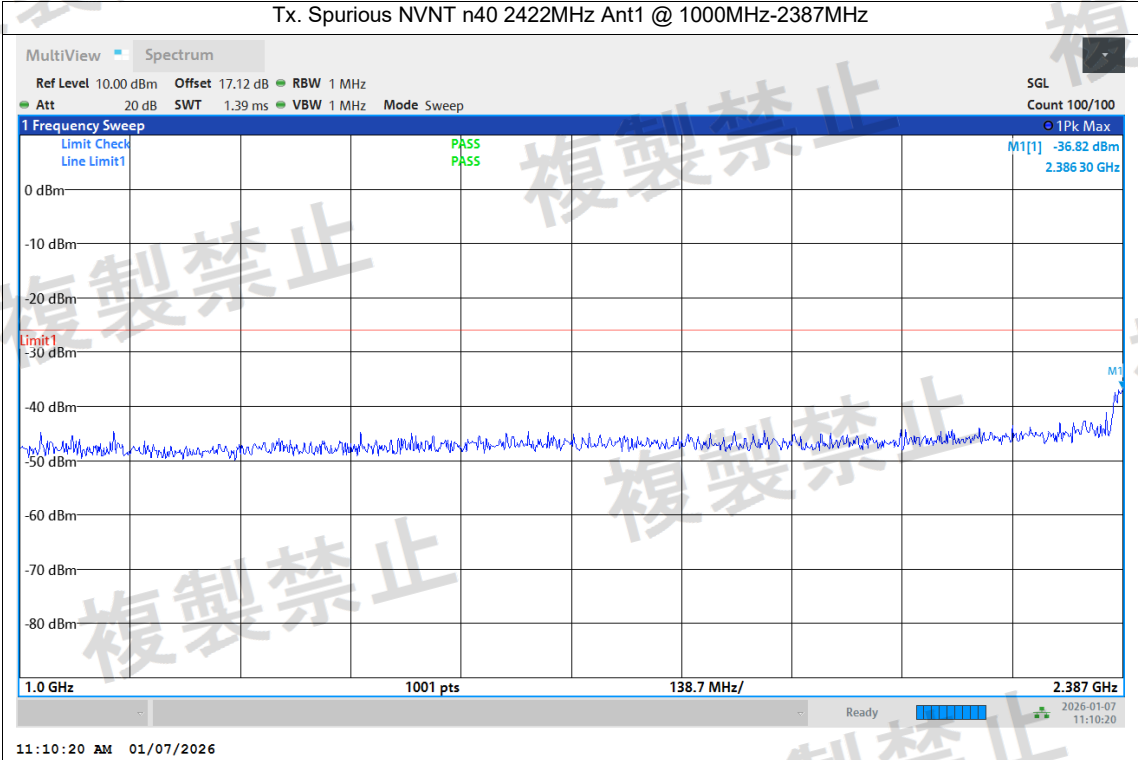


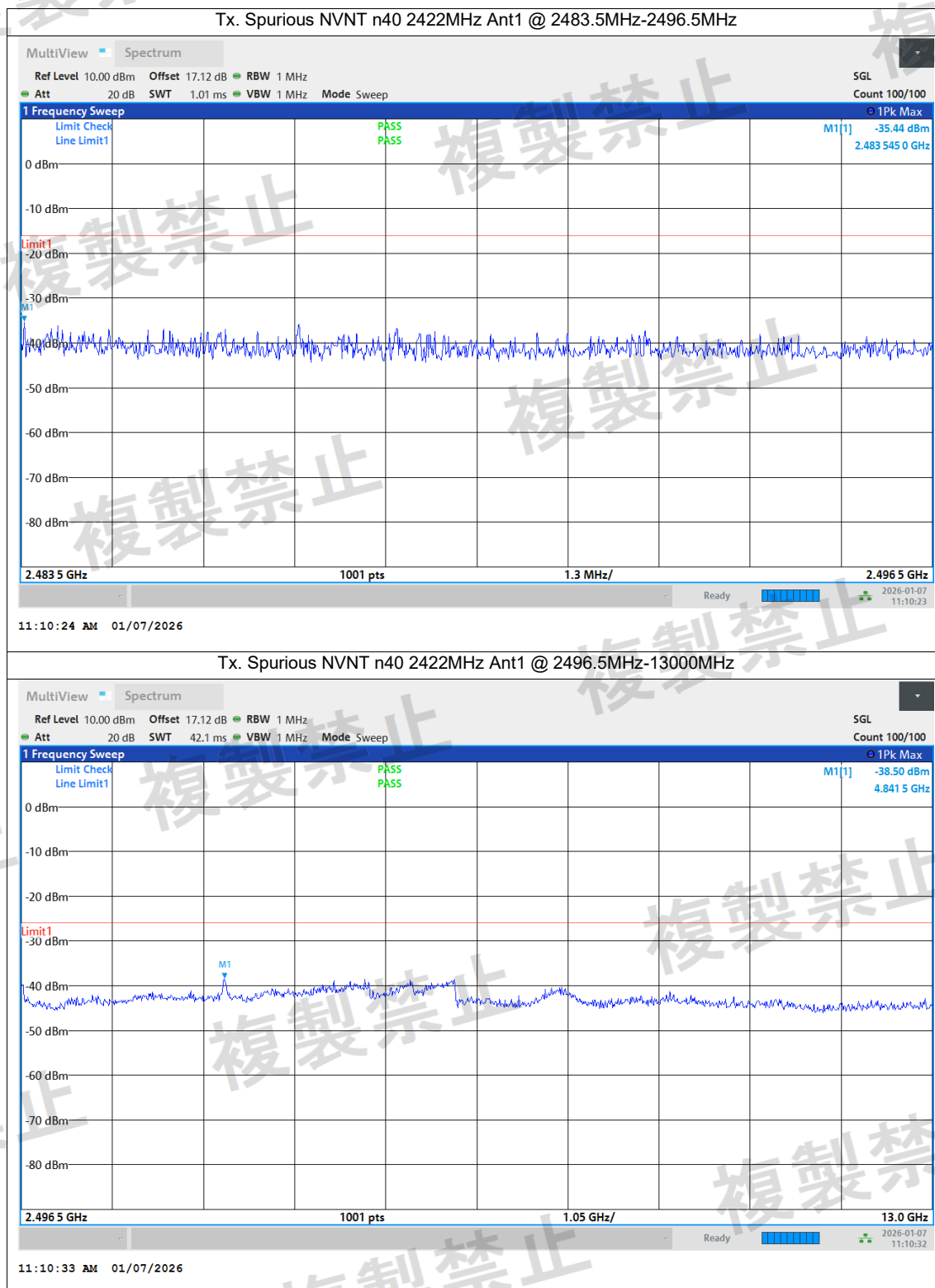


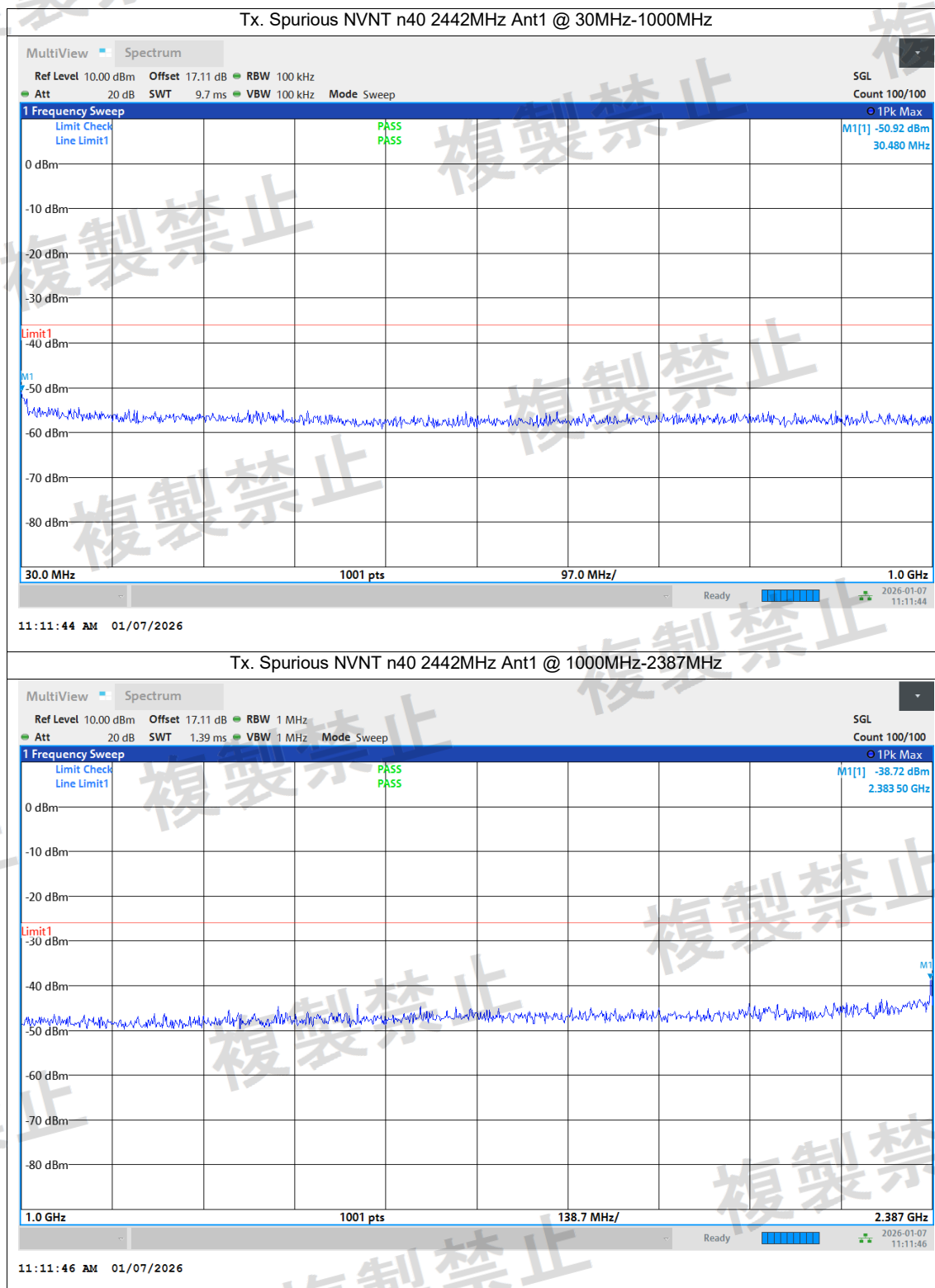


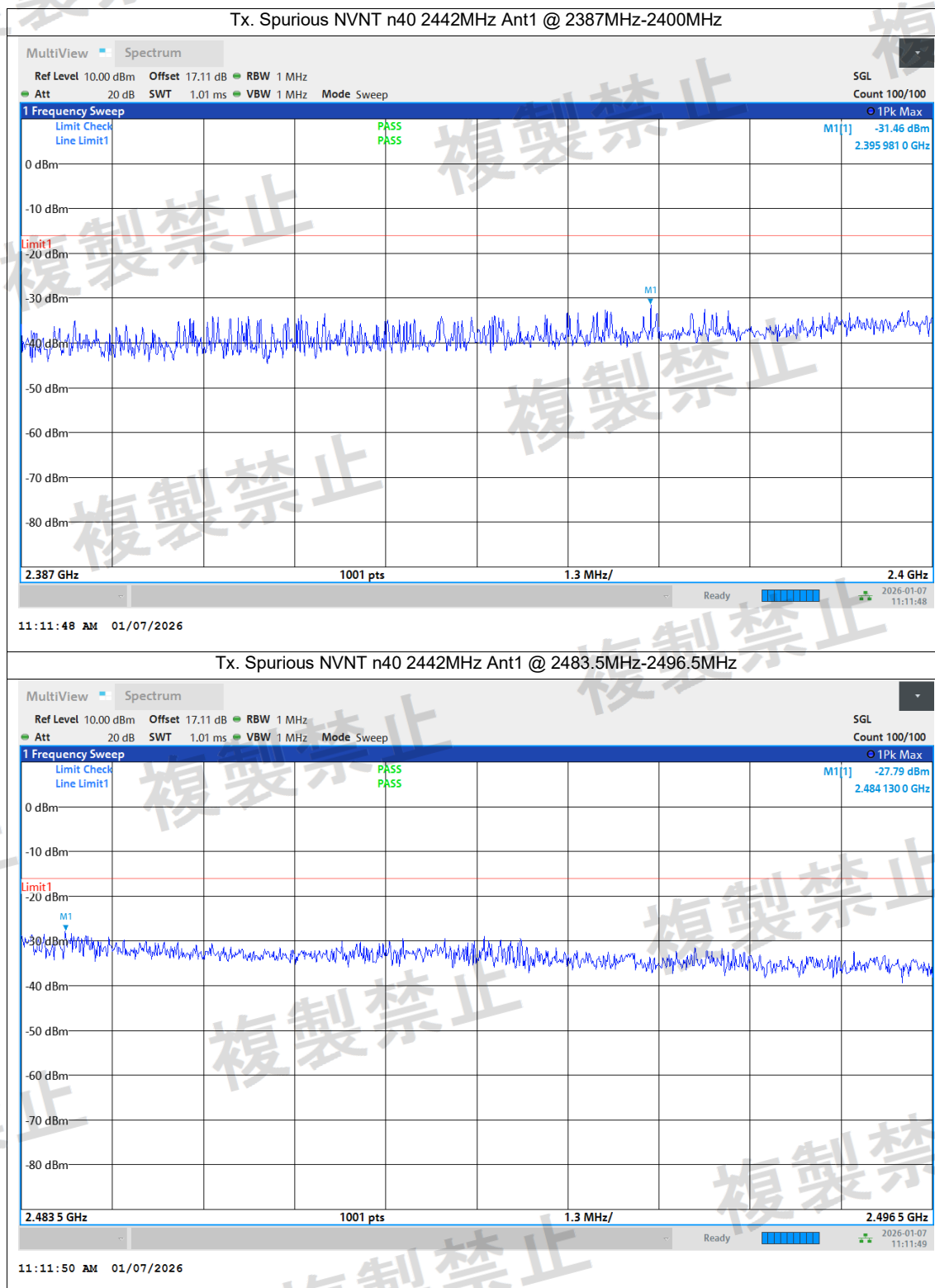


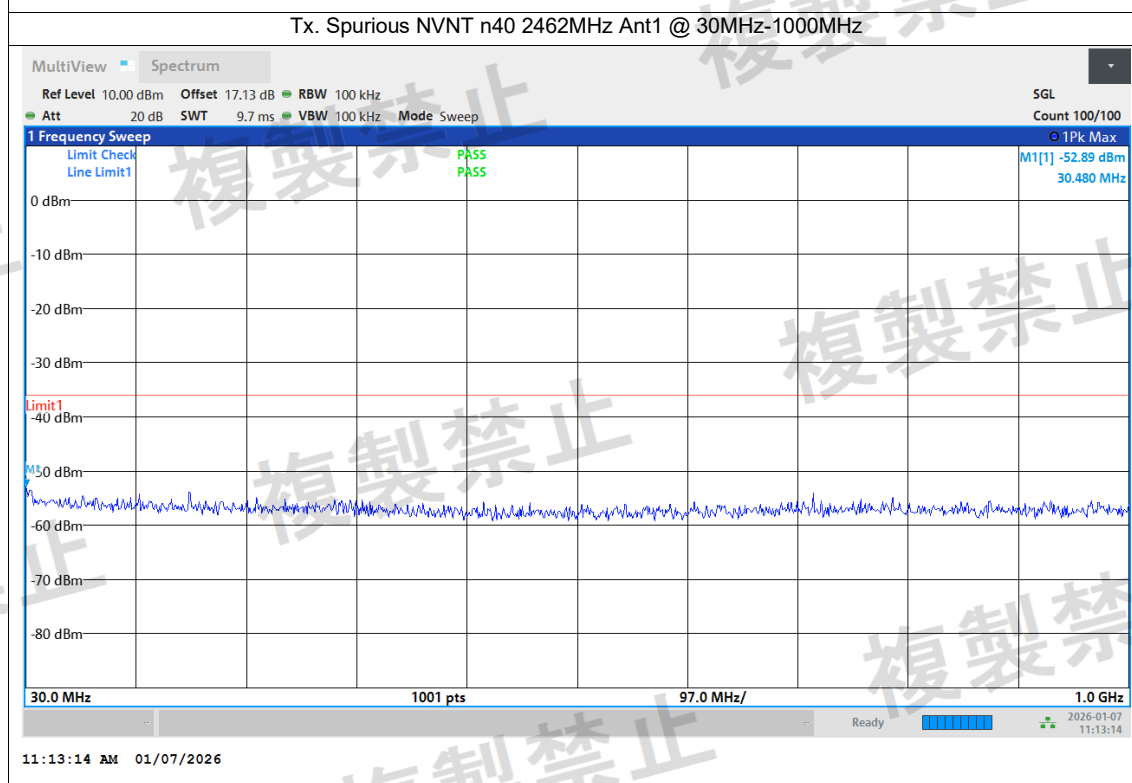
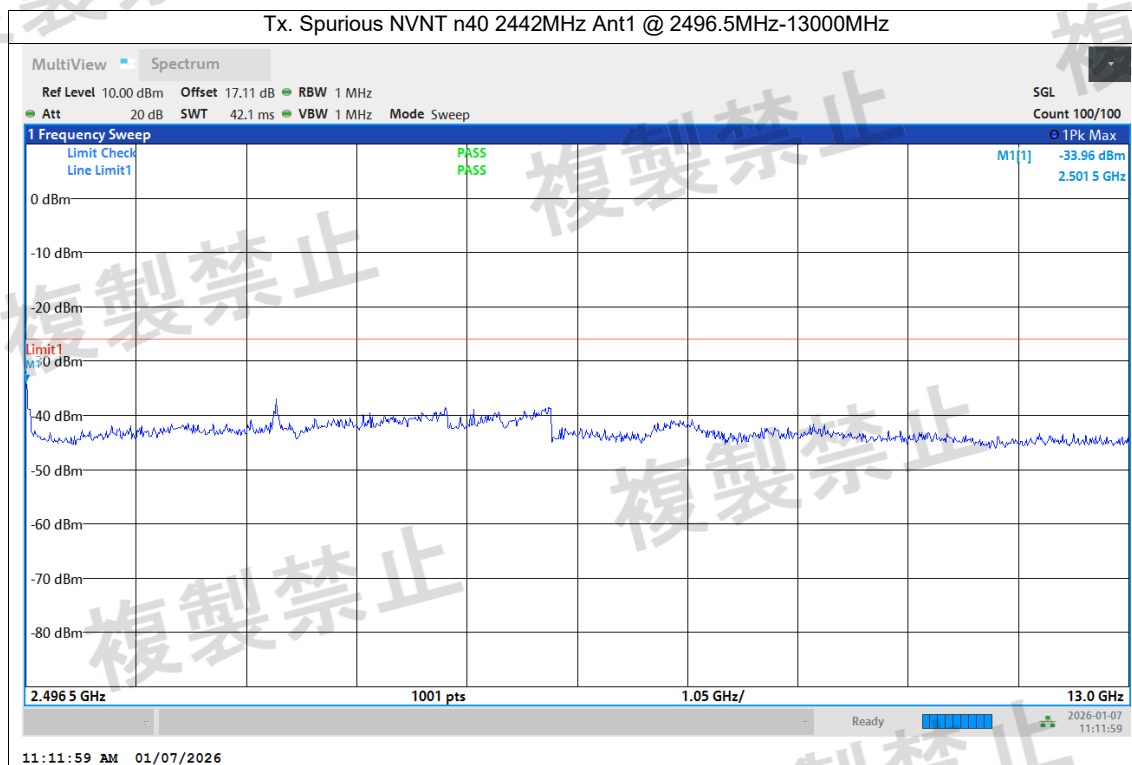


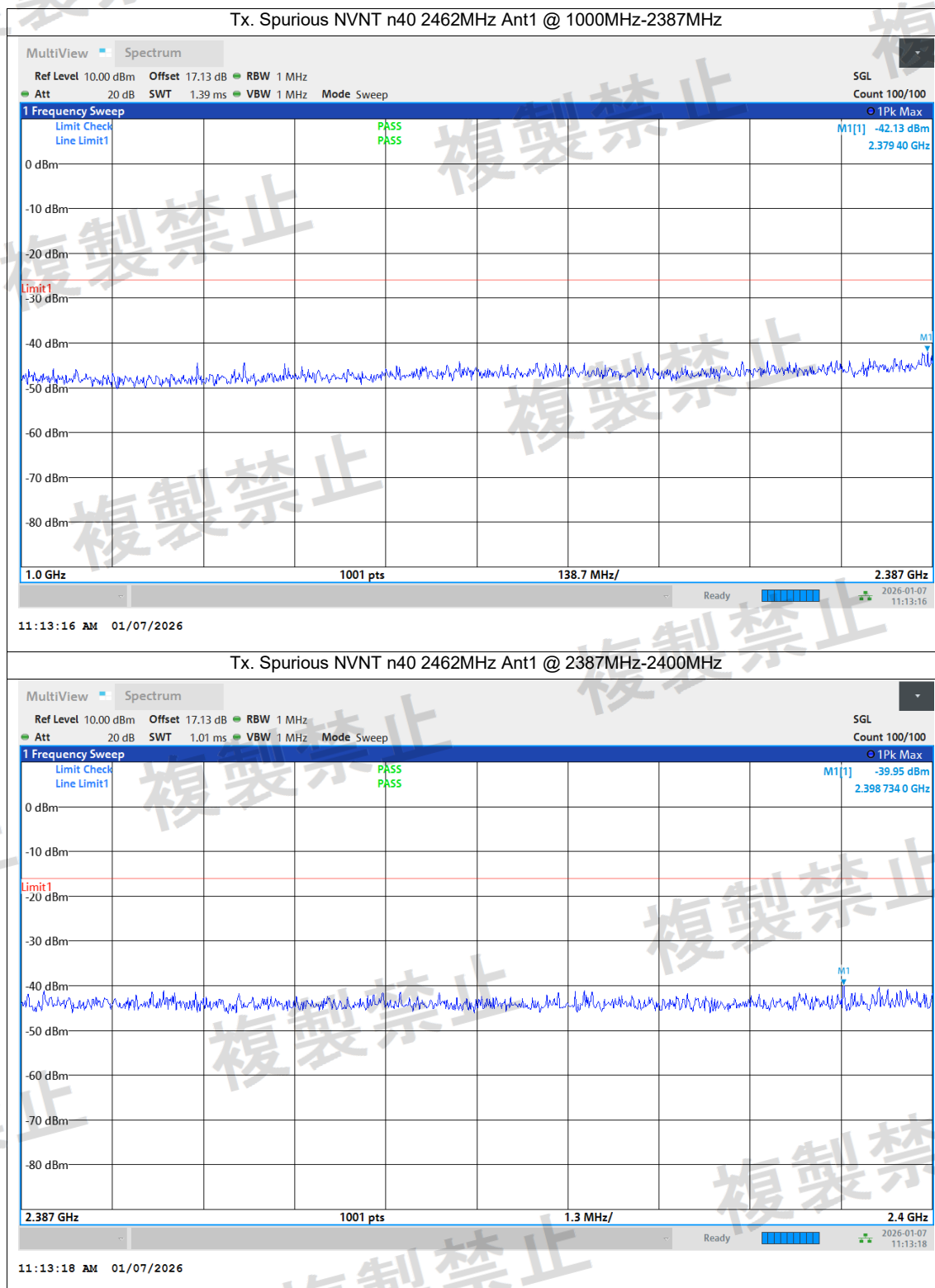


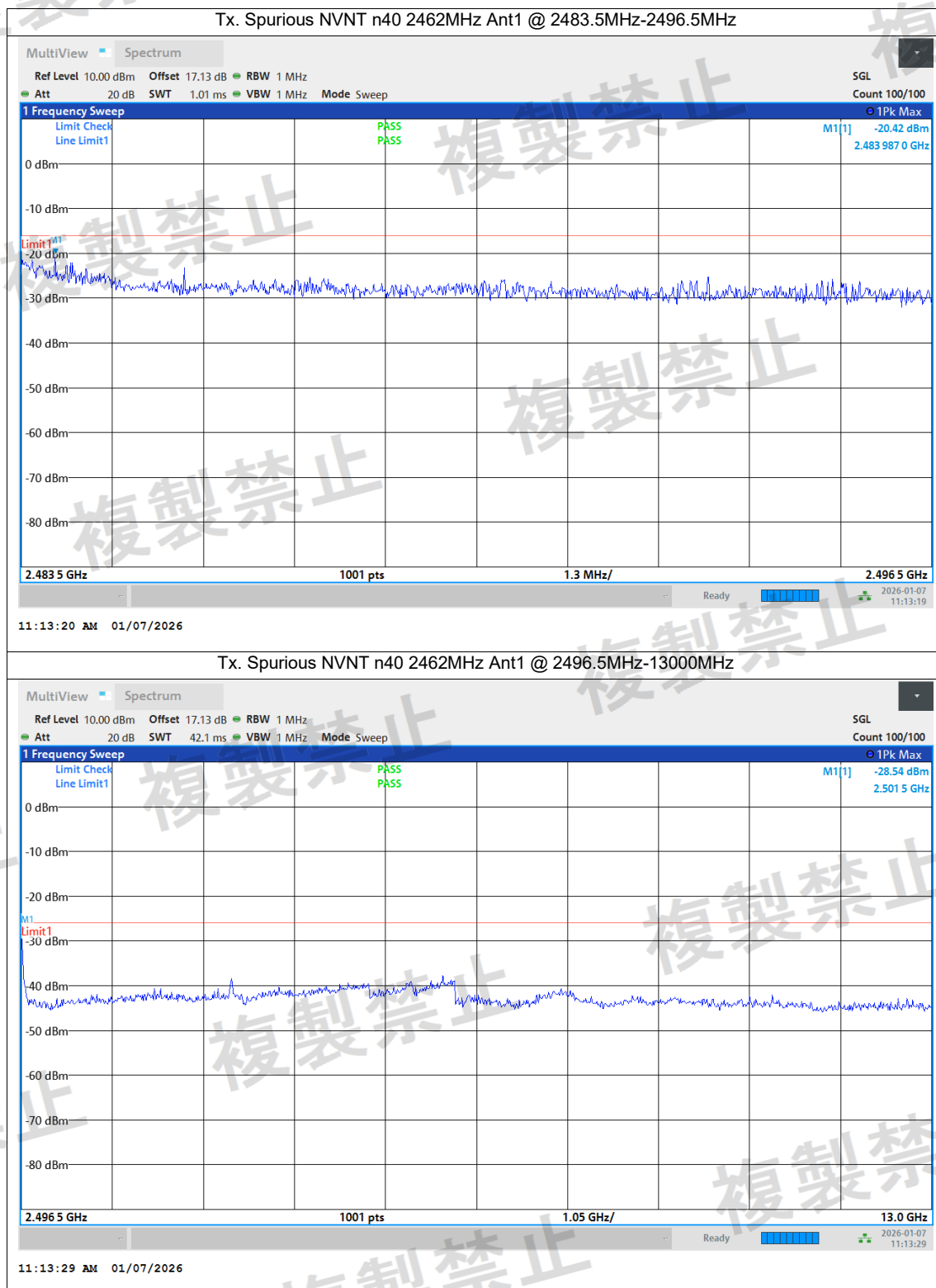










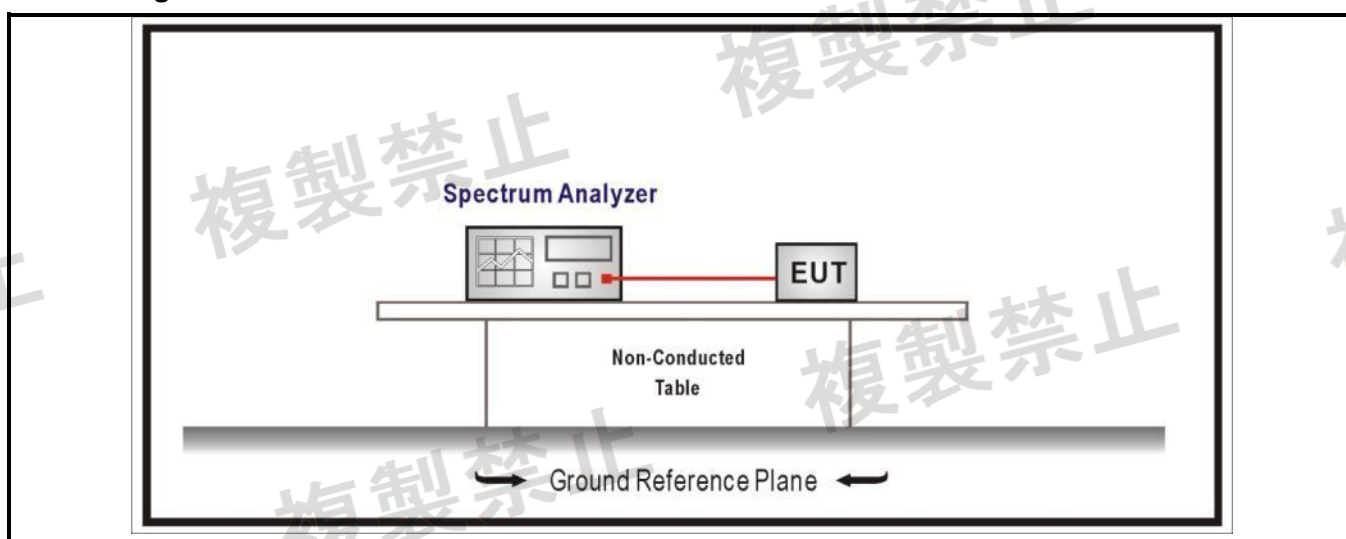


4.6	Receiver Spurious Emission	VERDICT: PASS
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Limit

Standard	MIC NOTICE NO.88 APPENDIX NO.43
<= 4nW for 30 – 1000 MHz	
<= 20nW for 1000 – 12750 MHz	

Test Configuration



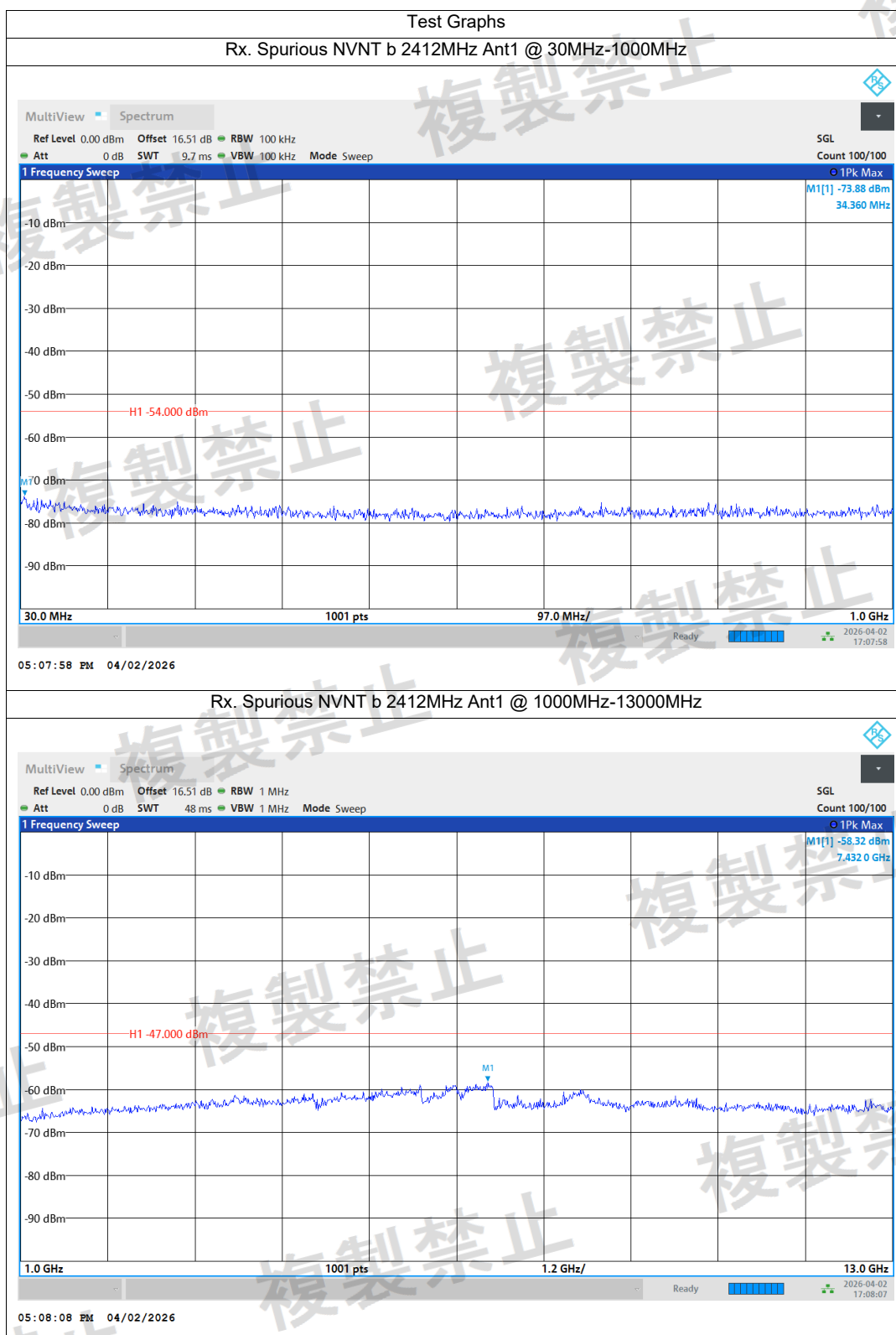
Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 2	
Remark	---	

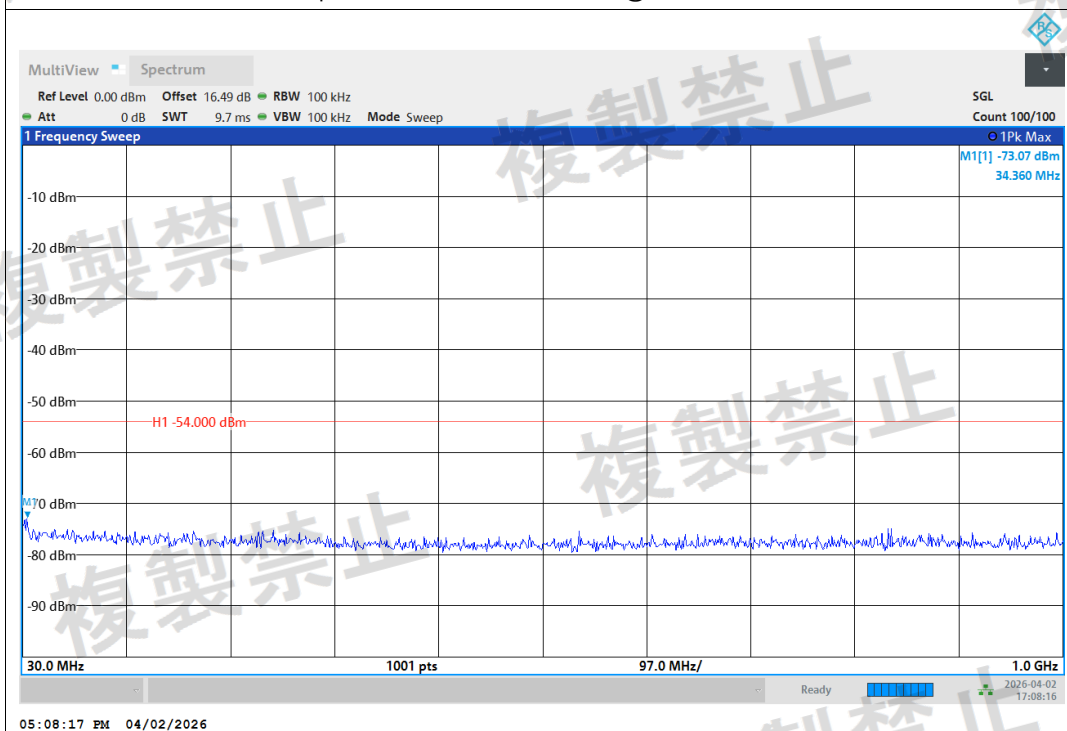
Results

Mode	CH.	Test Freq. (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Result
802.11b	01	2412	30-1000	34.36	-73.88	-54	Pass
			1000-13000	7432	-58.32	-47	Pass
	07	2442	30-1000	34.36	-73.07	-54	Pass
			1000-13000	7468	-58.26	-47	Pass
	13	2472	30-1000	30.48	-73.71	-54	Pass
			1000-13000	6964	-58.30	-47	Pass
802.11g	01	2412	30-1000	36.30	-73.55	-54	Pass
			1000-13000	7480	-57.88	-47	Pass
	07	2442	30-1000	34.36	-72.35	-54	Pass
			1000-13000	6916	-58.54	-47	Pass
	13	2472	30-1000	31.45	-73.68	-54	Pass
			1000-13000	7468	-58.22	-47	Pass
802.11n (20M)	01	2412	30-1000	36.30	-73.37	-54	Pass
			1000-13000	7432	-57.82	-47	Pass
	07	2442	30-1000	35.33	-72.77	-54	Pass
			1000-13000	7228	-57.74	-47	Pass
	13	2472	30-1000	35.33	-73.57	-54	Pass
			1000-13000	7468	-58.96	-47	Pass
802.11n (40M)	03	2422	30-1000	47.93	-73.62	-54	Pass
			1000-13000	7432	-57.38	-47	Pass
	07	2442	30-1000	33.39	-73.20	-54	Pass
			1000-13000	6940	-58.02	-47	Pass
	11	2462	30-1000	30.48	-73.74	-54	Pass
			1000-13000	7492	-58.02	-47	Pass

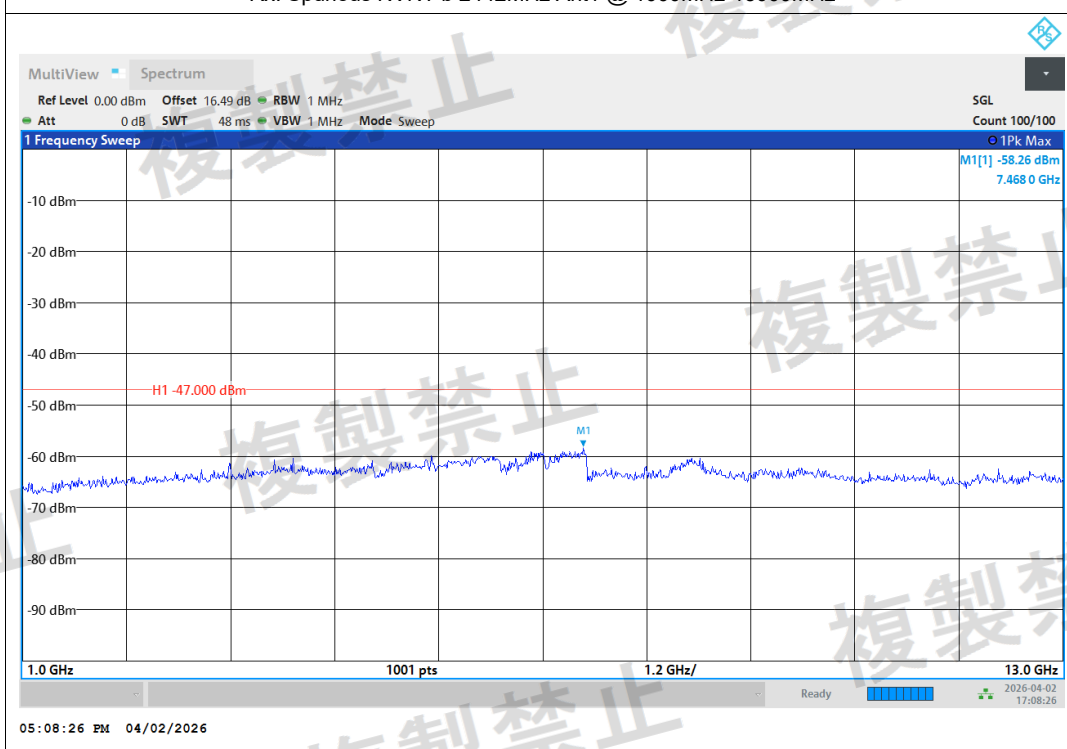
Receiver Spurious Emission



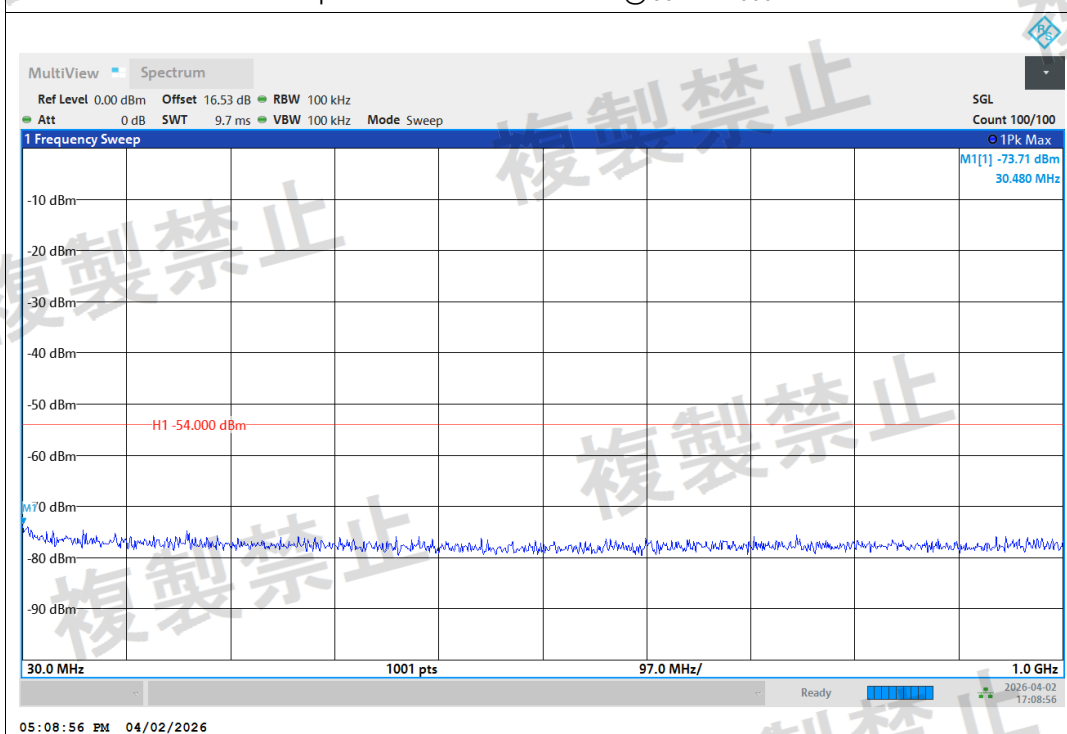
Rx. Spurious NVNT b 2442MHz Ant1 @ 30MHz-1000MHz



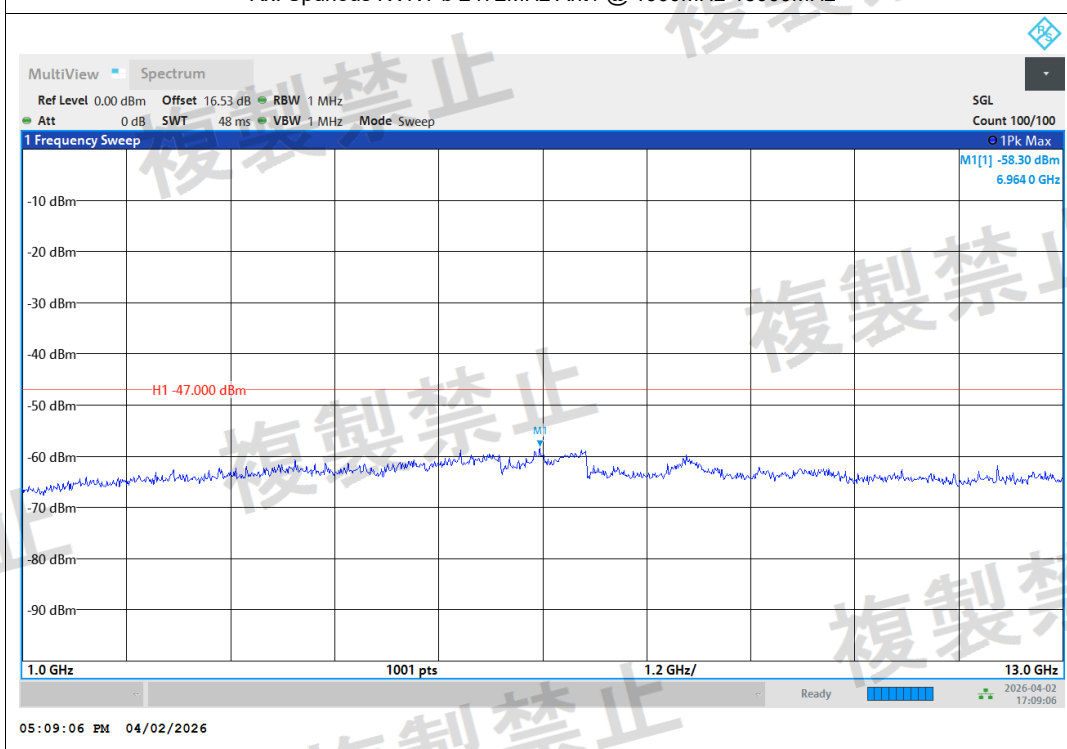
Rx. Spurious NVNT b 2442MHz Ant1 @ 1000MHz-13000MHz



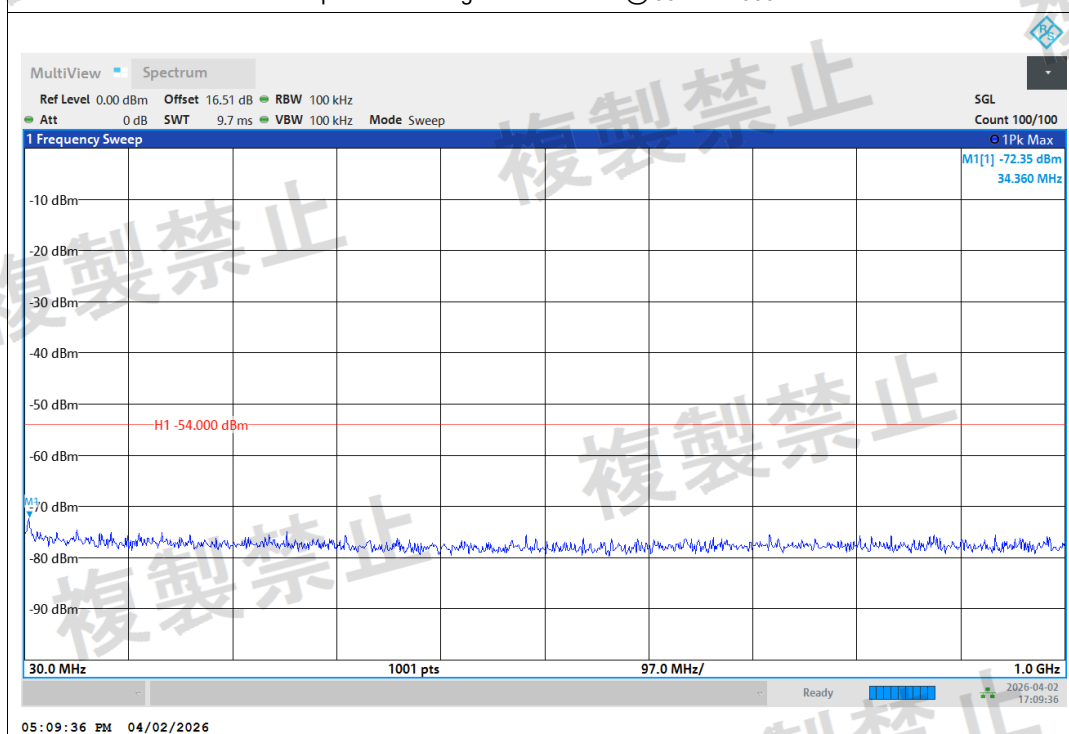
Rx. Spurious NVNT b 2472MHz Ant1 @ 30MHz-1000MHz



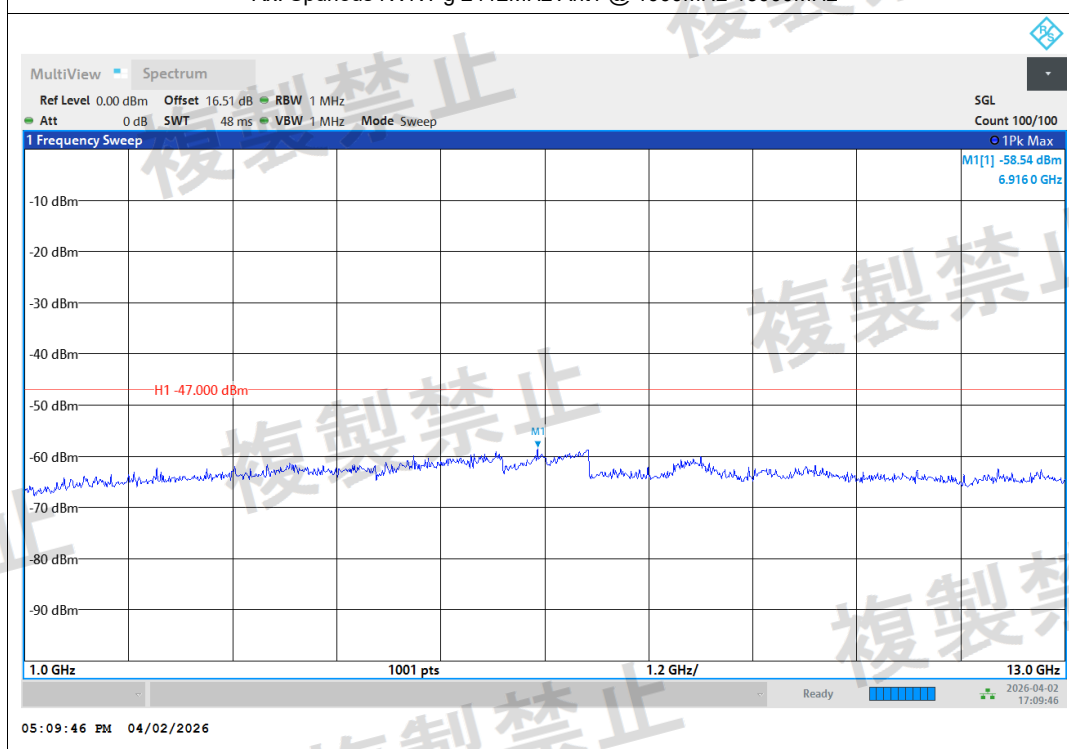
Rx. Spurious NVNT b 2472MHz Ant1 @ 1000MHz-13000MHz



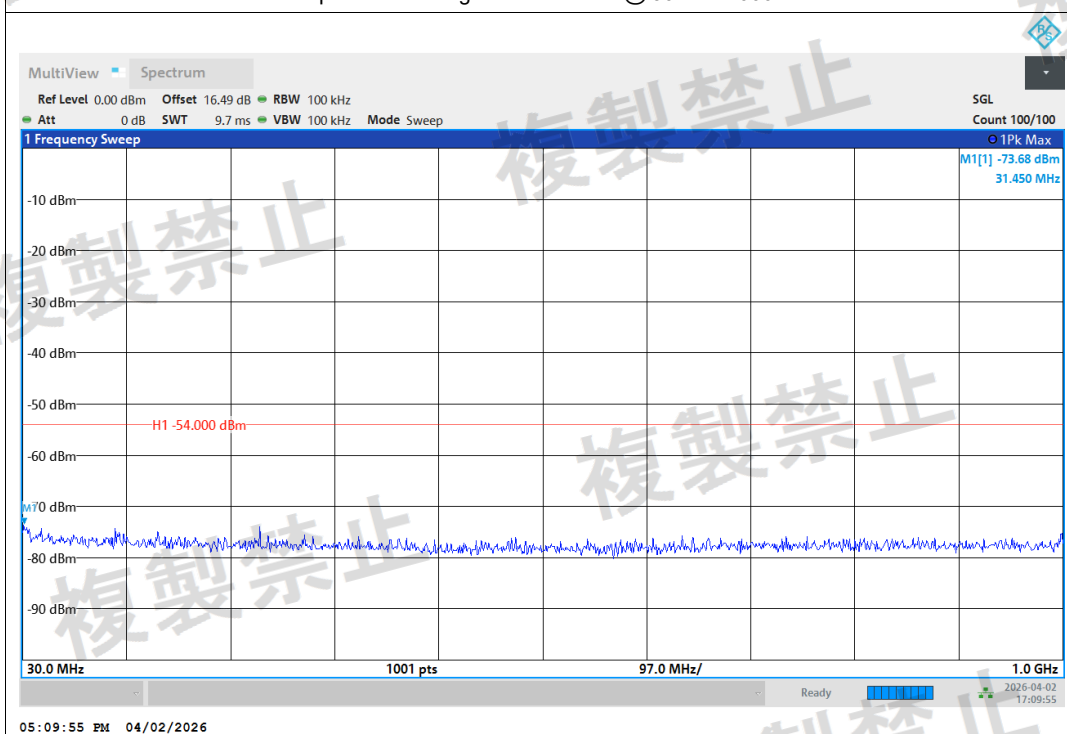
Rx. Spurious NVNT g 2412MHz Ant1 @ 30MHz-1000MHz



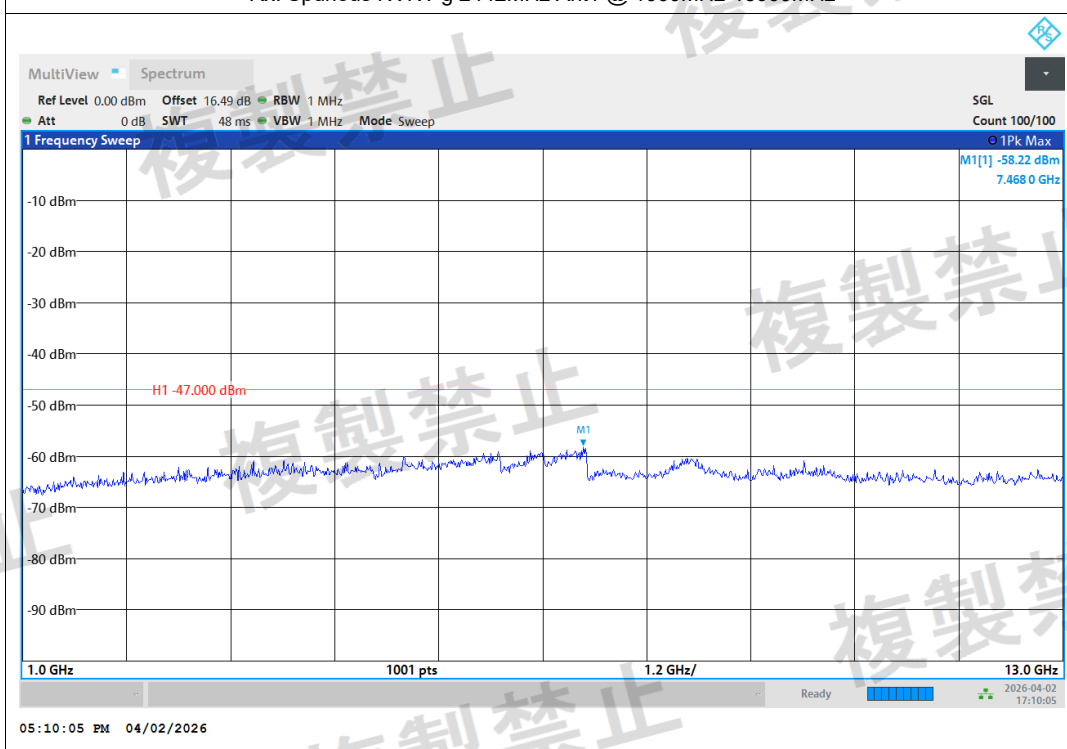
Rx. Spurious NVNT g 2412MHz Ant1 @ 1000MHz-13000MHz



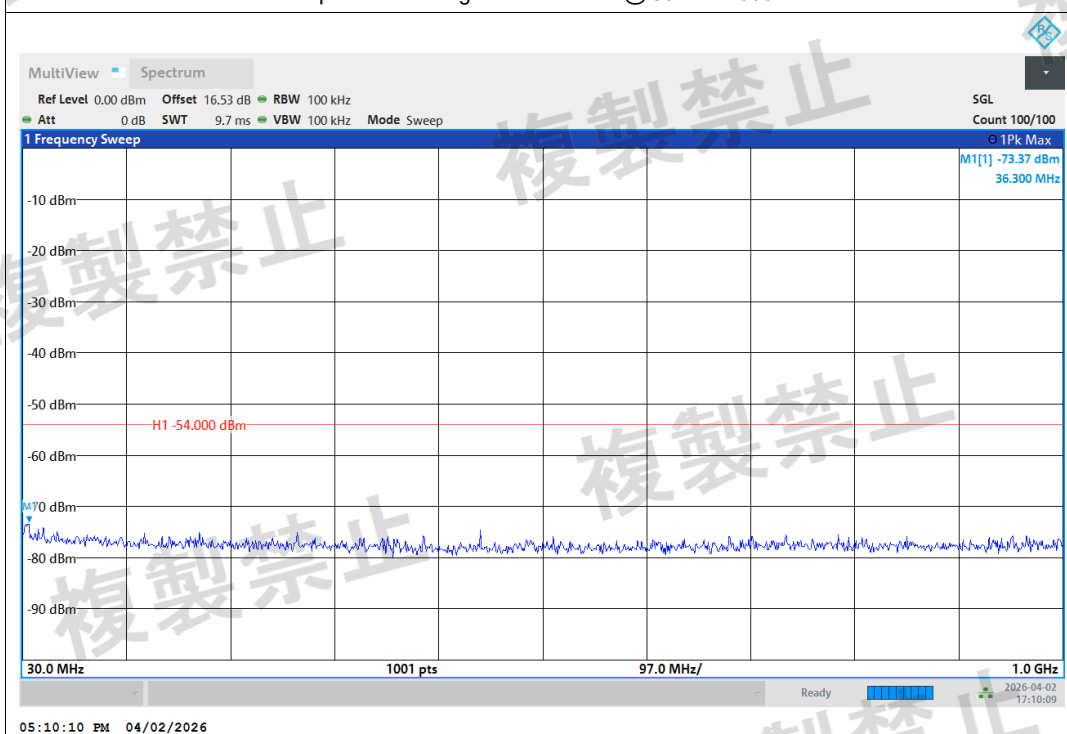
Rx. Spurious NVNT g 2442MHz Ant1 @ 30MHz-1000MHz



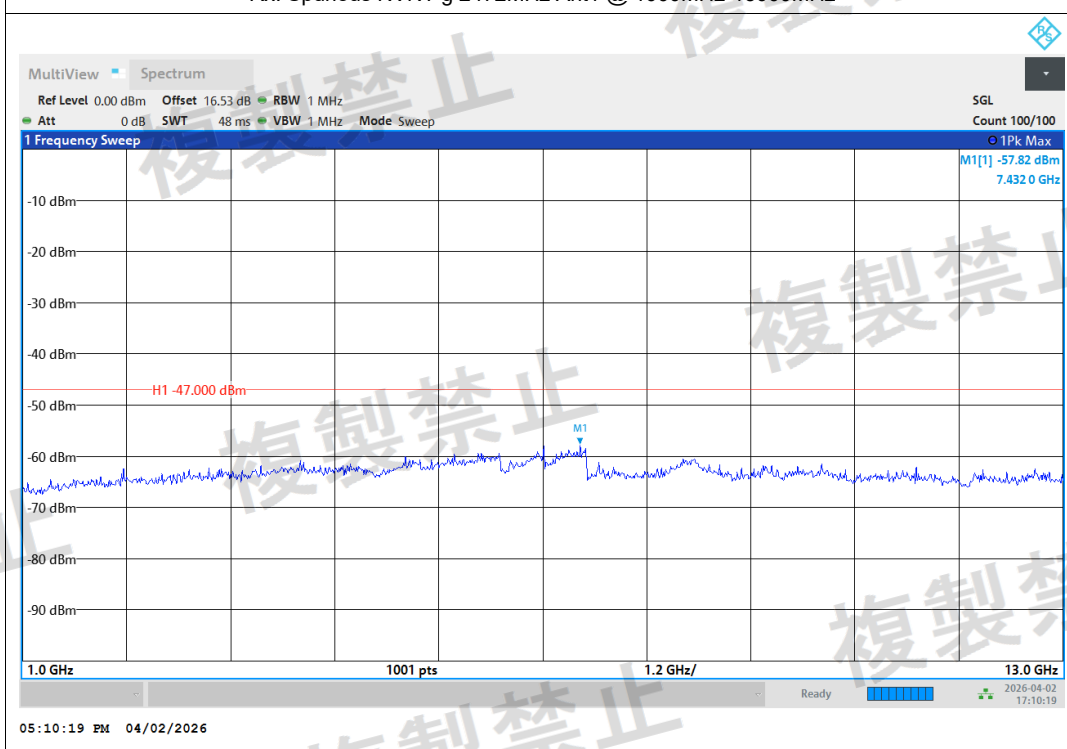
Rx. Spurious NVNT g 2442MHz Ant1 @ 1000MHz-13000MHz



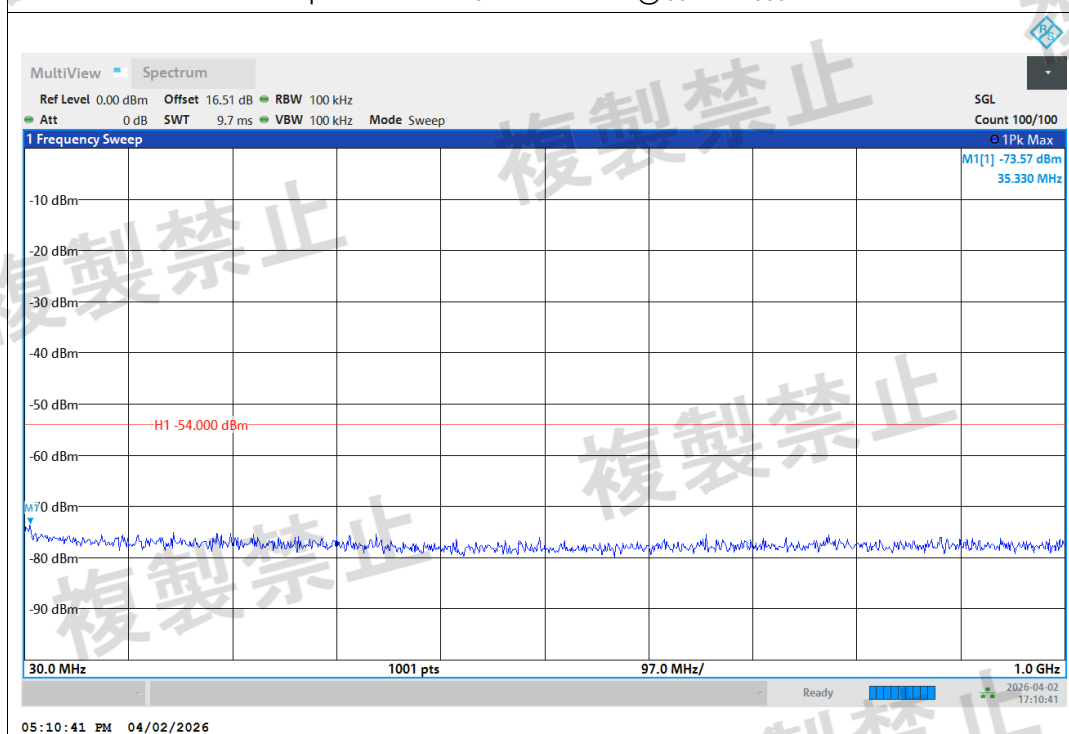
Rx. Spurious NVNT g 2472MHz Ant1 @ 30MHz-1000MHz



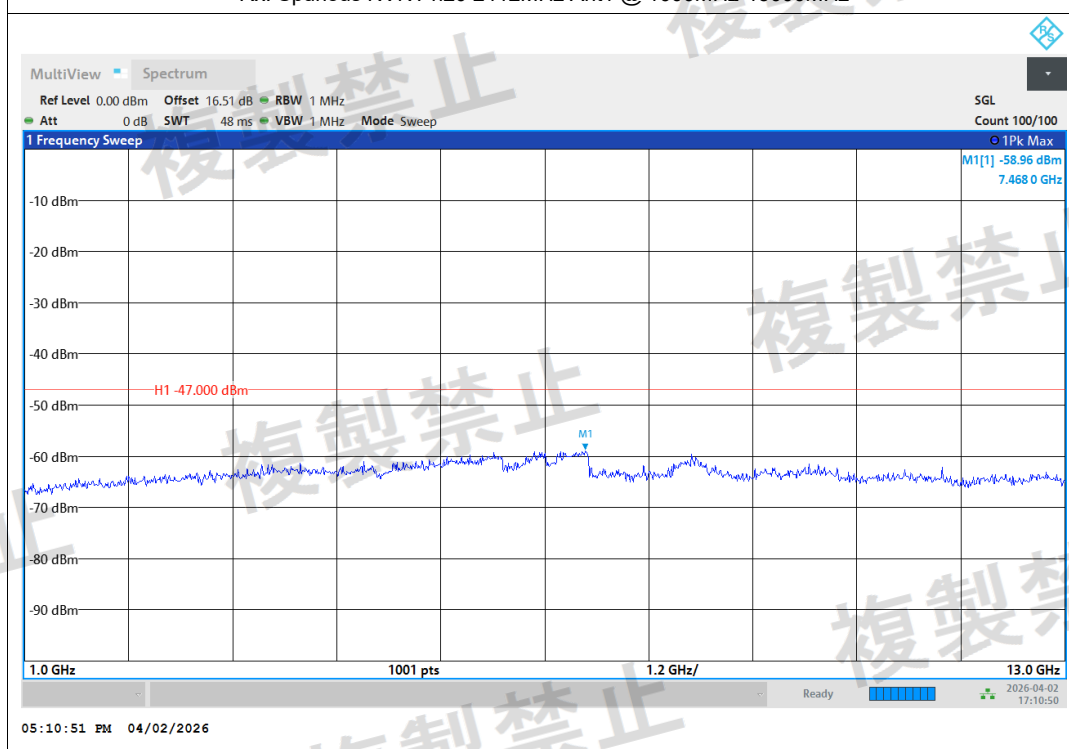
Rx. Spurious NVNT g 2472MHz Ant1 @ 1000MHz-13000MHz



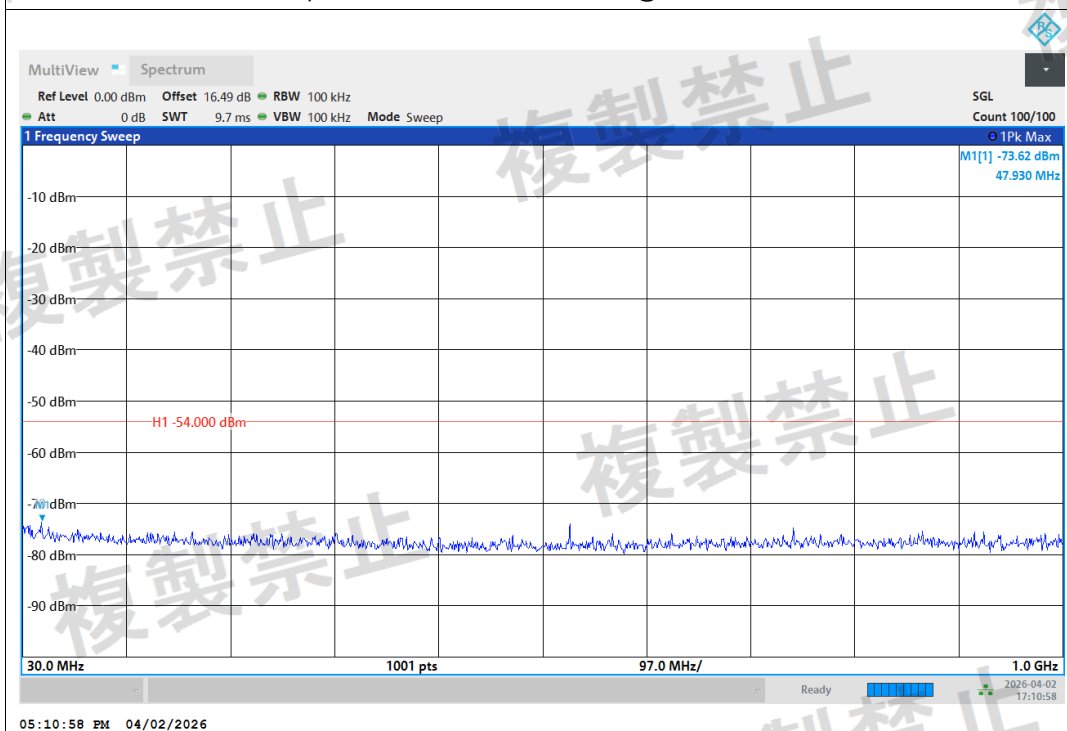
Rx. Spurious NVNT n20 2412MHz Ant1 @ 30MHz-1000MHz



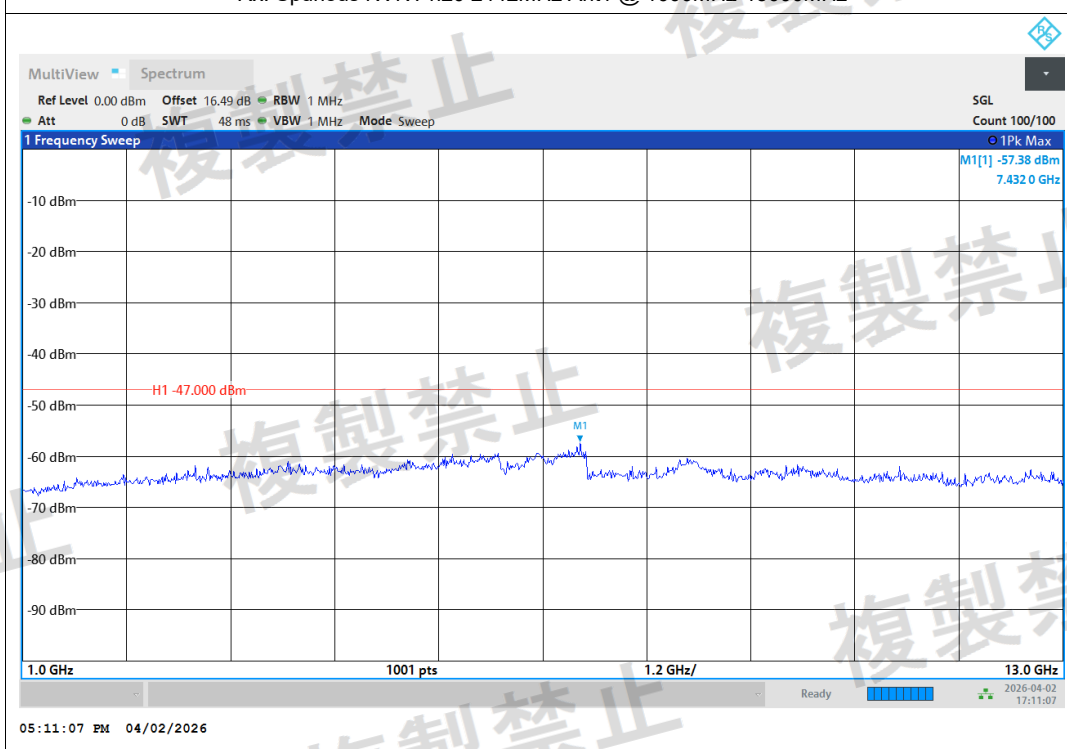
Rx. Spurious NVNT n20 2412MHz Ant1 @ 1000MHz-13000MHz



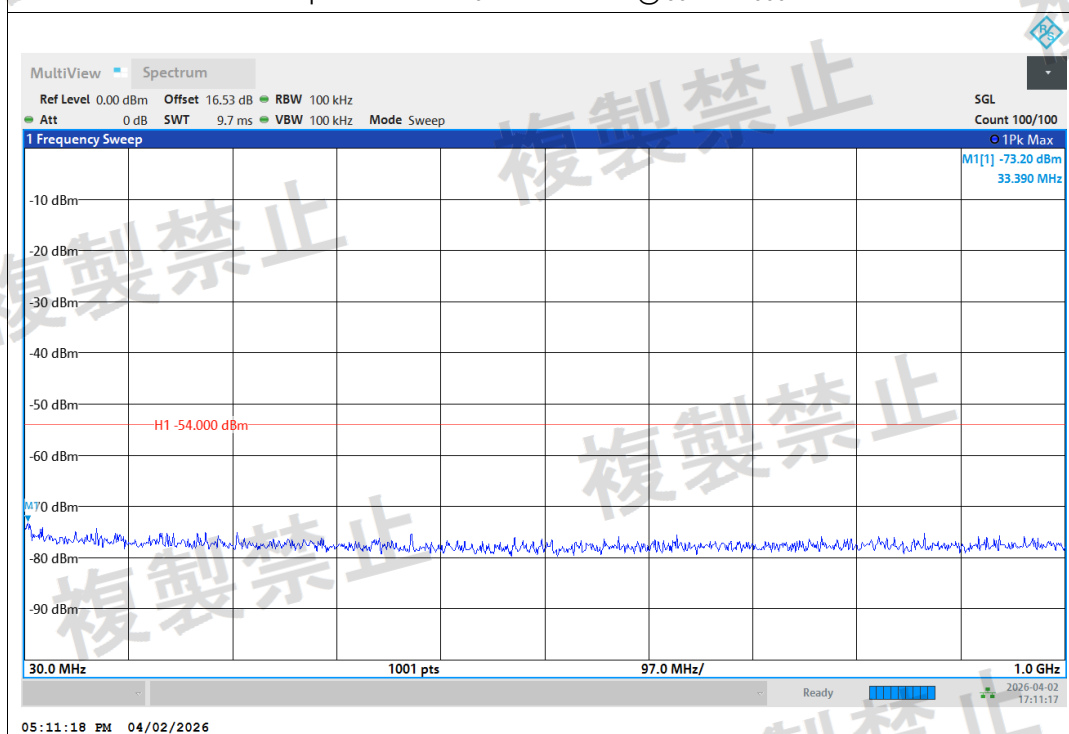
Rx. Spurious NVNT n20 2442MHz Ant1 @ 30MHz-1000MHz



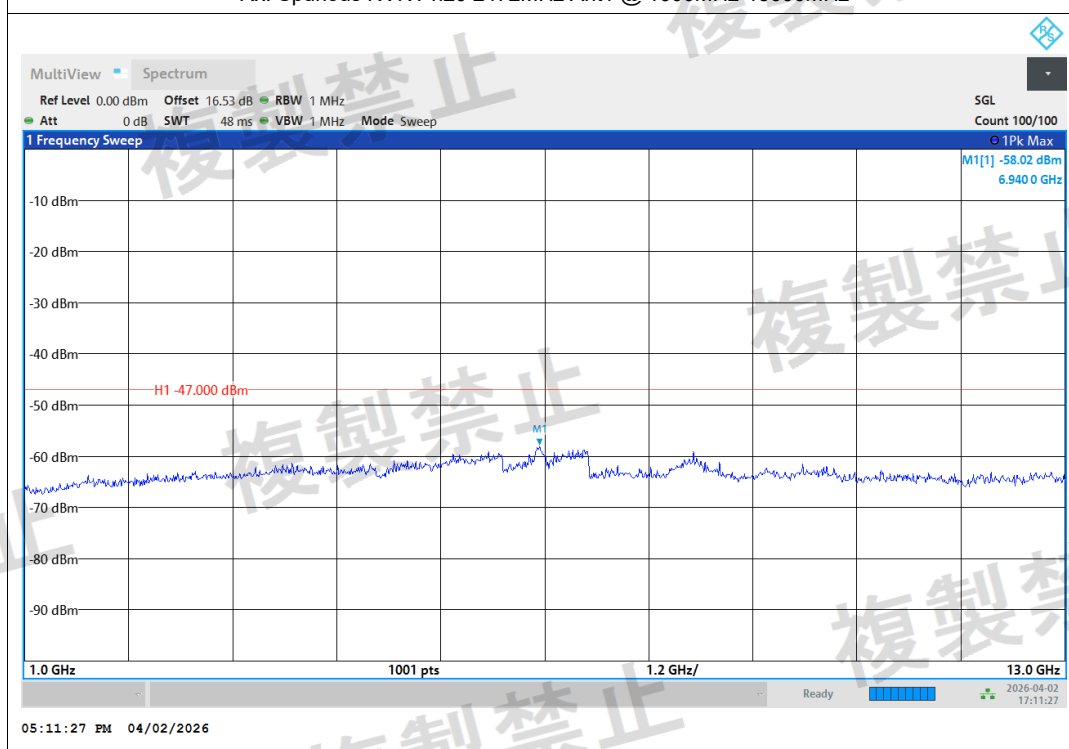
Rx. Spurious NVNT n20 2442MHz Ant1 @ 1000MHz-13000MHz



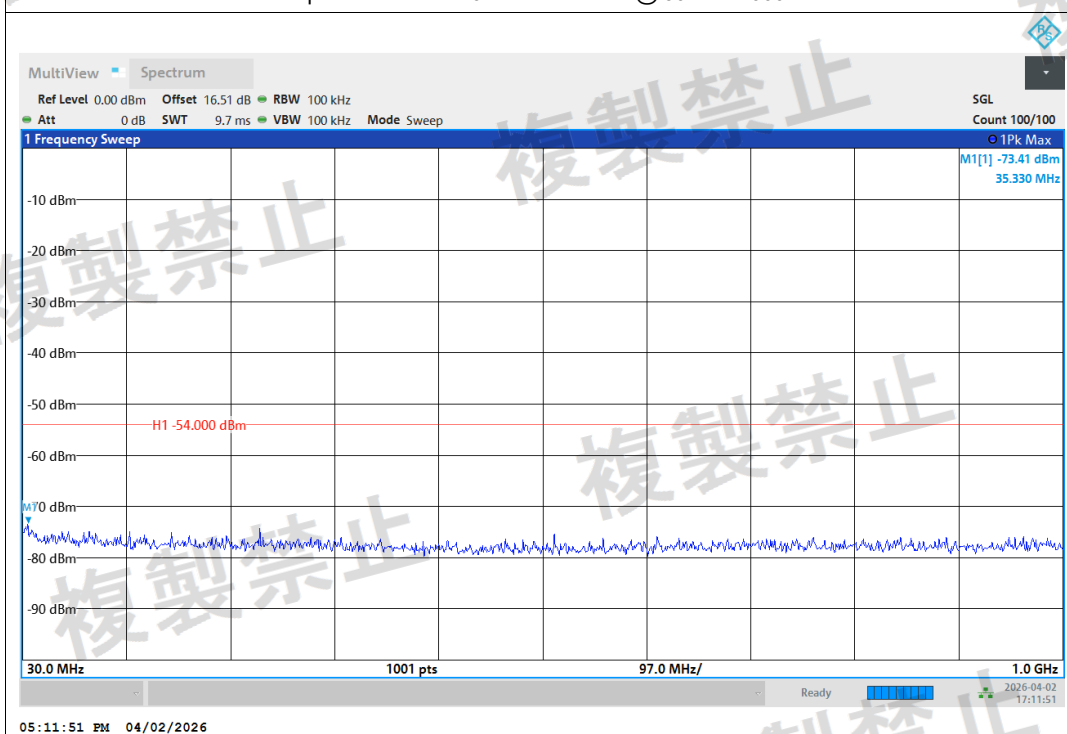
Rx. Spurious NVNT n20 2472MHz Ant1 @ 30MHz-1000MHz



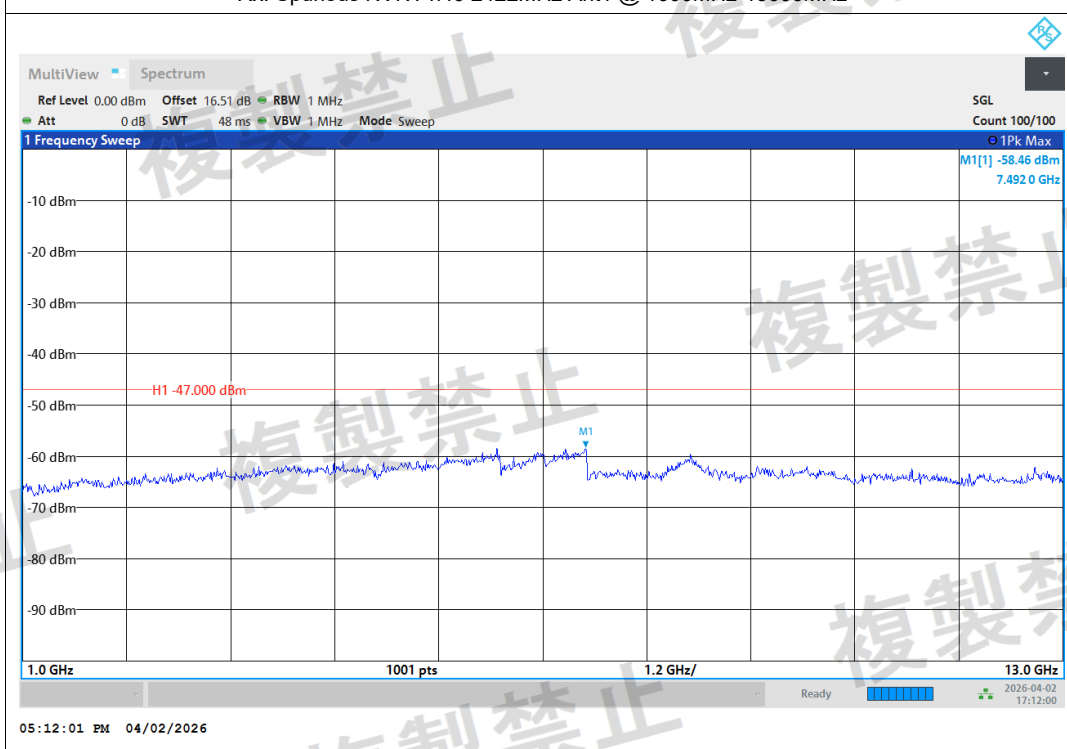
Rx. Spurious NVNT n20 2472MHz Ant1 @ 1000MHz-13000MHz



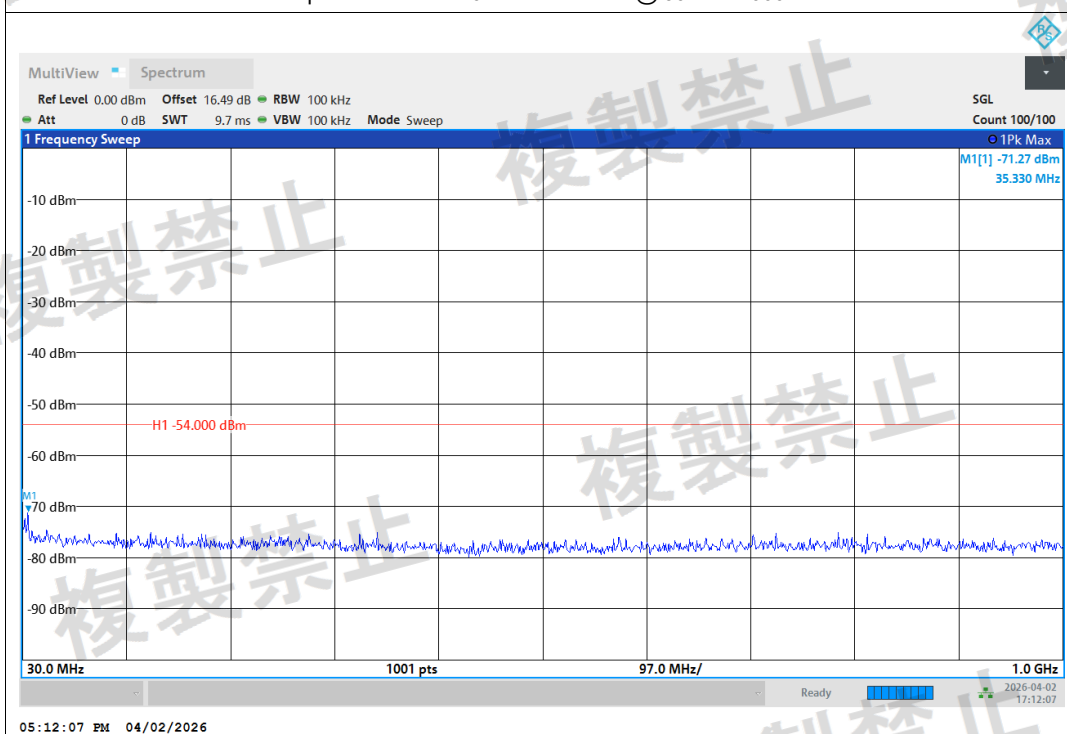
Rx. Spurious NVNT n40 2422MHz Ant1 @ 30MHz-1000MHz



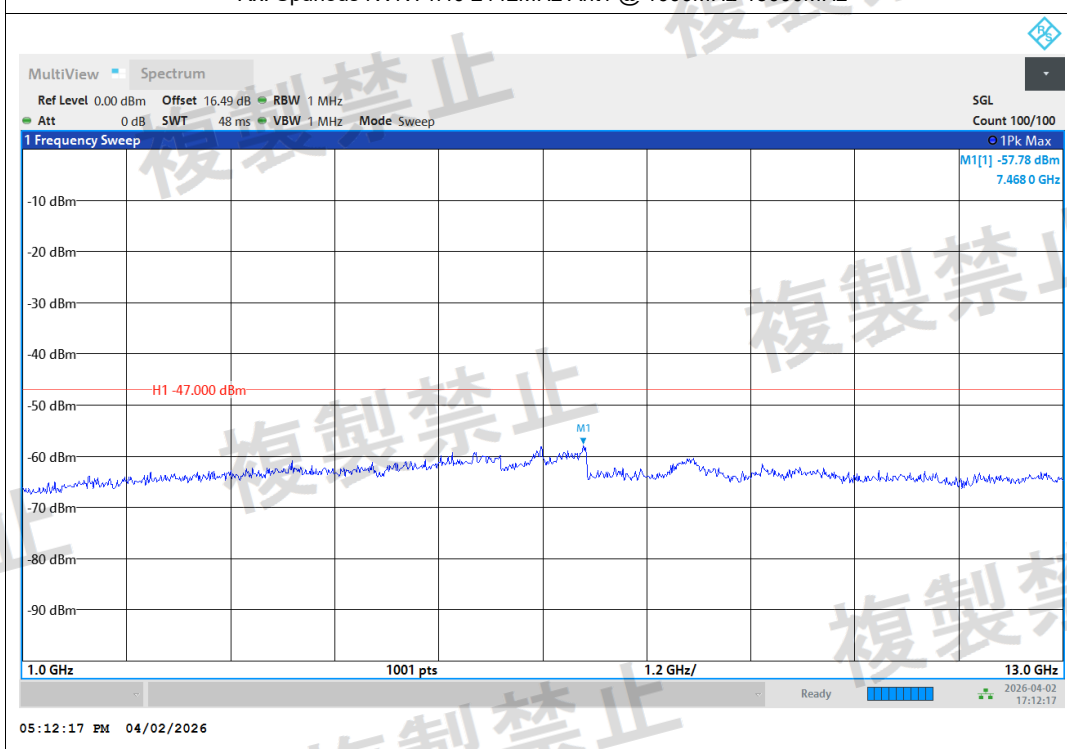
Rx. Spurious NVNT n40 2422MHz Ant1 @ 1000MHz-13000MHz



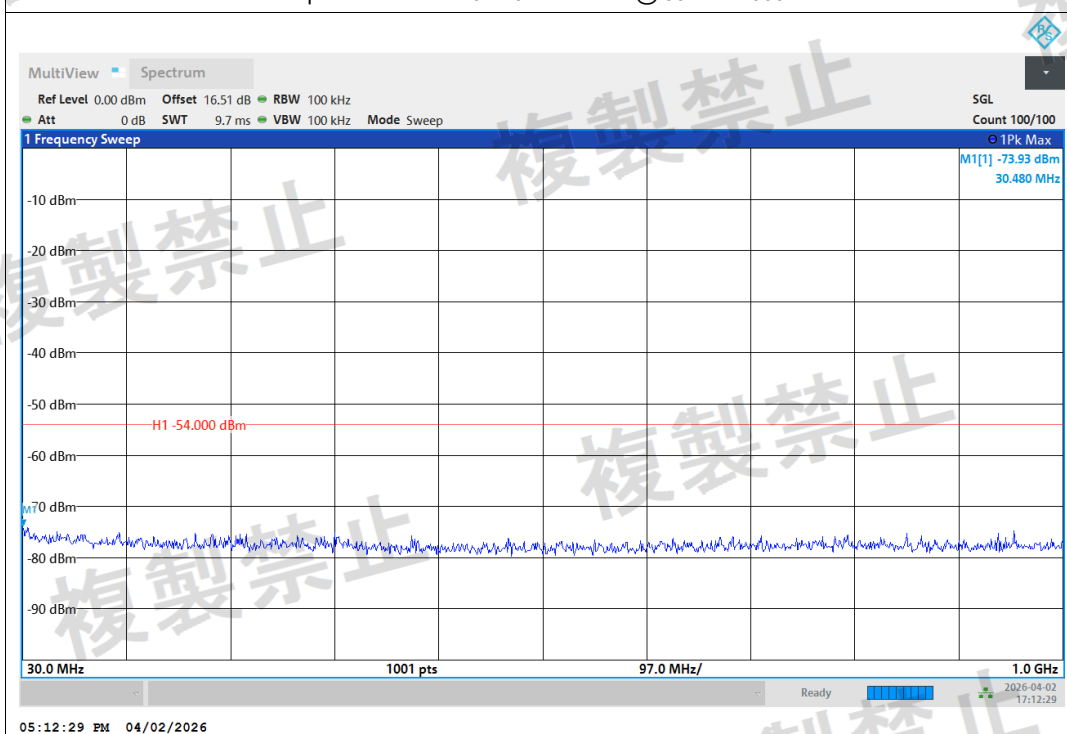
Rx. Spurious NVNT n40 2442MHz Ant1 @ 30MHz-1000MHz



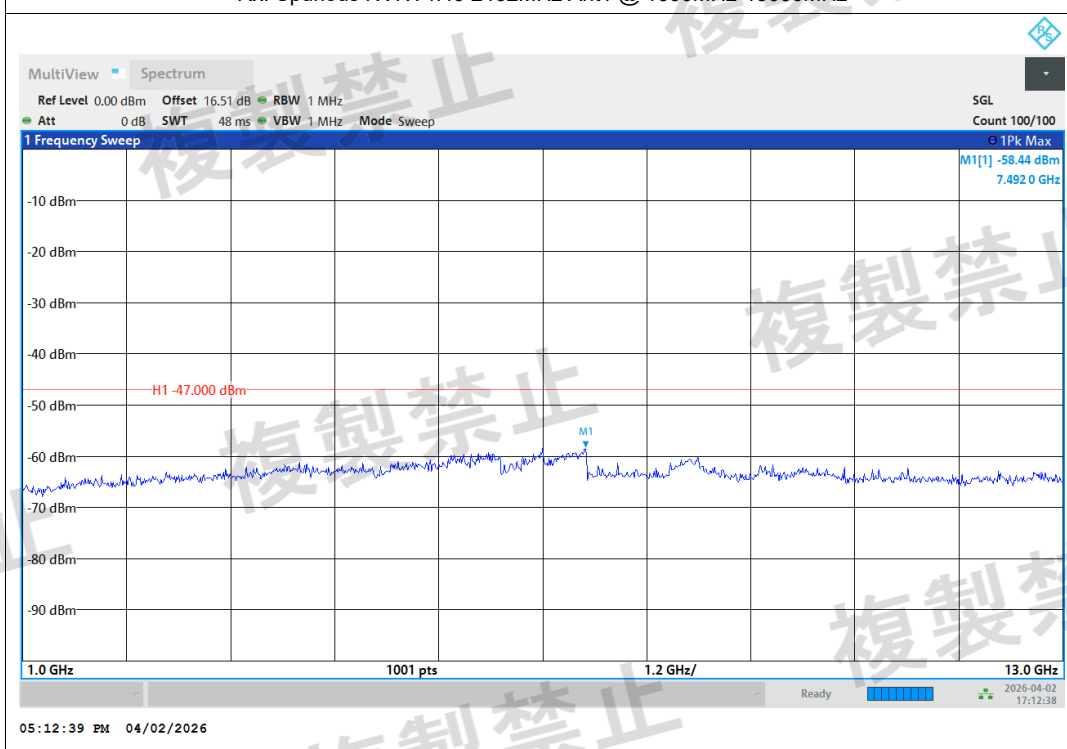
Rx. Spurious NVNT n40 2442MHz Ant1 @ 1000MHz-13000MHz



Rx. Spurious NVNT n40 2462MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious NVNT n40 2462MHz Ant1 @ 1000MHz-13000MHz



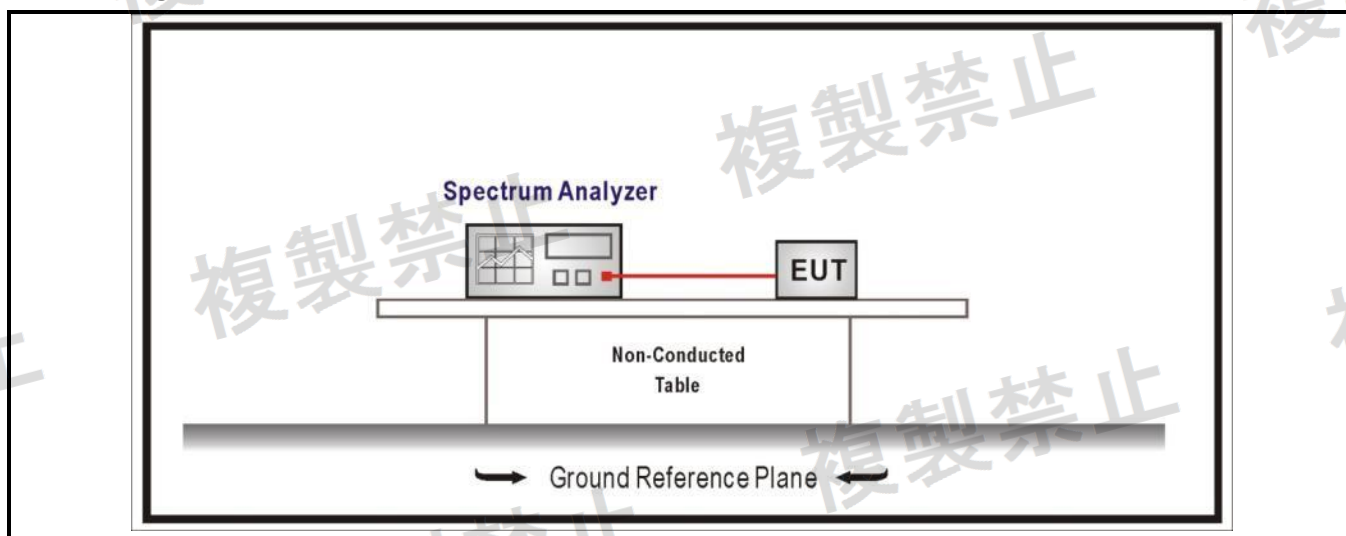
4.7 Interference Prevention Function Measurement

VERDICT: PASS

Limit

Standard	MIC NOTICE NO.88 APPENDIX NO.43
Identifying code length 48bit	

Test Configuration



Performed measurements

Port under test	Antenna port	
Test method applied	☒	Conducted measurement
	☐	Radiated measurement
Test setup	Refer to the Annex 3 for test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Results

EUT MAC Address: 80:9d:65:b2:c7:db

IP address 192.168.2.46

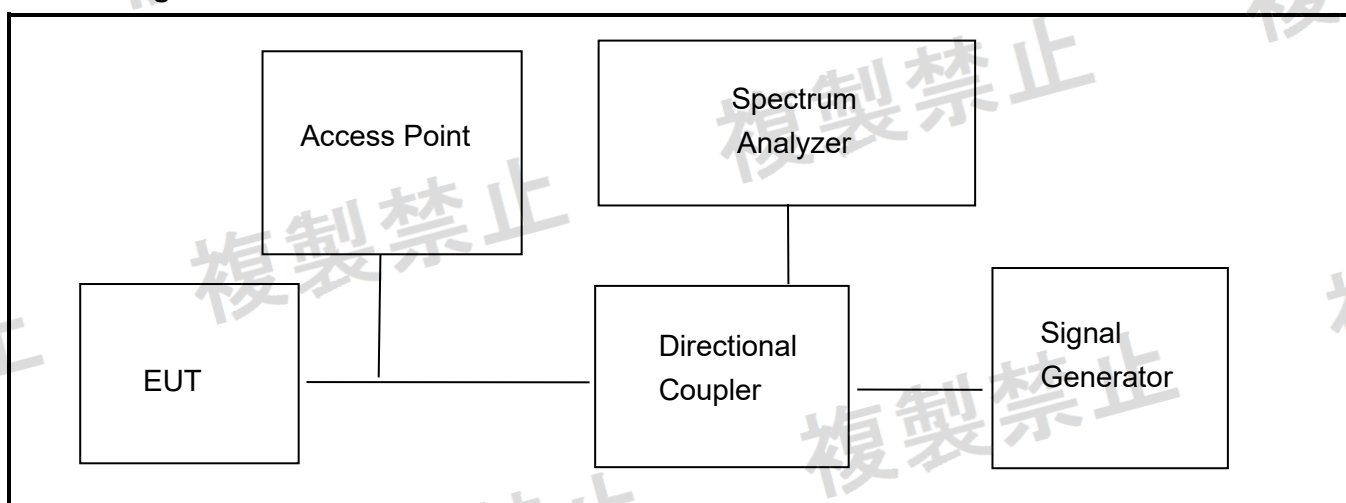
MAC address 80:9d:65:b2:c7:db

4.8	Carrier Sense Measurement	VERDICT: PASS
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Limit

Standard	MIC NOTICE NO.88 APPENDIX NO.43
The EUT shall have the interference prevention capability to transmit or to receive the identification automatically, so that sender and receiver shall exclude other equipment.	

Test Configuration



Test Procedure

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency Carrier Sense Measurement. 1.Link EUT and Access Point to Directional Coupler input port. 2.Link Signal Generator and Spectrum Analyzer to test port and output port in the Directional Coupler separately. 3.A positive Peak Detector function in Spectrum Analyzer must be used. 4.Set the Span to Zero. 5.Press the Signal Generator on and it will output the Carrier Signal. When the Link breaks off, wait a minute and press the Signal Generator off. After a while, reset the Link and done the tes
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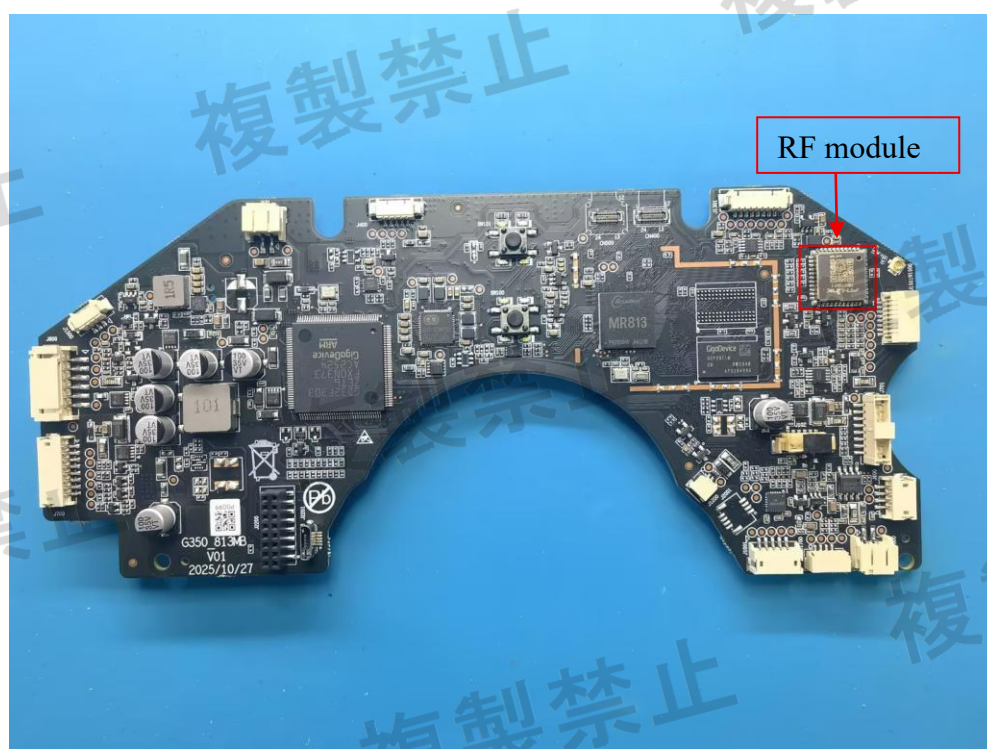
Result

Pass

5 CONFORMING THE STRUCTURE THAT IS DIFFICULT TO OPEN

The Radio Equipment:	
☐	Use Special Screw
☒	Metal Shielding is Soldered
☐	Use Ball Grid Array (BGA)
☐	RF module/Chip Pins > 20
☐	RF module/Chip Pins distance < 1.5 mm

The high-frequency section and modulation section (except for the antenna system) are not capable of being opened easily.



6 IDENTIFICATION OF THE EQUIPMENT UNDER TEST

Remark: The test setup photo and EUT Photo please see appendix.

ANNEX 1 – MEASUREMENT UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test item	Uncertainty
Output Power and Output Power Tolerance	$\pm 1.27\text{dB}$
Spread Bandwidth and Spread Factor	$\pm 150\text{Hz}$
Occupied Bandwidth	$\pm 1.27\text{dB}$
Frequency Error	$\pm 150\text{Hz}$
Transmitter Spurious Emissions	$\pm 1.27\text{dB}$
Receiver Spurious Emissions	$\pm 1.27\text{dB}$
Interference Prevention Function Measurement	$\pm 1.27\text{dB}$
Carrier Sense Measurement	$\pm 1.27\text{dB}$

ANNEX 2 – USED EQUIPMENT

Equipment Name	Manufacturer	Type/Model	Serial Number	Last Cal Date	Cal Due date	Calibration Body	Calibration Method
Vector signal generator	ROHDE & SCHWARZ	SMM100A	101780	2025/10/27	2026/10/26	CEPREI	c
Open switch and control platform	ROHDE & SCHWARZ	OSP150	100856	2025/10/27	2026/10/26	CEPREI	c
Signal & Spectrum Analyzer	ROHDE & SCHWARZ	FSV3044	101287	2025/10/27	2026/10/26	CEPREI	c
Wireless Connectivity Tester	ROHDE & SCHWARZ	CMW270	102651	2025/10/27	2026/10/26	CEPREI	c
Signal Generator	ROHDE & SCHWARZ	SMB100A	183222	2025/10/27	2026/10/26	CEPREI	c
DC Power Supply	apc	ADC-0800100-15	D222120022	2025/10/27	2026/10/26	CEPREI	c
AC Power Supply	apc	KDF-11005GS	F322120041	2025/10/27	2026/10/26	CEPREI	c
Temperature & Humidity Chamber	HESON	HS-225B	CDW230301-01	2025/10/27	2026/10/26	CEPREI	c
Software	MWRFtest	MTS 8310	2.0.0.0	N/A	N/A	N/A	N/A

Note:

1. CEPREI: CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

2. Calibration Method:

a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)

b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)

c) Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)

d) Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)

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