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TEST REPORT

Application No.: CQASZ20250801897E-04
Applicant: SEIBIDOU.CO.,LTD.
Address of Applicant: Nagasu 2156-93, Kashima shi, Ibaraki ken, 314-0022, JAPAN
Manufacturer: Shenzhen Giantsmart Technology Co.,Ltd
Address of Manufacturer: Floor 14, Building 1, Yishang Sanwei Industrial Building, No. 642-2, Zhoushi Road, Hangcheng Street, Bao'an District, Shenzhen,China
Factory: SHENZHEN FUSAIPU TECHNOLOGY CO.,LTD.
Address of Factory: 5F, Building B, Behind No.545, Zhoushi Road Huangmabu Community, Hangcheng Subdistrict Bao'an District,Shenzhen
Equipment Under Test (EUT):
Product: MC-BOX3
All Model No.: MC-BOX3
Test Model No.: MC-BOX3
Brand Name: N/A
Standards: Item 19-3 of Article 2 Paragraph 1
Date of Receipt: 2025-08-15
Date of Test: 2025-08-15 to 2025-10-09
Date of Issue: 2025-10-09
Test Result : PASS*
Test Methods: Test method temporarily determined by TACOYAKI

Tested By:

Lewis Zhou

(Lewis Zhou)

Reviewed By:

Timo Lei

(Timo Lei)

Approved By:

Jack Ai

(Jack Ai)



* In the configuration tested, the EUT complied with the standards specified above.

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.

1 Version

Report No.	Version	Description	Issue Date
CQASZ20250801897E-04	Rev.01	Initial report	2025-10-09

2 Test Summary

Test	Test Requirement	Result
Antenna Requirement	Item 19-3 of Article 2-1	PASS
Frequency Error		PASS
Occupied Bandwidth		PASS
Spurious Emission of Tx		PASS
Antenna Power		PASS
Equivalent isotropically radiated power (EIRP)		PASS
Adjacent channel power tolerance		PASS
Out-band emission power		PASS
Spurious Emission of Rx		PASS
Interference prevention function		PASS
Carrier sense function		PASS
Transmission Burst Length		PASS

Remark:

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

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4 General Information

4.1 General Description of EUT

Product Name: MC-BOX3
All Model No: MC-BOX3
Test Model No: MC-BOX3
Trade Mark: N/A

4.2 Technical Specifications

Operation Frequency: 5180~5240MHz
Modulation Technique: IEEE for 802.11ax: OFDMA(1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
IEEE for 802.11a/n/ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
Transmit Data Rate: 802.11a: 6M/9M/12M/18M/24M/36M/48M/54M bps
802.11n: ~72M bps
802.11ac: ~86.7M bps
802.11ax:
8.6M/17.2M/25.8M/34.4M/51.6M/68.8M/77.4M/86M/103.2M/114.7M/129M/143.4Mbps

Software version: AIC8800D LINUX SDK V4.0

Hardware version: L6680-S V3.0

Antenna Type: External antenna

Antenna Gain: 1.5 dBi

Rated power: 4.9mW/MHz

Power Supply: ☐ For EUT operation:
☒ For other: Charge by DC12V

Adapter:

Model:MYX-1202000PJ

Input:100-240V~50/60Hz 0.8A Max

Output:12V 2.0A MAX 24W

Test Voltage: ☒ Normal voltage (EUT operation): DC12V
☐ Low voltage (Normal voltage -10%):
☐ High voltage (Normal voltage+10%):

4.3 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
/	/	/

4.4 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L5785)**

CNAS has accredited Shenzhen Huaxia Testing Technology Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **ISED Registration No.: 22984-1**

The 3m Semi-anechoic chamber of Shenzhen Huaxia Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

- **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

4.6 Measurement Uncertainty

No.	Parameter	Measurement Uncertainty
1	Radio Frequency	3×10^{-8}
2	Duty cycle	0.6 %.
3	Occupied Bandwidth	1.1%
4	RF conducted power	0.86dB
5	RF power density	0.74
6	Conducted Spurious emissions	0.86dB
7	Temperature test	0.8℃
8	Humidity test	2.0%
9	Supply voltages	0.5 %.
10	Frequency Error	5.5 Hz

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5 Equipment Used during Test

Test Equipment List						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. date (yyyy-mm-dd)	Calibration body	Classificati on
Humi/ Temp Indicator	ANPUHUA	HTC-1	212066	2024/9/8	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	(c)
Spectrum Analyzer	Rohde & Schwarz	FSU26	200019	2024/9/8	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	(c)
Multimeter	Fluke	15B	96710318	2024/9/8	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	(c)
Signal generator	ANRITSU	MG3692B	074702	2024/9/8	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	(c)
DC Power Supply	GW	GPC3030D	A671672	2024/9/8	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	(c)

Remark:

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).

From JRL Article 24-2, paragraph 4,

Item 2

Notice: Calibration duration for above equipments is 1 year.

6 Test Results

6.1 Radio Technical Requirements Specification

Tabel 1: 5 GHz band low-power data communication system (1)

Items	Technical standard																																		
Assigned frequency or designated frequency	5180MHz-5240MHz																																		
Tolerance of frequency	20×10^{-6}																																		
Tolerance of occupied bandwidth	20MHz or less for 20MHz system 40MHz or less for 40MHz system 80MHz or less for 80MHz system																																		
Tolerance of unwanted emission intensity	<table><tr><th colspan="2">20MHz system</th></tr><tr><th>OBW : 18MHz or less</th><th>OBW : 18 - 20 MHz</th></tr><tr><td>5,142 MHz or less : 2.5 μW/MHz</td><td>5,142 MHz or less : 2.5 μW/MHz</td></tr><tr><td>5,142 - 5,150 MHz : 15 μW/MHz</td><td>5,142 - 5,150 MHz : 15 μW/MHz</td></tr><tr><td>5,250 - 5,251 MHz : $10^{1-(f-9)}\text{mW/MHz}$</td><td>5,250.2 - 5,251 MHz : $10^{1-(8/75)(f-9.75)}\text{mW/MHz}$</td></tr><tr><td>5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW/MHz}$</td><td>5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW/MHz}$</td></tr><tr><td>5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW/MHz}$</td><td>5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW/MHz}$</td></tr><tr><td>5,266.7 MHz or more : 2.5 μW/MHz</td><td>5,266.7 MHz or more : 2.5 μW/MHz</td></tr><tr><td>f = MHz, Difference from 5240 (MHz)</td><td>f = MHz, Difference from 5240 (MHz)</td></tr></table> <table><tr><th>40MHz system</th><th>80MHz system</th></tr><tr><td>5,141.6 MHz or less : 2.5 μW/MHz</td><td>5,123.2 MHz or less : 2.5 μW/MHz</td></tr><tr><td>5,141.6 - 5,150 MHz : 15 μW/MHz</td><td>5,123.2 - 5,150 MHz : 15 μW/MHz</td></tr><tr><td>5,250 - 5,251 MHz : $10^{-(f-20)+\log(1/2)}\text{mW/MHz}$</td><td>5,250 - 5,251 MHz : $10^{-(f-40)+\log(1/4)}\text{mW/MHz}$</td></tr><tr><td>5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}\text{mW/MHz}$</td><td>5,251 - 5,290 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}\text{mW/MHz}$</td></tr><tr><td>5,270 - 5,278.4 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}\text{mW/MHz}$</td><td>5,290 - 5,296.7 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}\text{mW/MHz}$</td></tr><tr><td>5,278.4 MHz or more : 2.5 μW/MHz</td><td>5,296.7 MHz or more : 2.5 μW/MHz</td></tr><tr><td>f = MHz, Difference from 5230 (MHz)</td><td>f = MHz, Difference from 5210 (MHz)</td></tr></table>	20MHz system		OBW : 18MHz or less	OBW : 18 - 20 MHz	5,142 MHz or less : 2.5 μ W/MHz	5,142 MHz or less : 2.5 μ W/MHz	5,142 - 5,150 MHz : 15 μ W/MHz	5,142 - 5,150 MHz : 15 μ W/MHz	5,250 - 5,251 MHz : $10^{1-(f-9)}\text{mW/MHz}$	5,250.2 - 5,251 MHz : $10^{1-(8/75)(f-9.75)}\text{mW/MHz}$	5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW/MHz}$	5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW/MHz}$	5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW/MHz}$	5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW/MHz}$	5,266.7 MHz or more : 2.5 μ W/MHz	5,266.7 MHz or more : 2.5 μ W/MHz	f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)	40MHz system	80MHz system	5,141.6 MHz or less : 2.5 μ W/MHz	5,123.2 MHz or less : 2.5 μ W/MHz	5,141.6 - 5,150 MHz : 15 μ W/MHz	5,123.2 - 5,150 MHz : 15 μ W/MHz	5,250 - 5,251 MHz : $10^{-(f-20)+\log(1/2)}\text{mW/MHz}$	5,250 - 5,251 MHz : $10^{-(f-40)+\log(1/4)}\text{mW/MHz}$	5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}\text{mW/MHz}$	5,251 - 5,290 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}\text{mW/MHz}$	5,270 - 5,278.4 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}\text{mW/MHz}$	5,290 - 5,296.7 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}\text{mW/MHz}$	5,278.4 MHz or more : 2.5 μ W/MHz	5,296.7 MHz or more : 2.5 μ W/MHz	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)
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5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}\text{mW/MHz}$	5,251 - 5,290 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}\text{mW/MHz}$																																		
5,270 - 5,278.4 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}\text{mW/MHz}$	5,290 - 5,296.7 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}\text{mW/MHz}$																																		
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f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)																																		
Antenna power	Tolerance: W52:+20% to -80%																																		
Equivalent isotropically radiated power (EIRP)	W52:10mW MHz or less																																		
Adjacent Channel Power Tolerance	Out-band leakage power EIRP: See Attached Table 1, 2 and 3.																																		
Limit of secondary radiated emissions	(1) Below 1GHz : 4nW (2) 1GHz - 10GHz : 20nW (3) 10GHz or higher : 20nW																																		
Interference prevention function	Shall have the function of automatic transmission or reception of identification code.																																		
Carrier sensing function	Shall not transmit radio wave when receiving over 100mV/m																																		
Transmission burst length	8ms or less																																		
Note	DS: Direct spreading OFDM : Orthogonal frequency division multiplexing																																		

Test Methods: Test method temporarily determined by TACOYAKI

6.2 E.U.T. test conditions

Power supply:

The RF unit is supplied DC3.3V. The fluctuation of input voltage to the circuit of RF unit of test equipment is under $\pm 1\%$, when input voltage from DC12V to the test equipment is fluctuated by $\pm 10\%$, So, all measurement has been conducted by only rated voltage.

The measurement result of the voltage fluctuation at RF circuit		
	EUT Voltage for operation	RF Circuitry Voltage
High voltage	110V	3.3V
Normal voltage	100V	3.3V
Low voltage	90V	3.3V

Temperature:

5 -35.0 °C

Humidity:

45-85 % RH

Atmospheric Pressure:

1000 -1010 mbar

Test frequencies:

If the EUT can be set to 3 or more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.

For 5180~5240MHz:

For 802.11a/n/ac/ax Operation in the 5150MHz ~5350 MHz band			
Channel	Frequency	Channel	Frequency
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz

Channel	Frequency(MHz)
The Lowest channel	5180
The middle channel	5200
The Highest channel	5240

For 5190~5230MHz:

For 802.11n/ac/ax Operation in the 5150MHz ~5350 MHz band			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz

Channel	Frequency(MHz)
The Lowest channel	5190
The Highest channel	5230

6.3 Test Environment

Operating Environment:	
Temperature:	26 °C
Humidity:	49 % RH
Atmospheric Pressure:	1005 mbar

6.4 Antenna Requirement

Standard requirement

Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.

EUT Antenna



The EUT with External antenna, the max peak gain of the antenna is 2.72dBi.

Note: An antenna connector is available, all relevant tests will be carried out conducted.

6.5 Interference prevention function

The device consists of the external antenna and 5 GHz IC; Component IC CPU also can use the protocol function to protect interference come from outside.

(MAC: 56:1C:6E:3D:B5:05)

Test result: The unit does meet the requirements (Good).

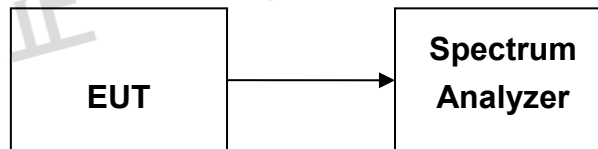
6.6 Frequency Error

Test Requirement: Item 19-3 of Article 2-1

Tolerance of frequency: $\pm 20 \times 10^{-6}$

Test Status: Test the EUT in transmitting mode without modulation.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread/Hopping OFF, CW Tx

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 1MHz

RBW 10 kHz (Modulation OFF),

VBW 10 kHz (Modulation OFF),

Sweep Time Auto

Detector mode Positive peak

Indication mode Max hold

Test Data:

WIFI5:

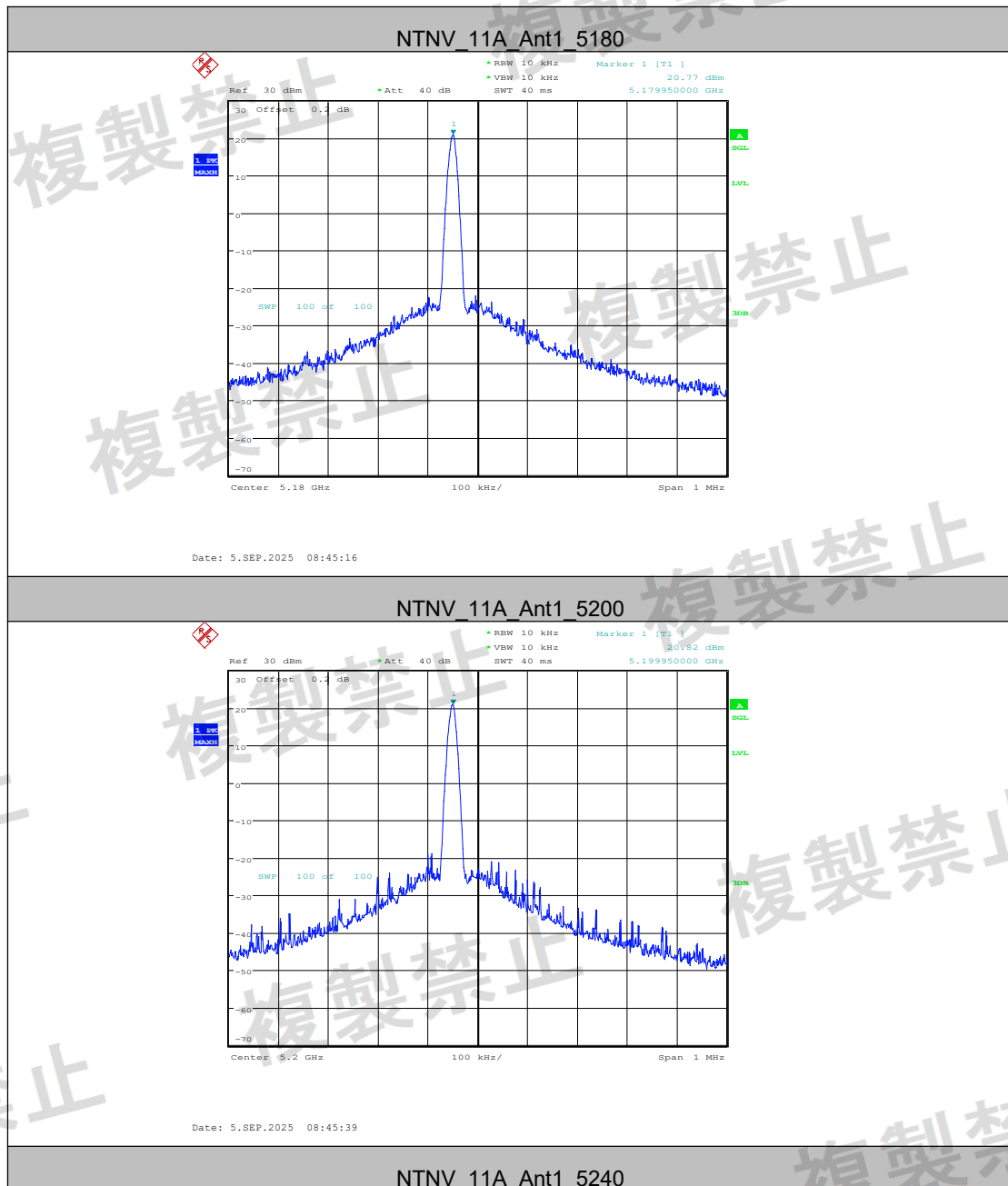
Test Condition	Test Mode	Antenna	Freq(M Hz)	Result [ppm]	Limit [ppm]	Verdict
NTNV	11A	Ant1	5180	-9.65251	±20	PASS
			5200	-9.61539	±20	PASS
			5240	-9.92366	±20	PASS
	11N20SI SO	Ant1	5180	-10.03861	±20	PASS
			5200	-10.00000	±20	PASS
			5240	-10.11450	±20	PASS
	11N40SI SO	Ant1	5190	-10.21195	±20	PASS
			5230	-10.32505	±20	PASS
	11AC20S ISO	Ant1	5180	-10.42471	±20	PASS
			5200	-10.57692	±20	PASS
			5240	-10.49618	±20	PASS
	11AC40S ISO	Ant1	5190	-10.59730	±20	PASS
			5230	-10.51625	±20	PASS

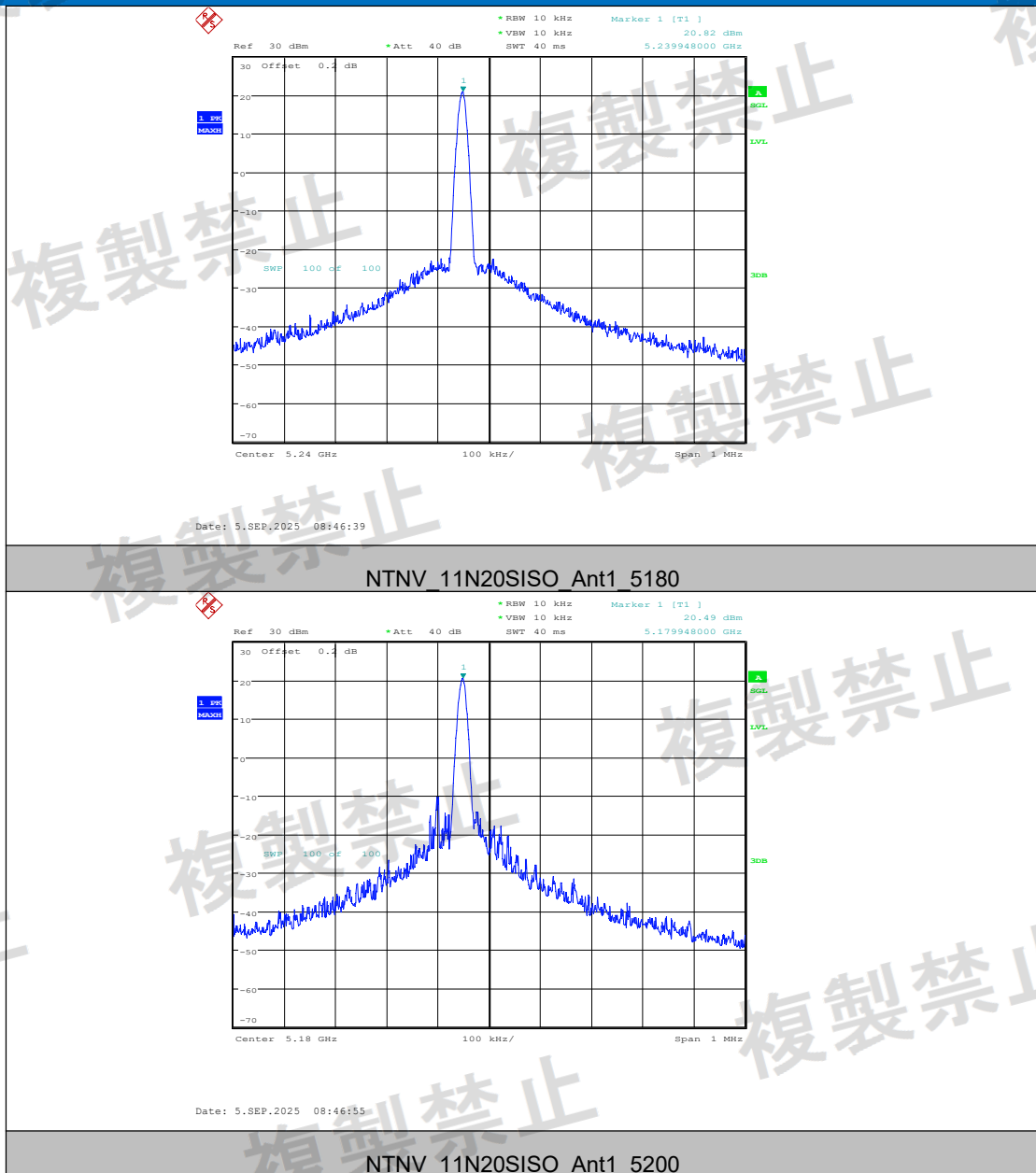
WIFI6:

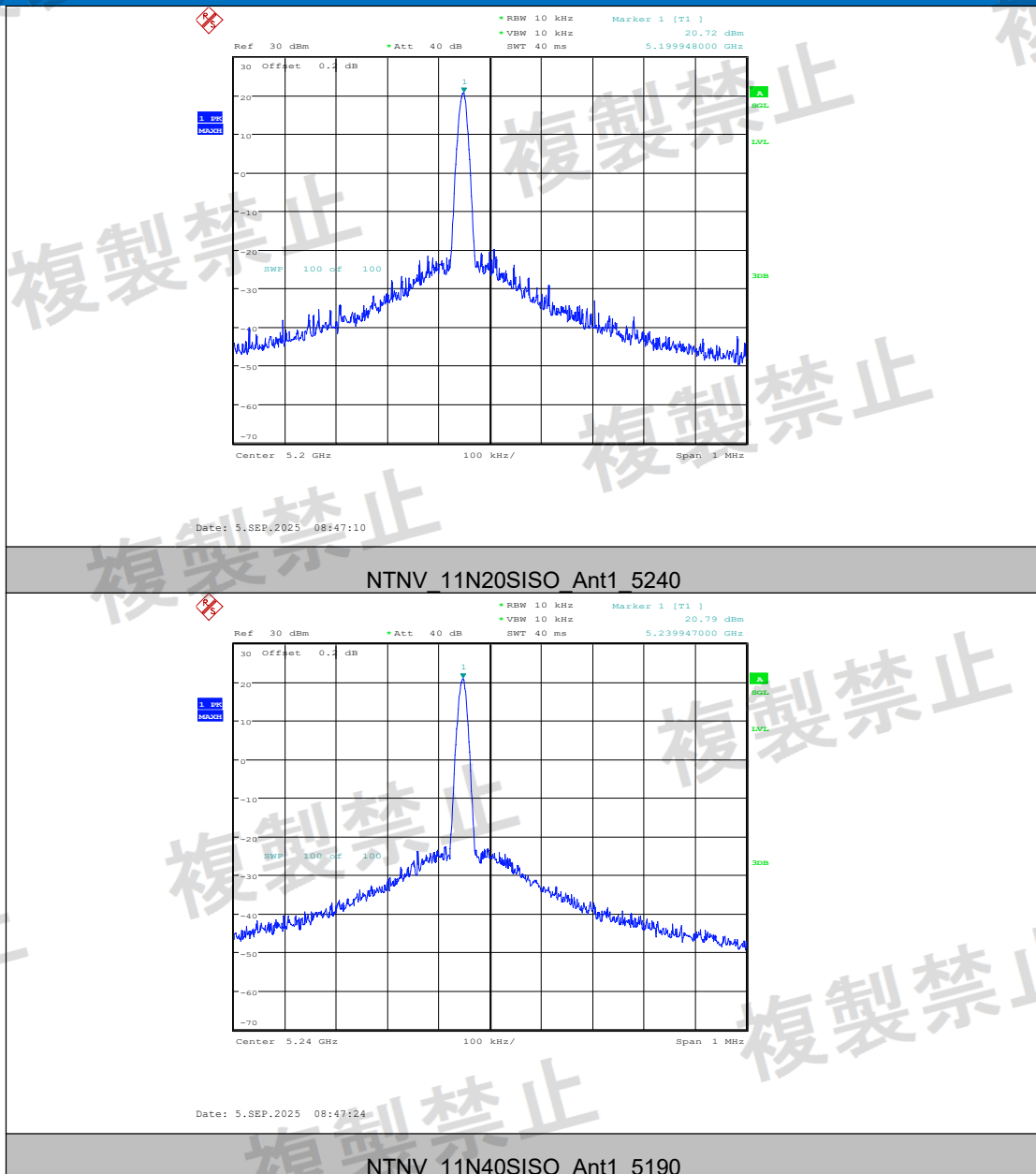
TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	11AX20SISO	Ant1	5180	-10.61776	±20	PASS
			5200	-10.57692	±20	PASS
			5240	-10.68702	±20	PASS
	11AX40SISO	Ant1	5190	-10.78998	±20	PASS
			5230	-10.70746	±20	PASS

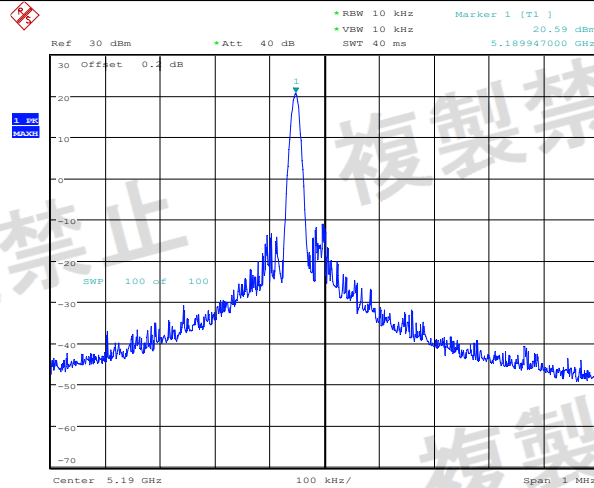
Note: The nominal frequency shall be confirmed by the applicant and test lab.

Test plot as follows:

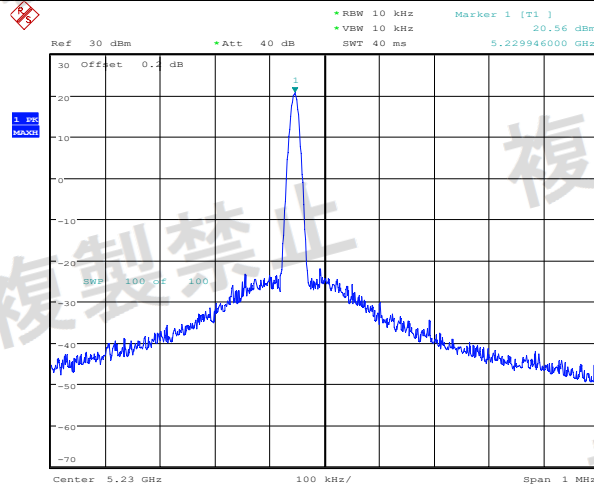




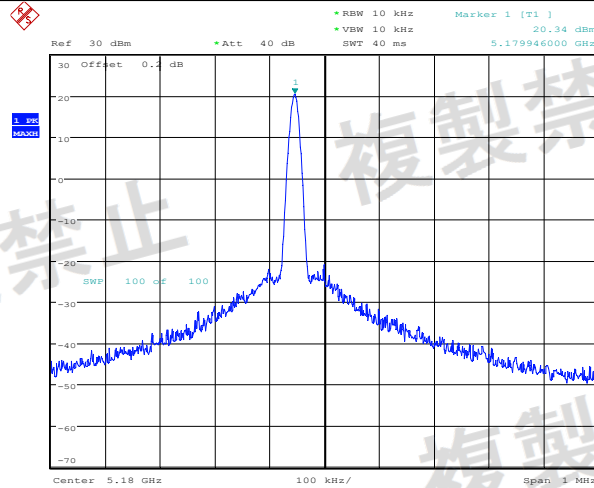




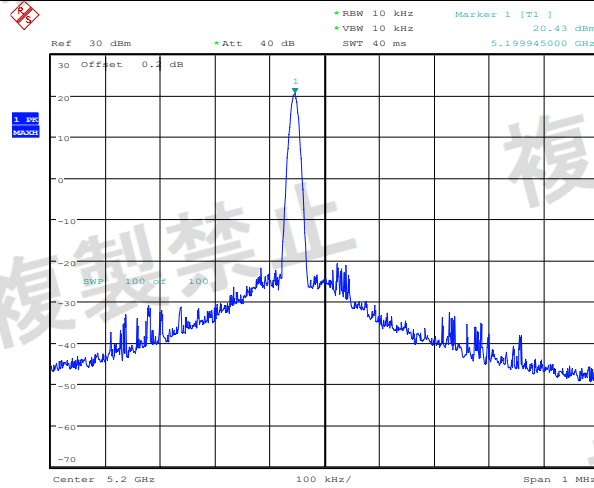
NTNV_11N40SISO Ant1 5230



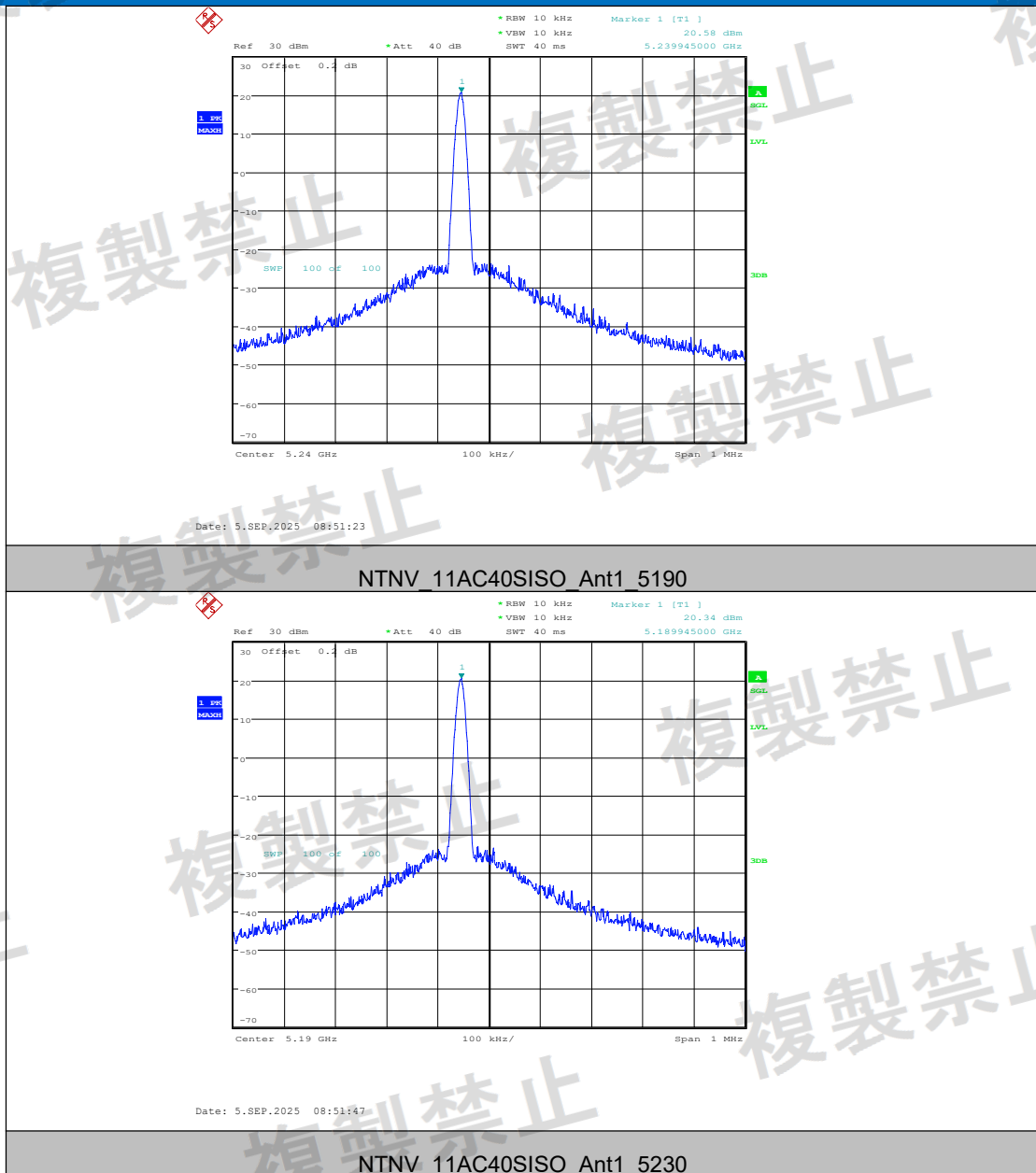
NTNV_11AC20SISO Ant1 5180

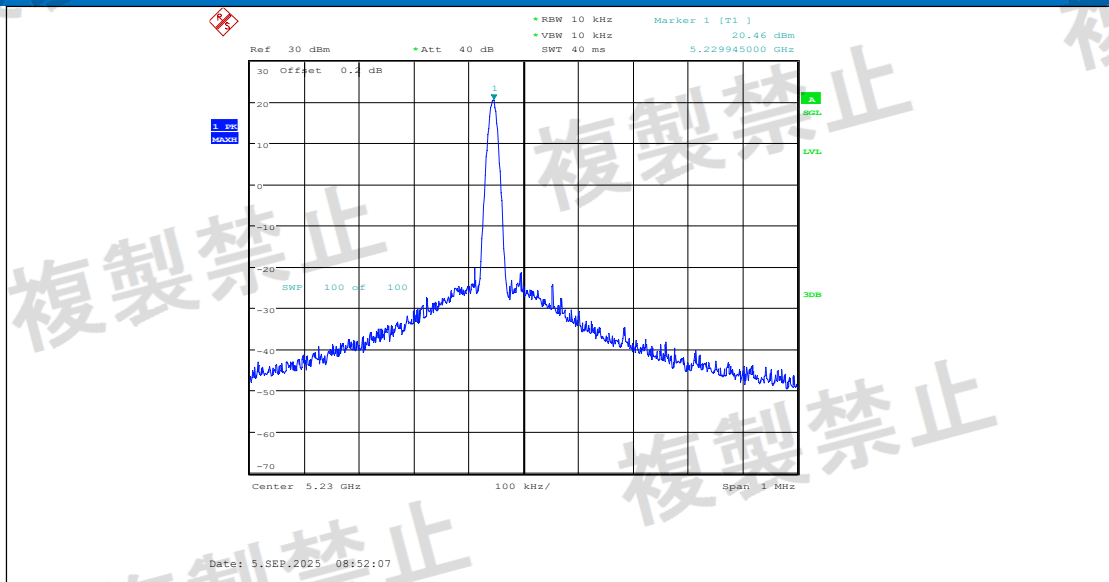


NTNV_11AC20SISO Ant1 5200

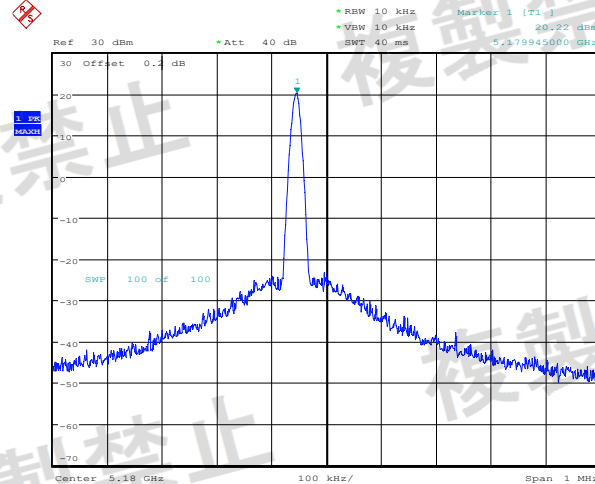


NTNV_11AC20SISO Ant1 5240



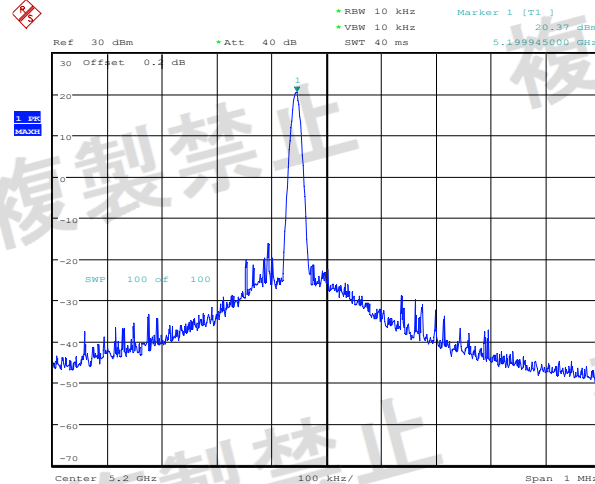


NTNV_11AX20SISO_Ant1_5180_26Tone_RUFULL



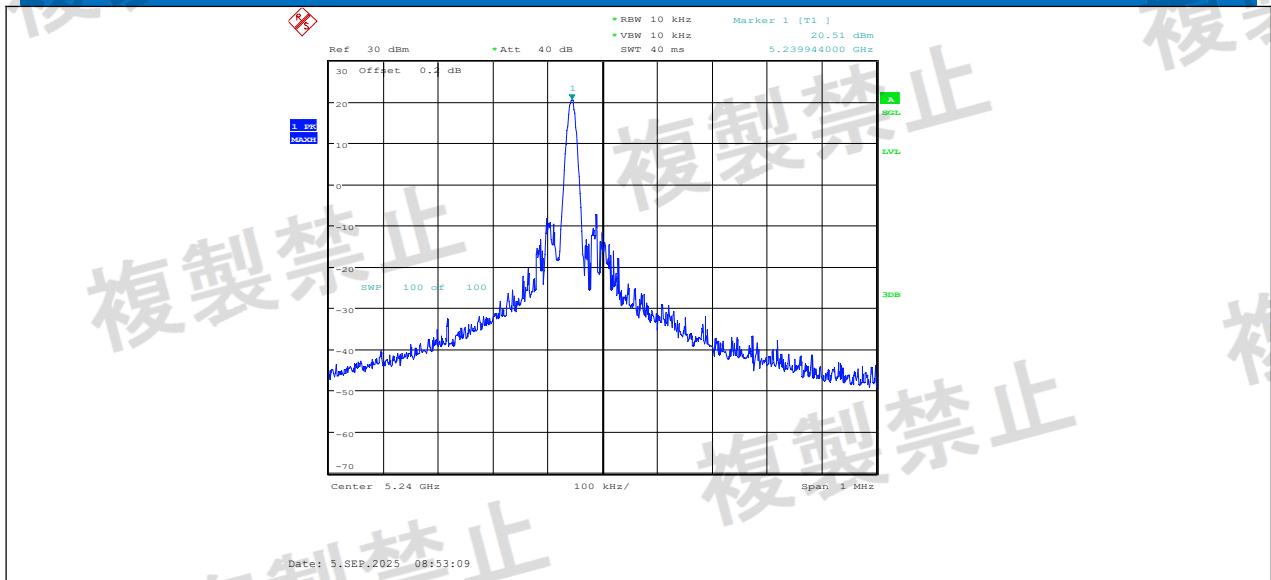
Date: 5.SEP.2025 08:52:38

NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL

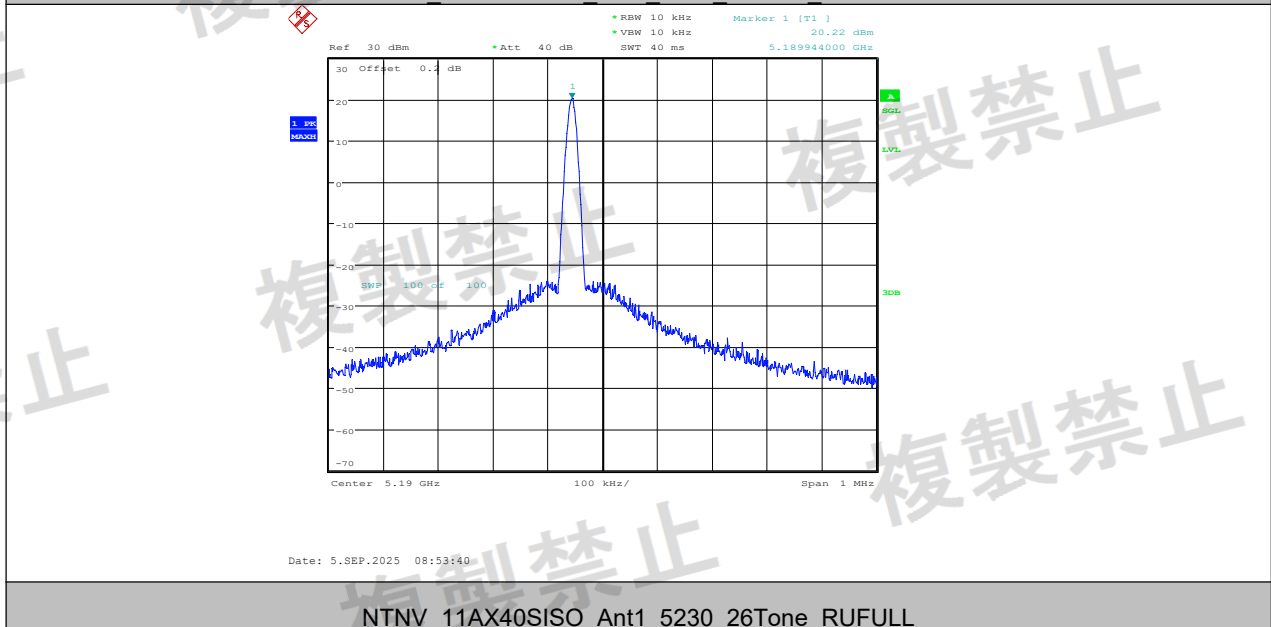


Date: 5.SEP.2025 08:52:54

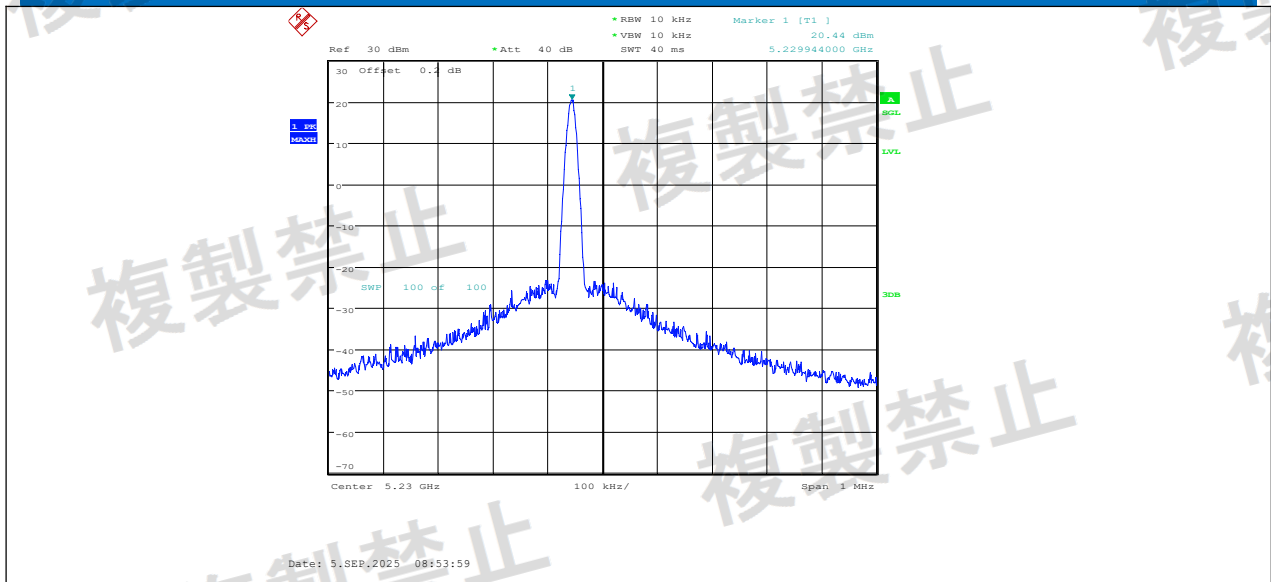
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL



NTNV 11AX40SISO_Ant1_5190_26Tone_RUFULL



NTNV 11AX40SISO_Ant1_5230_26Tone_RUFULL



6.7 Occupied Bandwidth (99%)

Test Requirement: Item 19-3 of Article 2-1

20MHz or less for 20MHz system

40MHz or less for 40MHz system

80MHz or less for 80MHz system

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 40 MHz

RBW Within 3% of the technical standard

VBW Same as RBW

Sweep Time Auto

detector mode Positive peak

Indication mode Maxhold

OBW 99%

Test result:

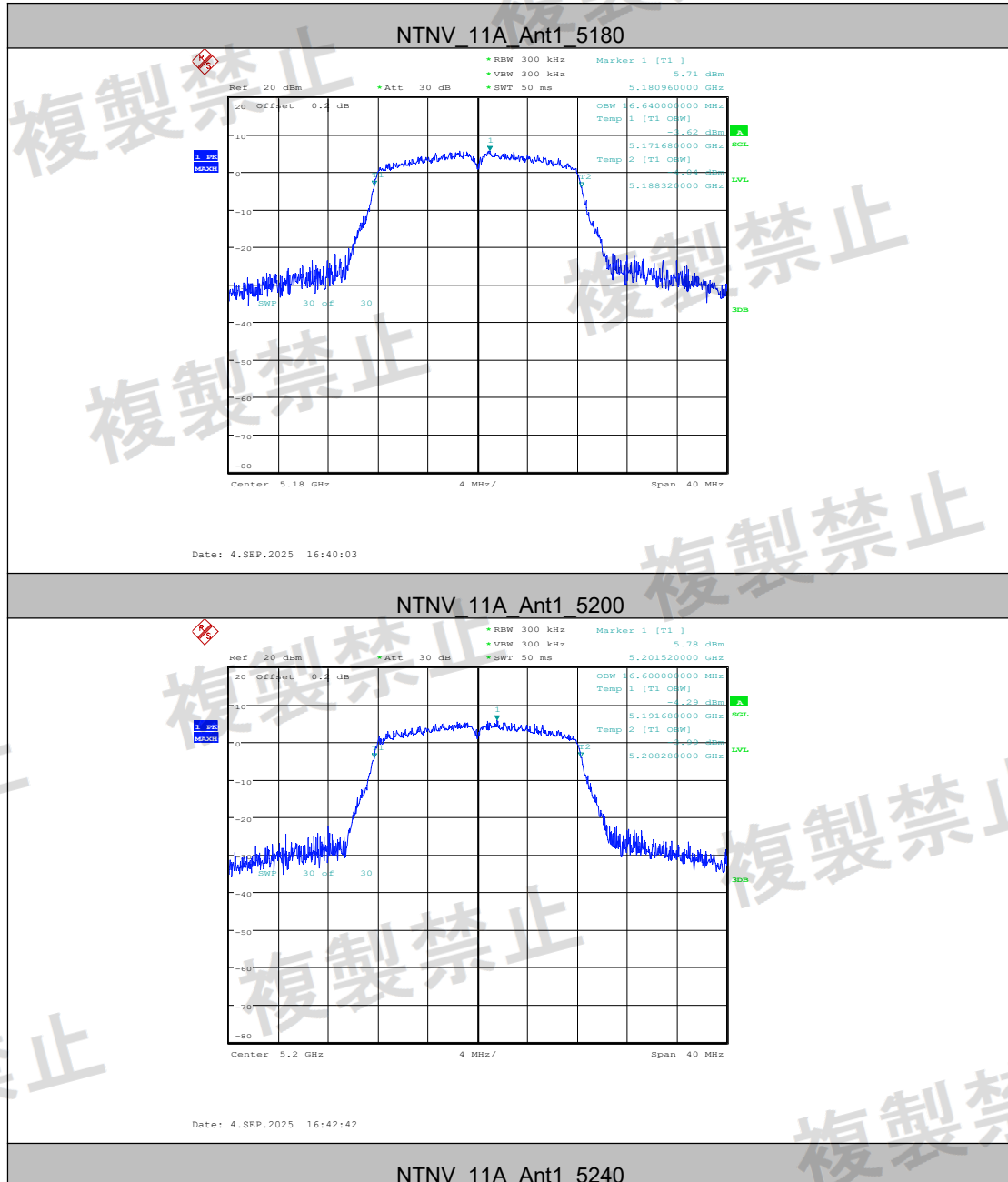
WIFI5:

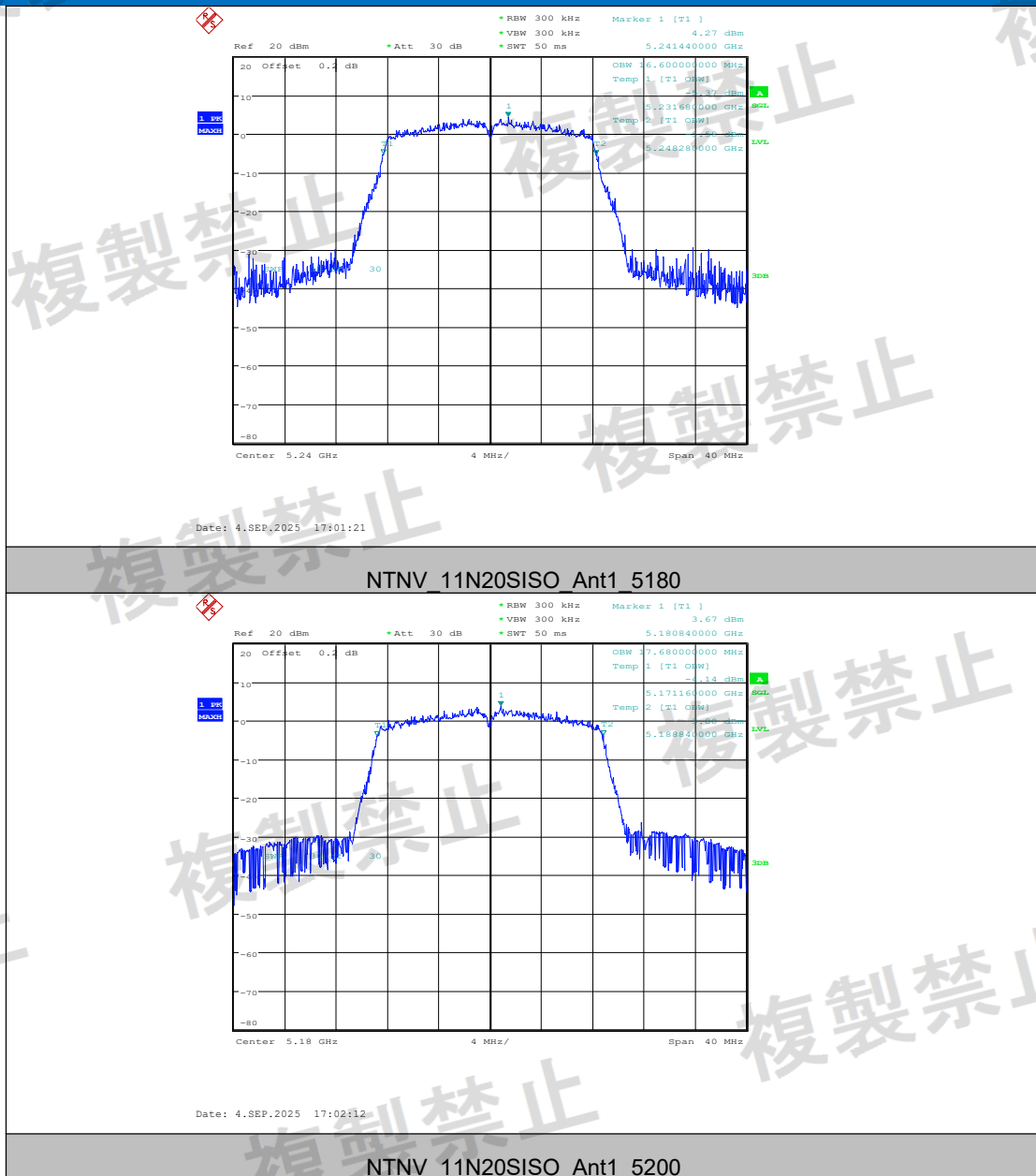
TestCondition n	TestMod e	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11A	5180	16.640	≤20	PASS
		5200	16.600	≤20	PASS
		5240	16.600	≤20	PASS
	11N20SI SO	5180	17.680	≤20	PASS
		5200	17.680	≤20	PASS
		5240	17.720	≤20	PASS
	11N40SI SO	5190	35.920	≤40	PASS
		5230	35.920	≤40	PASS
	11AC20S ISO	5180	17.680	≤20	PASS
		5200	17.680	≤20	PASS
		5240	17.680	≤20	PASS
	11AC40S ISO	5190	35.920	≤40	PASS
		5230	36.000	≤40	PASS

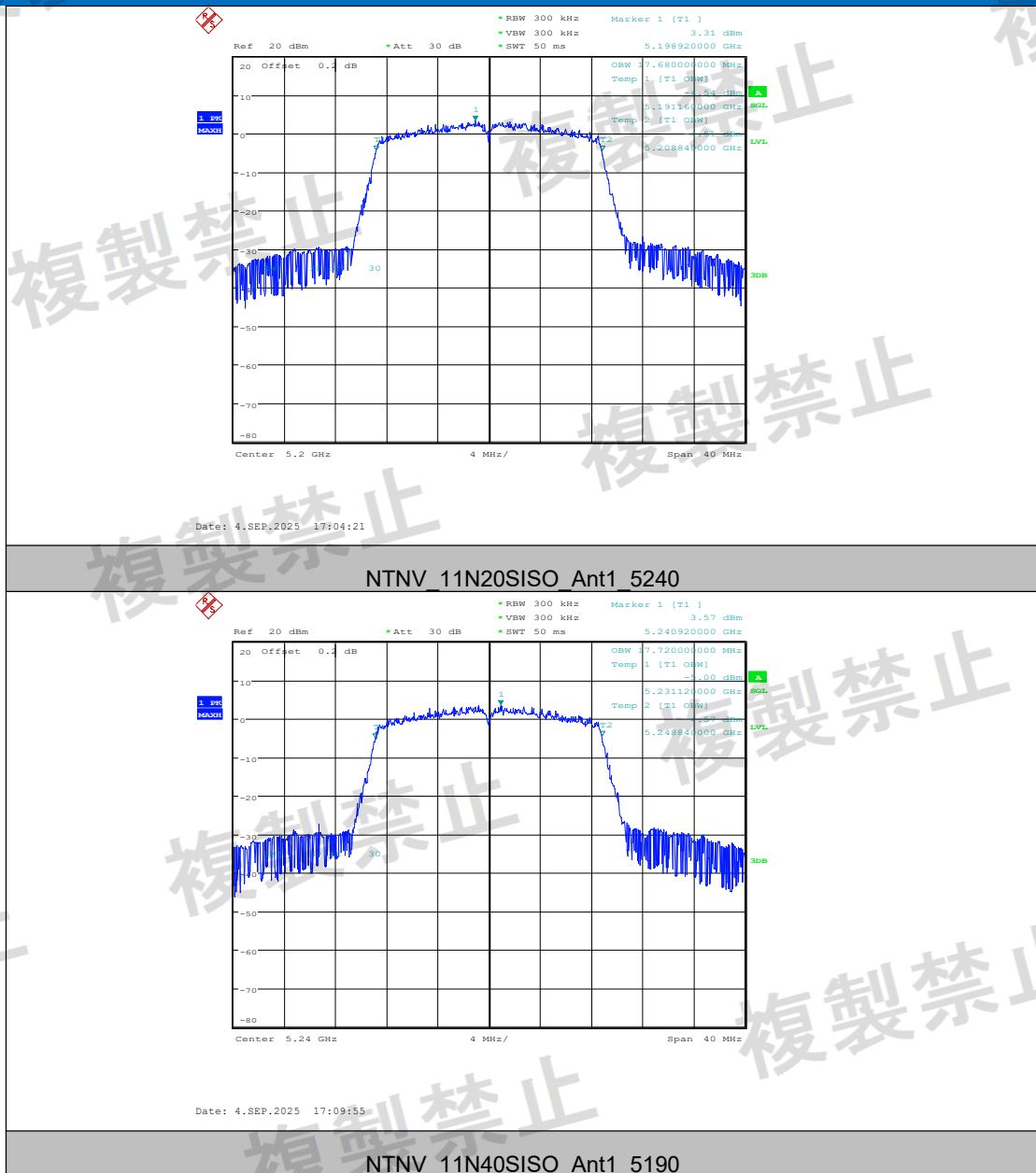
WIFI6:

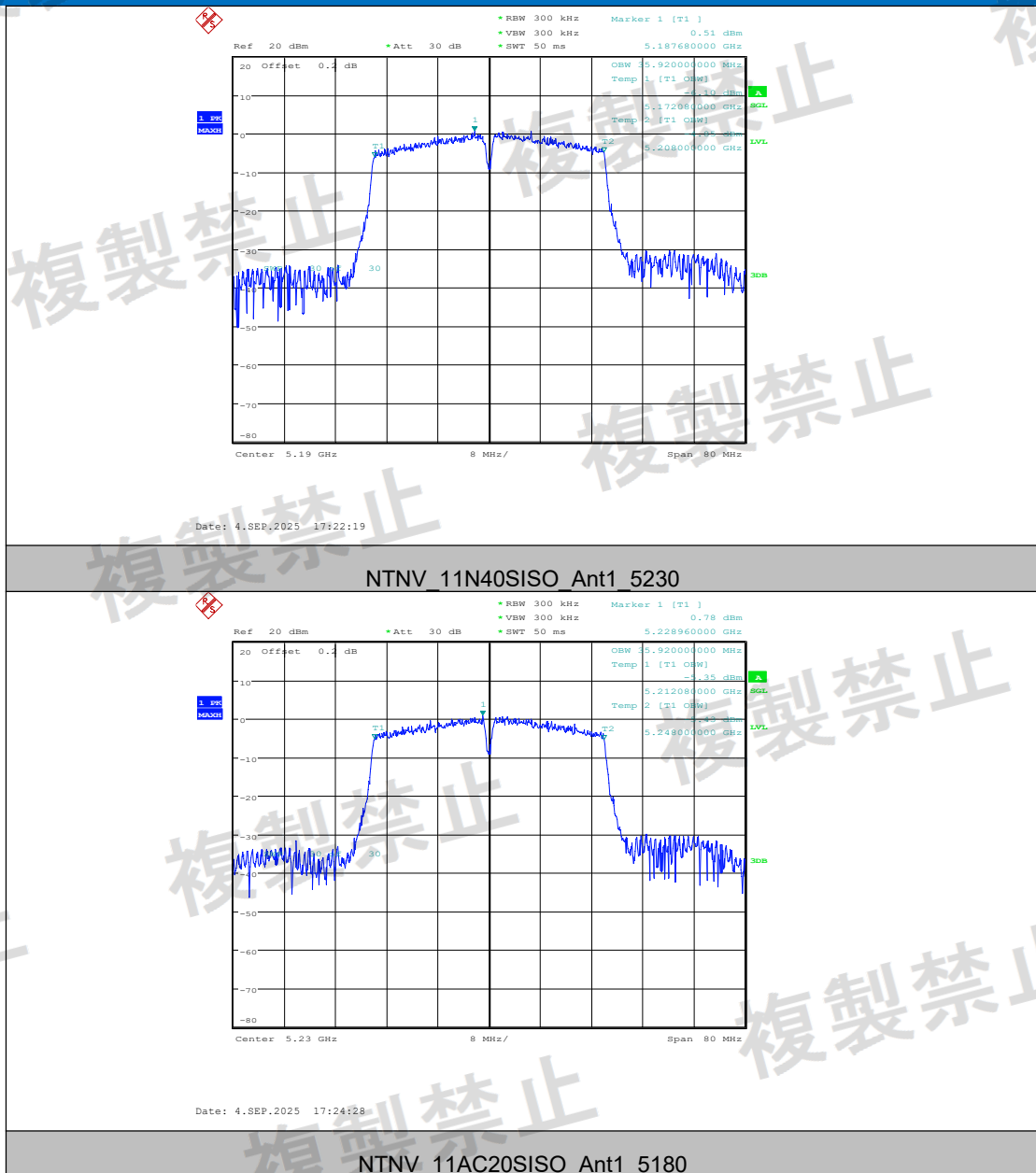
Test Condition	Test Mode	Freq(MHz)	Channel	Result [MHz]	Limit [MHz]	Verdict
NTNV	11AX20SISO	Ant1	5180	17.680	≤20	PASS
			5200	17.680	≤20	PASS
			5240	17.640	≤20	PASS
	11AX40SISO	Ant1	5190	35.920	≤40	PASS
			5230	35.840	≤40	PASS

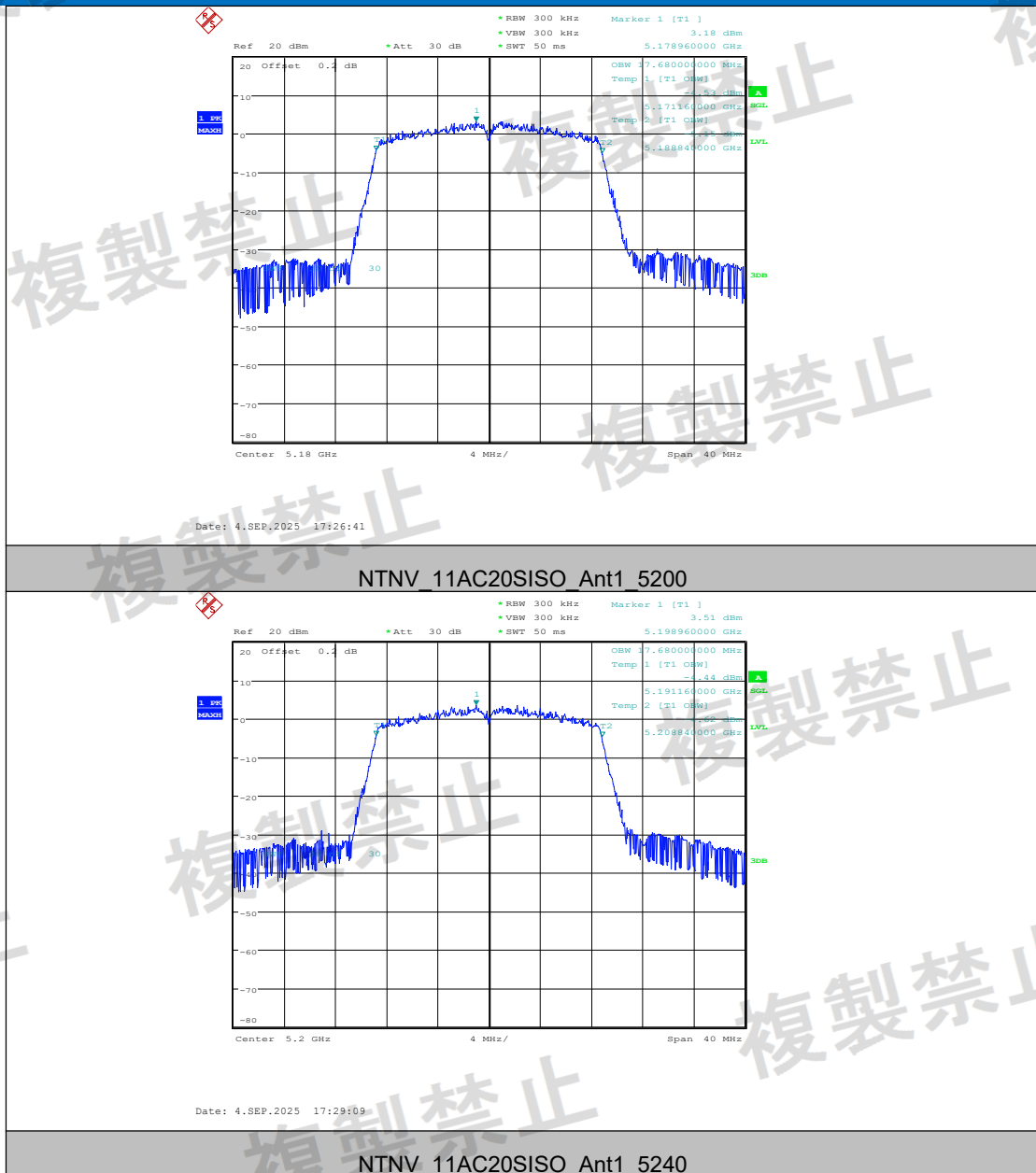
Test plot as follows:

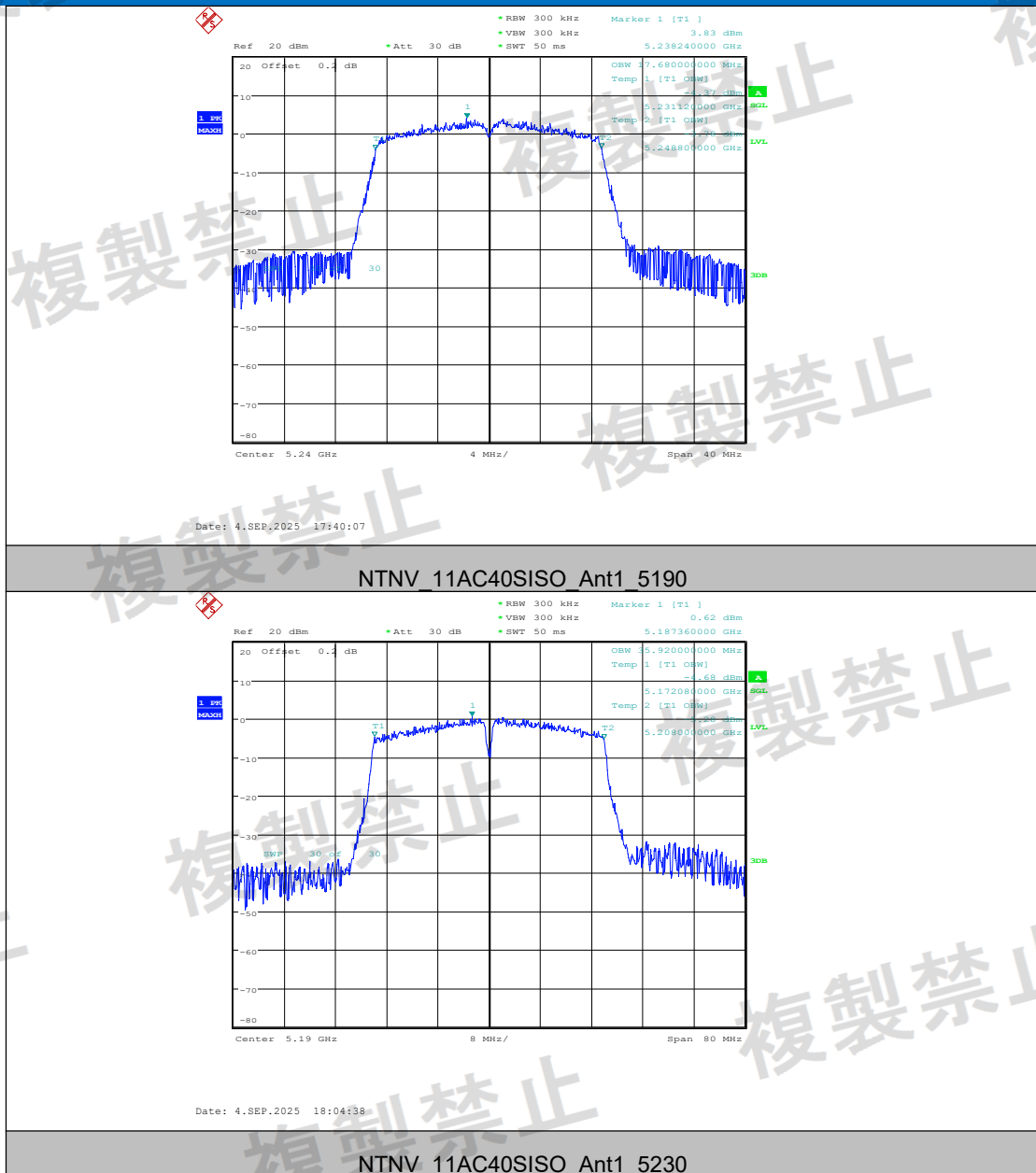


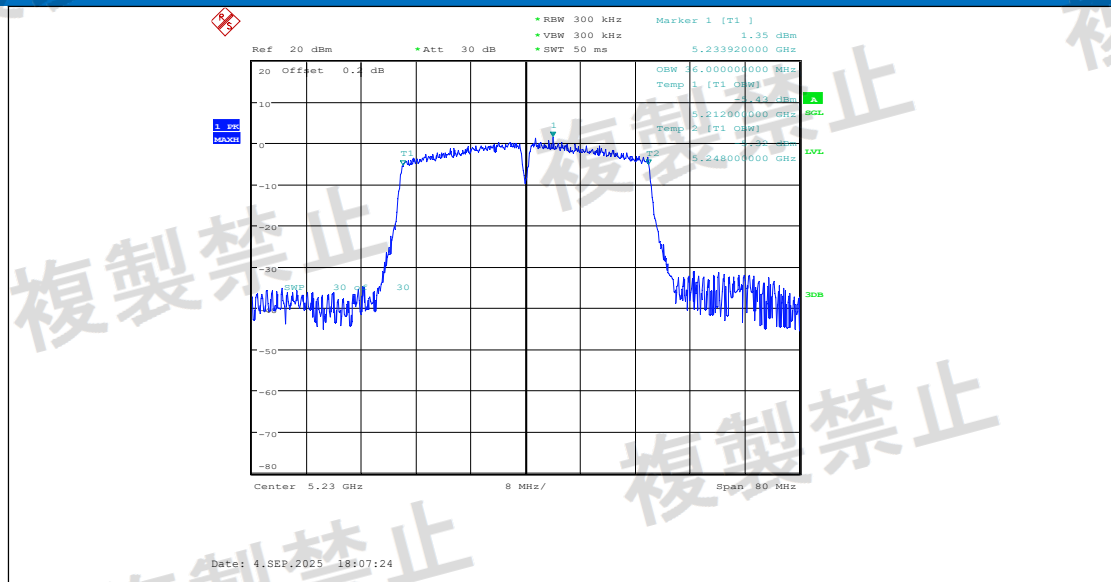




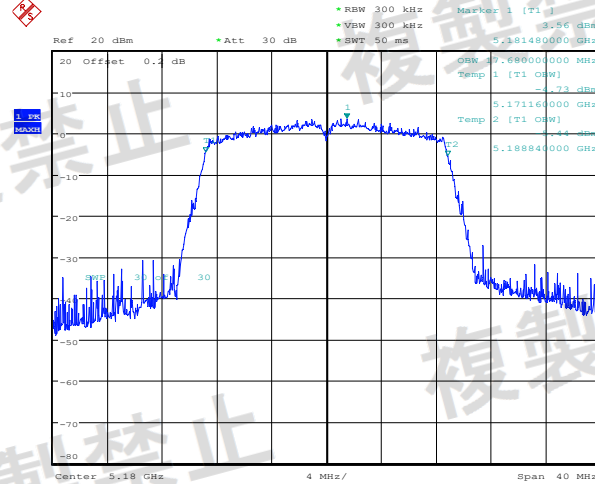






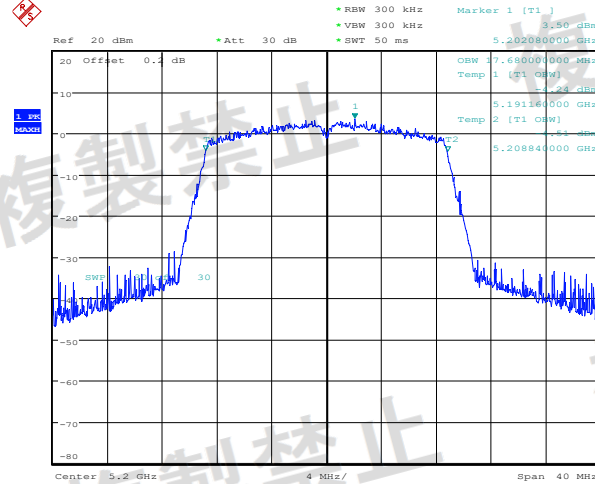


NTNV_11AX20SISO_Ant1_5180_26Tone_RUFULL



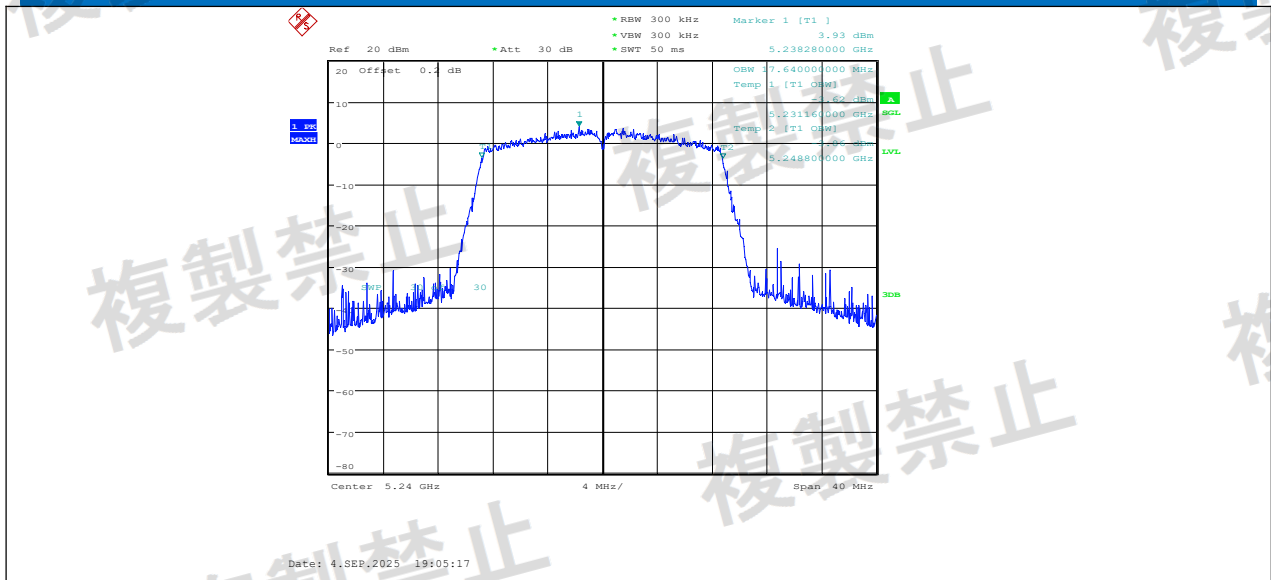
Date: 4.SEP.2025 18:09:57

NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL

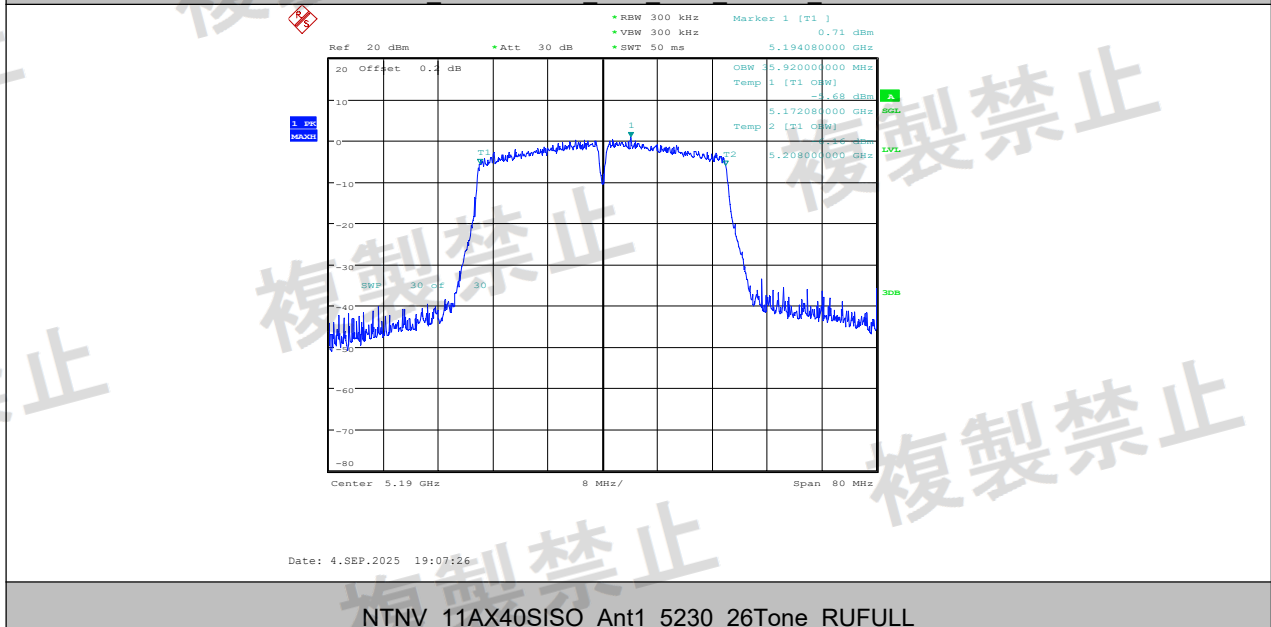


Date: 4.SEP.2025 19:02:52

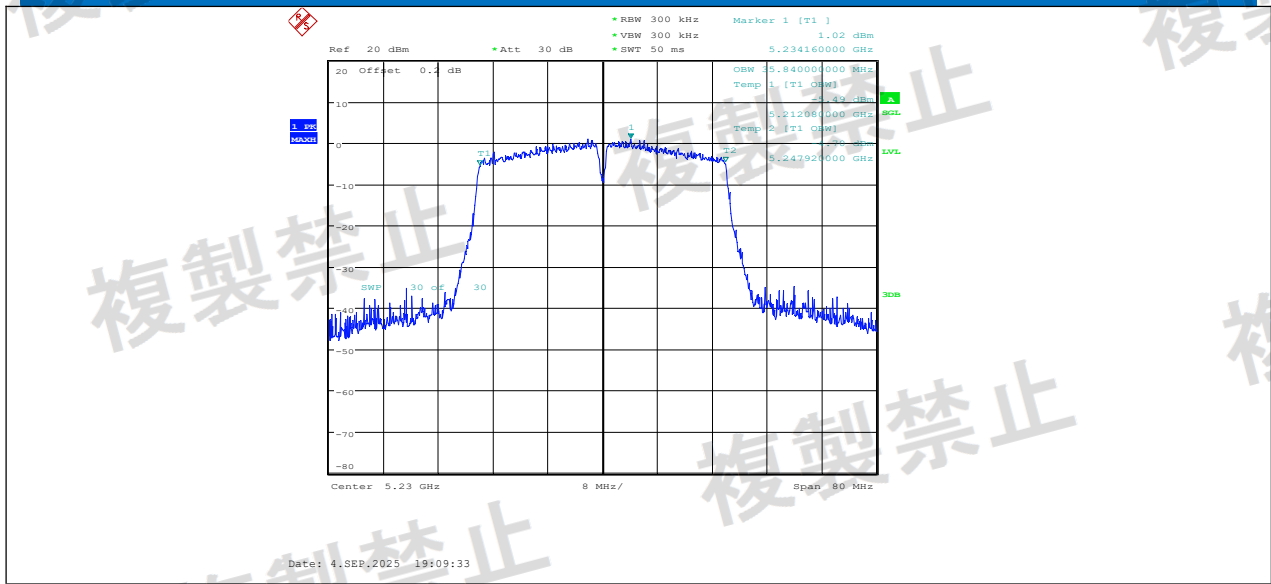
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL



NTNV 11AX40SISO_Ant1_5190_26Tone_RUFULL



NTNV 11AX40SISO_Ant1_5230_26Tone_RUFULL



6.8 Antenna Power

Test Requirement: Item 19-3 of Article 2-1

(1) OFDM, DS :

OBW $\leq$ 20MHz: 10mW / MHz or less

Tolerance :

W52: +20% to -80%

W56: $\pm$ 50%

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

[Setting 1] - Search for peak power frequency

Frequency: Test Frequency

Span Approximately twice the occupied bandwidth

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

[Setting 2] - Measurement of average antenna power for OFDM, DSSS

Frequency: Frequency of peak power found using [Setting 1]

Span: 0 Hz

RBW: 1MHz

Detector mode: Sample

Sweep: Minimum time required to make an accurate measurement.

For burst type (intermittent) transmission, sweep time shall be greater than one burst interval

Sweep data points: 1001 or greater

Test Data:

WIFI5:

Antenna Power							
Test Condition	Test Mode	Antenna	Freq(M Hz)	Result(dBm/ MHz)	Result(mW/M Hz)	Limit(mW/ MHz)	Verdict
NTNV	11A	Ant1	5180	7.04	5.058	≤10	PASS
			5200	6.97	4.977	≤10	PASS
			5240	7.66	5.834	≤10	PASS
	11N20SI SO	Ant1	5180	4.11	2.576	≤10	PASS
			5200	4.74	2.979	≤10	PASS
			5240	4.16	2.606	≤10	PASS
	11N40SI SO	Ant1	5190	1.64	1.459	≤5	PASS
			5230	1.96	1.570	≤5	PASS
	11AC20S ISO	Ant1	5180	4.51	2.825	≤10	PASS
			5200	4.52	2.831	≤10	PASS
			5240	4.63	2.904	≤10	PASS
	11AC40S ISO	Ant1	5190	1.73	1.489	≤5	PASS
			5230	1.83	1.524	≤5	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power (mW/MHz)	RatedPower (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	11A	Ant1	5180	5.058	4.9	3.22	-80 to +20	PASS
			5200	4.977	4.9	1.57	-80 to +20	PASS
			5240	5.834	4.9	19.06	-80 to +20	PASS
	11N20SI SO	Ant1	5180	2.576	4.9	-47.43	-80 to +20	PASS
			5200	2.979	4.9	-39.20	-80 to +20	PASS
			5240	2.606	4.9	-46.82	-80 to +20	PASS

	11N40SI SO	Ant1	5190	1.459	4.9	-70.22	-80 to +20	PASS
			5230	1.570	4.9	-67.96	-80 to +20	PASS
	11AC20 SISO	Ant1	5180	2.825	4.9	-42.35	-80 to +20	PASS
			5200	2.831	4.9	-42.22	-80 to +20	PASS
			5240	2.904	4.9	-40.73	-80 to +20	PASS
	11AC40 SISO	Ant1	5190	1.489	4.9	-69.61	-80 to +20	PASS
			5230	1.524	4.9	-68.90	-80 to +20	PASS

EIRP							
Test Condition	Test Mode	Antenna	Freq(M Hz)	Result(mW/ MHz)	EIRP(mW/M Hz)	Limit(mW/ MHz)	Verdict
NTNV	11A	Ant1	5180	5.058	7.145	≤10	PASS
			5200	4.977	7.031	≤10	PASS
			5240	5.834	8.241	≤10	PASS
	11N20SI SO	Ant1	5180	2.576	3.639	≤10	PASS
			5200	2.979	4.207	≤10	PASS
			5240	2.606	3.681	≤10	PASS
	11N40SI SO	Ant1	5190	1.459	2.061	≤5	PASS
			5230	1.570	2.218	≤5	PASS
	11AC20S ISO	Ant1	5180	2.825	3.990	≤10	PASS
			5200	2.831	3.999	≤10	PASS
			5240	2.904	4.102	≤10	PASS
	11AC40S ISO	Ant1	5190	1.489	2.104	≤5	PASS
			5230	1.524	2.153	≤5	PASS

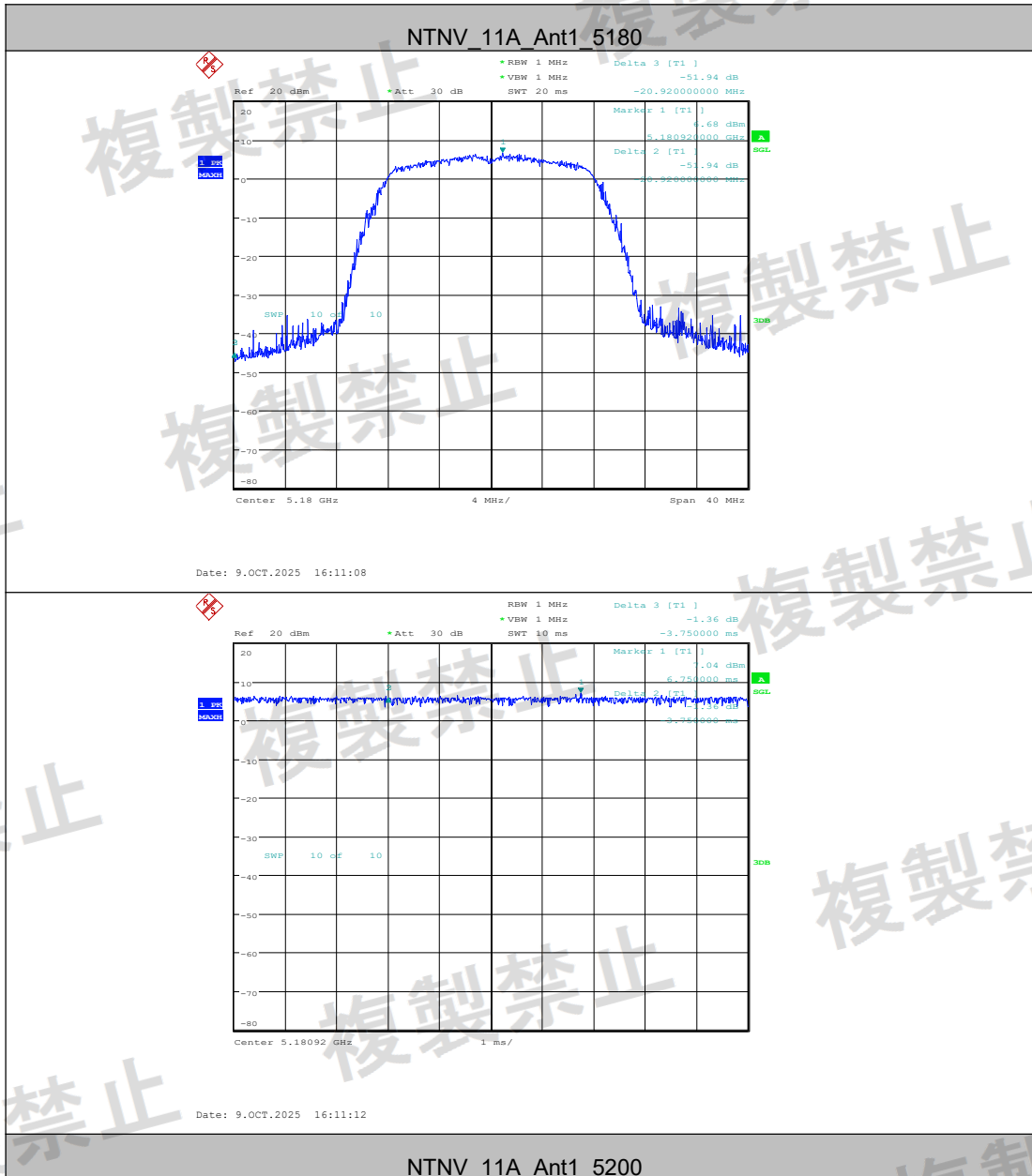
WIFI6:

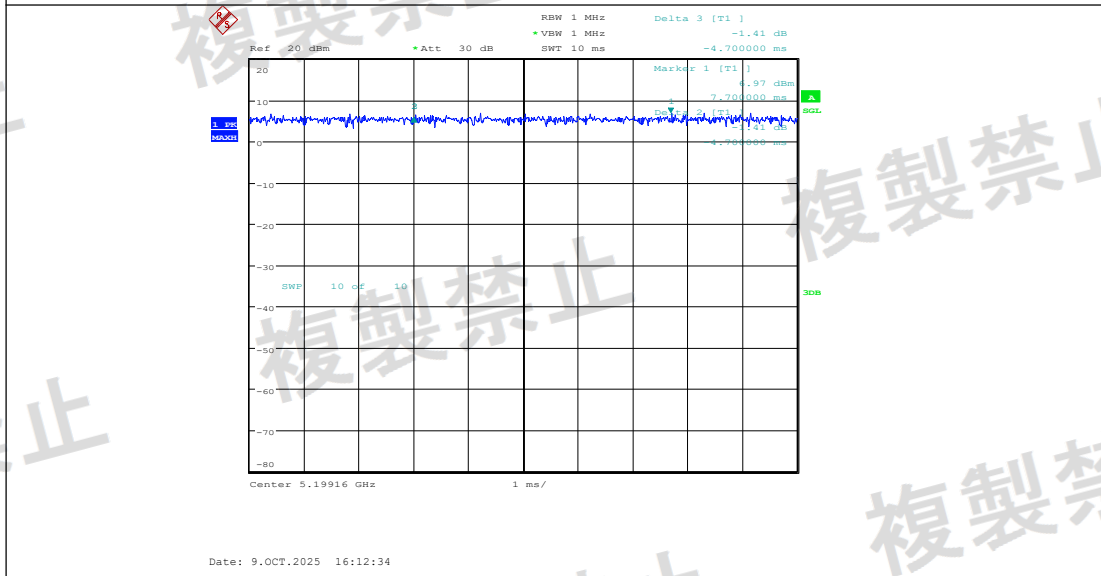
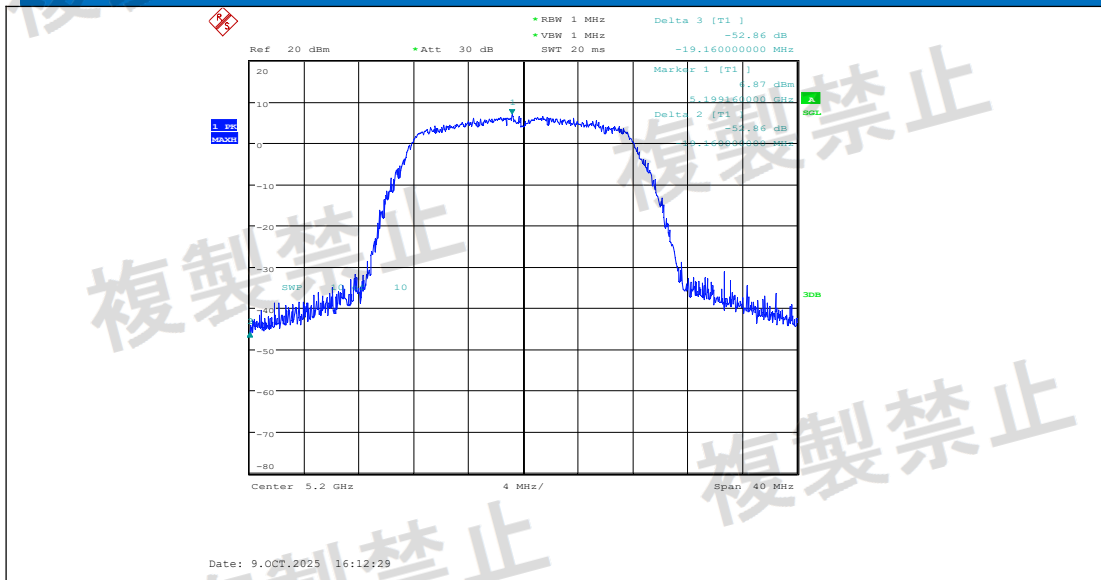
Antenna Power							
Test Condition	Test Mode	Antenna	Channel	Result(dBm/MHz)	Result(mW/MHz)	Limit(mW/MHz)	Verdict
NTNV	11AX20SISO	Ant1	5180	6.3	4.27	≤10	PASS
			5200	5.48	3.53	≤10	PASS
			5240	6.75	4.73	≤10	PASS
	11AX40SISO	Ant1	5190	2.52	1.79	≤5	PASS
			5230	2.75	1.88	≤5	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Channel	Power (mW/MHz)	Rated Power (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	11AX20SISO	Ant1	5180	4.27	4.9	-12.86	-80 to +20	PASS
			5200	3.53	4.9	-27.96	-80 to +20	PASS
			5240	4.73	4.9	-3.47	-80 to +20	PASS
	11AX40SISO	Ant1	5190	1.79	4.9	-63.47	-80 to +20	PASS
			5230	1.88	4.9	-61.63	-80 to +20	PASS

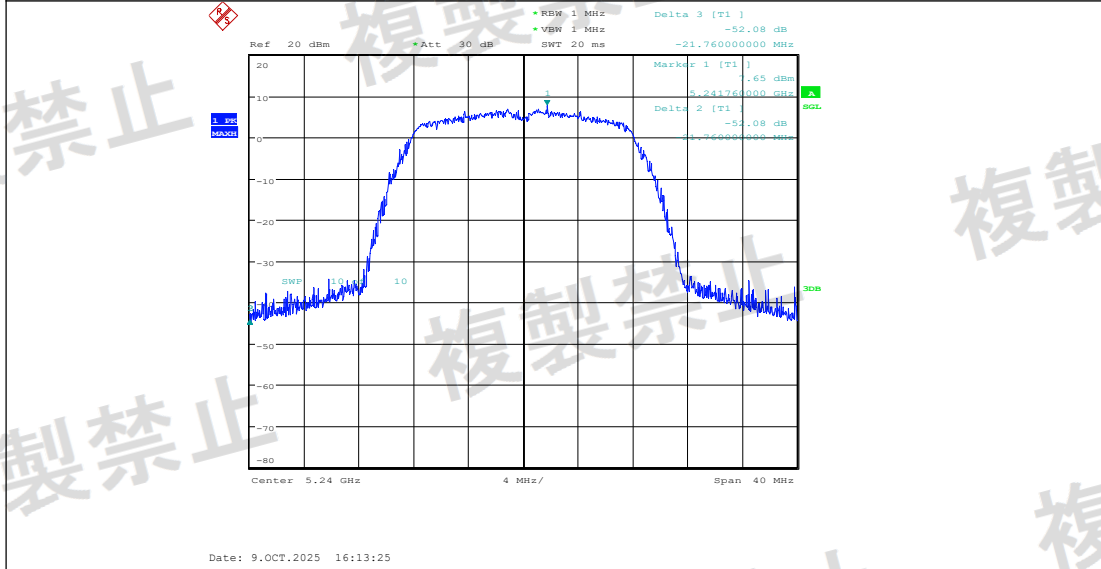
EIRP						
Test Condition	Test Mode	Antenna	Freq(MHz)	Result (mW/MHz)	Result (mW/MHz)	Limit (mW/MHz)
NTNV	11AX20SISO	Ant1	5180	4.27	6.026	≤10
			5200	3.53	4.989	≤10
			5240	4.73	6.683	≤10
	11AX40SISO	Ant1	5190	1.79	2.523	≤5
			5230	1.88	2.661	≤5

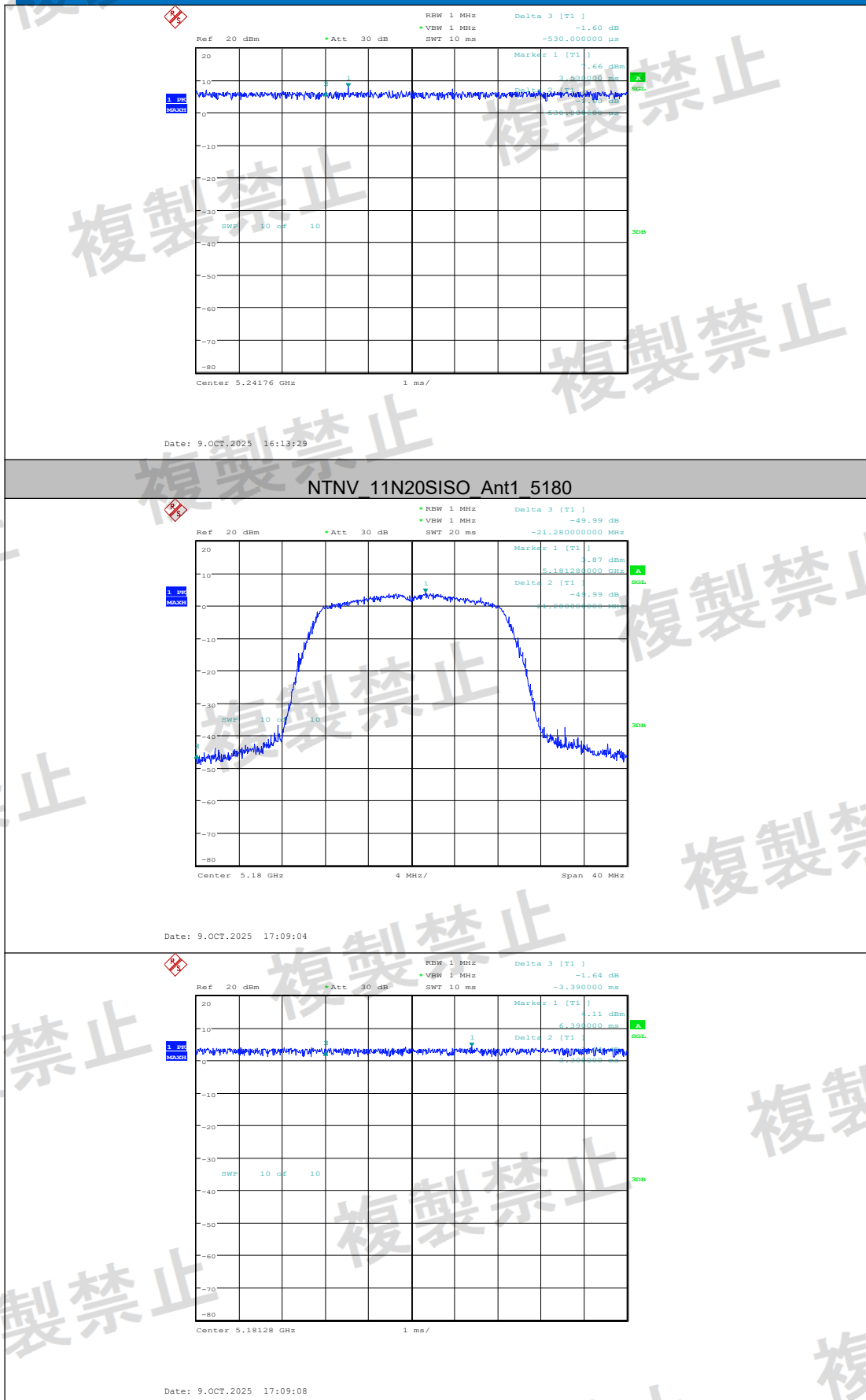
Test plot as follows:

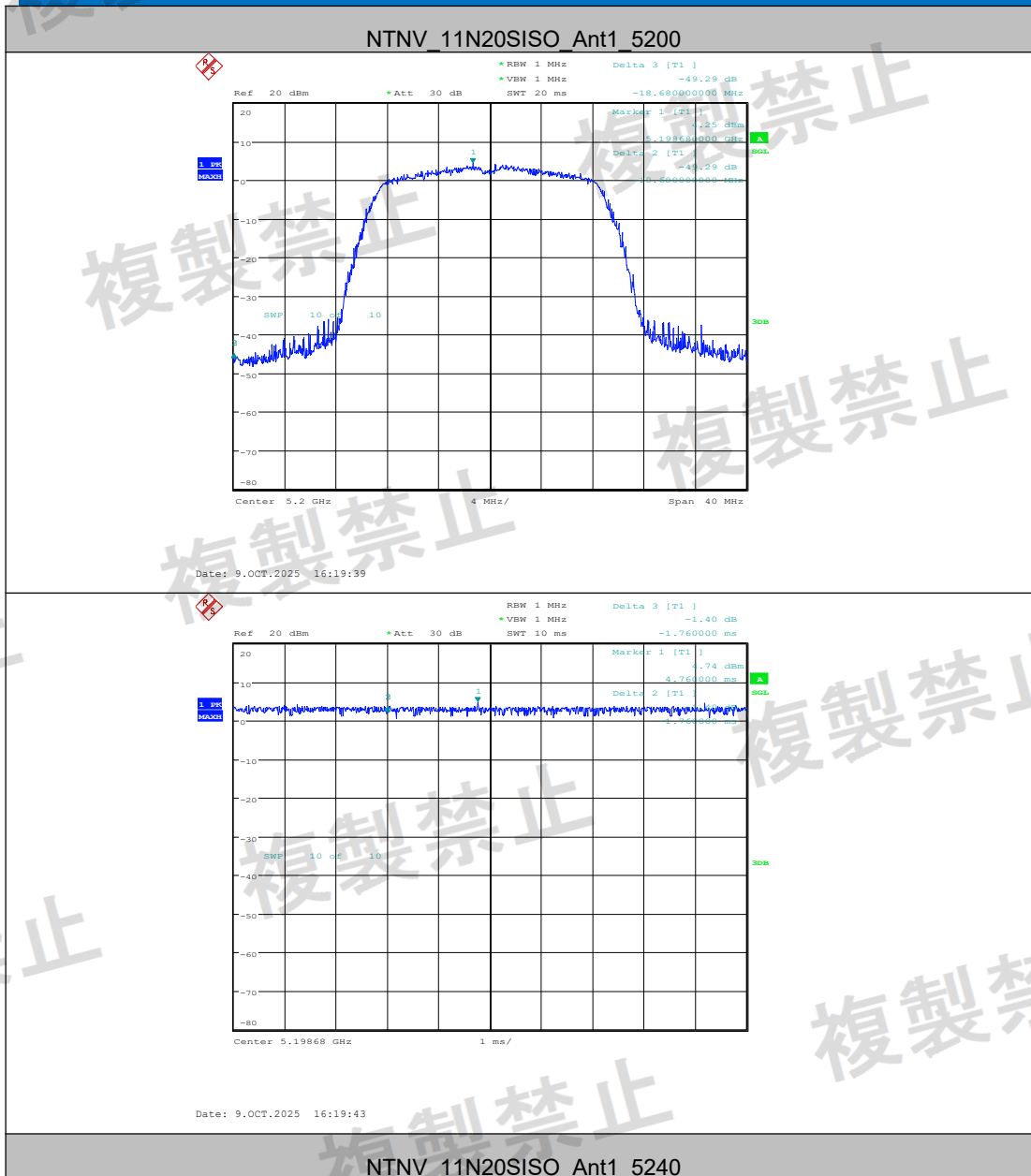


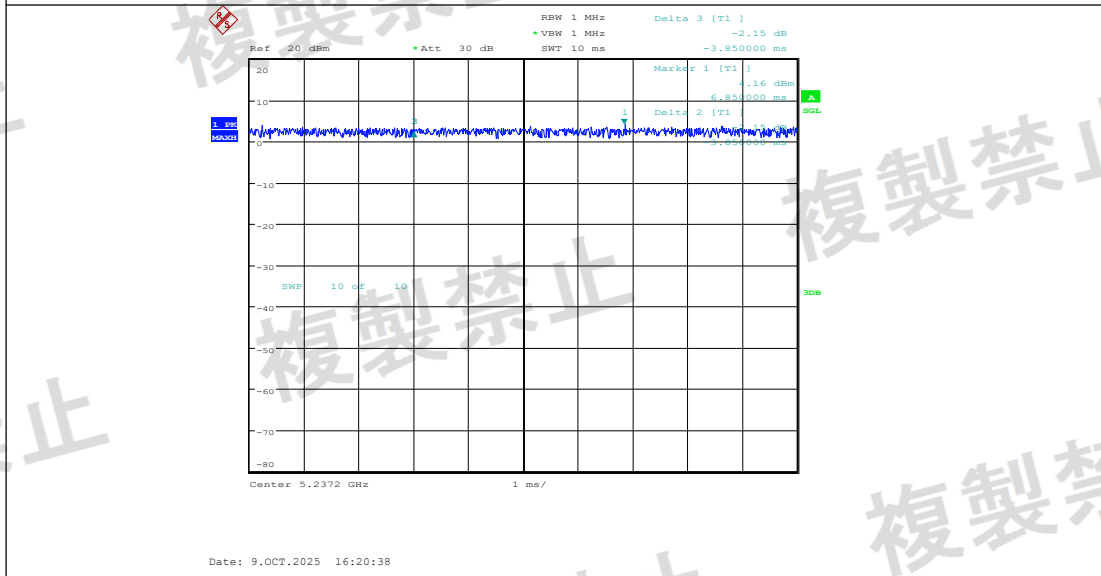
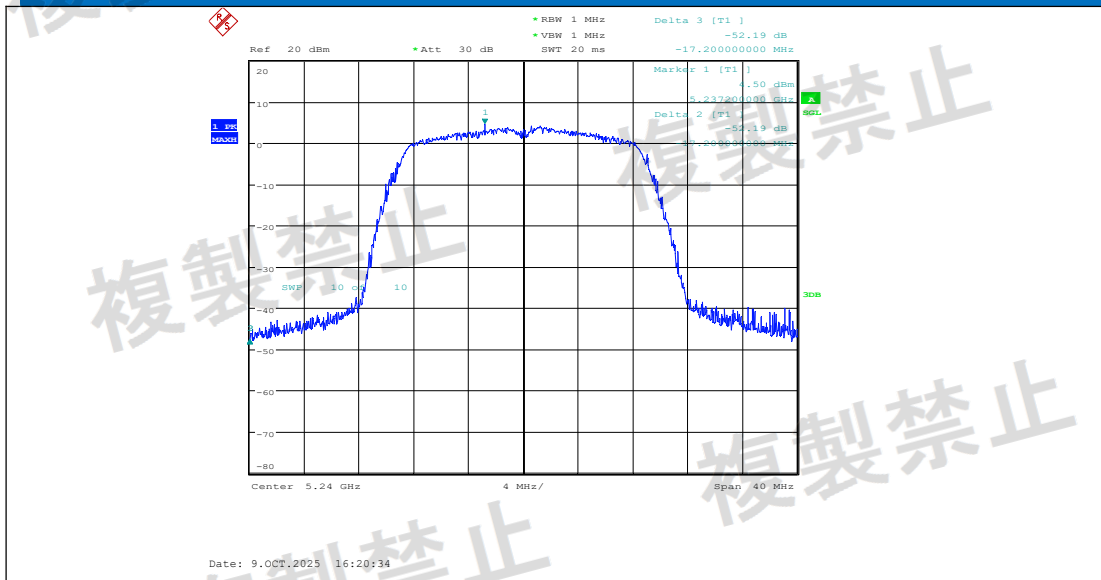


NTNV 11A Ant1 5240

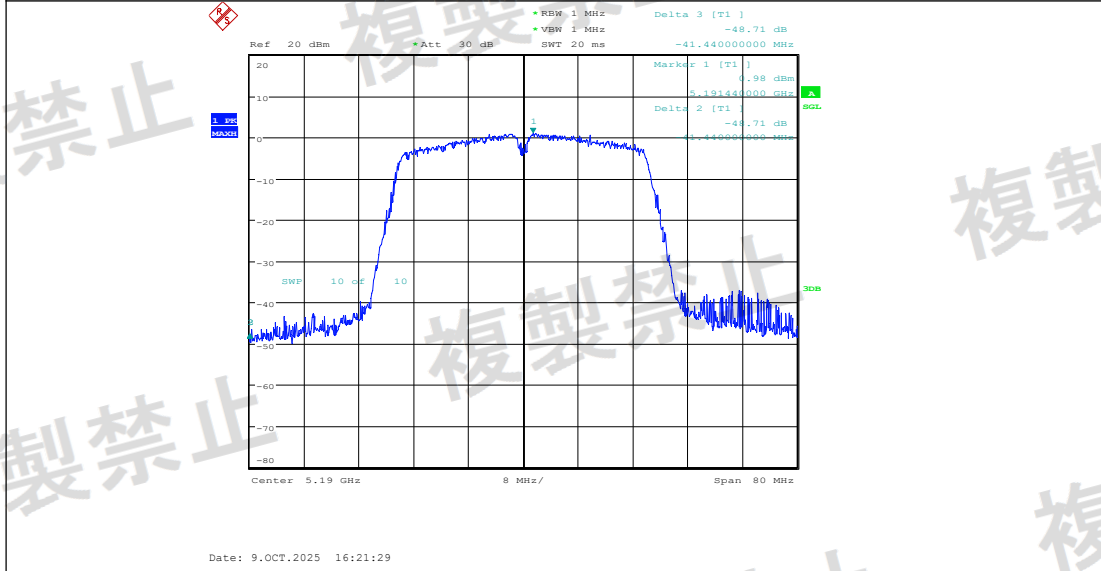


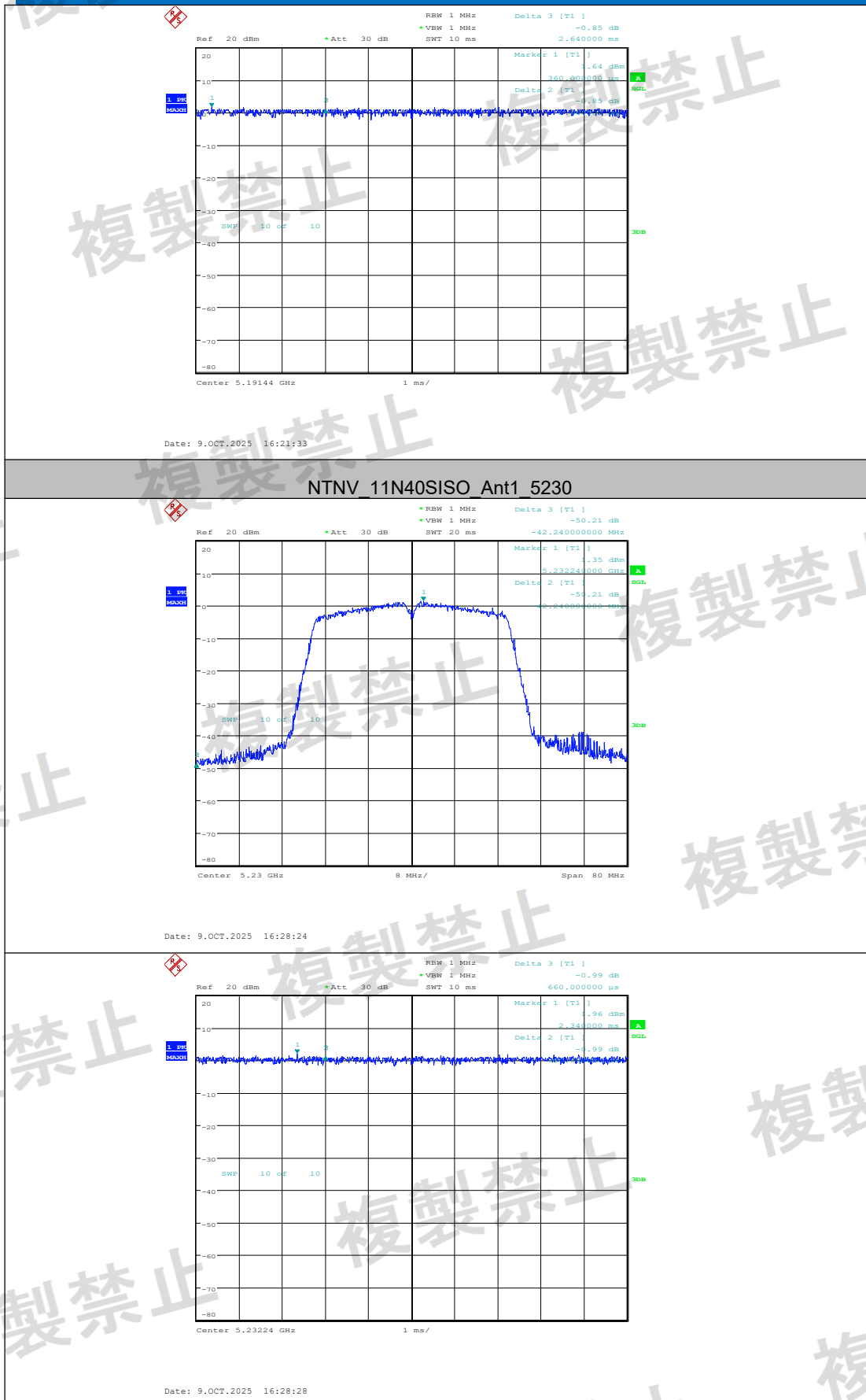


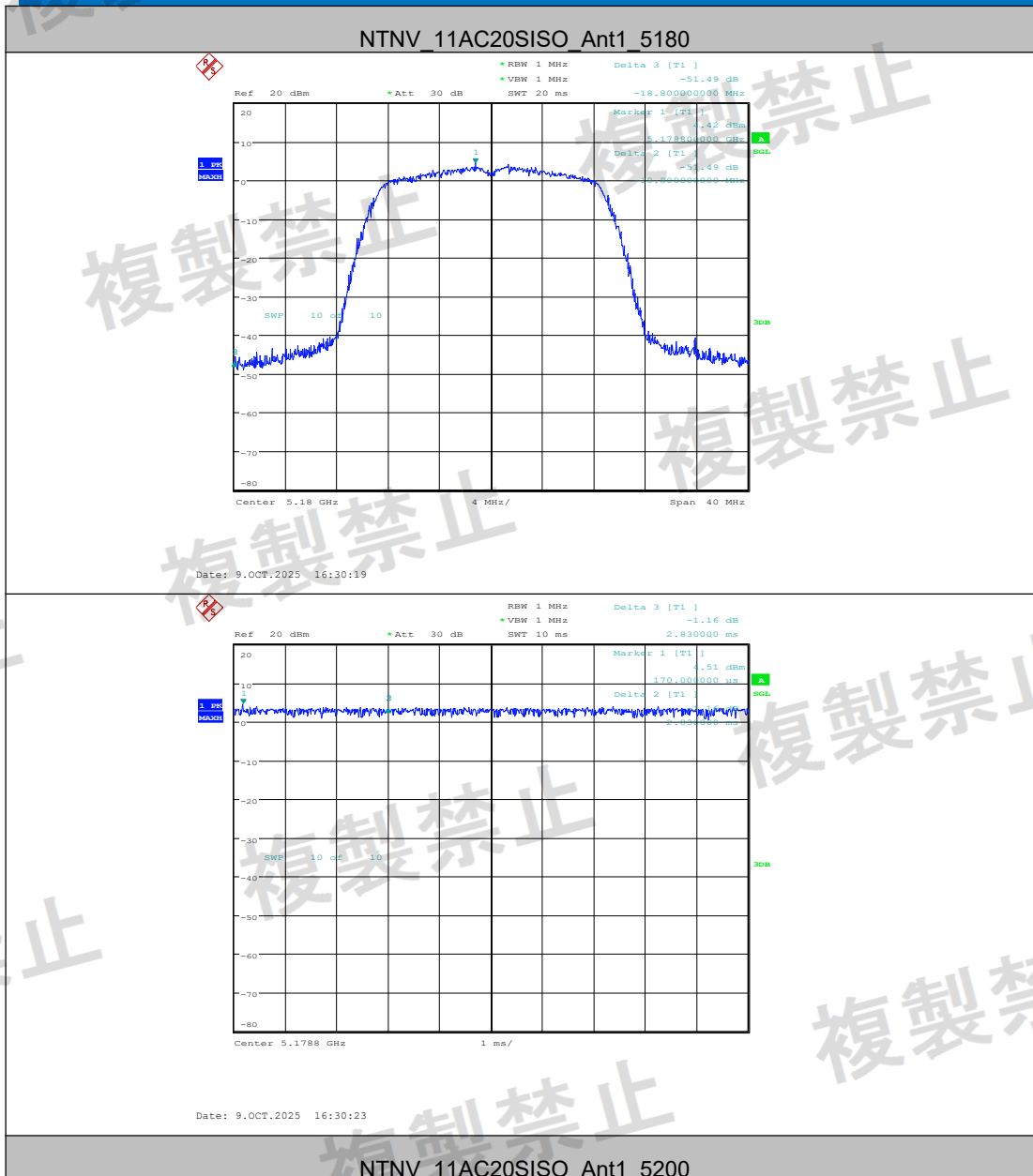


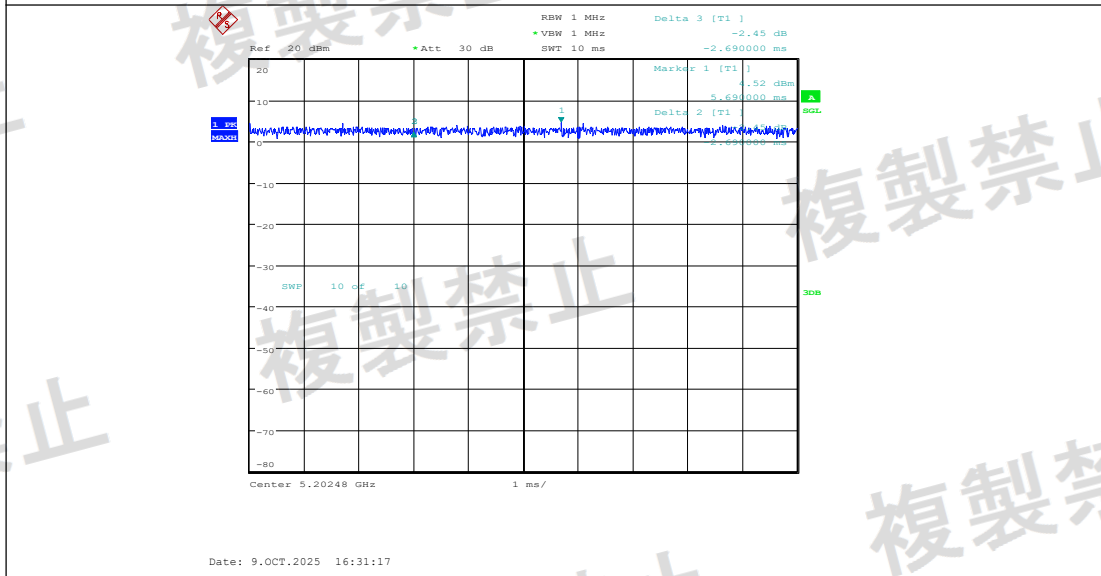
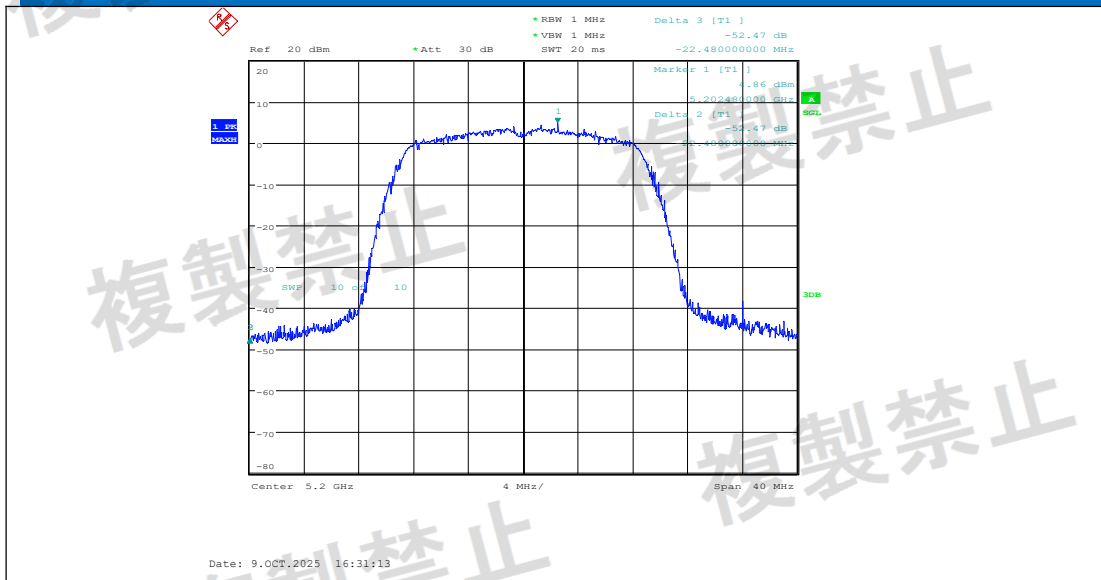


NTNV 11N40SISO Ant1 5190

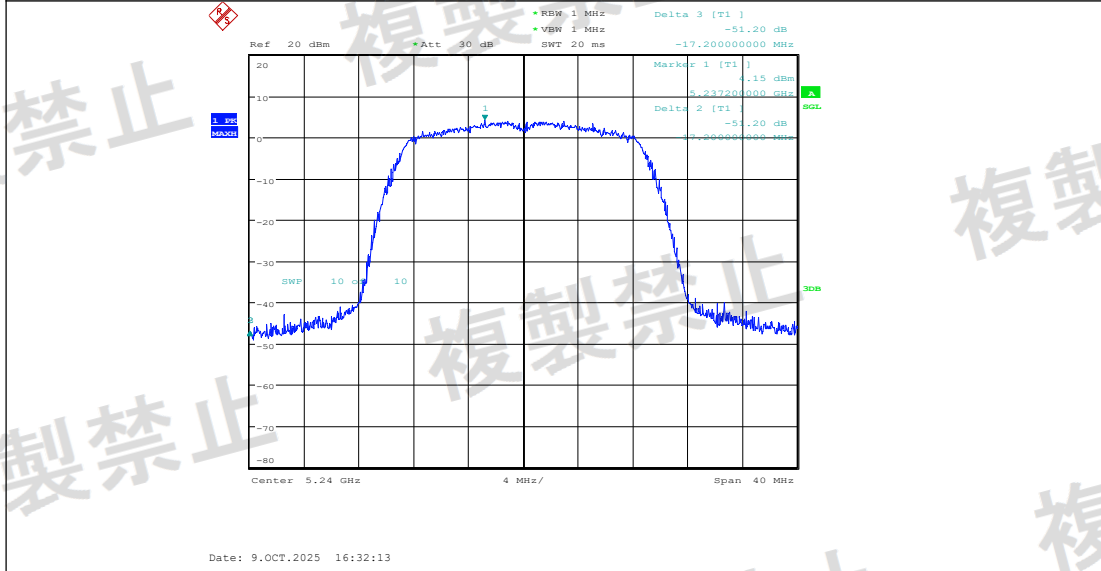


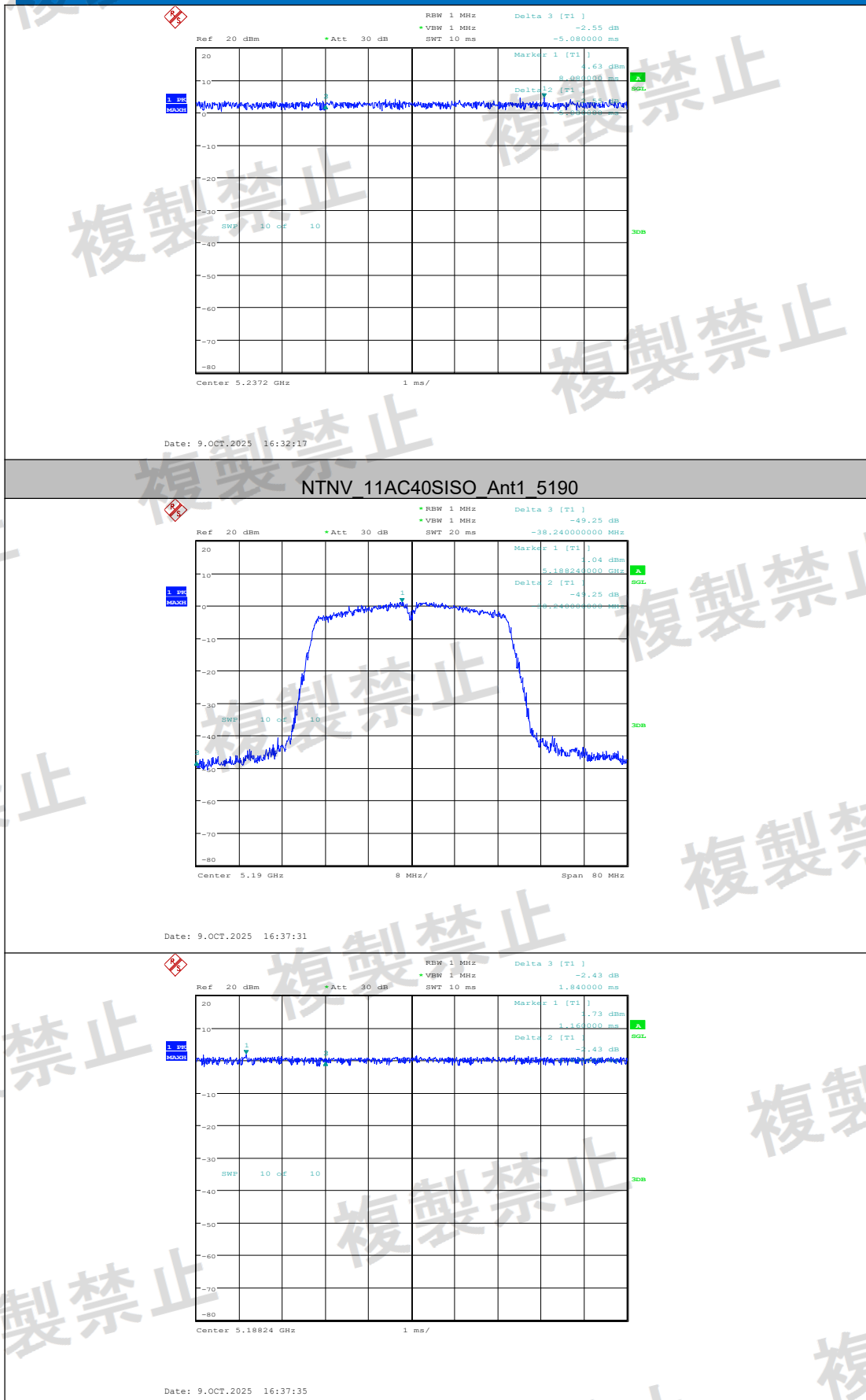


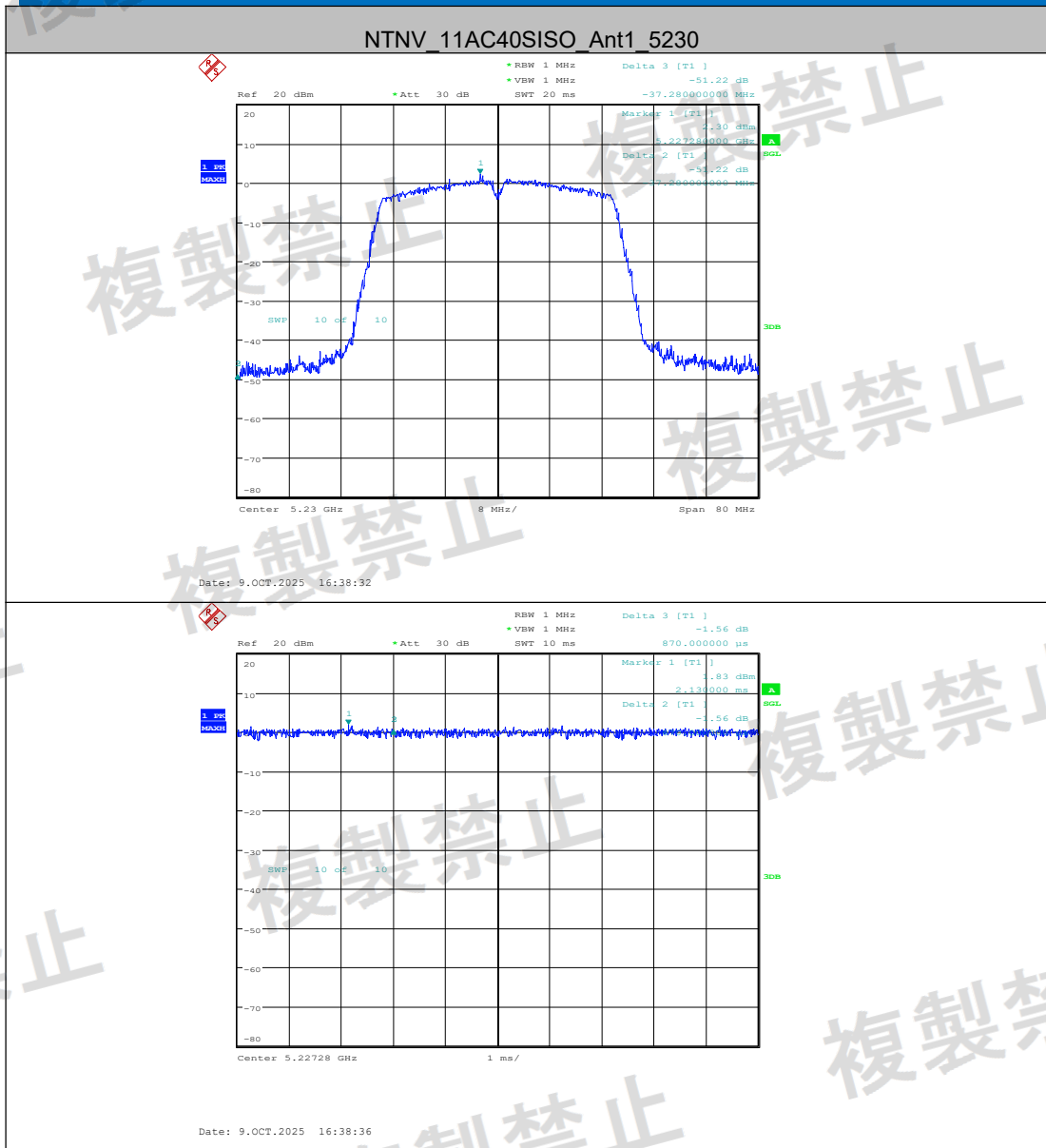


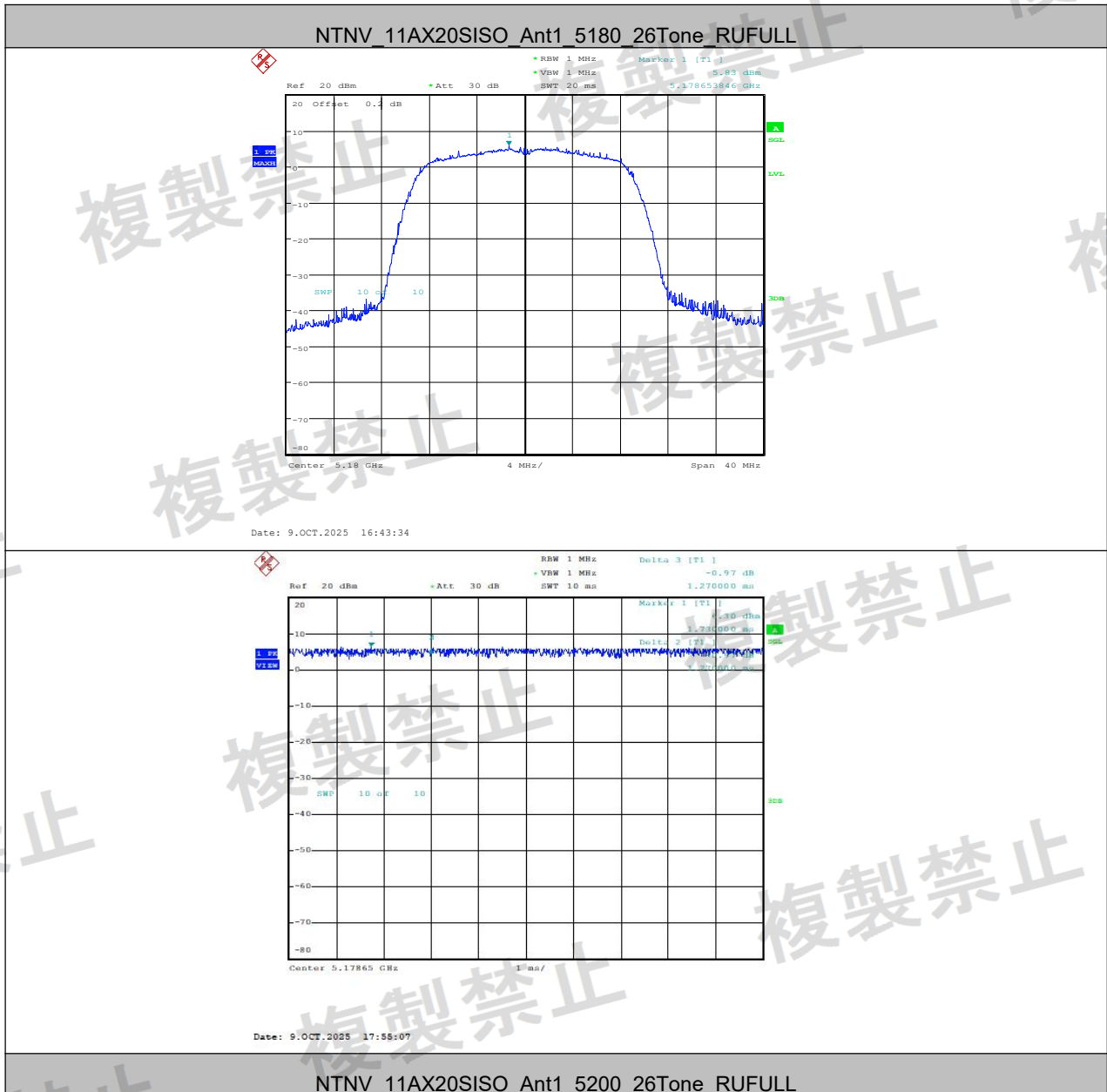


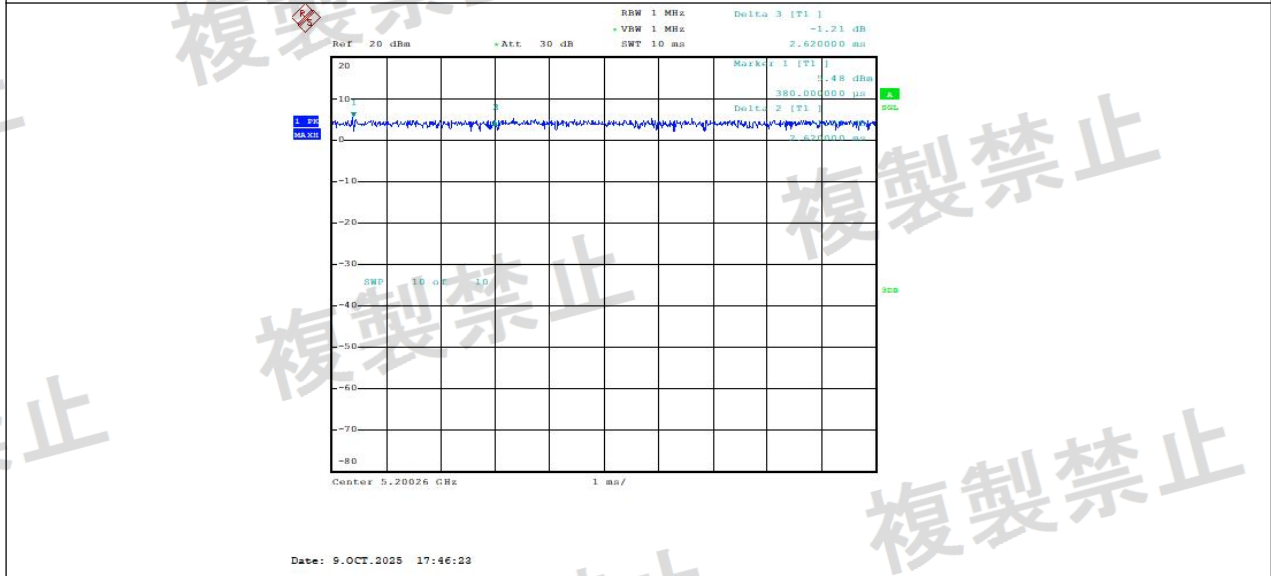
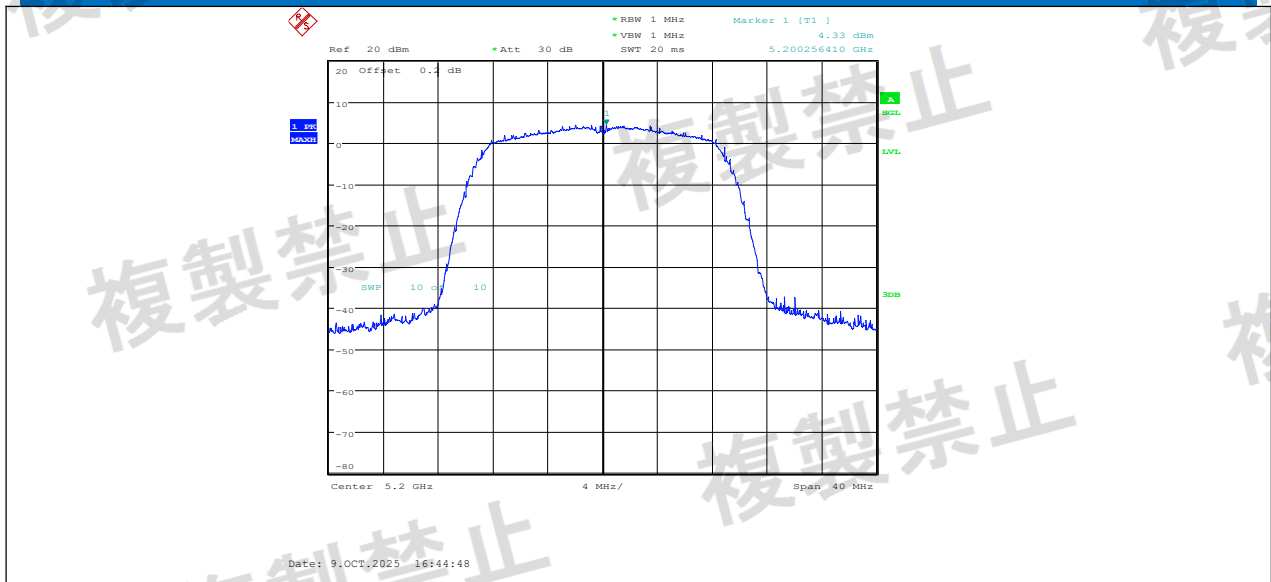
NTNV 11AC20SISO Ant1 5240



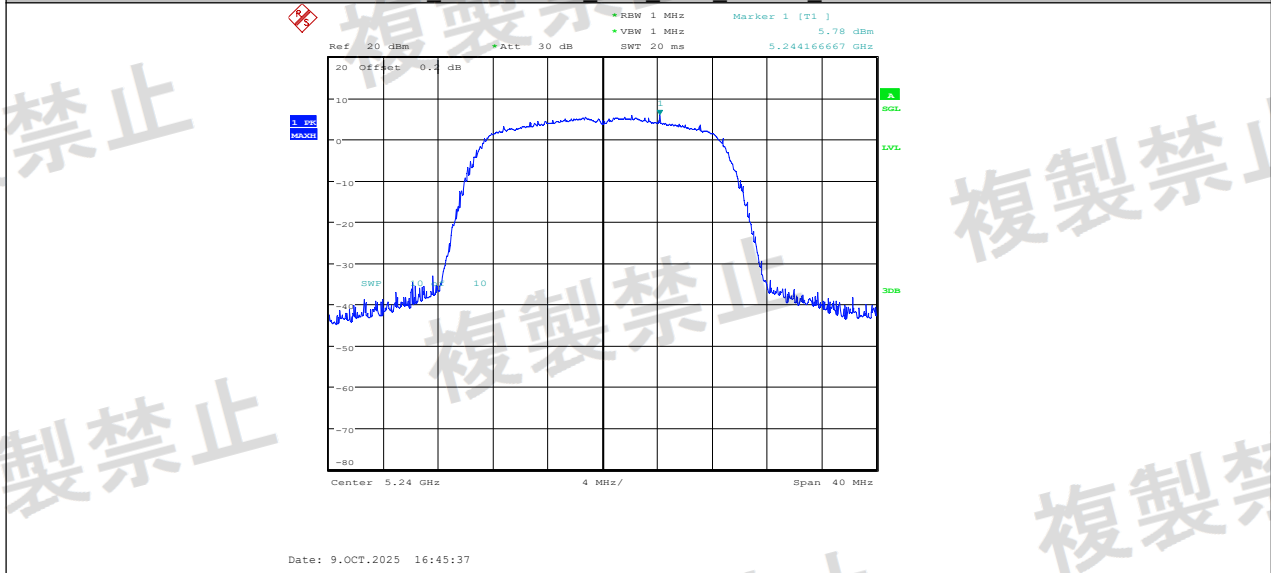


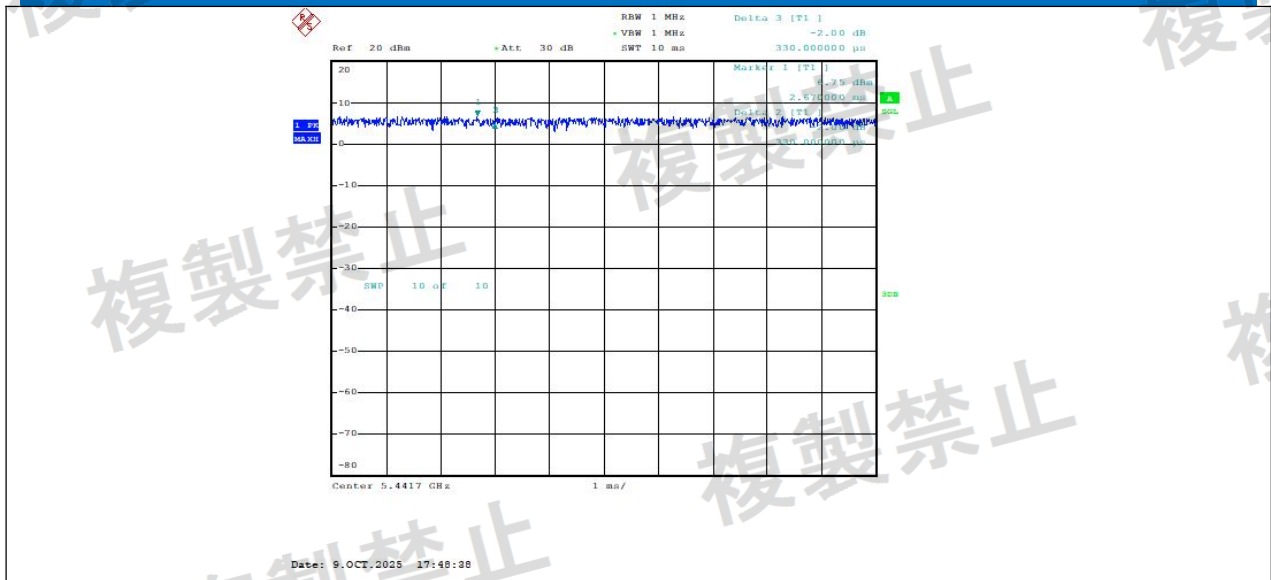




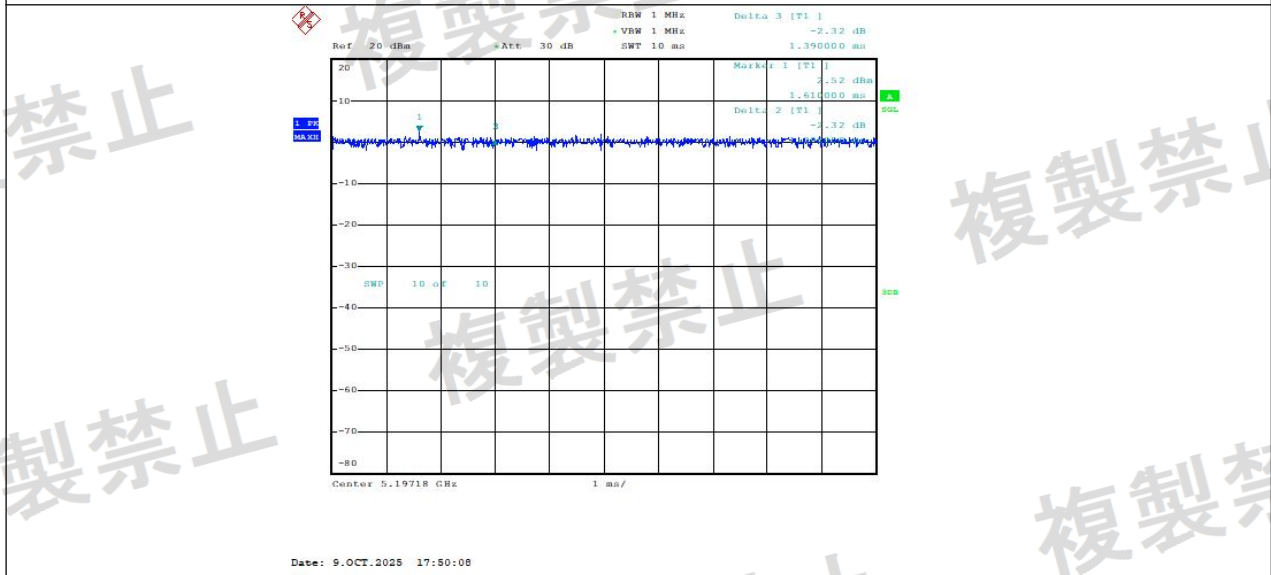
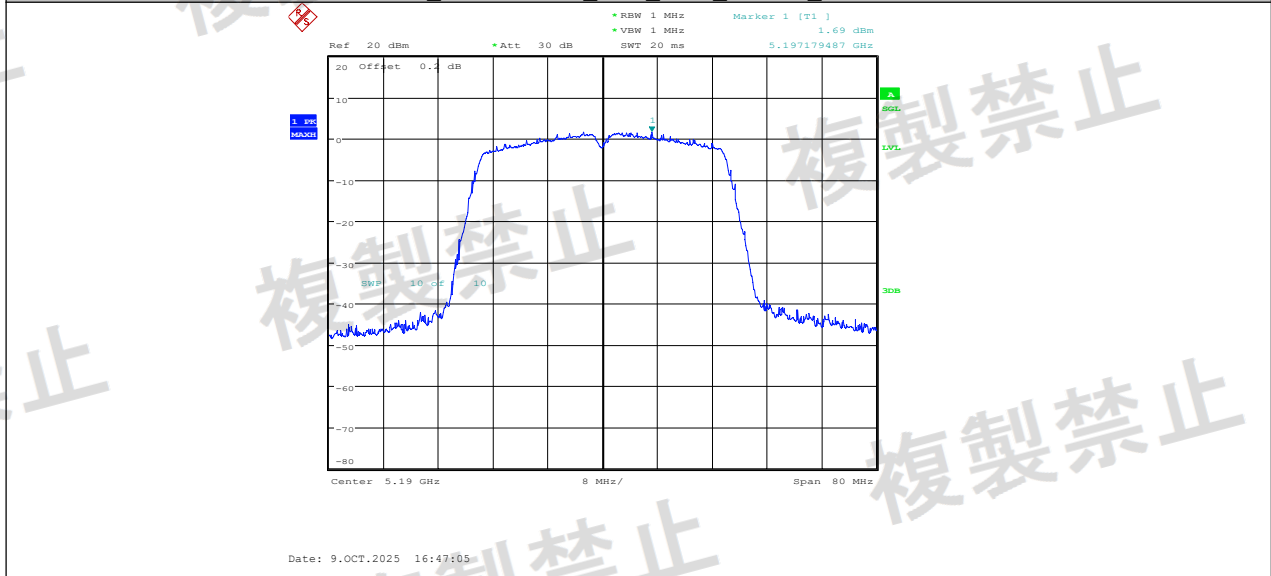


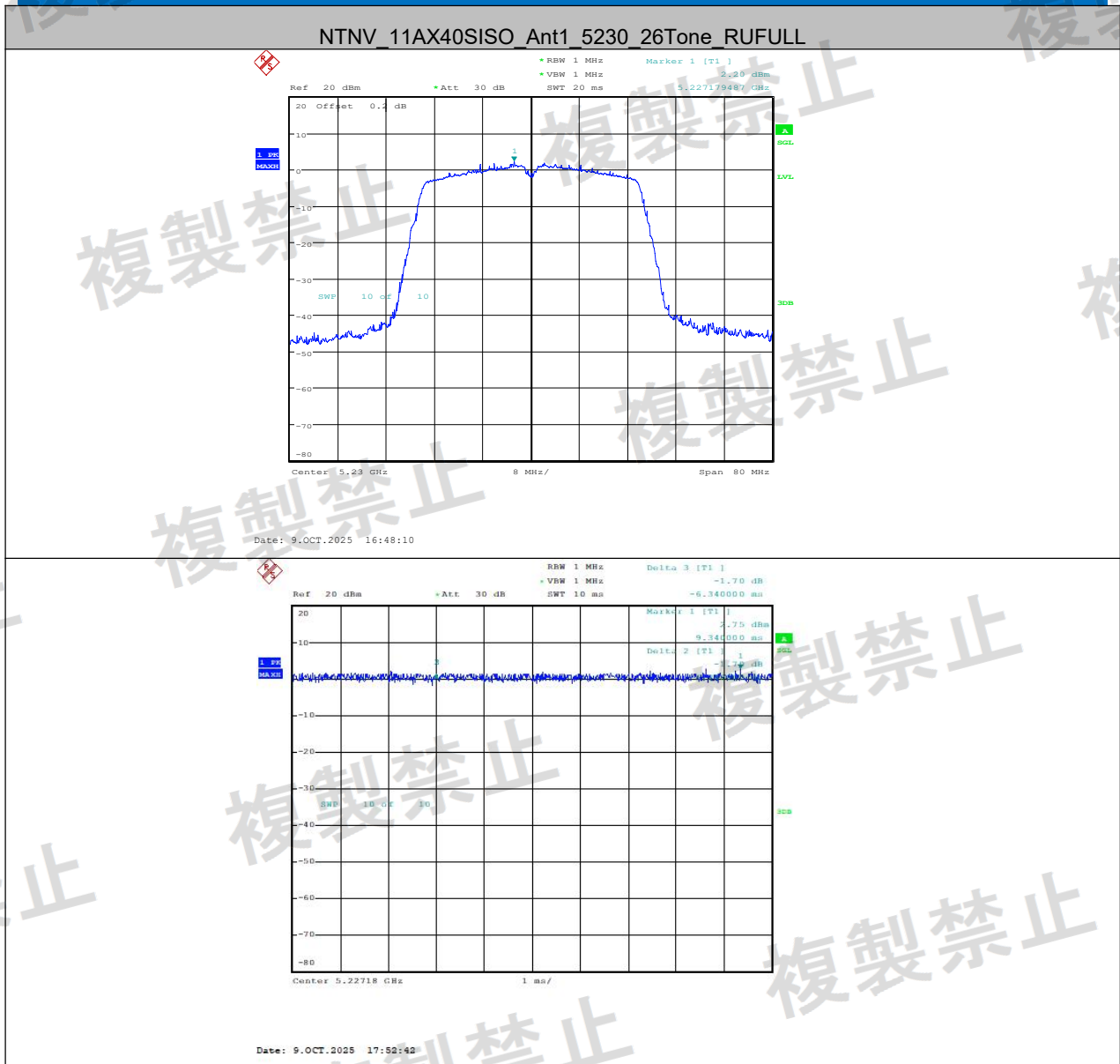
NTNV 11AX20SISO Ant1 5240 26Tone_RUFULL





NTNV_11AX40SISO_Ant1_5190_26Tone_RUFULL



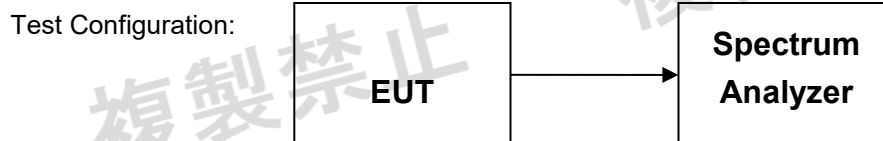


6.9 Adjacent Channel Power Tolerance

Test Requirement: Item 19-3 of Article 2 Paragraph 1

$F_c \pm 20\text{MHz}$ $\pm 10\text{MHz BW} : -25\text{dBc}$
$F_c \pm 40\text{MHz}$ $\pm 10\text{MHz BW} : -40\text{dBc}$

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channels were selected for the final test as listed below.



Test Procedure:

- 1) Test Conditions:
Power meter or Spectrum Analyzer is used for measurement.
- 2) EUT conditions:
Modulation/Spread
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
- 3) Spectrum Analyzer conditions:
Frequency: Test Frequency
RBW 300kHz, VBW 300kHz
Span: 120MHz
Tx bandwidth 20MHz
Adjacent channel bandwidth 20MHz, Channel spacing 20MHz
Alternate channel bandwidth 20MHz, Channel spacing 40MHz
Sweep Time Auto
detector mode Positive peak
Indication mode Max hold

WIFI5:

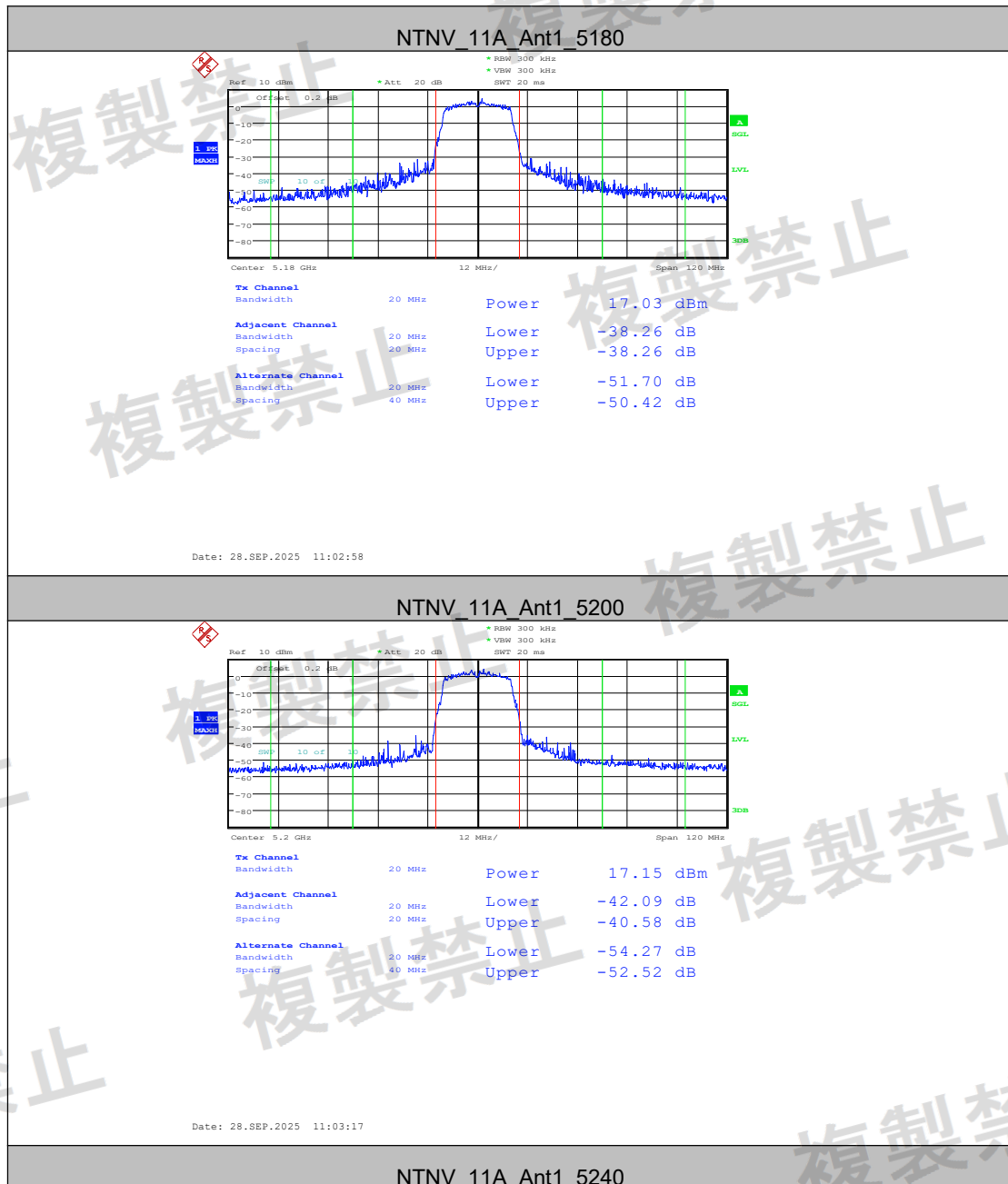
TestCondition	TestMode	Freq(MHz)	Offset [MHz]	Result [dBc]	Limit [dBc]	Verdict
NTNV	11A	5180	-40	-51.70	≤-40	PASS
			-20	-38.26	≤-25	PASS
			+20	-38.26	≤-25	PASS
			+40	-50.42	≤-40	PASS
		5200	-40	-54.27	≤-40	PASS
			-20	-42.09	≤-25	PASS
			+20	-40.58	≤-25	PASS
			+40	-52.52	≤-40	PASS
		5240	-40	-49.48	≤-40	PASS
			-20	-37.80	≤-25	PASS
			+20	-38.05	≤-25	PASS
			+40	-49.14	≤-40	PASS
	11N20SI SO	5180	-40	-50.69	≤-40	PASS
			-20	-35.96	≤-25	PASS
			+20	-35.24	≤-25	PASS
			+40	-49.34	≤-40	PASS
		5200	-40	-53.16	≤-40	PASS
			-20	-37.86	≤-25	PASS
			+20	-36.74	≤-25	PASS
			+40	-51.46	≤-40	PASS
		5240	-40	-48.32	≤-40	PASS
			-20	-35.24	≤-25	PASS
			+20	-35.37	≤-25	PASS
			+40	-48.78	≤-40	PASS
	11N40SI SO	5190	-80	-52.09	≤-40	PASS
			-40	-38.36	≤-25	PASS
			+40	-35.44	≤-25	PASS
			+80	-49.90	≤-40	PASS
		5230	-80	-52.76	≤-40	PASS
			-40	-41.09	≤-25	PASS
			+40	-39.68	≤-25	PASS
			+80	-51.29	≤-40	PASS
		11AC20S	5180	-40	≤-40	PASS

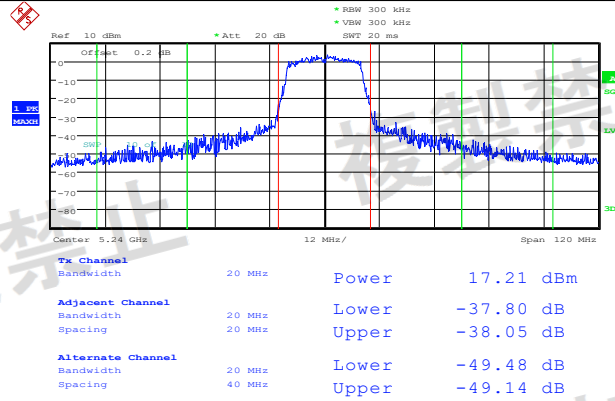
		ISO		-20	-37.72	≤-25	PASS
				+20	-36.86	≤-25	PASS
				+40	-49.71	≤-40	PASS
		5200		-40	-54.00	≤-40	PASS
				-20	-39.48	≤-25	PASS
				+20	-39.19	≤-25	PASS
		5240		+40	-52.26	≤-40	PASS
				-40	-49.31	≤-40	PASS
				-20	-37.17	≤-25	PASS
		5190		+20	-37.28	≤-25	PASS
				+40	-49.25	≤-40	PASS
		11AC40S		-80	-52.58	≤-40	PASS
				-40	-39.36	≤-25	PASS
				+40	-36.39	≤-25	PASS
		ISO	5230	+80	-49.96	≤-40	PASS
				-80	-52.18	≤-40	PASS
				-40	-39.00	≤-25	PASS
				+40	-37.70	≤-25	PASS
				+80	-50.87	≤-40	PASS

WIFI6:

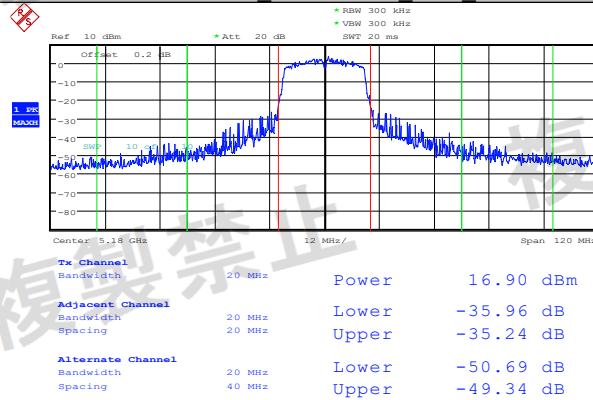
Test Condition	TestMode	Antenna	Freq(MHz)	Ru Size	Ru Index	Offset [MHz]	Result [dBc]	Limit [dBc]	Verdict
NTNV	11AX20SISO	Ant1	5180	26Tone	RUFULL	-40	-51.11	≤-40	PASS
					RUFULL	-20	-37.92	≤-25	PASS
					RUFULL	+20	-37.23	≤-25	PASS
					RUFULL	+40	-50.07	≤-40	PASS
			5200	26Tone	RUFULL	-40	-53.86	≤-40	PASS
					RUFULL	-20	-38.77	≤-25	PASS
					RUFULL	+20	-38.88	≤-25	PASS
					RUFULL	+40	-52.26	≤-40	PASS
	11AX40SISO	Ant1	5240	26Tone	RUFULL	-40	-48.75	≤-40	PASS
					RUFULL	-20	-37.23	≤-25	PASS
					RUFULL	+20	-36.99	≤-25	PASS
					RUFULL	+40	-48.72	≤-40	PASS
			5190	26Tone	RUFULL	-80	-53.18	≤-40	PASS
					RUFULL	-40	-41.73	≤-25	PASS
					RUFULL	+40	-39.11	≤-25	PASS
					RUFULL	+80	-50.63	≤-40	PASS
			5230	26Tone	RUFULL	-80	-52.35	≤-40	PASS
					RUFULL	-40	-40.86	≤-25	PASS
					RUFULL	+40	-39.49	≤-25	PASS
					RUFULL	+80	-51.19	≤-40	PASS

Test plot as follows:

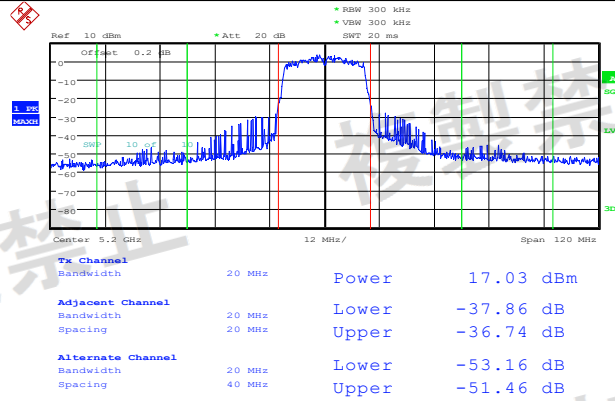




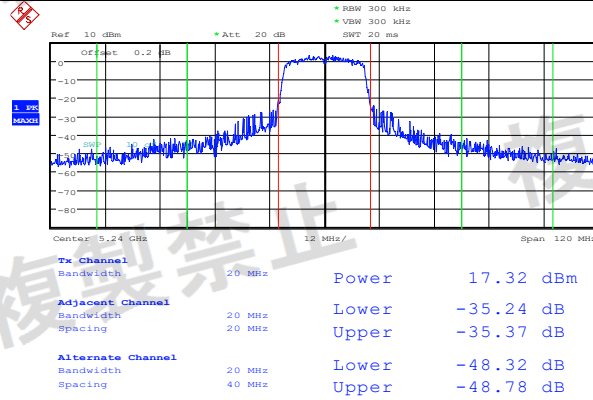
NTNV_11N20SISO_Ant1_5180



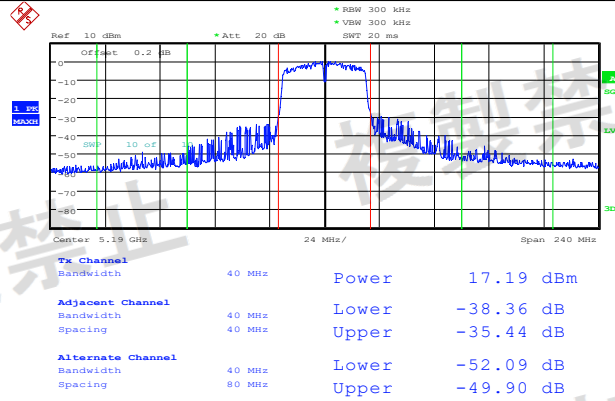
NTNV_11N20SISO_Ant1_5200



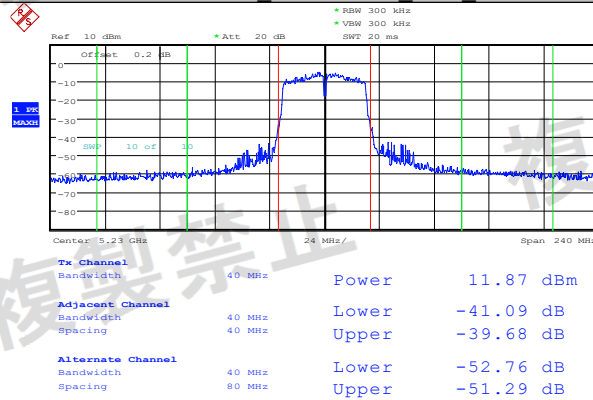
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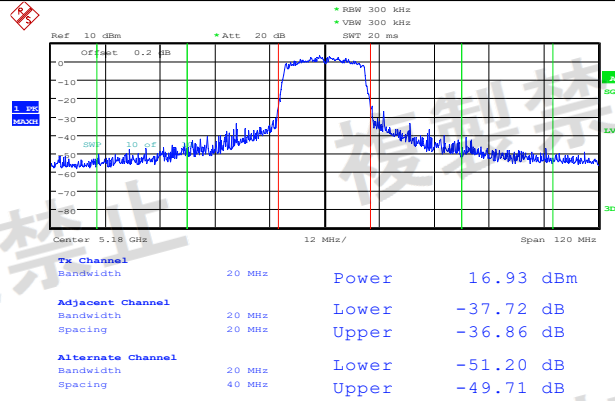
NTNV_11N40SISO_Ant1_5190



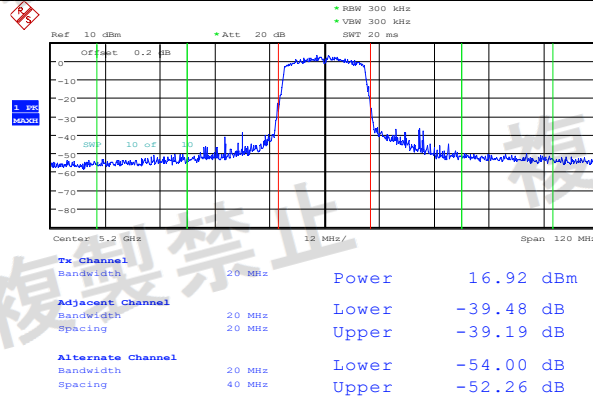
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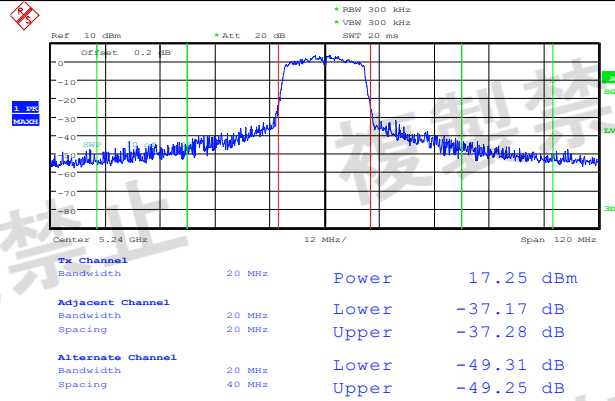
NTNV_11AC20SISO Ant1_5180



NTNV 11AC20SISO Ant1 5200

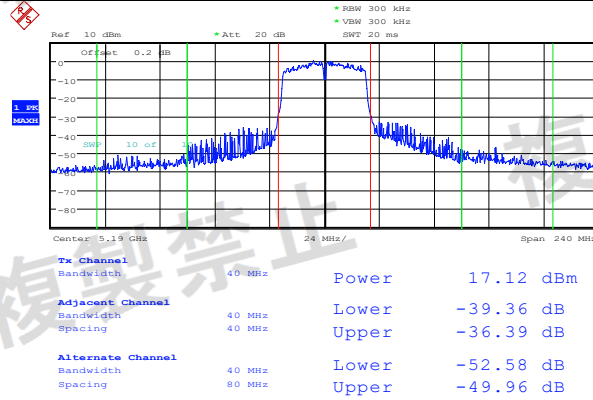


NTNV 11AC20SISO Ant1 5240



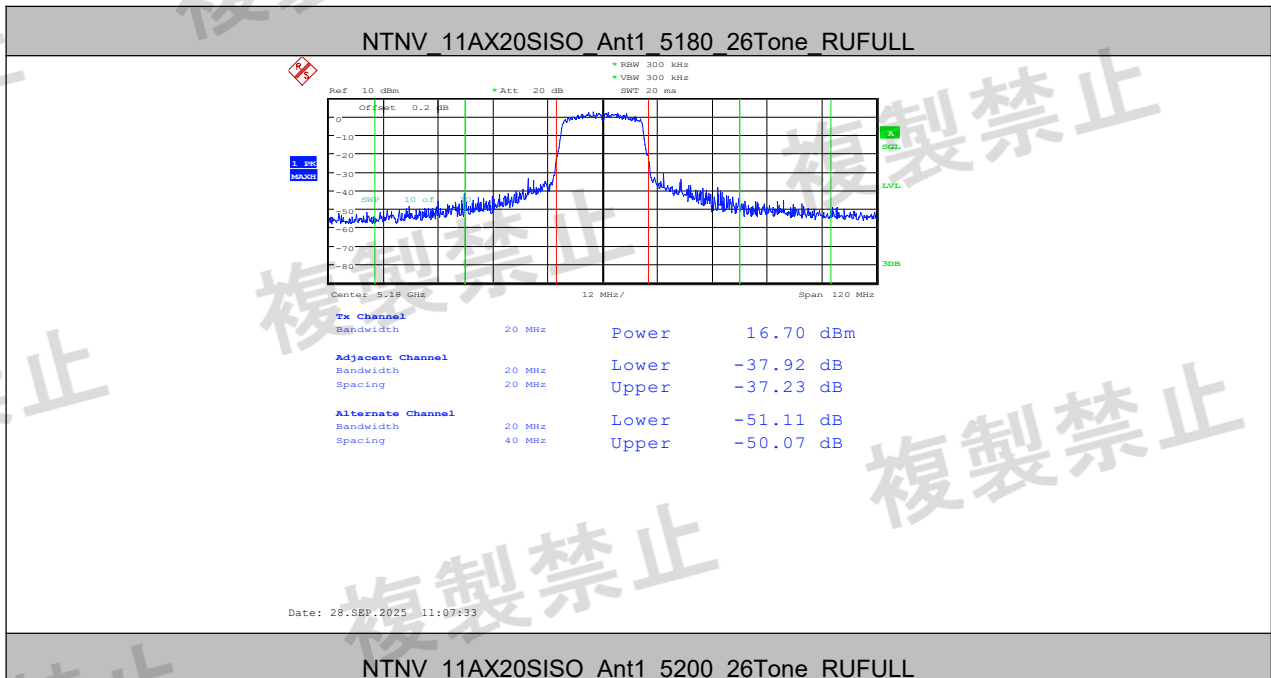
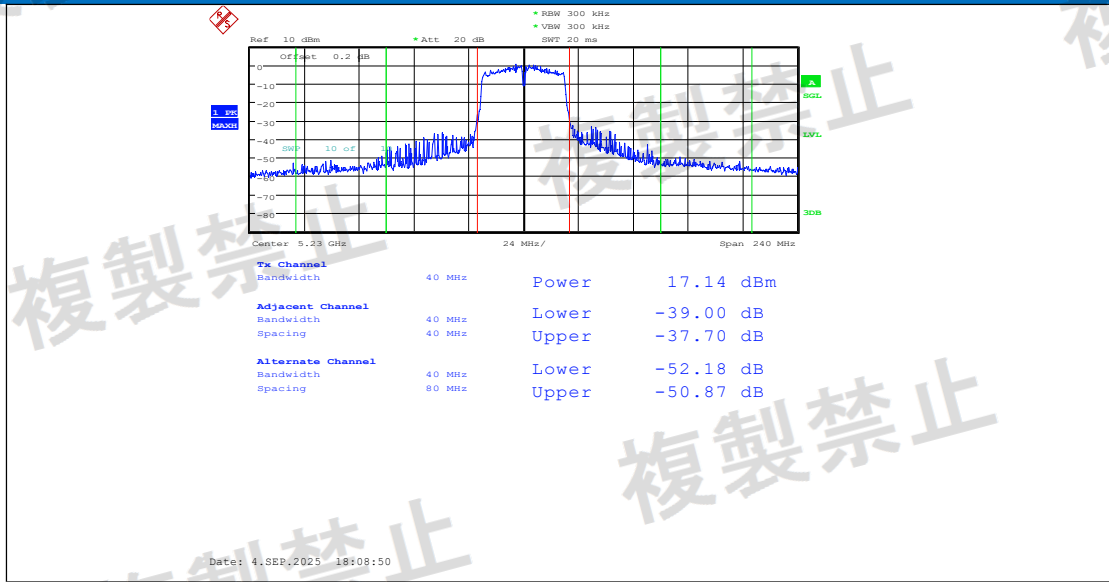
Date: 28.SEP.2025 11:06:45

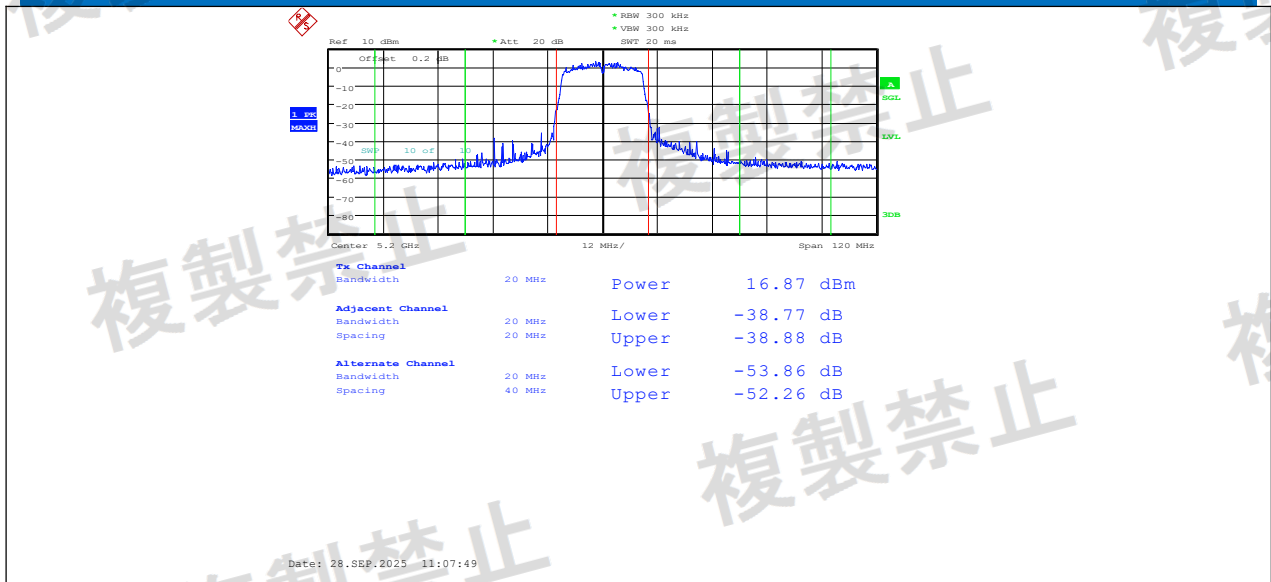
NTNV 11AC40SISO Ant1 5190



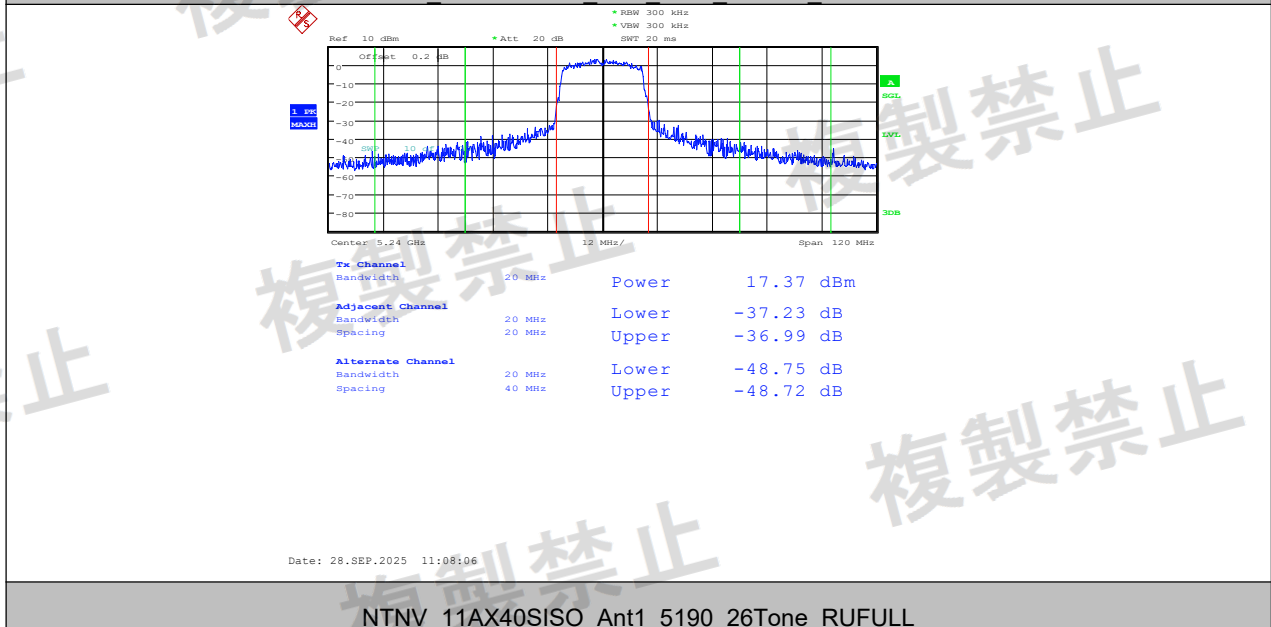
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NTNV 11AC40SISO Ant1 5230

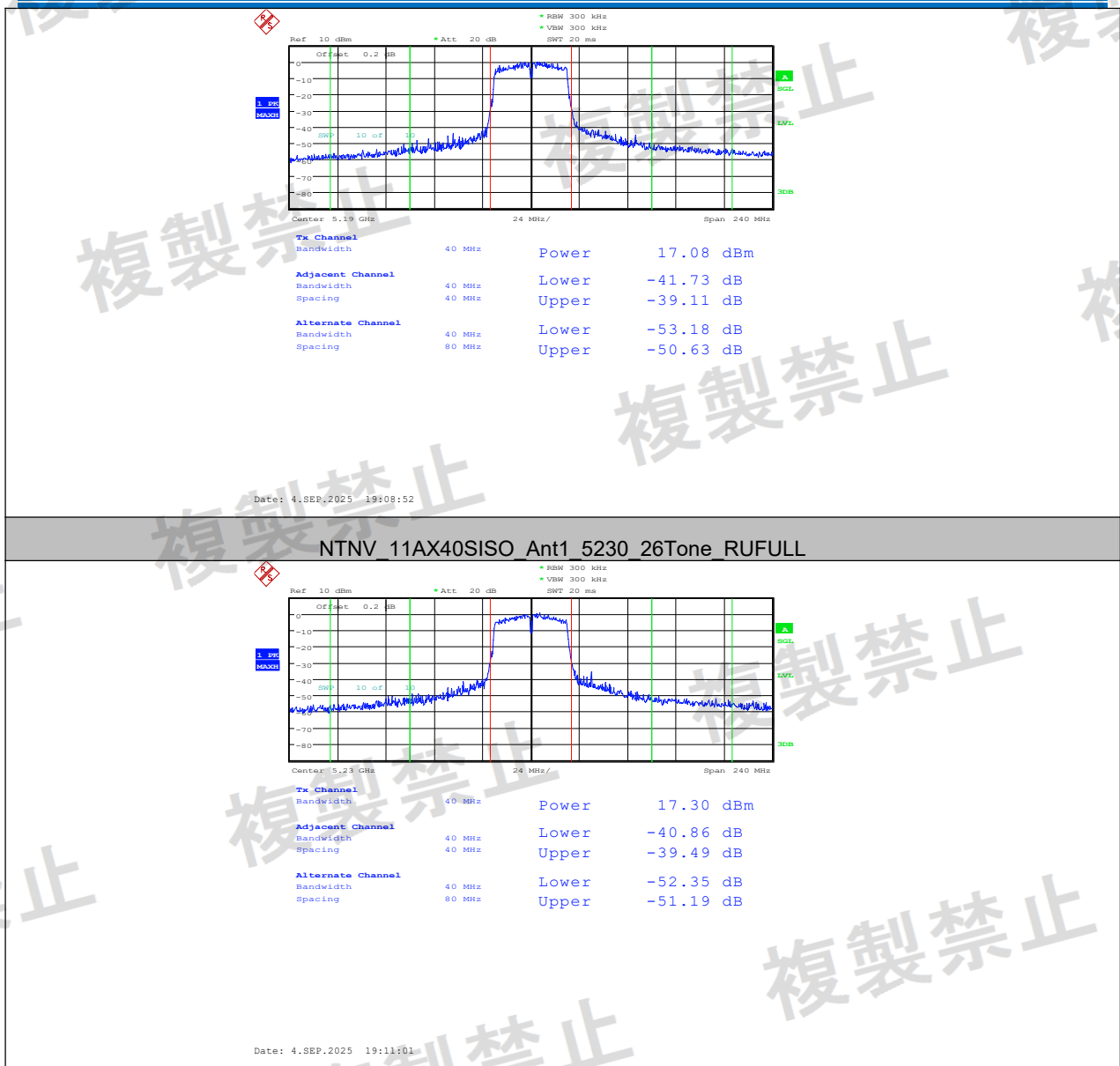




NTNV 11AX20SISO Ant1 5240 26Tone RUFULL



NTNV 11AX40SISO Ant1 5190 26Tone RUFULL



Test result: The unit does meet the requirements.

6.10 Spurious Emissions of TX

Test Requirement: Item 19-3 of Article 2-1

20MHz system	
OBW : 18MHz or less	OBW : 18 - 20 MHz
5,142 MHz or less : 2.5 μ W/MHz	5,142 MHz or less : 2.5 μ W/MHz
5,142 - 5,150 MHz : 15 μ W/MHz	5,142 - 5,150 MHz : 15 μ W/MHz
	5,250 - 5,250.2 MHz : $10^{1-(8/3)(f-9.75)}$ mW/MHz
5,250 - 5,251 MHz : $10^{1-(f-9)}$ mW/MHz	5,250.2 - 5,251 MHz : $10^{1-(f-9)}$ mW/MHz
5,251 - 5,260 MHz : $10^{1-(8/90)(f-11)}$ mW/MHz	5,251 - 5,260 MHz : $10^{1-(8/90)(f-11)}$ mW/MHz
5,260 - 5,266.7 MHz : $10^{1.8-(6/50)(f-20)}$ mW/MHz	5,260 - 5,266.7 MHz : $10^{1.8-(6/50)(f-20)}$ mW/MHz
5,266.7 MHz or more : 2.5 μ W/MHz	5,266.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)

40MHz system	80MHz system
5,141.6 MHz or less : 2.5 μ W/MHz	5,123.2 MHz or less : 2.5 μ W/MHz
5,141.6 - 5,150 MHz : 15 μ W/MHz	5,123.2 - 5,150 MHz : 15 μ W/MHz
5,250 - 5,251 MHz : $10^{-(f-20)+\log(1/2)}$ mW/MHz	5,250 - 5,251 MHz : $10^{-(f-40)+\log(1/4)}$ mW/MHz
5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5,251 - 5,290 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5,270 - 5,278.4 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,290 - 5,296.7 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5,278.4 MHz or more : 2.5 μ W/MHz	5,296.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Step 1

All spurious are measured from 30 MHz to 40 GHz by peak mode.

Step 2:

Frequency: Spurious Frequency
RBW 1 MHz
VBW 1 MHz
Sweep Time Auto
detector mode Sample
Indication mode Max hold

WIFI5:

Test Condition	Test Mode	Channel (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	EIRP [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11A	5180	30~5142	5134.33	-45.20	-45.20	0.03020	≤2.5	PASS
			5142~5150	5148.42	-29.39	-29.39	1.15080	≤15	PASS
			5250~5251	5250.91	-45.76	-45.76	0.02655	≤123.0	PASS
			5251~5260	5258.47	-45.09	-45.09	0.03097	≤21.7	PASS
			5260~5266.7	5265.78	-46.16	-46.16	0.02421	≤3.2	PASS
			5266.7~26000	5280.52	-50.50	-50.50	0.00891	≤2.5	PASS
		5200	30~5142	5137.23	-50.08	-50.08	0.00982	≤2.5	PASS
			5142~5150	5149.54	-40.09	-40.09	0.09795	≤15	PASS
			5250~5251	5250.83	-38.60	-38.60	0.13804	≤147.9	PASS
			5251~5260	5256.25	-41.59	-41.59	0.06934	≤34.1	PASS
			5260~5266.7	5266.69	-46.18	-46.18	0.02410	≤2.5	PASS
			5266.7~26000	5274.30	-48.57	-48.57	0.01390	≤2.5	PASS
		5240	30~5142	5139.10	-52.79	-52.79	0.00526	≤2.5	PASS
			5142~5150	5149.18	-48.82	-48.82	0.01312	≤15	PASS
			5250~5251	5250.89	-16.47	-16.47	22.54239	≤128.8	PASS
			5251~5260	5252.81	-18.55	-18.55	13.96368	≤69.0	PASS
			5260~5266.7	5262.19	-26.05	-26.05	2.48313	≤8.7	PASS
			5266.7~26000	5266.70	-36.77	-36.77	0.21038	≤2.5	PASS
	11N20 SISO	5180	30~5142	5140.98	-39.43	-39.43	0.11402	≤2.5	PASS
			5142~5150	5149.62	-29.06	-29.06	1.24165	≤15	PASS
			5250~5251	5250.92	-43.60	-43.60	0.04365	≤120.2	PASS
			5251~5260	5259.64	-45.81	-45.81	0.02624	≤17.1	PASS
			5260~5266.7	5266.30	-46.12	-46.12	0.02443	≤2.8	PASS
			5266.7~26000	5269.46	-50.05	-50.05	0.00989	≤2.5	PASS
		5200	30~5142	5132.12	-50.54	-50.54	0.00883	≤2.5	PASS
			5142~5150	5149.34	-40.92	-40.92	0.08091	≤15	PASS
			5250~5251	5251.00	-42.12	-42.12	0.06138	≤100.0	PASS
			5251~5260	5259.76	-45.10	-45.10	0.03090	≤16.6	PASS
			5260~5266.7	5266.51	-45.25	-45.25	0.02985	≤2.6	PASS
			5266.7~26000	5268.77	-48.30	-48.30	0.01479	≤2.5	PASS
		5240	30~5142	5128.88	-52.21	-52.21	0.00601	≤2.5	PASS
			5142~5150	5145.81	-48.27	-48.27	0.01489	≤15	PASS
			5250~5251	5250.41	-13.57	-13.57	43.95416	≤389.0	PASS
			5251~5260	5251.00	-23.02	-23.02	4.98884	≤100.0	PASS

複製禁止			5260~5266.7	5261.69	-38.86	-38.86	0.13002	≤9.9	PASS	
			5266.7~26000	5268.08	-51.44	-51.44	0.00718	≤2.5	PASS	
	11N40 SISO	5190	30~5141.6	5137.85	-35.53	-35.53	0.27990	≤2.5	PASS	
			5141.6~5150	5149.86	-29.59	-29.59	1.09901	≤15	PASS	
			5250~5251	5250.96	-35.27	-35.27	0.29717	≤54.8	PASS	
			5251~5270	5268.08	-37.42	-37.42	0.18113	≤9.5	PASS	
			5270~5278.4	5276.19	-42.35	-42.35	0.05821	≤3.4	PASS	
			5278.4~26000	5280.47	-49.21	-49.21	0.01199	≤2.5	PASS	
			5230	30~5141.6	5141.26	-47.26	-47.26	0.01879	≤2.5	PASS
		5141.6~5150		5147.51	-40.92	-40.92	0.08091	≤15	PASS	
		5250~5251		5250.99	-18.73	-18.73	13.39677	≤51.2	PASS	
		5251~5270		5251.10	-25.82	-25.82	2.61818	≤49.5	PASS	
		5270~5278.4		5270.43	-40.92	-40.92	0.08091	≤7.5	PASS	
		5278.4~26000		5281.85	-50.90	-50.90	0.00813	≤2.5	PASS	
		11AC2 OSISO		5180	30~5142	5134.16	-48.42	-48.42	0.01439	≤2.5
			5142~5150		5146.94	-32.56	-32.56	0.55463	≤15	PASS
	5250~5251		5250.98		-45.93	-45.93	0.02553	≤104.7	PASS	
	5251~5260		5259.33		-45.13	-45.13	0.03069	≤18.2	PASS	
	5260~5266.7		5266.55		-45.78	-45.78	0.02642	≤2.6	PASS	
	5266.7~26000		5268.77		-49.27	-49.27	0.01183	≤2.5	PASS	
	5200		30~5142	5141.49	-49.61	-49.61	0.01094	≤2.5	PASS	
			5142~5150	5147.61	-41.92	-41.92	0.06427	≤15	PASS	
			5250~5251	5250.95	-42.62	-42.62	0.05470	≤112.2	PASS	
			5251~5260	5259.69	-43.87	-43.87	0.04102	≤16.9	PASS	
			5260~5266.7	5266.39	-44.59	-44.59	0.03475	≤2.7	PASS	
			5266.7~26000	5266.70	-47.78	-47.78	0.01667	≤2.5	PASS	
	5240		30~5142	5134.50	-53.07	-53.07	0.00493	≤2.5	PASS	
			5142~5150	5145.50	-52.38	-52.38	0.00578	≤15	PASS	
			5250~5251	5250.07	-10.60	-10.60	87.09636	≤851.1	PASS	
			5251~5260	5251.05	-24.22	-24.22	3.78443	≤99.0	PASS	
			5260~5266.7	5260.66	-37.00	-37.00	0.19953	≤13.2	PASS	
			5266.7~26000	5290.89	-51.70	-51.70	0.00676	≤2.5	PASS	
	11AC4 OSISO	5190	30~5141.6	5134.44	-35.56	-35.56	0.27797	≤2.5	PASS	
			5141.6~5150	5147.56	-28.92	-28.92	1.28233	≤15	PASS	
			5250~5251	5250.77	-35.27	-35.27	0.29717	≤84.9	PASS	
			5251~5270	5261.01	-37.45	-37.45	0.17989	≤18.9	PASS	

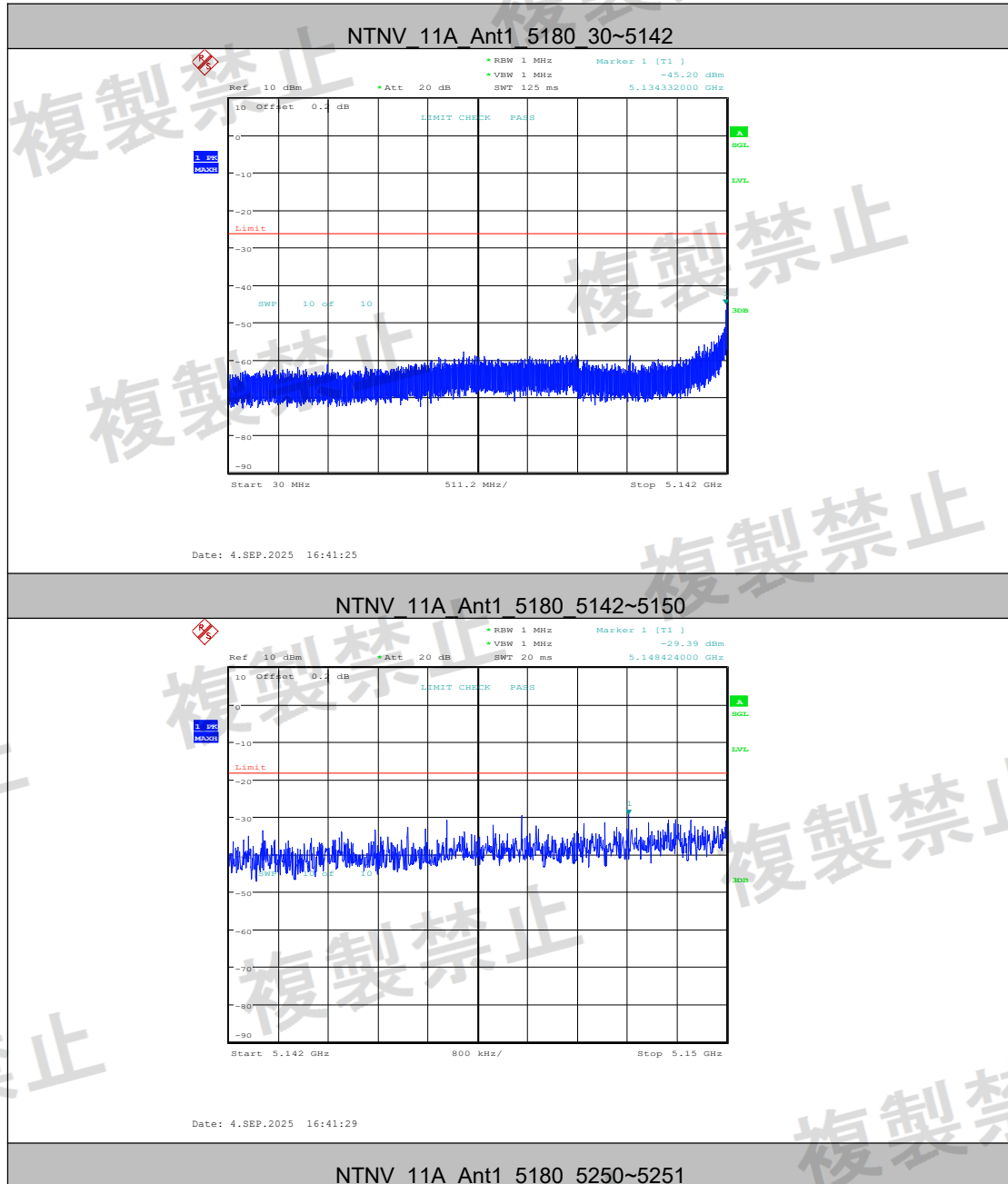
		5230	5270~5278.4	5278.02	-42.66	-42.66	0.05420	≤2.6	PASS
			5278.4~26000	5281.16	-48.90	-48.90	0.01288	≤2.5	PASS
			30~5141.6	5127.12	-49.52	-49.52	0.01117	≤2.5	PASS
			5141.6~5150	5149.31	-40.98	-40.98	0.07980	≤15	PASS
			5250~5251	5250.91	-17.46	-17.46	17.94734	≤61.5	PASS
			5251~5270	5265.84	-23.50	-23.50	4.46684	≤11.9	PASS
			5270~5278.4	5275.72	-30.91	-30.91	0.81096	≤3.6	PASS
			5278.4~26000	5278.40	-36.48	-36.48	0.22491	≤2.5	PASS

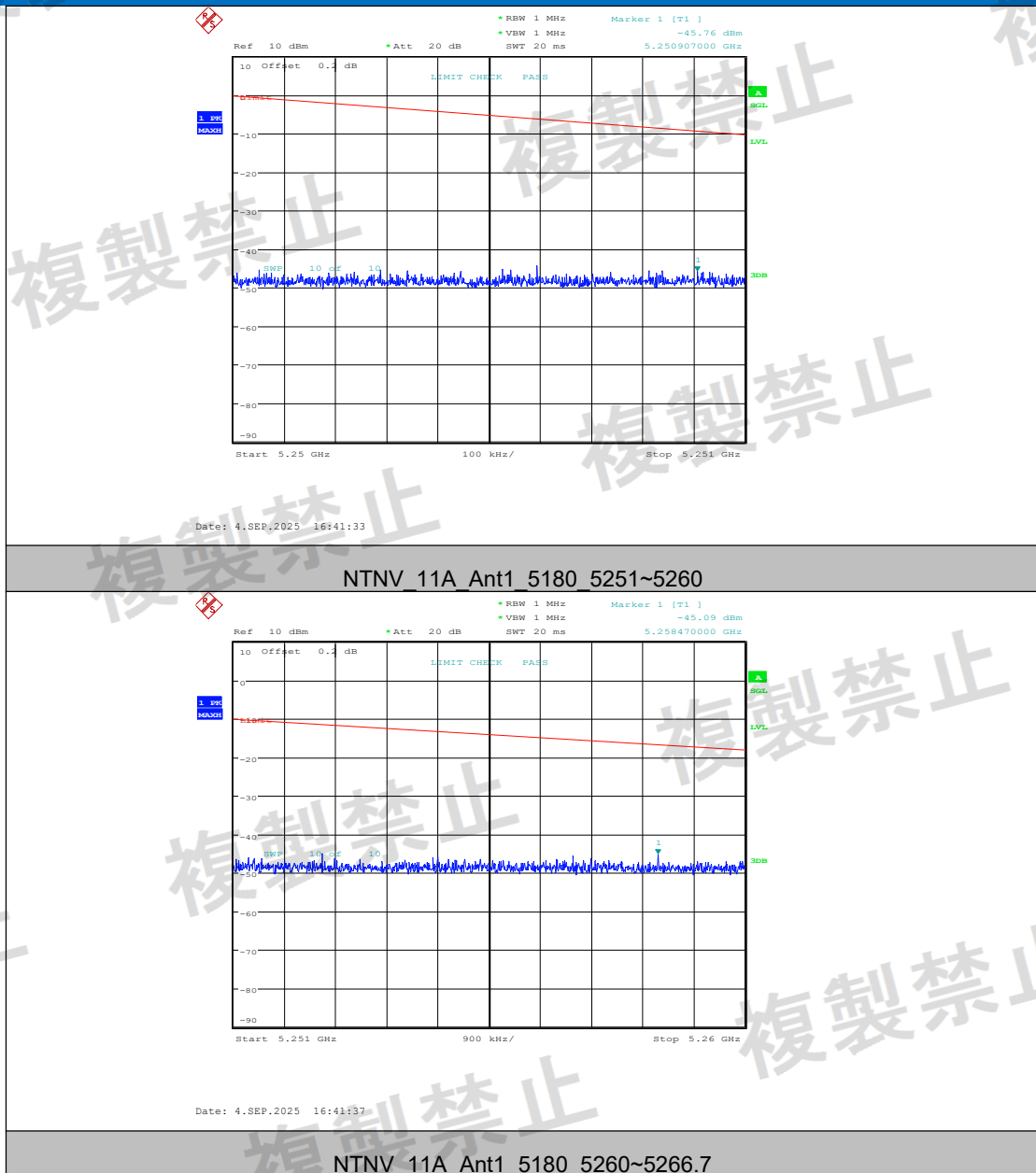
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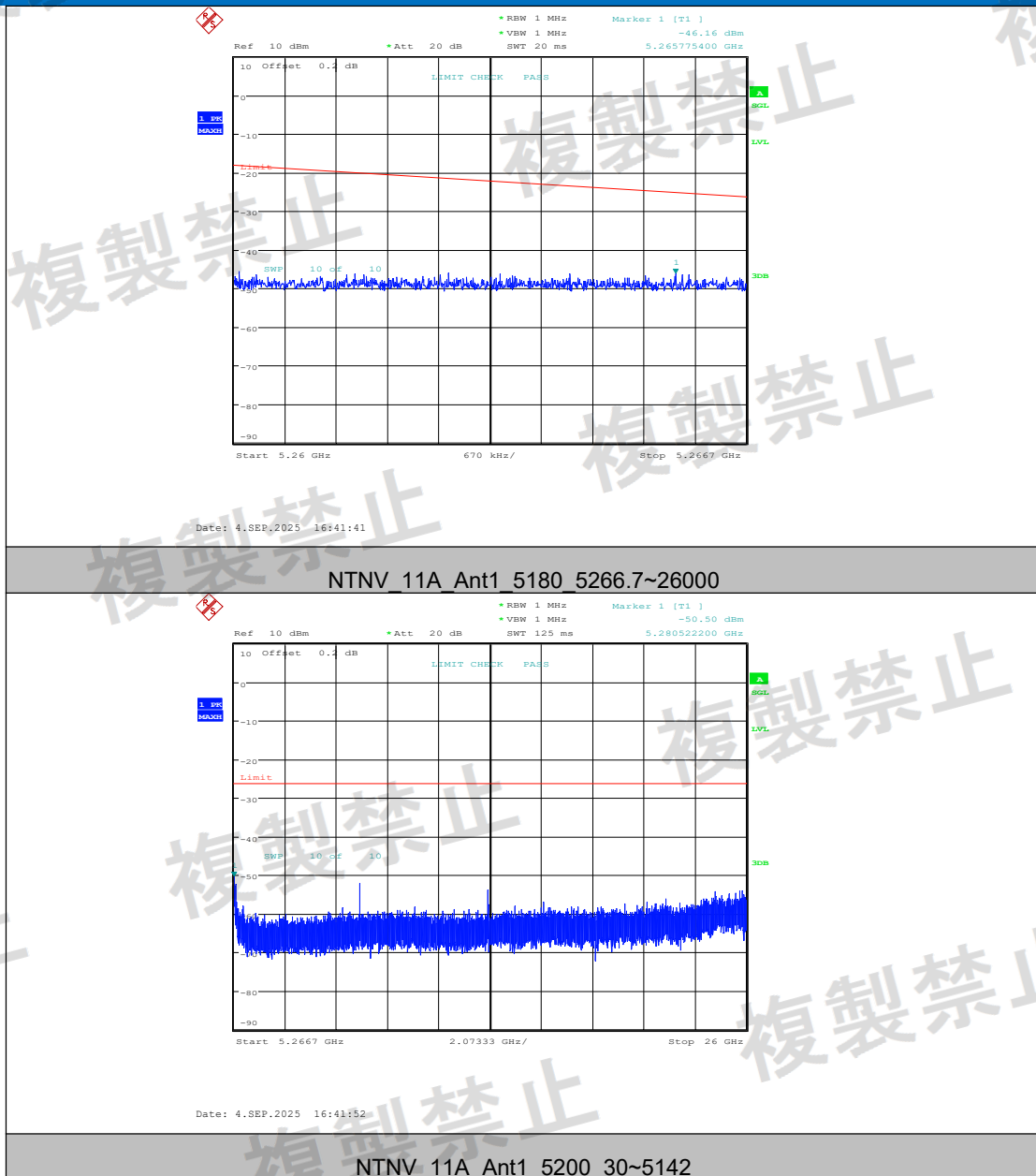
Test Condition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq [MHz]	Result [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	11AX20SISO	Ant1	5180	30~5142	5118.14	-49.10	0.01230	≤2.5	PASS
				5142~5150	5147.20	-32.96	0.50582	≤15	PASS
				5250~5251	5250.95	-45.46	0.02844	≤112.2	PASS
				5251~5260	5259.70	-45.28	0.02965	≤16.9	PASS
				5260~5266.7	5266.54	-45.89	0.02576	≤2.6	PASS
				5266.7~26000	5269.46	-49.49	0.01125	≤2.5	PASS
			5200	30~5142	5140.81	-49.92	0.01019	≤2.5	PASS
				5142~5150	5148.35	-43.23	0.04753	≤15	PASS
				5250~5251	5250.90	-43.47	0.04498	≤125.9	PASS
				5251~5260	5259.87	-45.06	0.03119	≤16.3	PASS
				5260~5266.7	5266.49	-45.29	0.02958	≤2.6	PASS
				5266.7~26000	5268.08	-49.23	0.01194	≤2.5	PASS
			5240	30~5142	5136.89	-52.85	0.00519	≤2.5	PASS
				5142~5150	5148.67	-52.13	0.00612	≤15	PASS
				5250~5251	5250.15	-11.10	77.62471	≤707.9	PASS
				5251~5260	5251.02	-24.02	3.96278	≤99.6	PASS
				5260~5266.7	5260.84	-37.50	0.17783	≤12.6	PASS

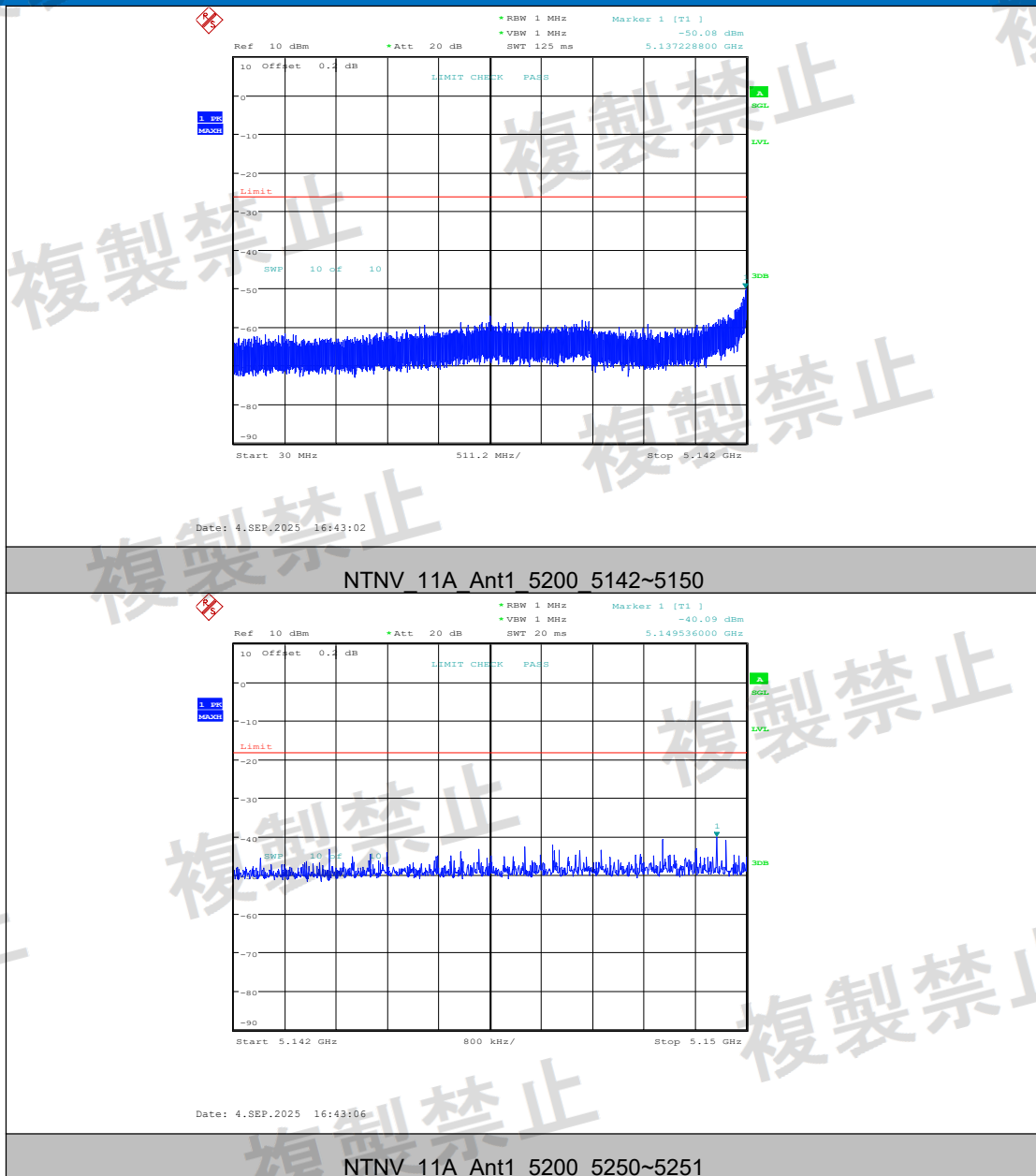
	11AX40SIS O	Ant1	5190	5266.7~260 00	5279.14	-50.30	0.0093 3	≤2.5	PASS
				30~5141.6	5140.07	-44.86	0.0326 6	≤2.5	PASS
				5141.6~515 0	5149.53	-30.16	0.9638 3	≤15	PASS
				5250~5251	5251.00	-36.89	0.2046 4	≤50	PASS
				5251~5270	5269.24	-43.49	0.0447 7	≤8.5	PASS
				5270~5278. 4	5278.26	-44.88	0.0325 1	≤2.5	PASS
				5278.4~260 00	5281.16	-50.18	0.0095 9	≤2.5	PASS
			5230	30~5141.6	1927.60	-49.46	0.0113 2	≤2.5	PASS
				5141.6~515 0	5148.59	-42.75	0.0530 9	≤15	PASS
				5250~5251	5250.85	-17.22	18.967 06	≤70.6	PASS
				5251~5270	5260.25	-22.89	5.1404 4	≤20.4	PASS
				5270~5278. 4	5274.46	-29.18	1.2078 1	≤4.3	PASS
				5278.4~260 00	5279.09	-43.65	0.0431 5	≤2.5	PASS

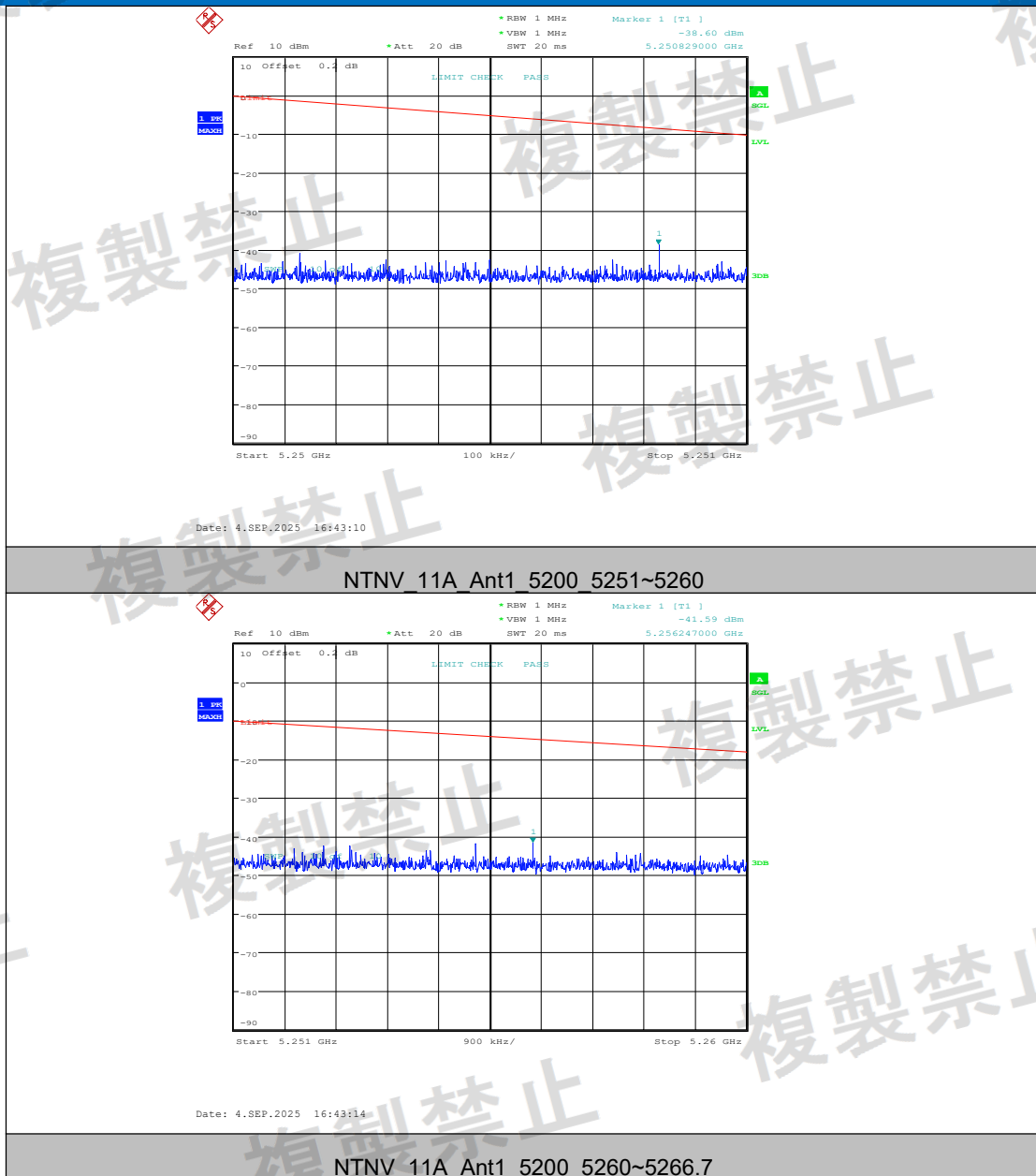
Test plot as follows:

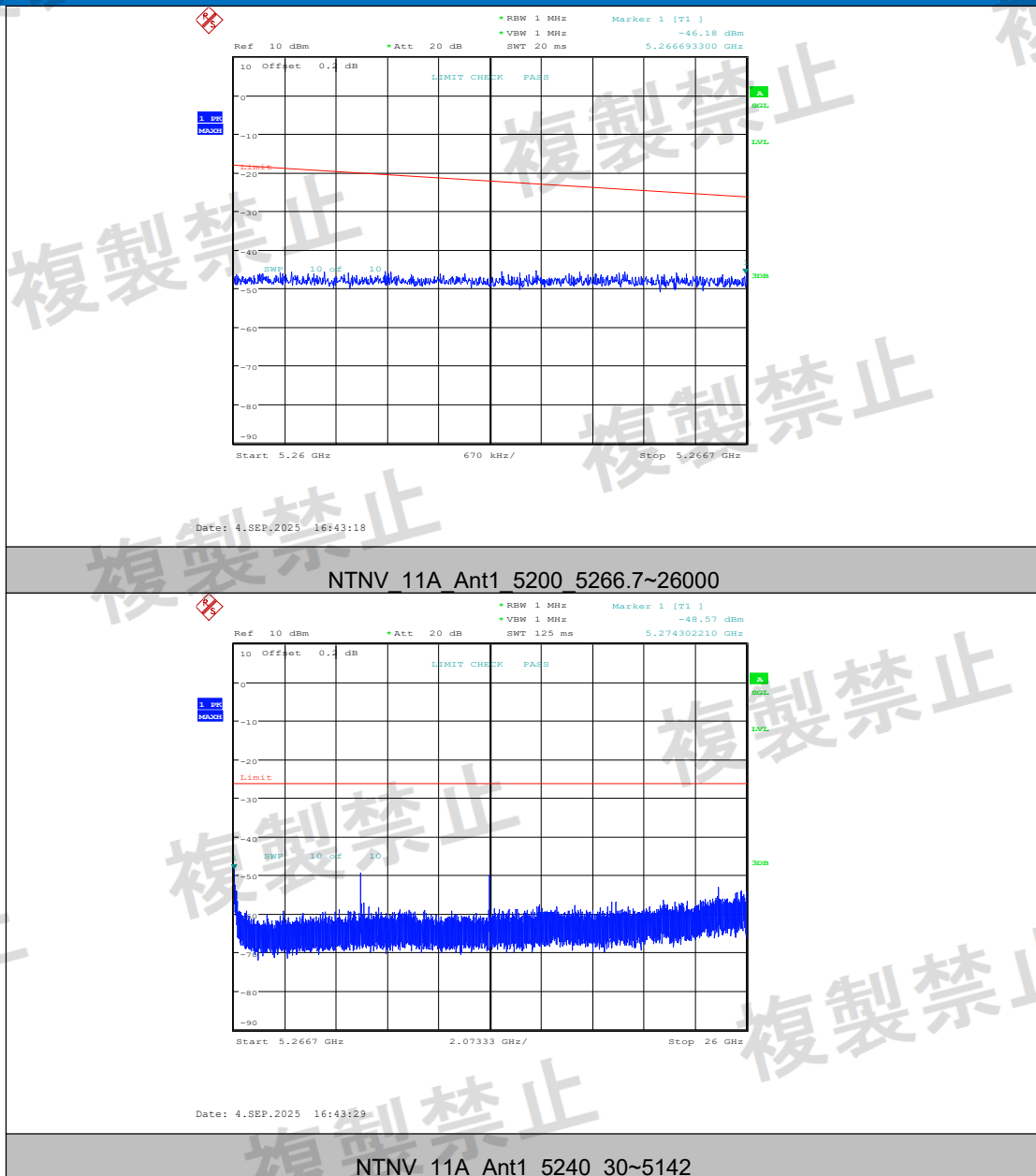


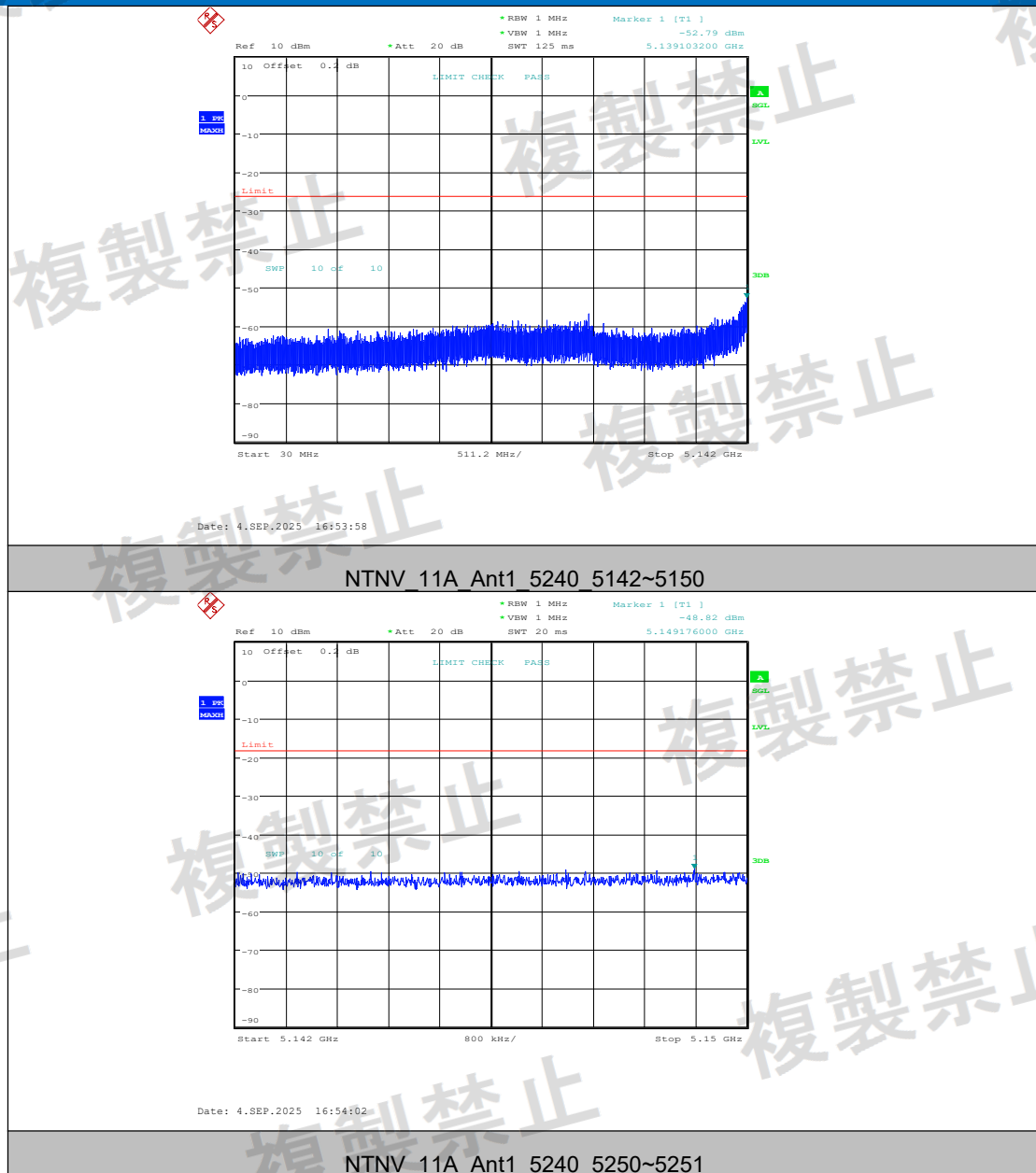


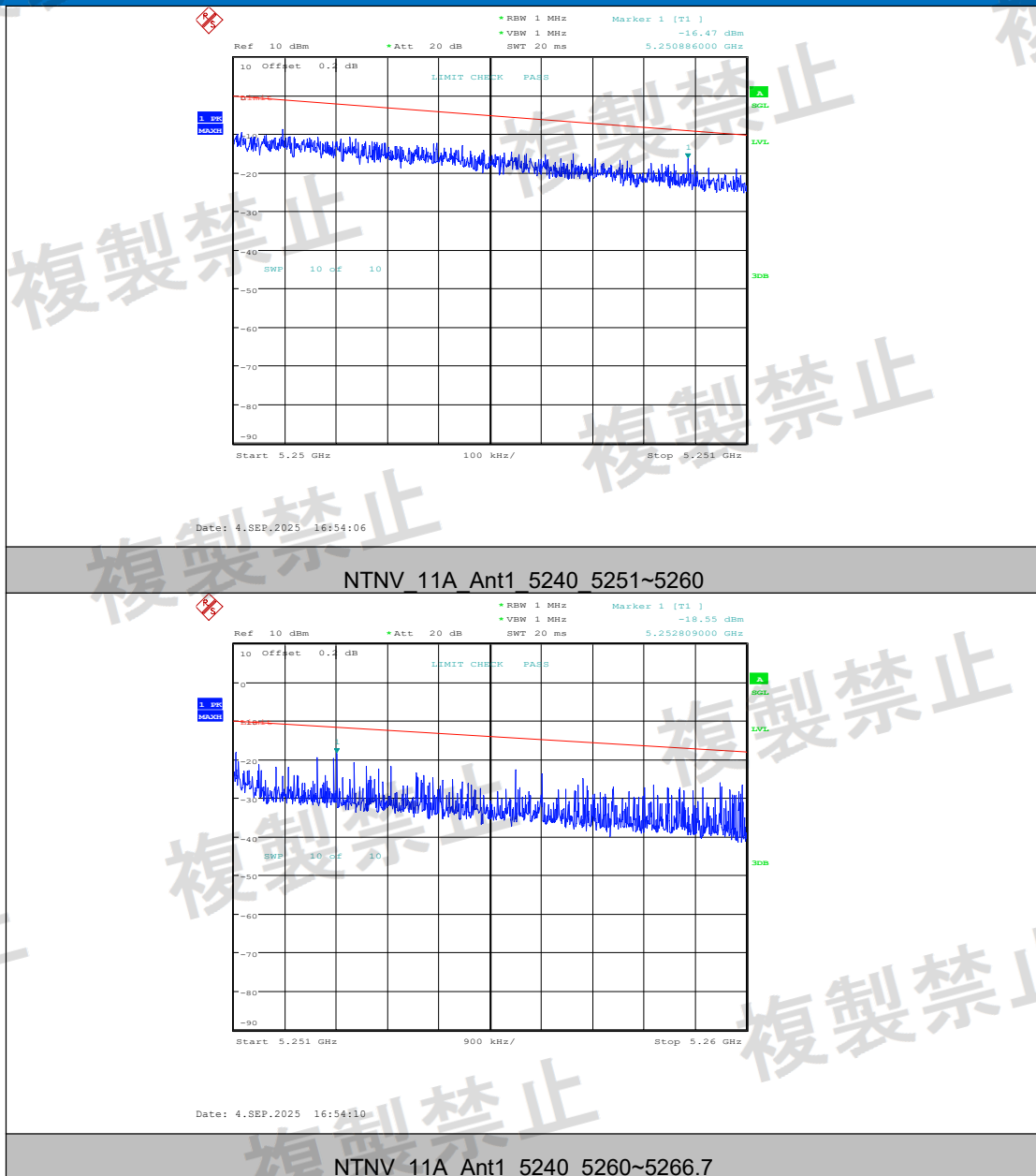


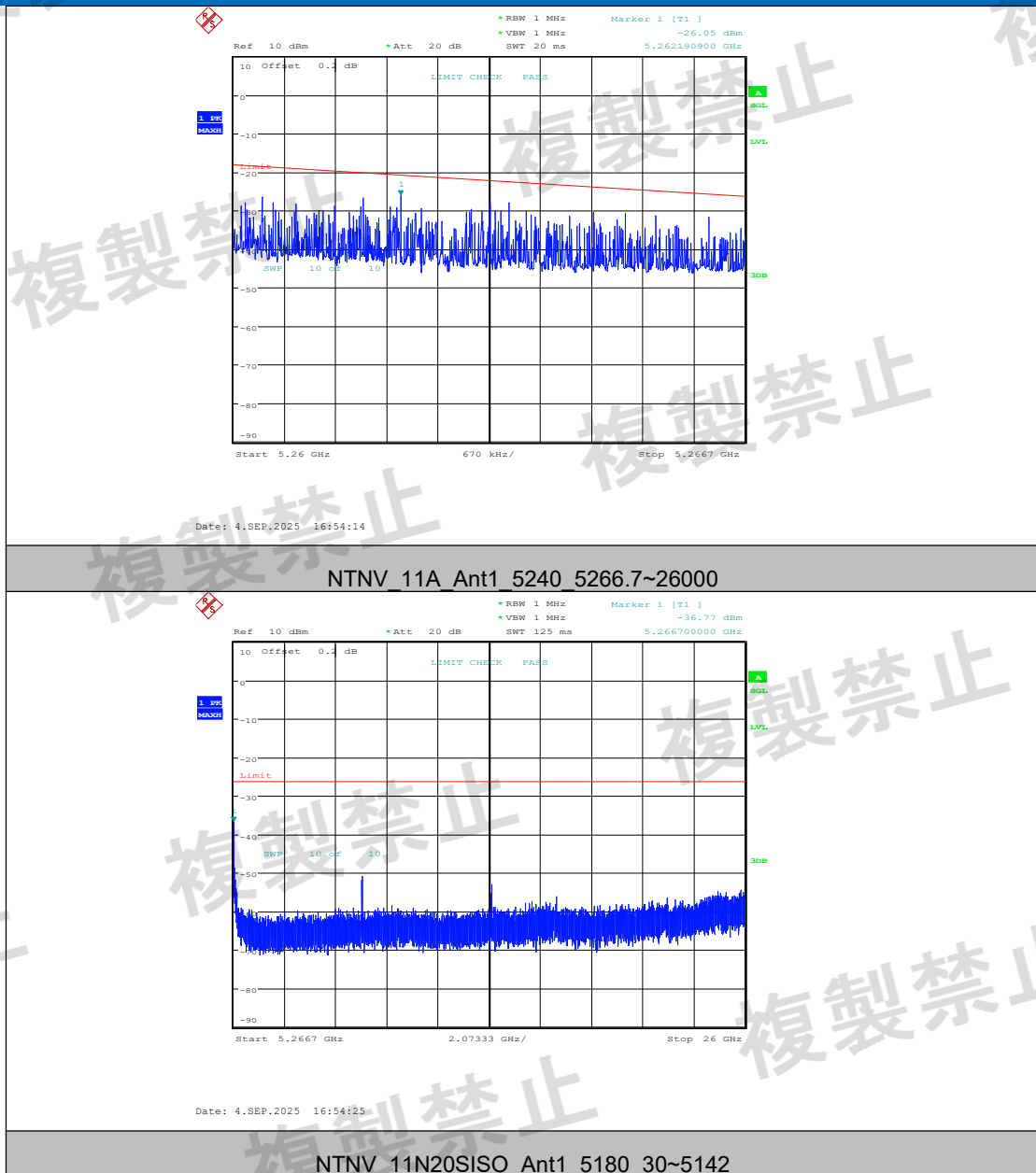


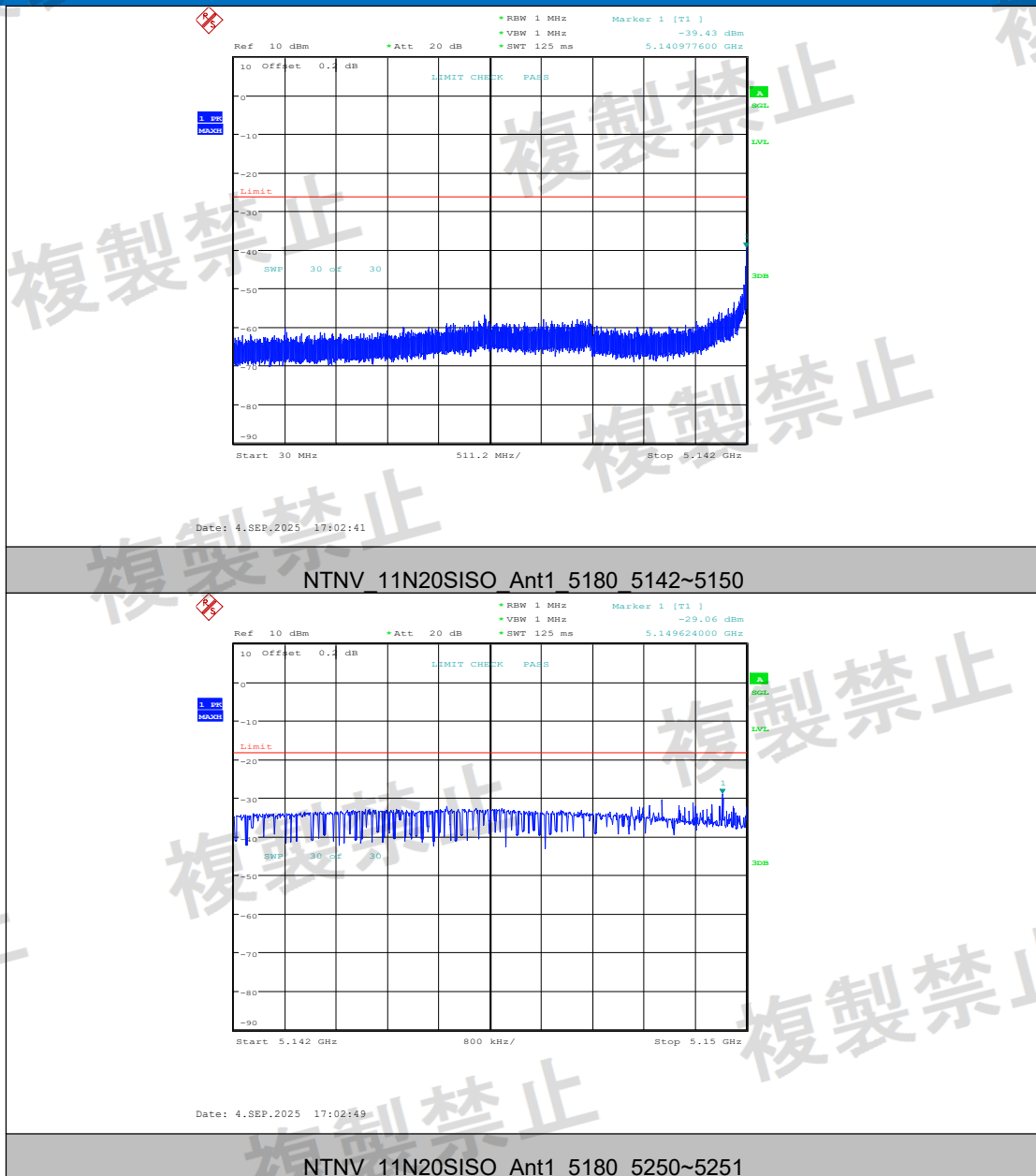


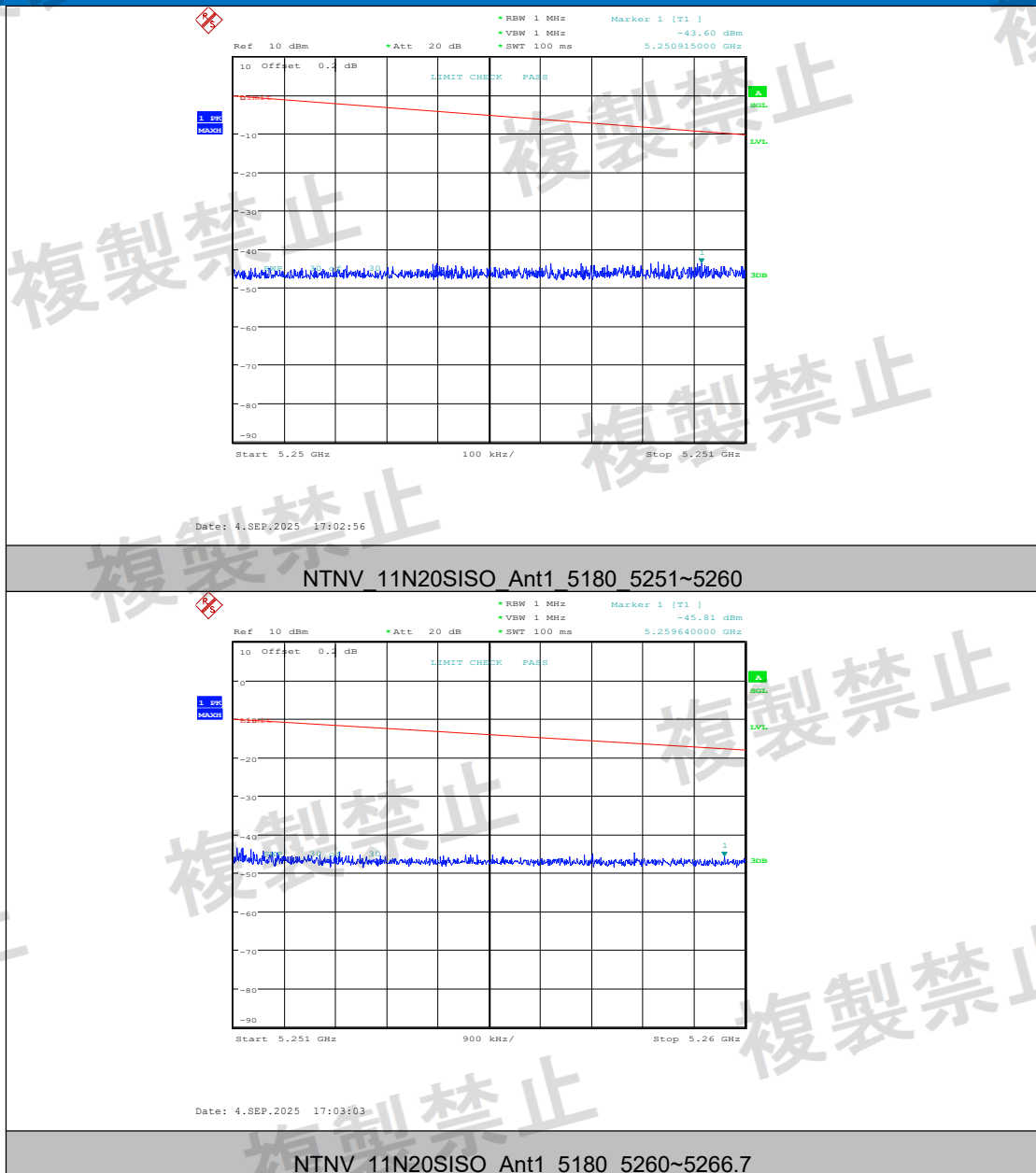


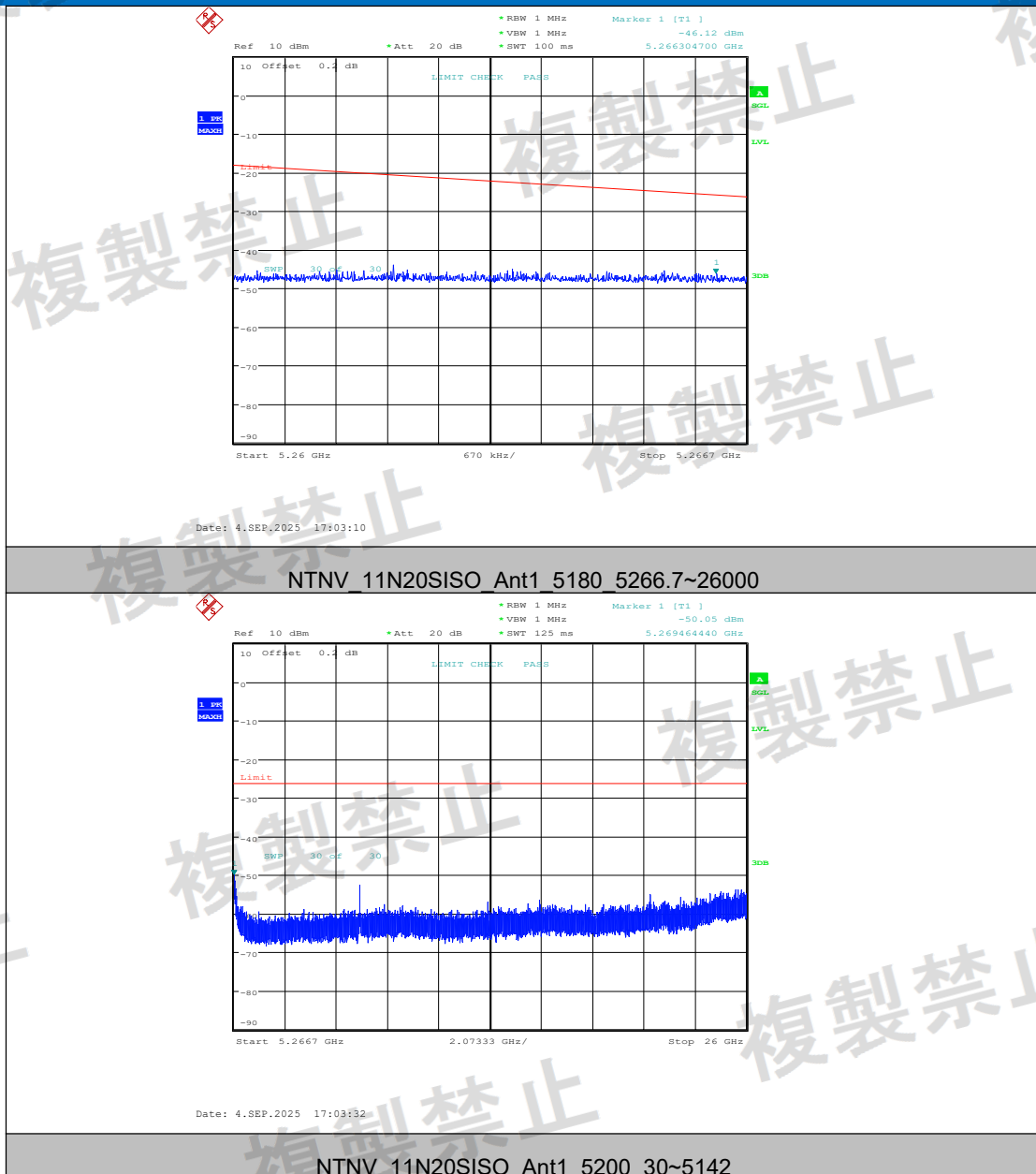


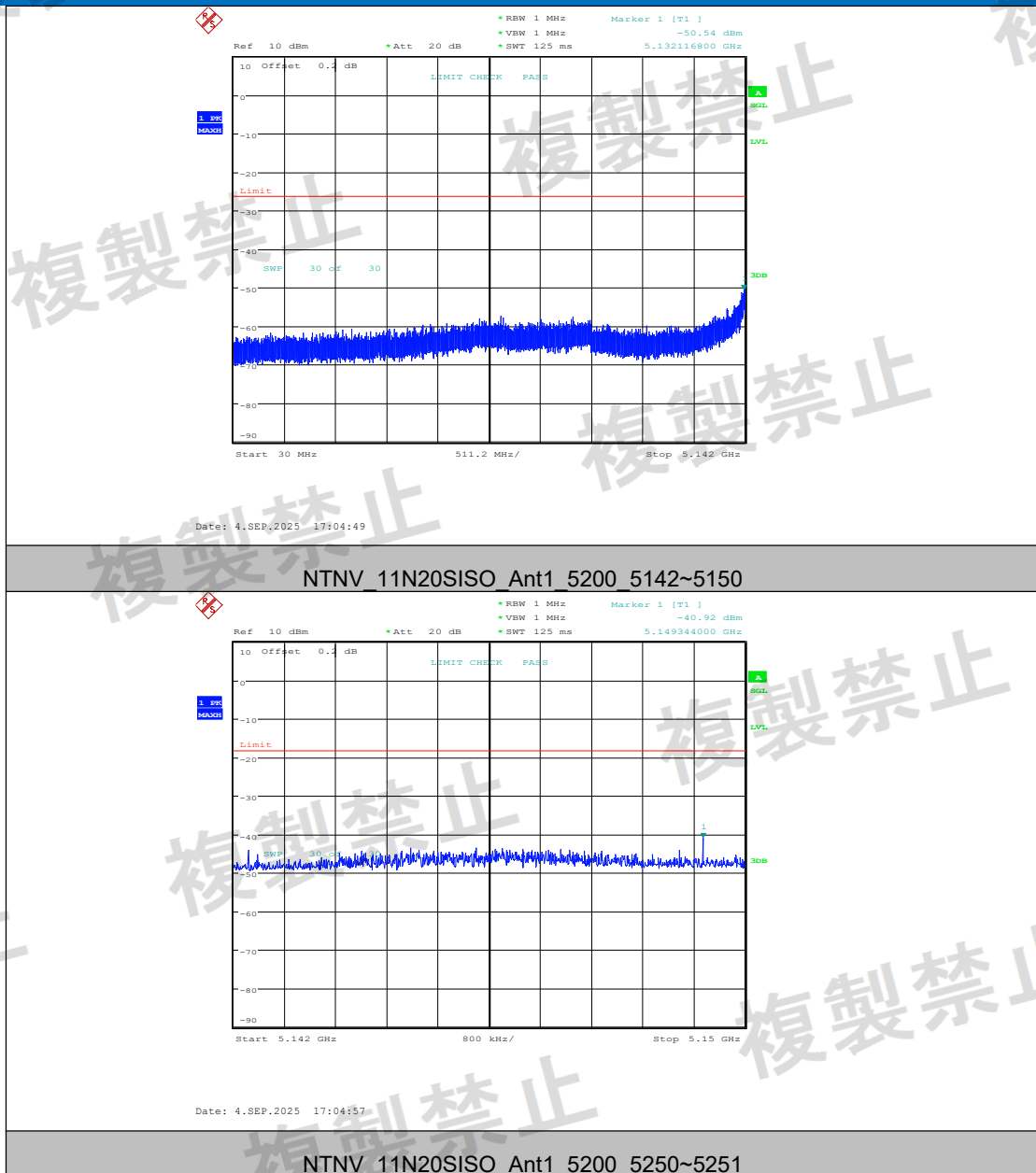


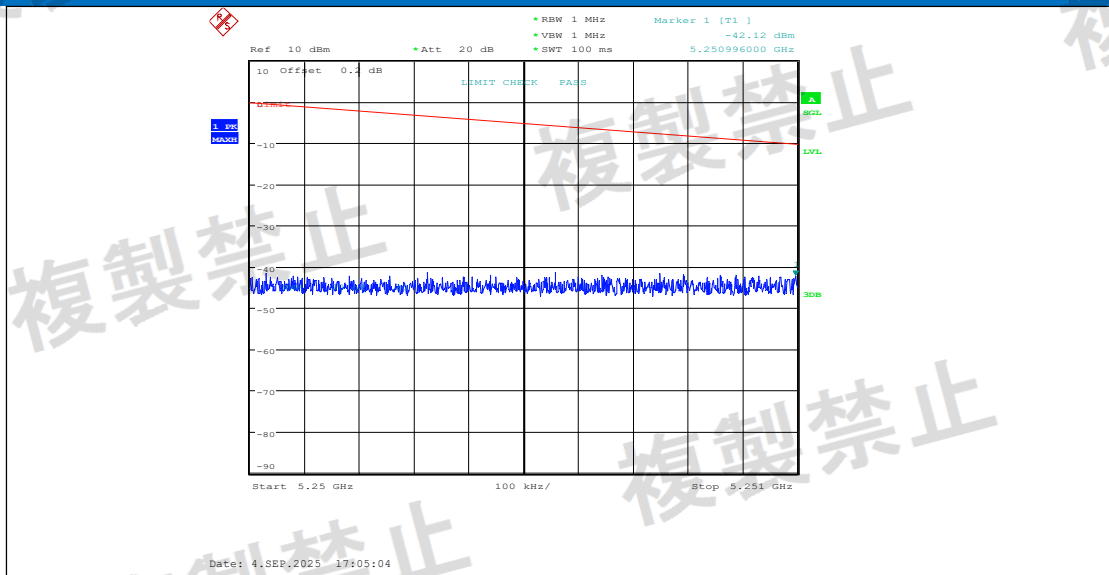




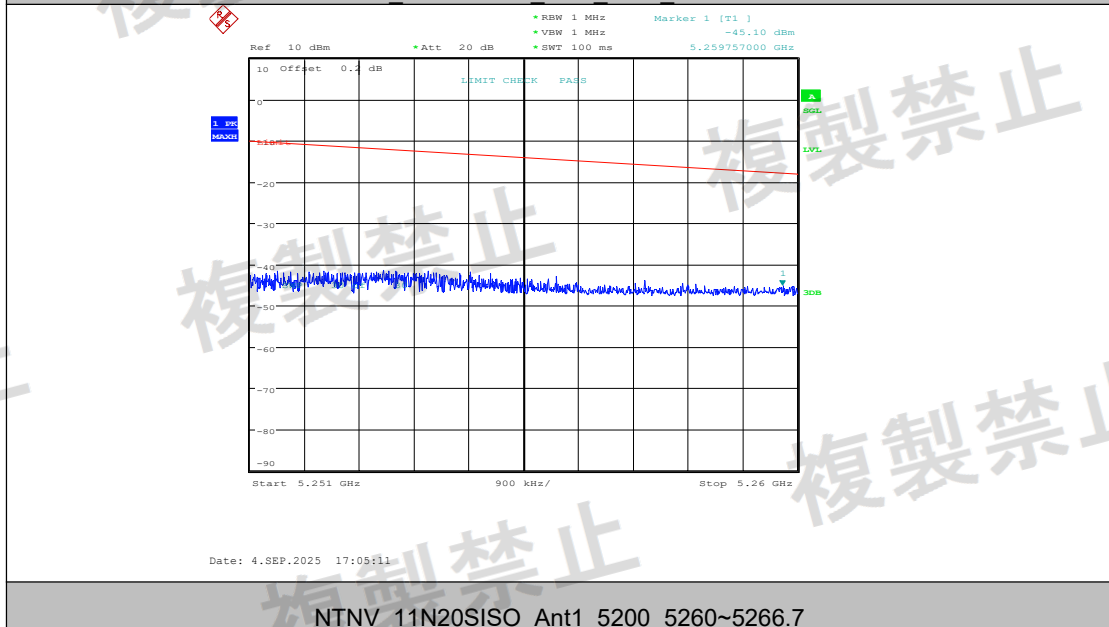




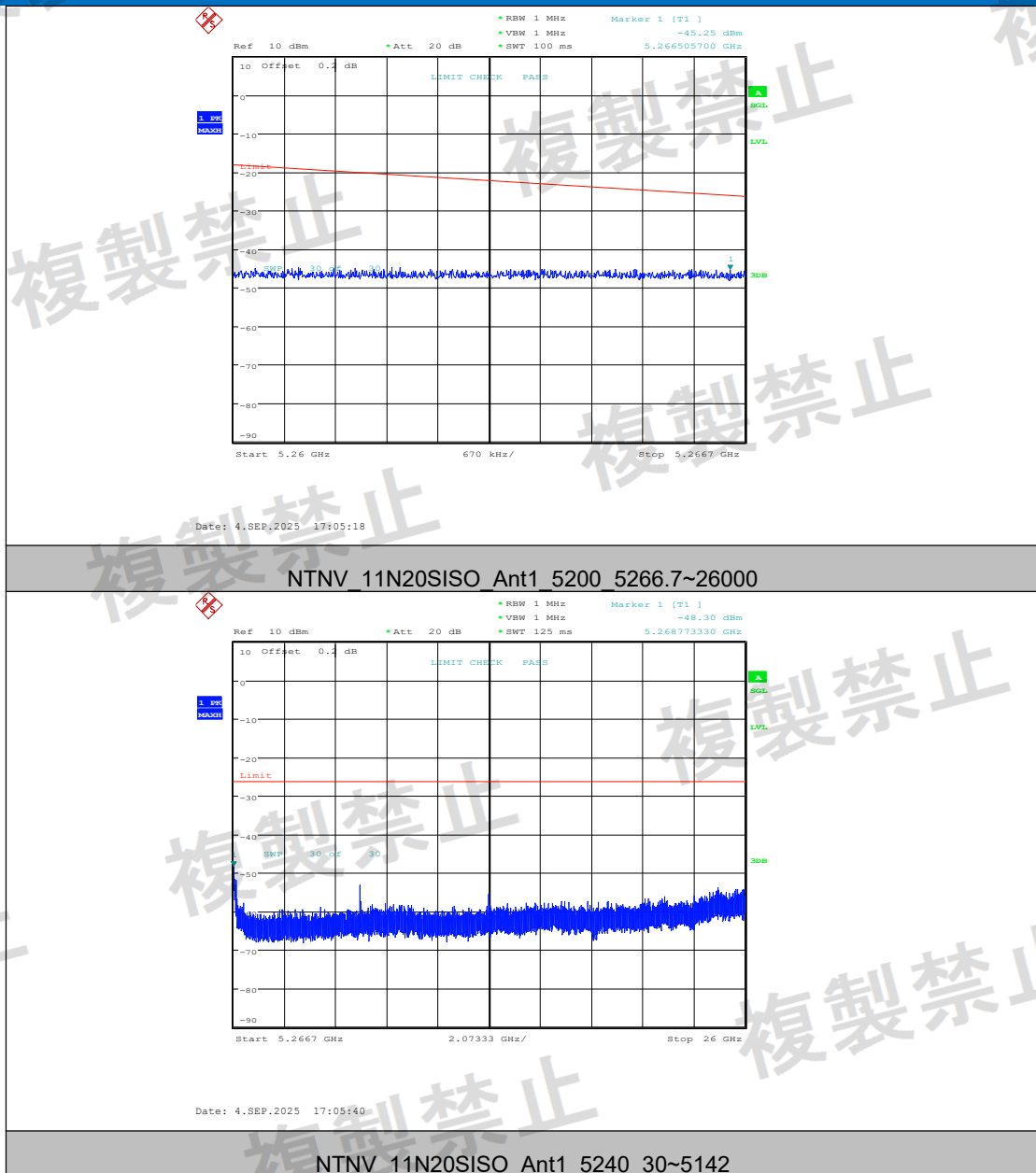


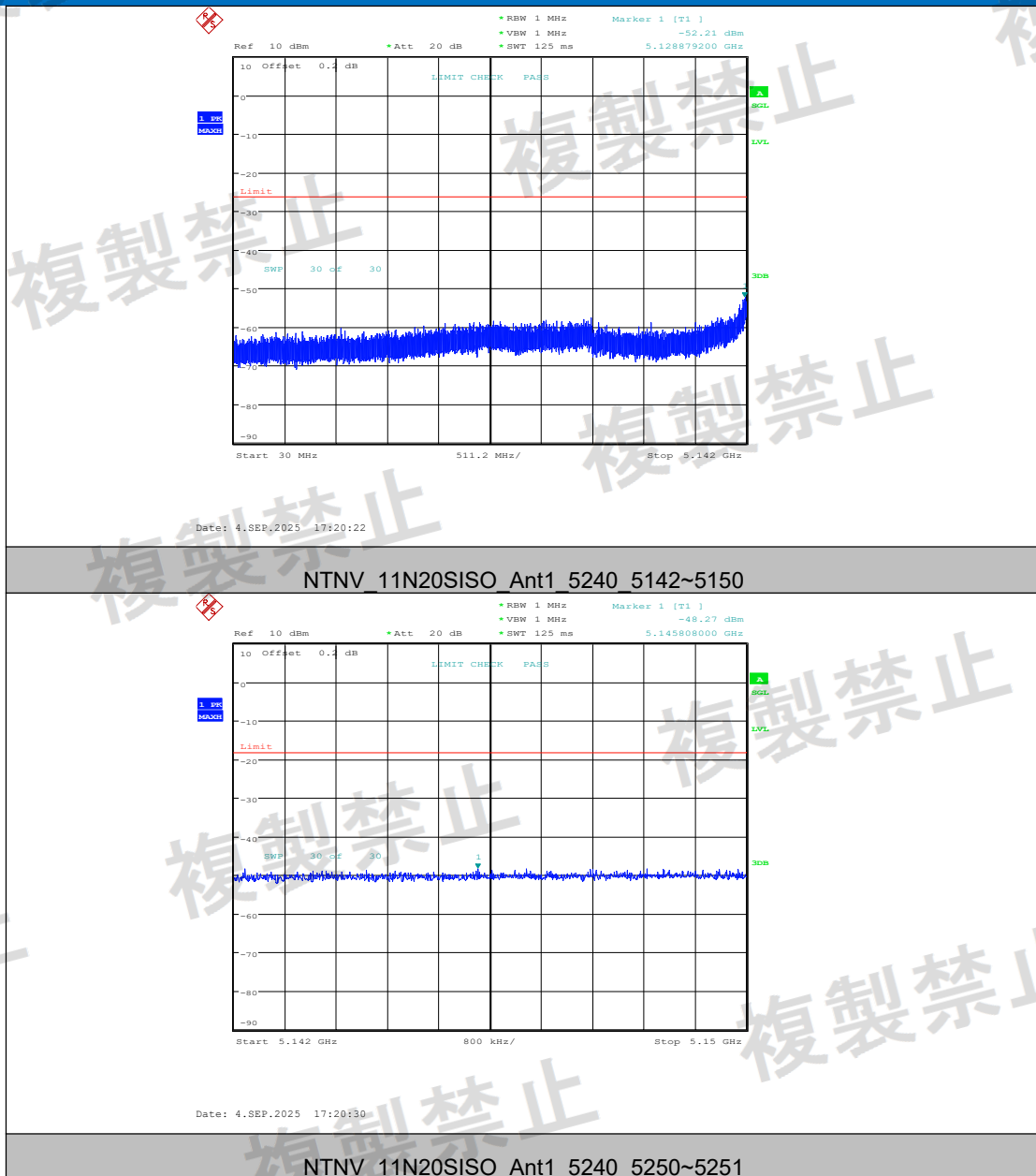


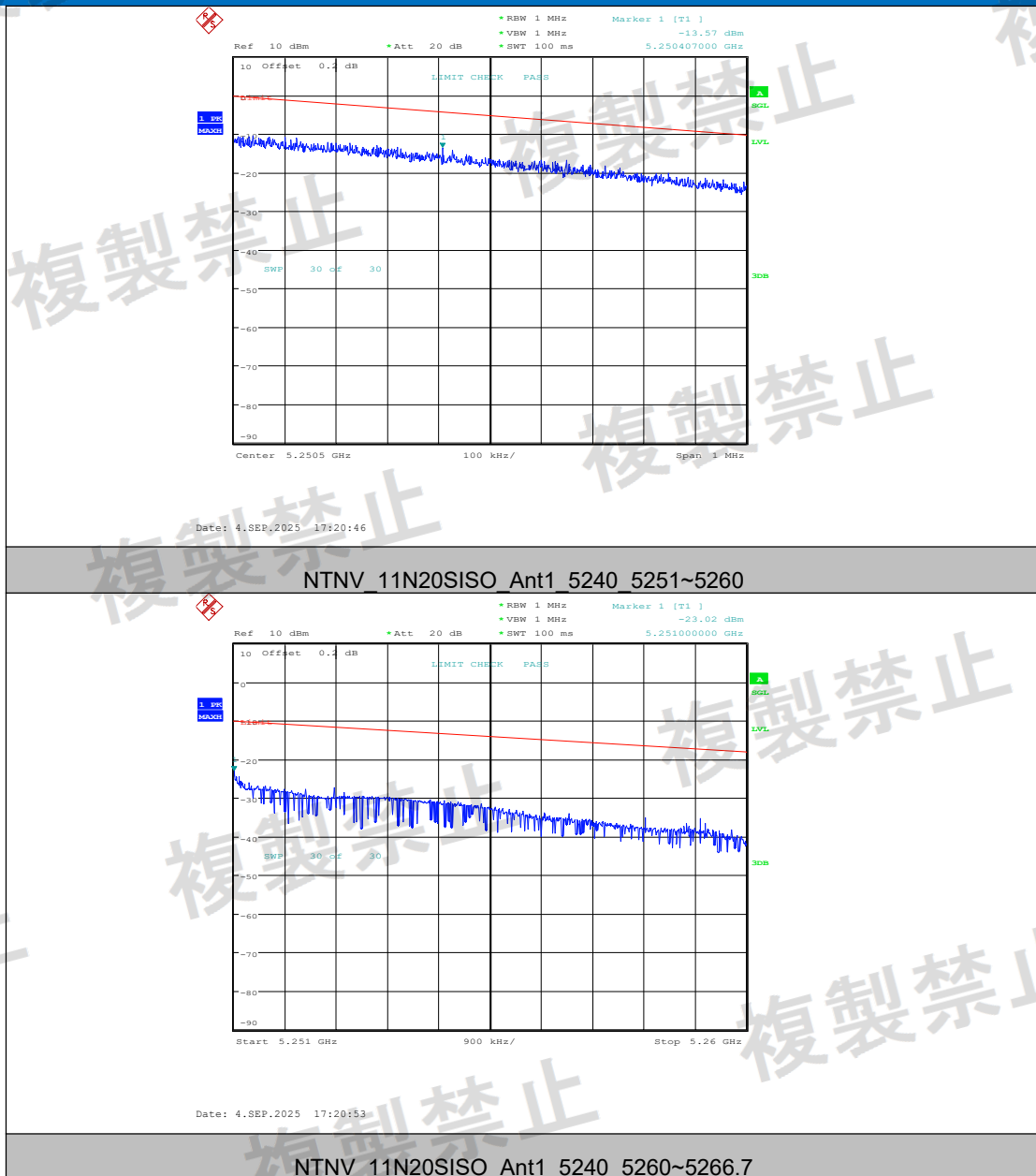
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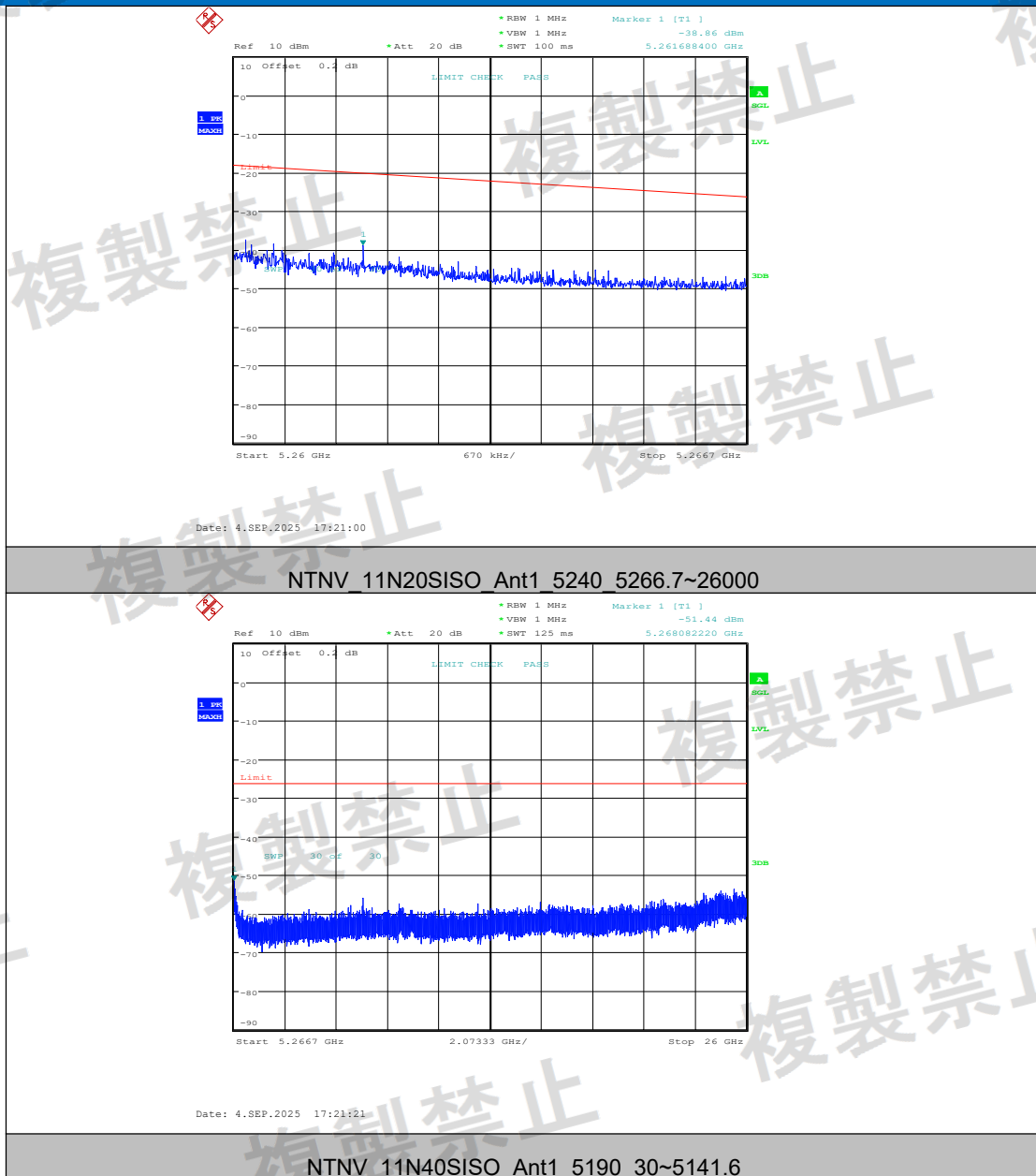


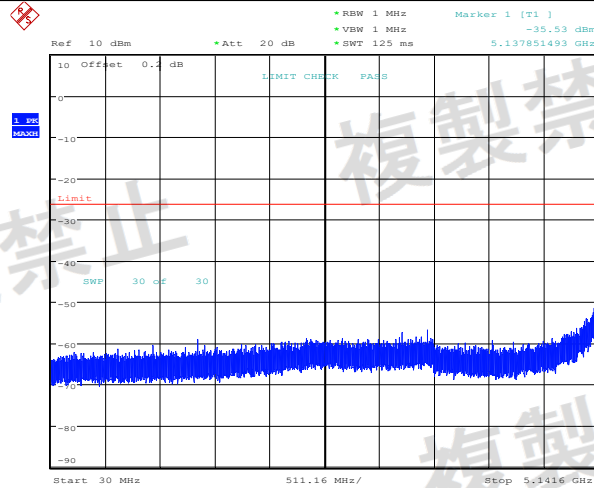
NTNV_11N20SISO_Ant1_5200_5260~5266.7





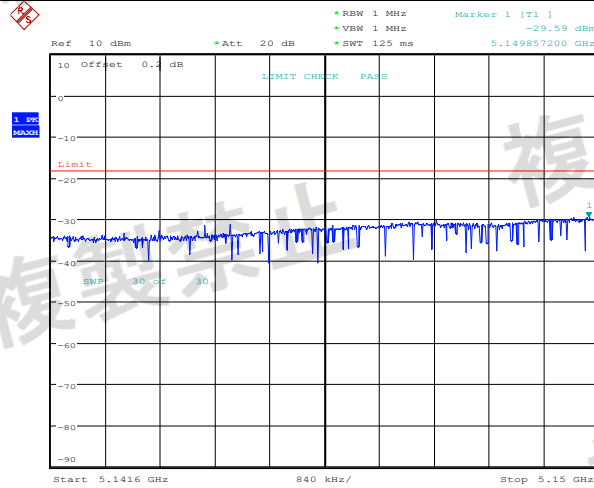






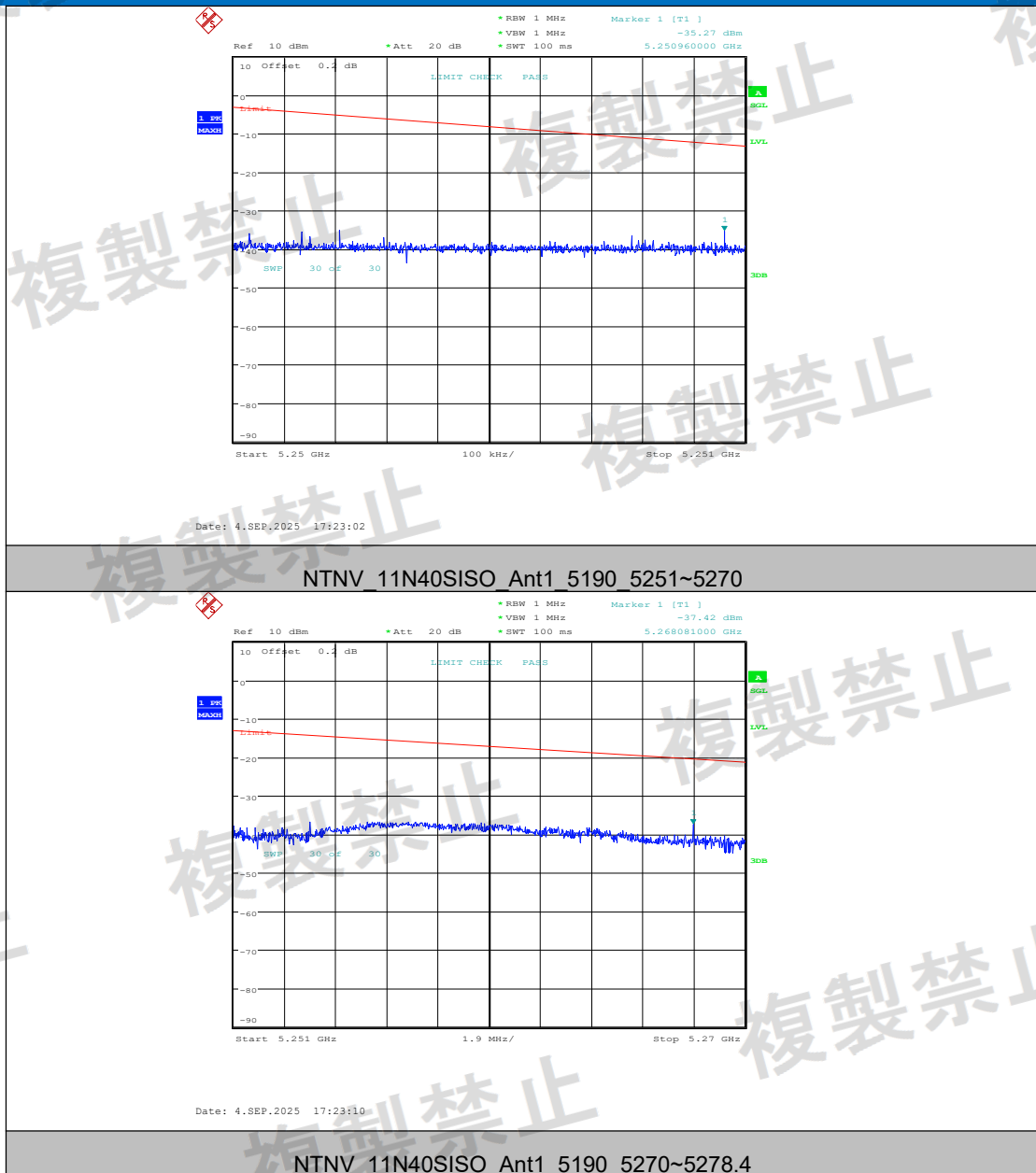
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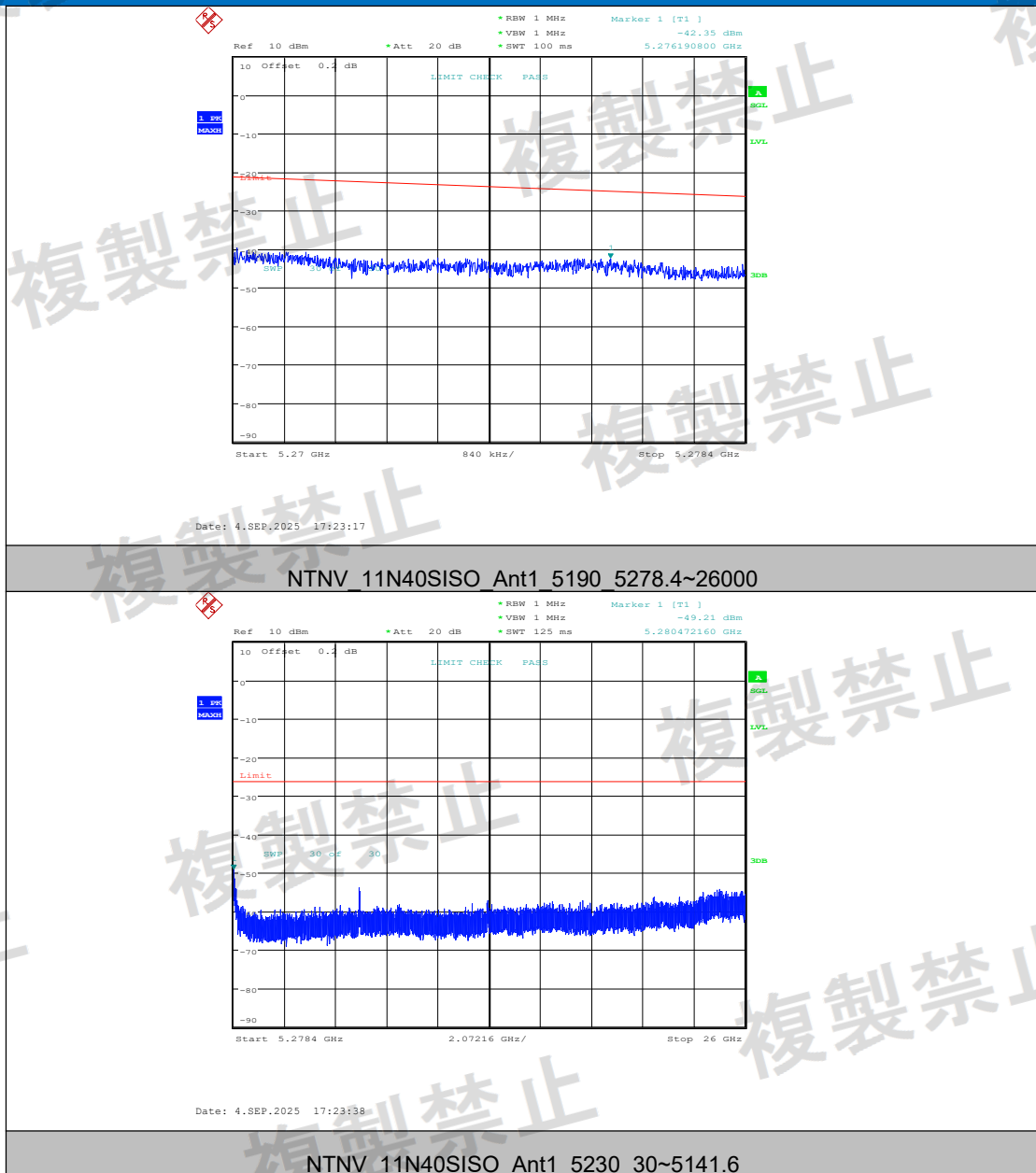
NTNV_11N40SISO_Ant1_5190_5141.6~5150

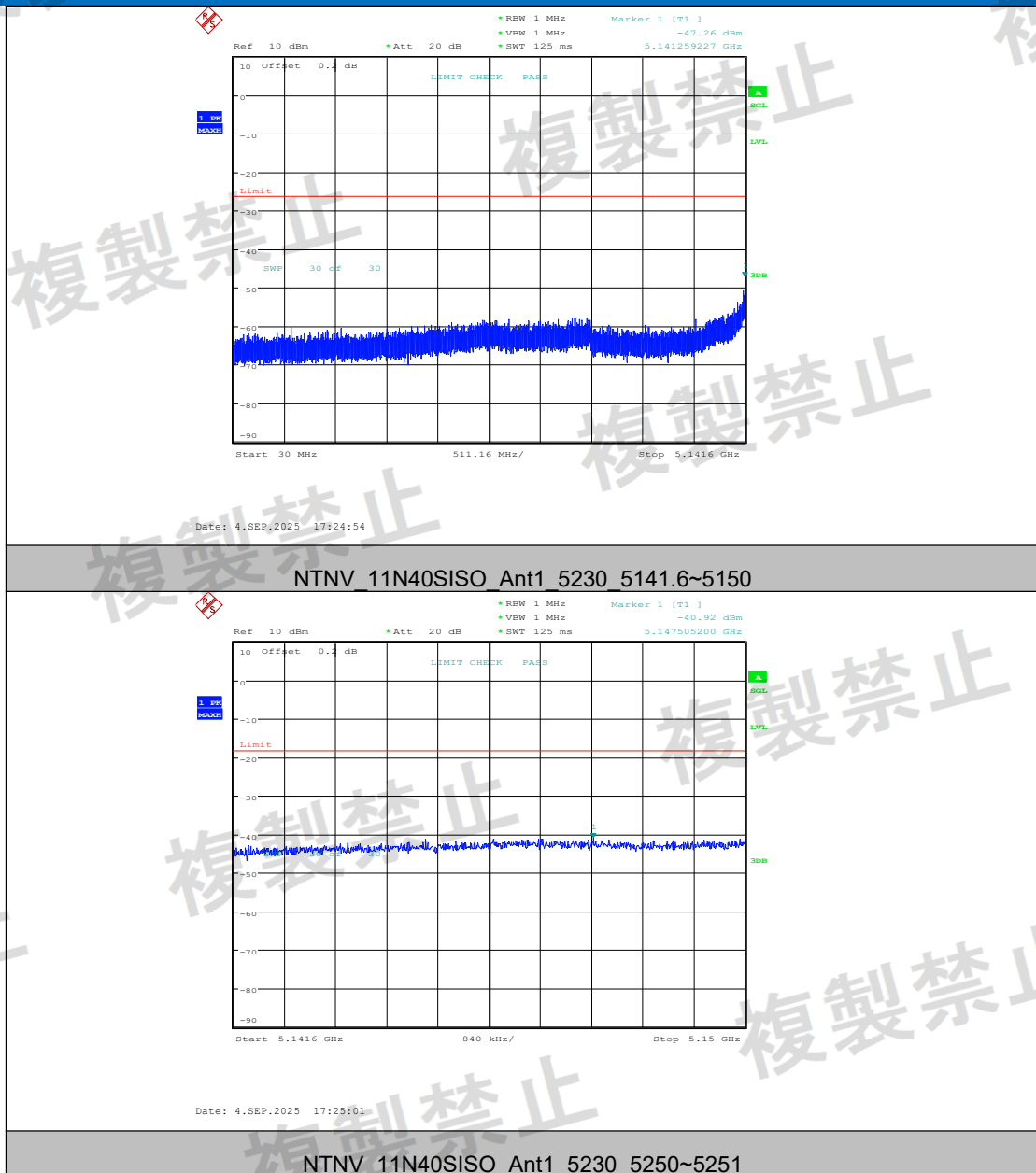


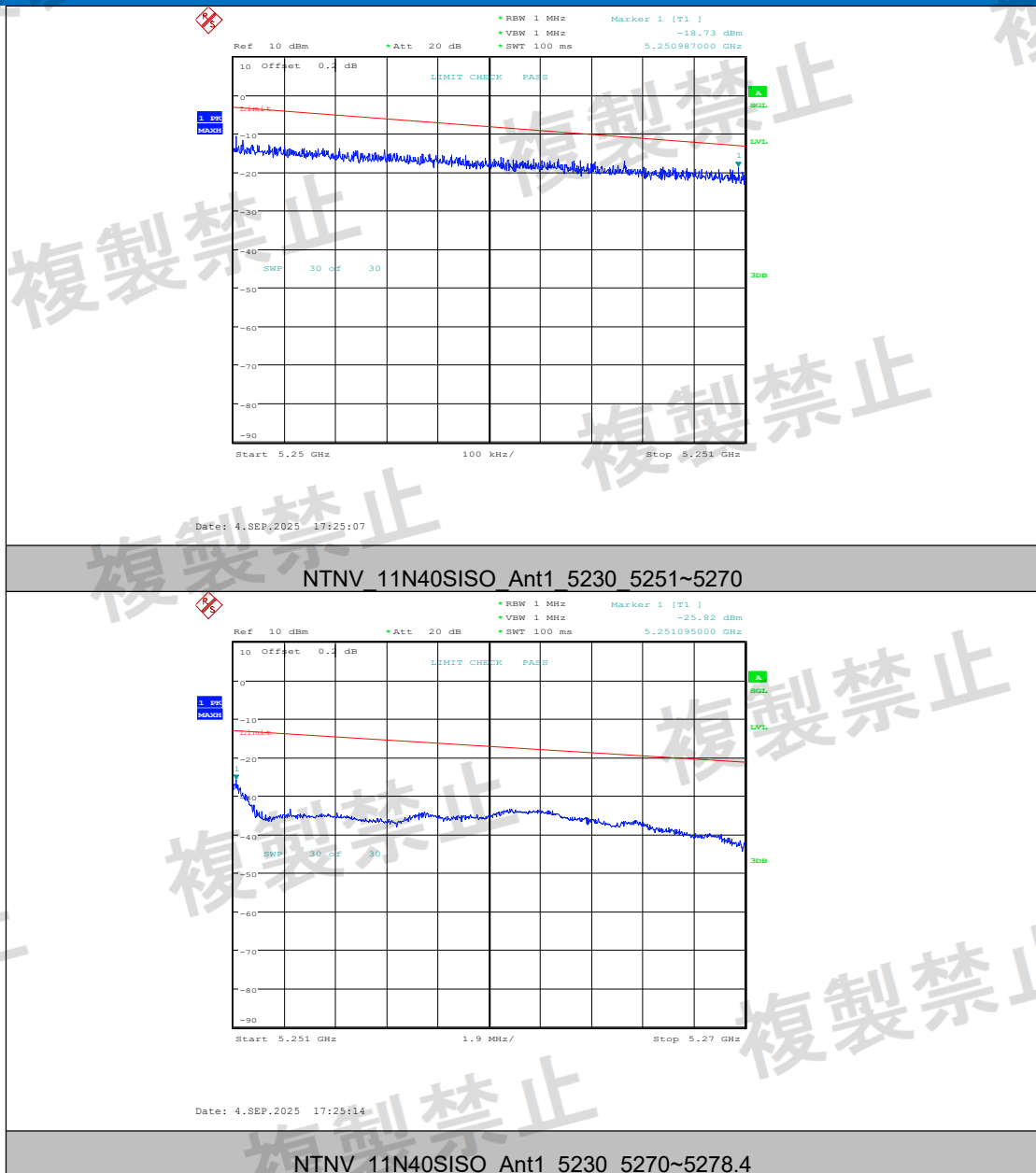
Date: 4.SEP.2025 17:22:56

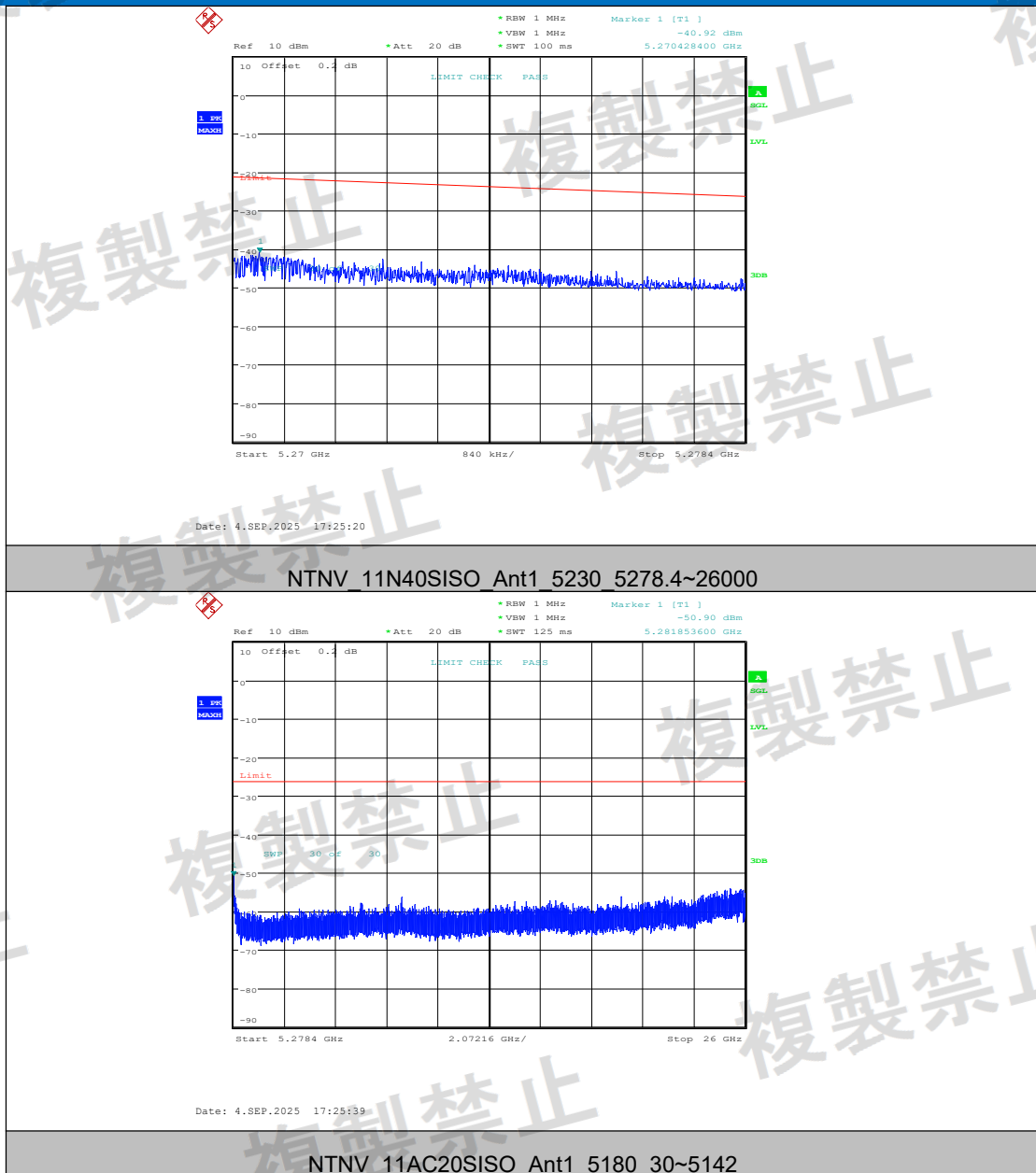
NTNV_11N40SISO_Ant1_5190_5250~5251

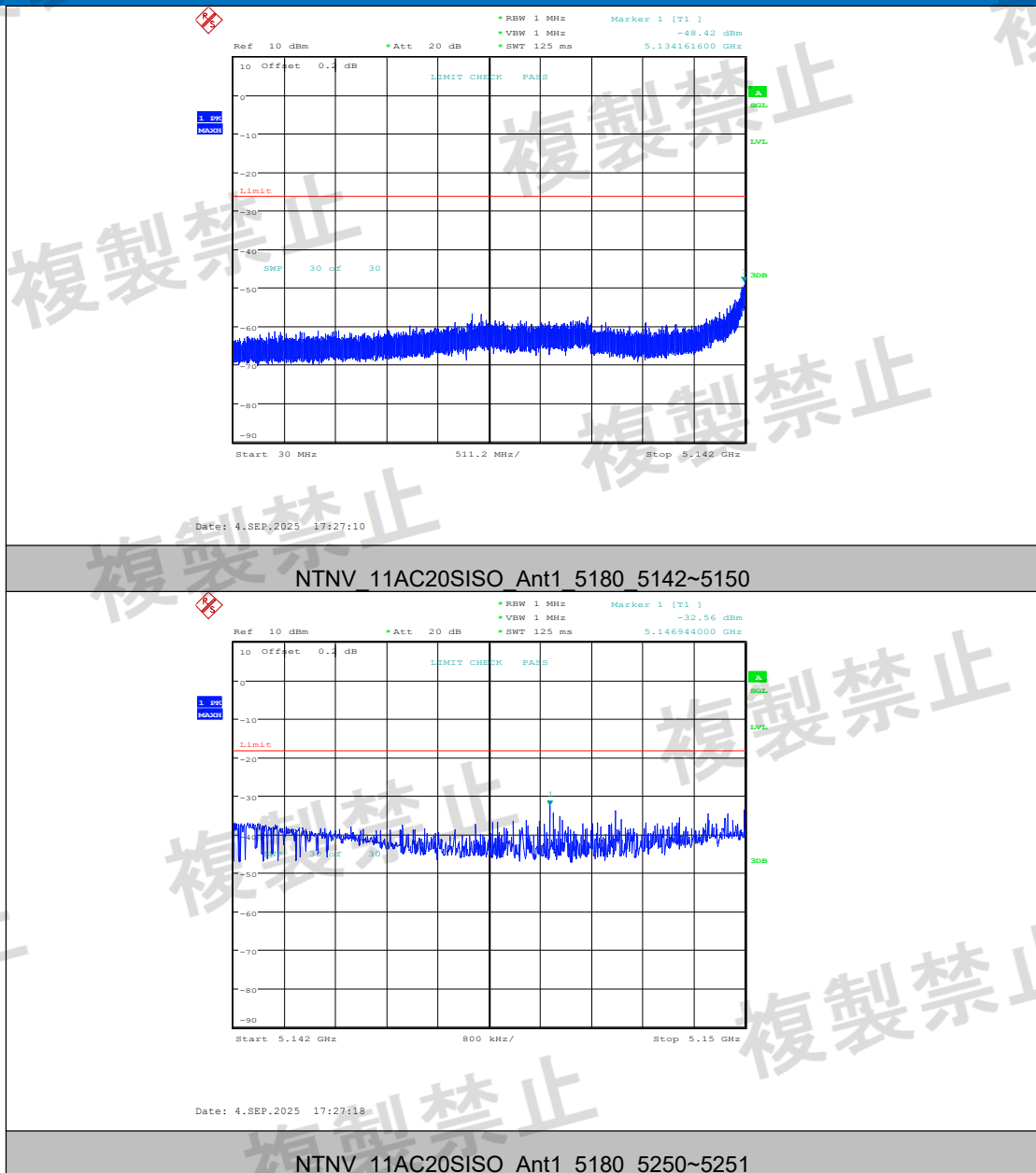


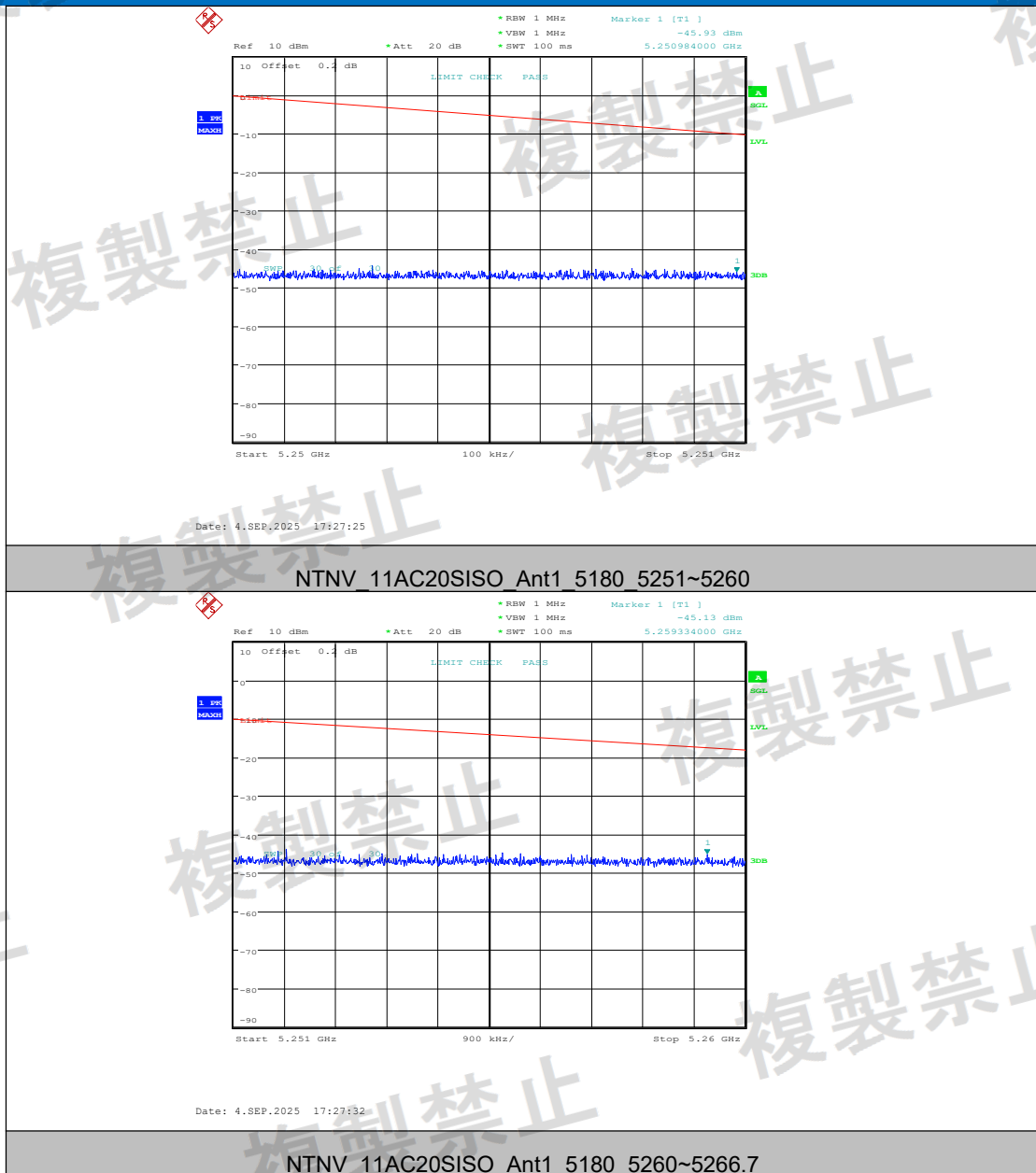


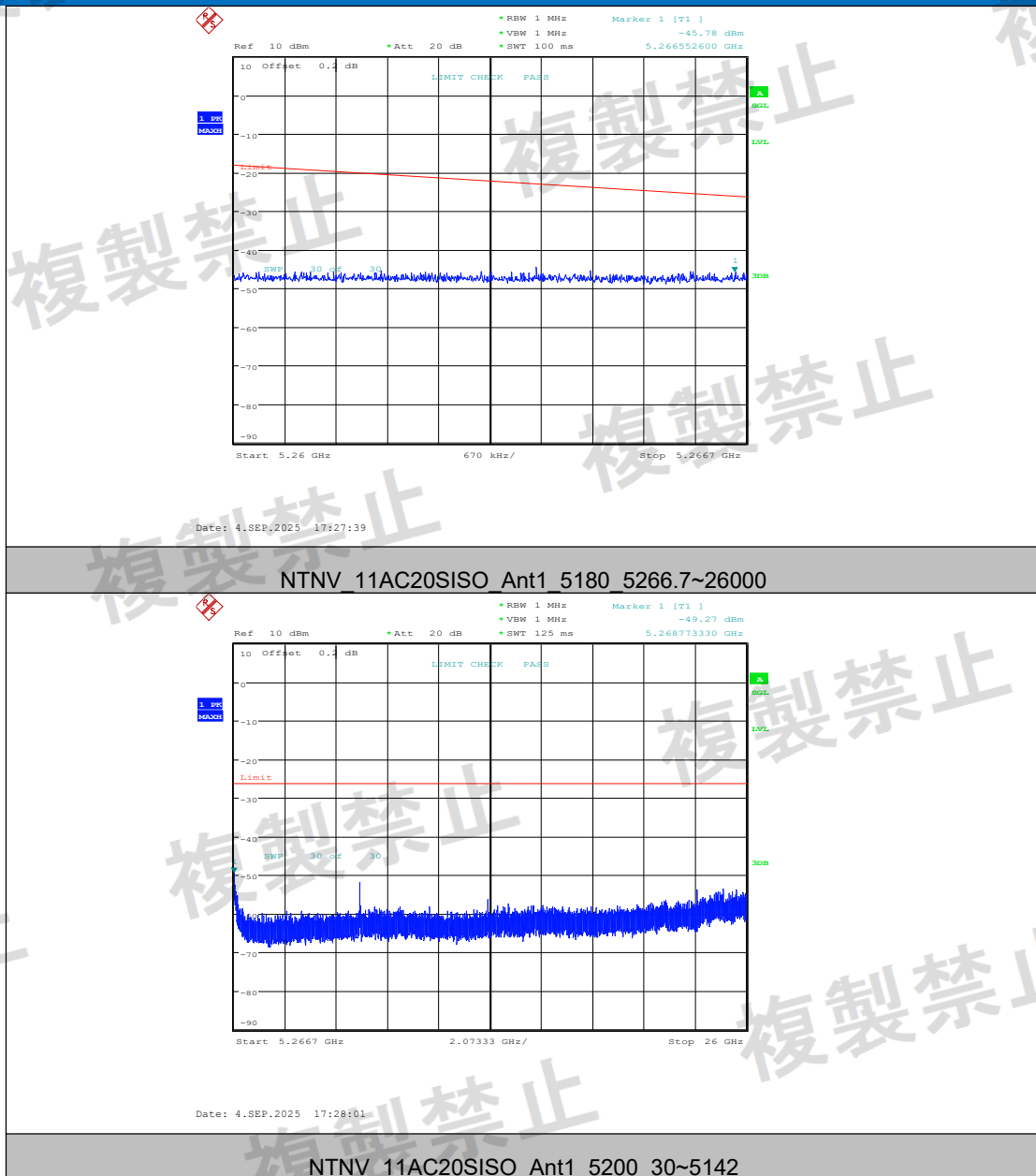


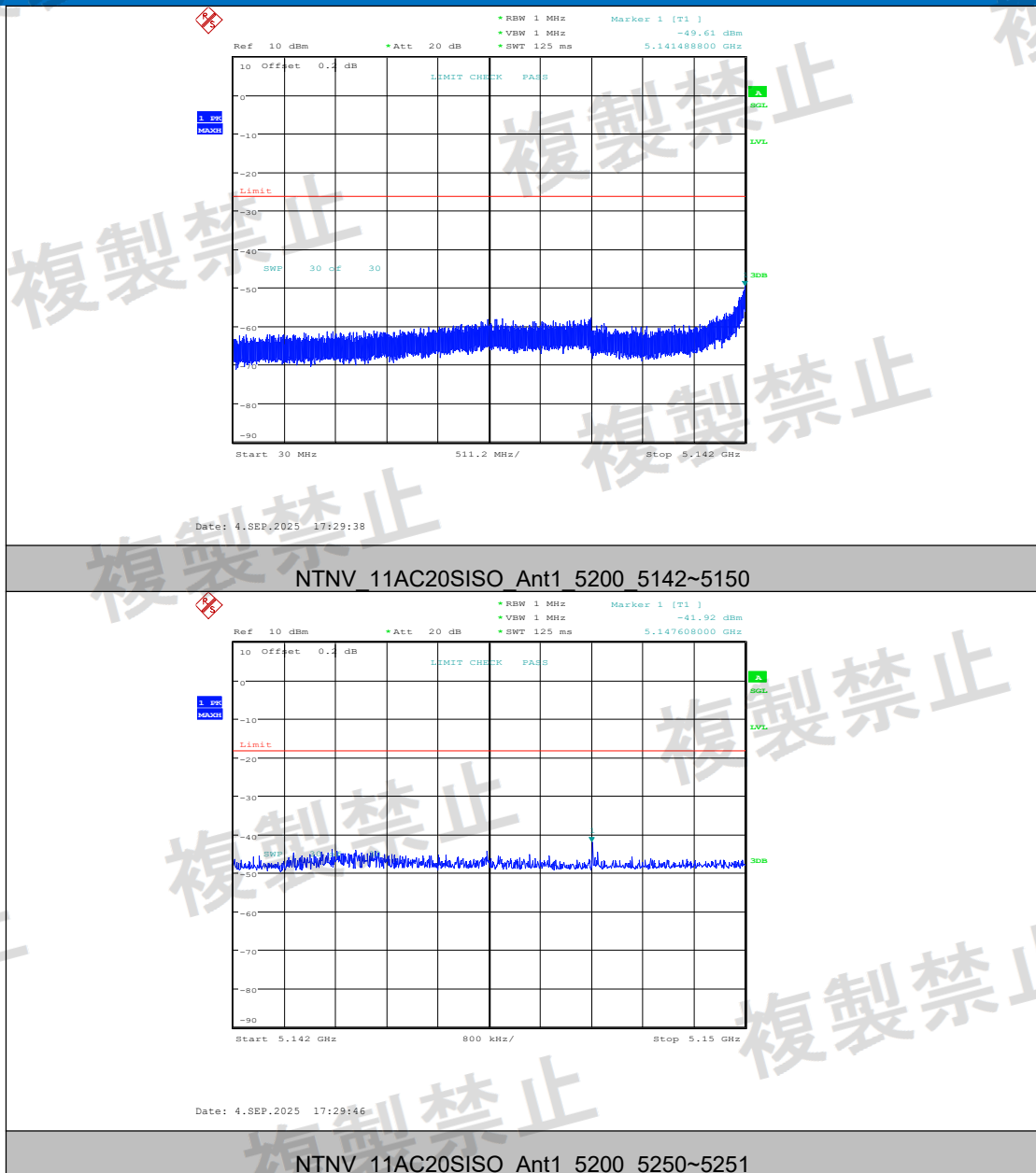


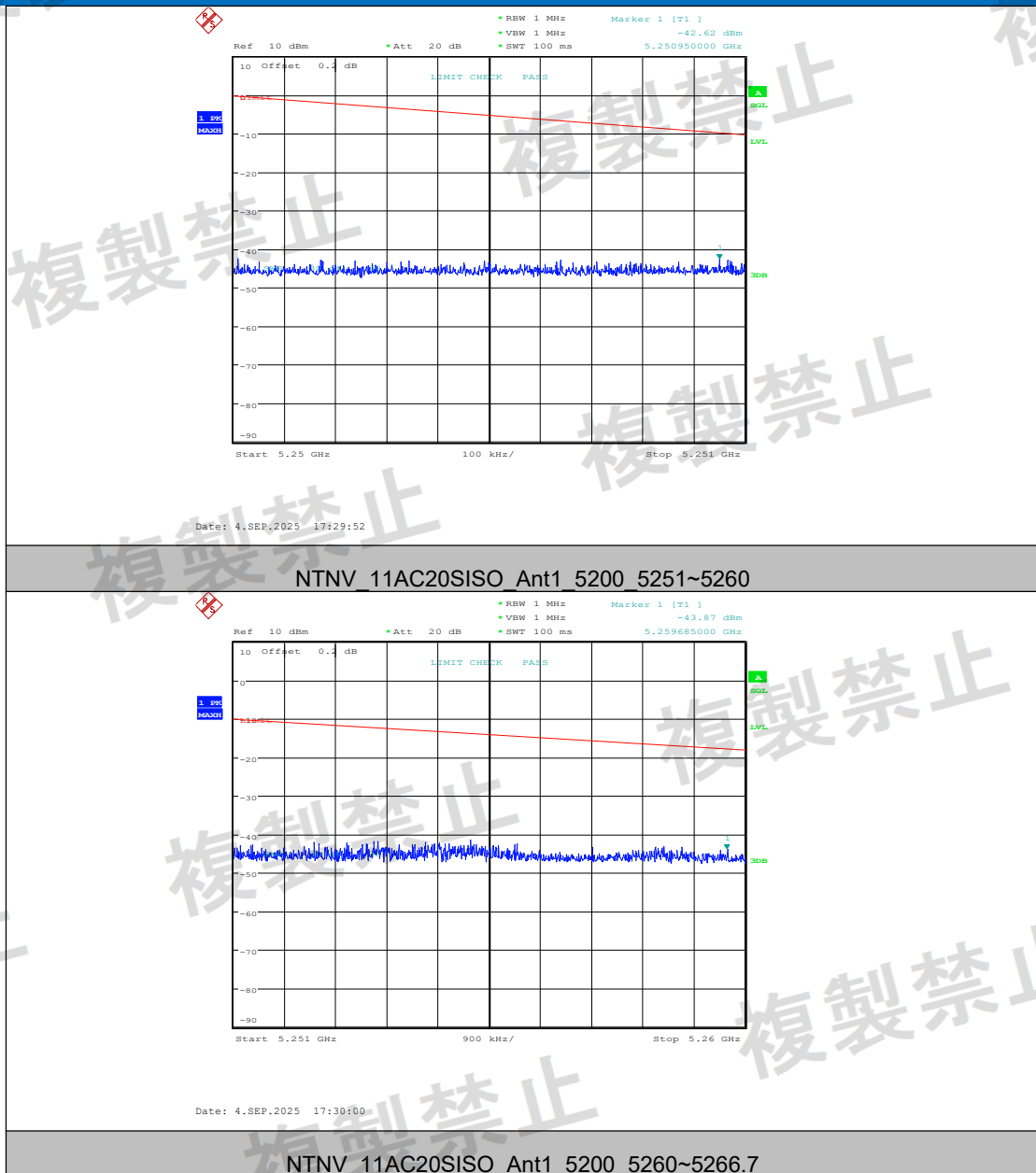


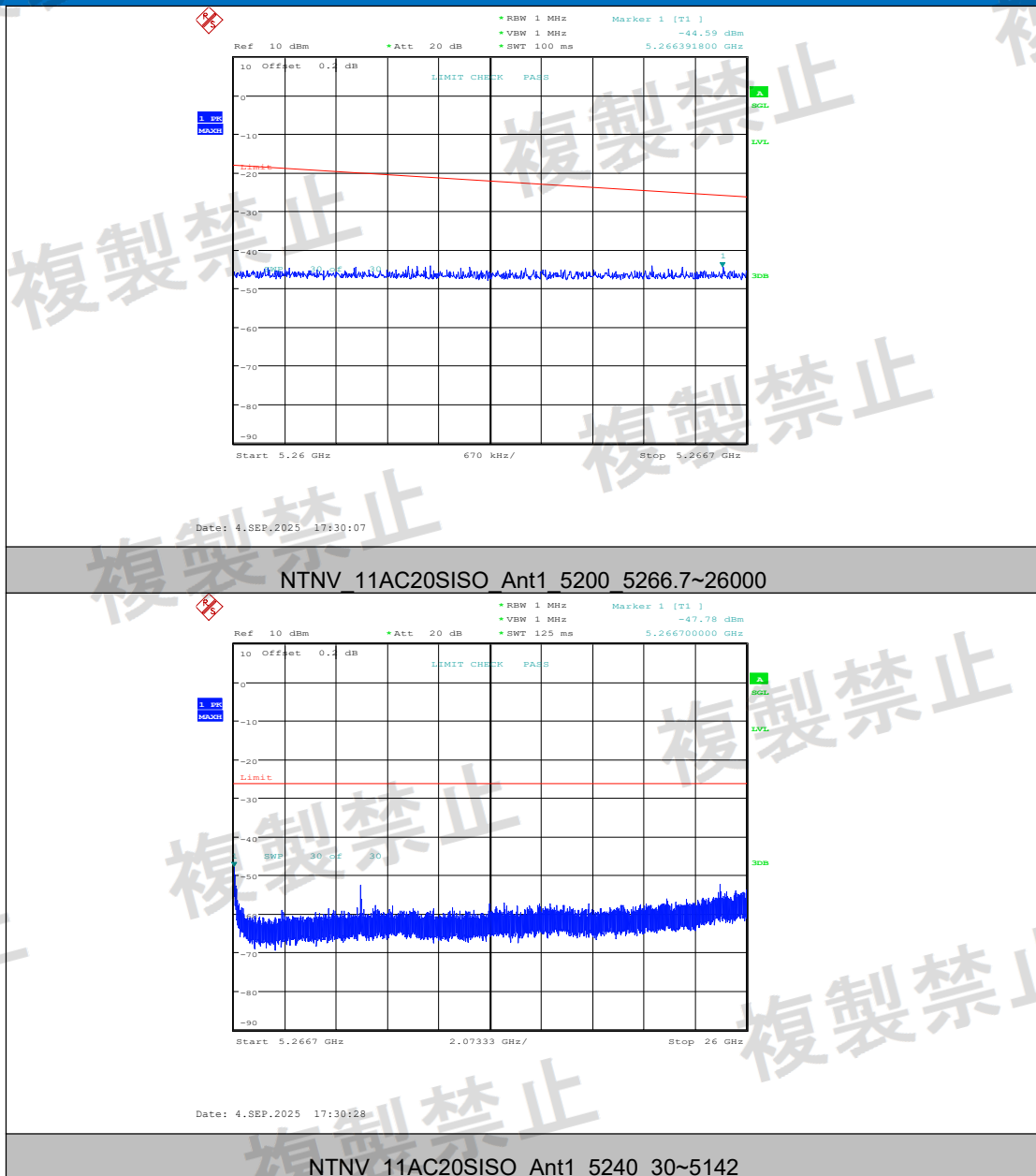


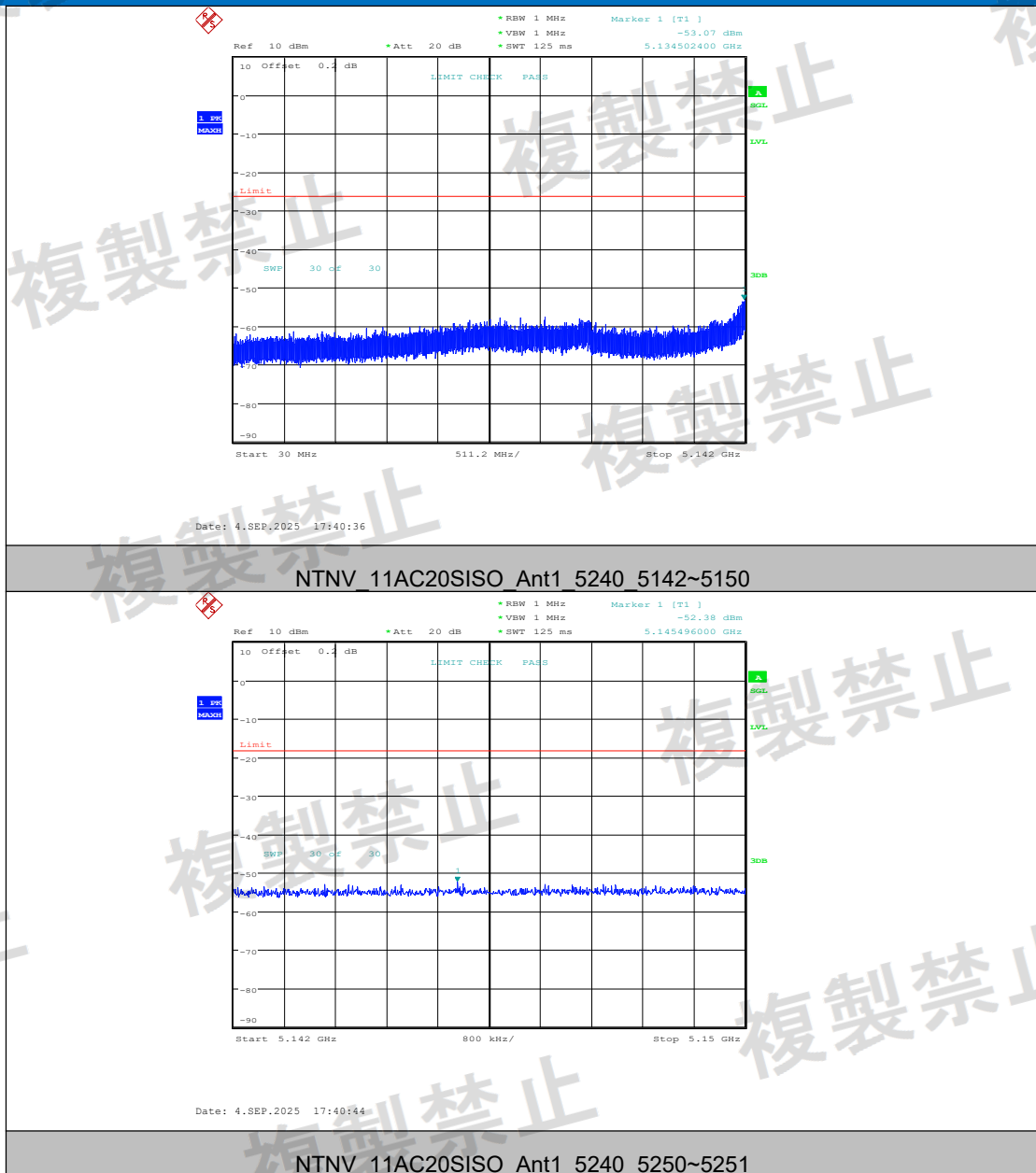


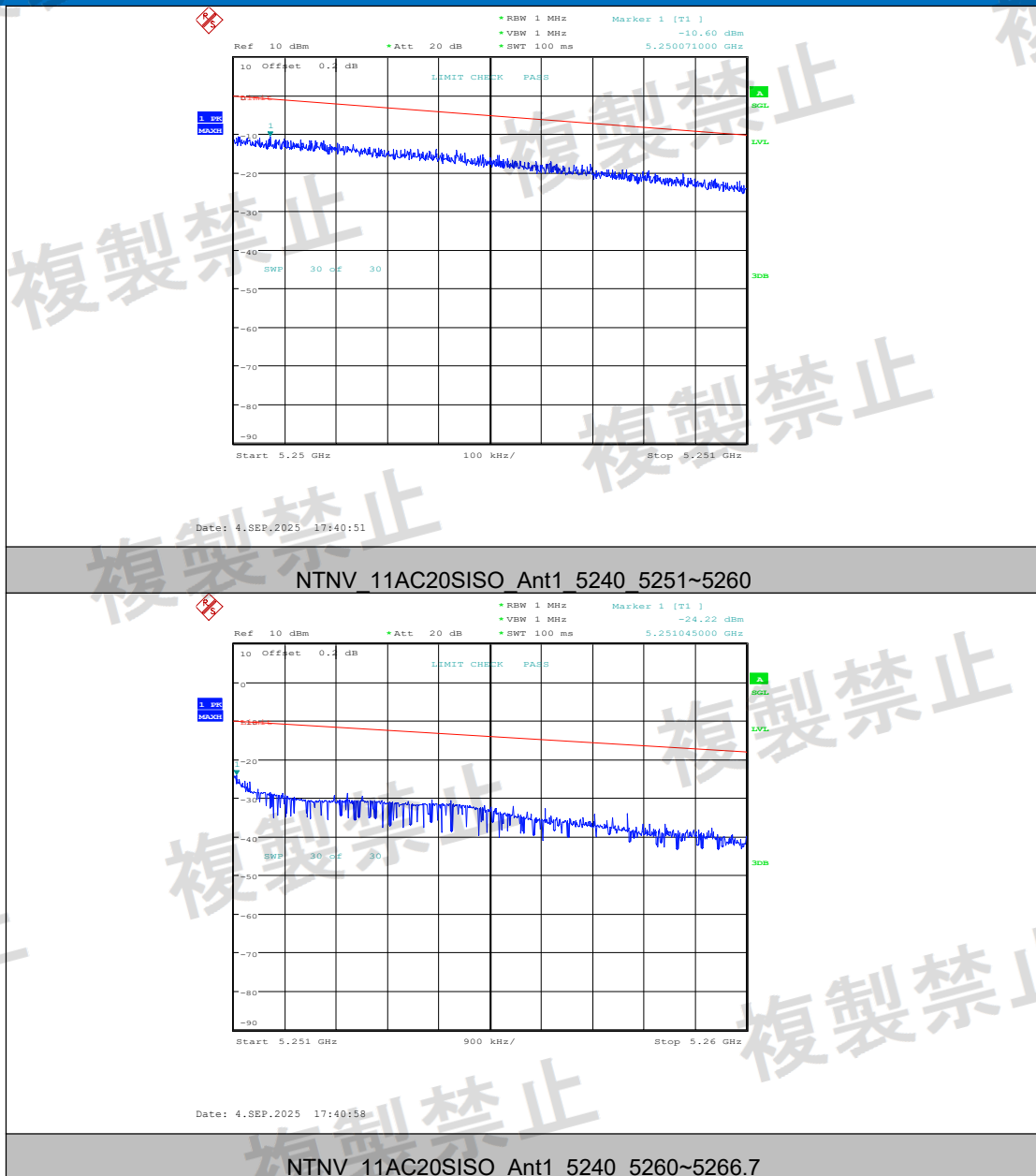


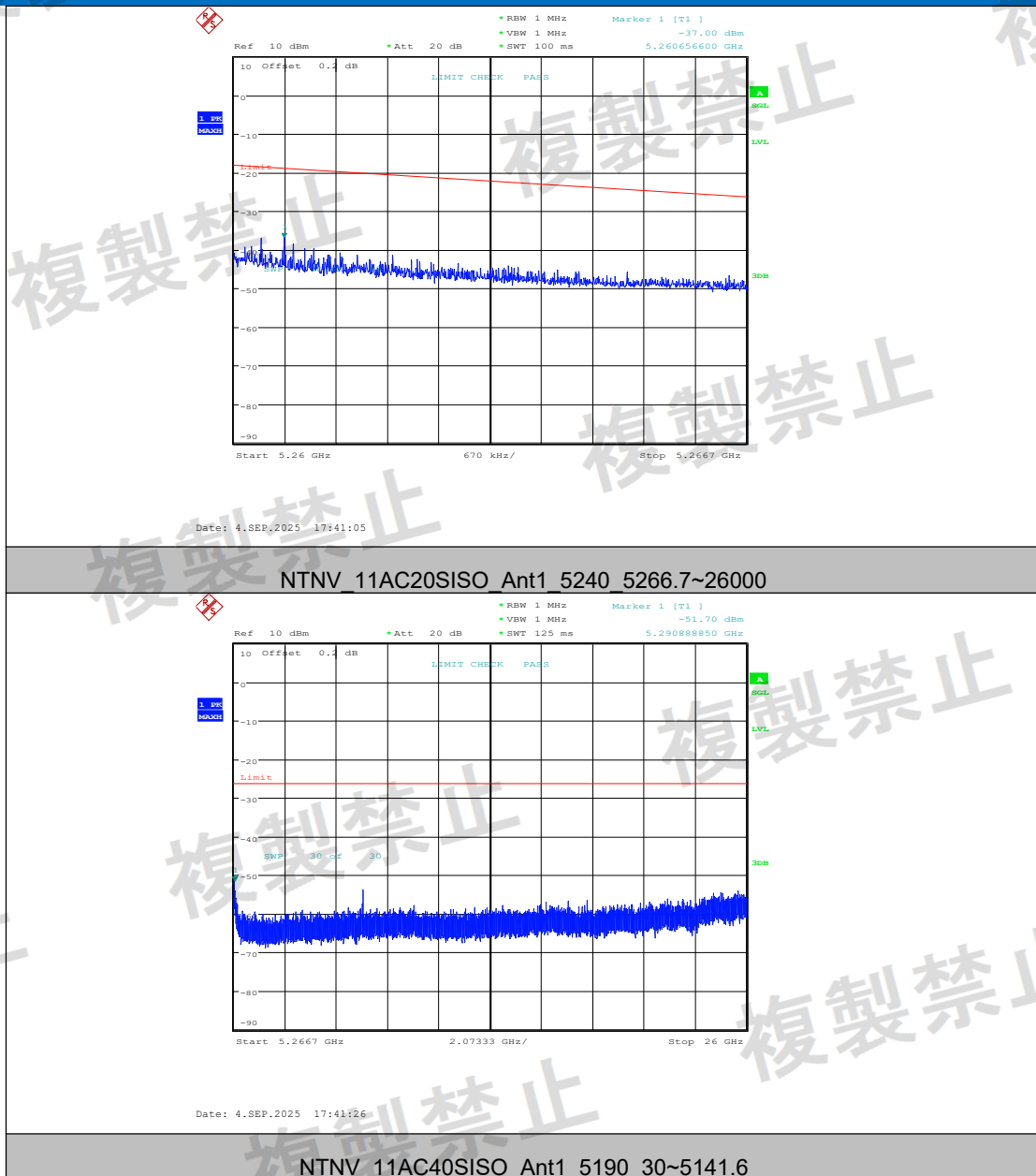


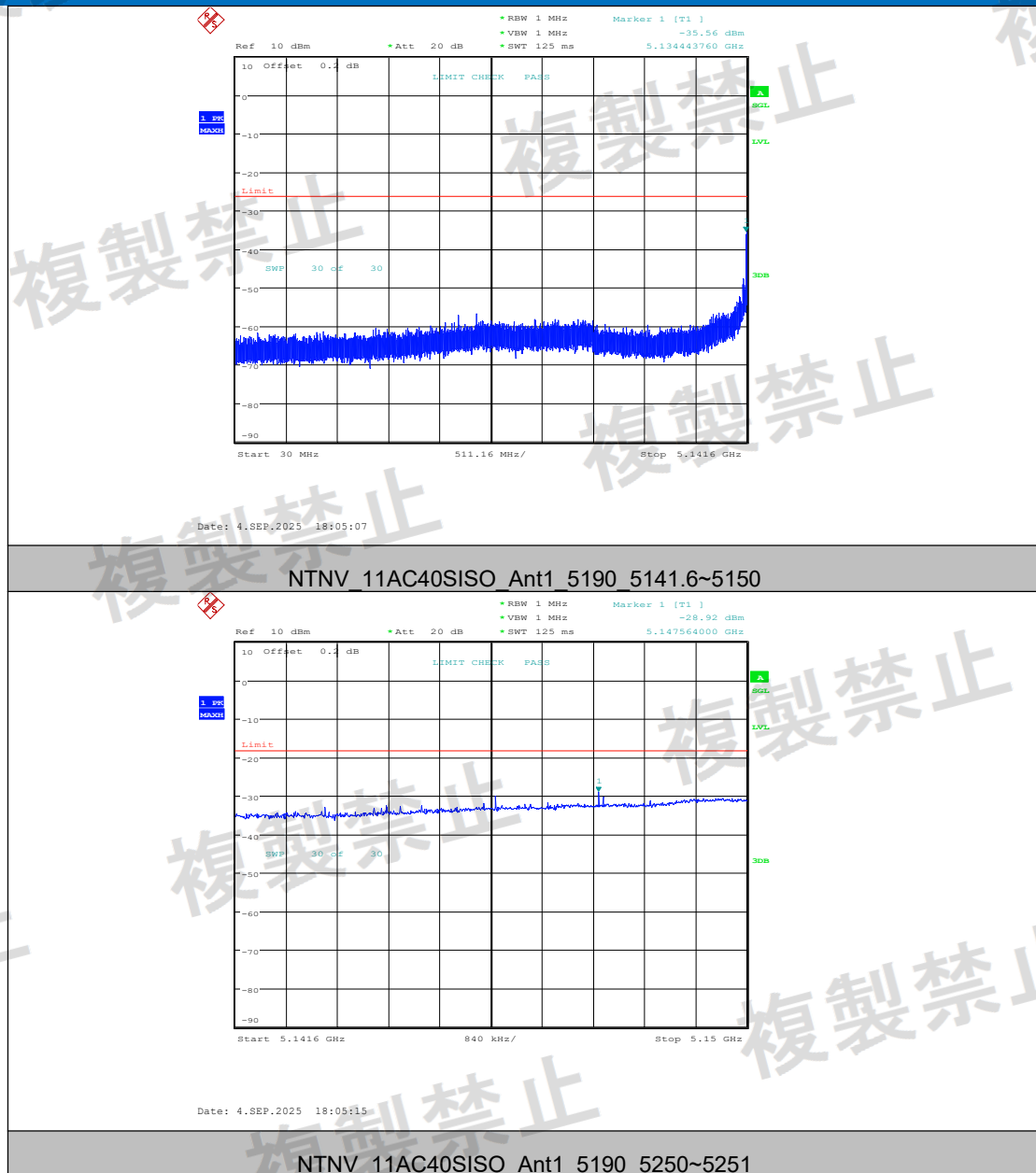


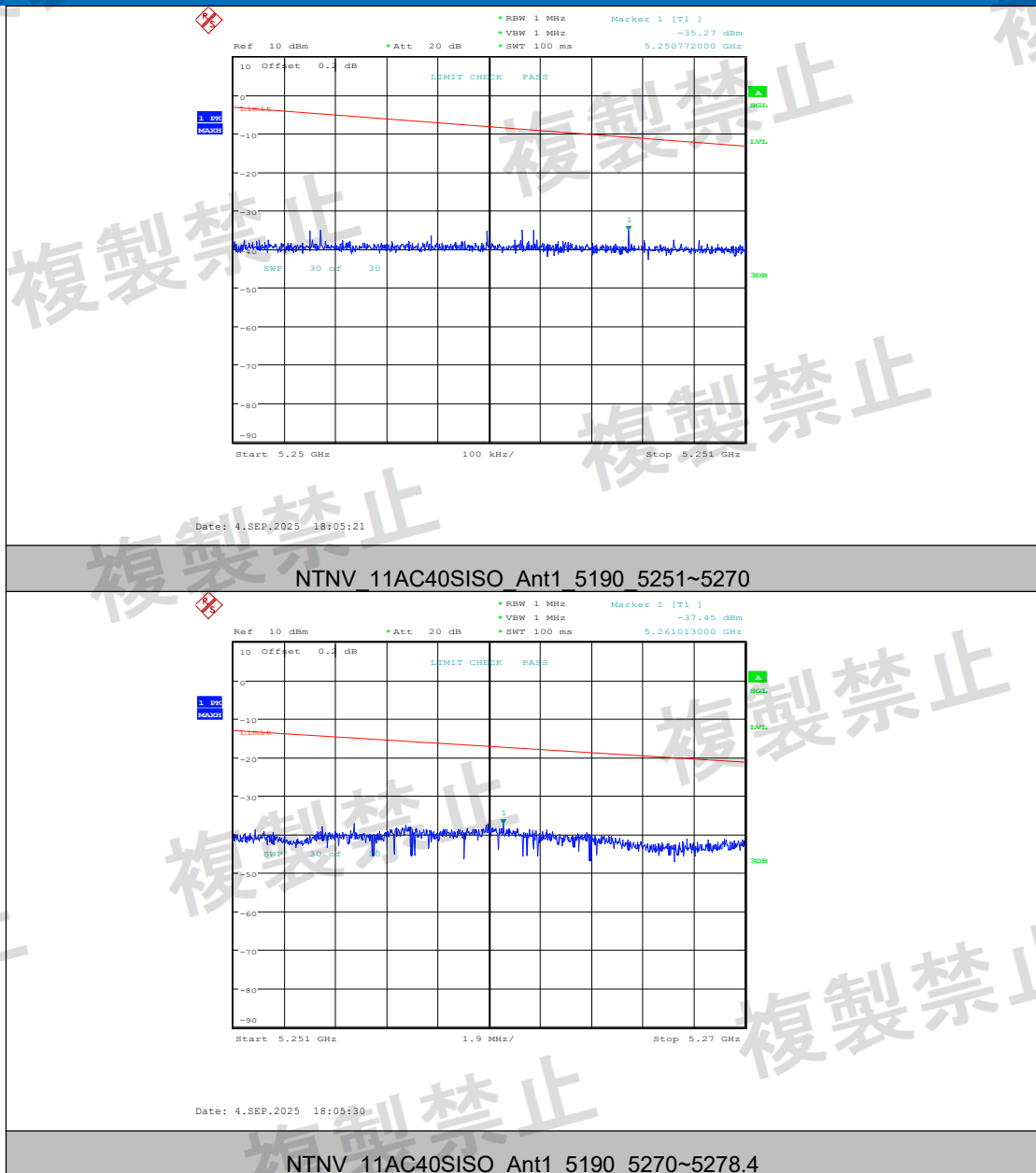


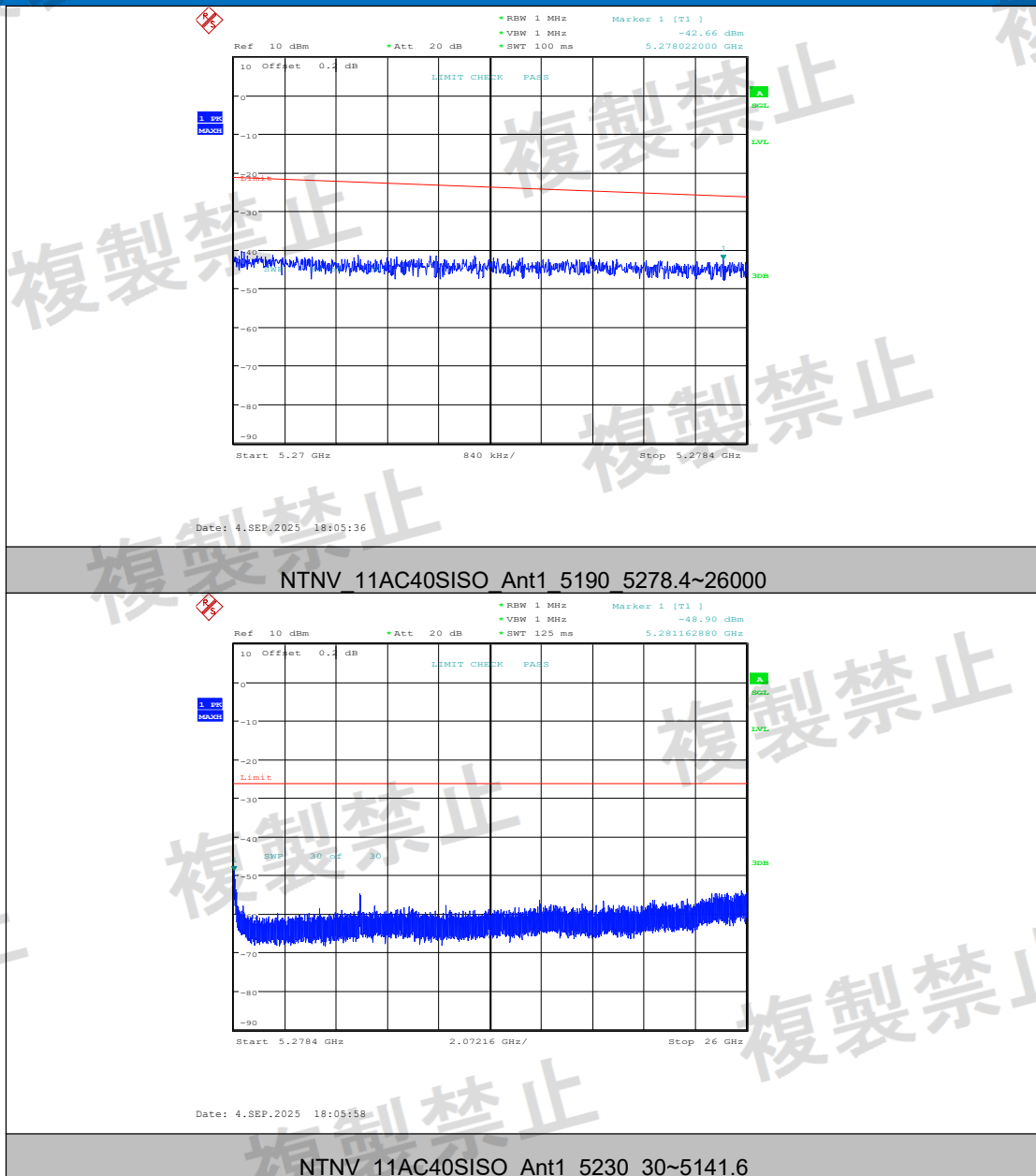


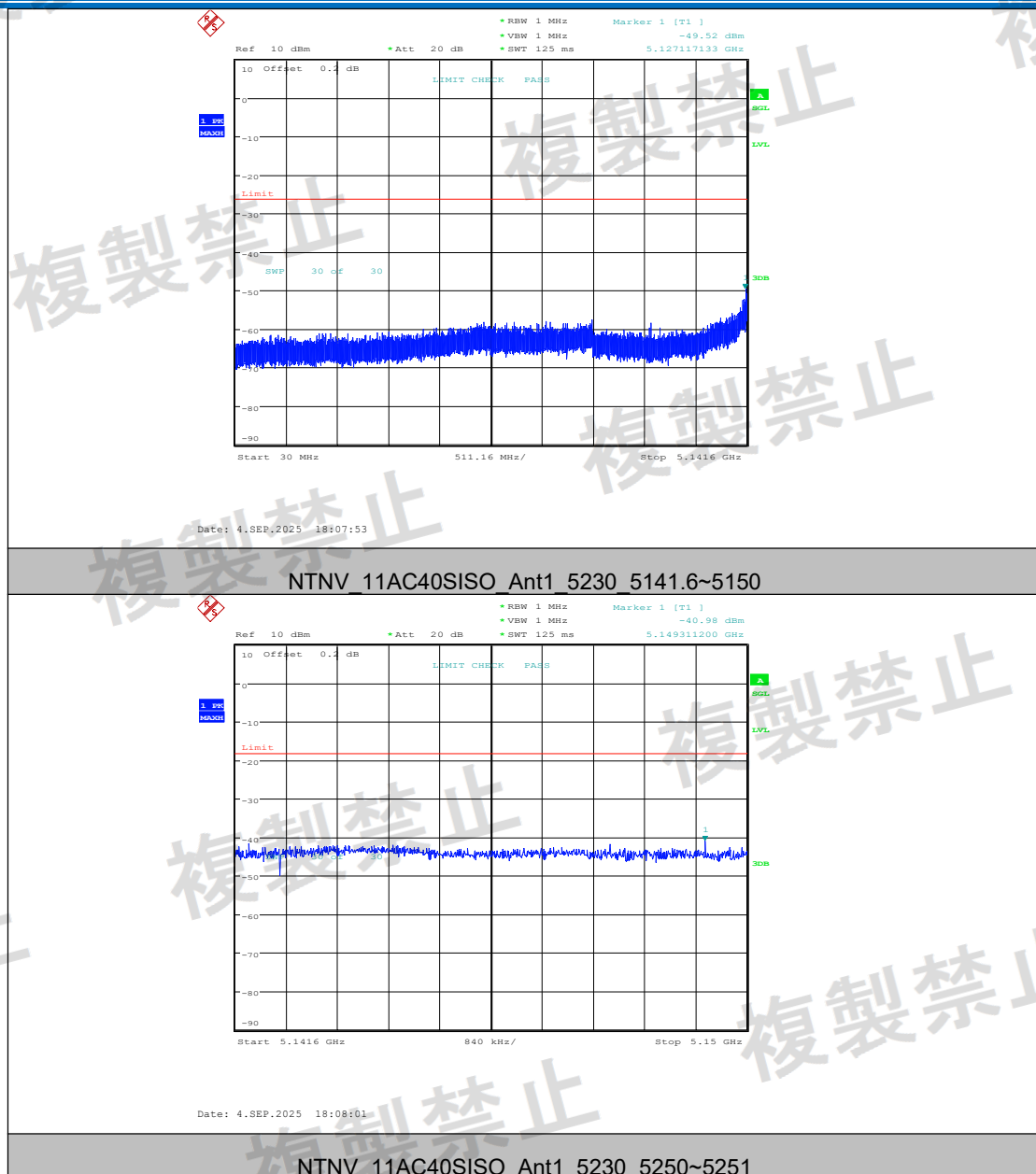


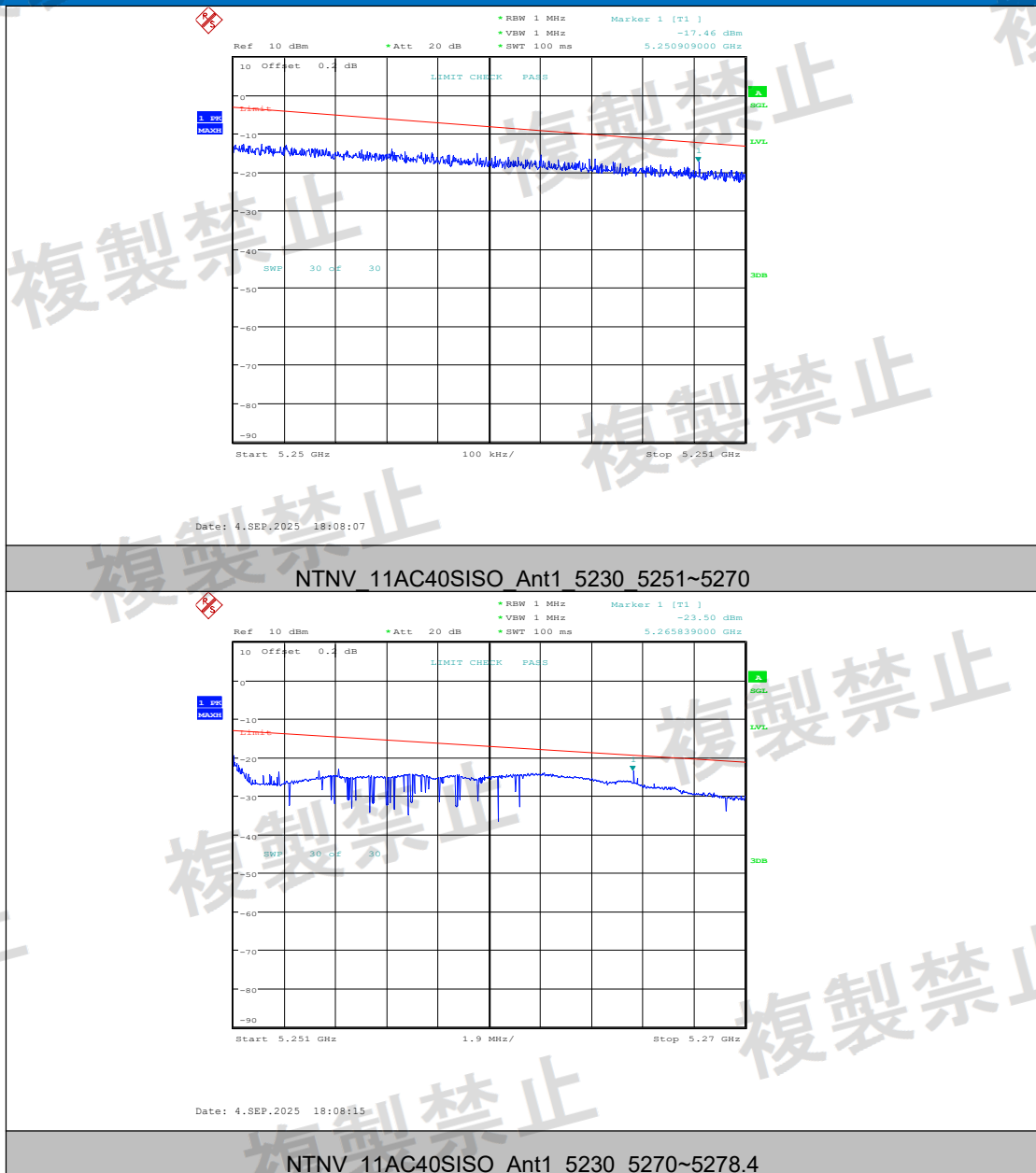


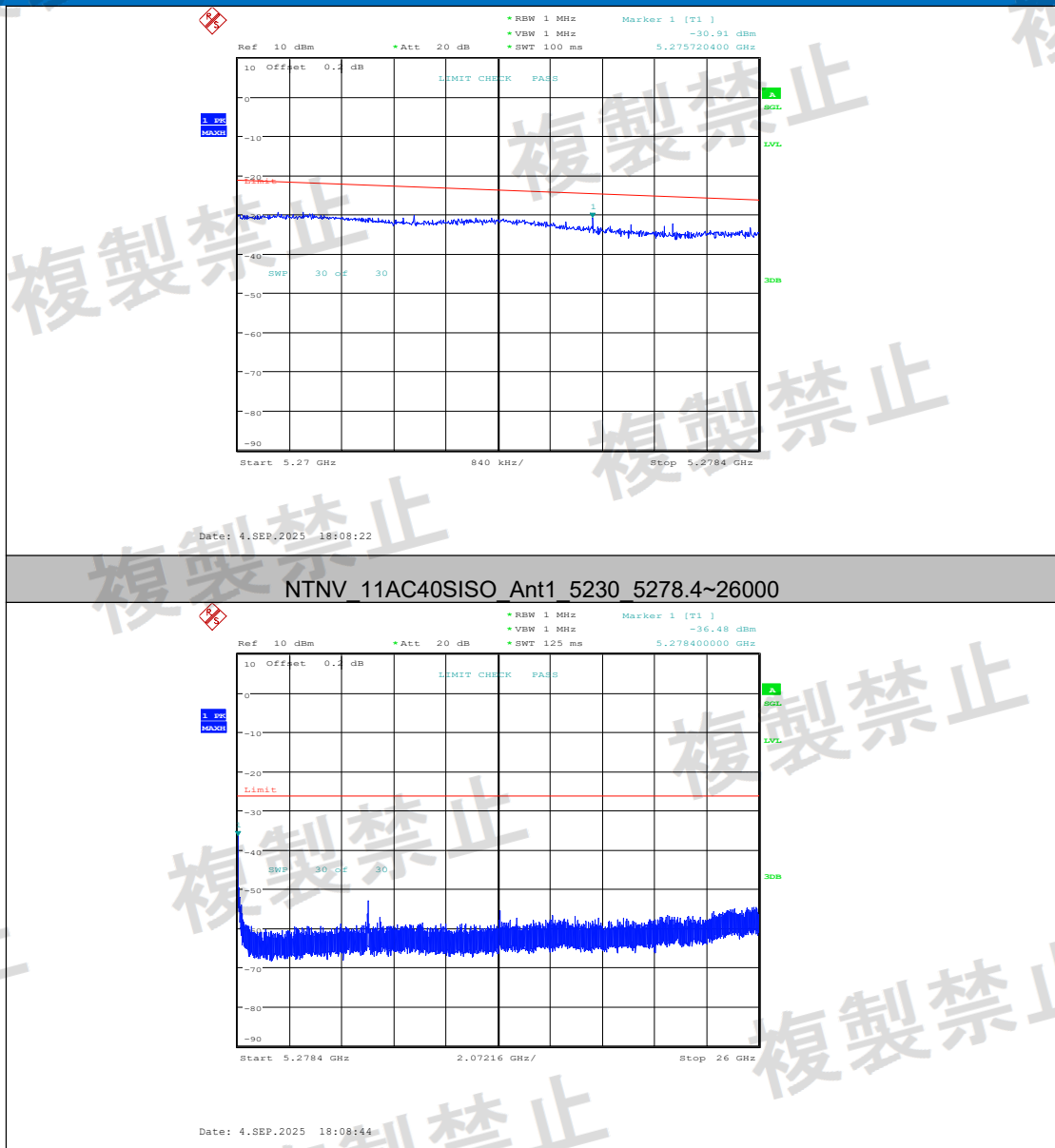


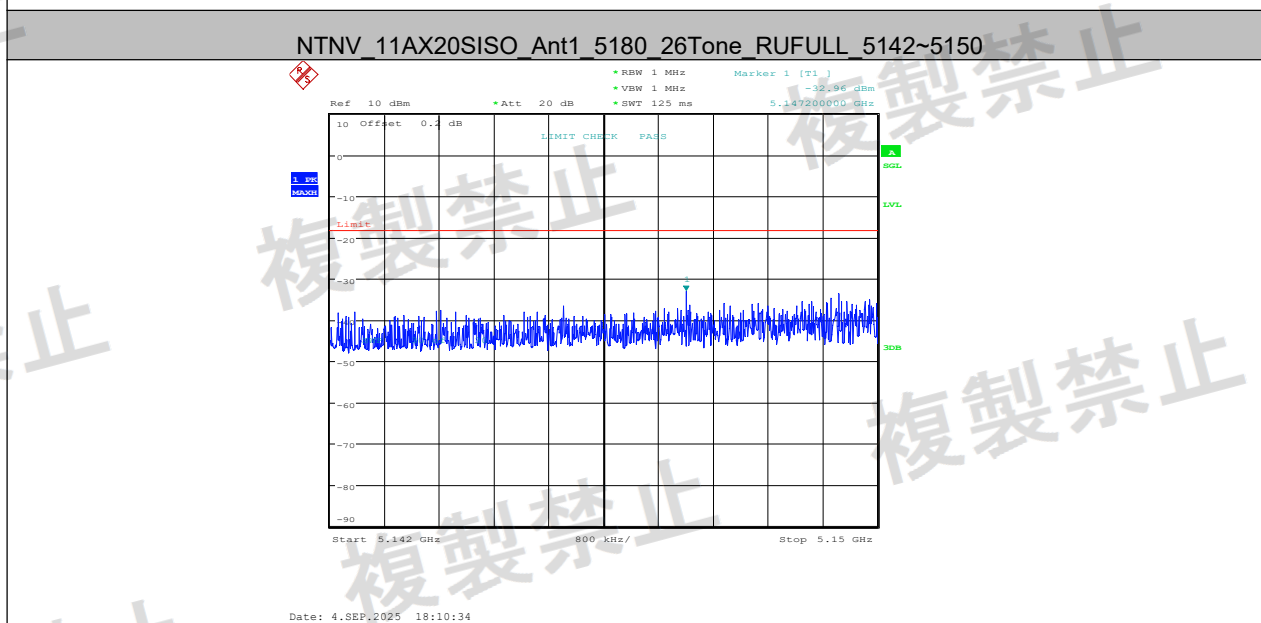
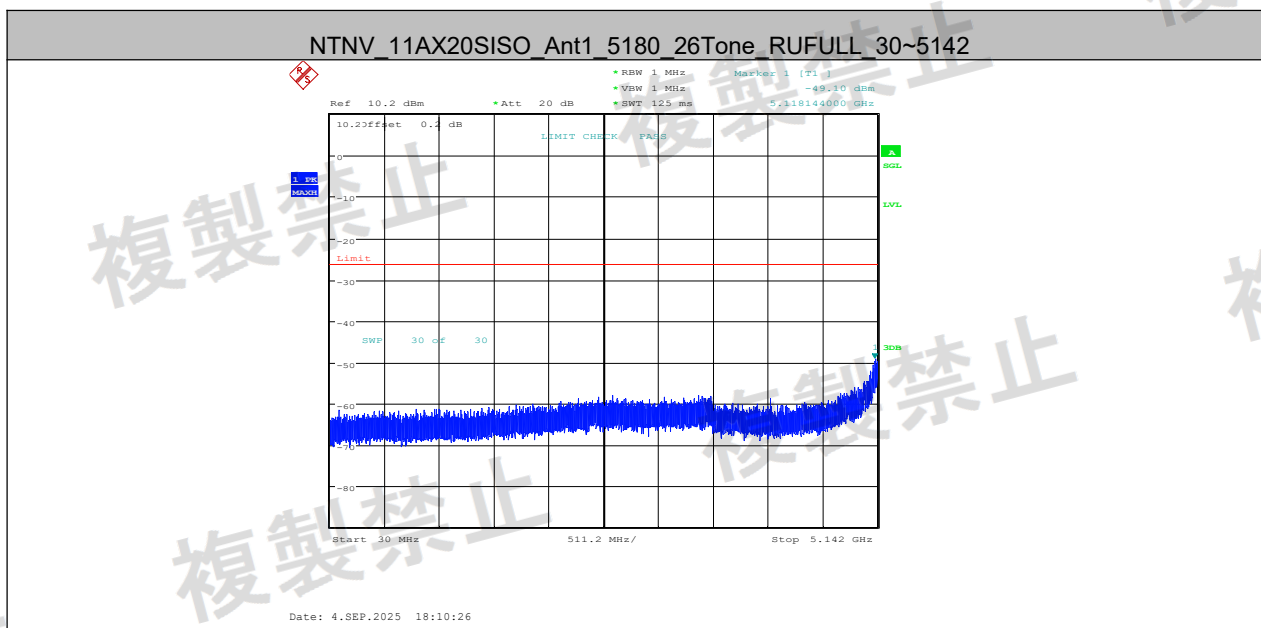




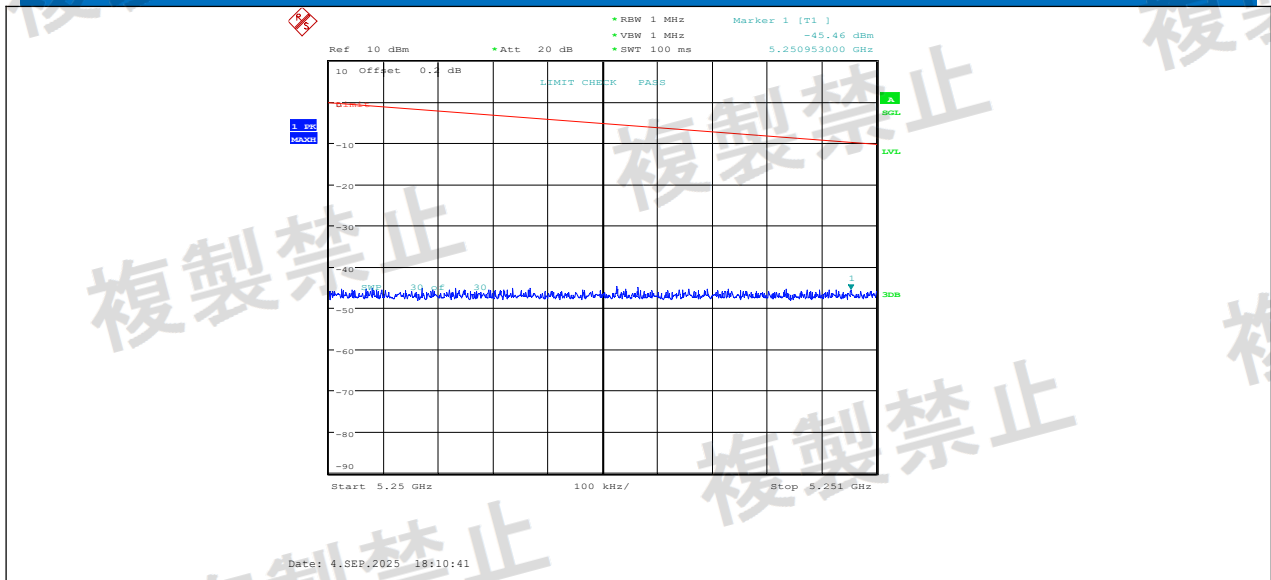




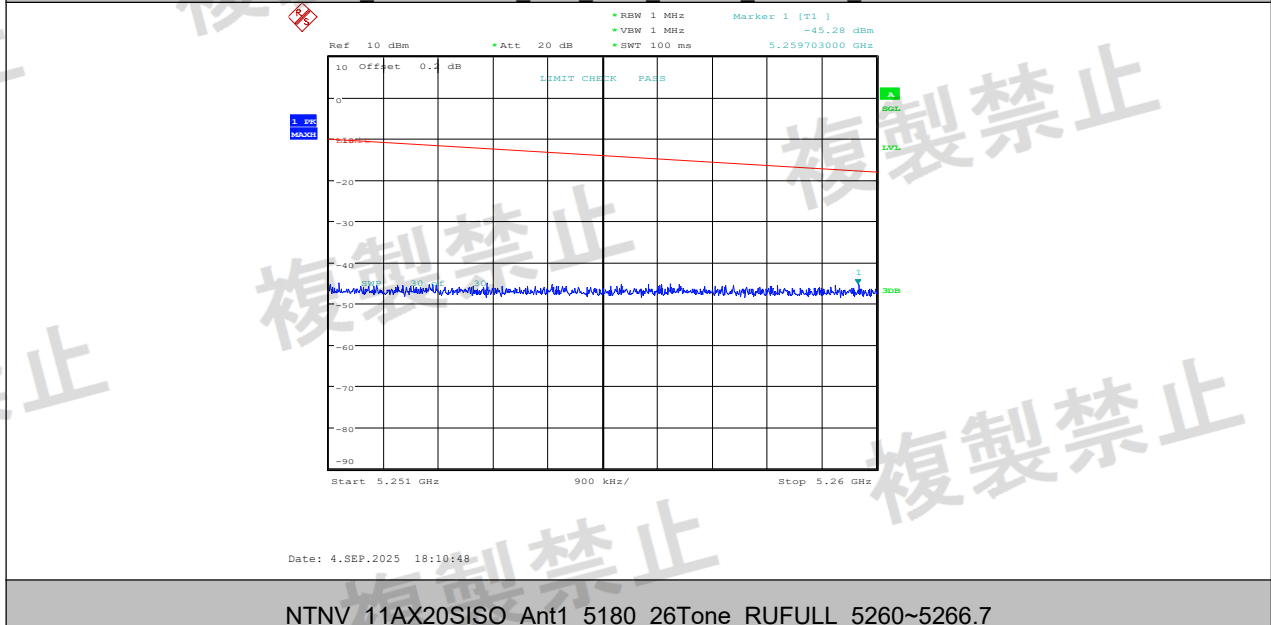




NTNV 11AX20SISO Ant1 5180 26Tone RUFULL 5250~5251



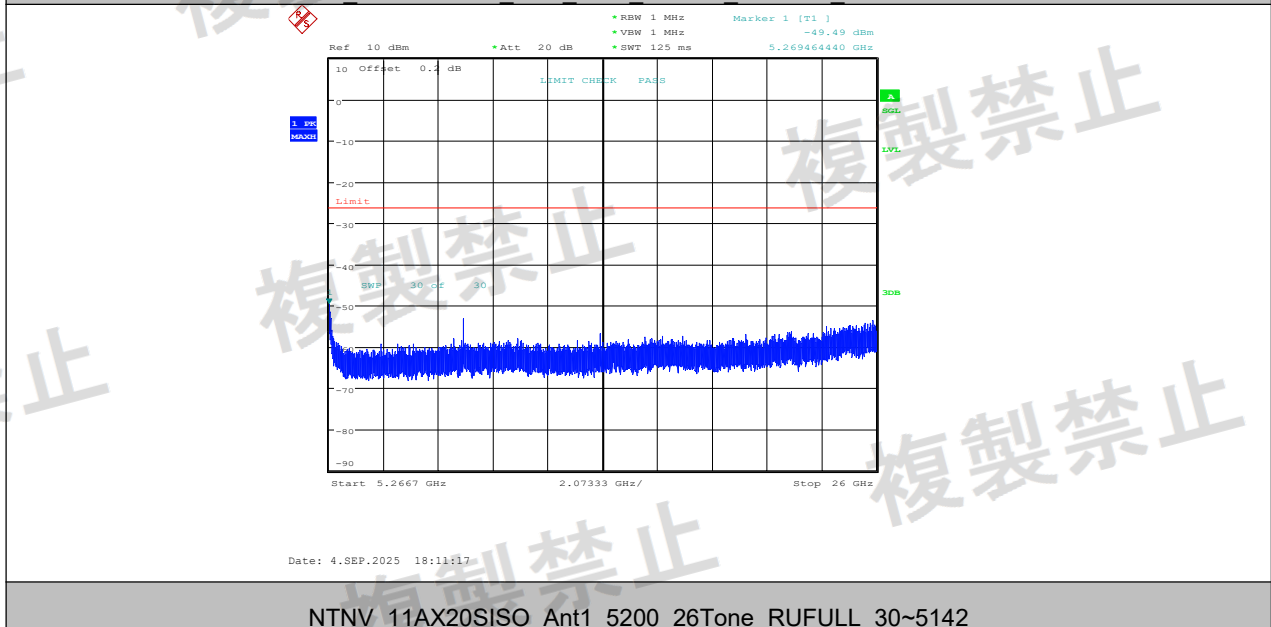
NTNV 11AX20SISO Ant1 5180 26Tone RUFULL 5251~5260



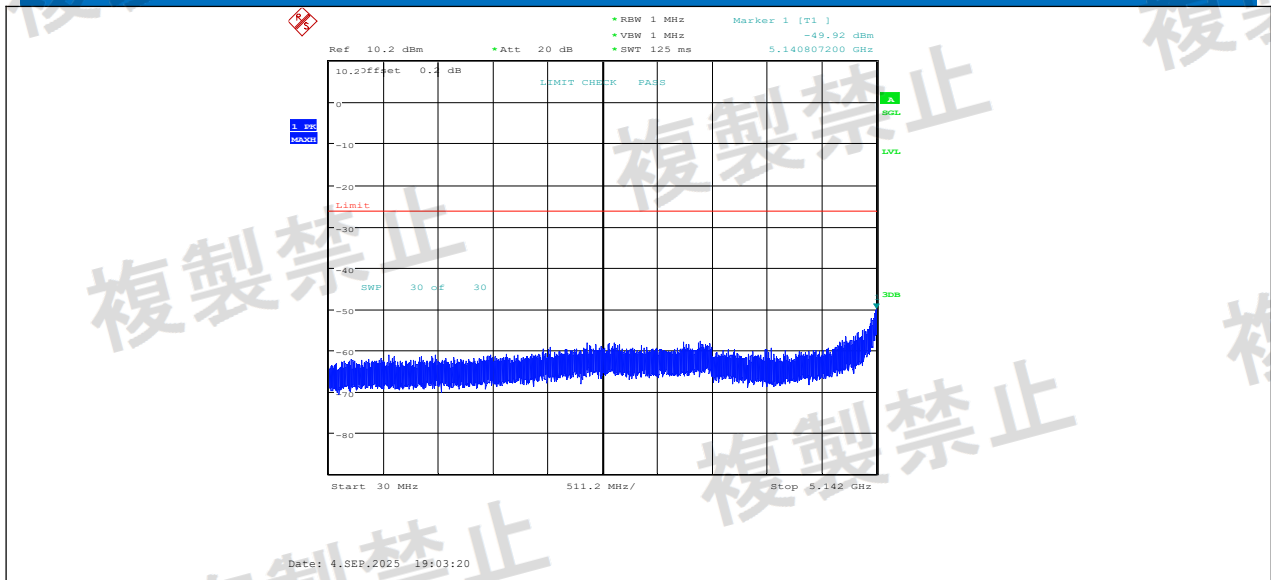
NTNV 11AX20SISO Ant1 5180 26Tone RUFULL 5260~5266.7



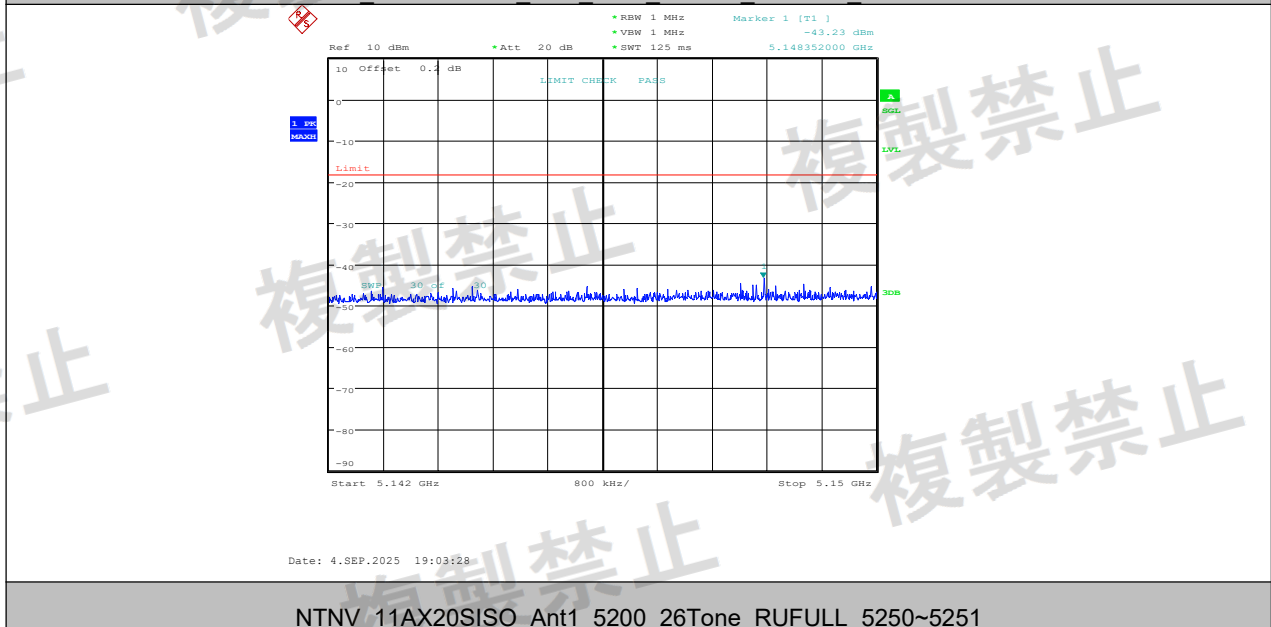
NTVN_11AX20SISO_Ant1_5180_26Tone_RUFULL_5266.7~26000



NTVN_11AX20SISO_Ant1_5200_26Tone_RUFULL_30~5142



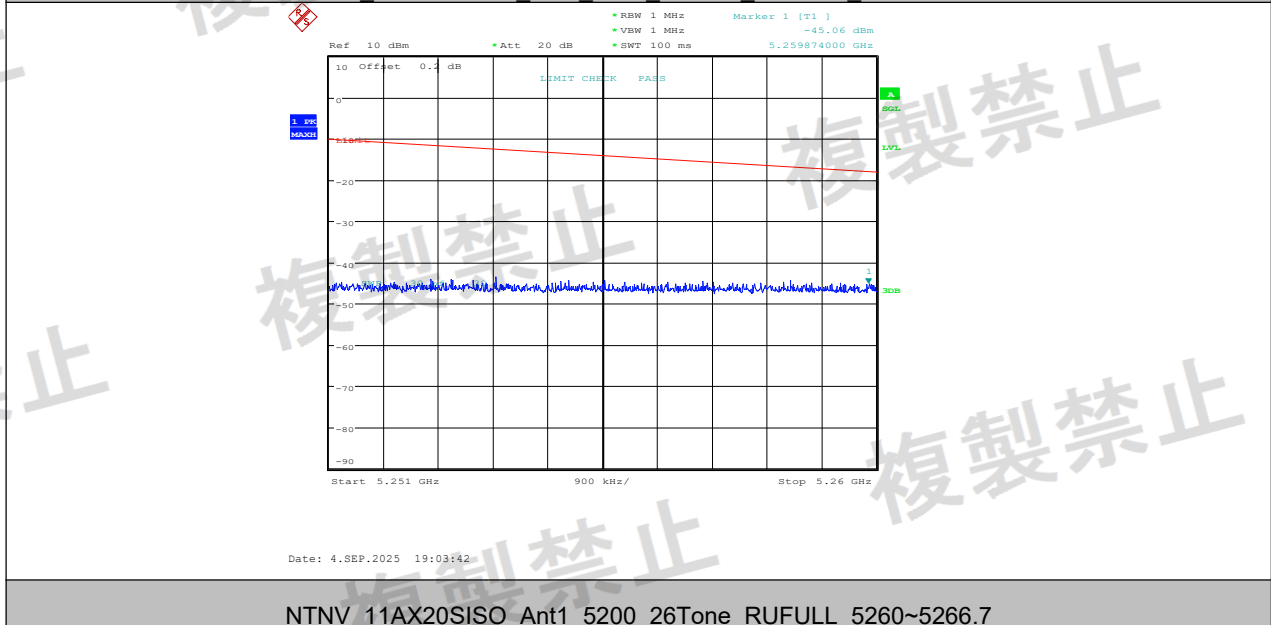
NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL_5142~5150



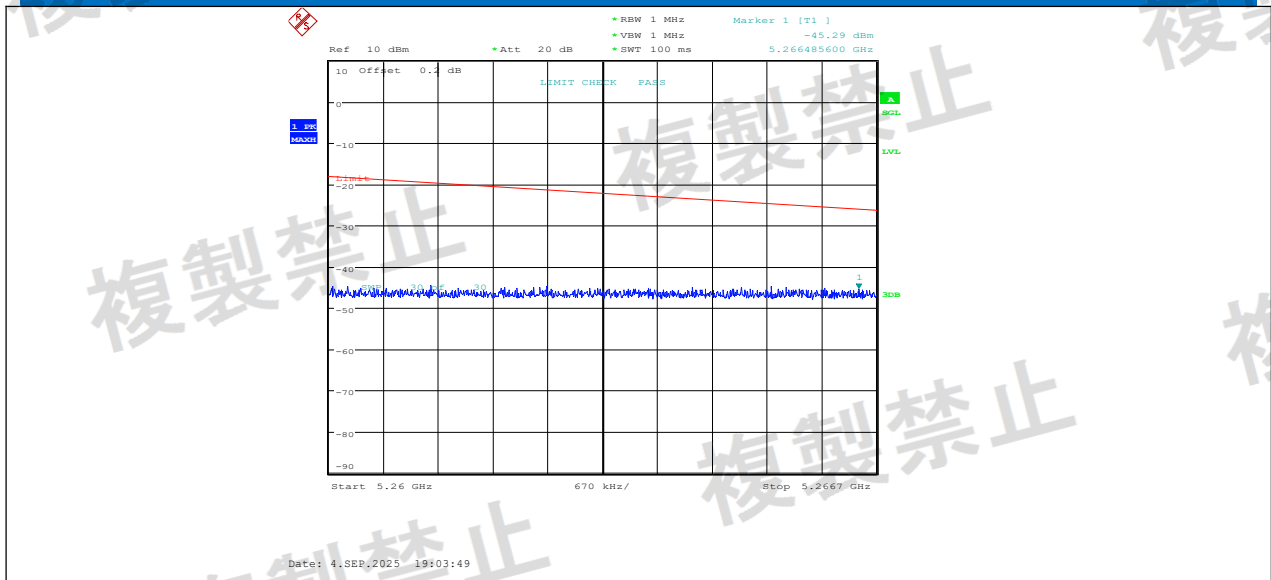
NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL_5250~5251



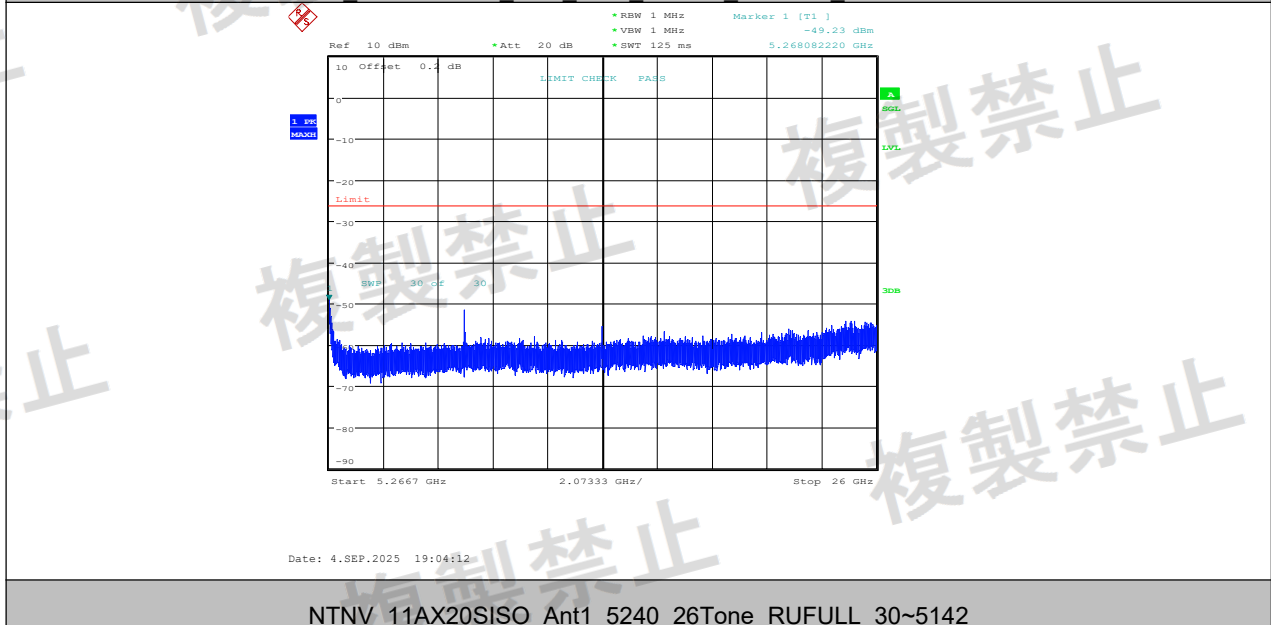
NTNV 11AX20SISO Ant1 5200 26Tone RUFULL 5251~5260



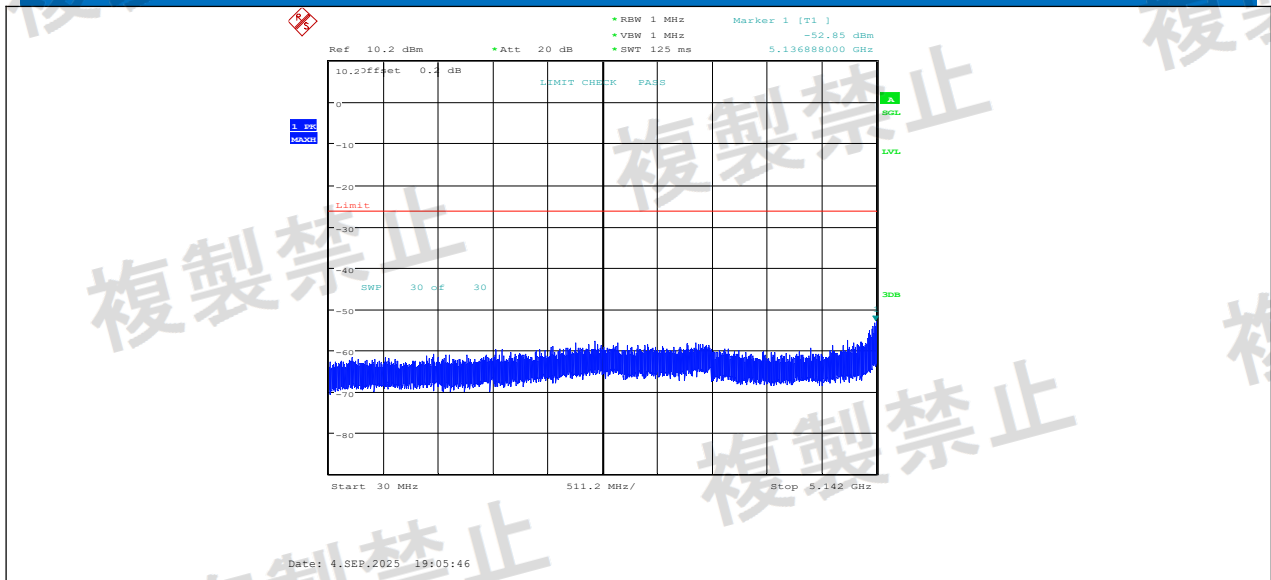
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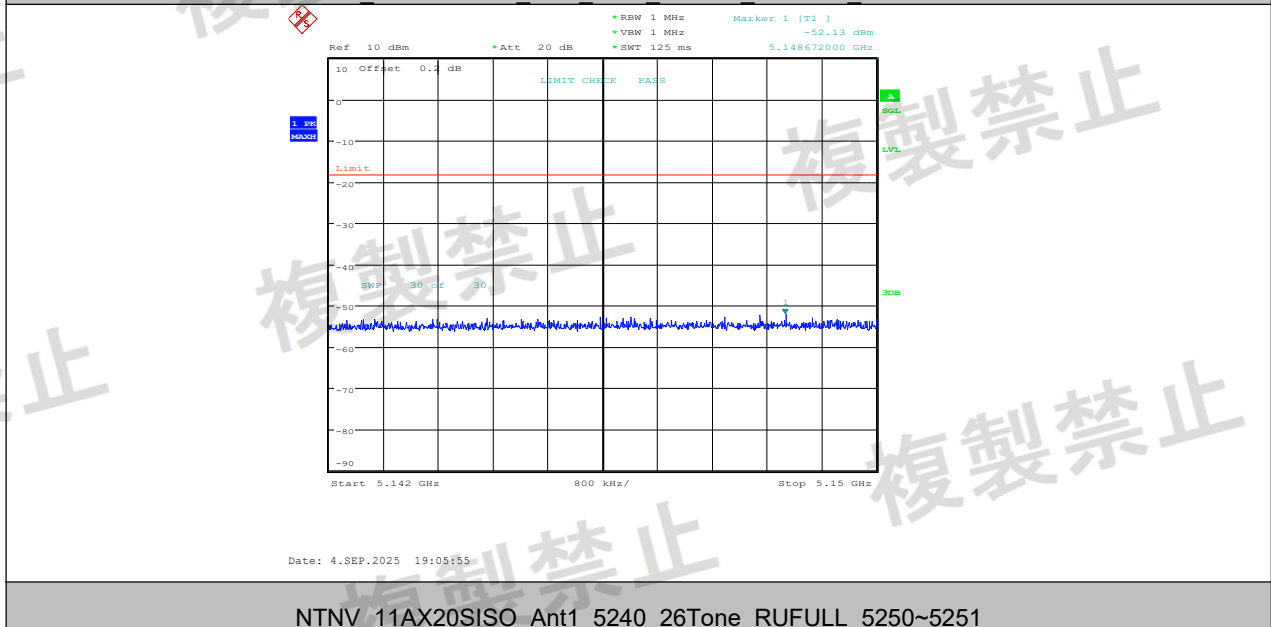
NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL_5266.7~26000



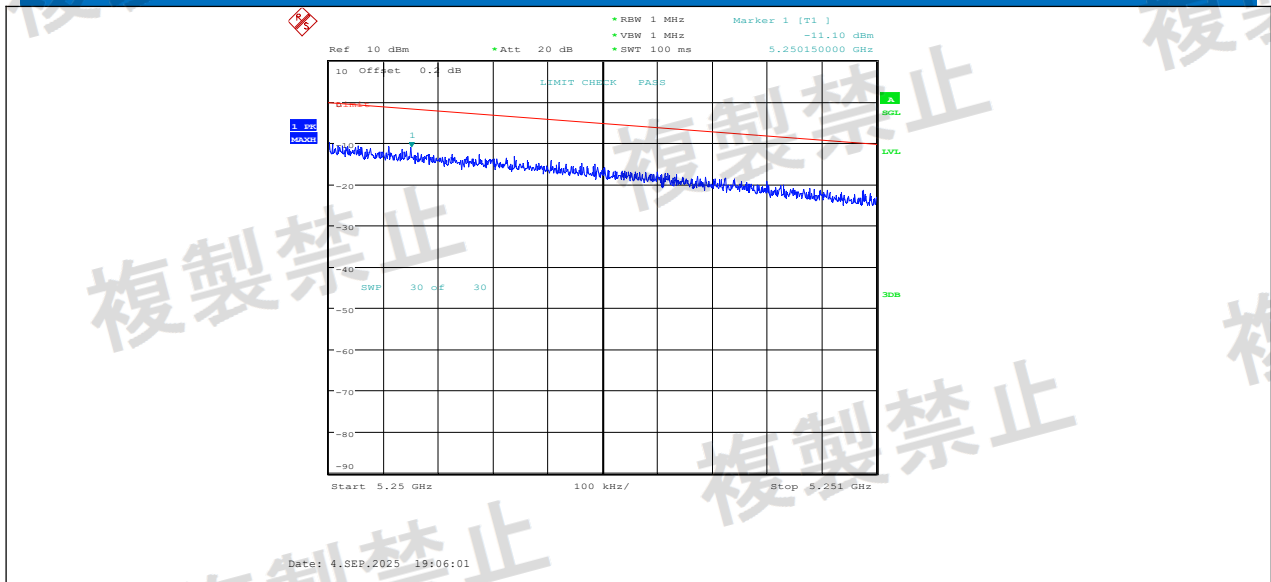
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL_30~5142



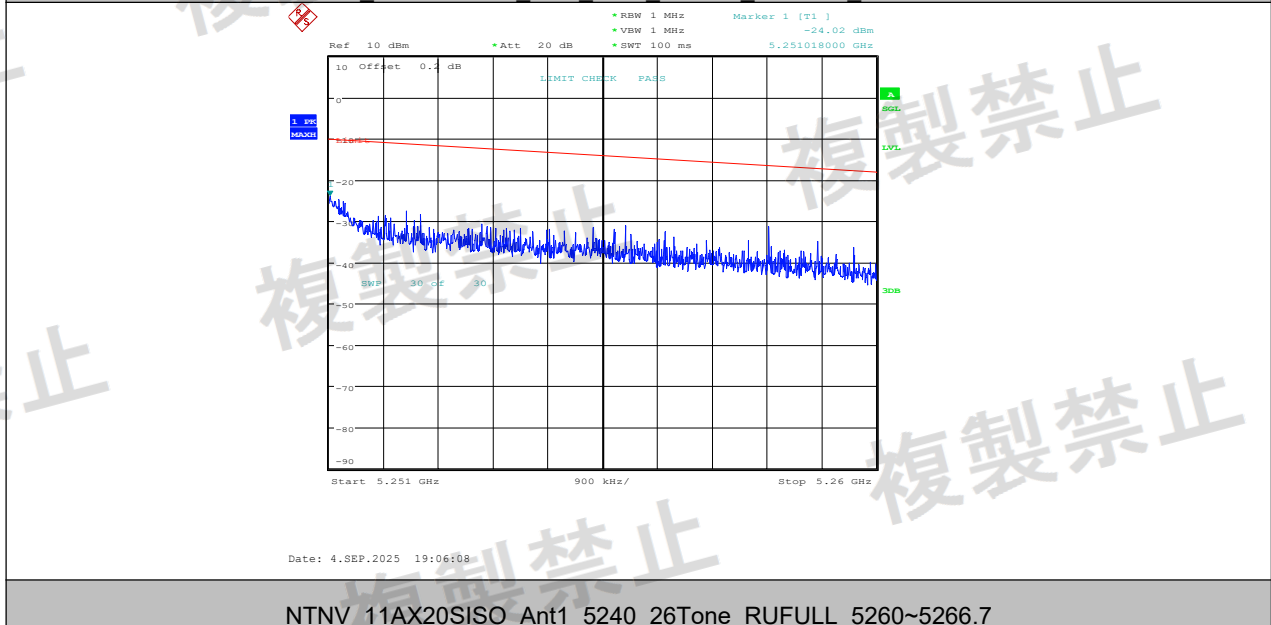
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL_5142~5150



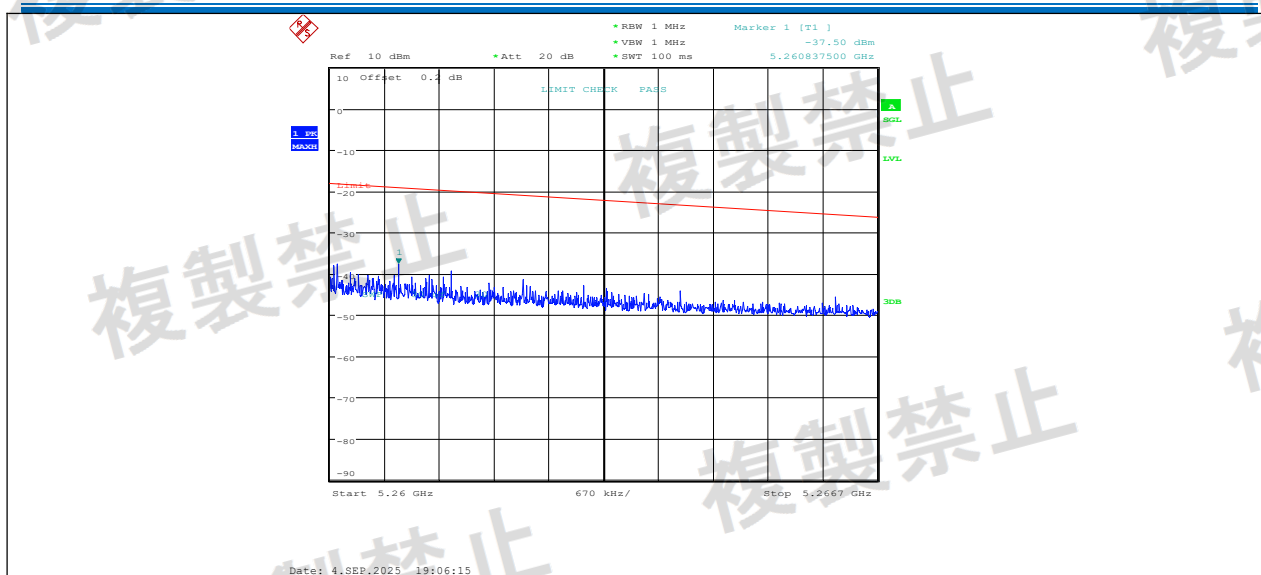
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL_5250~5251



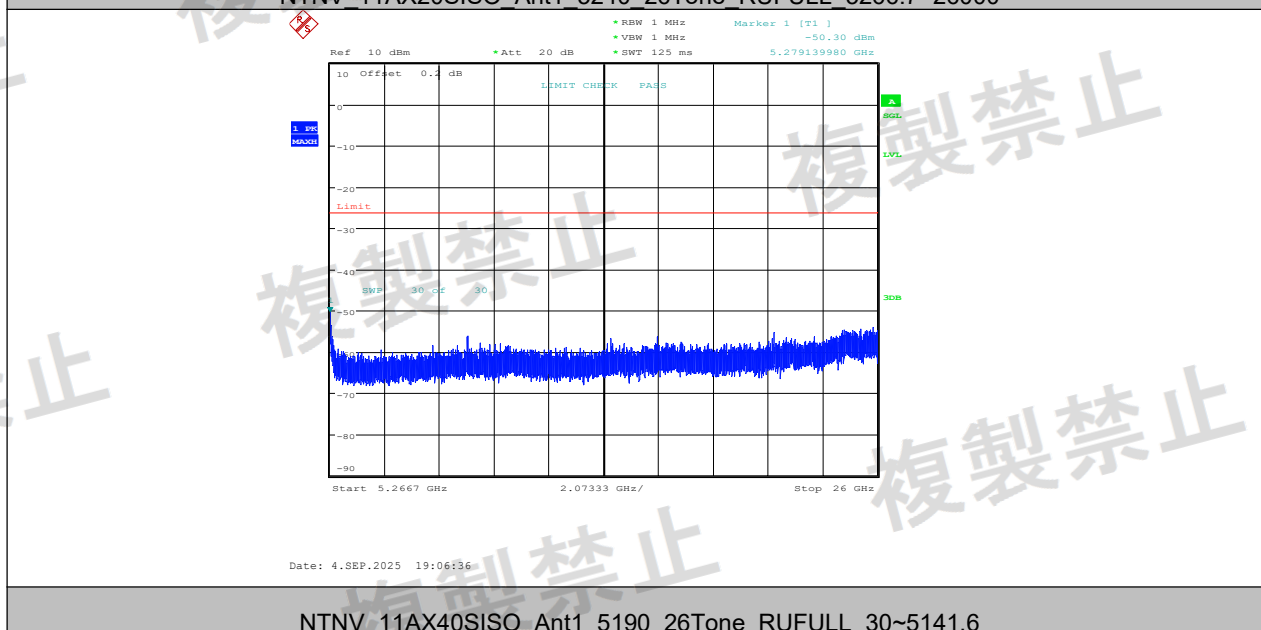
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL_5251~5260



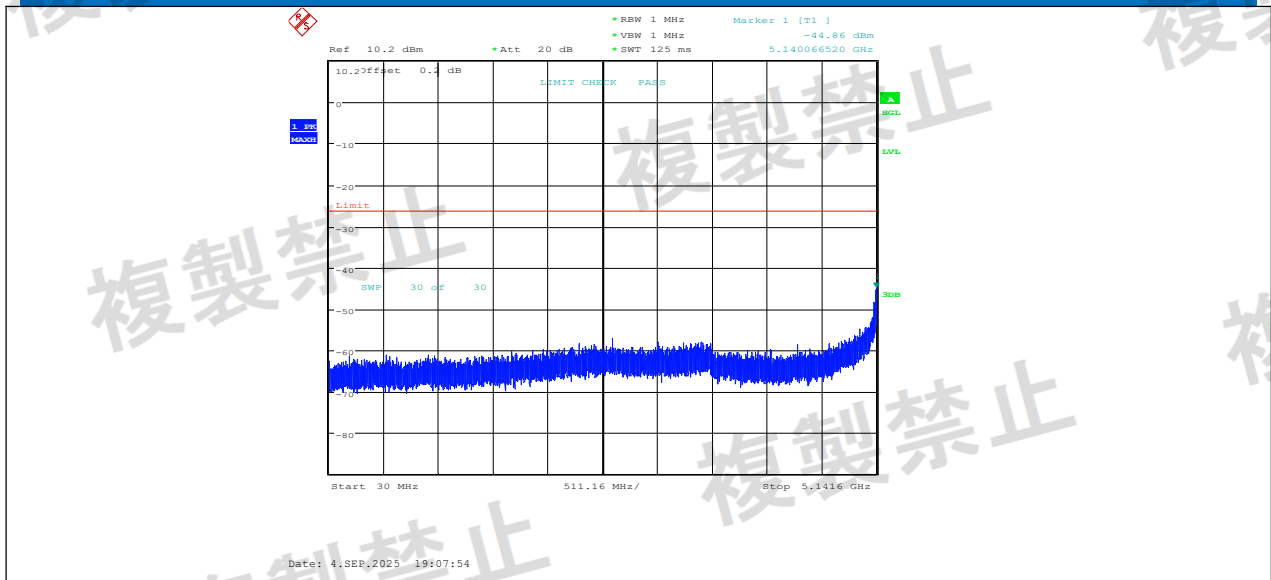
NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL_5260~5266.7



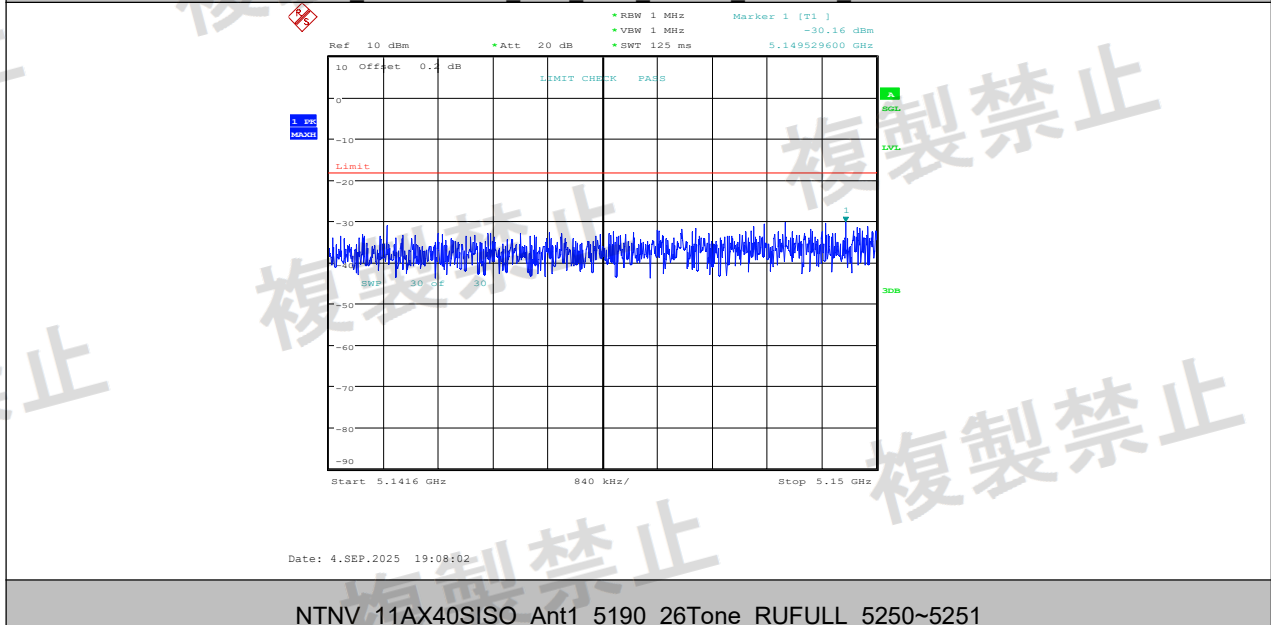
NTNV 11AX20SISO Ant1 5240 26Tone RUFULL 5266.7~26000



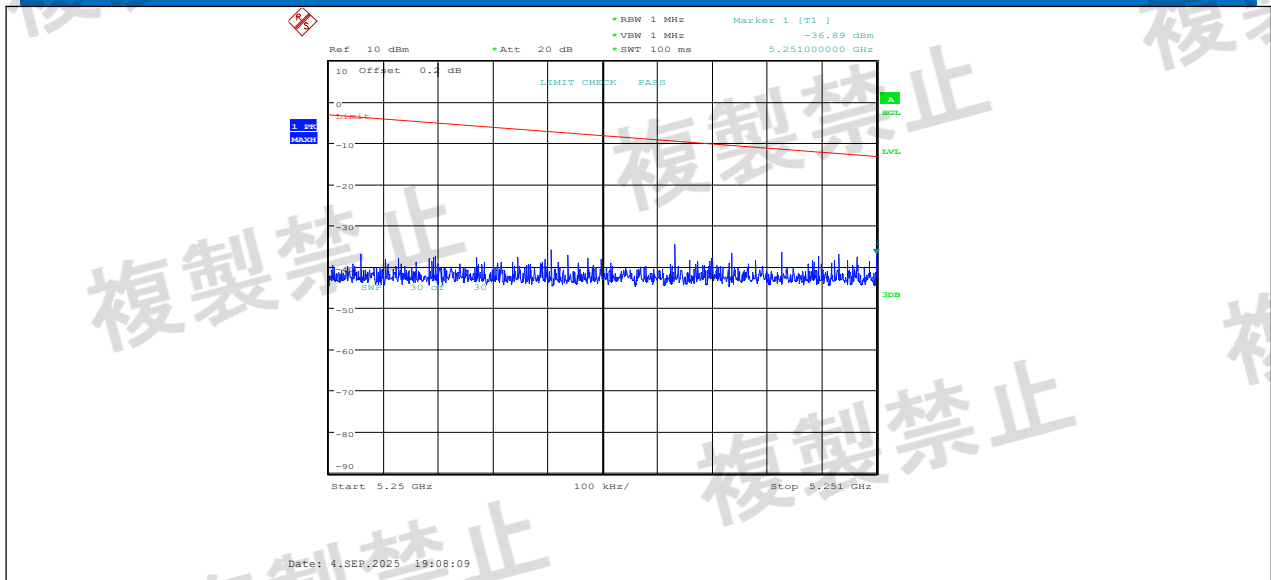
NTNV 11AX40SISO Ant1 5190 26Tone RUFULL 30~5141.6



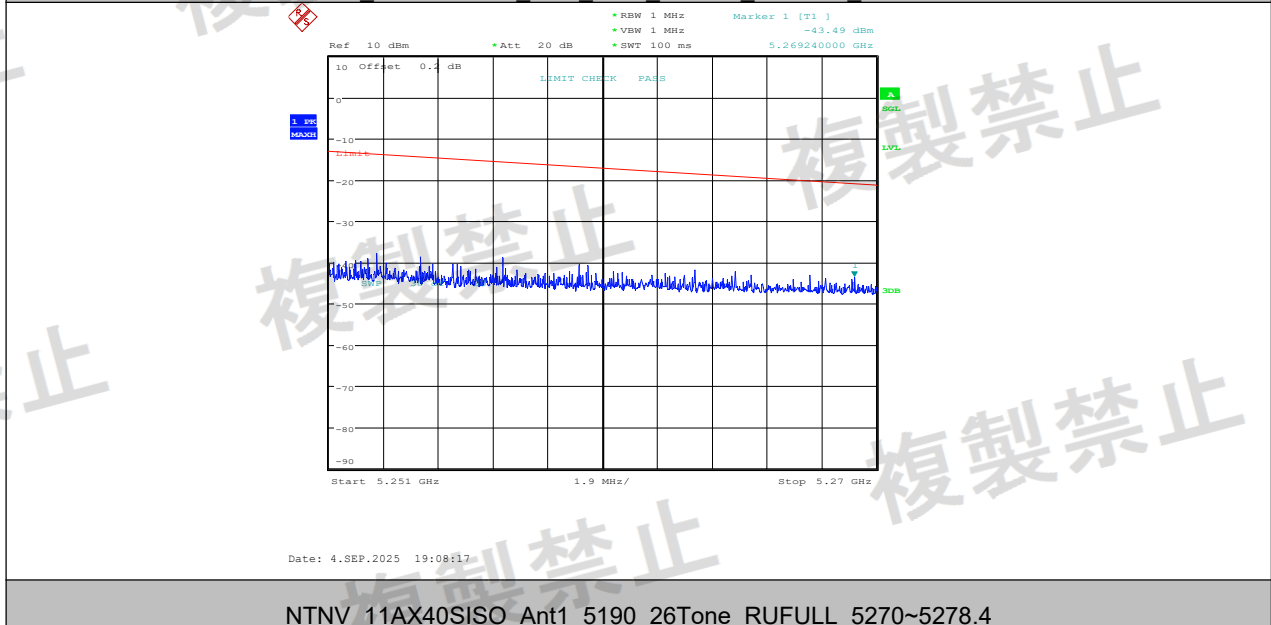
NTNV_11AX40SISO_Ant1_5190_26Tone_RUFULL_5141.6~5150



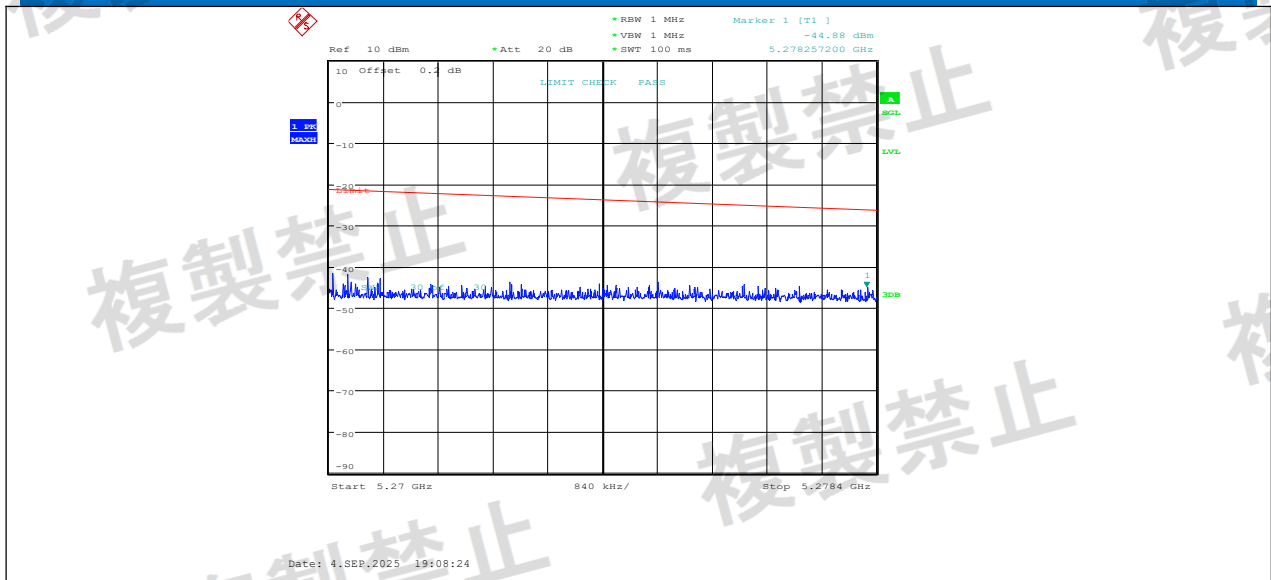
NTNV_11AX40SISO_Ant1_5190_26Tone_RUFULL_5250~5251



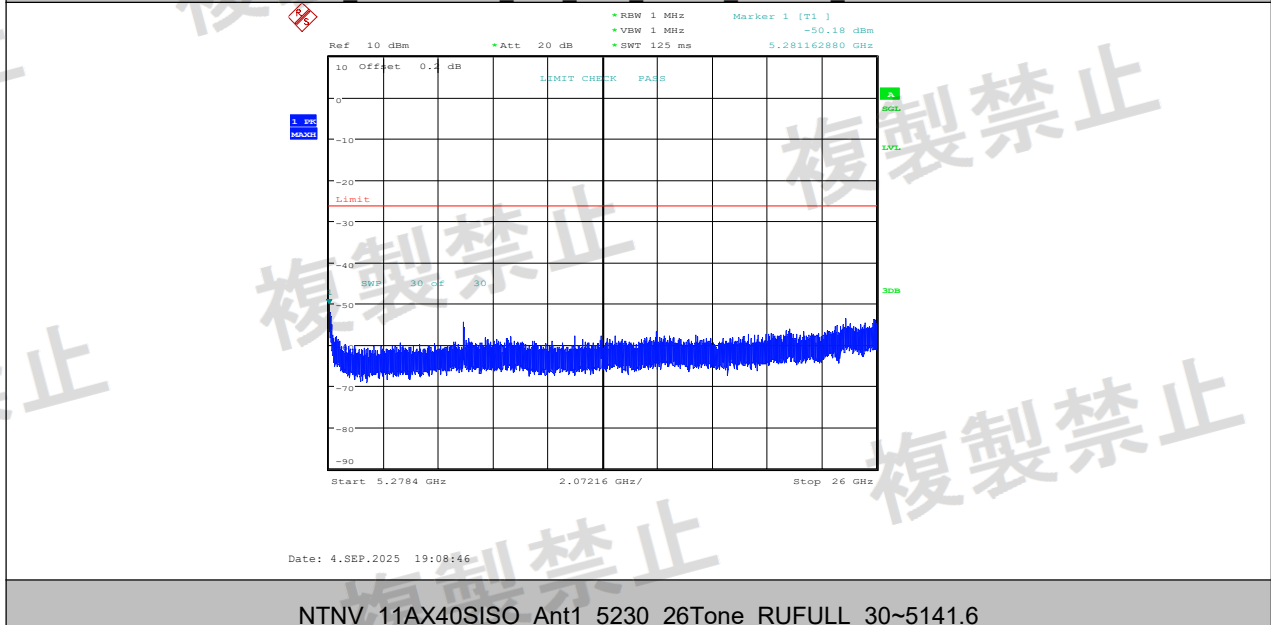
NTNV 11AX40SISO Ant1 5190 26Tone RUFULL 5251~5270



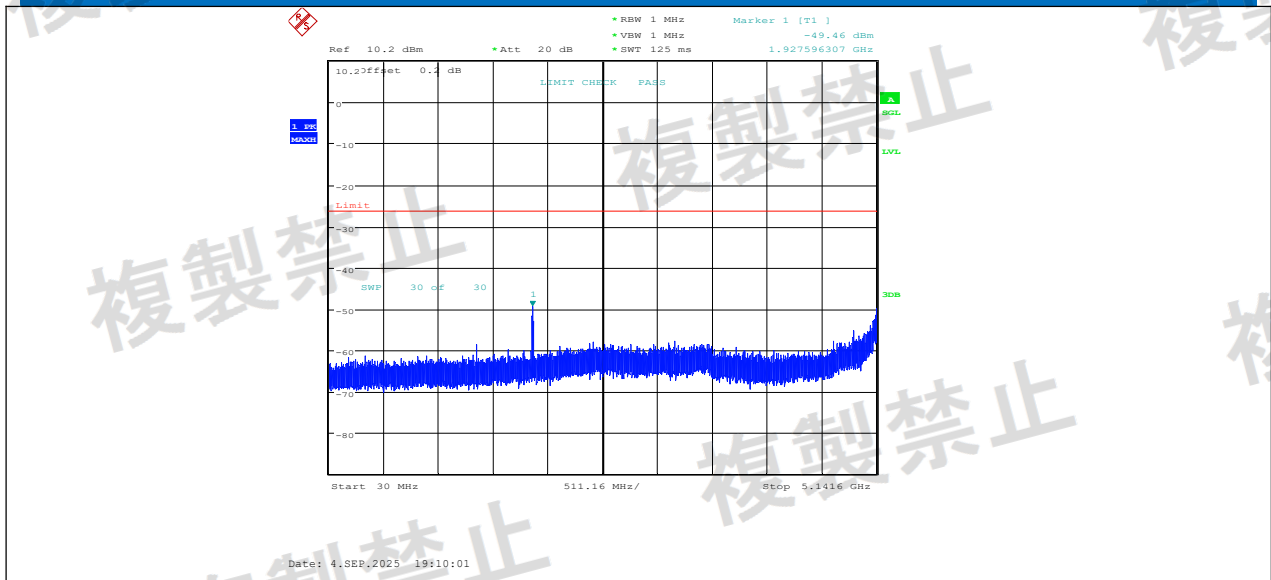
NTNV 11AX40SISO Ant1 5190 26Tone RUFULL 5270~5278.4



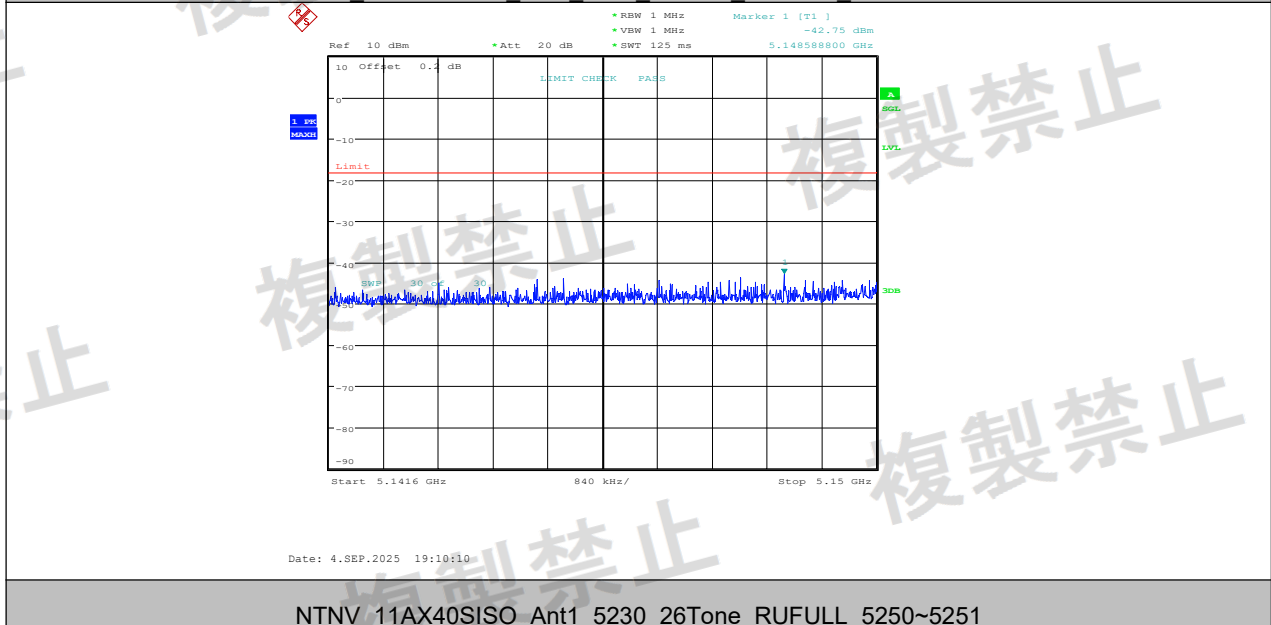
NTNV_11AX40SISO_Ant1_5190_26Tone_RUFULL_5278.4~26000



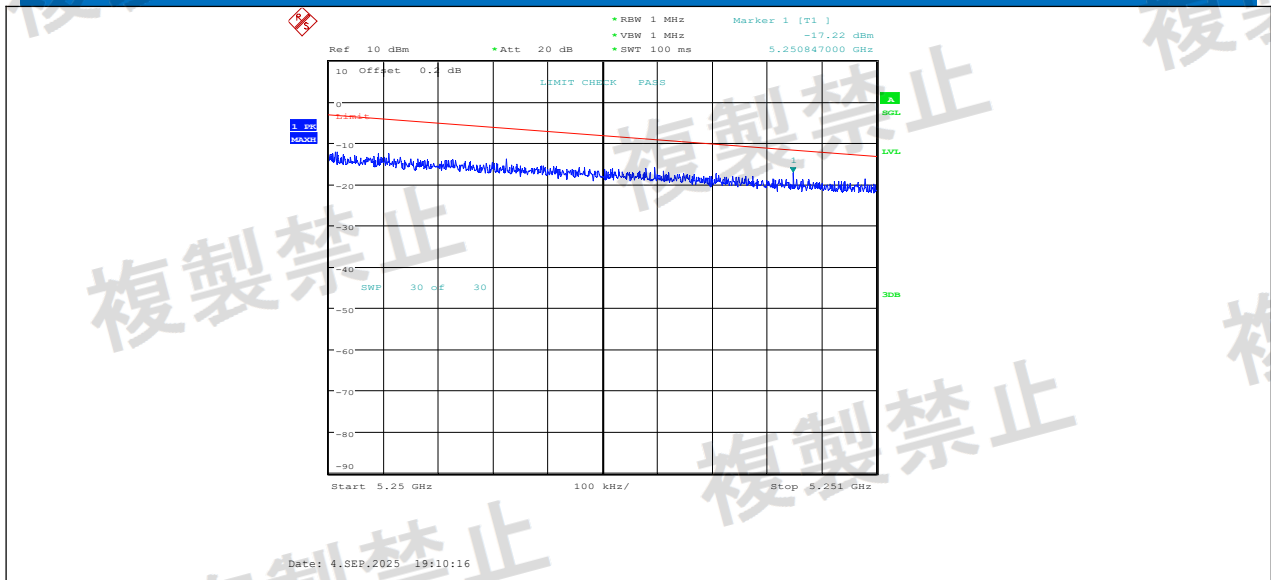
NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_30~5141.6



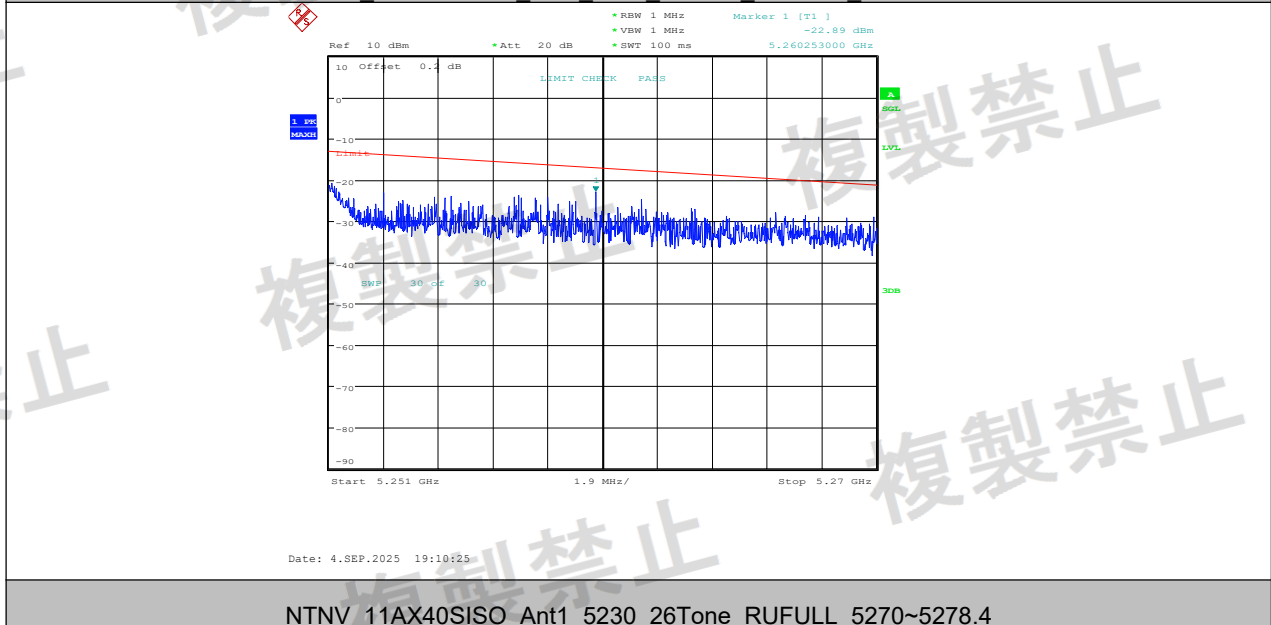
NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_5141.6~5150



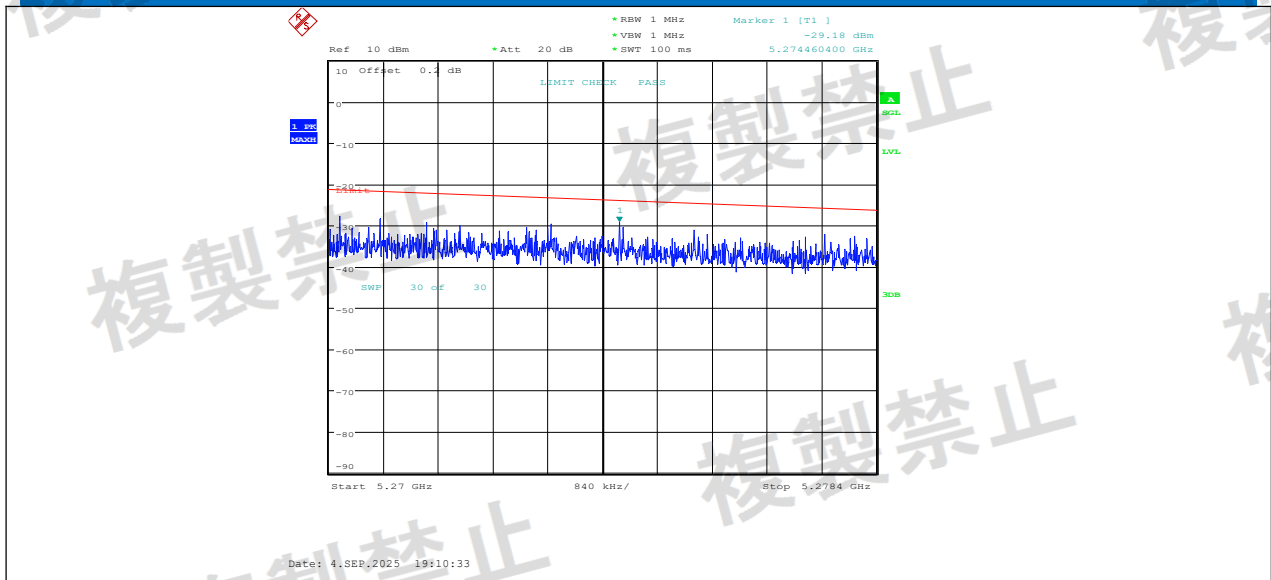
NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_5250~5251



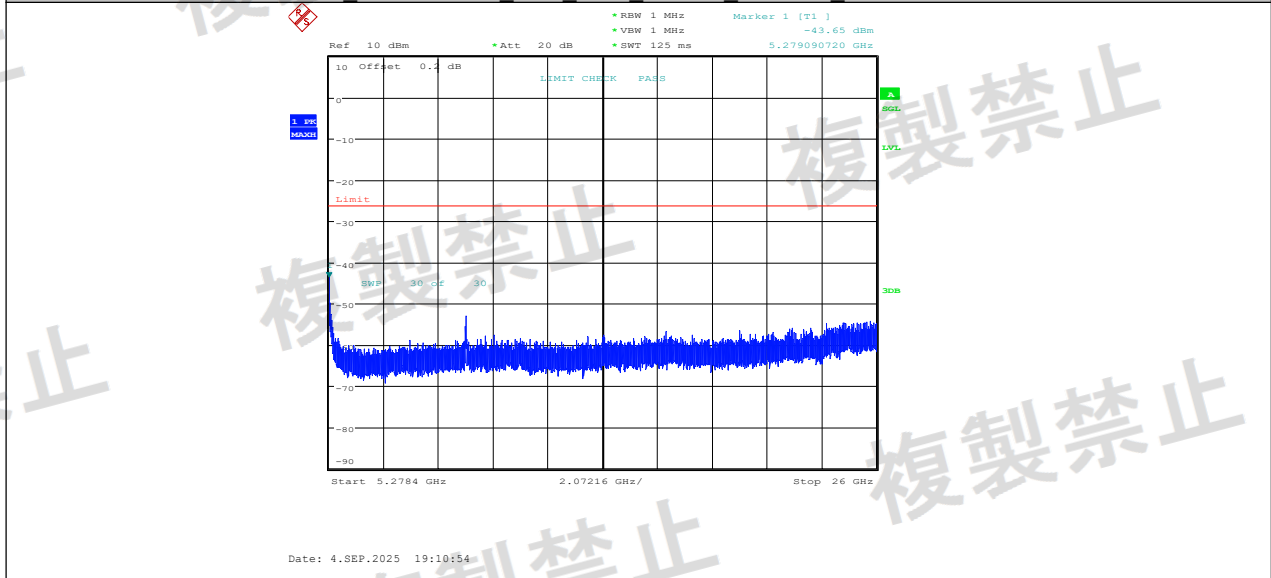
NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_5251~5270



NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_5270~5278.4



NTNV_11AX40SISO_Ant1_5230_26Tone_RUFULL_5278.4~26000



6.11 Spurious Emissions of Rx

Test Requirement: Item 19-3 of Article 2-1

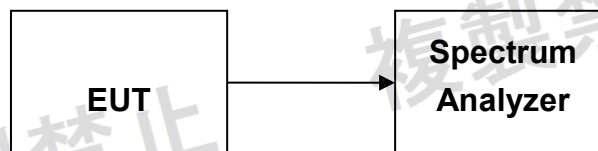
(1) Below 1 GHz : 4 nW or less

(2) 1 GHz and over : 20 nW or less

Note: 4 nW=-54dBm, 20 nW=-47dBm

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Step 1

All spurious are measured from 30 MHz to 26GHz by peak mode.

Step 2:

Frequency: Spurious Frequency

RBW below 1G: 100kHz, above 1G:1 MHz

VBW below 1G: 100kHz, above 1G:1 MHz

Sweep Time Auto

detector mode Sample

Indication mode Max hold

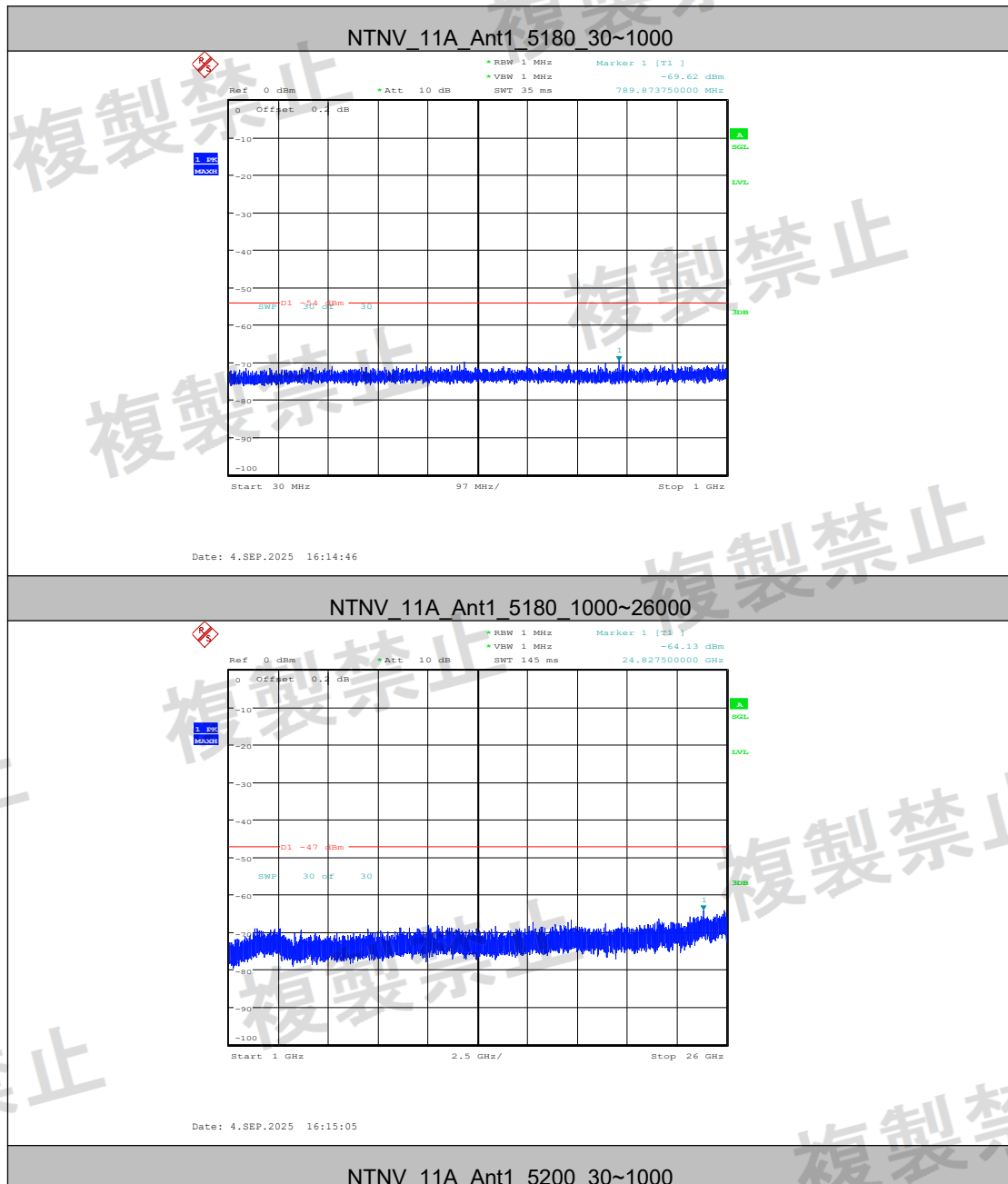
WIFI5:

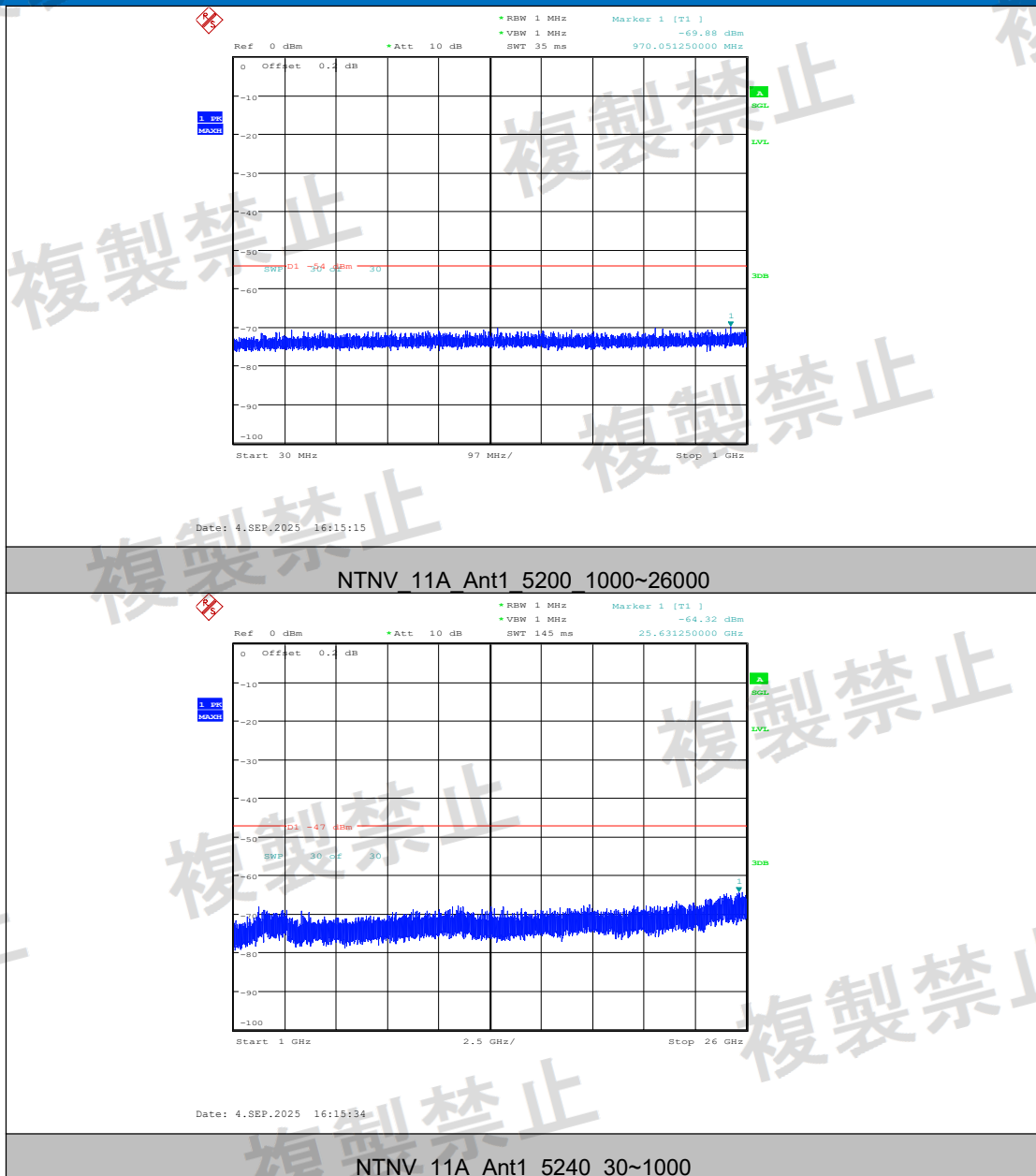
TestCondition	TestMode	Freq (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	11A	5180	30~1000	789.87	-69.62	≤-54	0.10914	≤4	PASS
			1000~26000	24827.50	-64.13	≤-47	0.38637	≤20	PASS
		5200	30~1000	970.05	-69.88	≤-54	0.10280	≤4	PASS
			1000~26000	25631.25	-64.32	≤-47	0.36983	≤20	PASS
		5240	30~1000	960.84	-70.06	≤-54	0.09863	≤4	PASS
			1000~26000	25503.75	-63.76	≤-47	0.42073	≤20	PASS
	11N20SI SO	5180	30~1000	839.47	-69.64	≤-54	0.10864	≤4	PASS
			1000~26000	25226.25	-63.77	≤-47	0.41976	≤20	PASS
		5200	30~1000	789.51	-70.04	≤-54	0.09908	≤4	PASS
			1000~26000	2551.25	-64.36	≤-47	0.36644	≤20	PASS
		5240	30~1000	641.95	-69.64	≤-54	0.10864	≤4	PASS
			1000~26000	2441.25	-62.39	≤-47	0.57677	≤20	PASS
	11N40SI SO	5190	30~1000	557.56	-70.04	≤-54	0.09908	≤4	PASS
			1000~26000	2485.00	-61.91	≤-47	0.64417	≤20	PASS
		5230	30~1000	945.68	-69.73	≤-54	0.10641	≤4	PASS
			1000~26000	25620.00	-64.31	≤-47	0.37068	≤20	PASS
	11AC20S ISO	5180	30~1000	586.17	-69.44	≤-54	0.11376	≤4	PASS
			1000~26000	5321.25	-61.78	≤-47	0.66374	≤20	PASS
		5200	30~1000	901.42	-70.04	≤-54	0.09908	≤4	PASS
			1000~26000	25633.75	-64.43	≤-47	0.36058	≤20	PASS
		5240	30~1000	792.30	-69.21	≤-54	0.11995	≤4	PASS
			1000~26000	25750.00	-64.31	≤-47	0.37068	≤20	PASS
	11AC40S ISO	5190	30~1000	780.17	-70.13	≤-54	0.09705	≤4	PASS
			1000~26000	25555.00	-64.14	≤-47	0.38548	≤20	PASS
		5230	30~1000	529.43	-69.98	≤-54	0.10046	≤4	PASS
			1000~26000	25050.00	-64.54	≤-47	0.35156	≤20	PASS

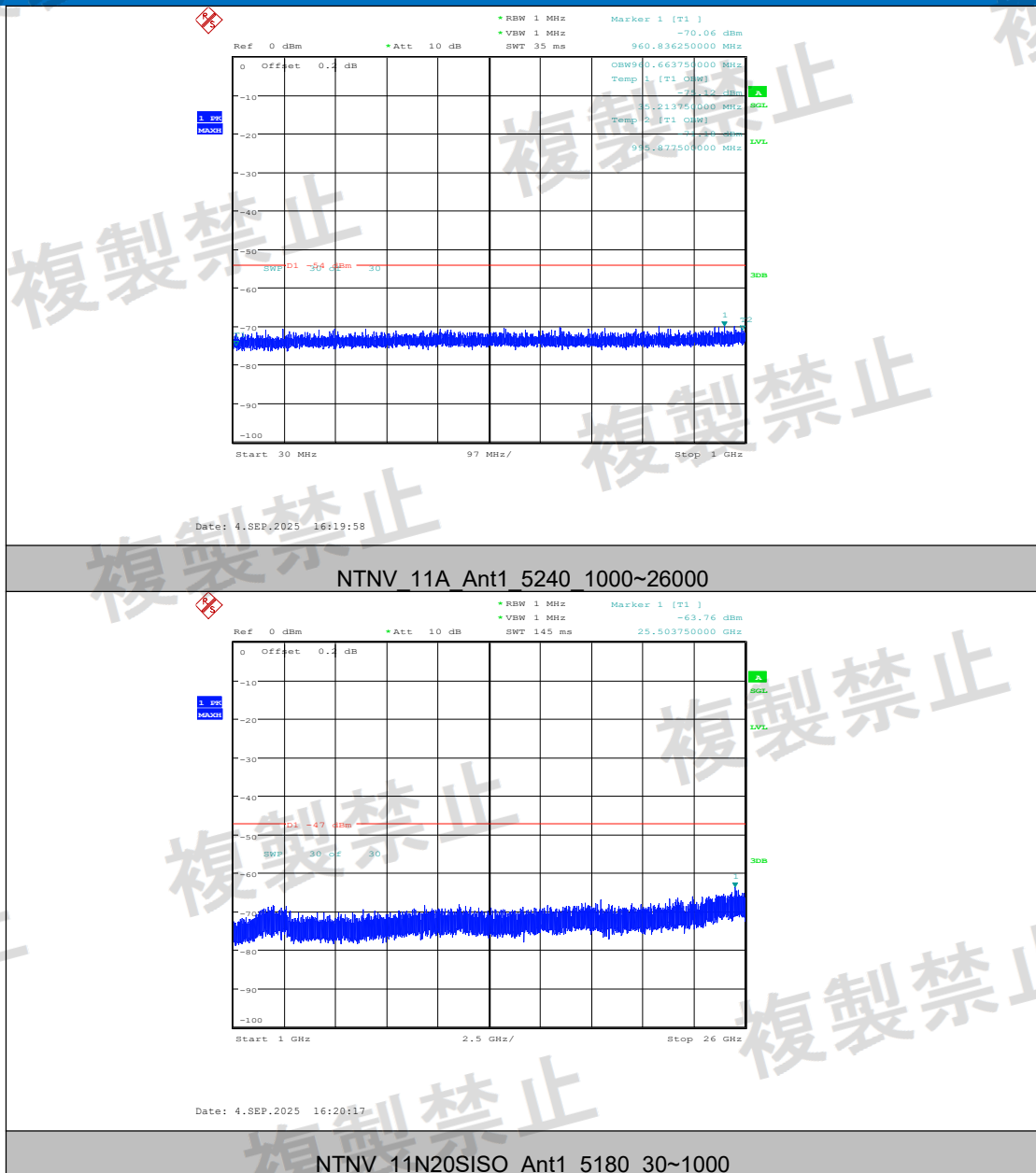
WIFI6:

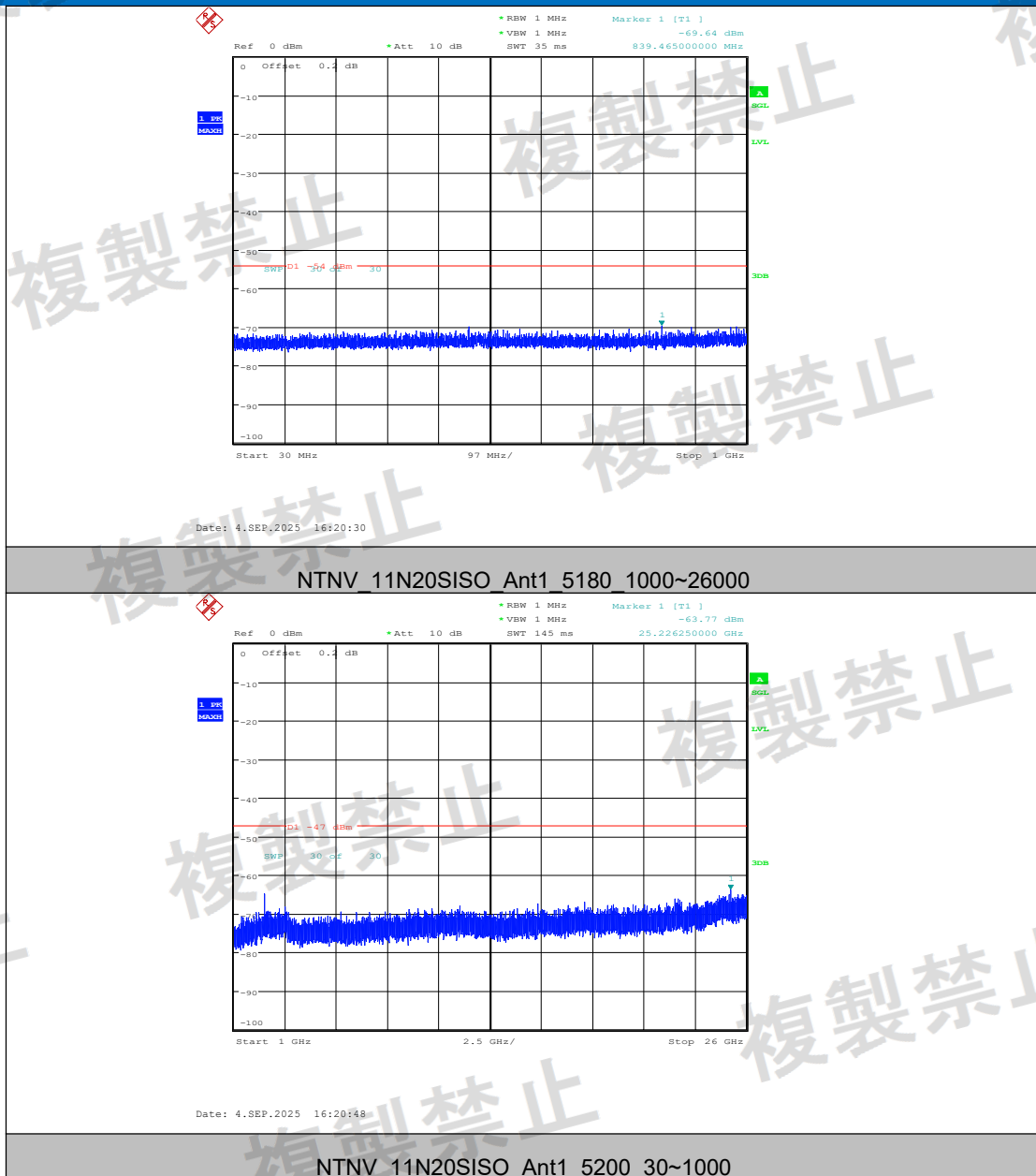
Test Condition	Test Mode	Freq (MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]
NTNV	11AX2 0SISO	5180	30~1000	-70.01	≤-54	0.09977	≤4	PASS
			1000~26000	-62.36	≤-47	0.58076	≤20	PASS
		5200	30~1000	-69.39	≤-54	0.11508	≤4	PASS
			1000~26000	-64.71	≤-47	0.33806	≤20	PASS
		5240	30~1000	-69.75	≤-54	0.10593	≤4	PASS
			1000~26000	-63.26	≤-47	0.47206	≤20	PASS
	11AX4 0SISO	5190	30~1000	-69.41	≤-54	0.11455	≤4	PASS
			1000~26000	-63.94	≤-47	0.40365	≤20	PASS
		5230	30~1000	-69.69	≤-54	0.10740	≤4	PASS
			1000~26000	-62.16	≤-47	0.60814	≤20	PASS

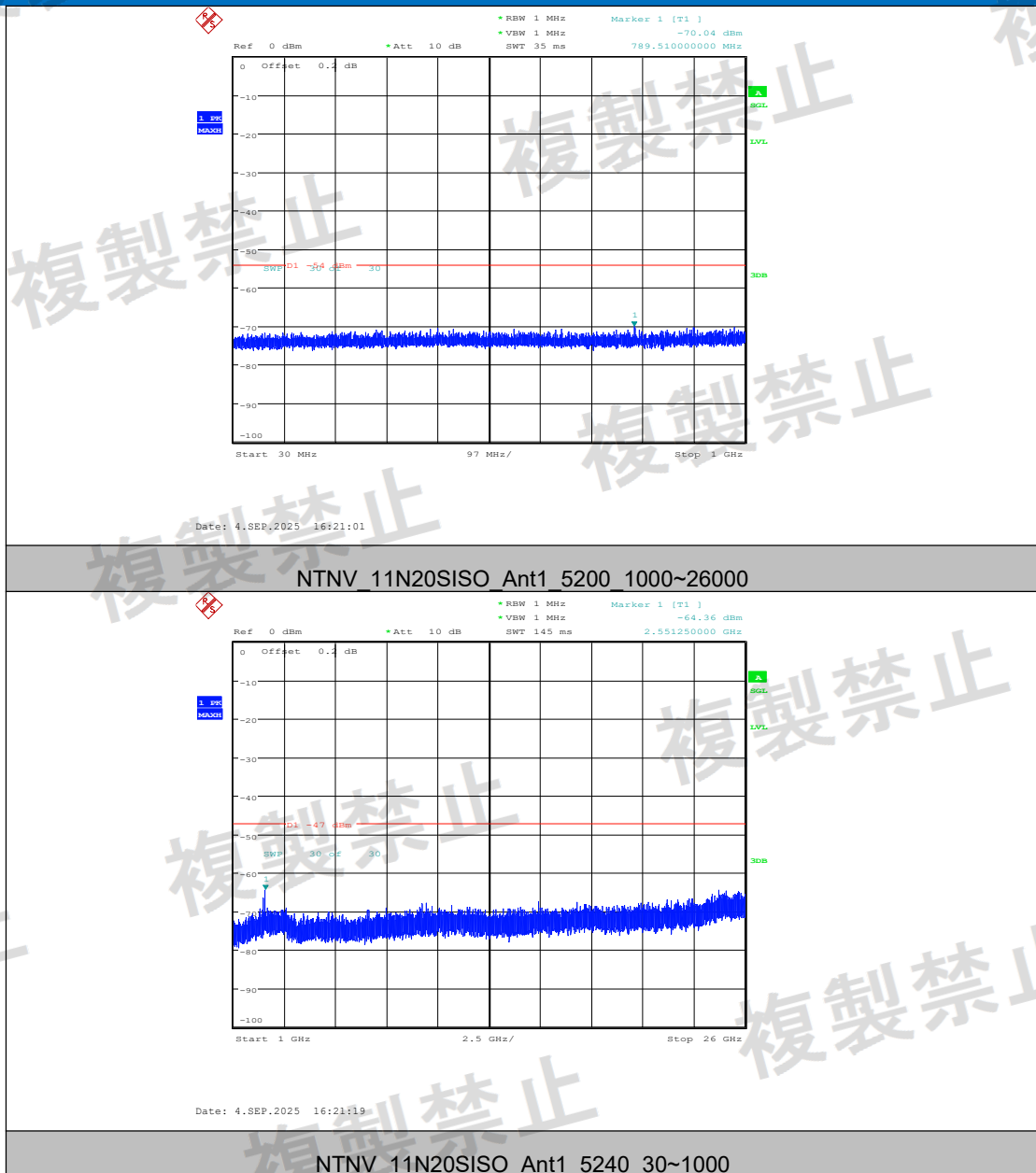
Test plot as follows:

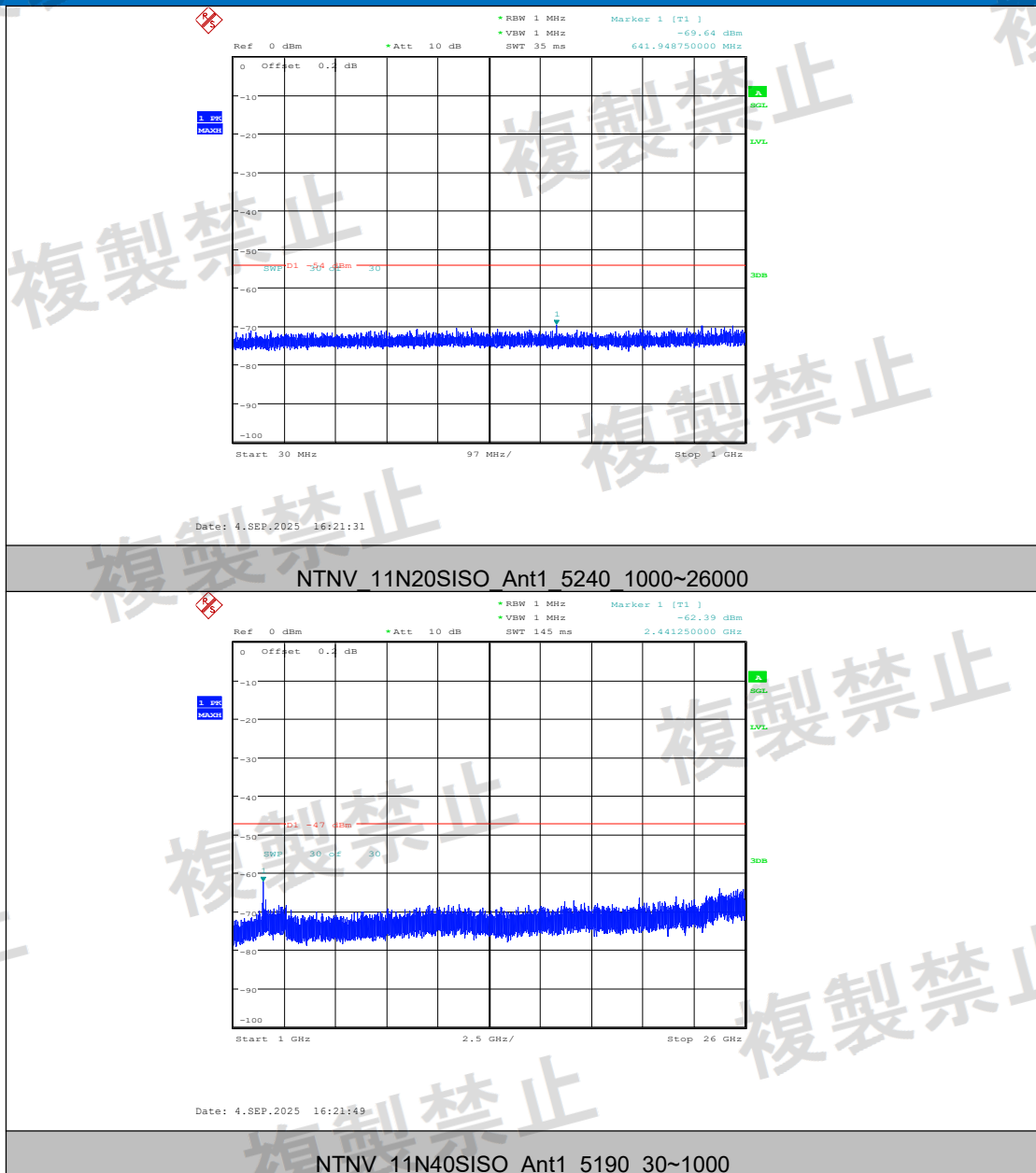


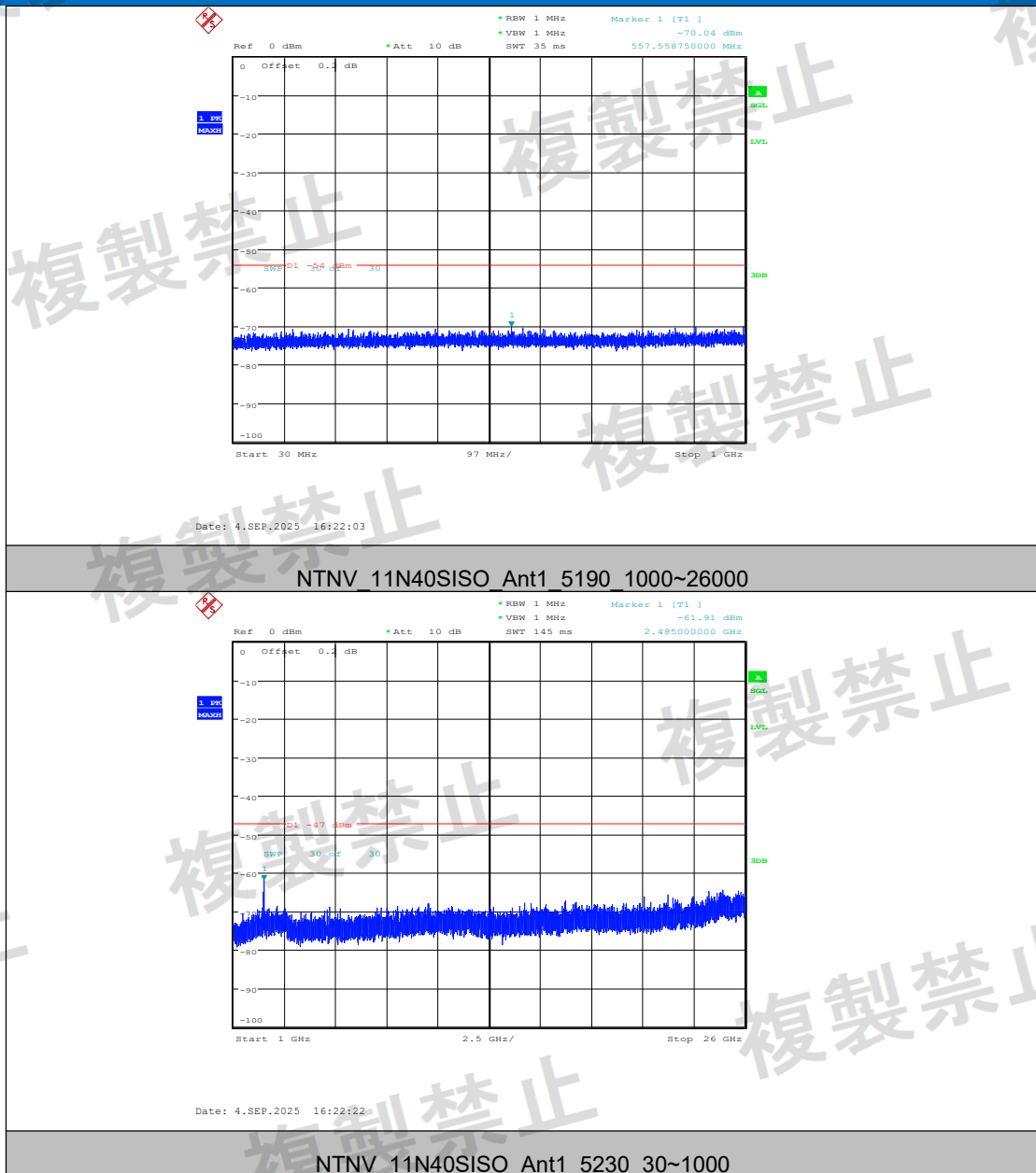


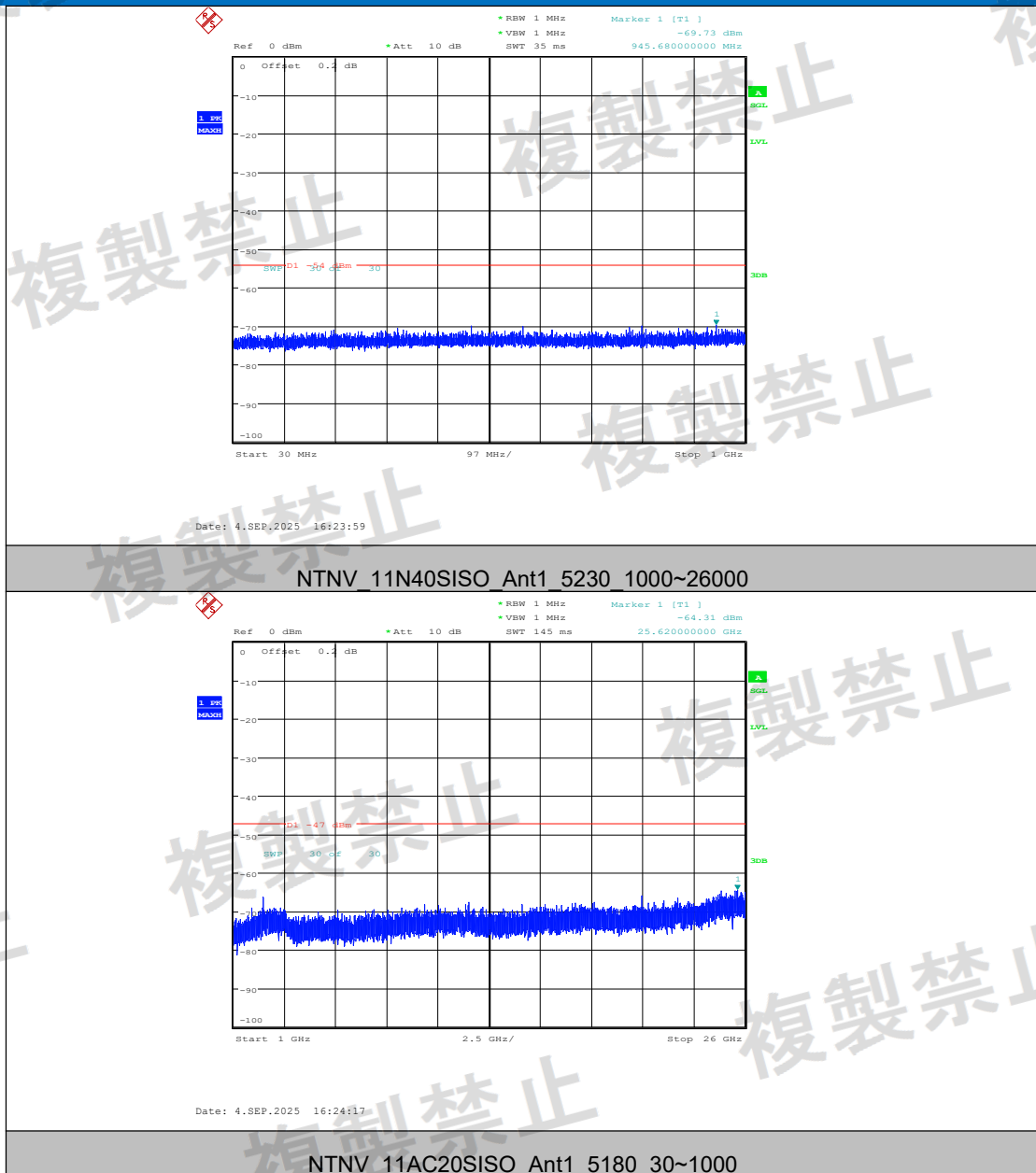


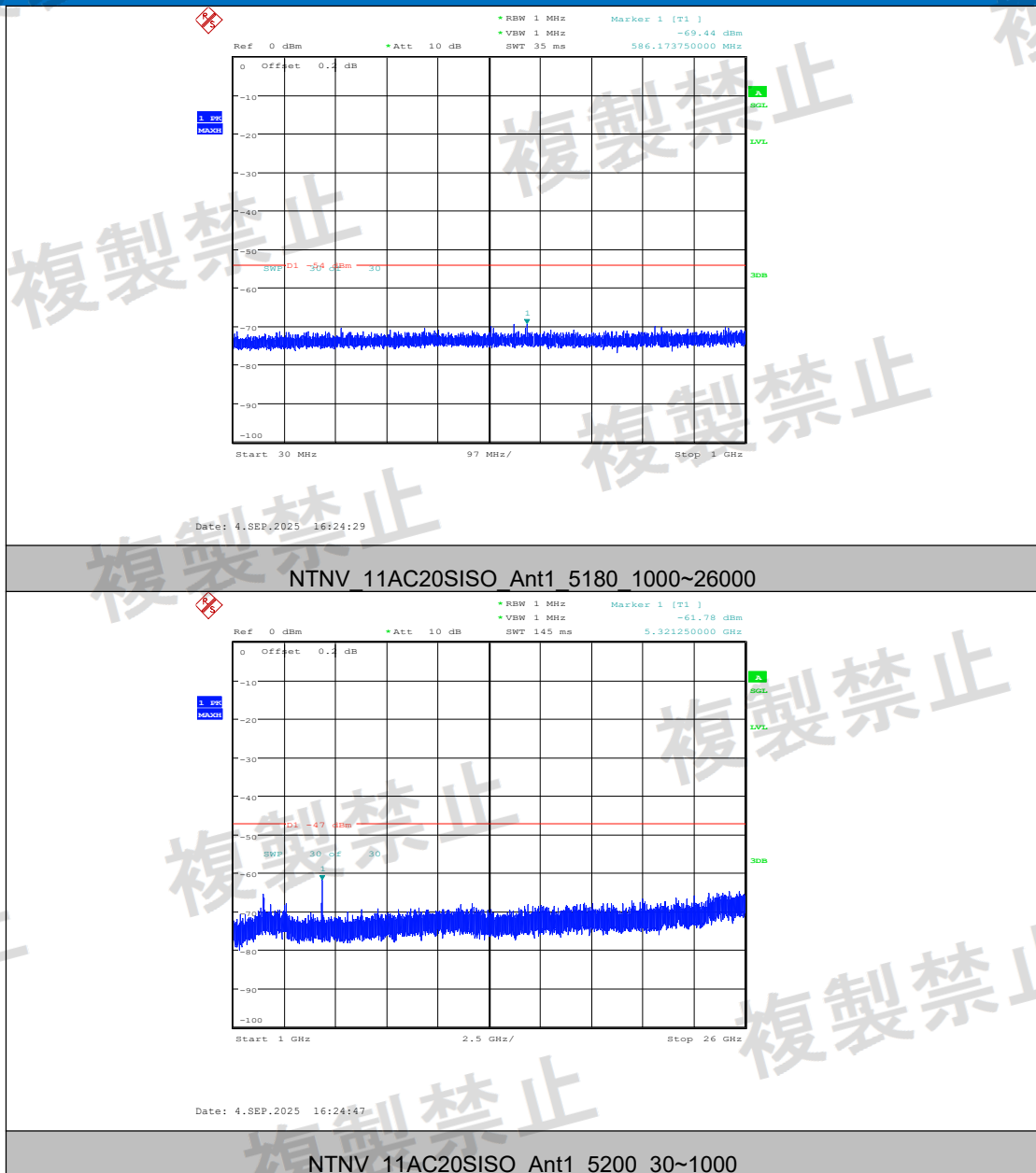


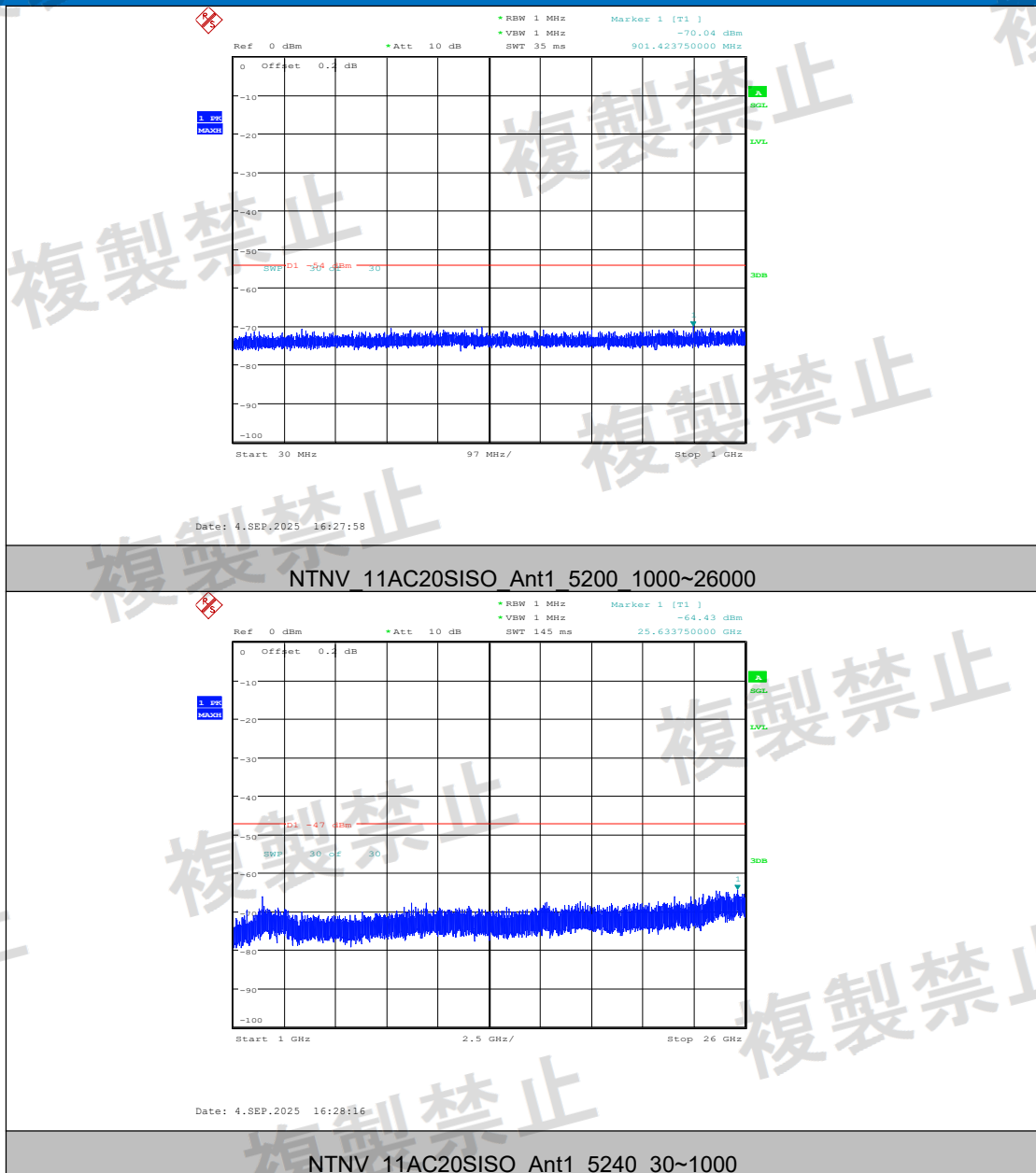


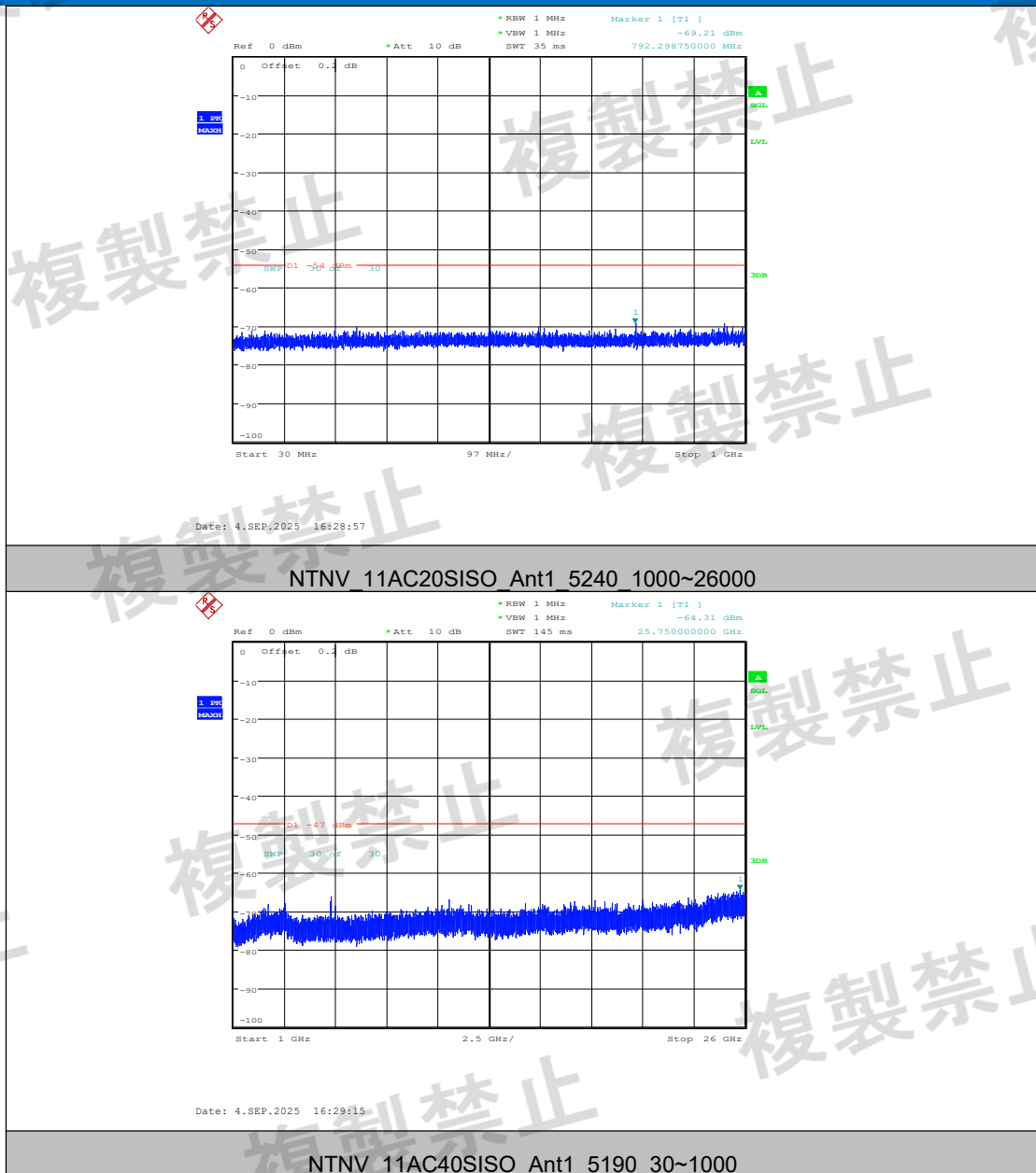


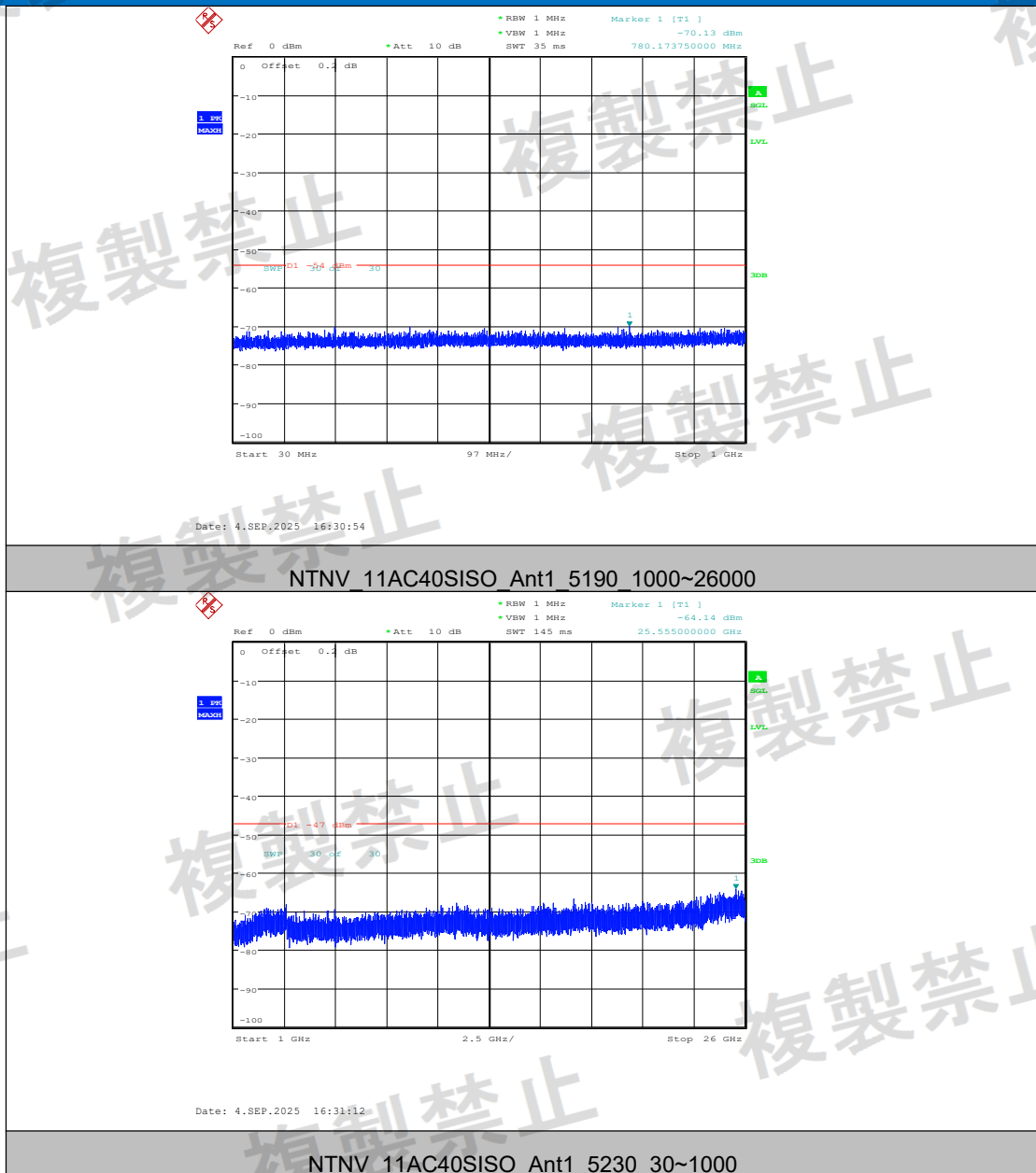


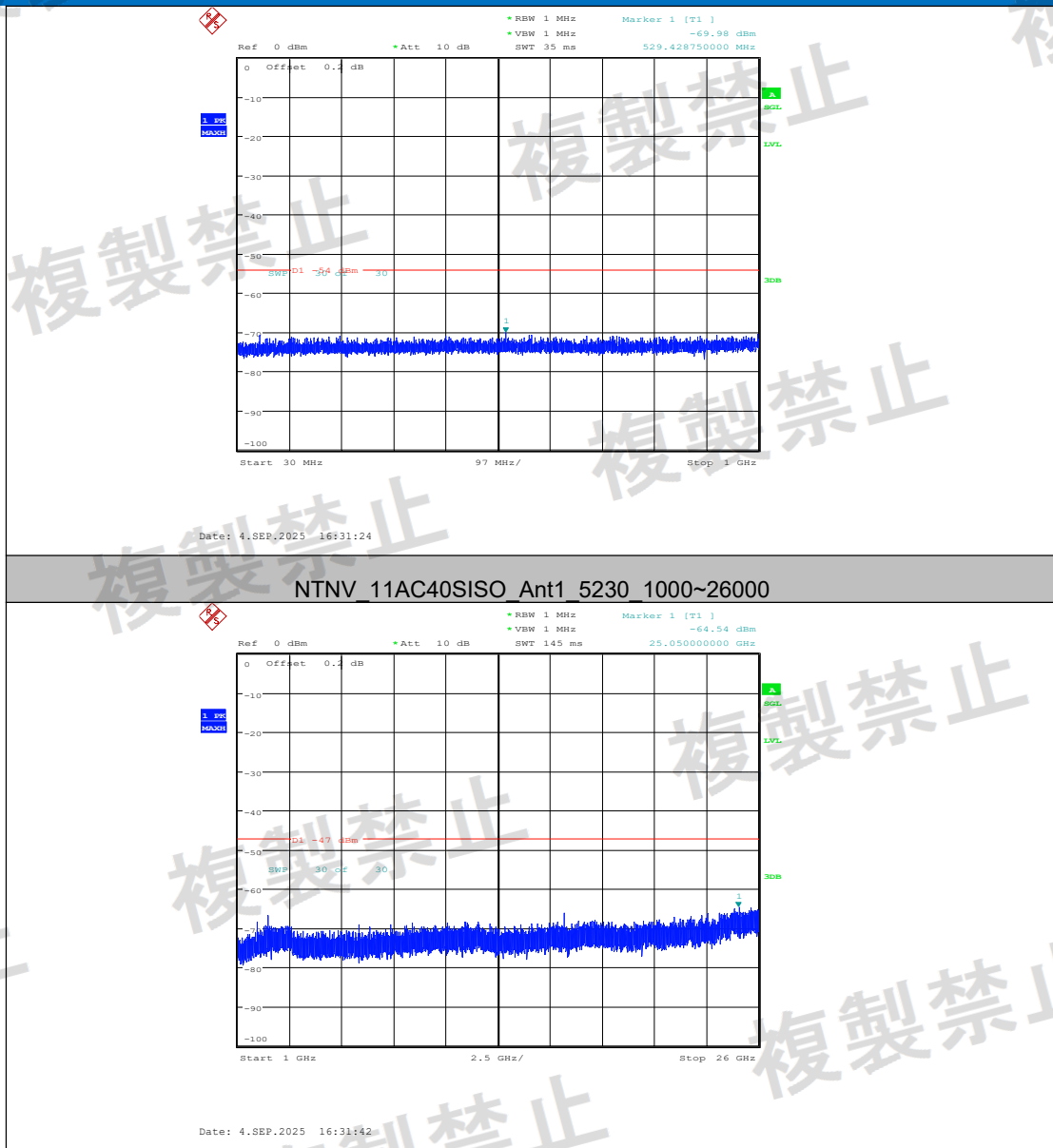




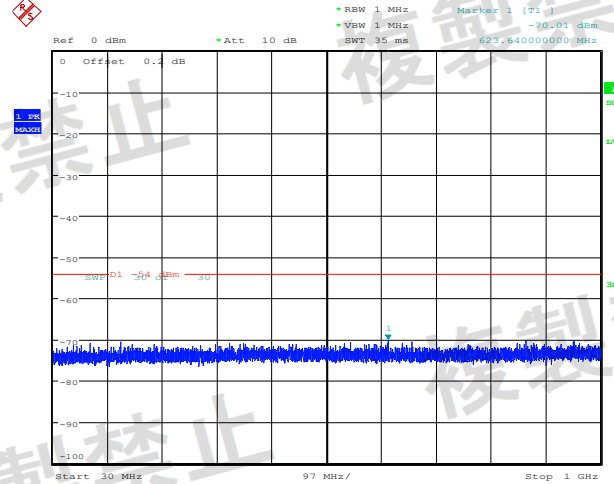






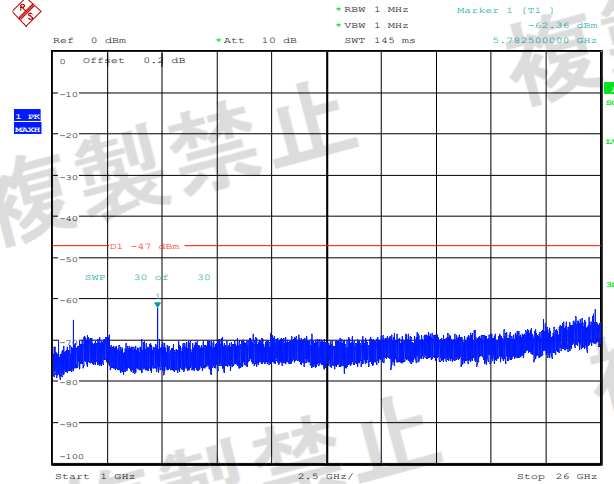


NTNV_11AX20SISO_Ant1_5180_26Tone_RUFULL_30~1000



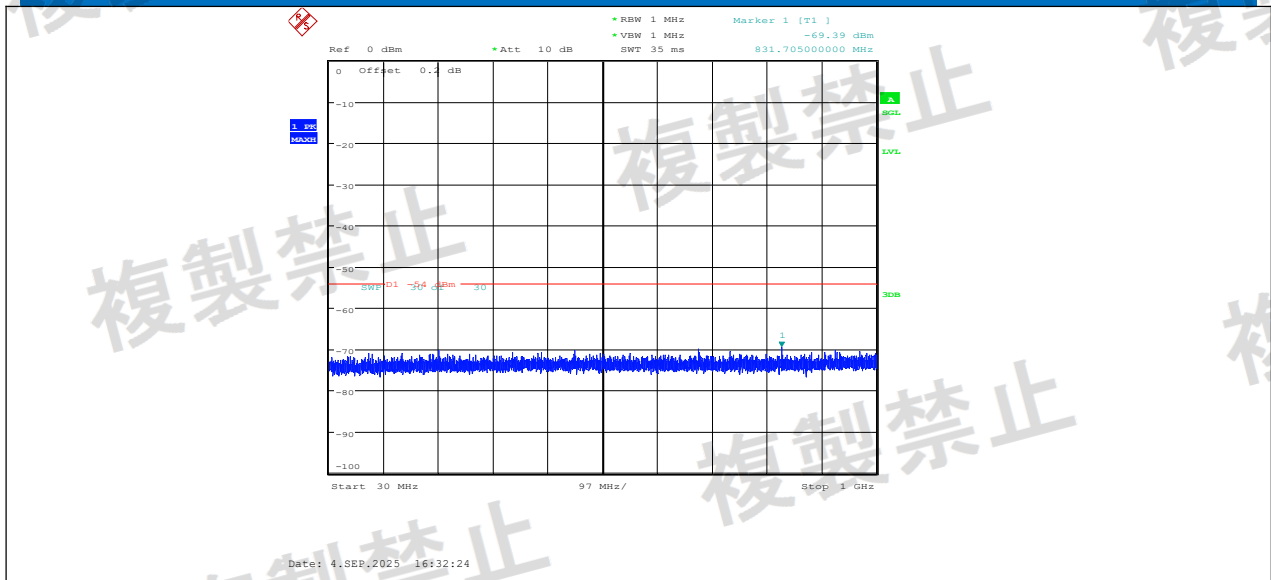
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NTNV_11AX20SISO_Ant1_5180_26Tone_RUFULL_1000~26000

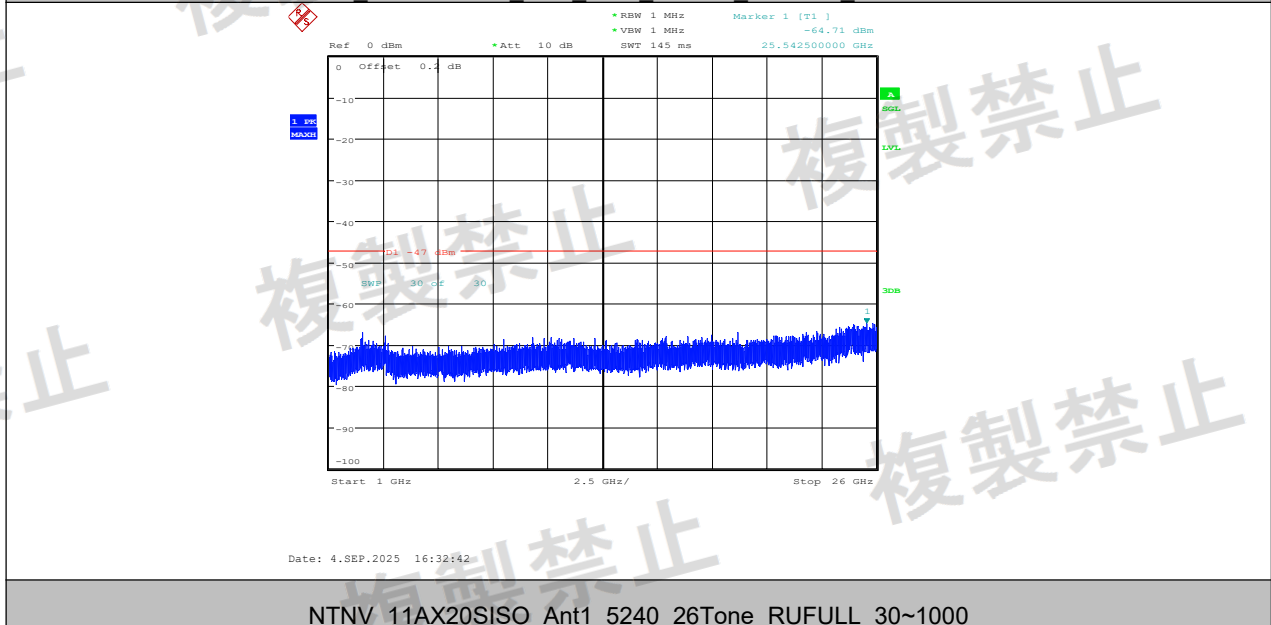


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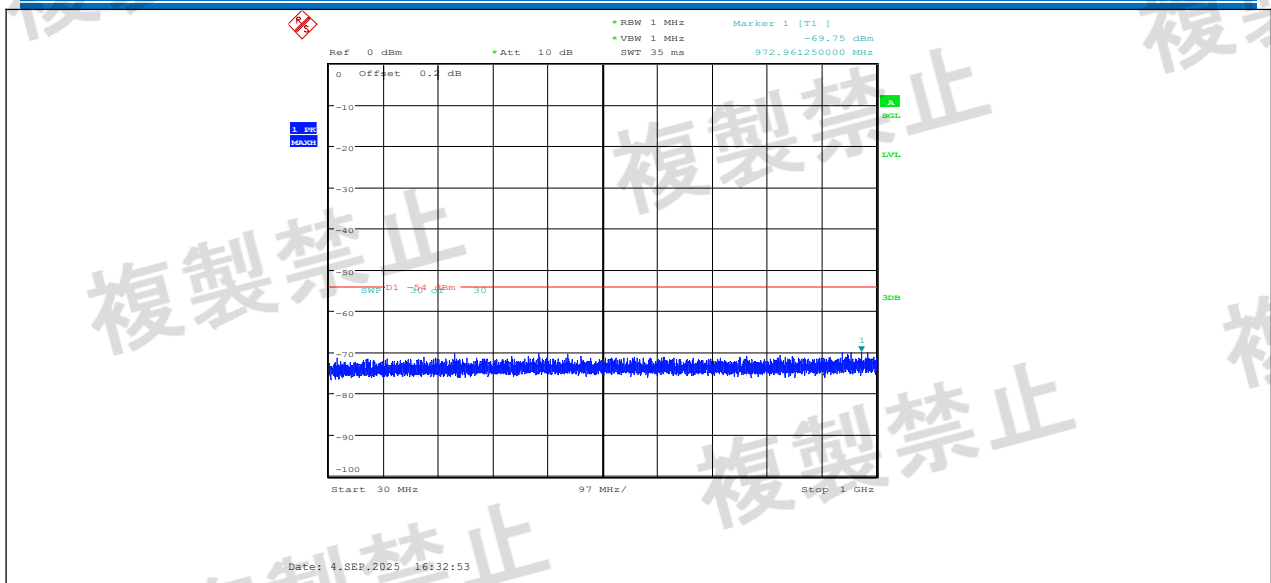
NTNV_11AX20SISO_Ant1_5200_26Tone_RUFULL_30~1000



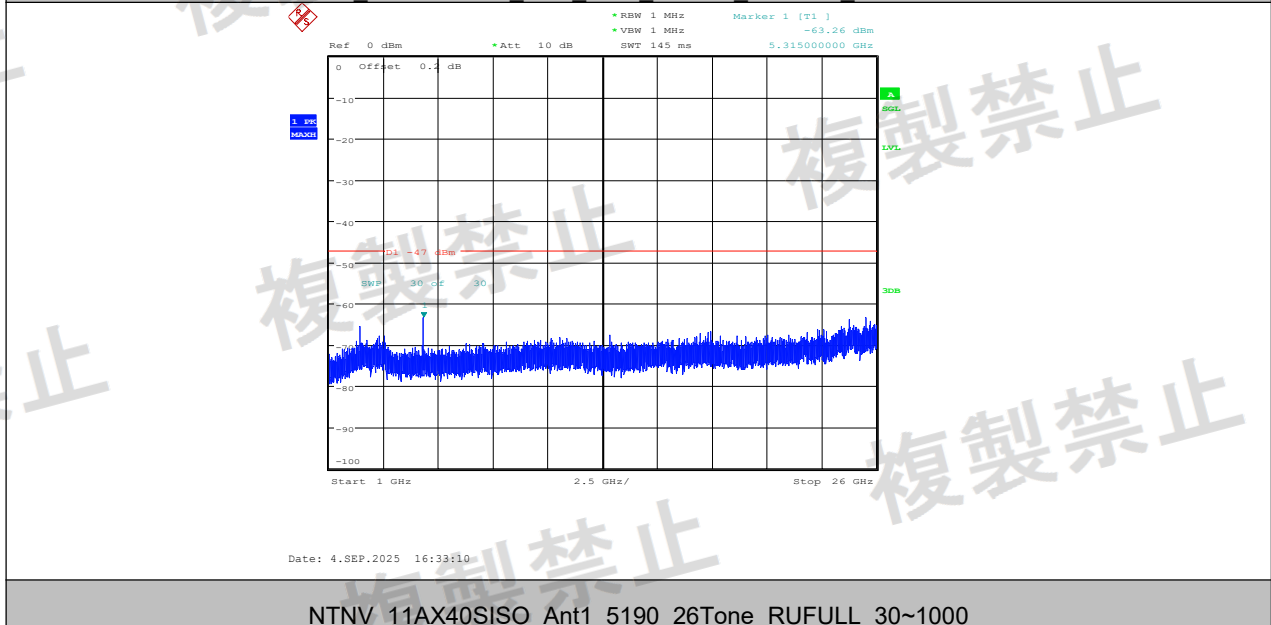
NTNV 11AX20SISO Ant1 5200 26Tone RUFULL 1000~26000



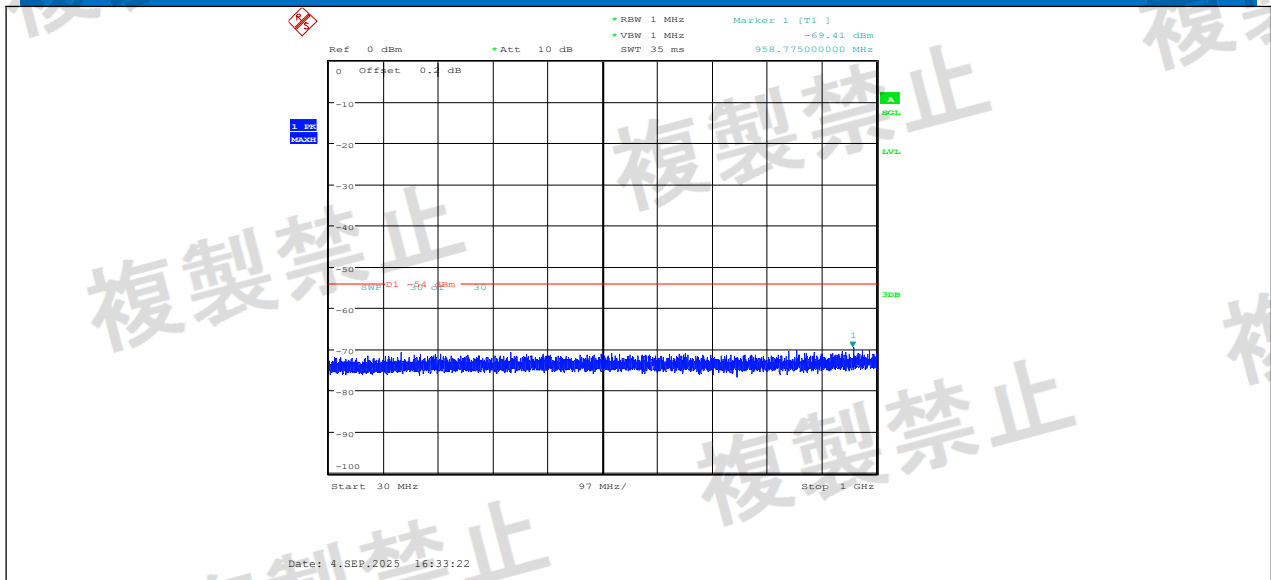
NTNV 11AX20SISO Ant1 5240 26Tone RUFULL 30~1000



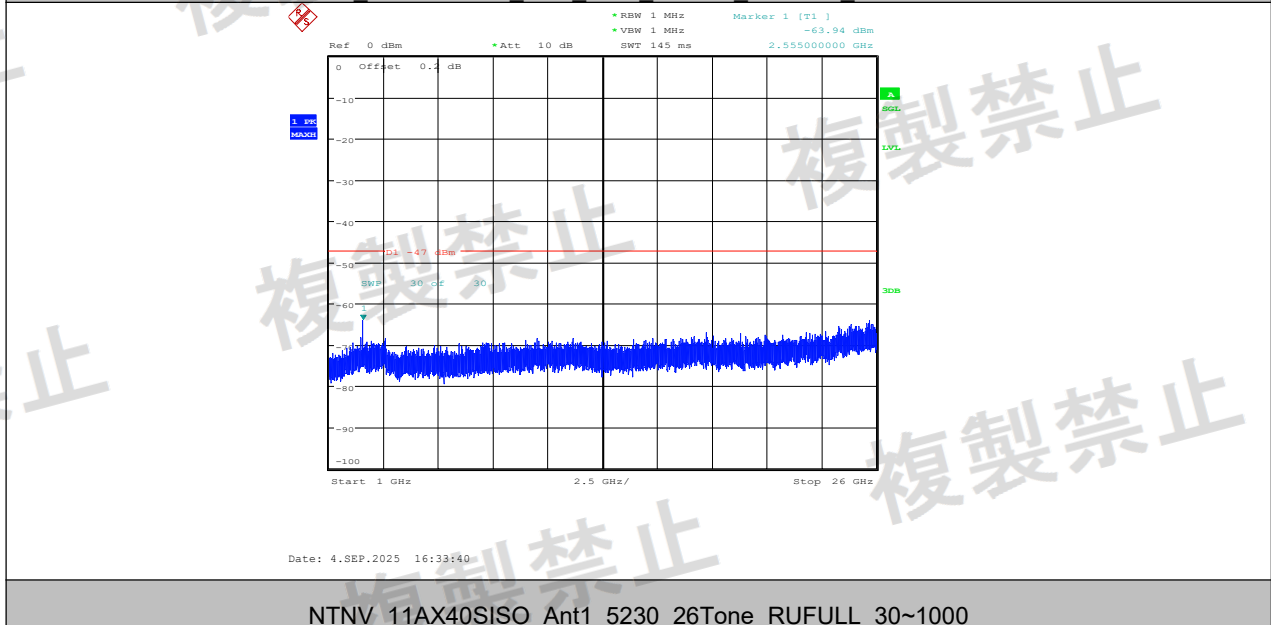
NTNV 11AX20SISO Ant1 5240 26Tone RUFULL 1000~26000



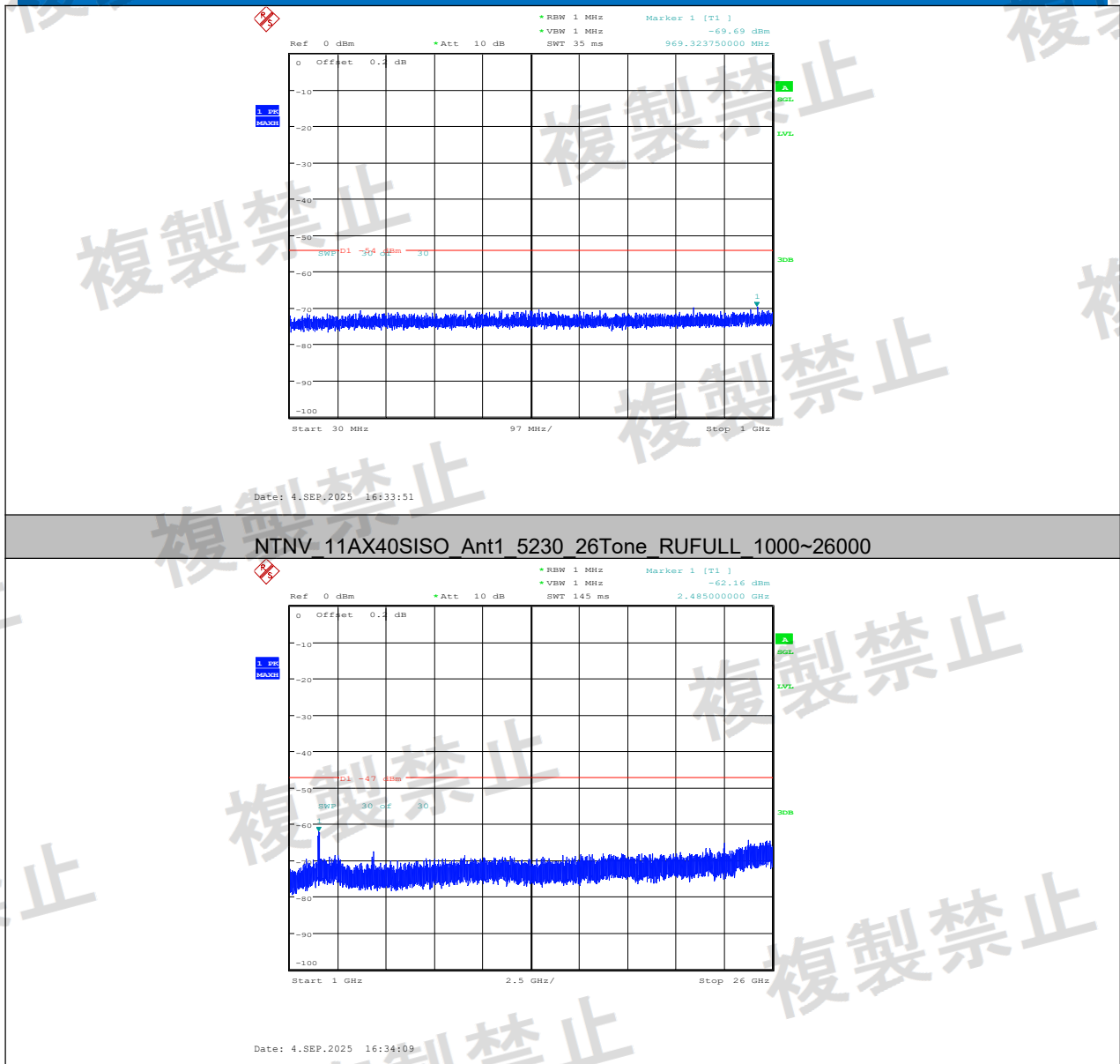
NTNV 11AX40SISO Ant1 5190 26Tone RUFULL 30~1000



NTNV 11AX40SISO Ant1 5190 26Tone RUFULL 1000~26000



NTNV 11AX40SISO Ant1 5230 26Tone RUFULL 30~1000

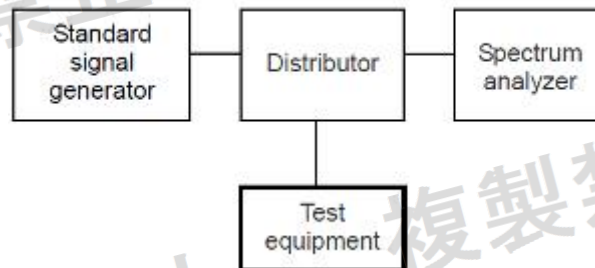


6.12 Carrier sense capability

Test Requirement: Item 19-3 of Article 2-1

Shall not transmit radio wave when receiving over 100mV/m

Test Configuration: Test with test equipment only



Test Procedure:

1) Test Conditions:

Spectrum Analyzer and signal generator is used for measurement.

2) EUT conditions:

Set the test equipment at the test frequency and the test spread code, and set it to the receiving mode, when using external test equipment, establish a connection

3) Set the standard signal generator as follows:

Carrier frequency: Center frequency of receiving frequency band of test equipment

Modulation: No modulation (when the carrier sense function does not work by the the unmodulated subcarrier in center frequency, shift the frequency or modulate if needed.)

Output level: In the antenna input unit of a test equipment, field intensity is equivalent to the value which becomes 100mV/m.

4) Set the spectrum analyzer as follows:

Center frequency: Center frequency of the bandwidth used.

Sweep frequency band: 50MHz

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Approximately same as the resolution bandwidth

Y-axis scale: 10dB/Div

Trigger condition: Free-run

Detective mode: Positive peak

5) Measuring operation

- (1) Test with test equipment only: Set the test equipment to the transmitting operation with the output of standard signal generator OFF, and confirm that it emits radio wave, using spectrum analyzer.
- (2) Set the test equipment to the receiving mode.
- (3) Set the test equipment to the transmitting operation with the output of standard signal generator ON, and confirm that it does not emit radio wave, using spectrum analyzer.

Test result: The product did not transmit radio wave when receiving over 100mV/m. The unit does meet the requirements

6.13 Burst Length

Test Requirement: Item 19-3 of Article 2-1
8ms or less

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Frequency Counter or Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread On,

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 0 MHz

RBW 10 MHz,

VBW 10 MHz,

Detector mode Positive peak

Indication mode Max hold

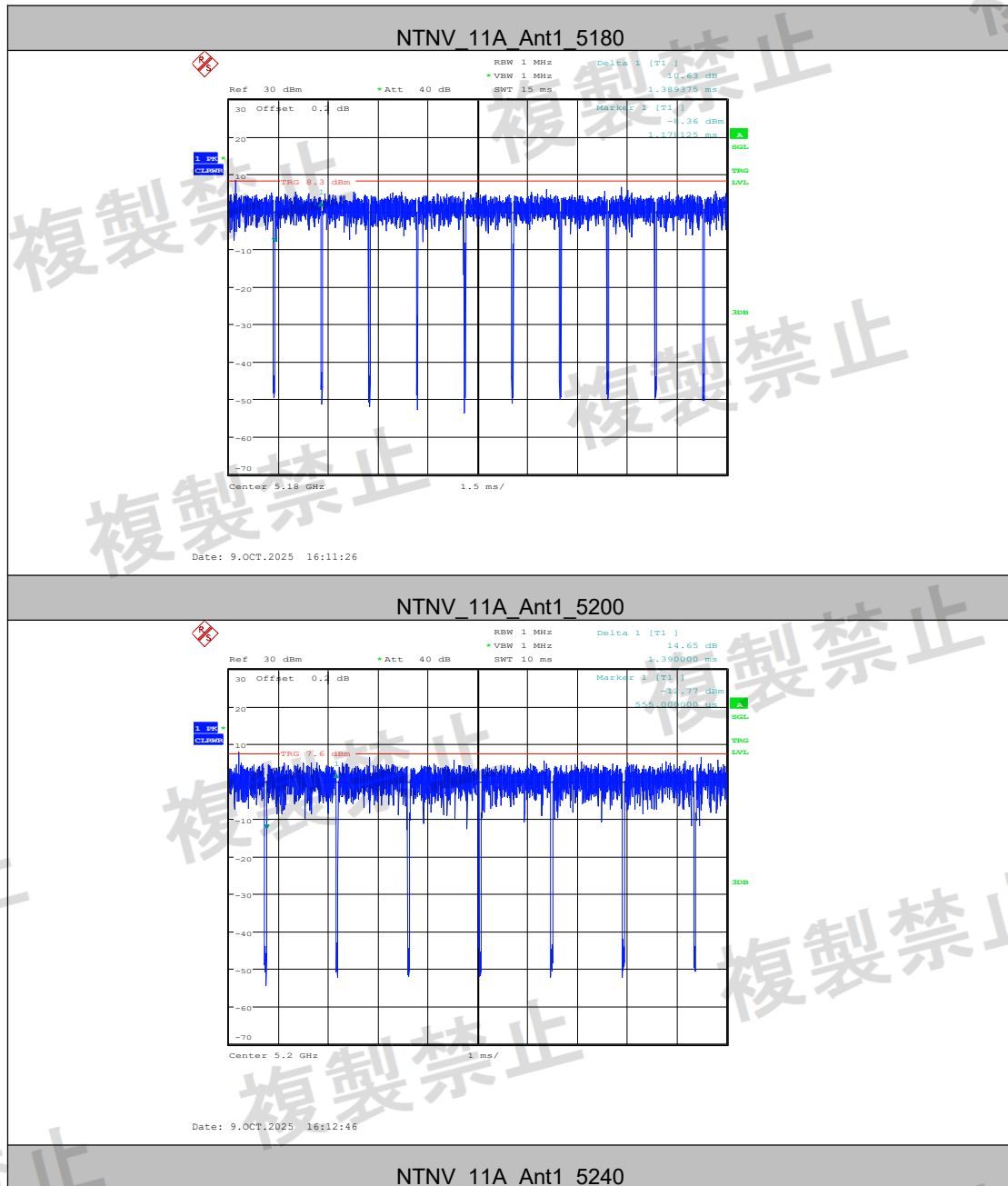
Test Data:

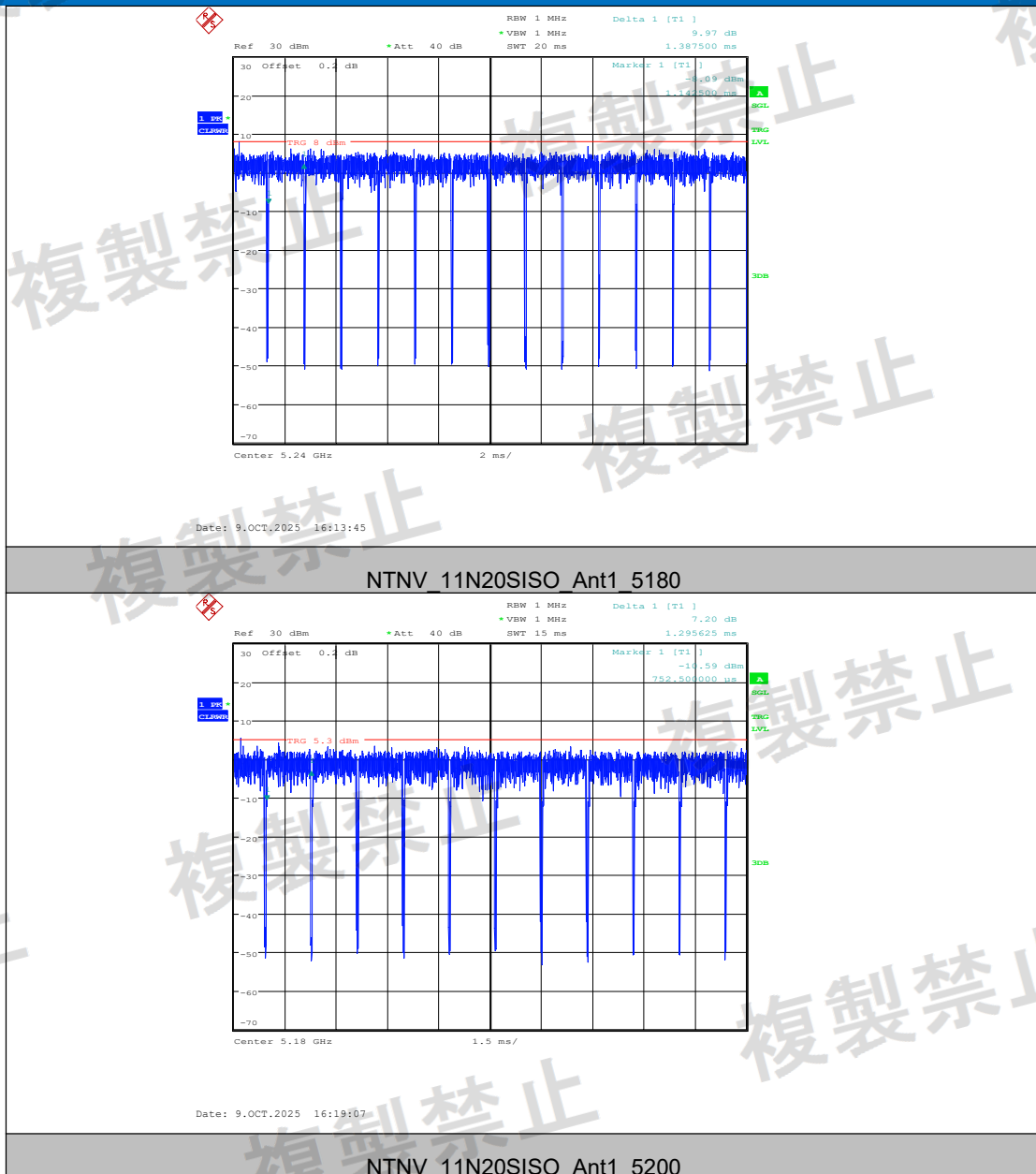
WIFI5:

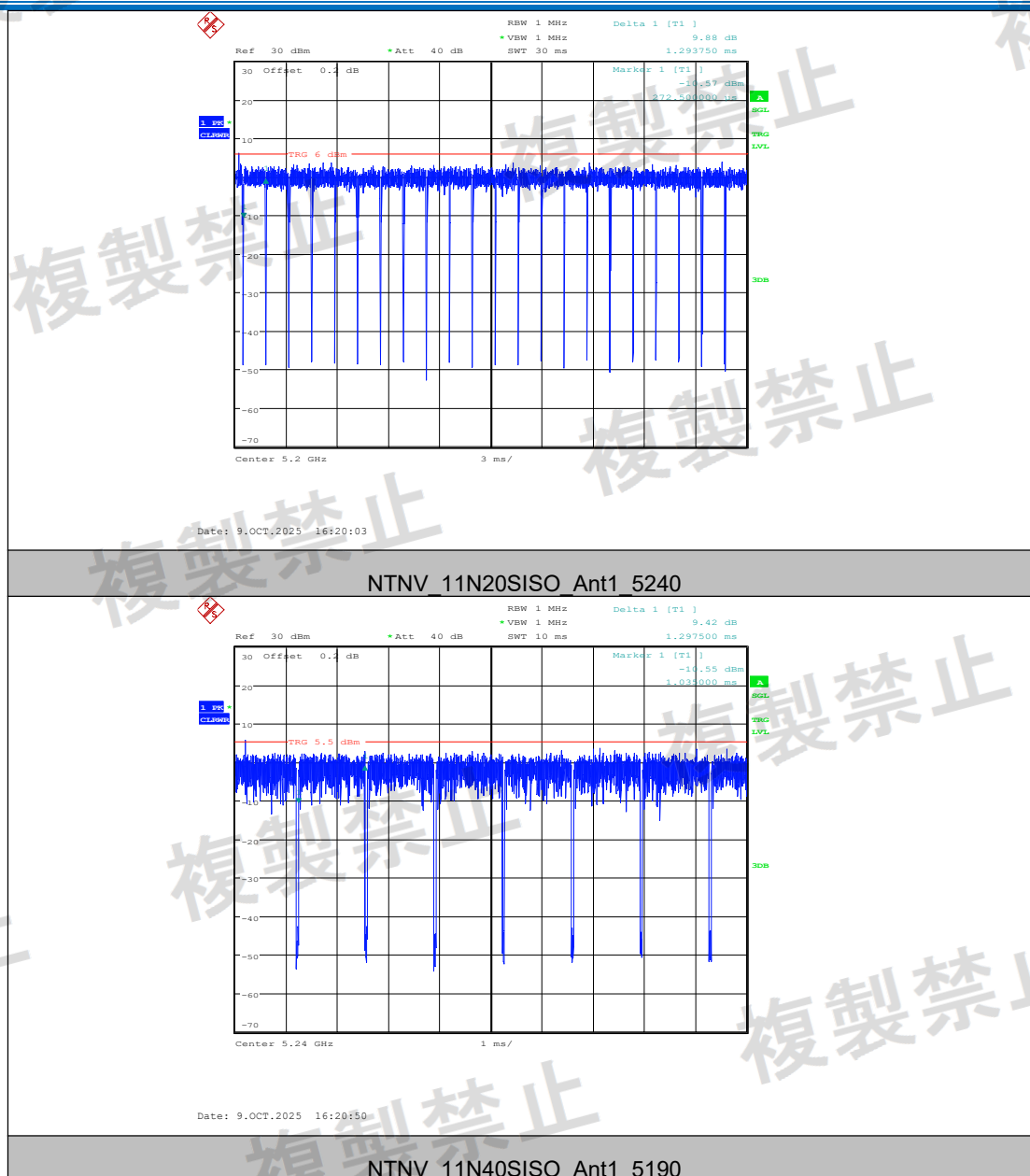
TestCondition	TestMode	Freq(MHz)	Result [ms]	Limit [ms]	Verdict
NTNV	11A	5180	1.39	≤8	PASS
		5200	1.39	≤8	PASS
		5240	1.39	≤8	PASS
	11N20SI SO	5180	1.30	≤8	PASS
		5200	1.29	≤8	PASS
		5240	1.30	≤8	PASS
	11N40SI SO	5190	0.65	≤8	PASS
		5230	0.64	≤8	PASS
	11AC20S ISO	5180	1.31	≤8	PASS
		5200	1.31	≤8	PASS
		5240	1.31	≤8	PASS
	11AC40S ISO	5190	0.65	≤8	PASS
		5230	0.65	≤8	PASS

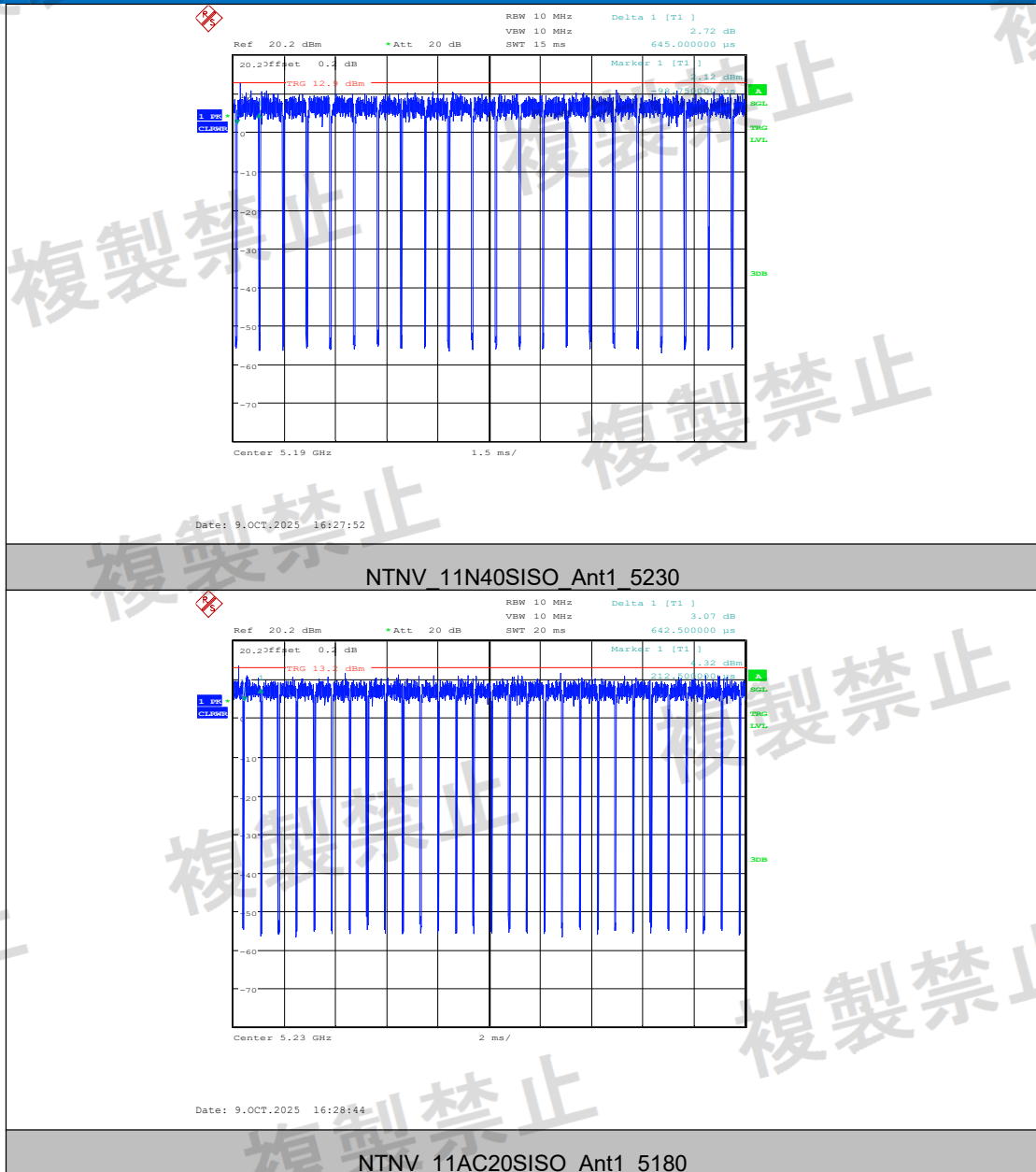
WIFI6:

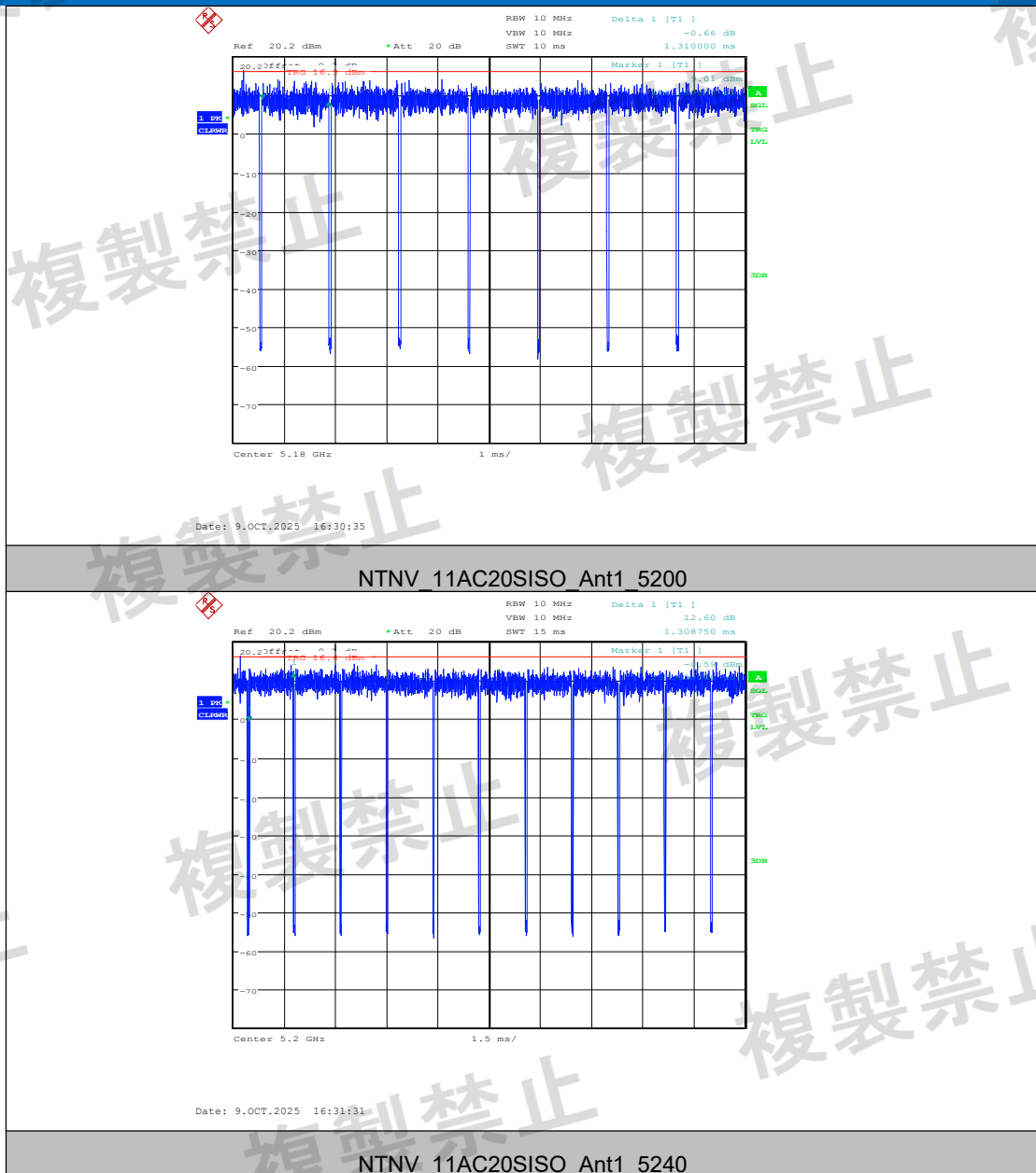
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [ms]	Limit [ms]	Verdict
NTNV	11AX20SISO	Ant1	5180	1.31	≤8	PASS
			5200	1.31	≤8	PASS
			5240	1.31	≤8	PASS
	11AX40SISO	Ant1	5190	0.65	≤8	PASS
			5230	0.65	≤8	PASS

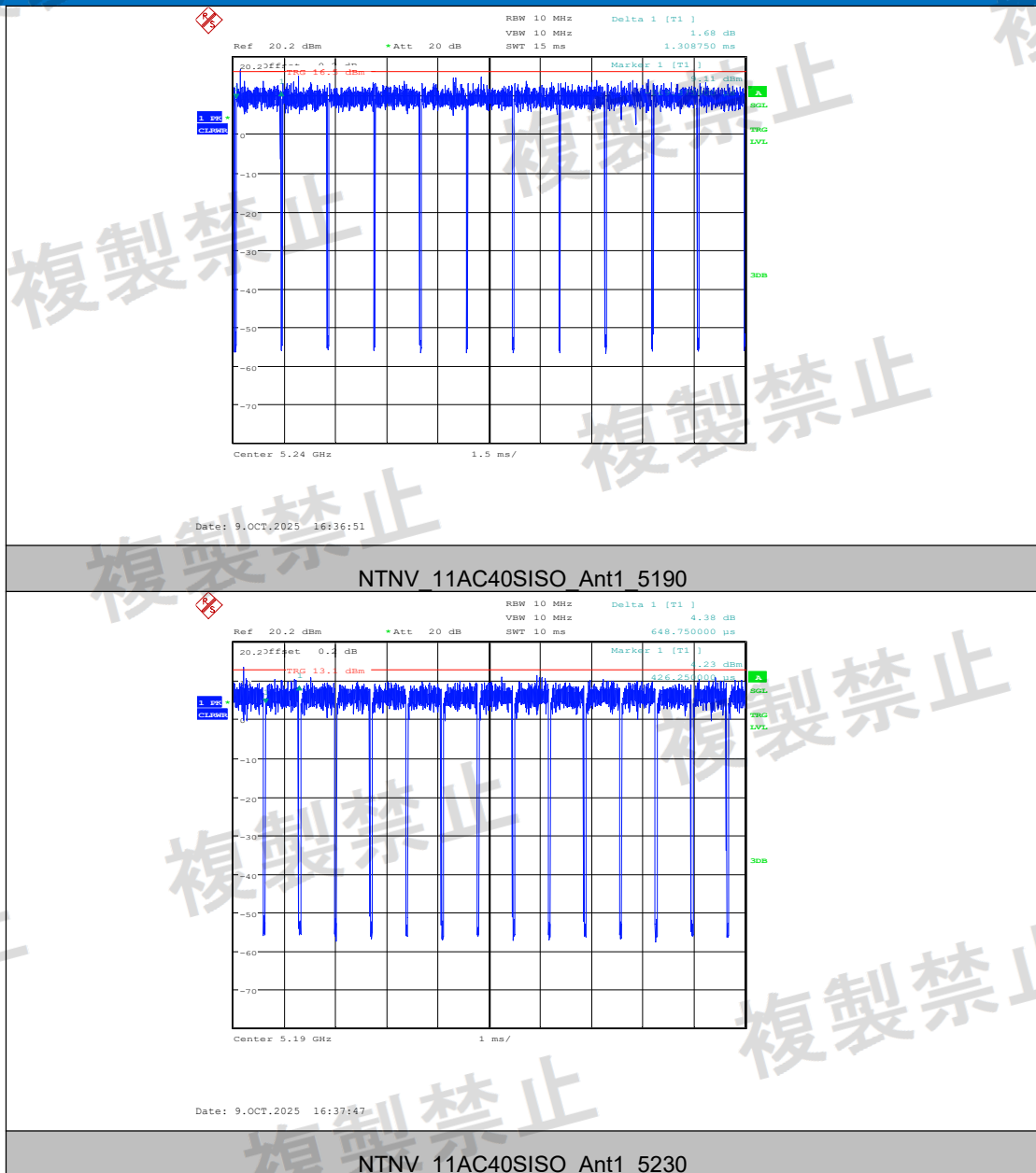


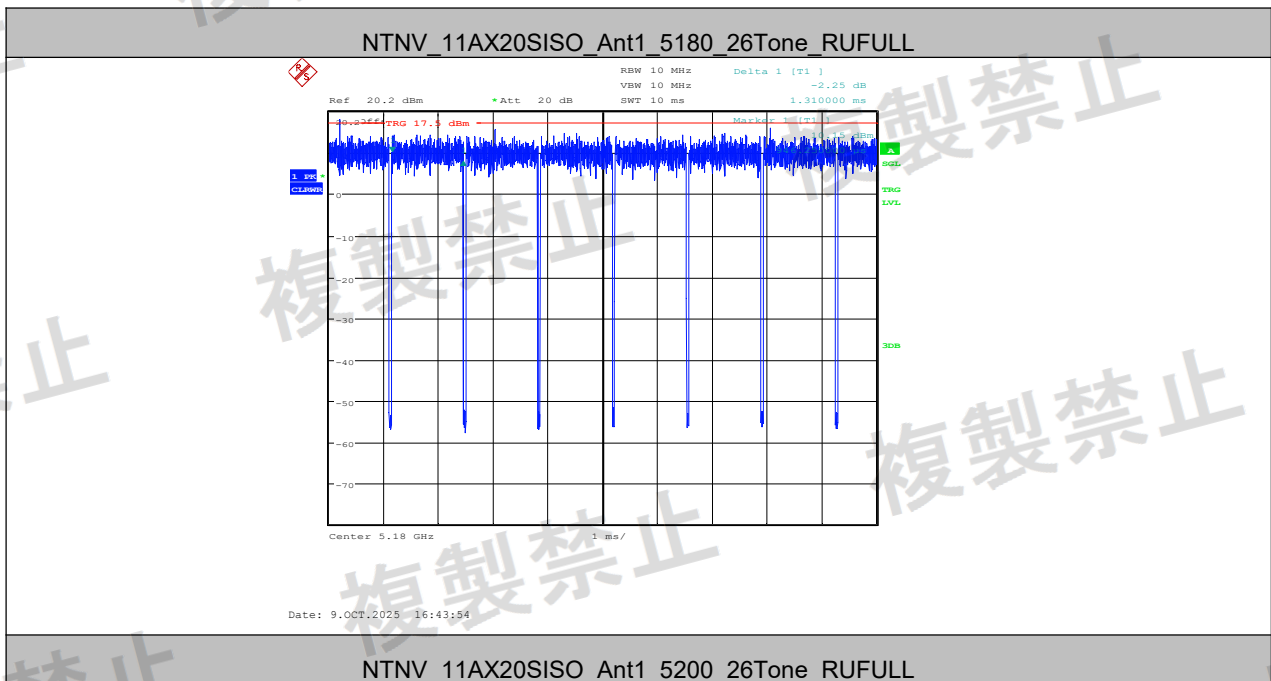
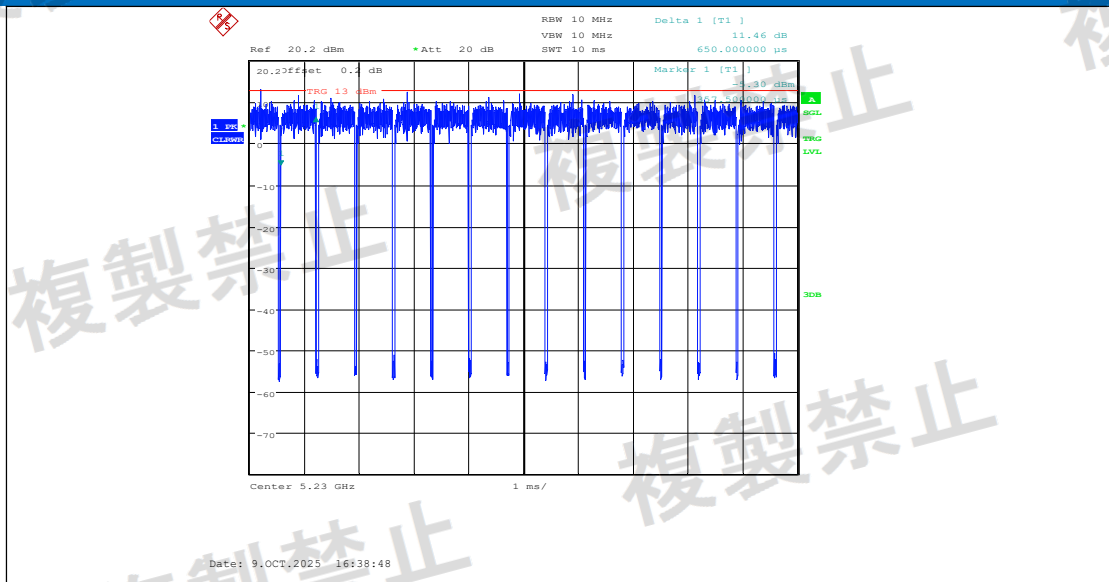


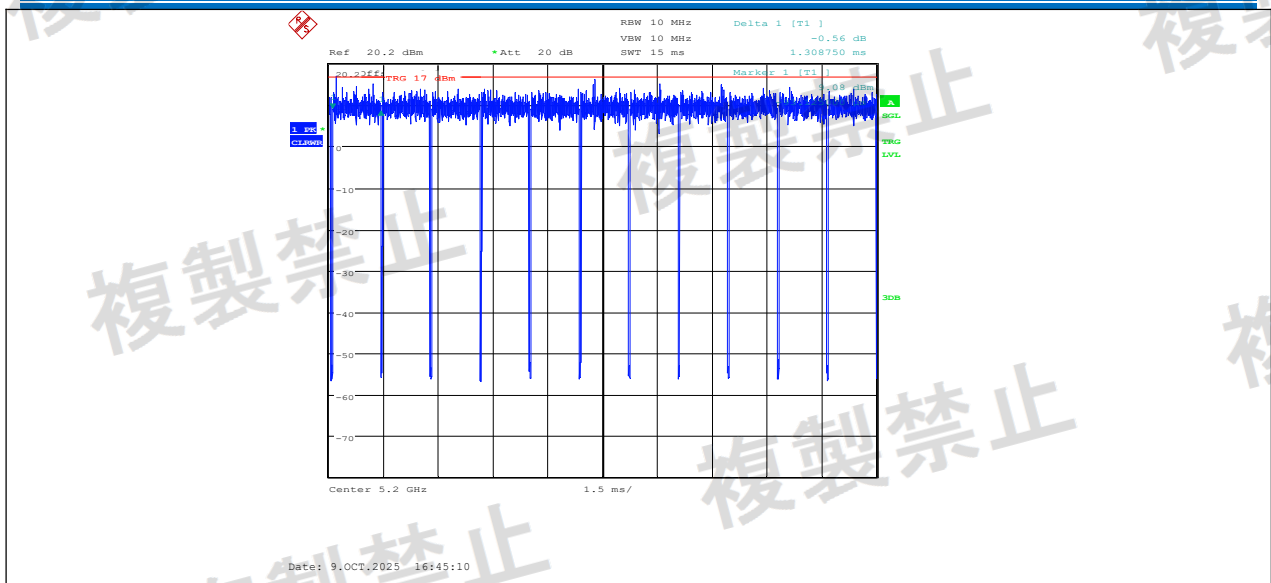




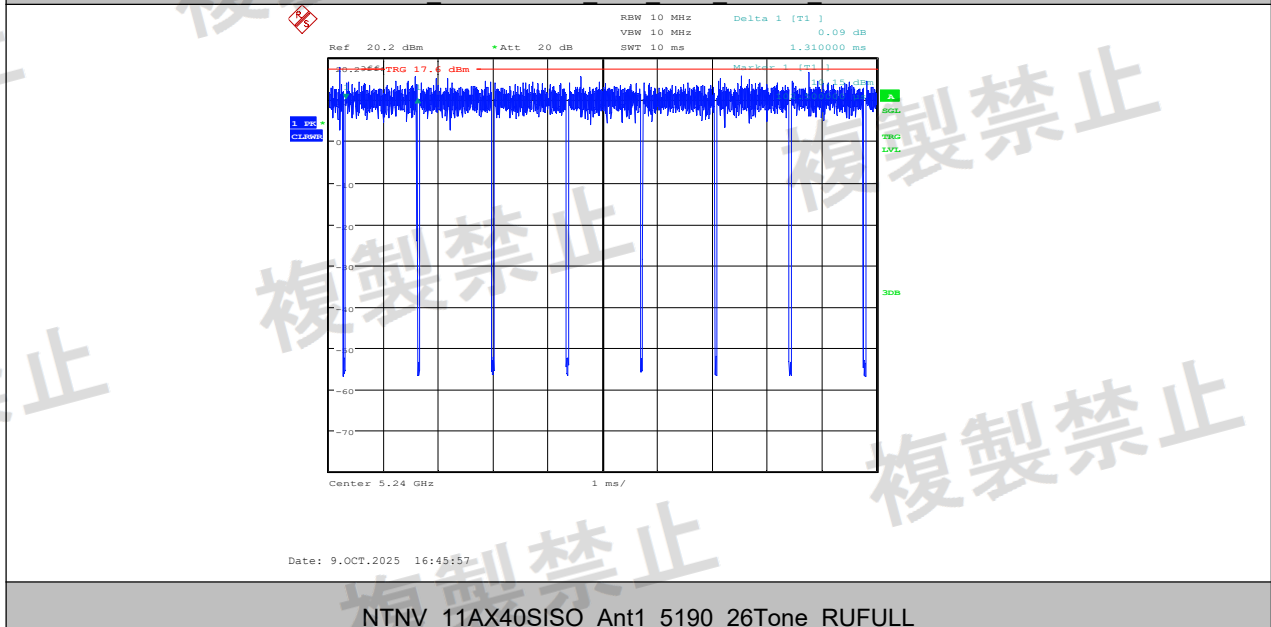




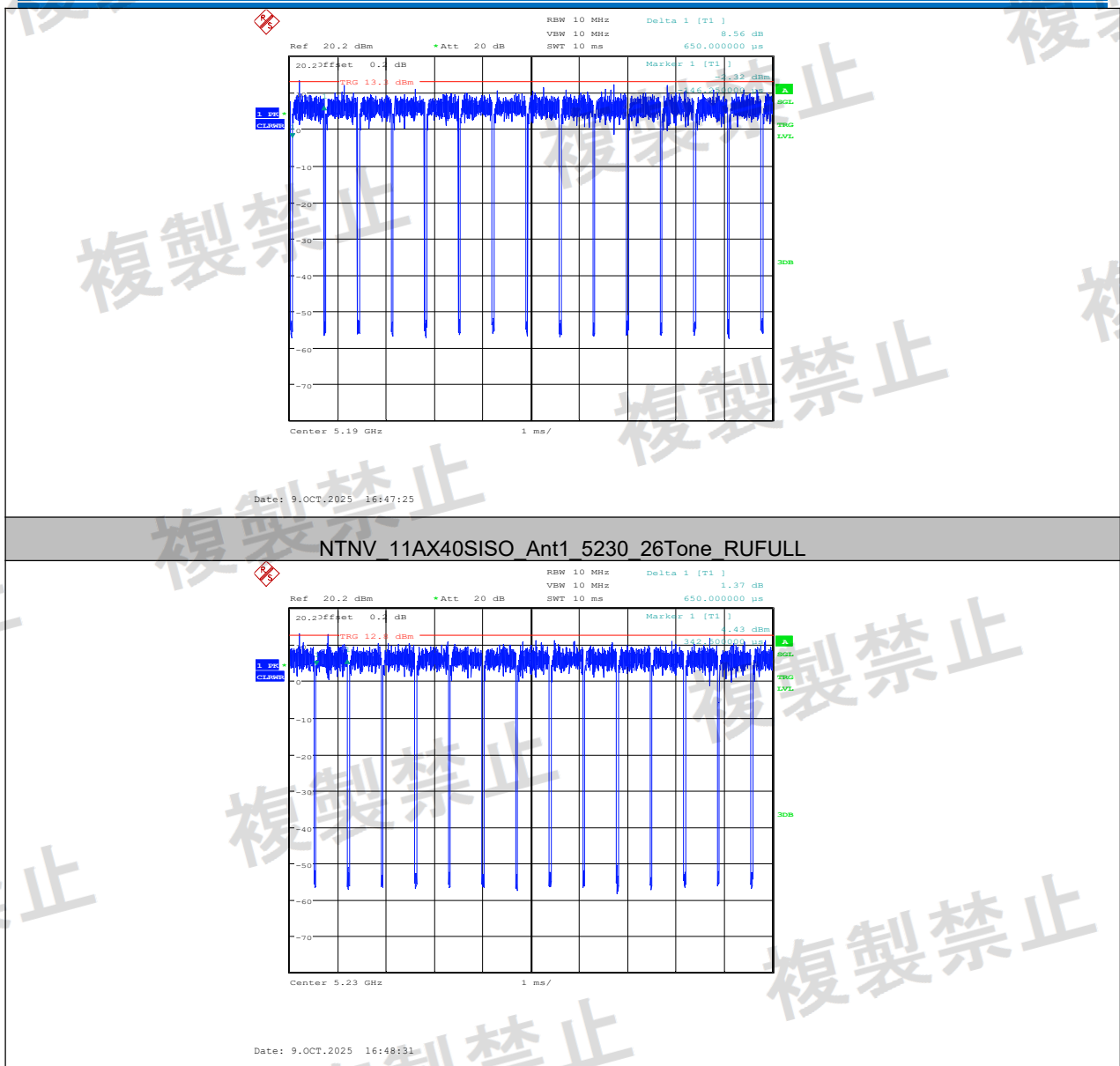




NTNV_11AX20SISO_Ant1_5240_26Tone_RUFULL



NTNV_11AX40SISO_Ant1_5190_26Tone_RUFULL



6.14 RF accessibility

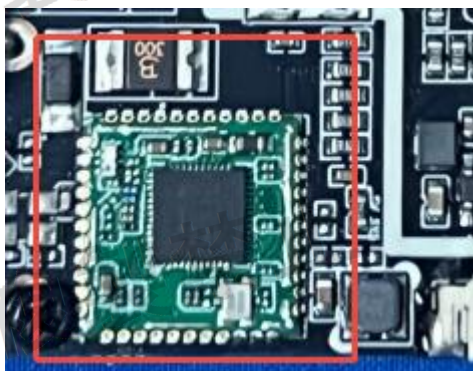
Standard requirement

Article 49-20, paragraph 1 (a)

The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.

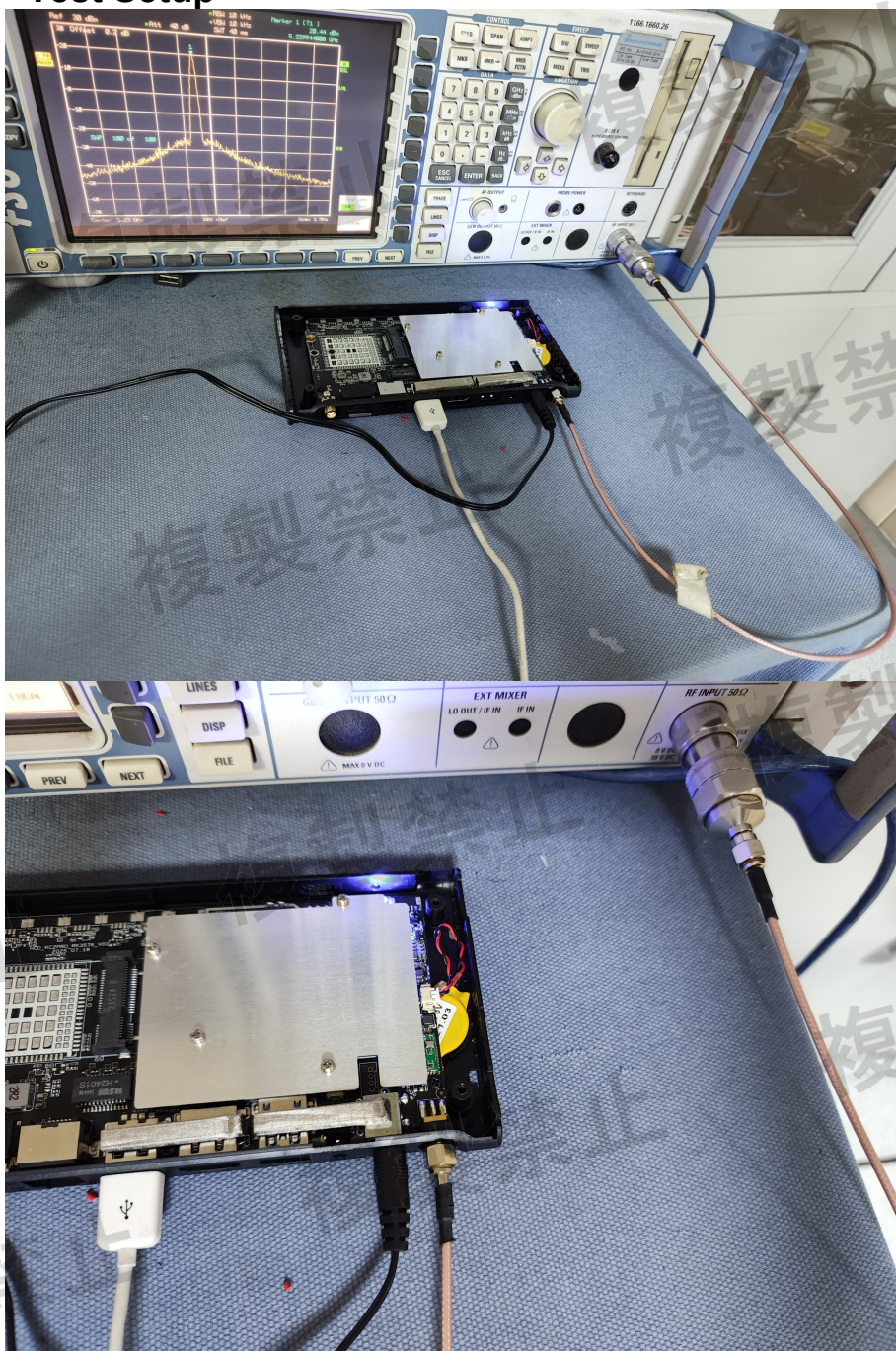
Tamper proof Declaration:

- ☐ 1. Sealed with special screws.
- ☐ 2. Plastic chassis is being welded using ultrasonic waves.
- ☐ 3. Chassis is glued using a special adhesive.
- ☐ 4. Metal covers are spot-fused.
- ☐ 5. Cover is specially interlocked.
- ☐ 6. RF and Modulation components are covered with shielding case and this shielding case is soldered.
- ☐ 7. Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
- ☐ 8. Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
- ☐ 9. Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
- ☒ 10. RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable parts on PCB or adjustable parts are not exposed.



Result: Method used to meet "can not open easily requirement" is shielding cover, Any attempt to modify the RF chip will void the normal operation of this device.

7 Test Setup



8 EUT Constructional Details

Refer to Photographs - EUT Constructional Details OF EUT for CQASZ20250801897E-01.

*** END OF REPORT ***