

TEST REPORT

Applicant Name..... : Topcon Positioning Systems, Inc
Address..... : 7400 National Drive Livermore, California USA 94550
Manufacturer Name..... : Beijing Green Valley Technology Co., Ltd
Address..... : 2301-2308, Suite A Building No.2 Zhongguancun Software Park, Haidian District, Beijing, P.R. China
Product..... : Sokkia SR-S1 Handheld Mapping System
Model(s)..... : SR-S1
Additional Model(s)..... : /
Trademark..... : /
Model Difference..... : /
Prepared by..... : Guangdong Zhonghan Testing Technology Co., Ltd.
Address..... : Room 104/201, Building 1, Yibaolai Industrial Park, Qiaotou, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Date of Receipt..... : Oct. 11, 2025
Date of Test(s)..... : Oct. 11, 2025 to Nov. 26, 2025
Date of Issue..... : May 25, 2026
Test Requested..... : Select test(s) as requested by the client.
Test Standard(s)..... : Article 2 paragraph 1 of item 19
MIC Notice No.88 Annex 1
MIC Notice No.88 Annex 43

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

Prepared by

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Approved by:

Levi Lee

Levi Lee/ Manager

Note: The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report shall not be reproduced except in full, without prior written approval of ZHT. This document may be altered or revised by ZHT, personnel only, and shall be noted in the revision of the document.

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Version

Report No.	Issue Date	Description
ZHT-251011121W01	Nov. 26, 2025	Original
ZHT-260513108W01	May 25, 2026	This report is based on the original report numbered ZHT-251011121W01 added a new models, added a product name and applicant Information. The only difference between the new model and the original models is the model name, which does not affect the test result. Therefore, there is no need to add new tests to this report, and all test data are referenced from the original report numbered ZHT-251011121W01.

1. TSUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Test method which is equal to Appendix No.43 of MIC Notification No 88.

MIC Notice No.88 Appendix No.43			
Rule	NO.	Test Item	Result
Article 2 paragraph 1 of item 19	1	RF shielding method	Pass
	2	Frequency Error	Pass
	3	Antenna Power	Pass
	4	99% Occupied bandwidth	Pass
	5	Spread spectrum bandwidth	Just For Report
	6	Spurious Emissions Intensity	Pass
	7	Limit of secondary radiated emissions	Pass
	8	Interference suppression	Pass
	9	Transmission Antenna Gain	N/A ²
	10	Transmission Radiation Angle Width(3dB Beam width)	N/A ¹
	11	CARRIER SENSE CAPABILITY	Pass

NOTE:

- (1) " N/A¹" Antenna gain less than 2.14dBi
- (2) " N/A²" EIRP is less than (2.14dBi + antenna power limit), the shortage of EIRP is not by the antenna power.



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Designation	Sokkia SR-S1 Handheld Mapping System
Model Name	SR-S1
Hardware Version:	A.0
Software Version:	V3.4.0
Modulation Type	IEEE 802.11b: DQPSK/DBPSK/DSSS/CCK IEEE 802.11g: QPSK/BPSK/16QAM/64QAM/OFDM IEEE 802.11n: QPSK/BPSK/16QAM/64QAM/OFDM
Operation Frequency	2412-2472MHz
Channel No.	13 Channels
Channel space	5MHz
Rated power:	3mW/MHz
Antenna Specification:	External antenna
Antenna Gain:	1.78dBi
Ratings:	Input: DC 14.4V by Battery
Sample Number:	251011121YP001
SWITCHING POWER SUPPLY:	
Model(s):	XSG1682000
Ratings:	Input: 100-240V, 50/60Hz, 1.3A Max Output: 16.8 V  2 A

Channel List for 802.11b/g/n(20MHz/40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452	13	2472
02	2417	06	2437	10	2457		
03	2422	07	2442	11	2462		
04	2427	08	2447	12	2467		

2.2 Description of test modes

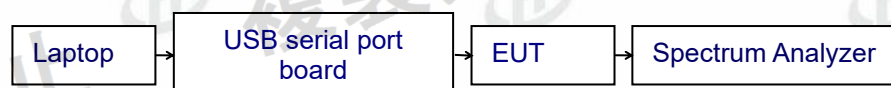
Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.		
The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels. test software SecureCRTPortable.exe used for controlling the EUT. During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of DSSS and OFDM.		
Test Software: SecureCRTPortable.exe		
Test Mode	Power Level	
802.11b	Default	
802.11g	Default	
802.11n (20MHz)	Default	
802.11n (40MHz)	Default	



Supply Voltage			
	Input Voltage (Vac)	Voltage at the input of the RF Circuit (Vdc)	Tolerance (%)
Normal	14.4	3.3	
+10%	15.84	3.3	0
-10%	12.96	3.3	0
Others			
Temperature (°C)	24.9		
Relative humidity	51 %		
ATM Pressure:	1014 mbar		
Note 1: When the input voltage is reduced or increased by 10%, the regulator voltage changes of less than 1%.So the following test items are conducted in the normal voltage.			

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

RF Conducted Emission



2.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Laptop	Lenovo	ThinkPad E480	N/A	AE

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 「Length」 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3.TEST FACILITY AND TEST INSTRUMENT USED

3.1 TEST FACILITY

Guangdong Zhonghan Testing Technology Co., Ltd.
Add.: Room 104/201, Building 1, Yibaolai Industrial Park, Qiaotou, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

FCC Registration Number:255941
Designation Number: CN0325
IC Registered No.: 29832
CAB identifier: CN0143

3.2 EQUIPMENTS LIST FOR ALL TEST ITEMS

Item	Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
1	Spectrum Analyzer	KEYSIGHT	N9020A	MY53420208	May 7, 2025	May 6, 2026
2	WIDBAND RADIO COMMUNICATION TESTER	R&S	CMW500	109863	May 7, 2025	May 6, 2026
3	Single Generator	Agilent	N5182A	MY48180575	May 7, 2025	May 6, 2026
4	Power Sensor	MWRFTest	MW100-RFCB	/	May 7, 2025	May 6, 2026
5	Single Generator	R&S	SMB100A	259098	May 7, 2025	May 6, 2026
6	Aattenuator	HTEC	-10dB	/	May 7, 2025	May 6, 2026

Measuring Equipment Calibration Information		
Used	Calibration Company Abbreviation	Full Name of calibration company
☒	/	GUANGZHOU NEM METROLOGY&TEST TECHNOLOGY CO.,LTD.
☒	/	/
Calibration Information (Article 24-2, Paragraph 4 of the Radio Act)		
☐	a) Calibration Conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.	
☐	b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.	
☒	(c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.	
☐	(d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.	

3.3 Testing software

Project	Software name	Edition
RF Conducted	MTS 8310	2.0.0.0

3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

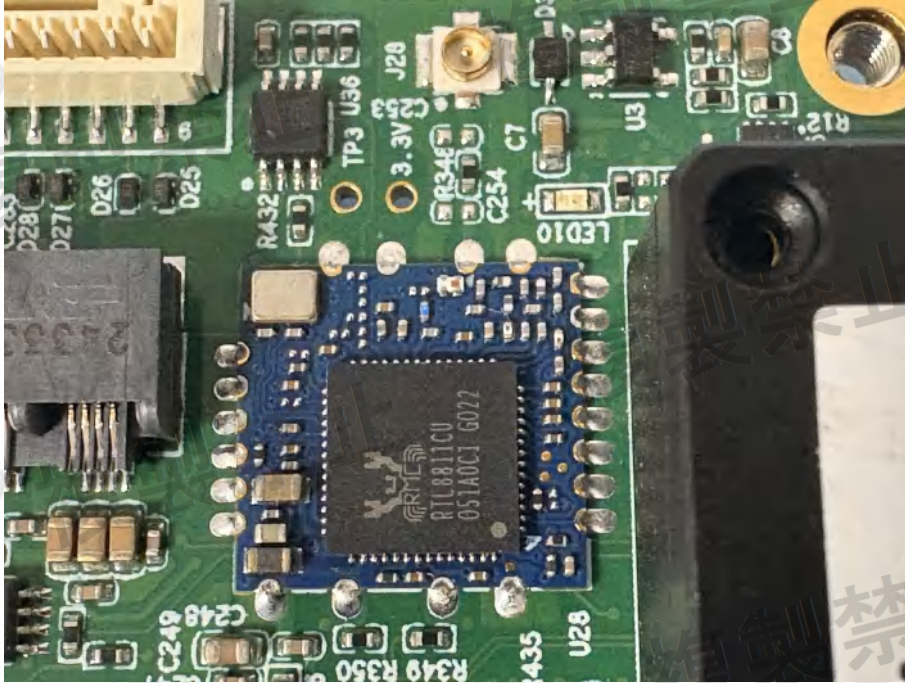
No.	Item	Uncertainty
1	RF conducted power	$U=0.16\text{dB}$
2	Spurious emissions conducted	$U=0.21\text{dB}$
3	Temperature	$U=0.5^{\circ}\text{C}$
4	Humidity	$U=2\%$
5	Occupied Bandwidth	$U=4.96\%$
6	Power Spectral Density	$U=0.71\text{dB}$

Decision Rule

- ☒ Uncertainty is not included
☐ Uncertainty is included

All RF control circuits are integrated in the IC, which is a QFN package. The number of pins is greater than 10, and the spacing between pins is less than 1mm.

-Spacing between pins: $0.05\text{mm} < 1\text{mm}$



5. TEST RESULTS

5.1 FREQUENCY ERROR

5.1.1 LIMIT

Item	Limits
Frequency Error	±50ppm

5.1.2 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

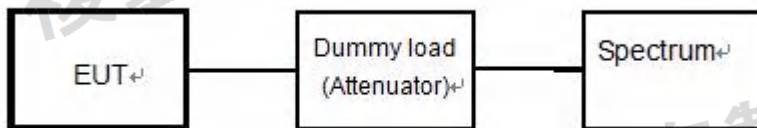
5.1.3 TEST PROCEDURES

- (1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a spectrum analyzer.
- (2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
- (3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
- (4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.



5.1.4 TEST SETUP LAYOUT



5.1.5 EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

5.1.6 RESULTS OF FREQUENCY ERROR

Please Refer to Appendix for Details



5.2 OCCUPIED BANDWITH

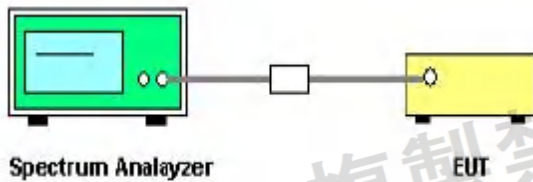
5.2.1 LIMIT

Item	Limits
Occupied Band Width:	802.11b,g,n(HT20): $\leq 26\text{MHz}$ 802.11n(HT40): 26MHz - 40MHz
Spreading Bandwidth:	N/A

5.2.2 TEST PROCEDURES

- Setting of SA is following as: RB: 300kHz / VB:300kHz / SPAN: 40MHz / AT: 20dB Ref: 10dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode(For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).
- Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.
- Spread Spectrum Factor limit is greater than 5
- The modulation rate: MR=1.375 for 802.11b,MR=1.5 for 802.11g/n20,MR=3 for 802.11n40.

5.2.3 TEST SETUP LAYOUT



5.2.4 TEST DEVIATION

There is no deviation with the original standard.

5.2.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.2.6 TEST RESULT

Please Refer to Appendix for Details



5.3 UNWANTED EMISSION INTENSITY MEASUREMENT

5.3.1 LIMIT

Item	Limits
TX Spurious Emission	30MHz – 2387MHz ; 2.5μW/MHz or less 2387MHz – 2400MHz ; 25μW/MHz or less 2483.5MHz – 2496.5MHz ; 25μW/MHz or less 2496.5MHz – 12.5GHz ; 2.5μW/MHz or less
	Below 1000 MHz: -36dBm or less 1000 to 2387 MHz: -26dBm or less 2387 to 2400 MHz: -16dBm or less 2483.5 to 2496.5 MHz: -16dBm or less Over 2496.5 MHz: -26dBm or less

5.3.2 MEASURING INSTRUMENTS AND SETTING

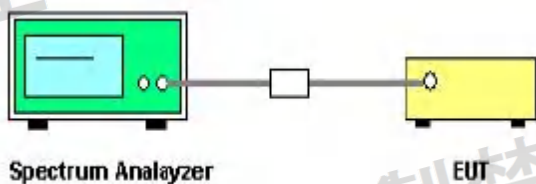
Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB (Below 1 GHz)	100 KHz
RB / VB (Above 1 GHz)	1 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.3.3 TEST PROCEDURES

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: Below 1GHz RB:100KHz / VB:100KHz
Above 1GHz RB:1MHz / VB:1MHz / AT: 10dB Ref: 0dBm / Sweep time: Auto
Sweep Mode: Continuous sweep / Detect mode: Positive peak
Trace mode: Max hold
3. Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than 0.25 μ W/MHz.
4. Setting of SA is following as 1000MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 μ W/MHz.
5. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25 μ W/MHz.
6. SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 μ W/MHz.
7. SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 μ W/MHz.
8. Measure side band spurious as follows: For 2.4GHz band: 2374MHz~2400MHz and 2483.5MHz~2509.5MHz RBW = VBW = 1MHz, Result_Value = Measured_Value
9. If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

5.3.4 TEST SETUP LAYOUT



5.3.5 TEST DEVIATION

There is no deviation with the original standard.

5.3.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.3.7 TEST RESULT

Please Refer to Appendix for Details



5.4 ANTENNA POWER ERROR MEASUREMENT

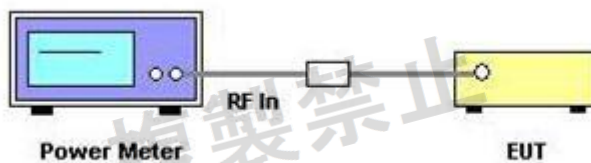
5.4.1 LIMIT

Item	Limits
Antenna Power Density	802.11b,g,n(HT20):10mW/MHz 802.11n(HT40):5mW/MHz
EIRP Power Density	≤ 12.14 - 22.14 dBm/MHz (DSSS,OFDM) ≤ 9.13 - 19.13 dBm/MHz (OFDM)
Antenna Power Error	+20% (Base on manufacturer declare antenna power density)

5.4.2 TEST PROCEDURES

1. A power meter is connected on the RF output port of the EUT.
2. EUT have transmitted continuous maximum power
3. Antenna Power Error is definition that actual measure antenna power tolerance between + 20% power range that base on manufacturer declare the conducted power density.
4. Antenna Power (dBm/MHz):It is measured directly by power meter, calculated and read out by software

5.4.3 TEST SETUP LAYOUT



5.4.4 EST DEVIATION

There is no deviation with the original standard.

5.4.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.4.6 TEST RESULT

Please Refer to Appendix for Details

**5.5 IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT****5.5.1 LIMIT**

Item	Limits	
RX Spurious Emission:	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)	$\leq -54\text{dBm}$
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)	$\leq -47\text{dBm}$

5.5.2 MEASURING INSTRUMENTS AND SETTING

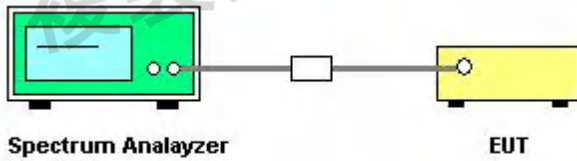
Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
VB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.5.3 TEST PROCEDURES

1. EUT have the continuous reception mode and fixed only one channelize.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1MHz (above 1GHz emissions) / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

5.5.4 TEST SETUP LAYOUT



5.5.6 TEST DEVIATION

There is no deviation with the original standard.

5.5.7 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously reception mode.

5.5.8 TEST RESULT

Please Refer to Appendix for Details



5.6 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

5.6.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

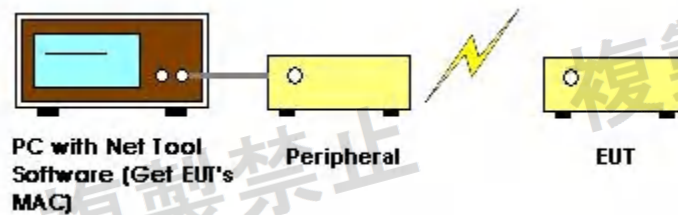
5.6.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

5.6.3 TEST PROCEDURES

1. In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes form EUT. b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification ocde: a. Transmit the predetermined identification codes form the counterpart. b . Check if communication is normal. c. Transmit the signals other than predetermined ID codes form the counterpart. d. check if the EUT stops the transmission, or if it displays that idnetification codes are different from the predetermined ones.

5.6.4 TEST SETUP LAYOUT



5.6.5 TEST DEVIATION

There is no deviation with the original standard.

5.6.6 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

5.6.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

MAC: 7D:B2:23:BC:65:E2



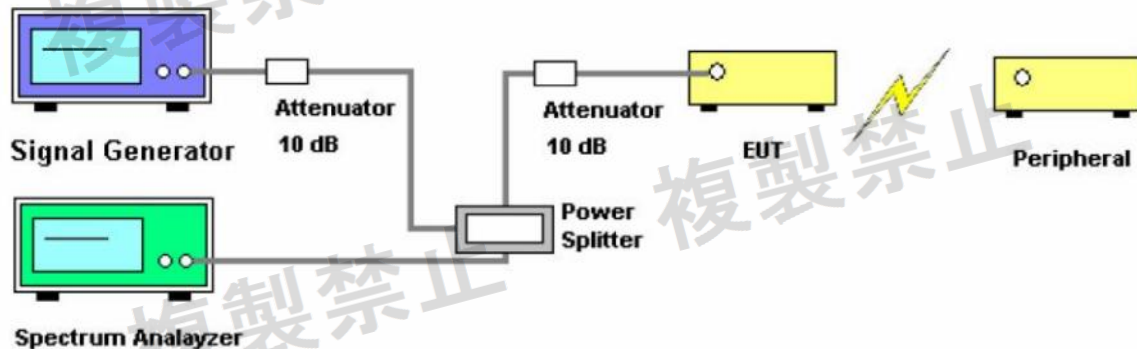
5.7 CARRIER SENSE CAPABILITY

5.7.1 LIMIT

EUT stop RF transmission signal after carrier inject to EUT

5.7.2 TEST PROCEDURE

Measurement System Diagram



1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is $(22.79 + G - 20 \cdot \log(f) \text{ dBm})$ (G is the antenna gain, f is the test frequency).
2. turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA :RBW/VBW=1MHz/1MHz, Span=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak
5. SG RF signal on.
6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous transmitted signal.

5.7.3 TEST RESULT

Frequency(MHz)	PCS(dbm)	CF(db)	SG level
2422	-43.78	2.3	-41.48
2442	-43.45	2.3	-41.15
2462	-43.48	2.3	-41.18

Note: this test item only applies to those modes with bandwidth greater than 20MHz;

$PCS = 22.79 + G - 20 \cdot \log(F)$

G= antenna gain

F= transmission frequency

CF=splitter loss + cable loss



5.8. TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH) MEASUREMENT

5.8.1. LIMIT

Item	Limits
3dB antenna beam width	$360/A$ (If $A < 1$; then $A=1$) $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$

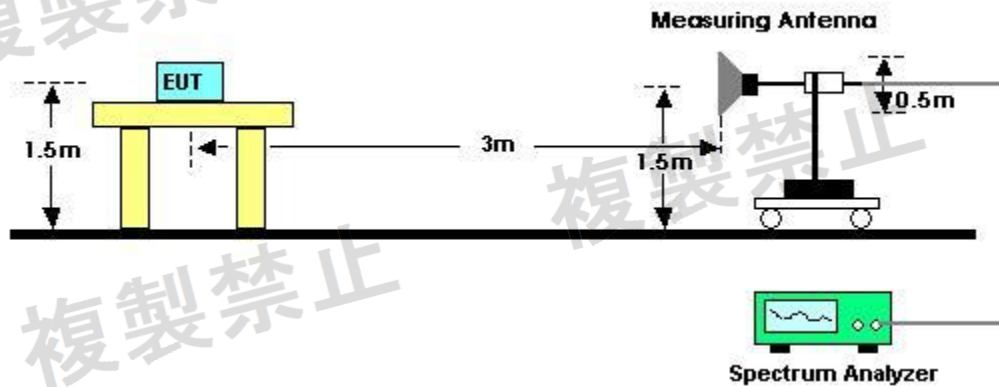
5.8.2. MEASURING INSTRUMENTS AND SETTING

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RB	1 MHz
VB	1 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.8.3. TEST PROCEDURES

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition in section 4.7.2 and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within $\pm 50\text{cm}$ of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as "E"
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below $360/A$ (If $A < 1$; then $A=1$).
 $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or
 $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$

5.8.4. TEST SETUP LAYOUT



5.8.5. TEST DEVIATION

There is no deviation with the original standard.

5.8.6. EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.8.7. TEST RESULT OF TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH)

Note: not applicable



6. EUT TEST PHOTO

Reference to the Test Setup Photos for details.

7. EUT CONSTRUCTIONAL DETAILS

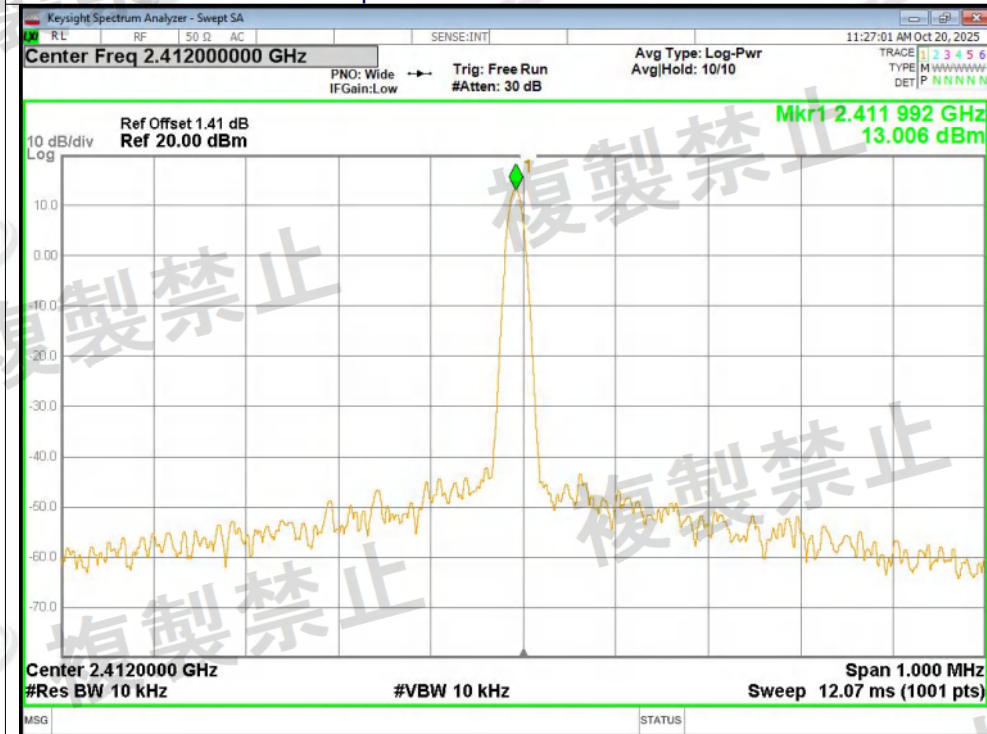
Reference to the appendix EUT Constructional for details.

8. APPENDIX

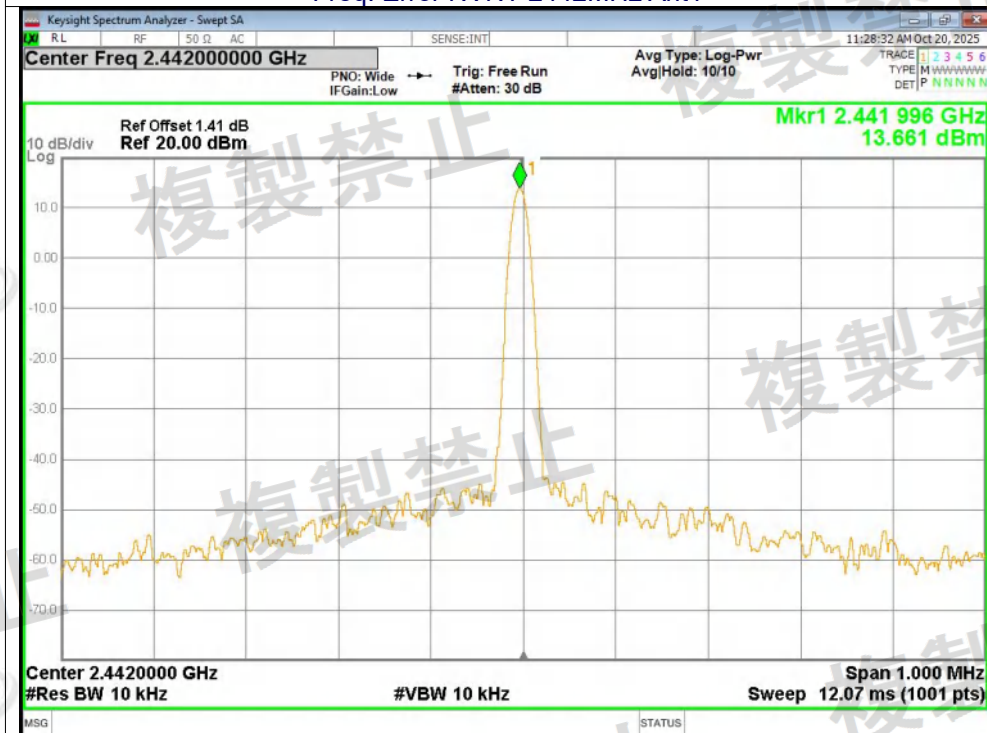
Frequency Error

Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
2412	Ant1	2411.992	-8000	-3.32	50	Pass
2442	Ant1	2441.996	-4000	-1.64	50	Pass
2472	Ant1	2472	0	0	50	Pass
2422	Ant1	2421.994	-6000	-2.48	50	Pass
2442	Ant1	2441.999	-1000	-0.41	50	Pass
2462	Ant1	2462.001	1000	0.41	50	Pass

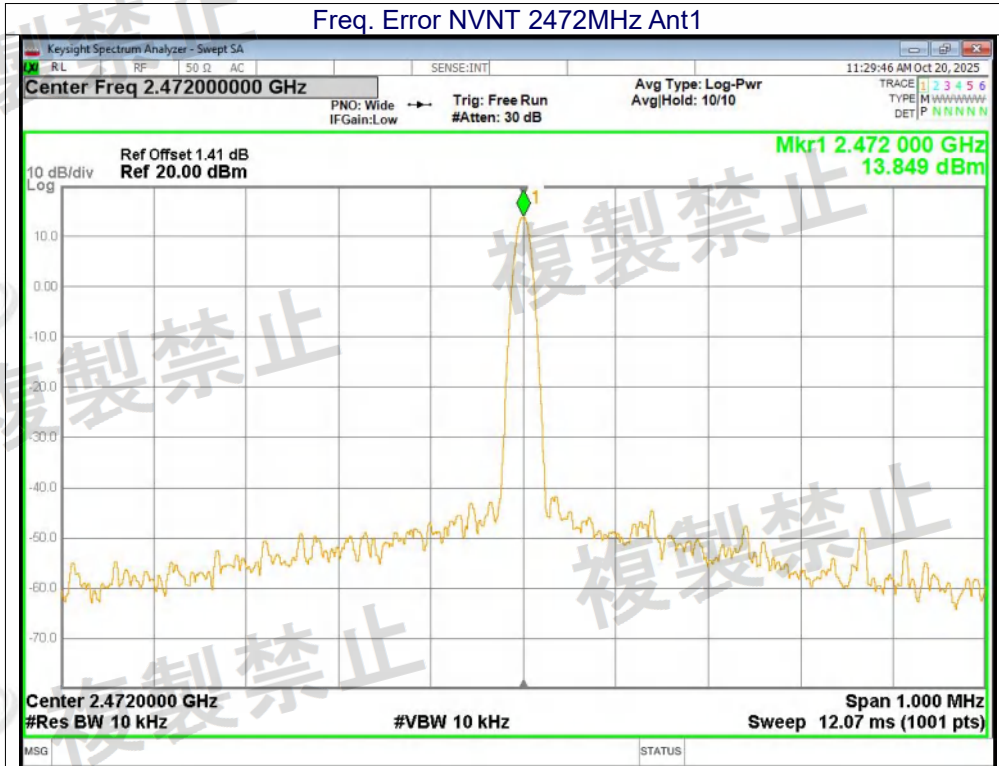
Test Graphs
Freq. Error NVNT 2412MHz Ant1



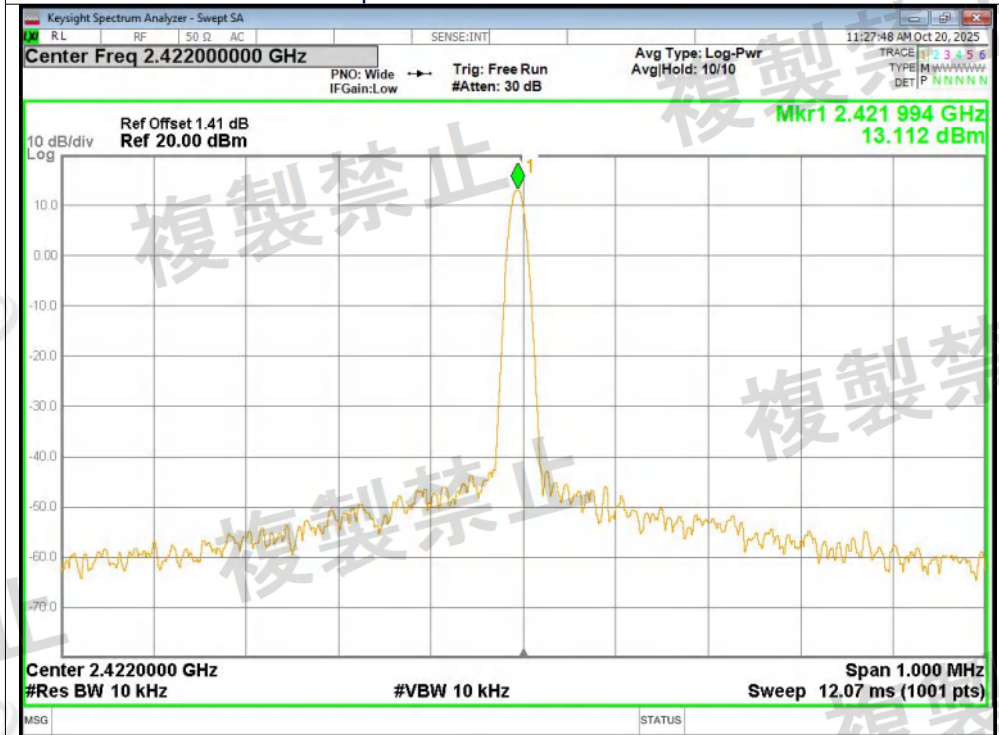
Freq. Error NVNT 2442MHz Ant1



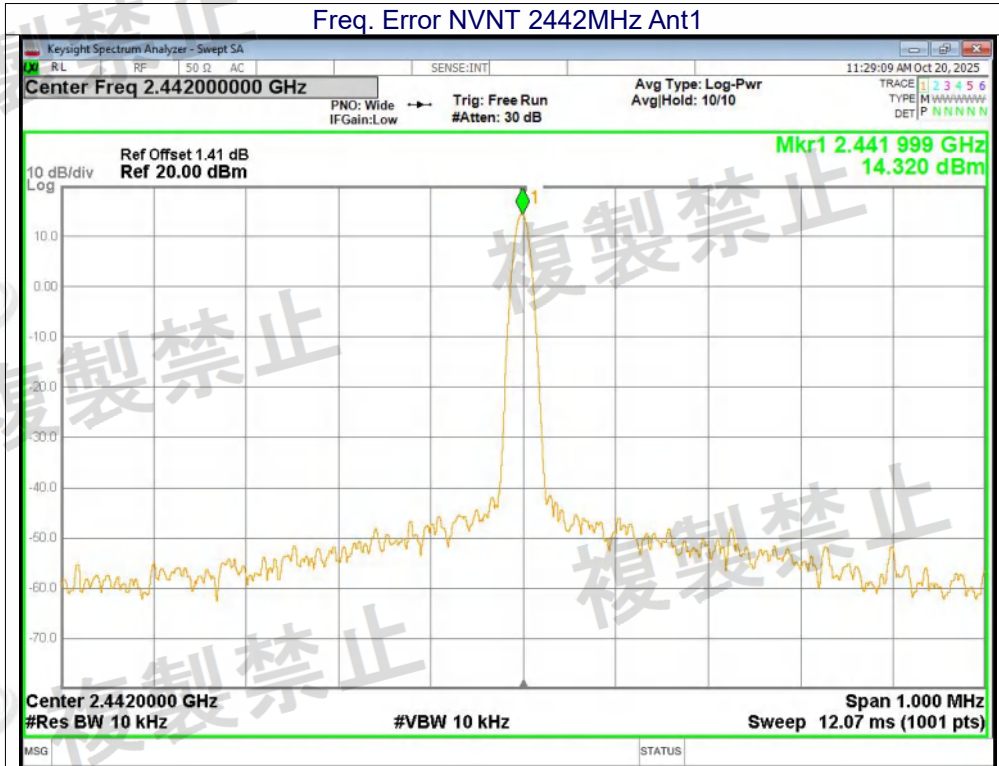
Freq. Error NVNT 2472MHz Ant1



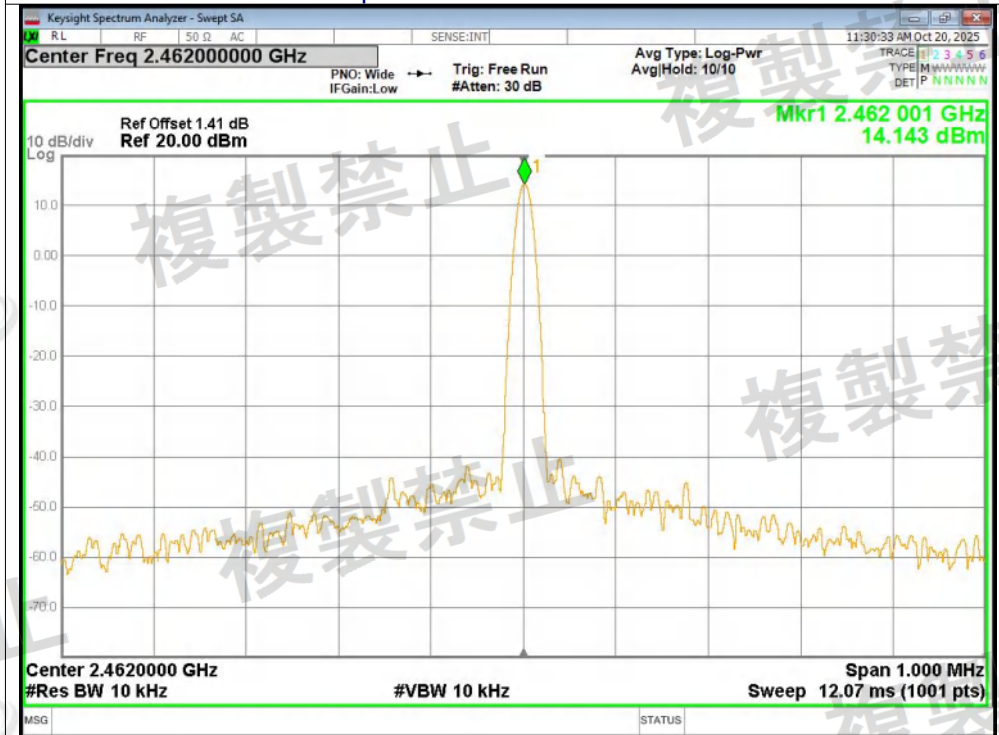
Freq. Error NVNT 2422MHz Ant1



Freq. Error NVNT 2442MHz Ant1



Freq. Error NVNT 2462MHz Ant1





Antenna and EIRP Power

Mode	Power (dBm/MHz)	Antenna Power (mW/MHz)	Limit (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Upper Limit (%)	Verdict
b	3.4	2.19	10	3	-27.00	20	Pass
b	4.49	2.81	10	3	-6.33	20	Pass
b	-0.87	0.82	10	3	-72.67	20	Pass
g	-0.09	0.98	10	3	-67.33	20	Pass
g	0.11	1.02	10	3	-66.00	20	Pass
g	0.23	1.05	10	3	-65.00	20	Pass
n20	0.51	1.13	10	3	-62.33	20	Pass
n20	0.81	1.2	10	3	-60.00	20	Pass
n20	0.29	1.07	10	3	-64.33	20	Pass
n40	-3.02	0.5	5	3	-83.33	20	Pass
n40	-1.85	0.65	5	3	-78.33	20	Pass
n40	-1.56	0.7	5	3	-76.67	20	Pass

Tolerance (%)= (Antenna Power-Rated output power) /Rated output power *100%

EIRP Power

Mode	Antenna Power (dBm/MHz)	Gain (dBi)	EIRP Power (dBm/MHz)	Limit (dBm/MHz)	Verdict
b	3.4	1.78	5.18	12.14	Pass
b	4.49	1.78	6.27	12.14	Pass
b	-0.87	1.78	0.91	12.14	Pass
g	-0.09	1.78	1.69	12.14	Pass
g	0.11	1.78	1.89	12.14	Pass
g	0.23	1.78	2.01	12.14	Pass
n20	0.51	1.78	2.29	12.14	Pass
n20	0.81	1.78	2.59	12.14	Pass
n20	0.29	1.78	2.07	12.14	Pass
n40	-3.02	1.78	-1.24	9.13	Pass
n40	-1.85	1.78	-0.07	9.13	Pass
n40	-1.56	1.78	0.22	9.13	Pass

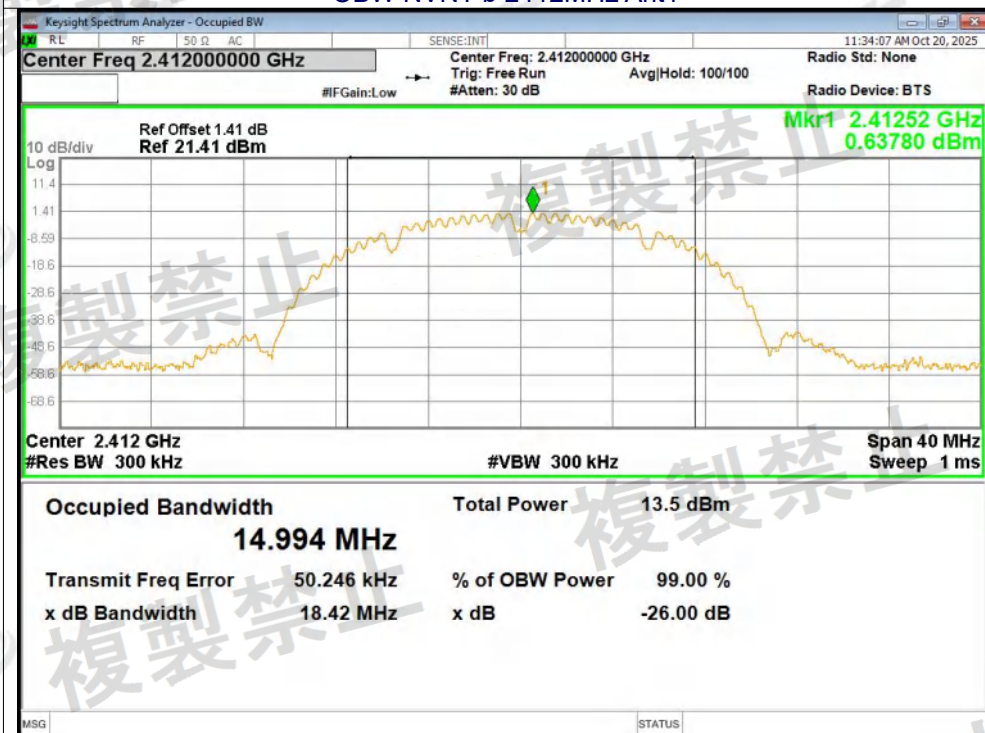
Note: Measured EIRP=Antenna power + Antenna Gain



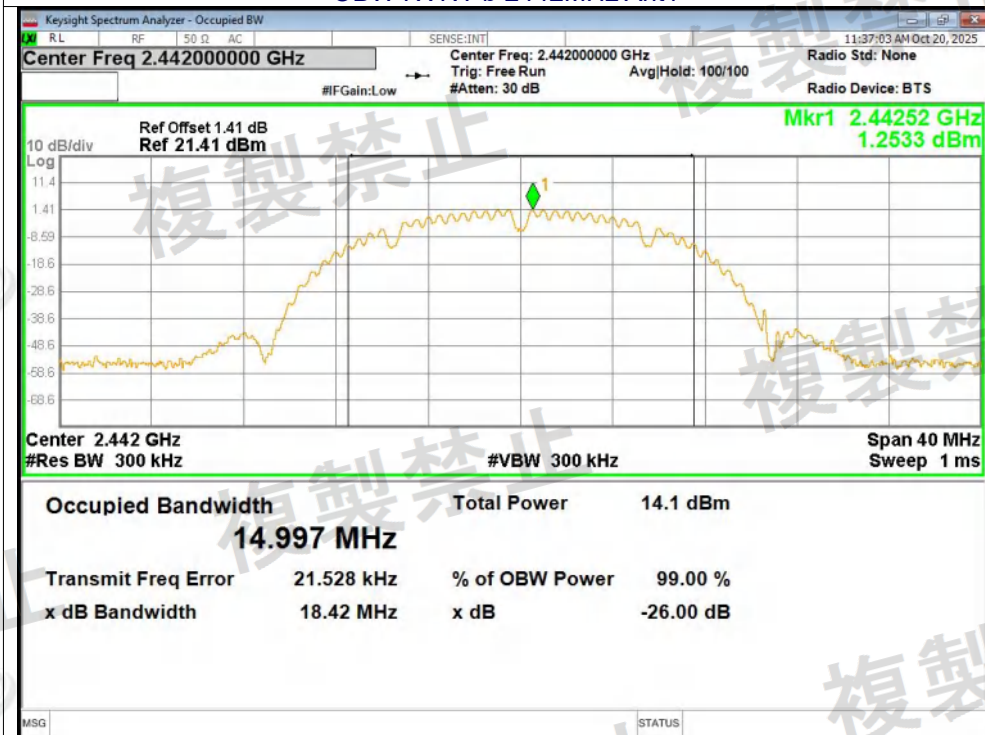
Occupied Channel Bandwidth

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	Limit (MHz)
b	2412	Ant1	14.994	≤26MHz
b	2442	Ant1	14.997	≤26MHz
b	2472	Ant1	14.983	≤26MHz
g	2412	Ant1	16.709	≤26MHz
g	2442	Ant1	16.71	≤26MHz
g	2472	Ant1	16.723	≤26MHz
n20	2412	Ant1	17.767	≤26MHz
n20	2442	Ant1	17.755	≤26MHz
n20	2472	Ant1	17.816	≤26MHz
n40	2422	Ant1	36.095	26MHz - 40MHz
n40	2442	Ant1	36.099	26MHz - 40MHz
n40	2462	Ant1	36.078	26MHz - 40MHz

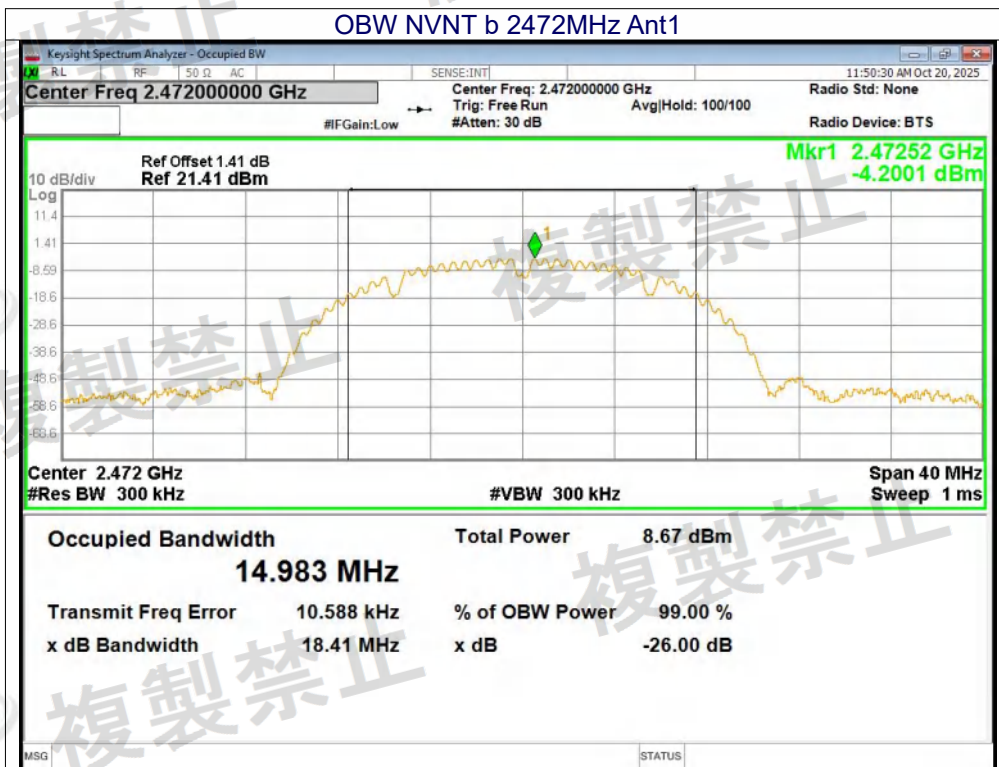
Test Graphs OBW NVNT b 2412MHz Ant1



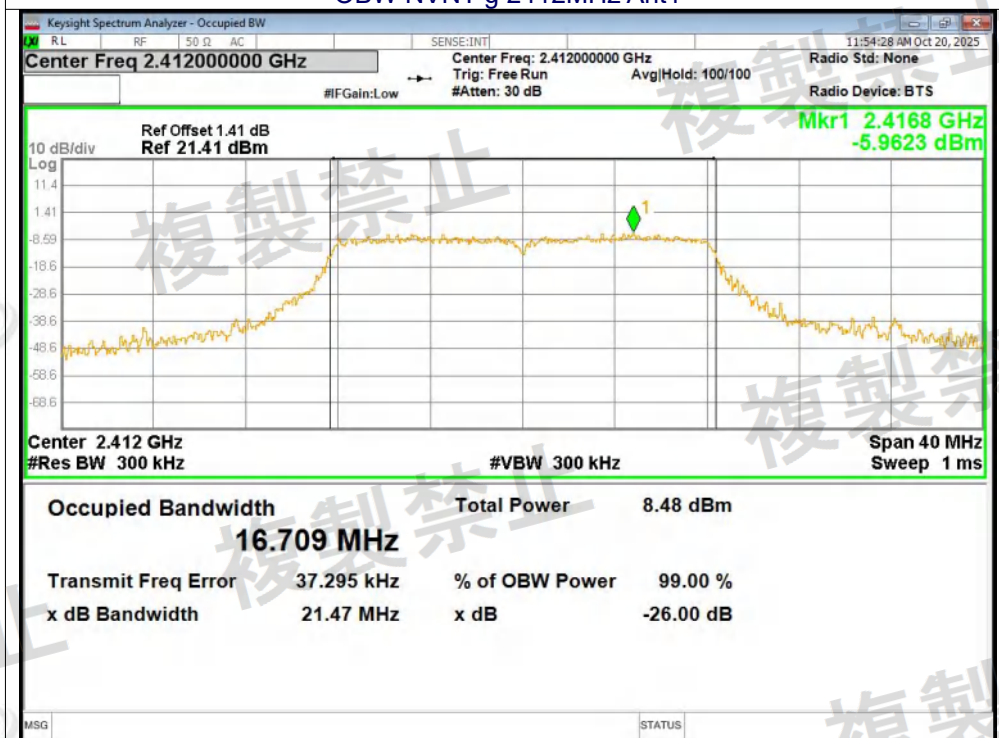
OBW NVNT b 2442MHz Ant1



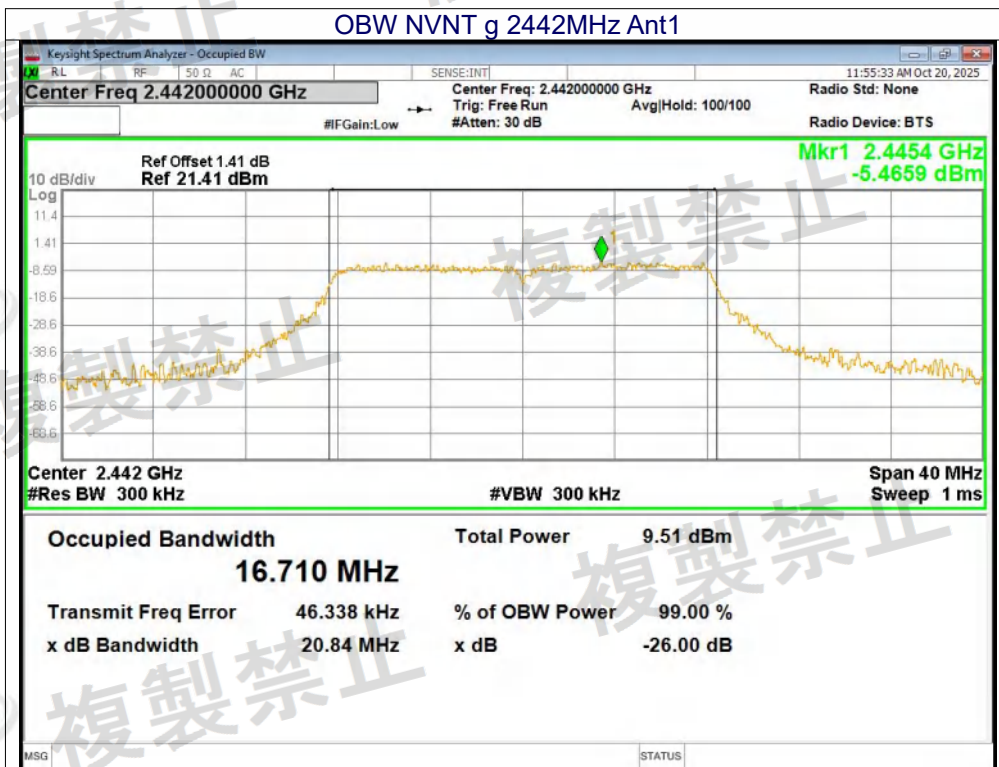
OBW NVNT b 2472MHz Ant1



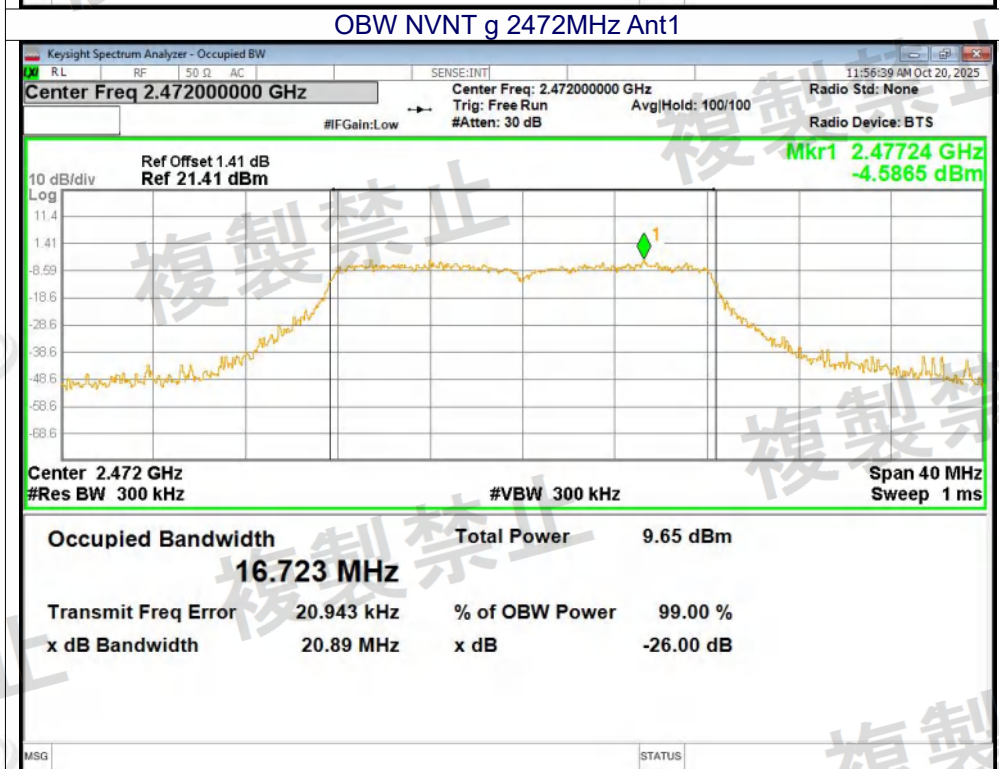
OBW NVNT g 2412MHz Ant1



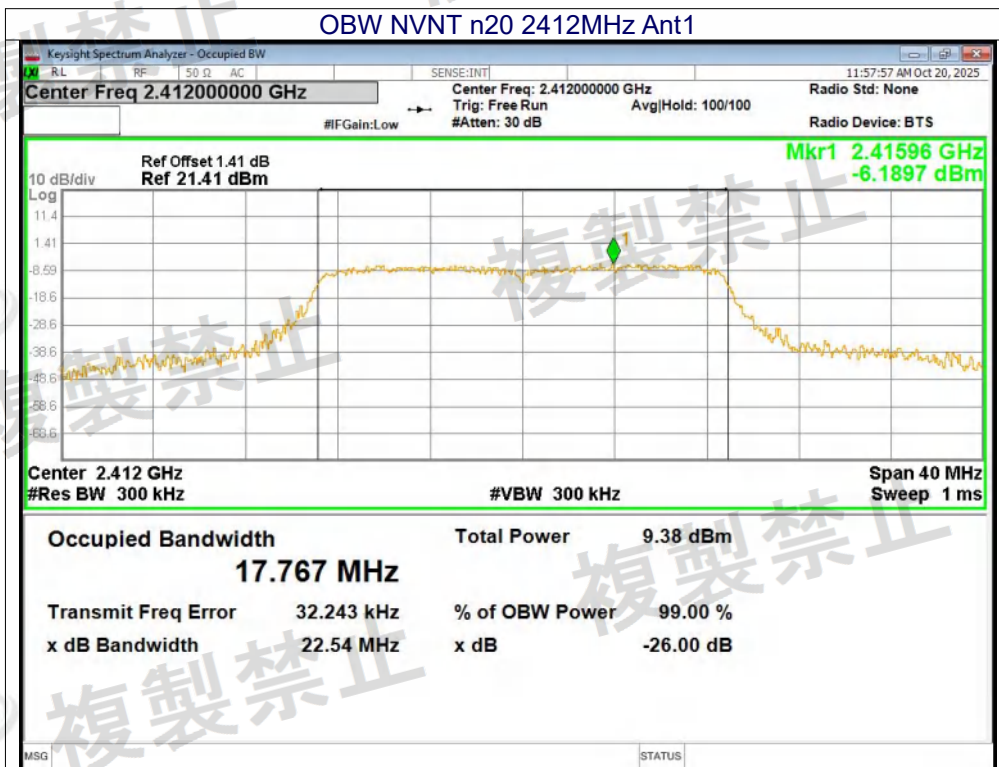
OBW NVNT g 2442MHz Ant1



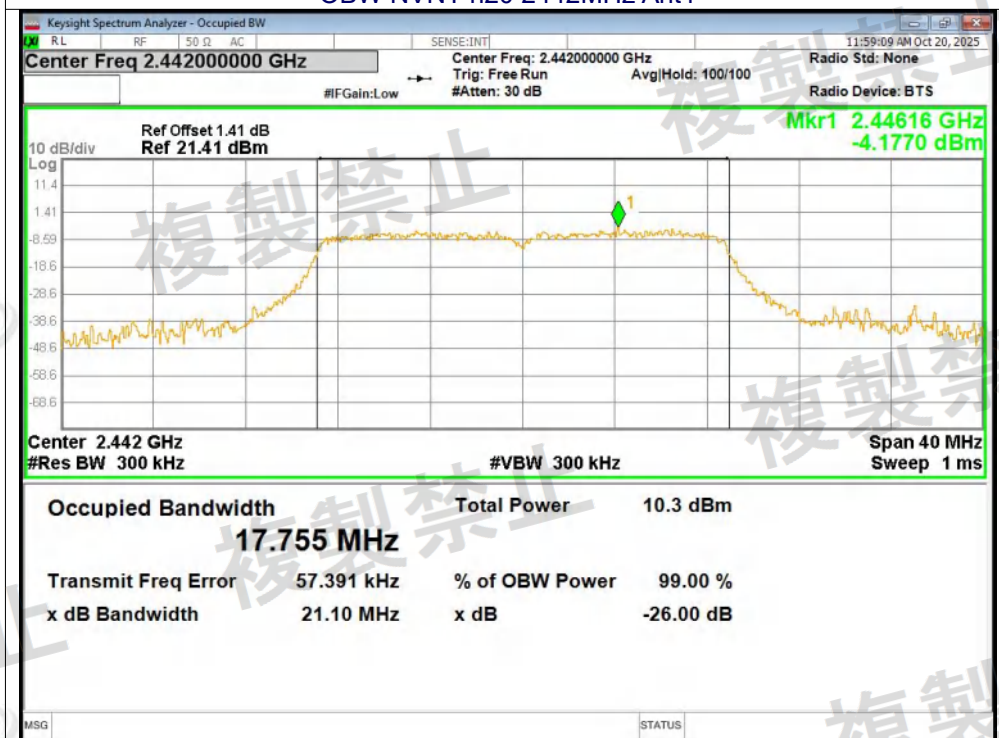
OBW NVNT g 2472MHz Ant1



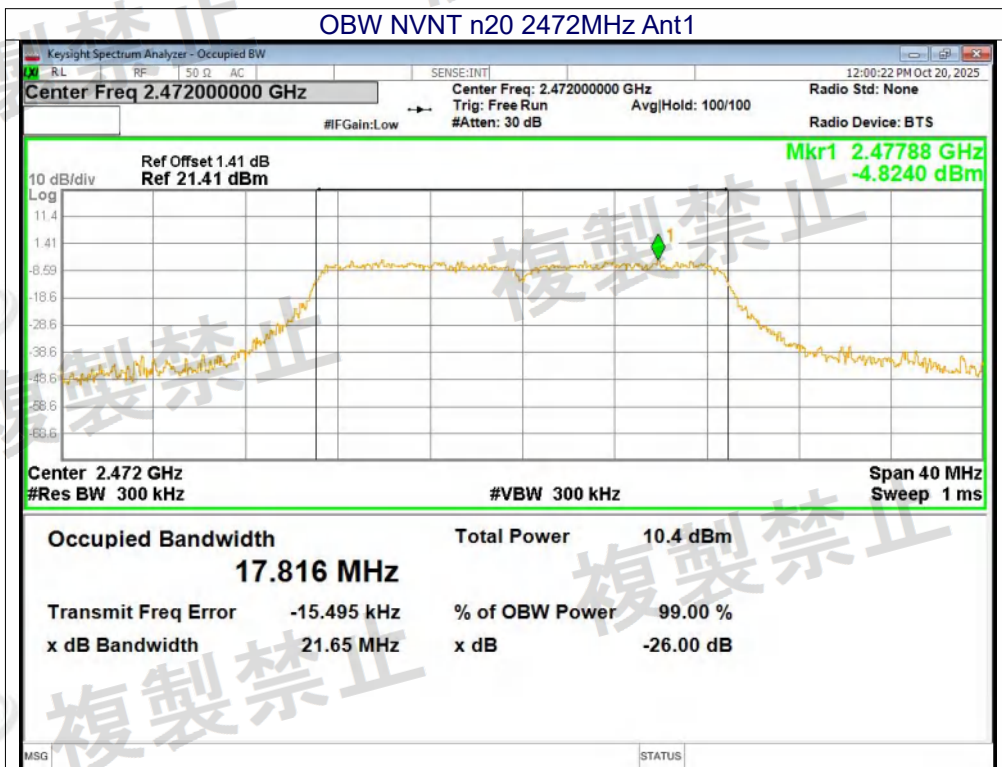
OBW NVNT n20 2412MHz Ant1



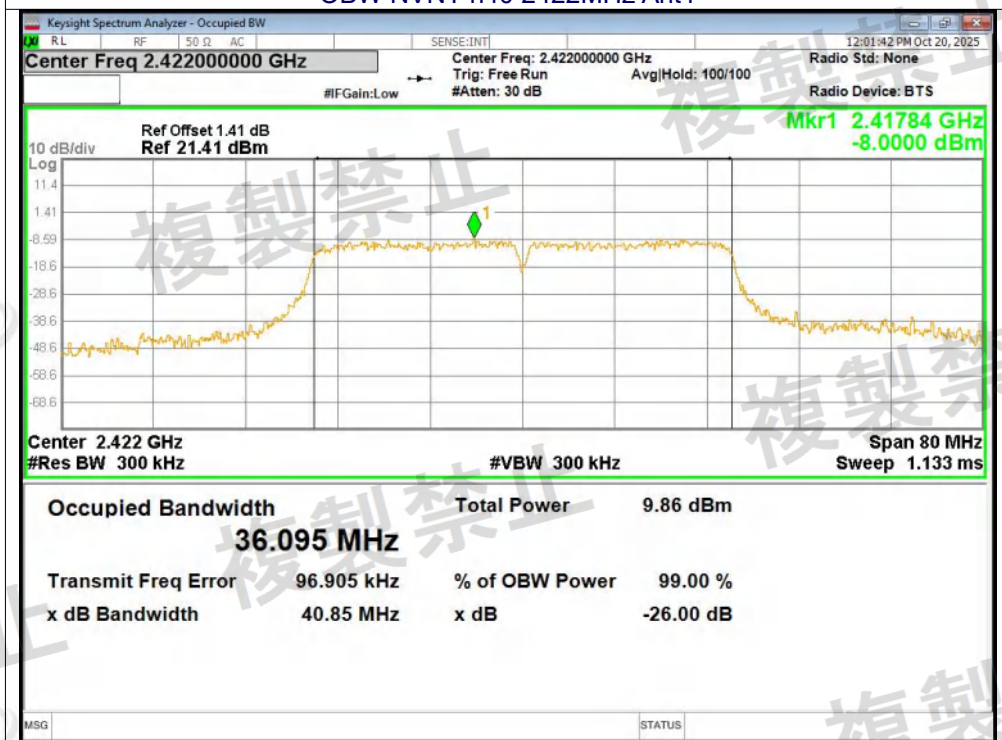
OBW NVNT n20 2442MHz Ant1



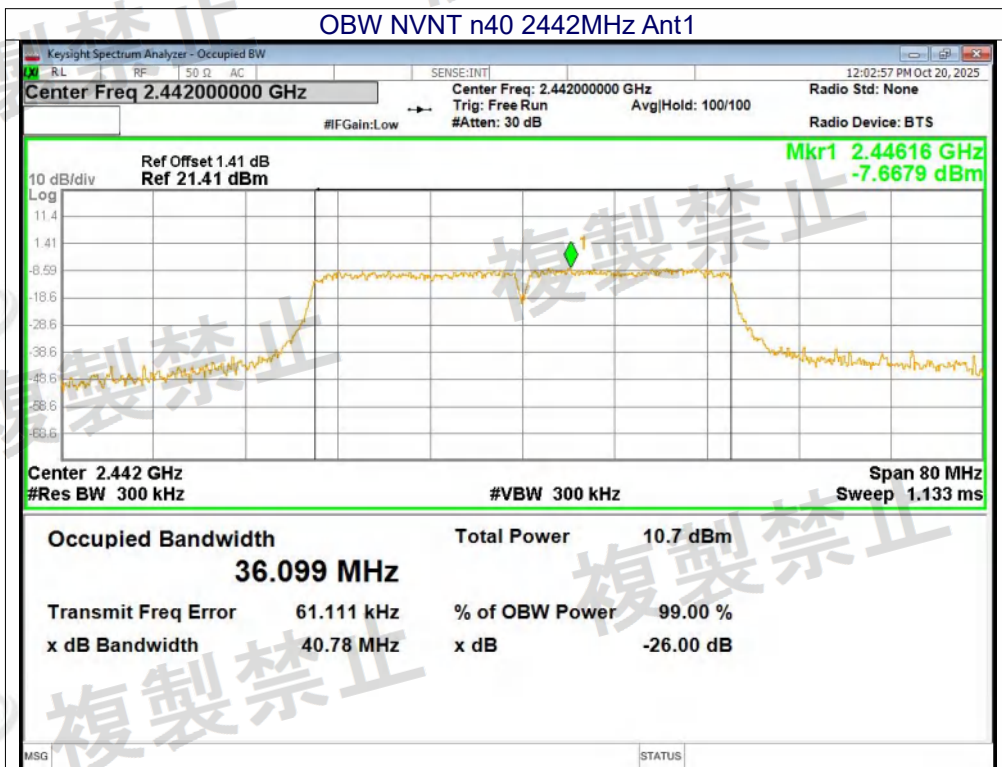
OBW NVNT n20 2472MHz Ant1



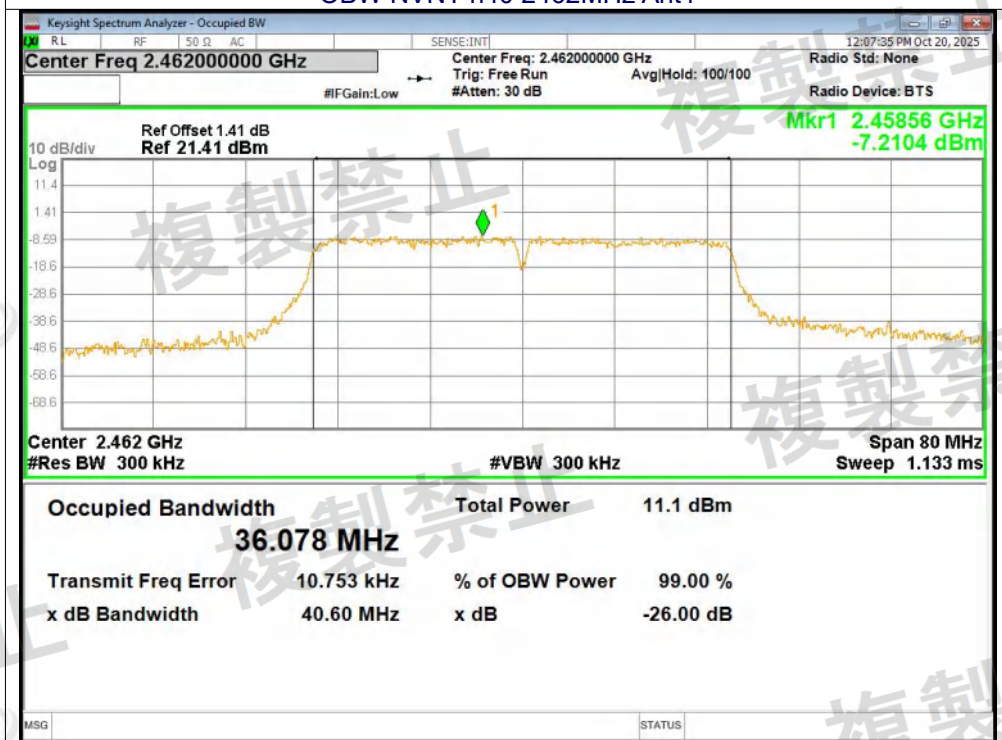
OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2442MHz Ant1



OBW NVNT n40 2462MHz Ant1





Tx Spurious Emission

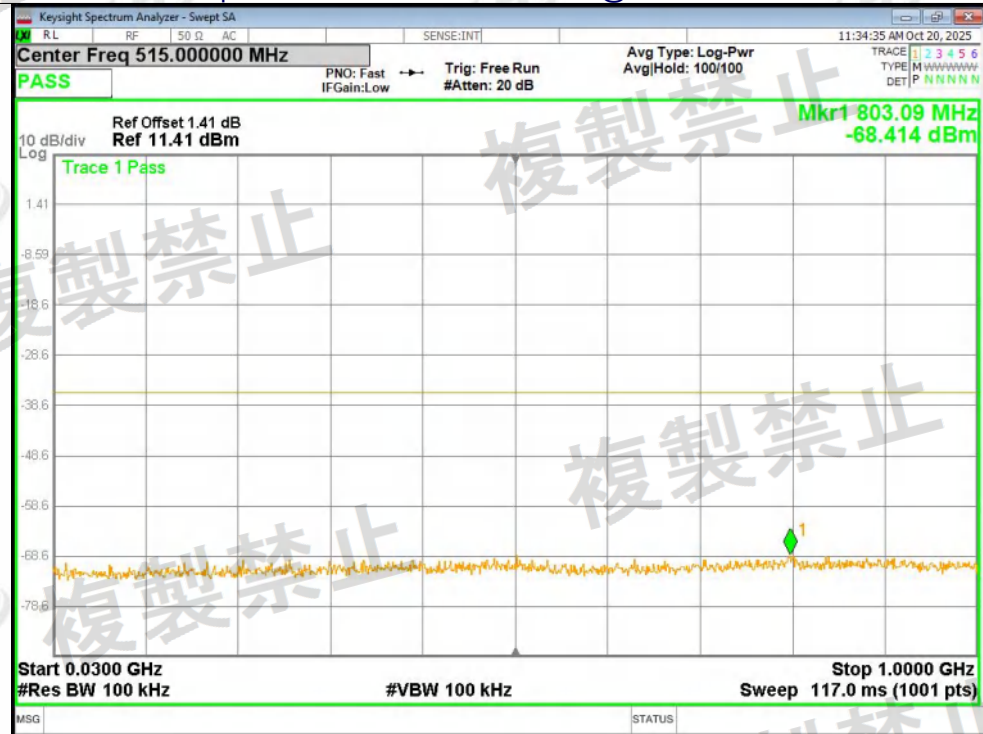
Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (uW/MHz)	Limit Stop (dBm/MHz)	Limit Stop (uW/MHz)	Verdict
b	2412	30-1000	803.09	-58.41	0.01	-36	0.25	Pass
b	2412	1000-2387	2387	-52.95	0.01	-26	2.5	Pass
b	2412	2387-2400	2399.88	-42.13	0.06	-16	25	Pass
b	2412	2483.5-2496.5	2491.76	-54.64	0.01	-16	25	Pass
b	2412	2496.5-13000	6435.31	-54.42	0.01	-26	2.5	Pass
b	2442	30-1000	811.82	-57.76	0.01	-36	0.25	Pass
b	2442	1000-2387	2385.61	-54.94	0.01	-26	2.5	Pass
b	2442	2387-2400	2393.47	-54.13	0.01	-16	25	Pass
b	2442	2483.5-2496.5	2494.78	-53.34	0.01	-16	25	Pass
b	2442	2496.5-13000	6508.84	-54.92	0.01	-26	2.5	Pass
b	2472	30-1000	31.94	-30.97	0.80	-36	0.25	Pass
b	2472	1000-2387	2165.08	-58.3	0.01	-26	2.5	Pass
b	2472	2387-2400	2395.94	-57.93	0.01	-16	25	Pass
b	2472	2483.5-2496.5	2483.9	-39.61	0.11	-16	25	Pass
b	2472	2496.5-13000	5752.59	-55.89	0.01	-26	2.5	Pass
g	2412	30-1000	31.94	-31.32	0.74	-36	0.25	Pass
g	2412	1000-2387	2387	-49.85	0.01	-26	2.5	Pass
g	2412	2387-2400	2398.75	-29.03	1.25	-16	25	Pass
g	2412	2483.5-2496.5	2496.12	-56.25	0.01	-16	25	Pass
g	2412	2496.5-13000	5836.61	-56.4	0.01	-26	2.5	Pass
g	2442	30-1000	31.94	-31.12	0.77	-36	0.25	Pass
g	2442	1000-2387	2375.9	-58.18	0.01	-26	2.5	Pass
g	2442	2387-2400	2398.82	-56.06	0.01	-16	25	Pass
g	2442	2483.5-2496.5	2485.05	-53.94	0.01	-16	25	Pass
g	2442	2496.5-13000	5784.1	-56.27	0.01	-26	2.5	Pass
g	2472	30-1000	31.94	-31.46	0.71	-36	0.25	Pass
g	2472	1000-2387	1423.04	-57.88	0.01	-26	2.5	Pass
g	2472	2387-2400	2393.75	-58.08	0.01	-16	25	Pass
g	2472	2483.5-2496.5	2483.79	-26.84	2.07	-16	25	Pass
g	2472	2496.5-13000	2496.5	-41.73	0.07	-26	2.5	Pass
n20	2412	30-1000	31.94	-31.09	0.78	-36	0.25	Pass
n20	2412	1000-2387	2385.61	-48.19	0.02	-26	2.5	Pass
n20	2412	2387-2400	2399.94	-27.63	1.73	-16	25	Pass
n20	2412	2483.5-2496.5	2492.52	-56.62	0.01	-16	25	Pass
n20	2412	2496.5-13000	5374.46	-56.01	0.01	-26	2.5	Pass
n20	2442	30-1000	31.94	-31.04	0.79	-36	0.25	Pass
n20	2442	1000-2387	2362.03	-57.89	0.01	-26	2.5	Pass
n20	2442	2387-2400	2400	-55.22	0.01	-16	25	Pass
n20	2442	2483.5-2496.5	2484.88	-51.57	0.01	-16	25	Pass
n20	2442	2496.5-13000	11876.13	-56.16	0.01	-26	2.5	Pass
n20	2472	30-1000	31.94	-31.05	0.79	-36	0.25	Pass
n20	2472	1000-2387	2320.42	-57.32	0.01	-26	2.5	Pass
n20	2472	2387-2400	2398.82	-57.66	0.01	-16	25	Pass
n20	2472	2483.5-2496.5	2483.51	-24.4	3.63	-16	25	Pass
n20	2472	2496.5-13000	2496.5	-39.11	0.12	-26	2.5	Pass



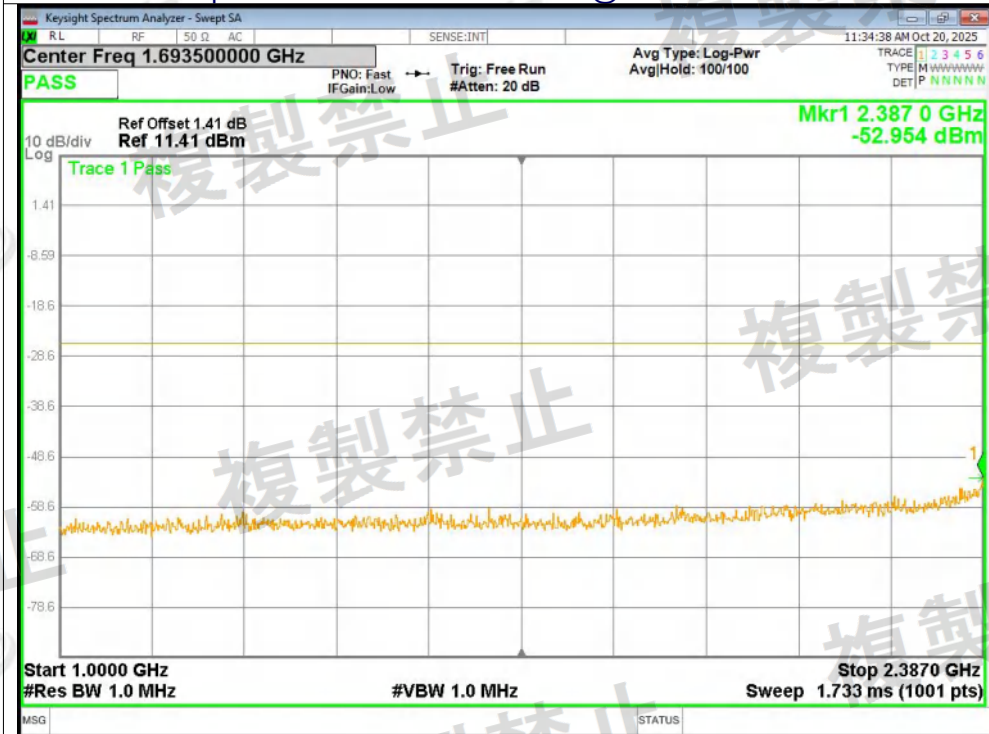
Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (uW/MHz)	Limit Stop (dBm)	Limit Stop (uW/MHz)	Verdict
n40	2422	30-1000	31.94	-31.05	0.79	-36	0.25	Pass
n40	2422	1000-2387	2384.23	-38.97	0.13	-26	2.5	Pass
n40	2422	2387-2400	2400	-30.28	0.94	-16	25	Pass
n40	2422	2483.5-2496.5	2487.58	-46.48	0.02	-16	25	Pass
n40	2422	2496.5-13000	3462.82	-38	0.16	-26	2.5	Pass
n40	2442	30-1000	31.94	-31.3	0.74	-36	0.25	Pass
n40	2442	1000-2387	2387	-52.12	0.01	-26	2.5	Pass
n40	2442	2387-2400	2399.29	-41.96	0.06	-16	25	Pass
n40	2442	2483.5-2496.5	2483.58	-35.24	0.30	-16	25	Pass
n40	2442	2496.5-13000	2496.5	-42.77	0.05	-26	2.5	Pass
n40	2462	30-1000	31.94	-31.45	0.72	-36	0.25	Pass
n40	2462	1000-2387	2382.84	-56.52	0.01	-26	2.5	Pass
n40	2462	2387-2400	2397.19	-52.68	0.01	-16	25	Pass
n40	2462	2483.5-2496.5	2483.54	-28.5	1.41	-16	25	Pass
n40	2462	2496.5-13000	2496.5	-33.55	0.44	-26	2.5	Pass

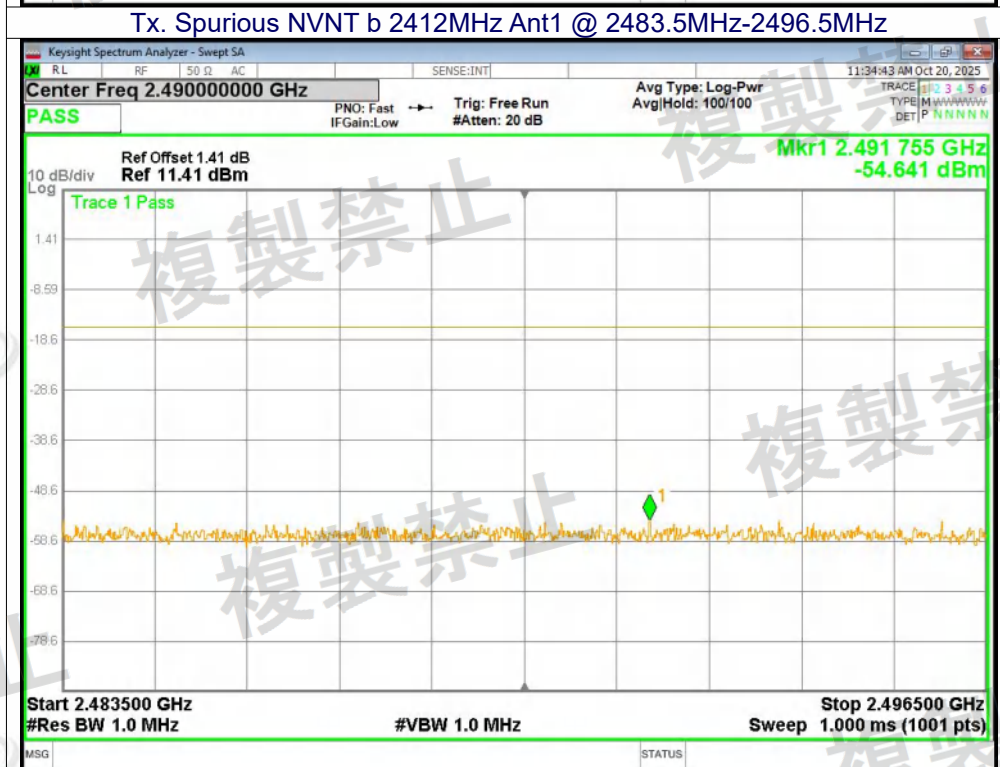
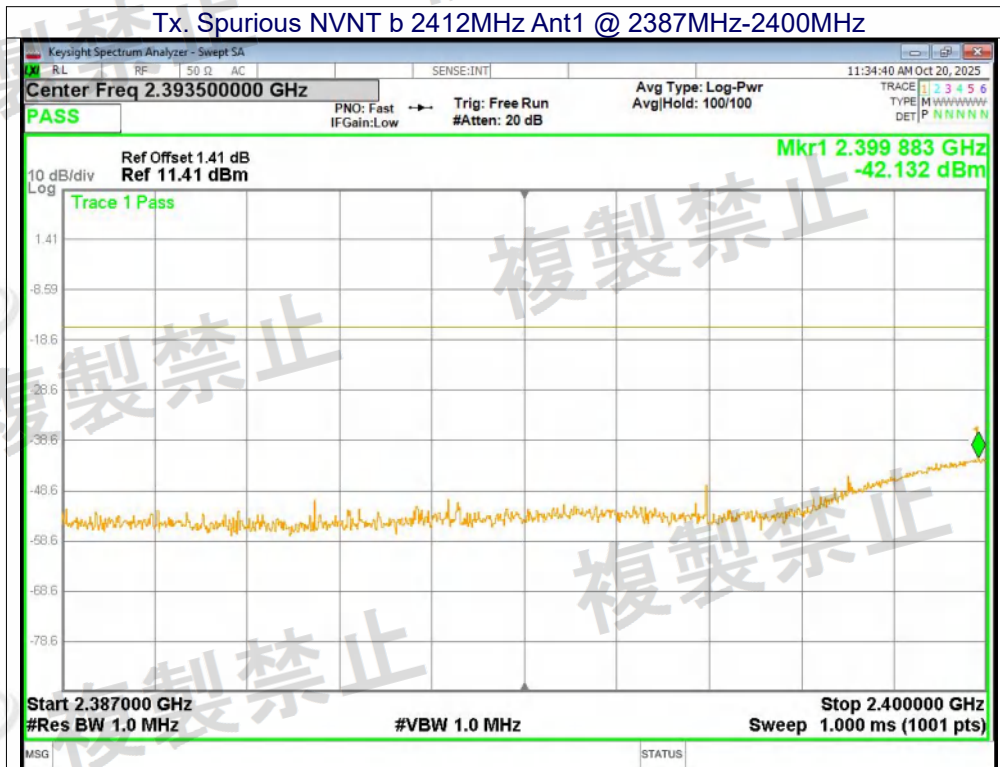
Test Graphs

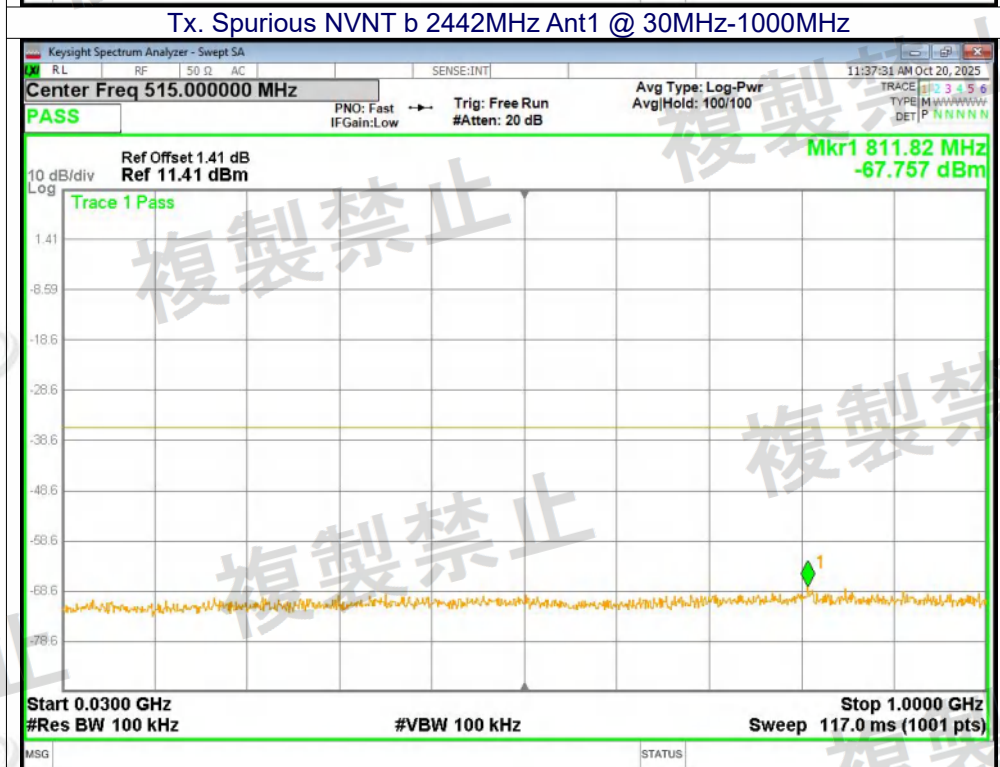
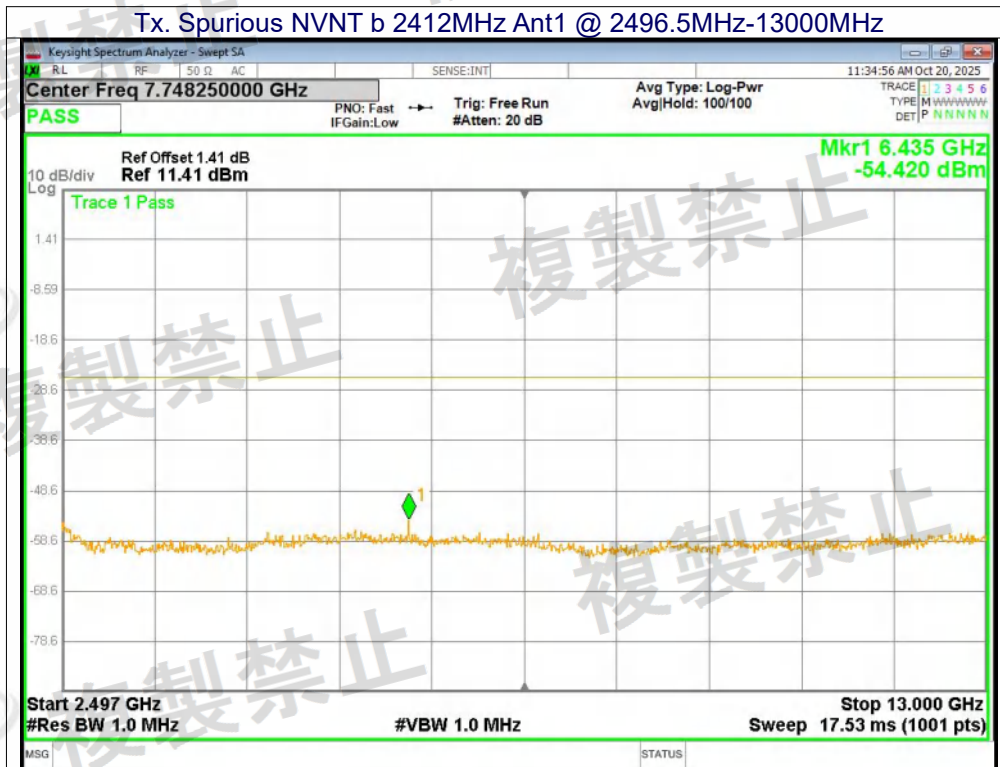
Tx. Spurious NVNT b 2412MHz Ant1 @ 30MHz-1000MHz



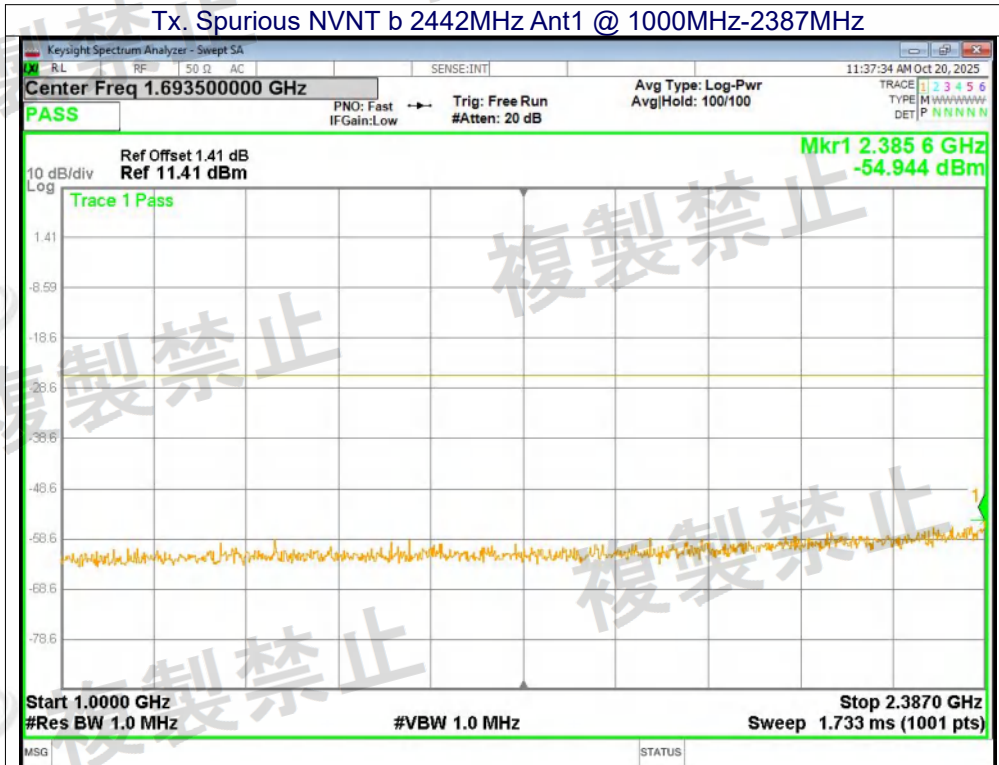
Tx. Spurious NVNT b 2412MHz Ant1 @ 1000MHz-2387MHz



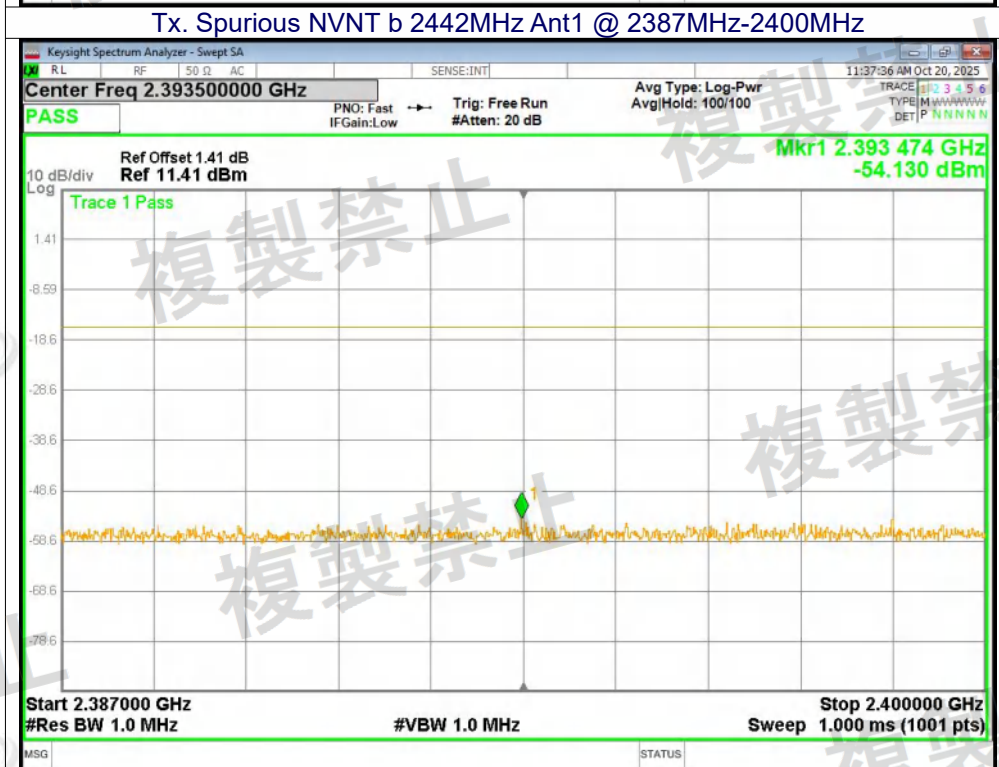




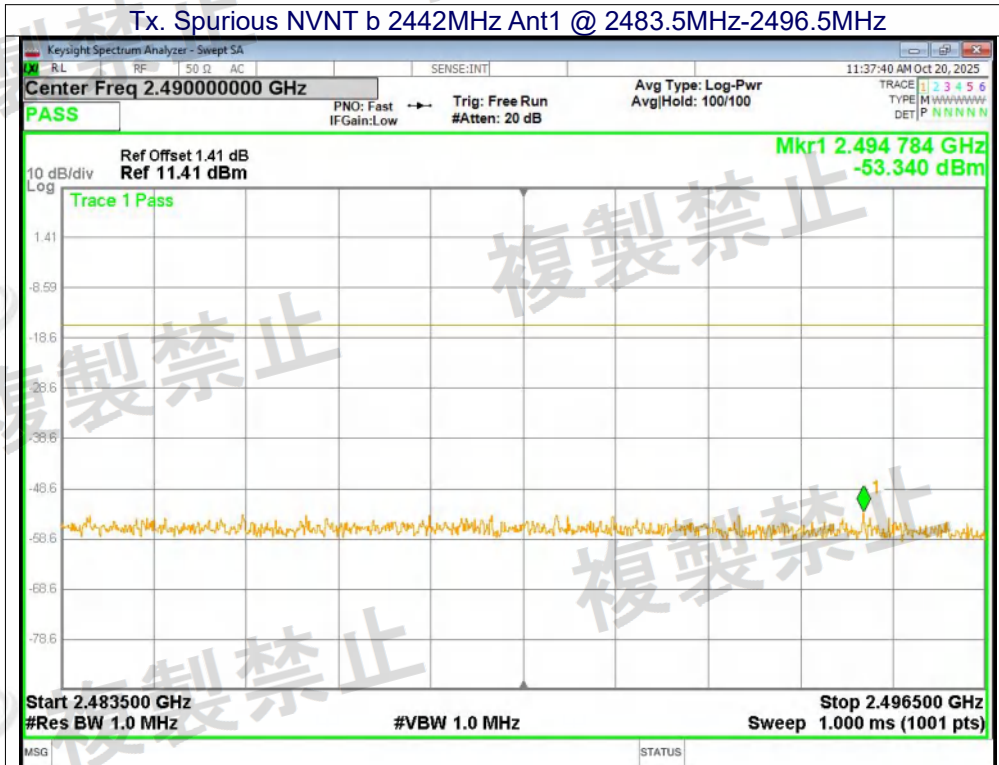
Tx. Spurious NVNT b 2442MHz Ant1 @ 1000MHz-2387MHz



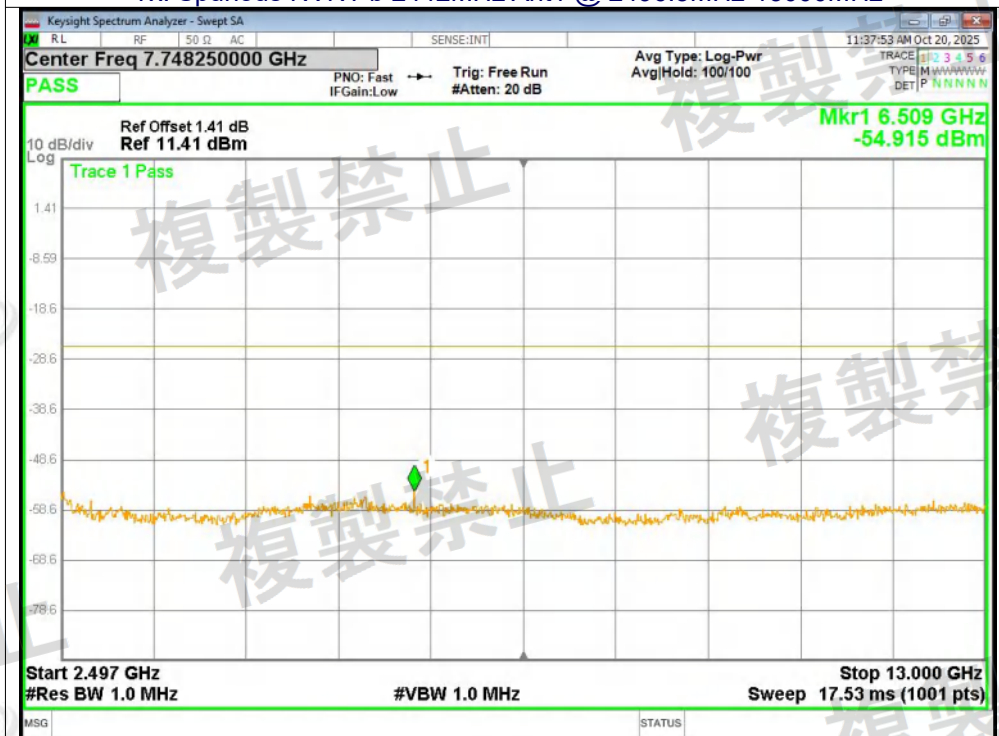
Tx. Spurious NVNT b 2442MHz Ant1 @ 2387MHz-2400MHz



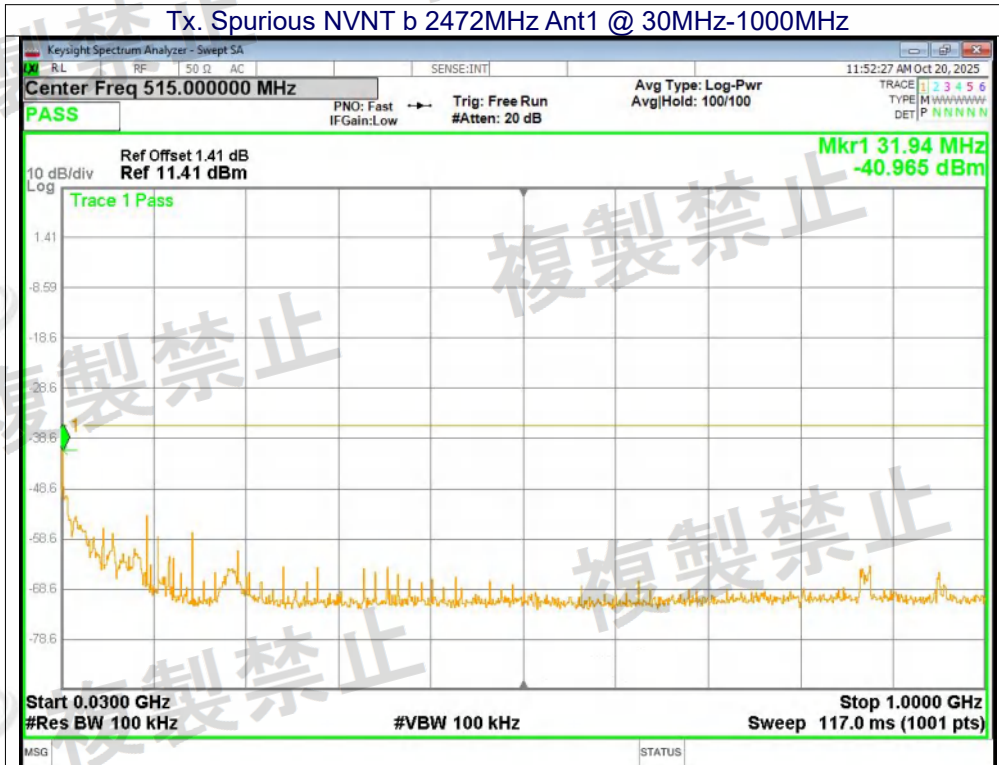
Tx. Spurious NVNT b 2442MHz Ant1 @ 2483.5MHz-2496.5MHz



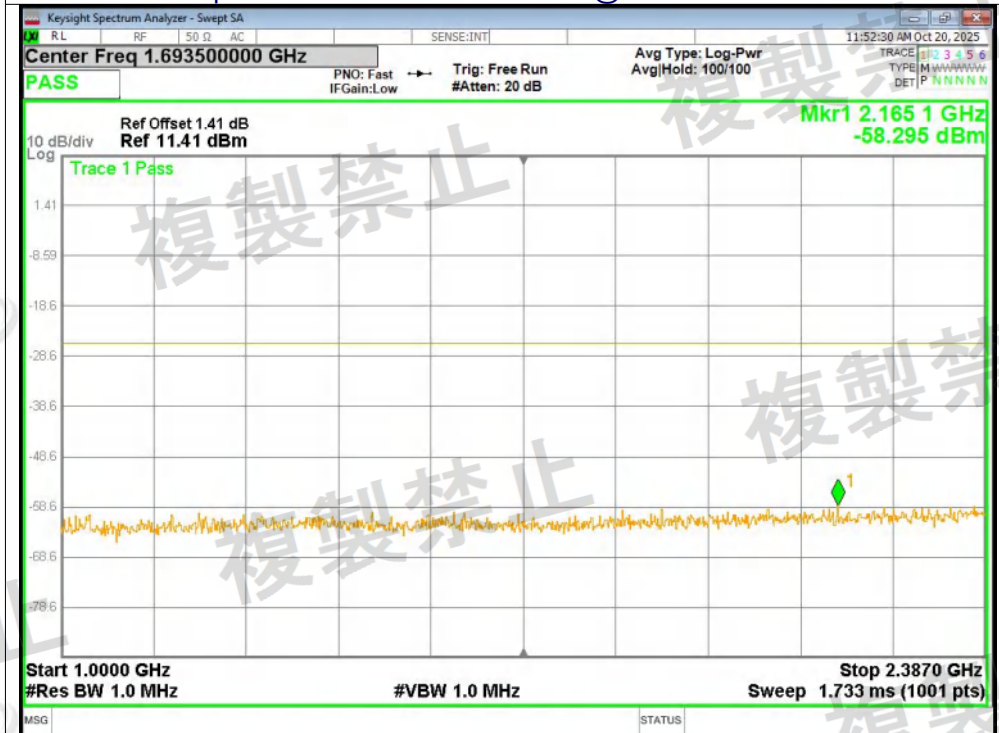
Tx. Spurious NVNT b 2442MHz Ant1 @ 2496.5MHz-13000MHz

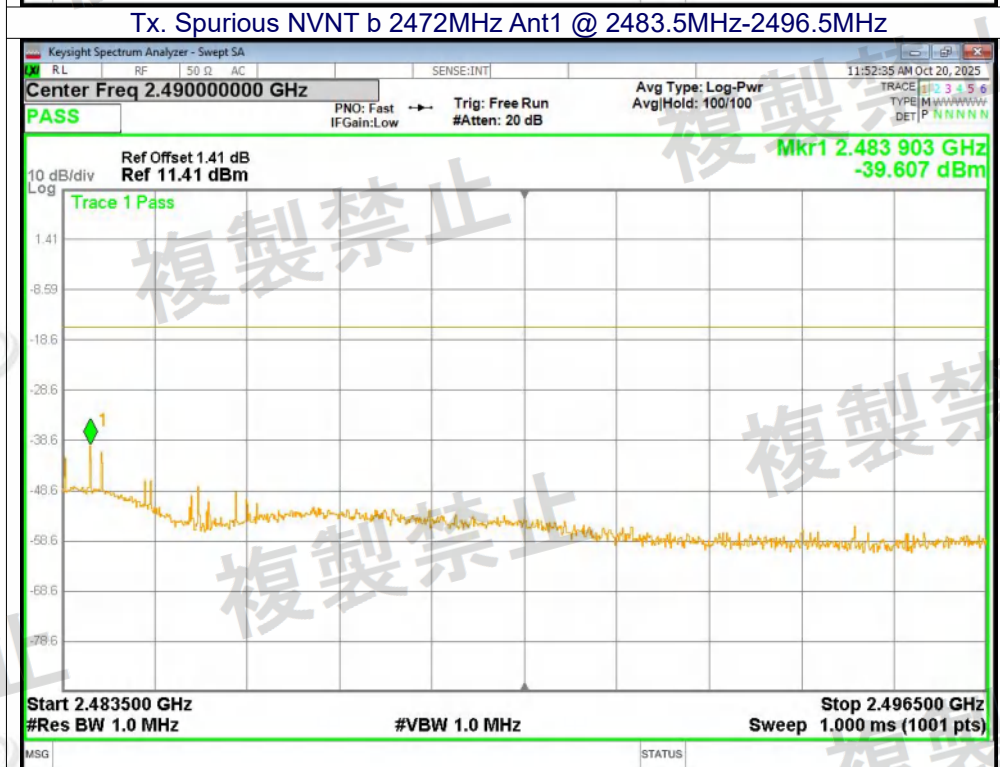
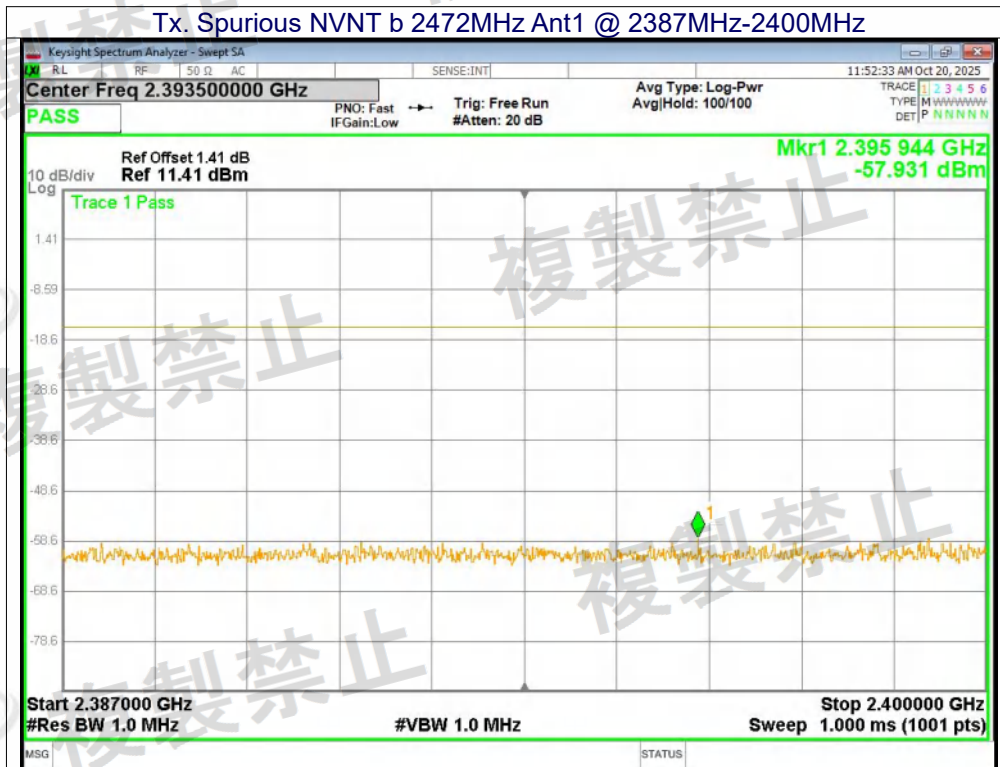


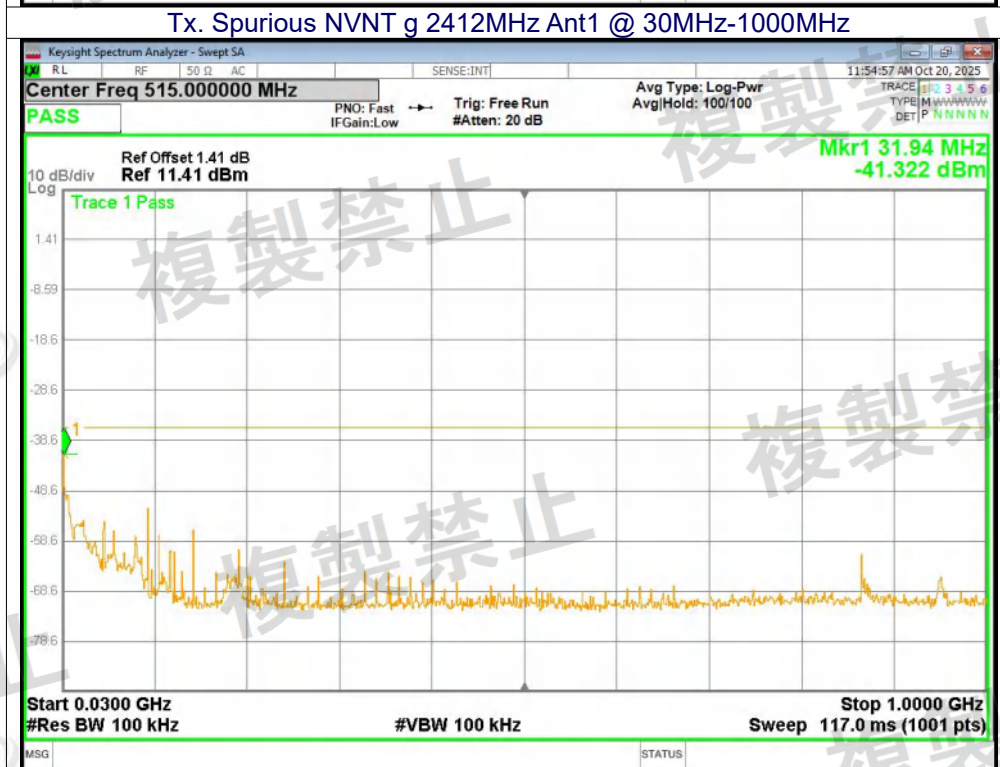
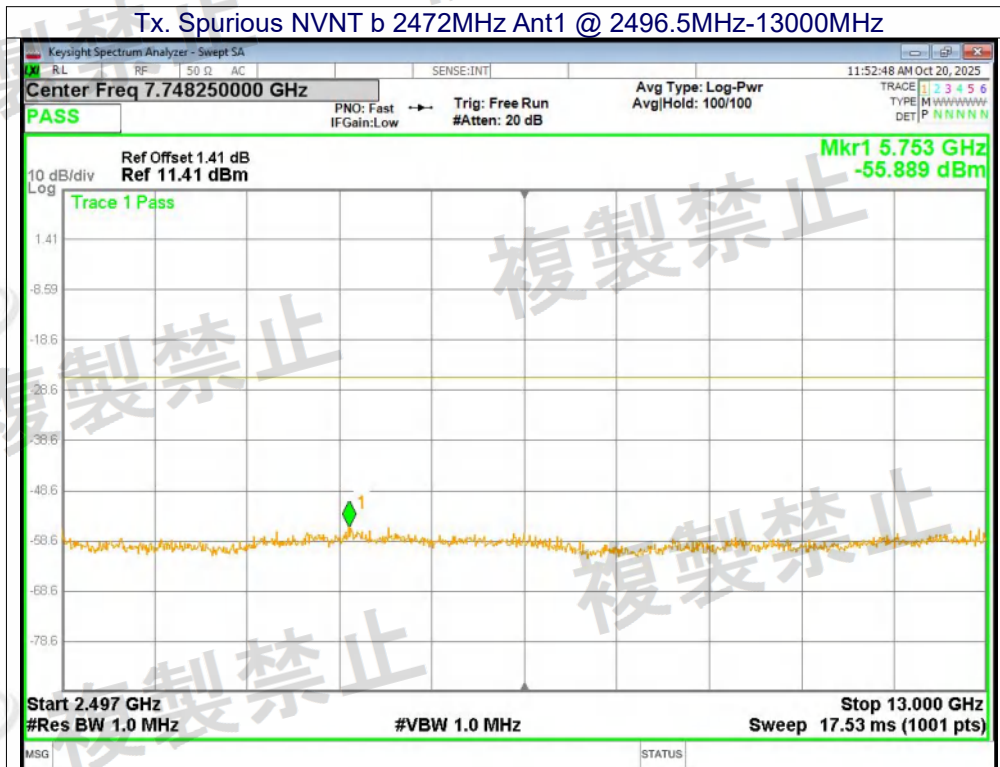
Tx. Spurious NVNT b 2472MHz Ant1 @ 30MHz-1000MHz



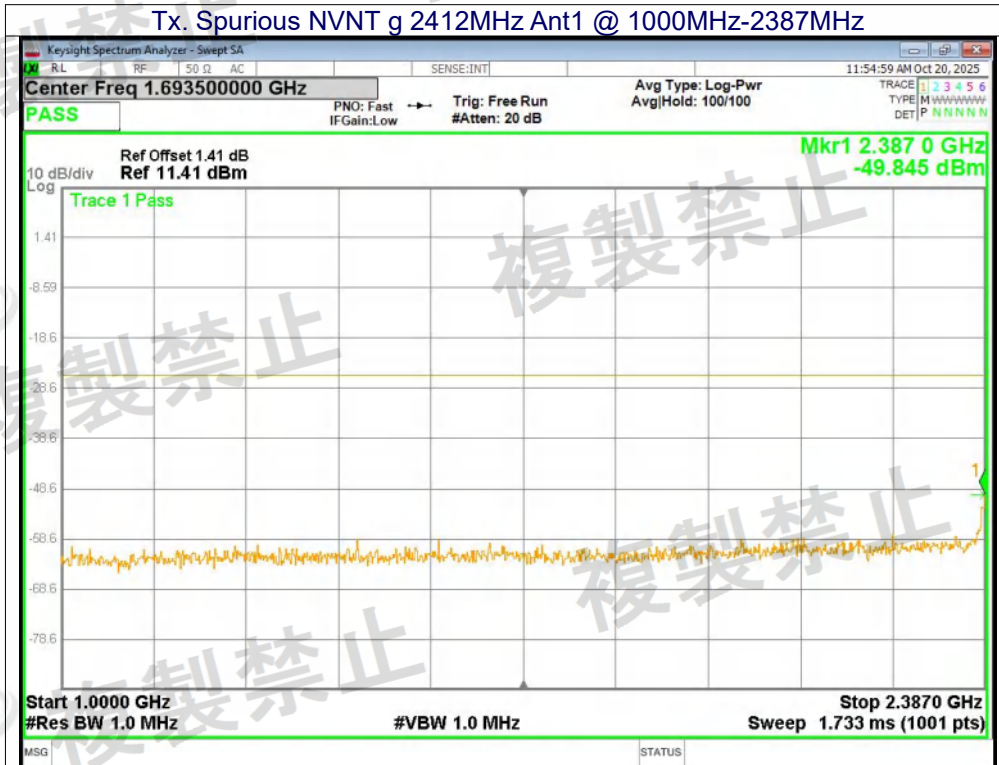
Tx. Spurious NVNT b 2472MHz Ant1 @ 1000MHz-2387MHz



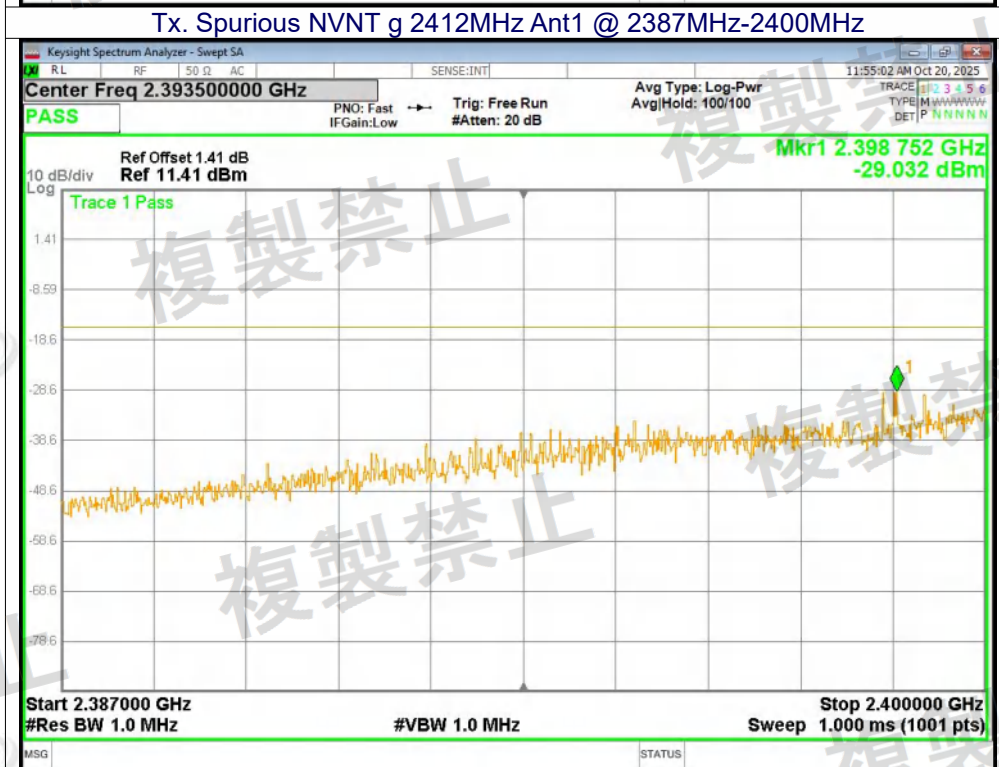


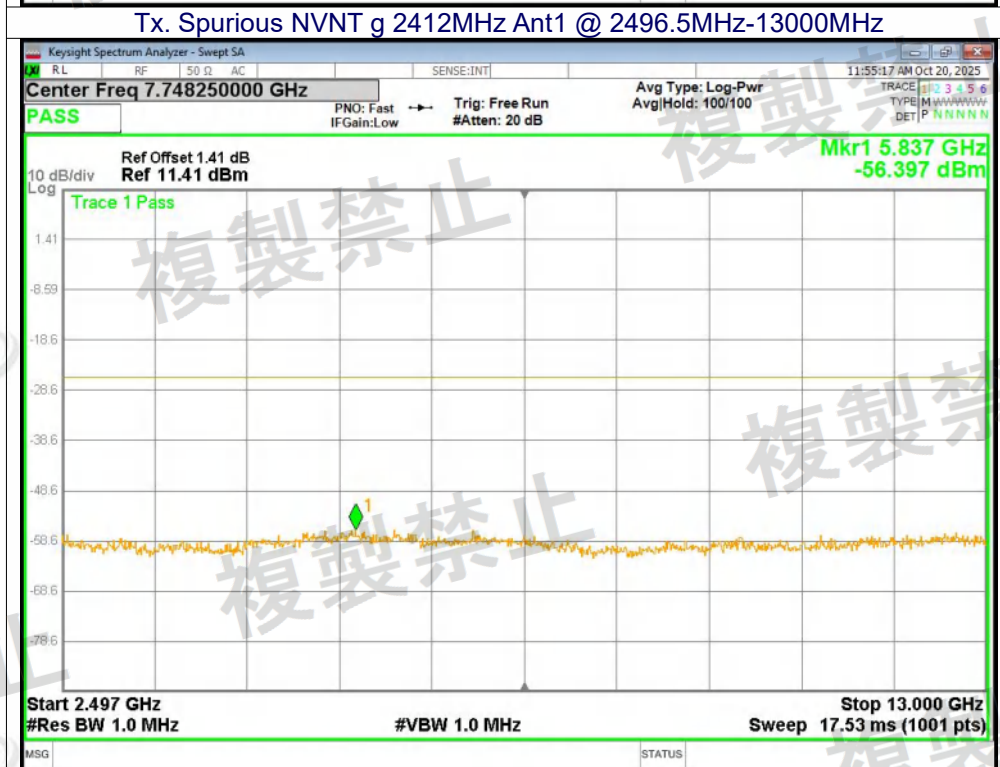
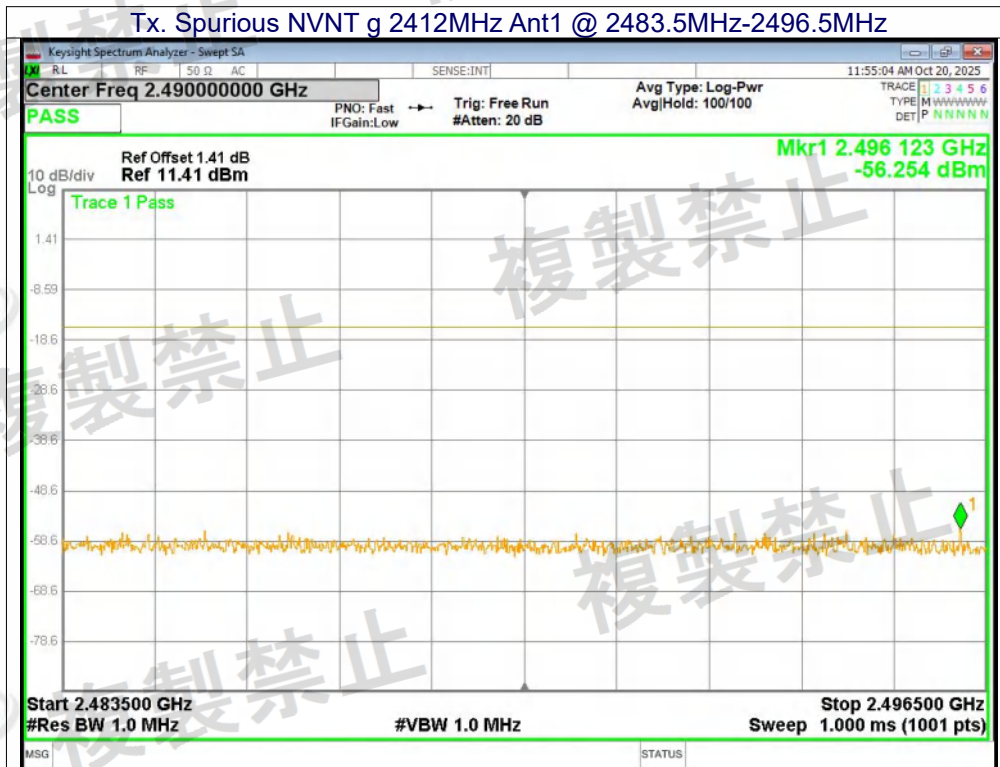


Tx. Spurious NVNT g 2412MHz Ant1 @ 1000MHz-2387MHz

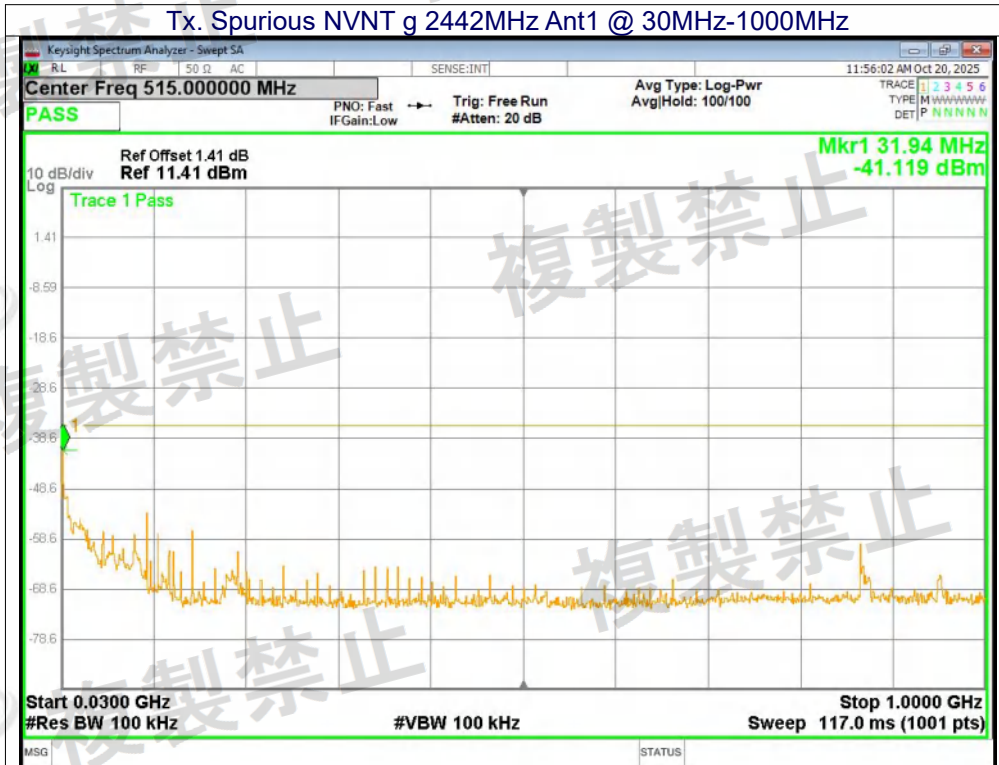


Tx. Spurious NVNT g 2412MHz Ant1 @ 2387MHz-2400MHz

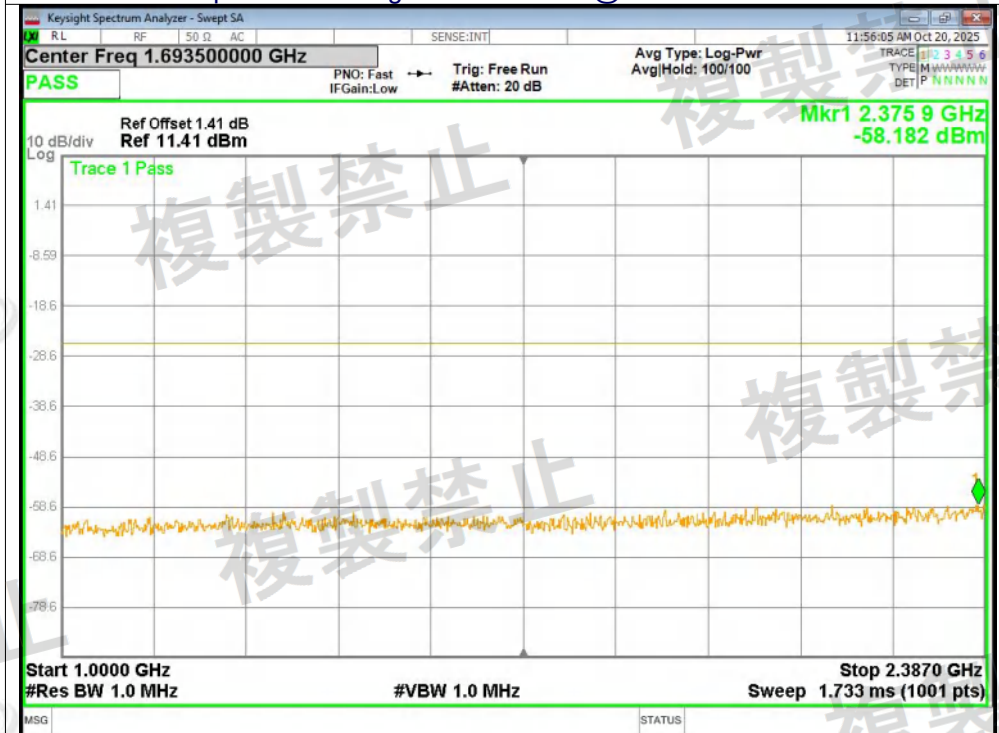


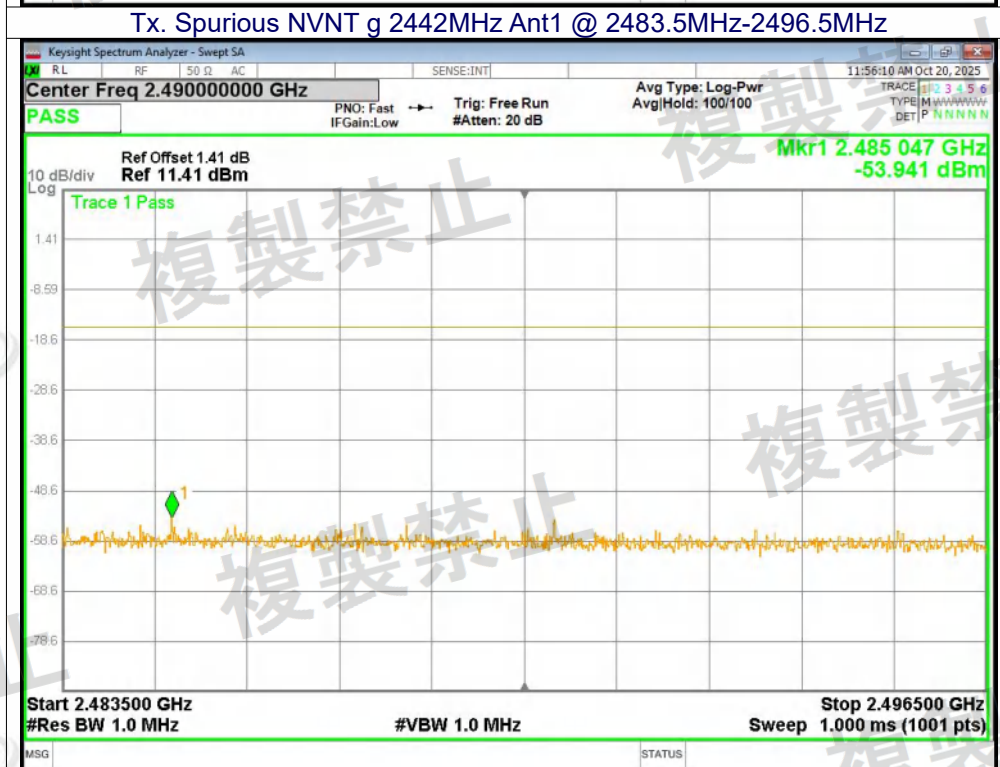
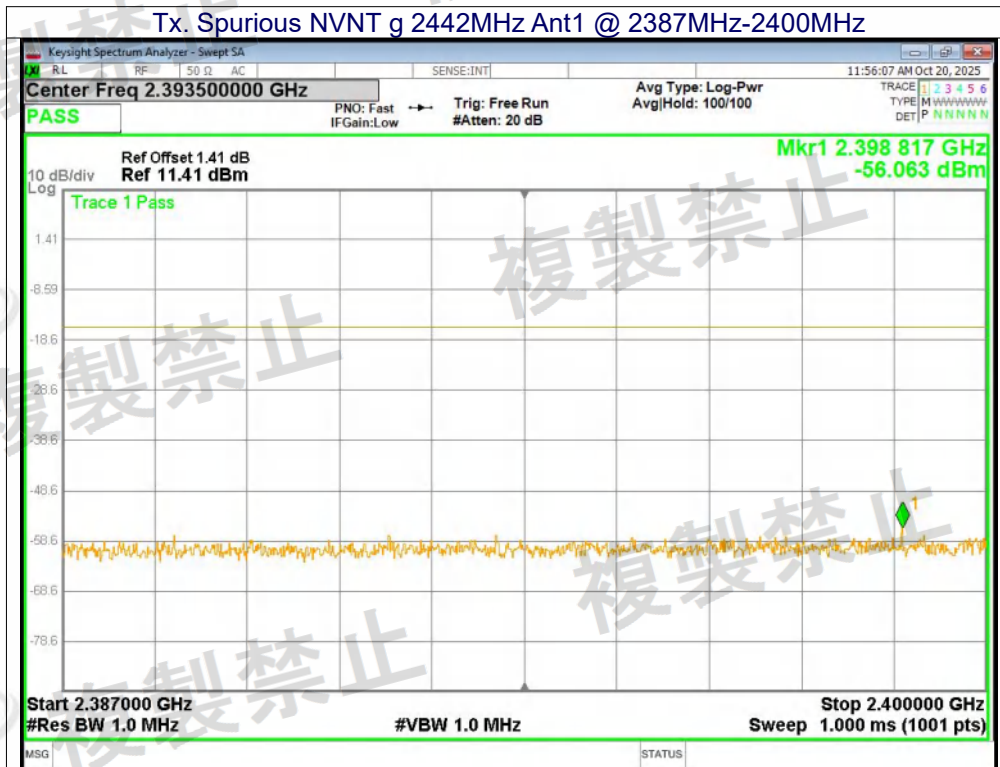


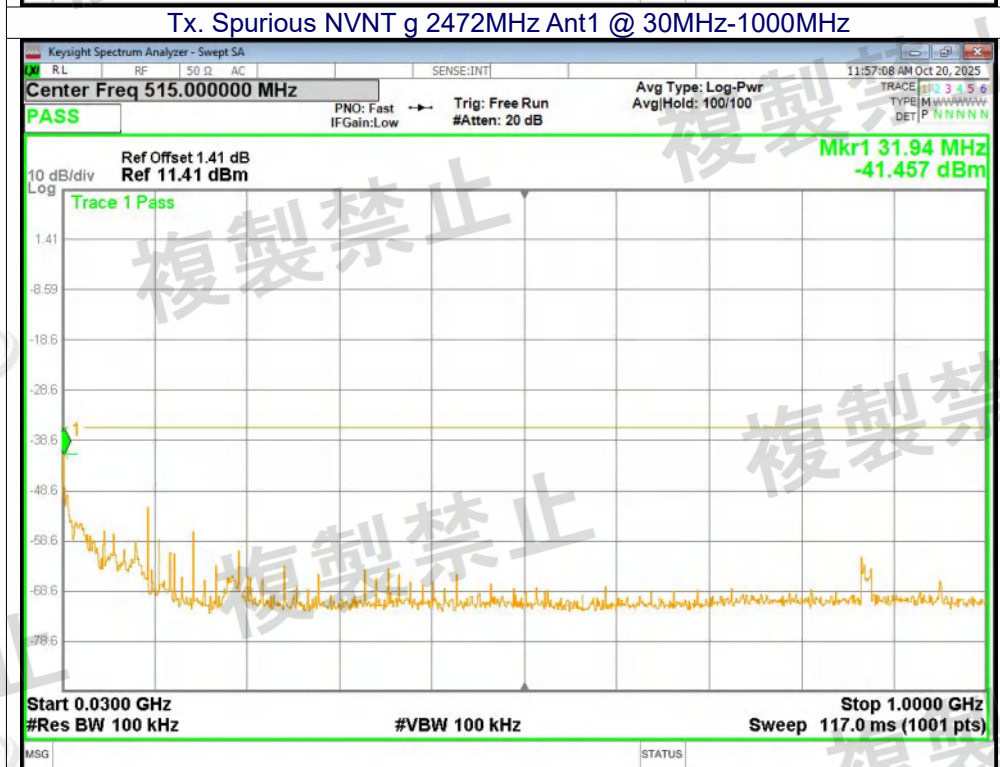
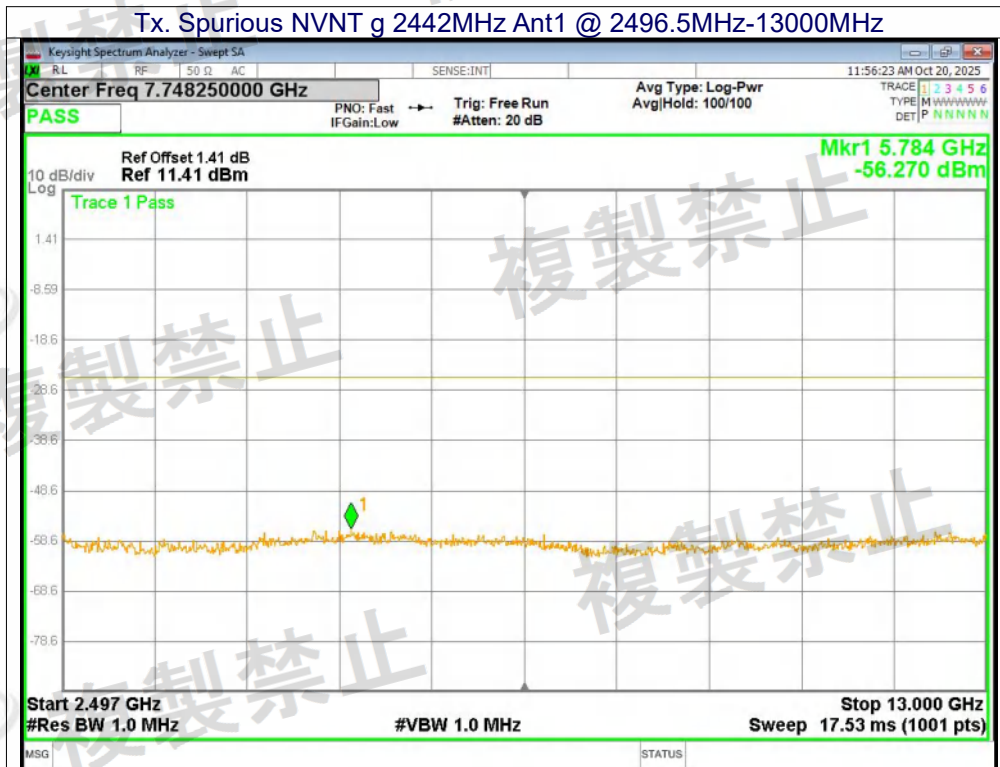
Tx. Spurious NVNT g 2442MHz Ant1 @ 30MHz-1000MHz



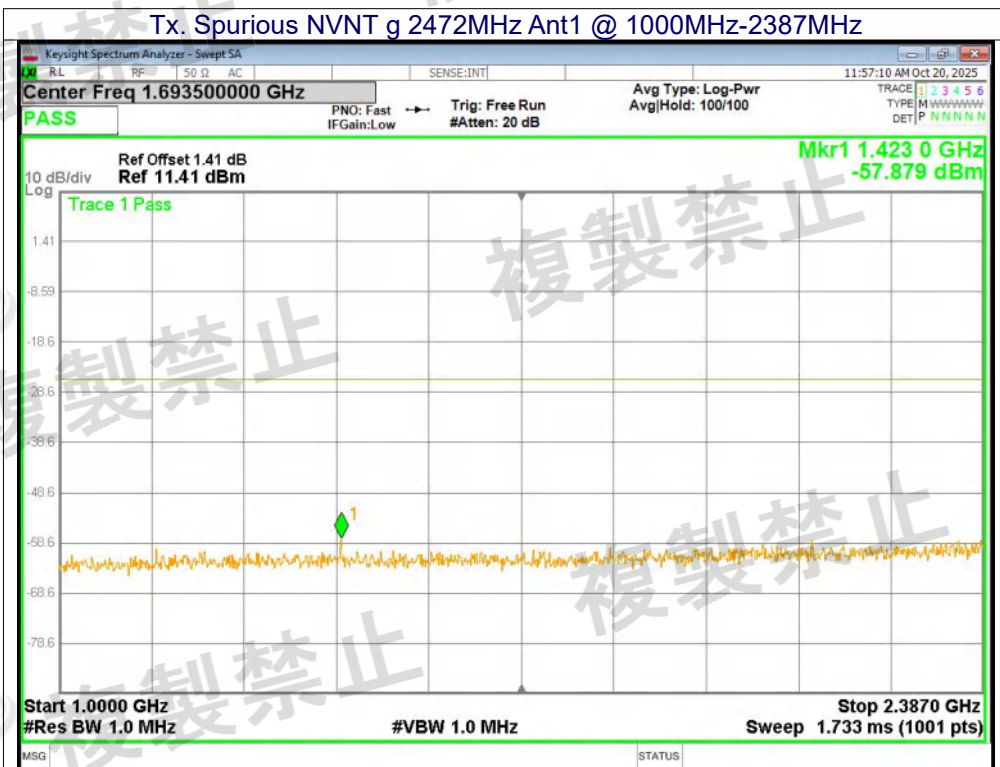
Tx. Spurious NVNT g 2442MHz Ant1 @ 1000MHz-2387MHz



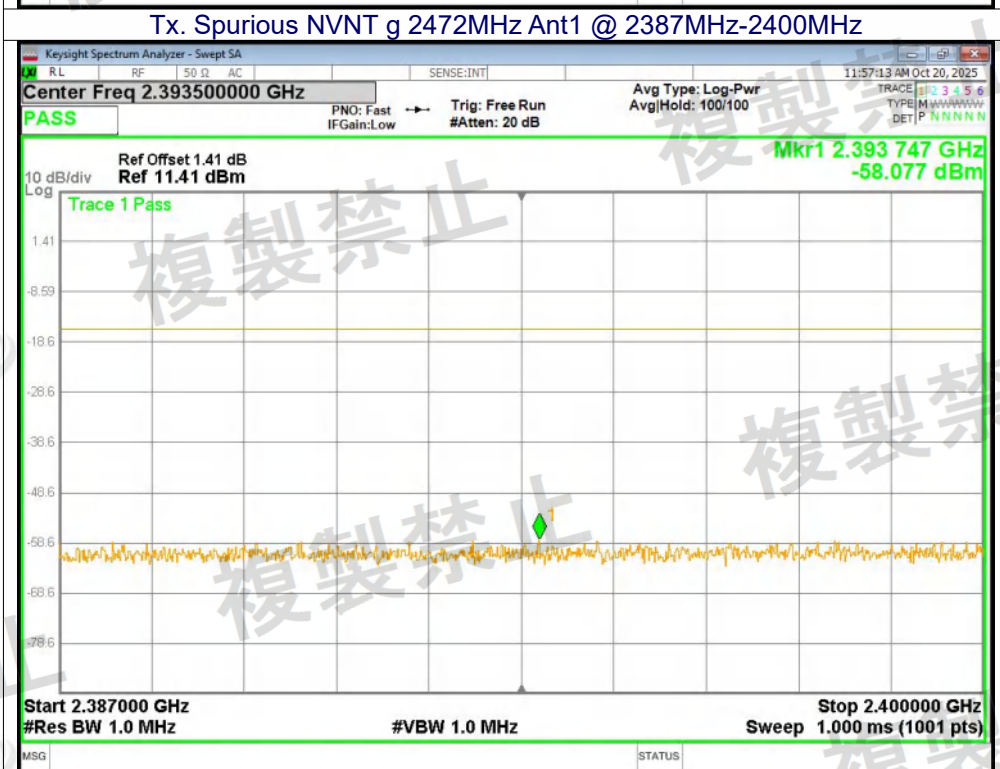


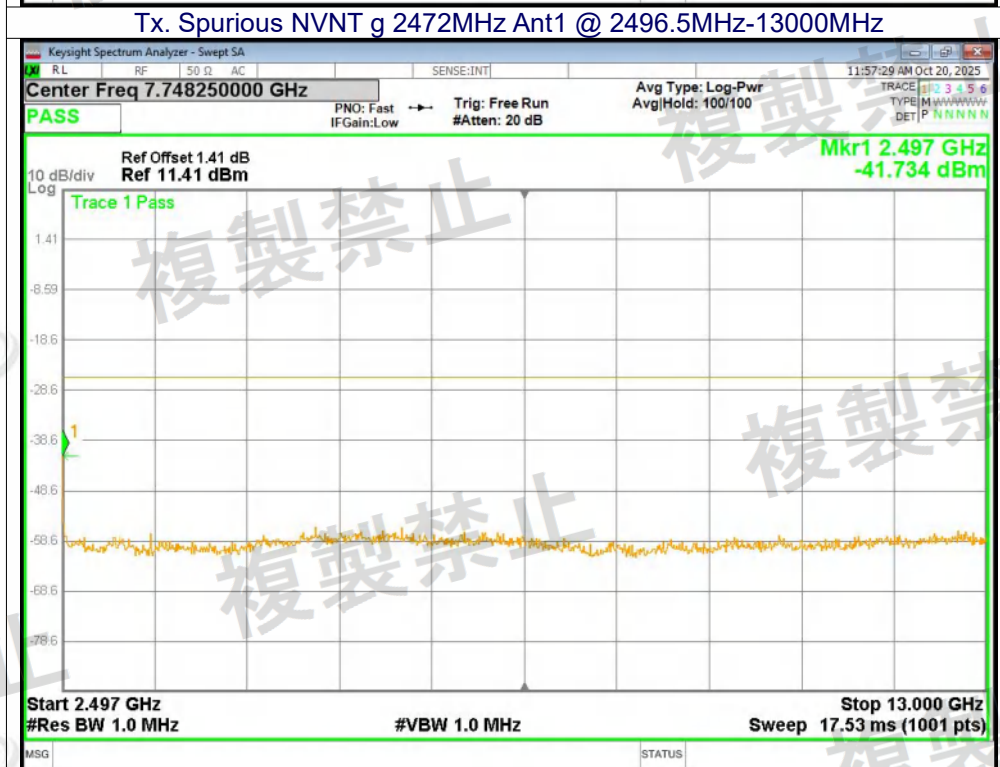
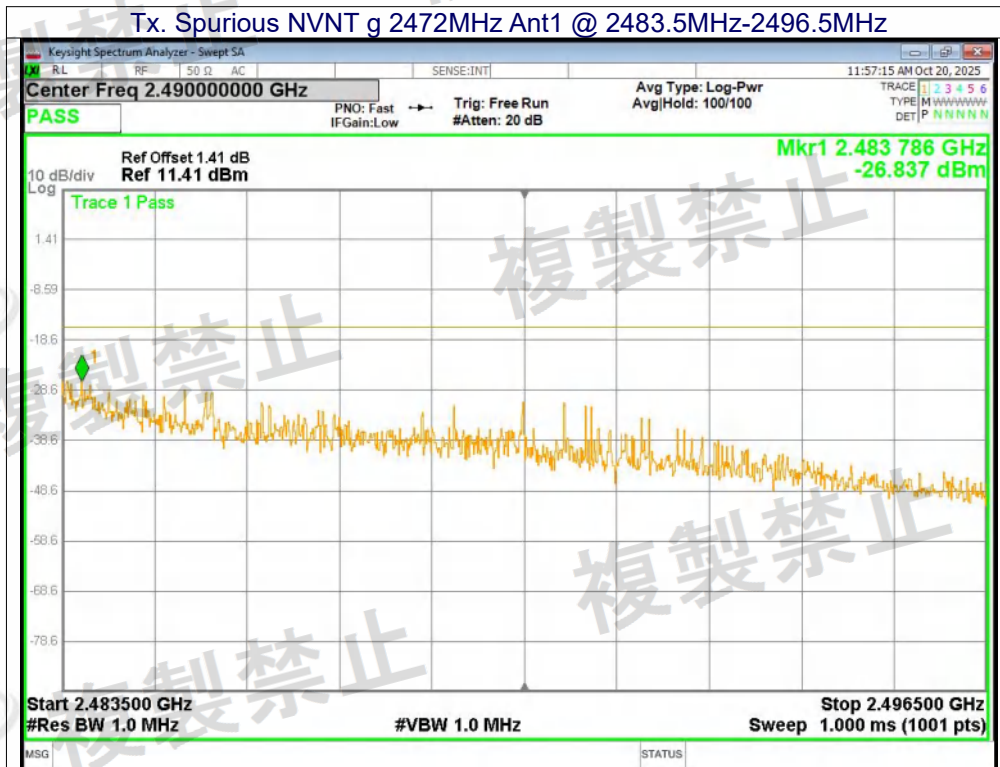


Tx. Spurious NVNT g 2472MHz Ant1 @ 1000MHz-2387MHz

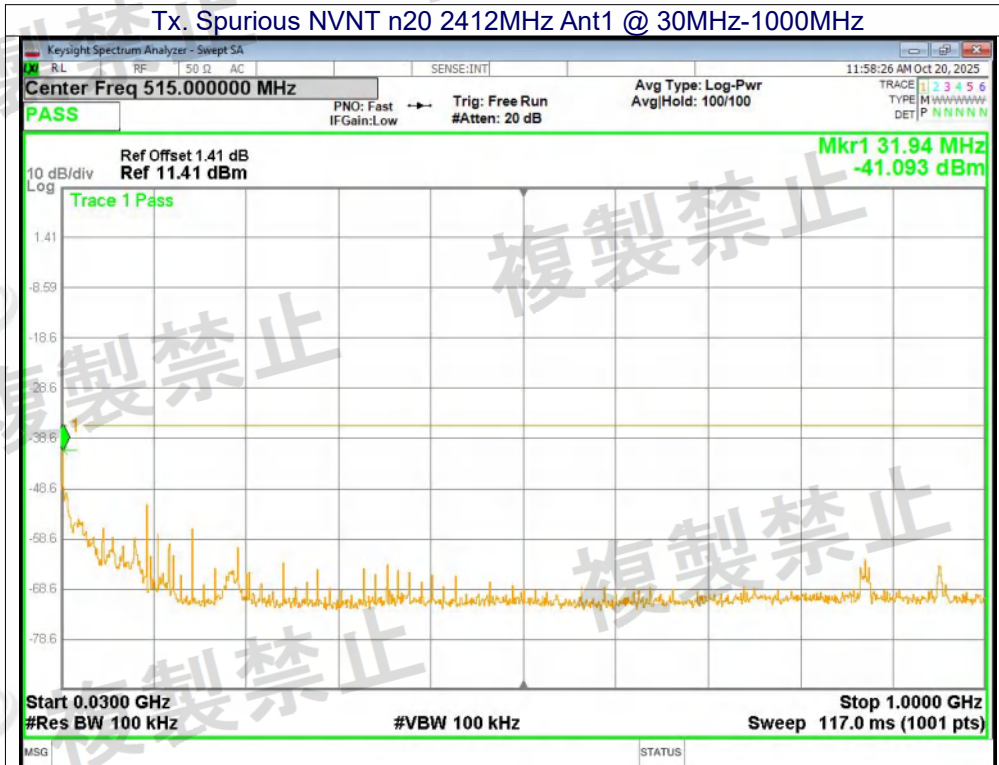


Tx. Spurious NVNT g 2472MHz Ant1 @ 2387MHz-2400MHz

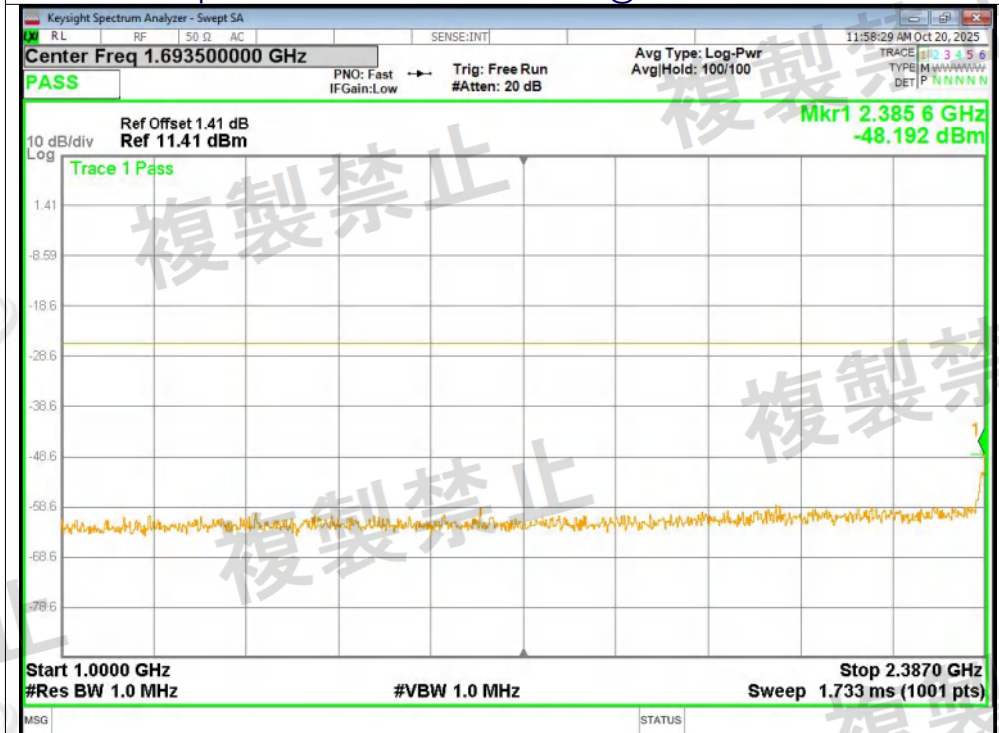


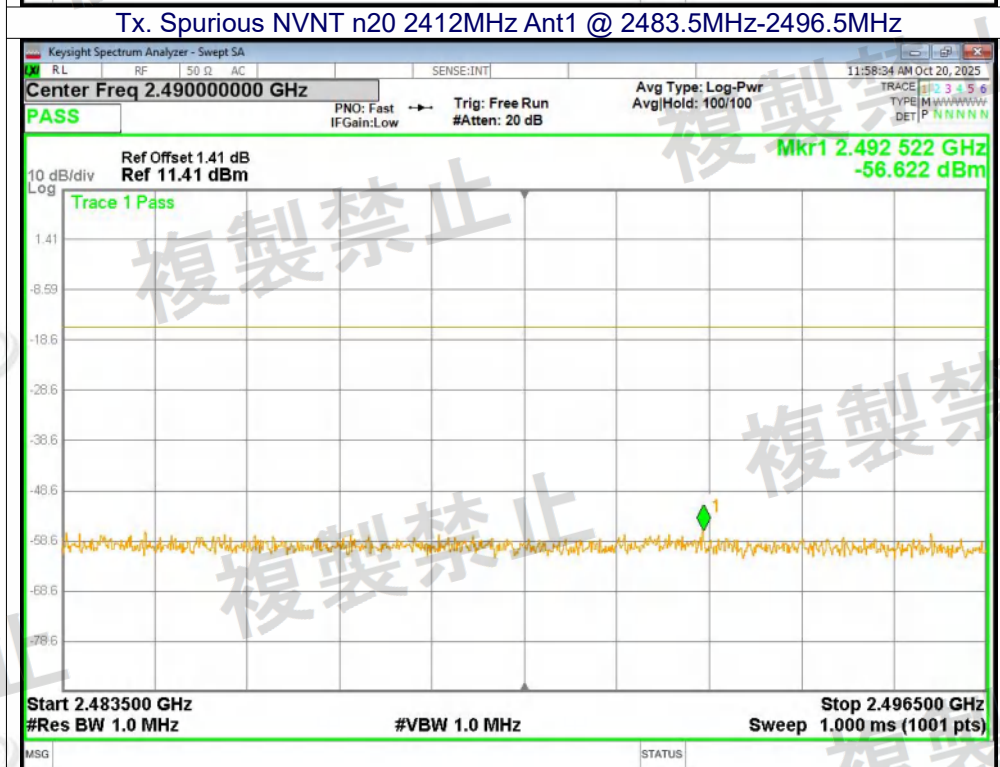
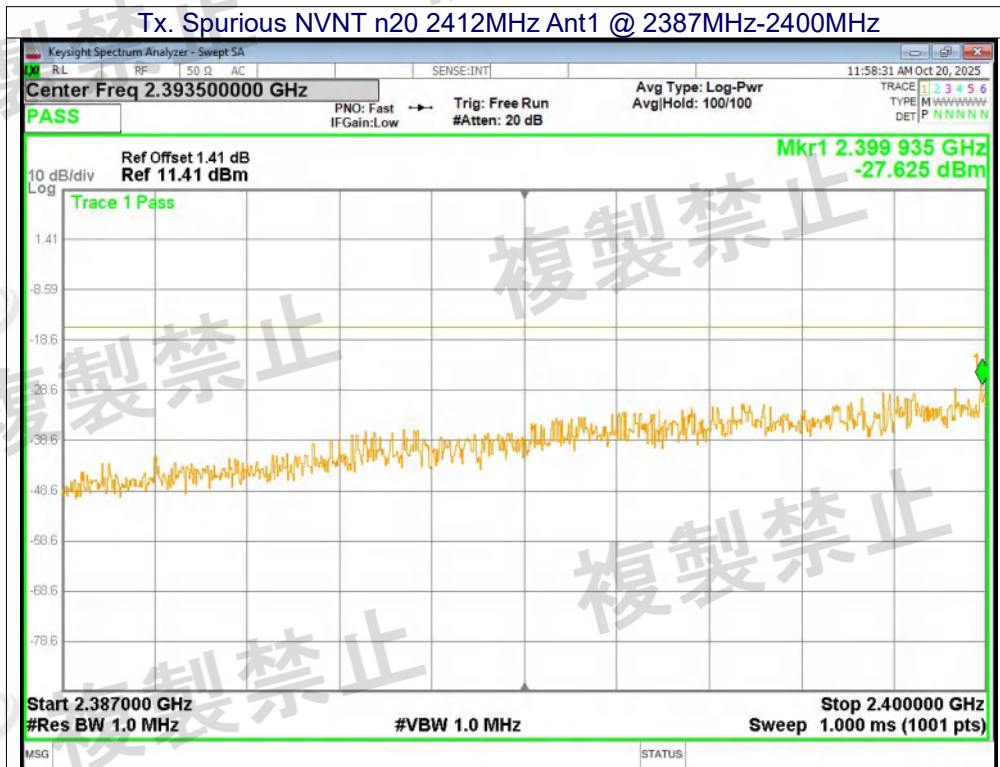


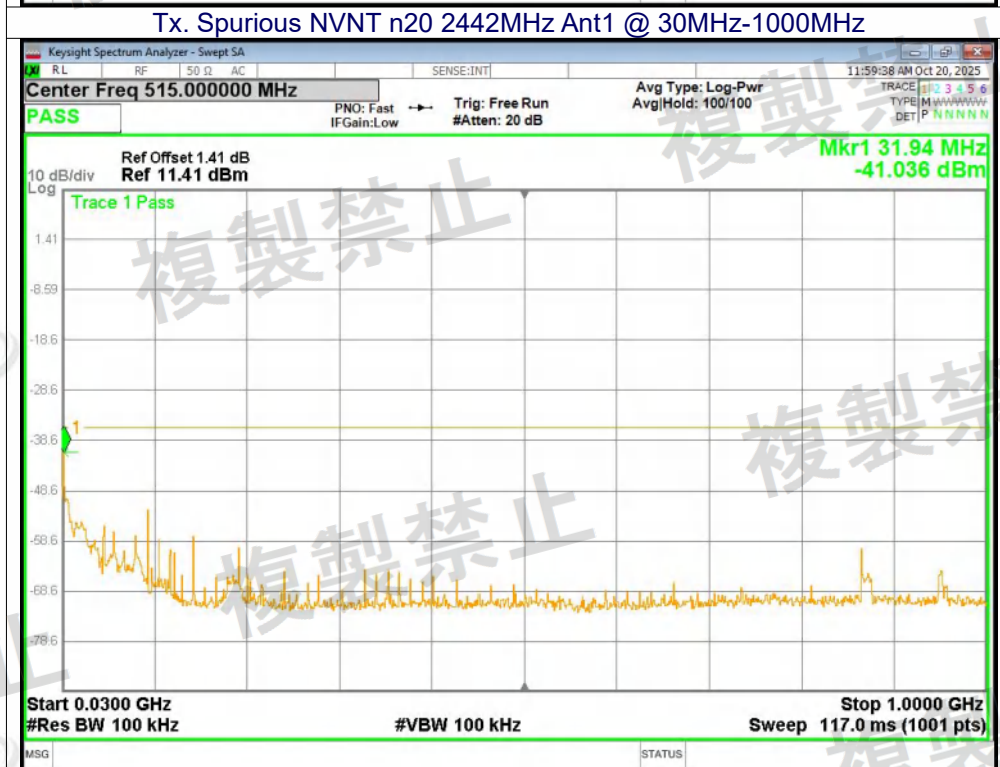
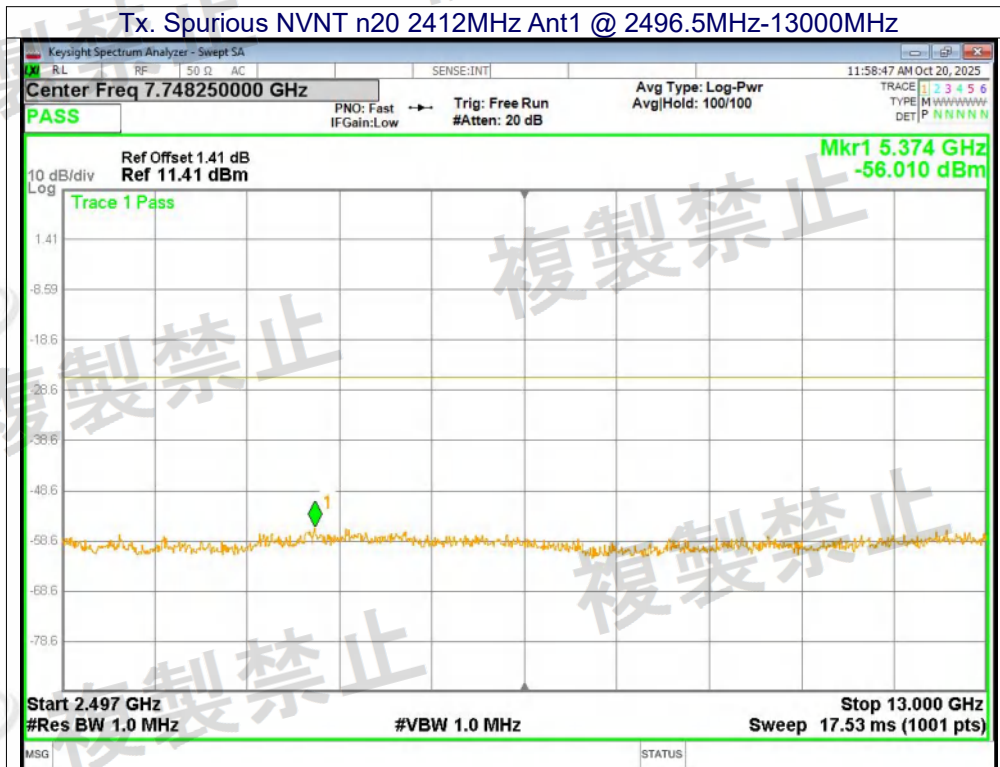
Tx. Spurious NVNT n20 2412MHz Ant1 @ 30MHz-1000MHz

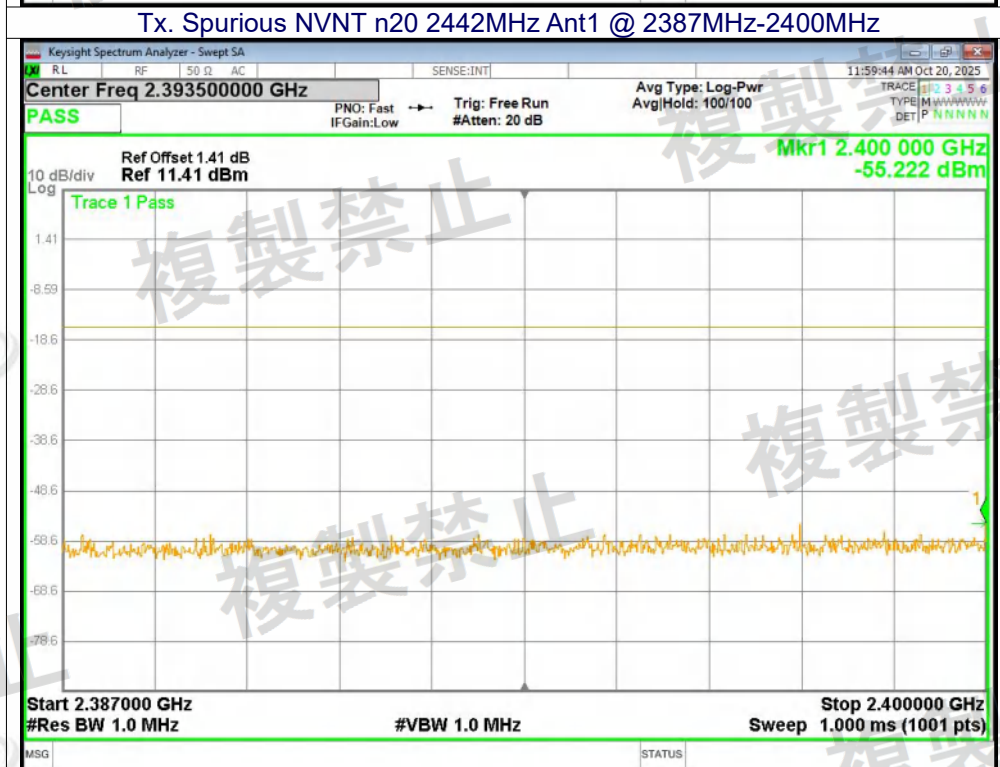
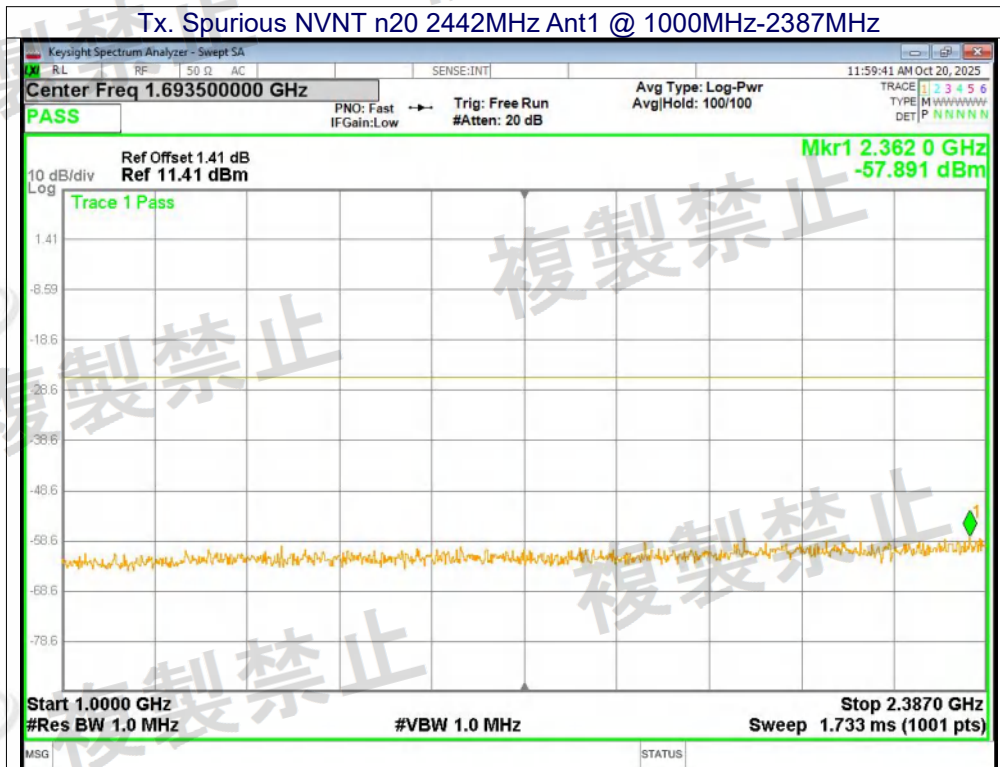


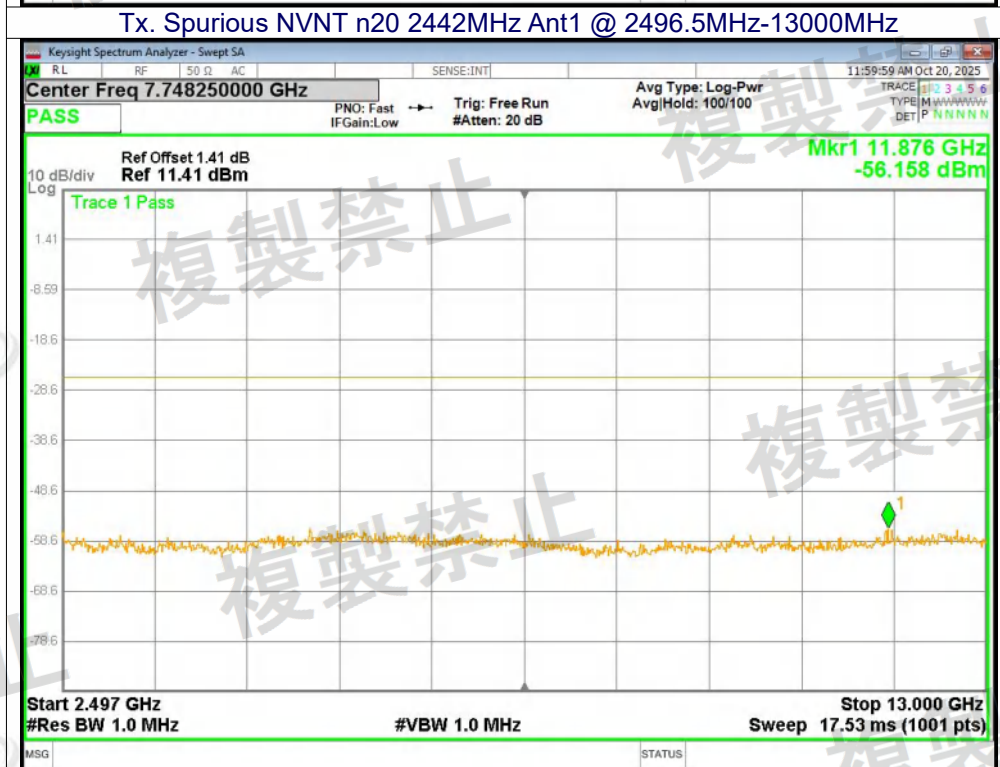
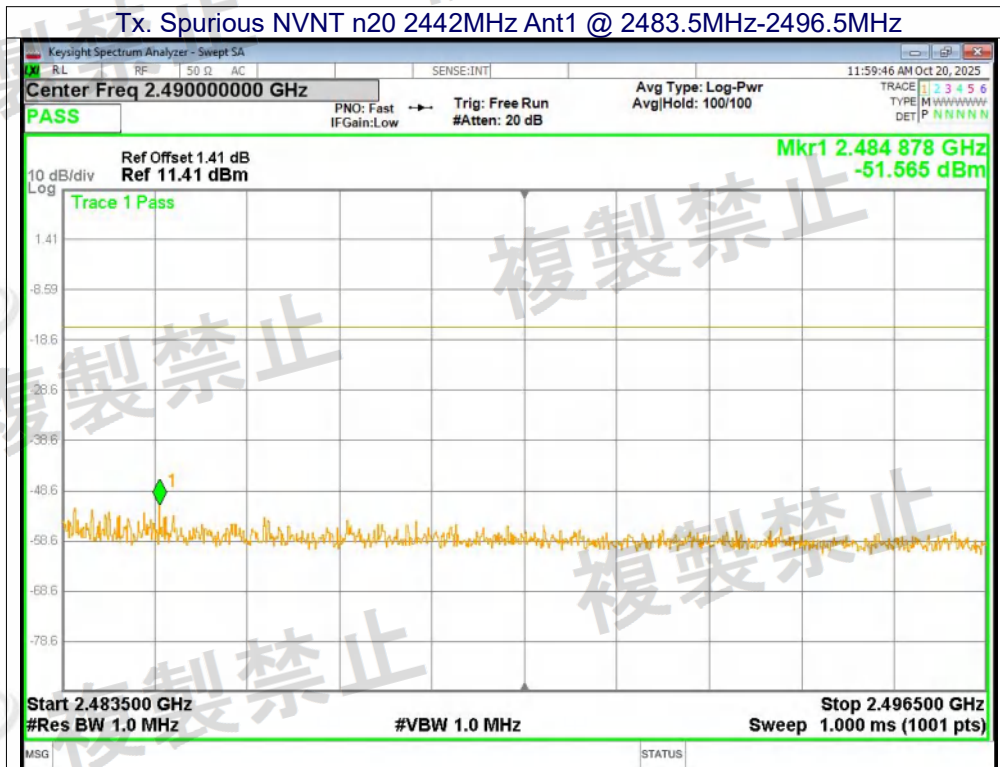
Tx. Spurious NVNT n20 2412MHz Ant1 @ 1000MHz-2387MHz



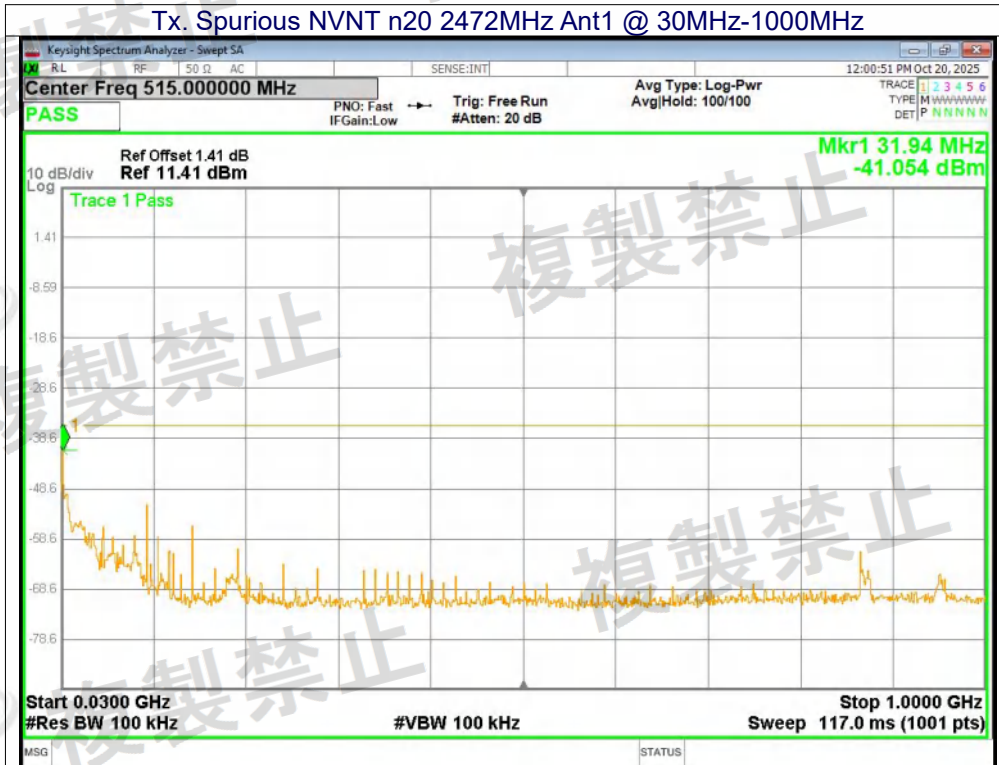




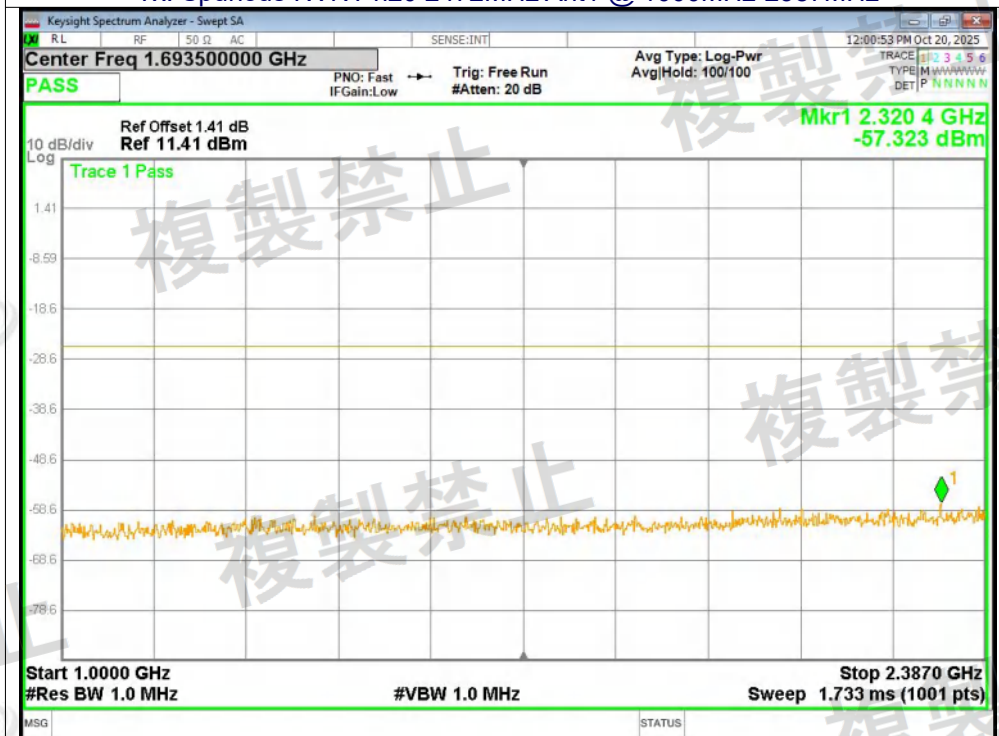


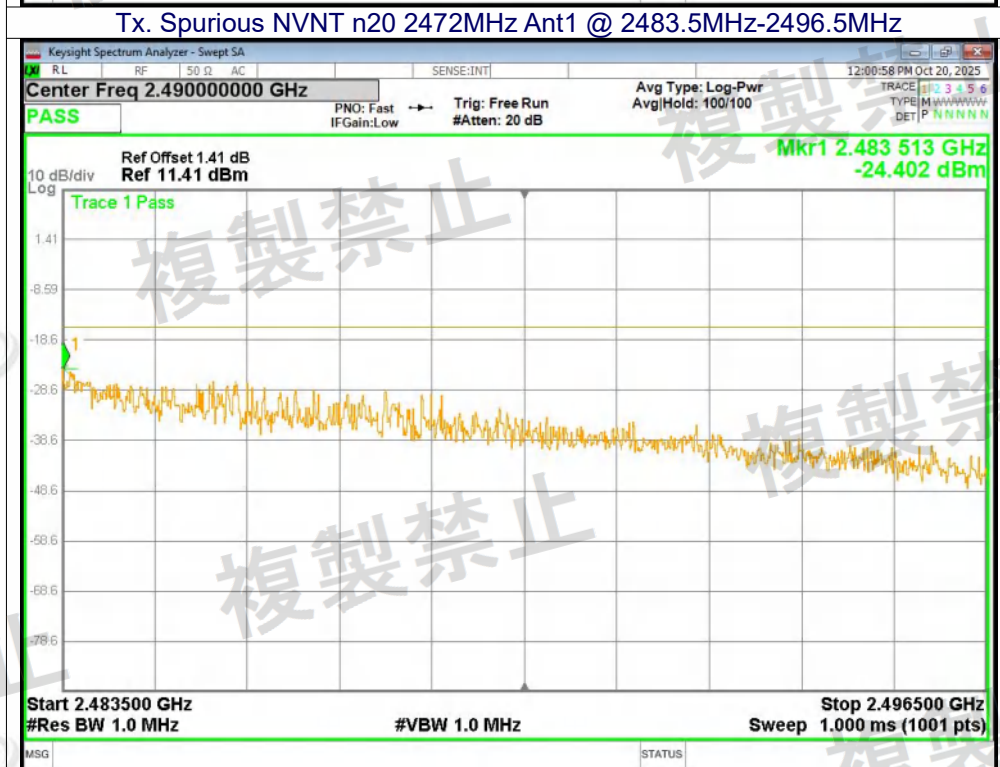
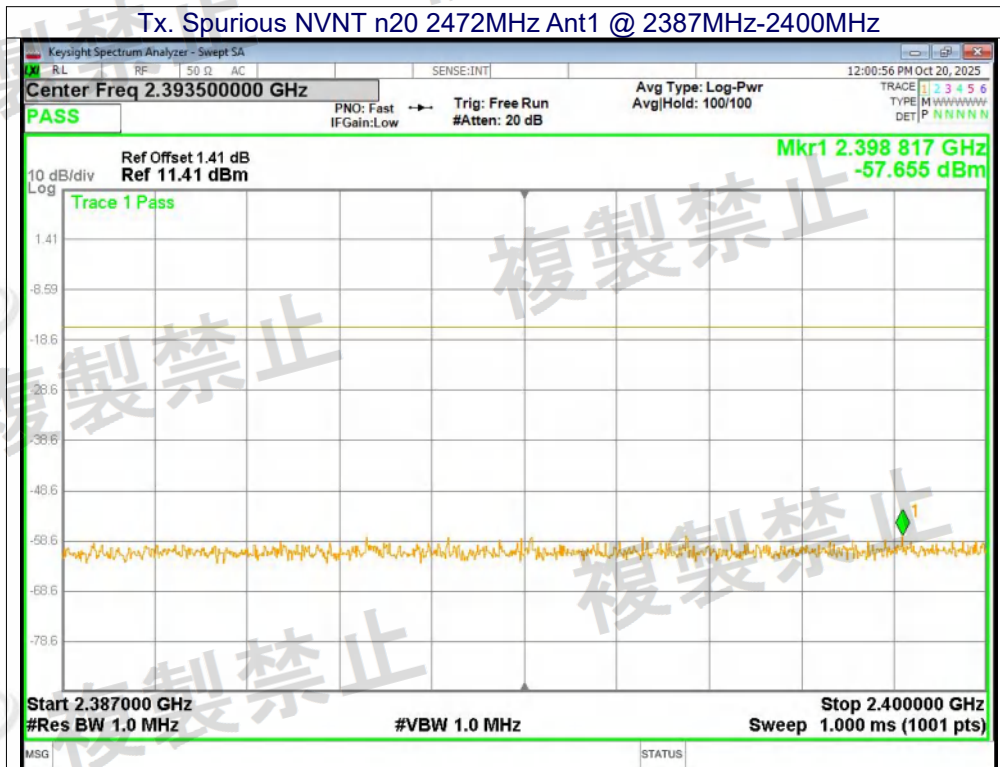


Tx. Spurious NVNT n20 2472MHz Ant1 @ 30MHz-1000MHz

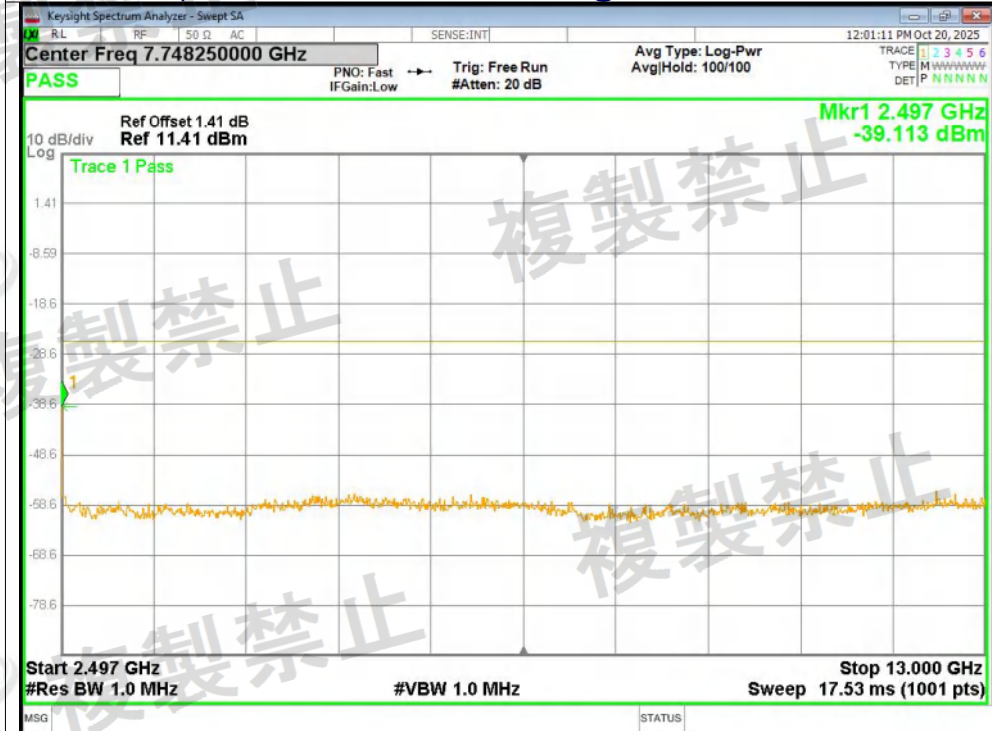


Tx. Spurious NVNT n20 2472MHz Ant1 @ 1000MHz-2387MHz

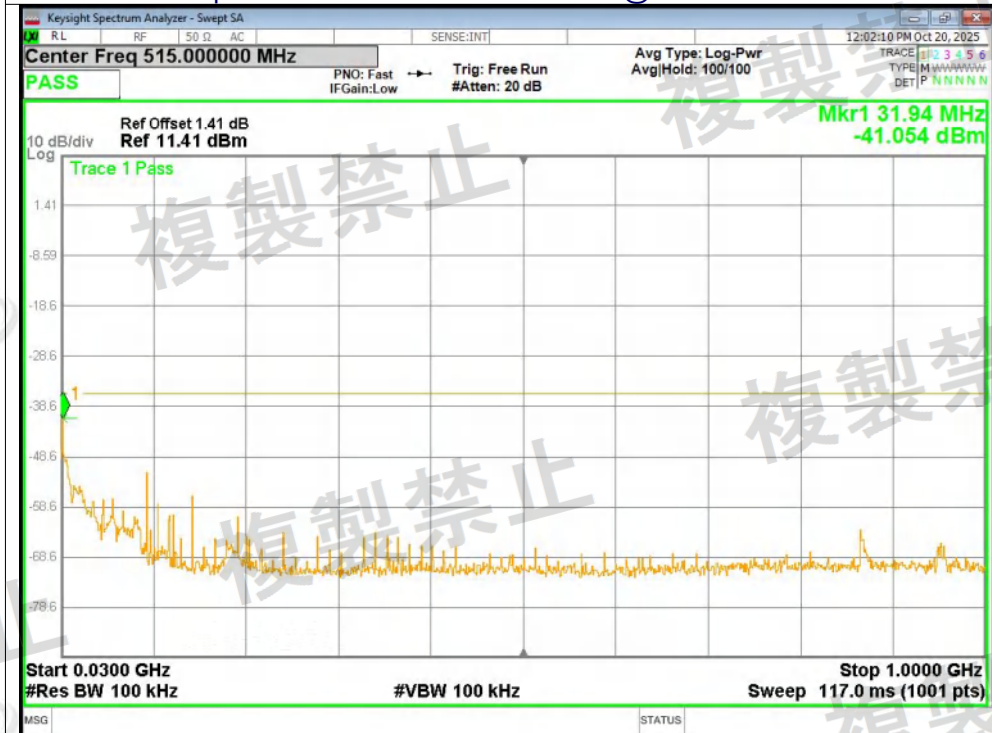


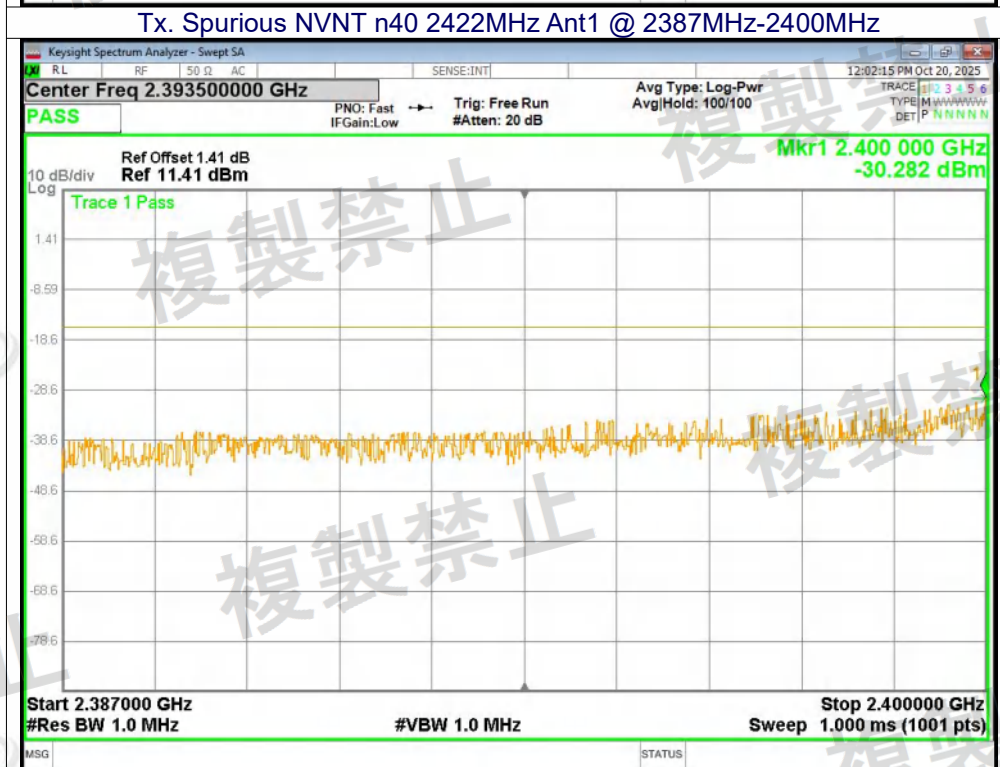
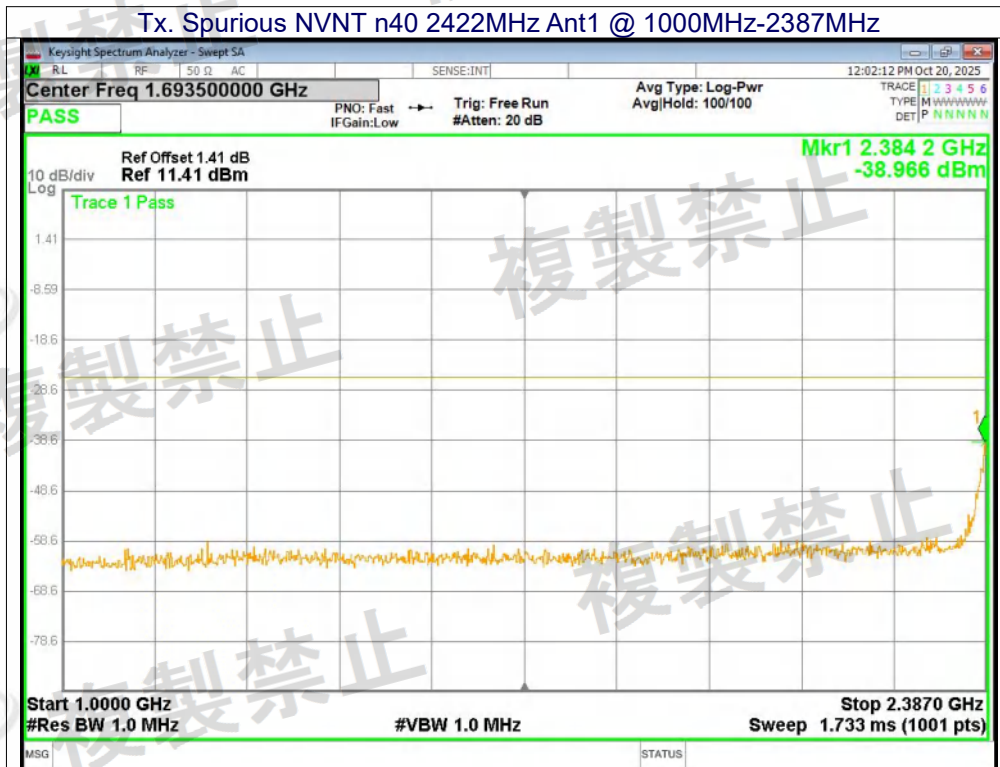


Tx. Spurious NVNT n20 2472MHz Ant1 @ 2496.5MHz-13000MHz

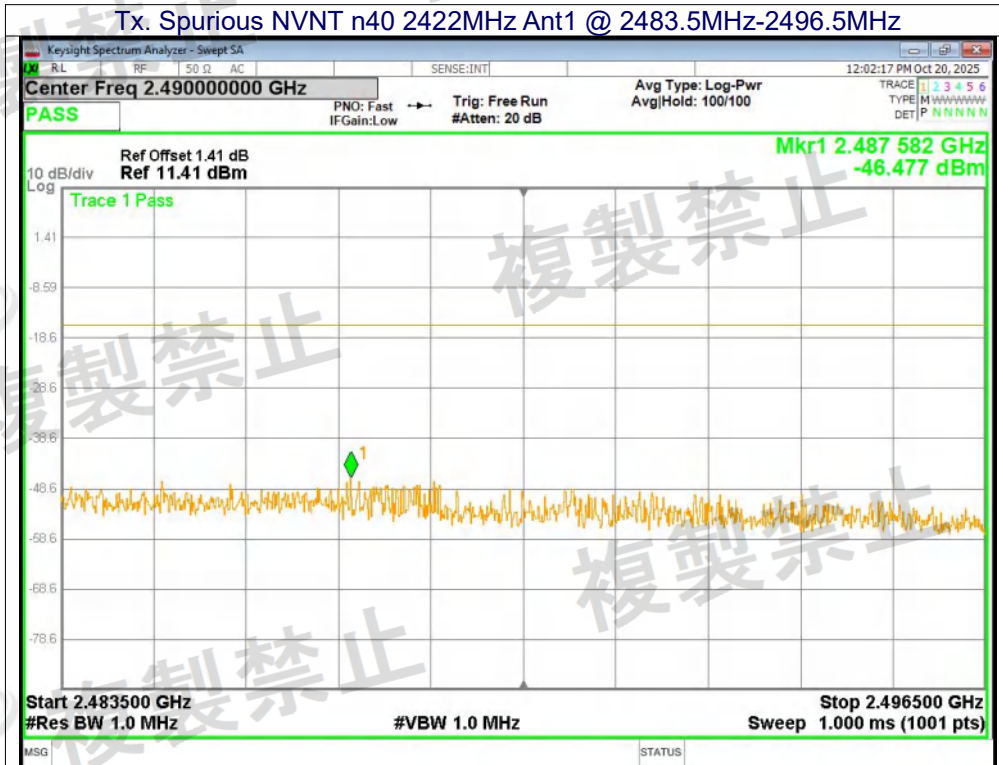


Tx. Spurious NVNT n40 2422MHz Ant1 @ 30MHz-1000MHz

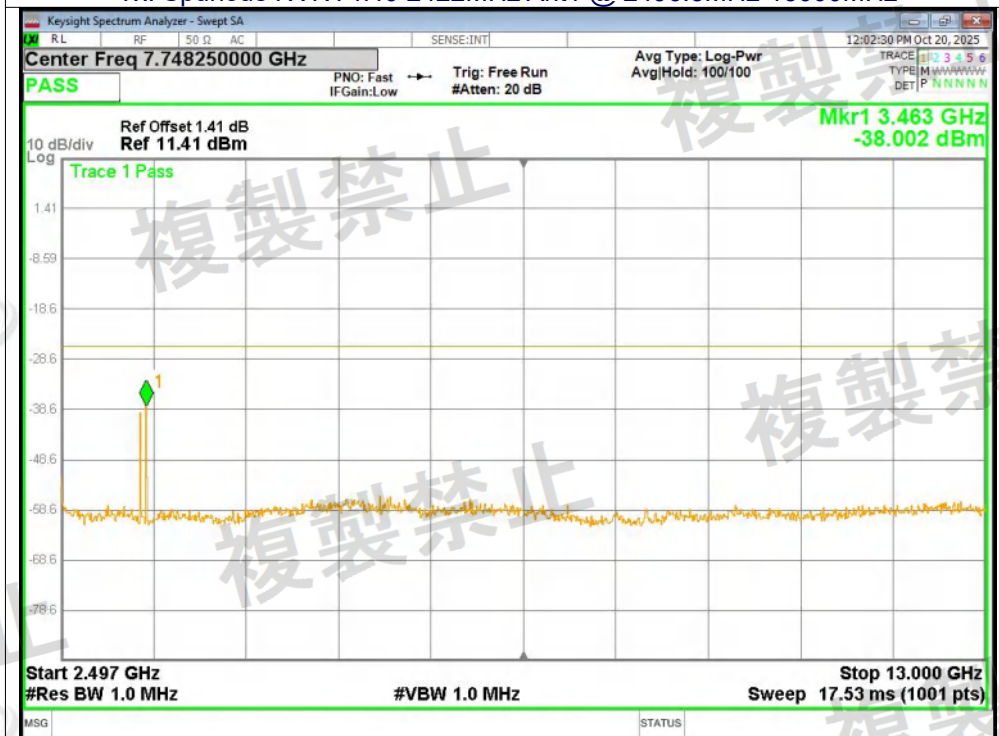




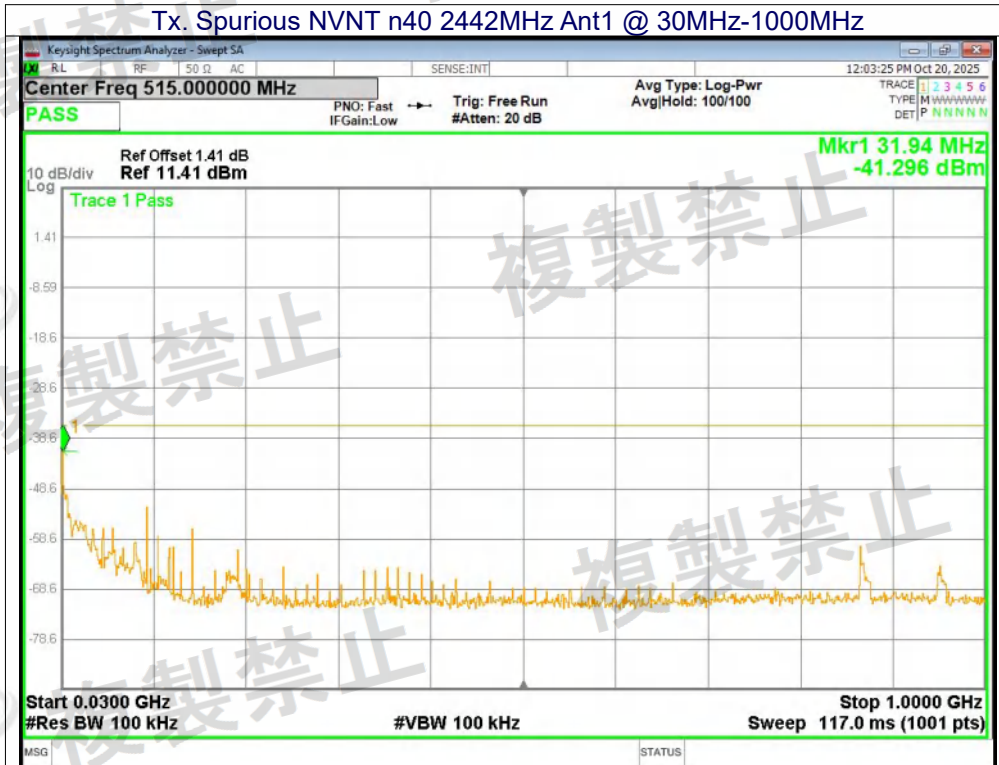
Tx. Spurious NVNT n40 2422MHz Ant1 @ 2483.5MHz-2496.5MHz



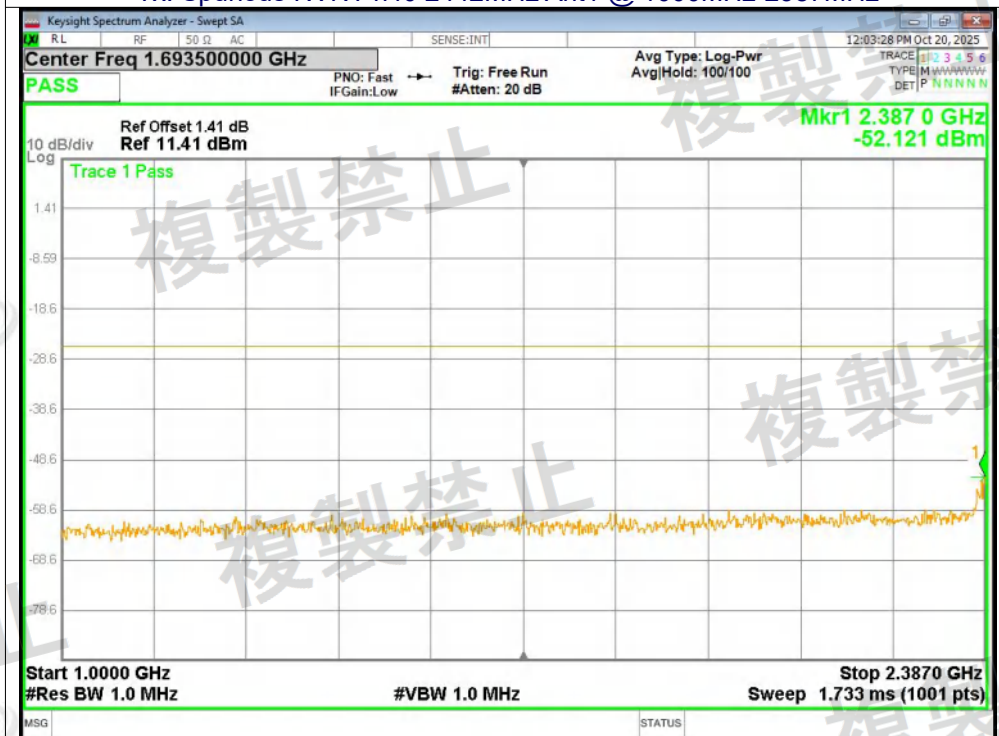
Tx. Spurious NVNT n40 2422MHz Ant1 @ 2496.5MHz-13000MHz



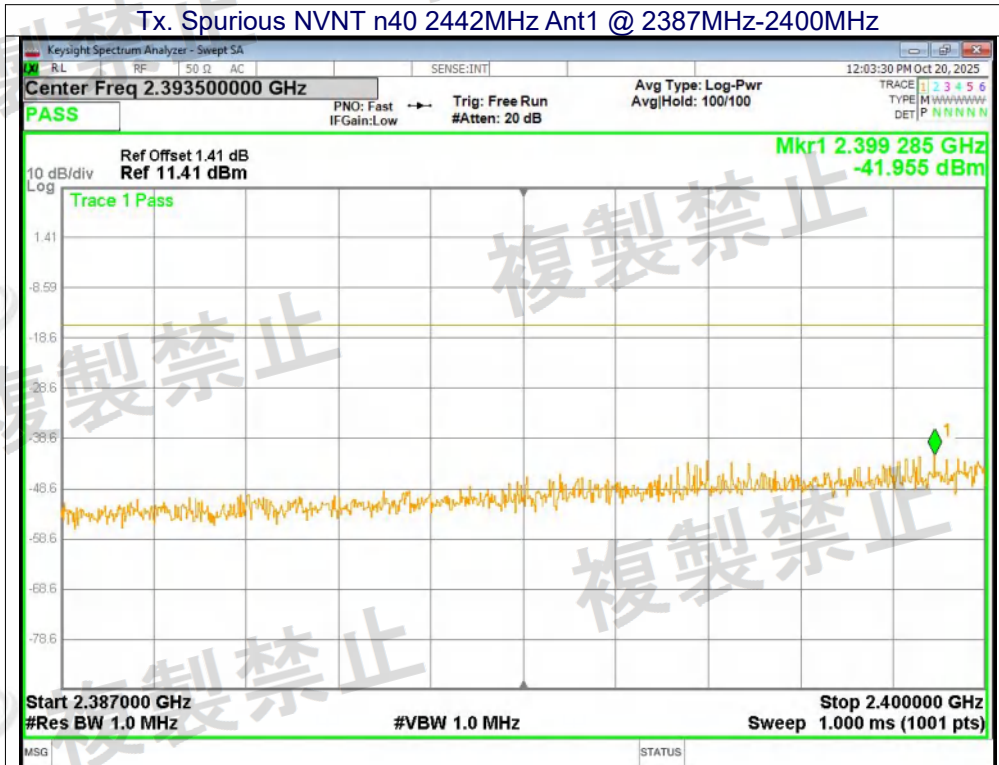
Tx. Spurious NVNT n40 2442MHz Ant1 @ 30MHz-1000MHz



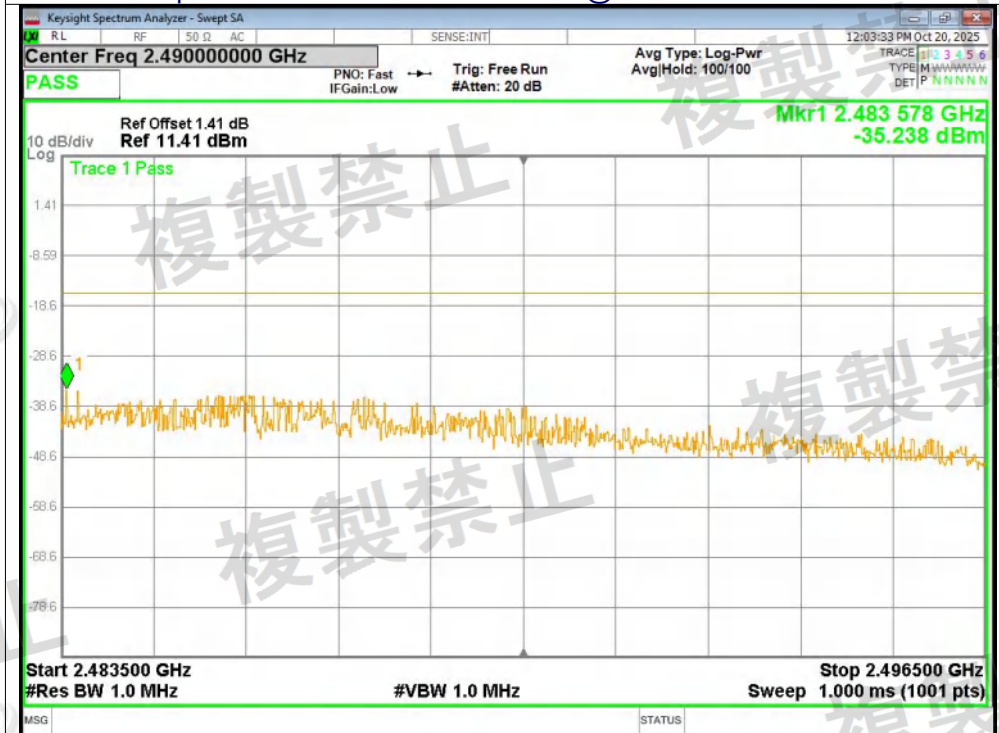
Tx. Spurious NVNT n40 2442MHz Ant1 @ 1000MHz-2387MHz



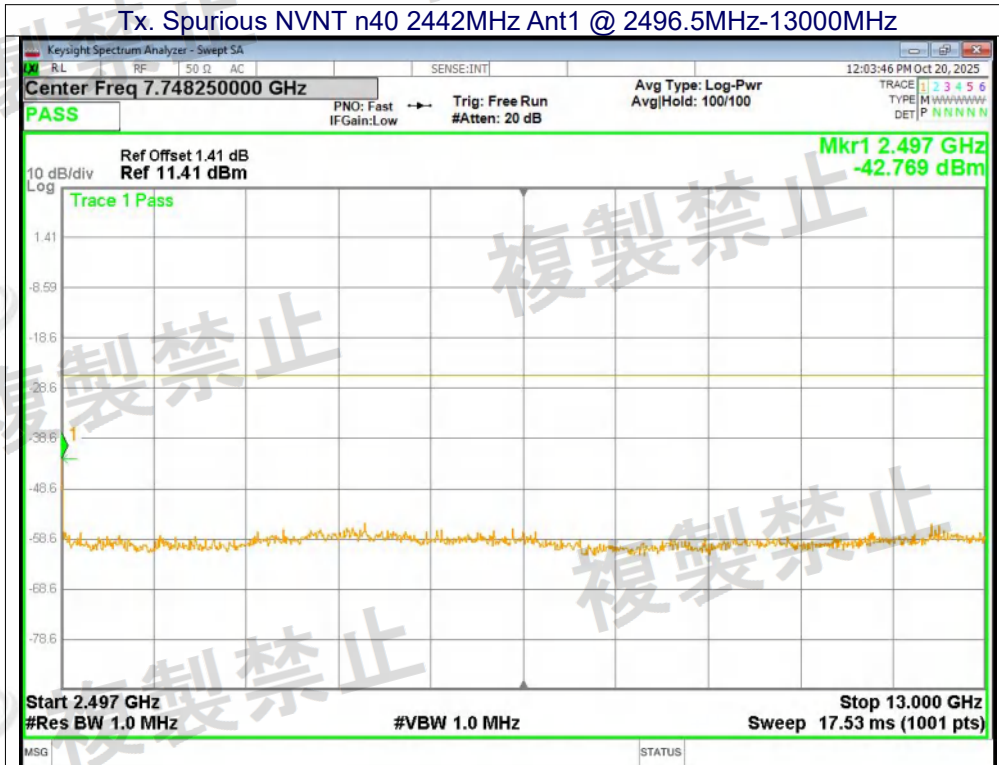
Tx. Spurious NVNT n40 2442MHz Ant1 @ 2387MHz-2400MHz



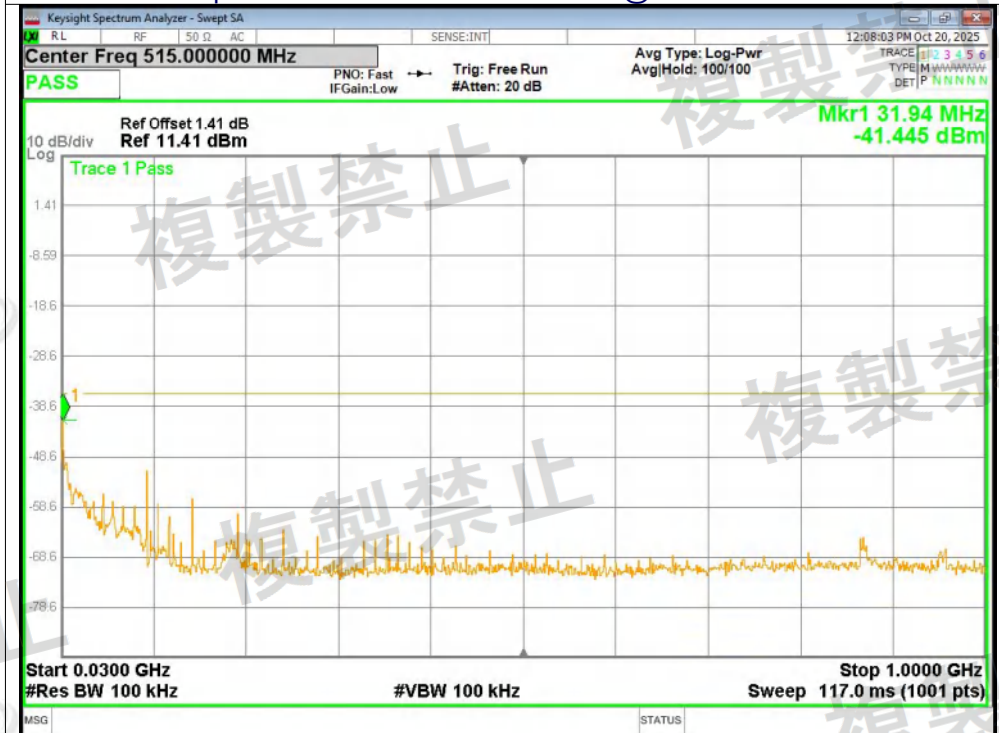
Tx. Spurious NVNT n40 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

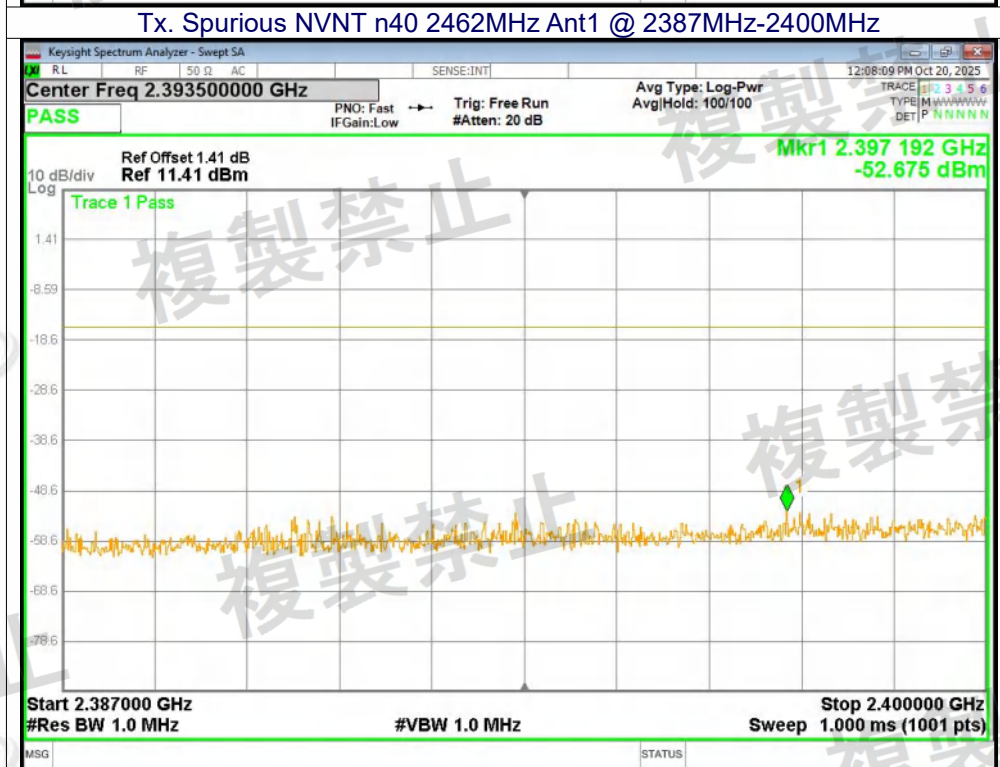
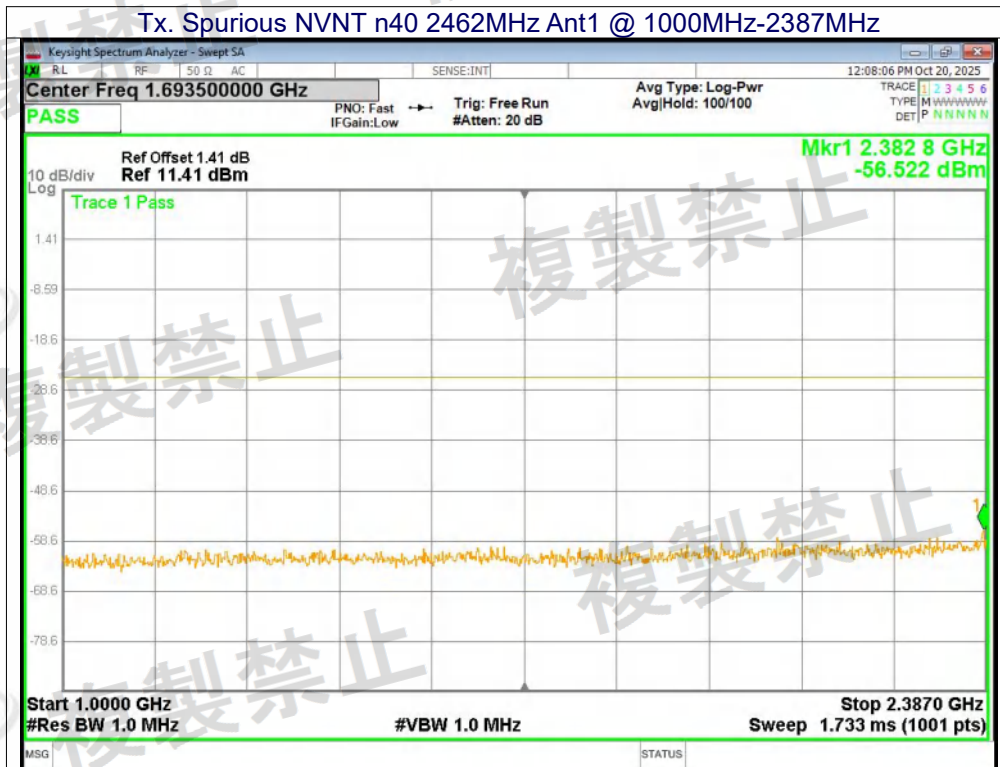


Tx. Spurious NVNT n40 2442MHz Ant1 @ 2496.5MHz-13000MHz

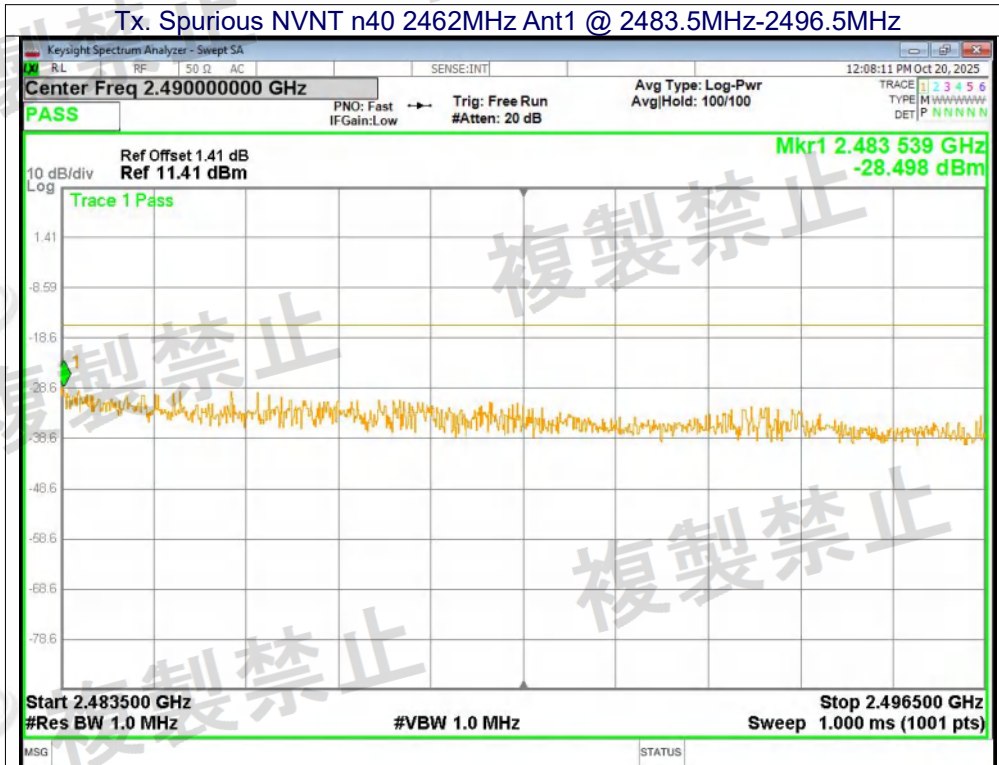


Tx. Spurious NVNT n40 2462MHz Ant1 @ 30MHz-1000MHz

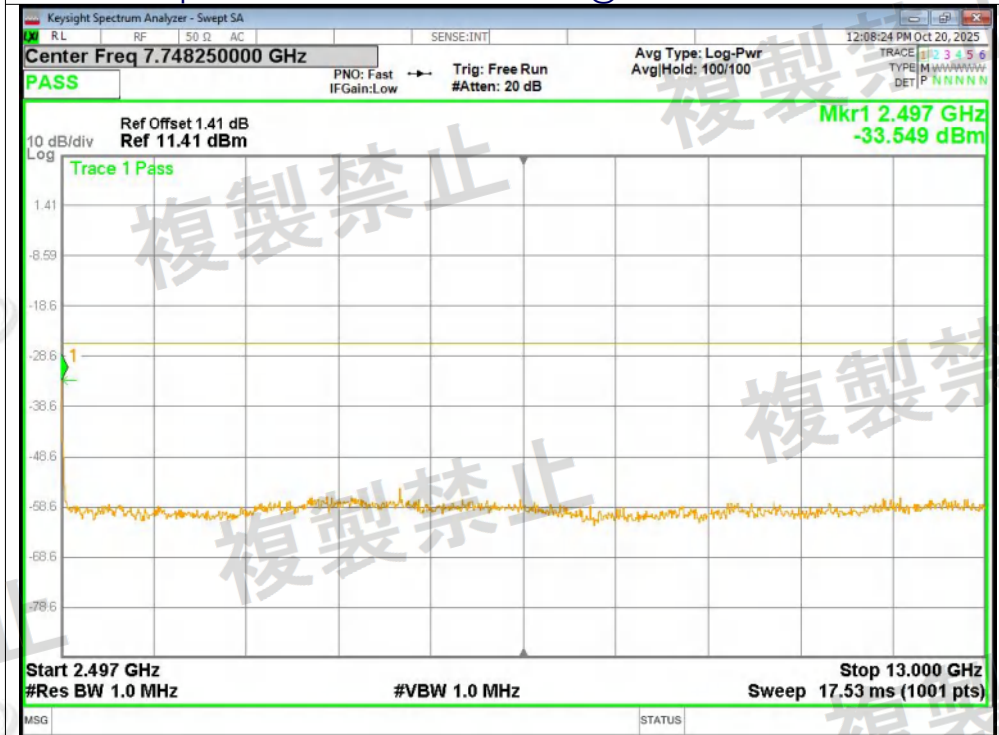




Tx. Spurious NVNT n40 2462MHz Ant1 @ 2483.5MHz-2496.5MHz



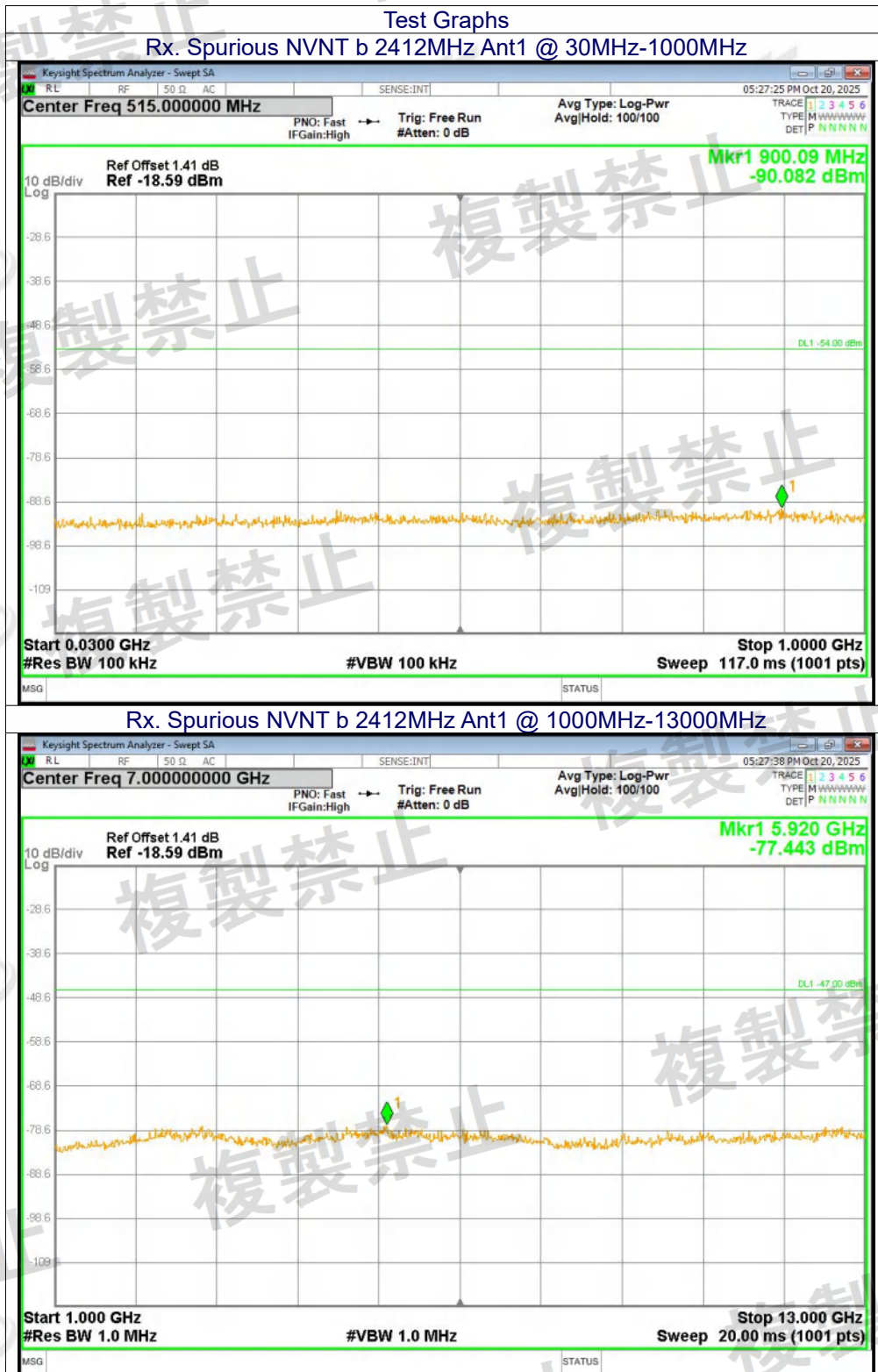
Tx. Spurious NVNT n40 2462MHz Ant1 @ 2496.5MHz-13000MHz



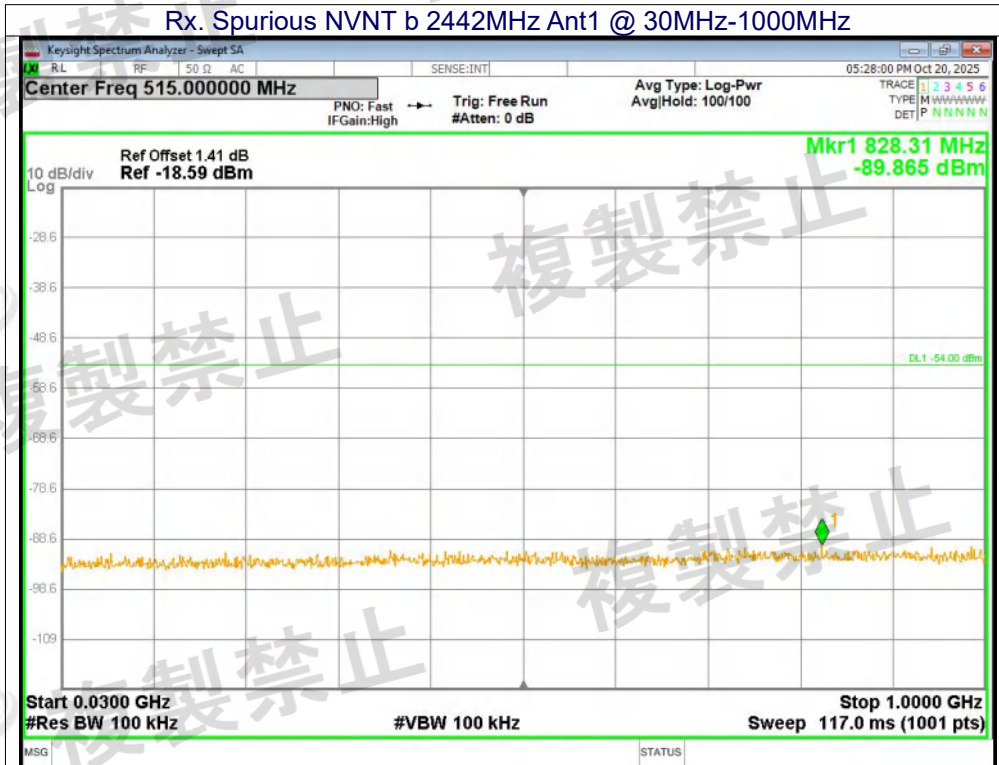


Rx Spurious Emission

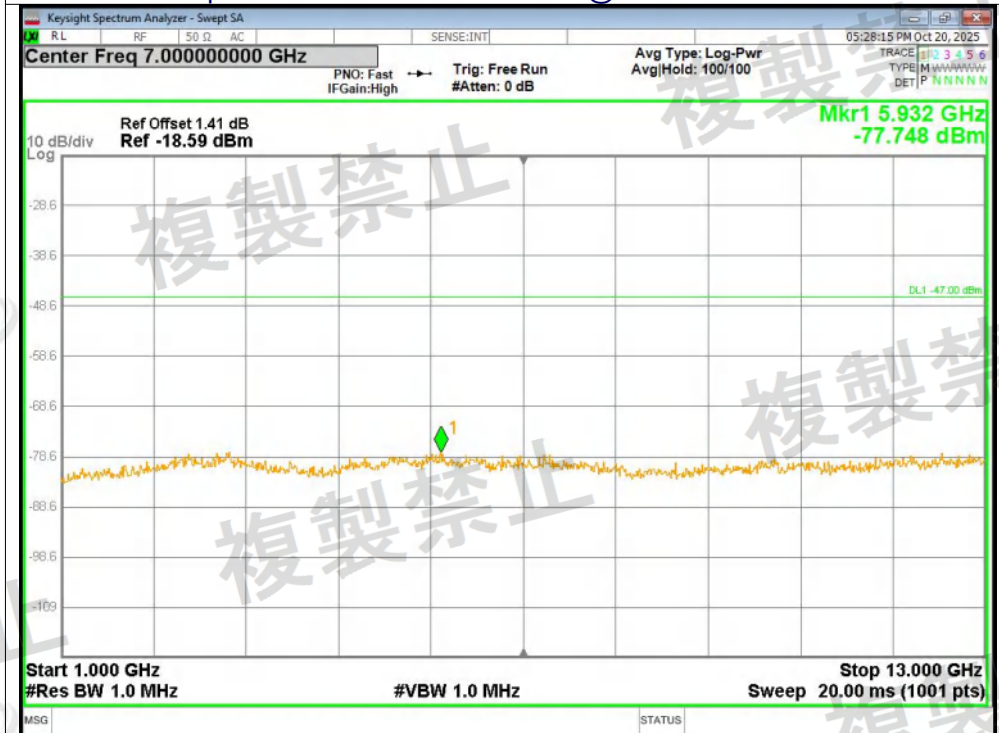
Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (nW)	Limit (dBm)	Limit (nW)	Verdict
b	2412	30-1000	900.09	-90.08	0.01	-54	4	Pass
b	2412	1000-13000	5920	-77.44	0.02	-47	20	Pass
b	2442	30-1000	828.31	-89.87	0.01	-54	4	Pass
b	2442	1000-13000	5932	-77.75	0.02	-47	20	Pass
b	2472	30-1000	403.45	-89.97	0.01	-54	4	Pass
b	2472	1000-13000	12604	-77.67	0.02	-47	20	Pass
g	2412	30-1000	428.67	-88.79	0.01	-54	4	Pass
g	2412	1000-13000	4984	-77.32	0.02	-47	20	Pass
g	2442	30-1000	907.85	-89.51	0.01	-54	4	Pass
g	2442	1000-13000	5968	-76.76	0.02	-47	20	Pass
g	2472	30-1000	835.1	-90.03	0.01	-54	4	Pass
g	2472	1000-13000	5392	-77.7	0.02	-47	20	Pass
n20	2412	30-1000	738.1	-90.35	0.01	-54	4	Pass
n20	2412	1000-13000	3148	-77.29	0.02	-47	20	Pass
n20	2442	30-1000	864.2	-90.06	0.01	-54	4	Pass
n20	2442	1000-13000	11680	-77.5	0.02	-47	20	Pass
n20	2472	30-1000	822.49	-90.28	0.01	-54	4	Pass
n20	2472	1000-13000	5416	-77.01	0.02	-47	20	Pass
n40	2422	30-1000	798.24	-89.77	0.01	-54	4	Pass
n40	2422	1000-13000	3160	-77.48	0.02	-47	20	Pass
n40	2442	30-1000	822.49	-89.47	0.01	-54	4	Pass
n40	2442	1000-13000	2680	-77.5	0.02	-47	20	Pass
n40	2462	30-1000	879.72	-89.64	0.01	-54	4	Pass
n40	2462	1000-13000	5728	-77.58	0.02	-47	20	Pass

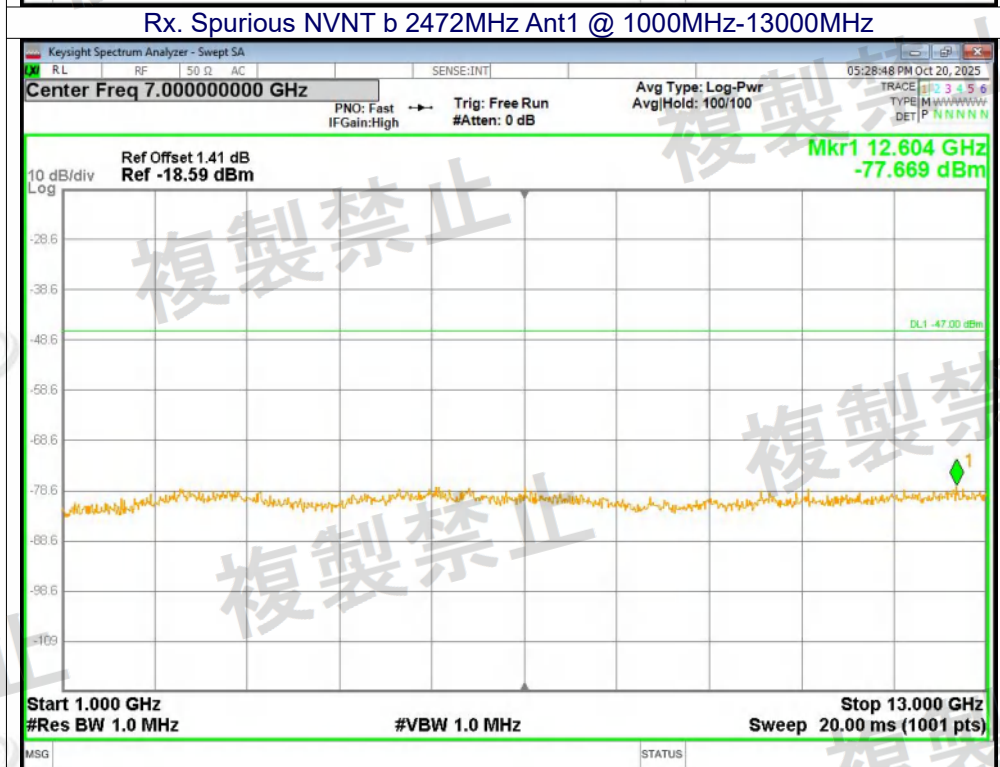
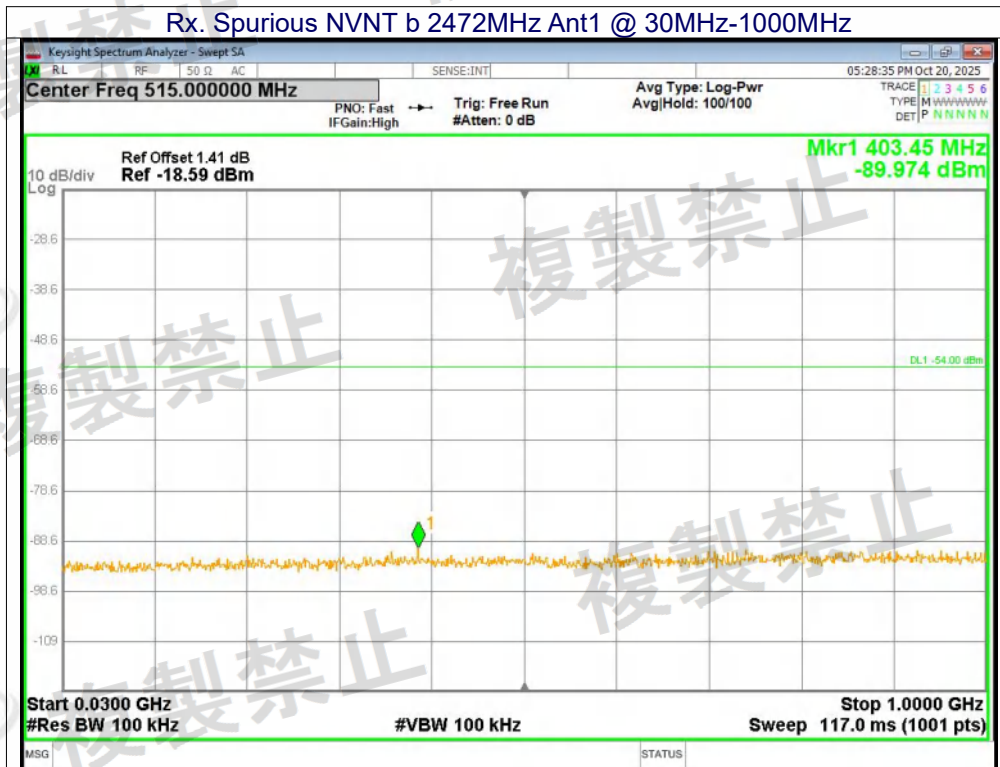


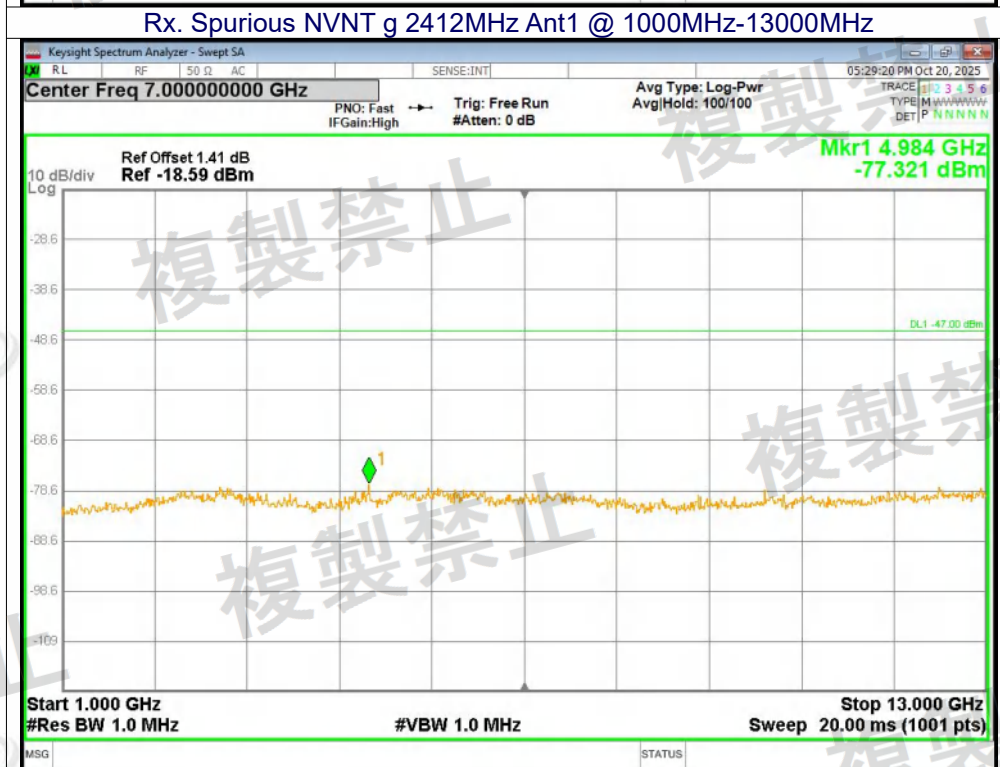
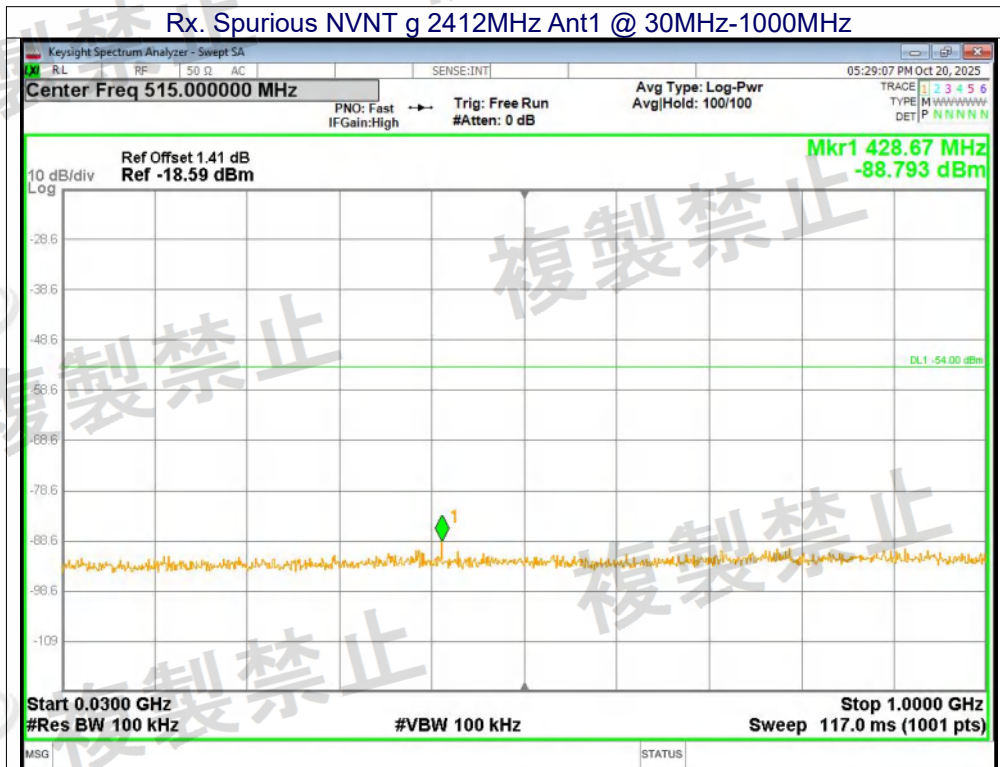
Rx. Spurious NVNT b 2442MHz Ant1 @ 30MHz-1000MHz

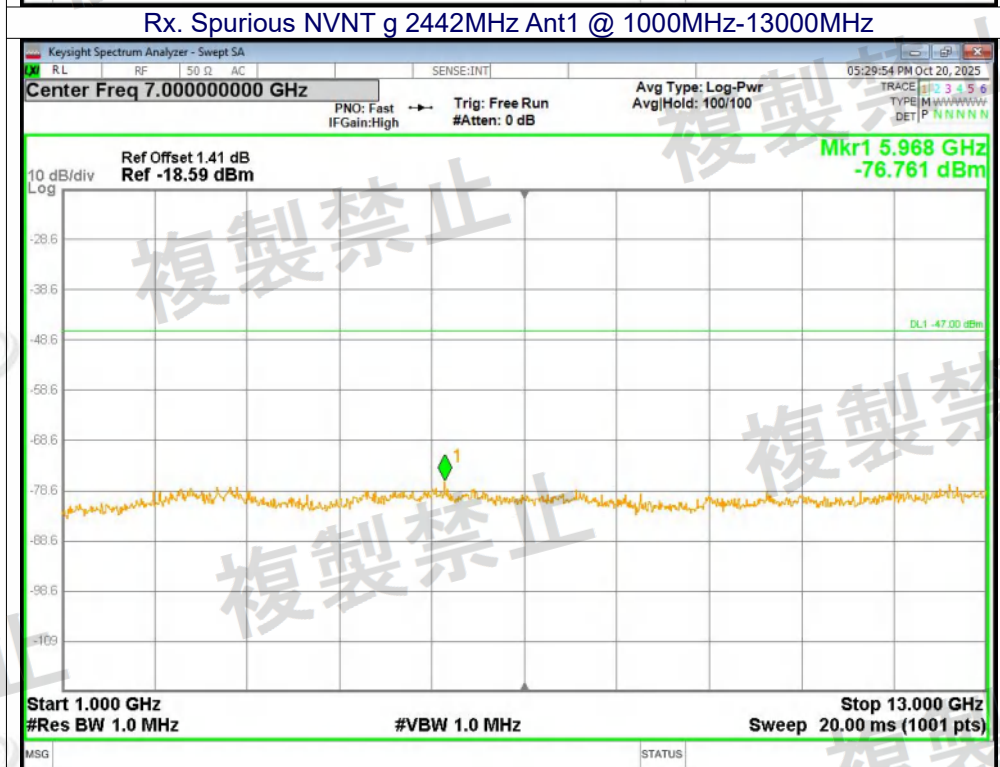
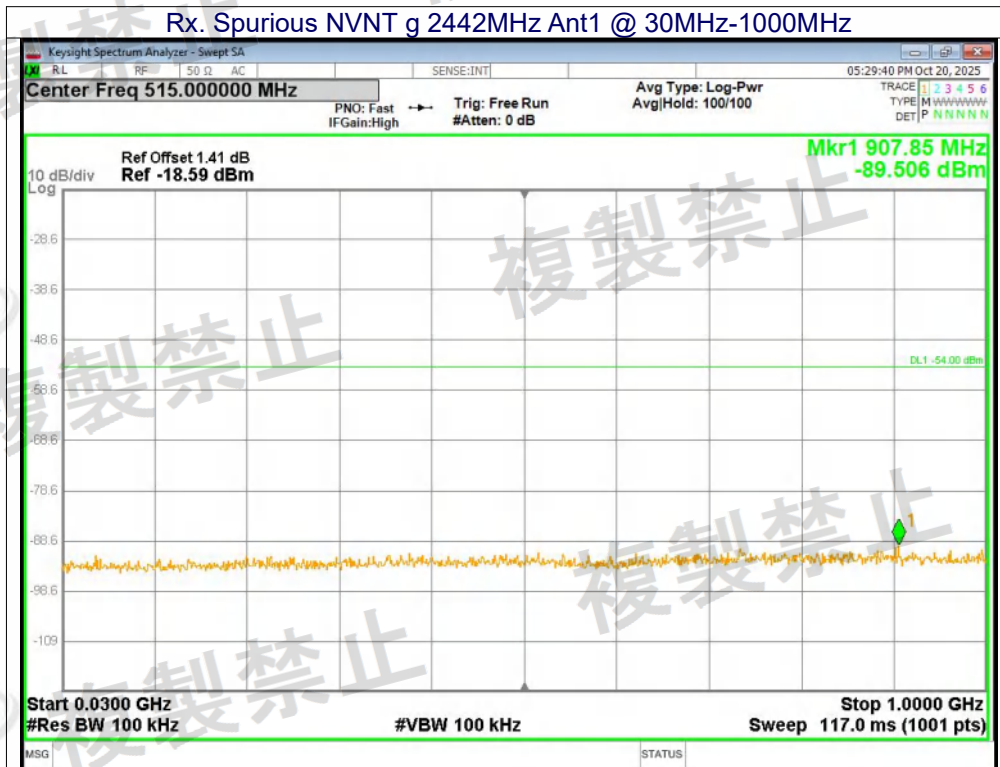


Rx. Spurious NVNT b 2442MHz Ant1 @ 1000MHz-13000MHz

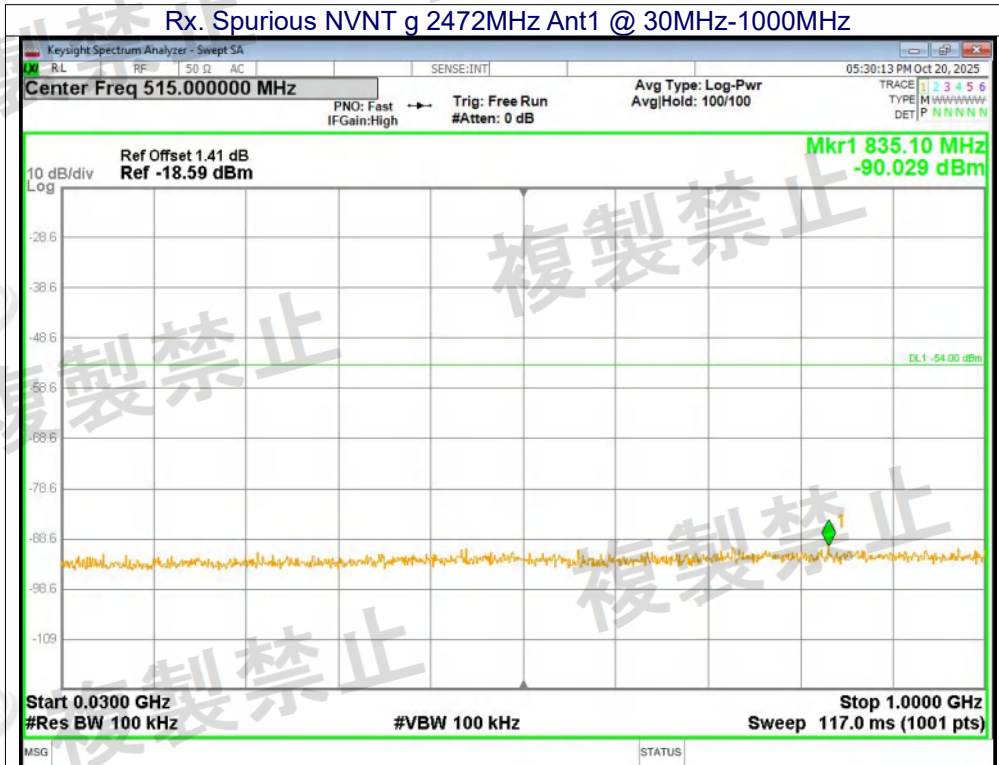




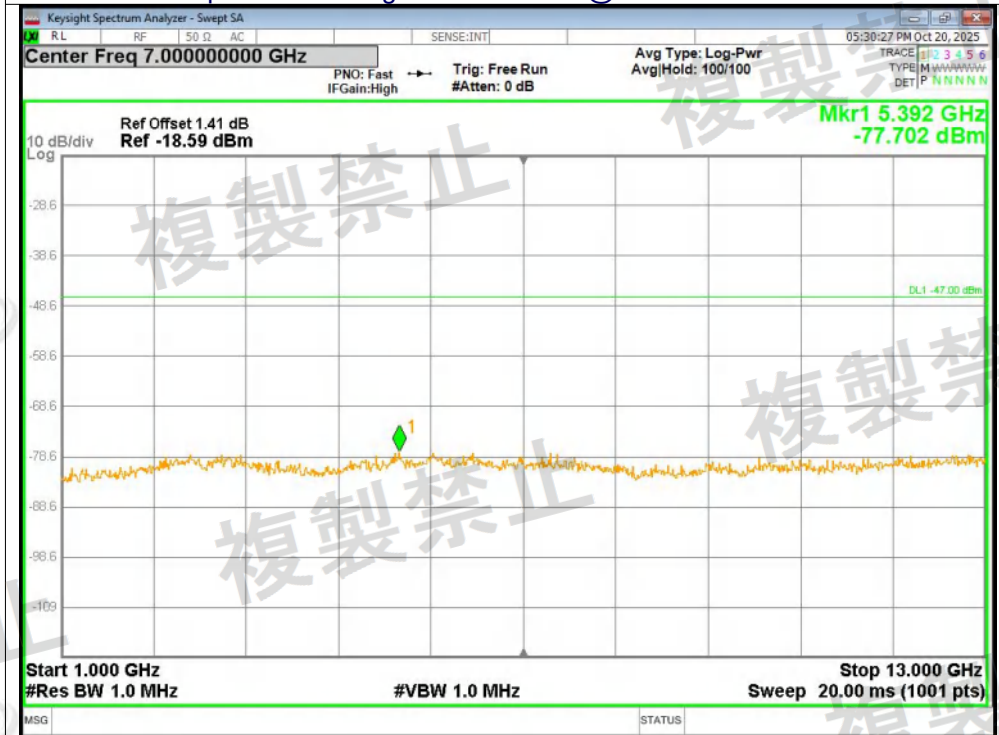


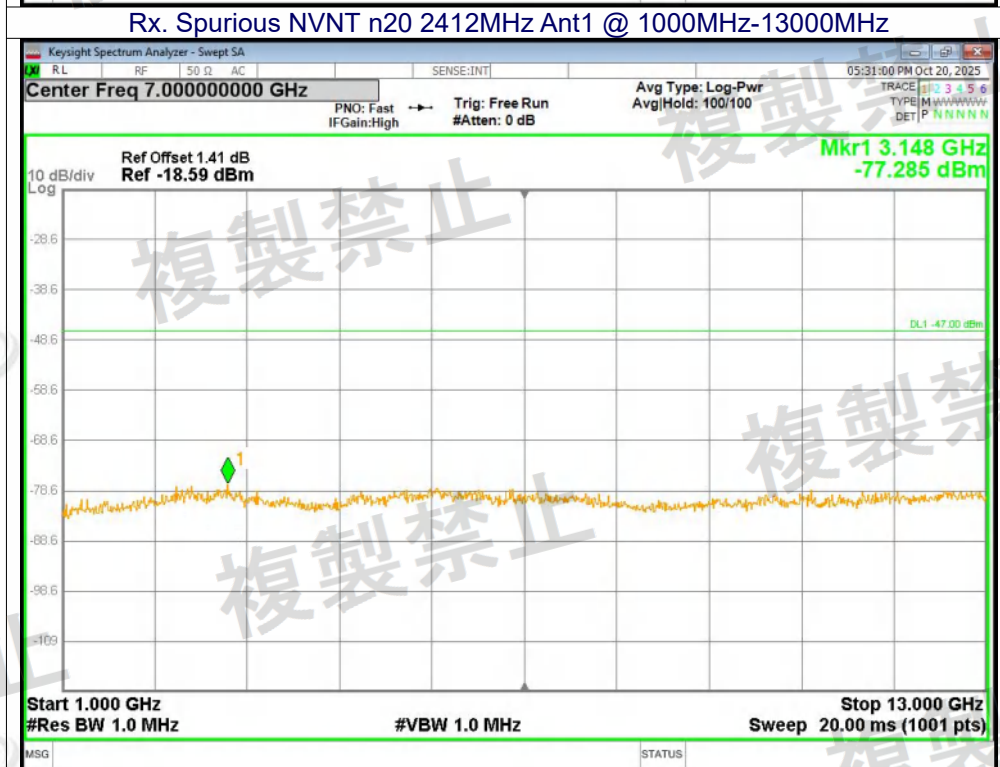
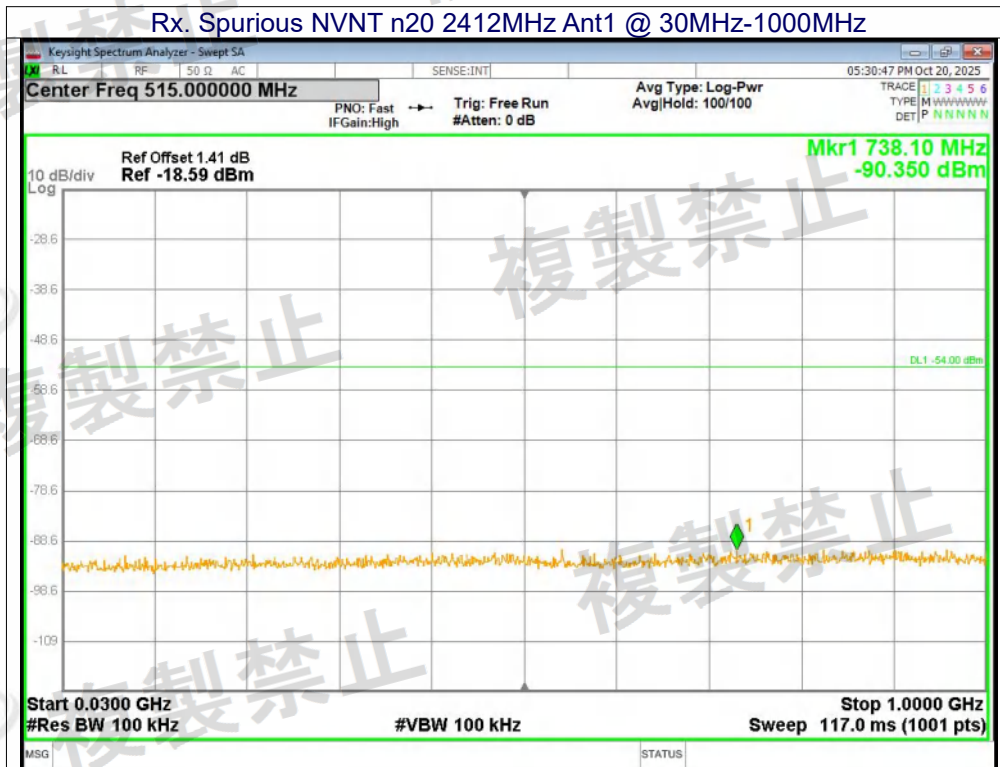


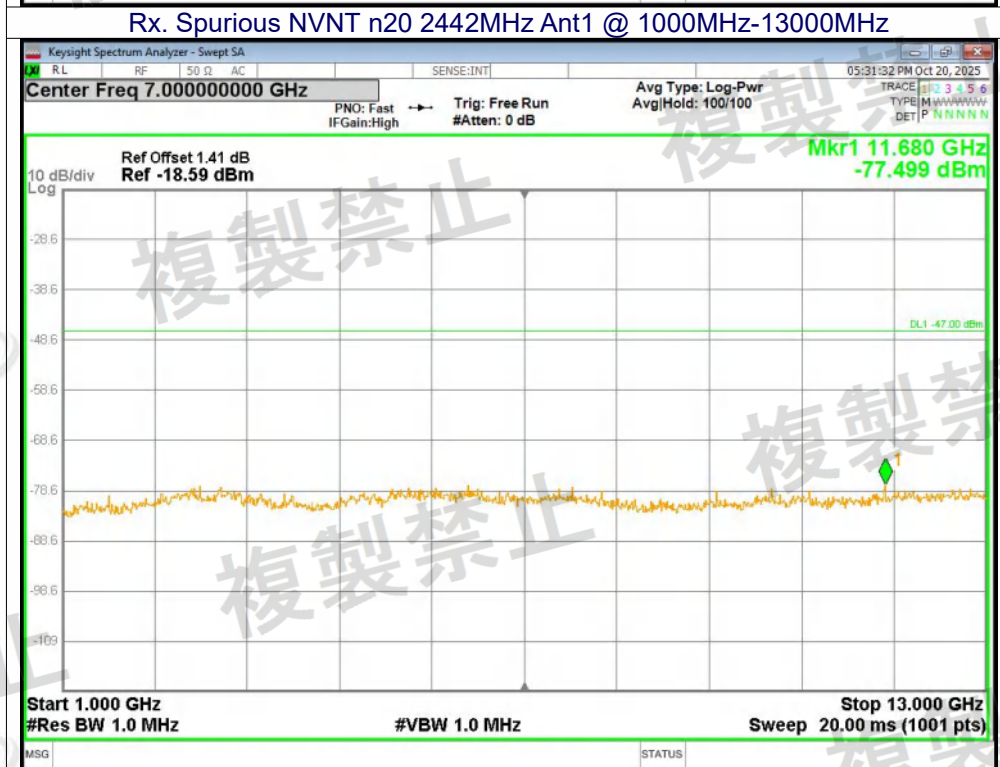
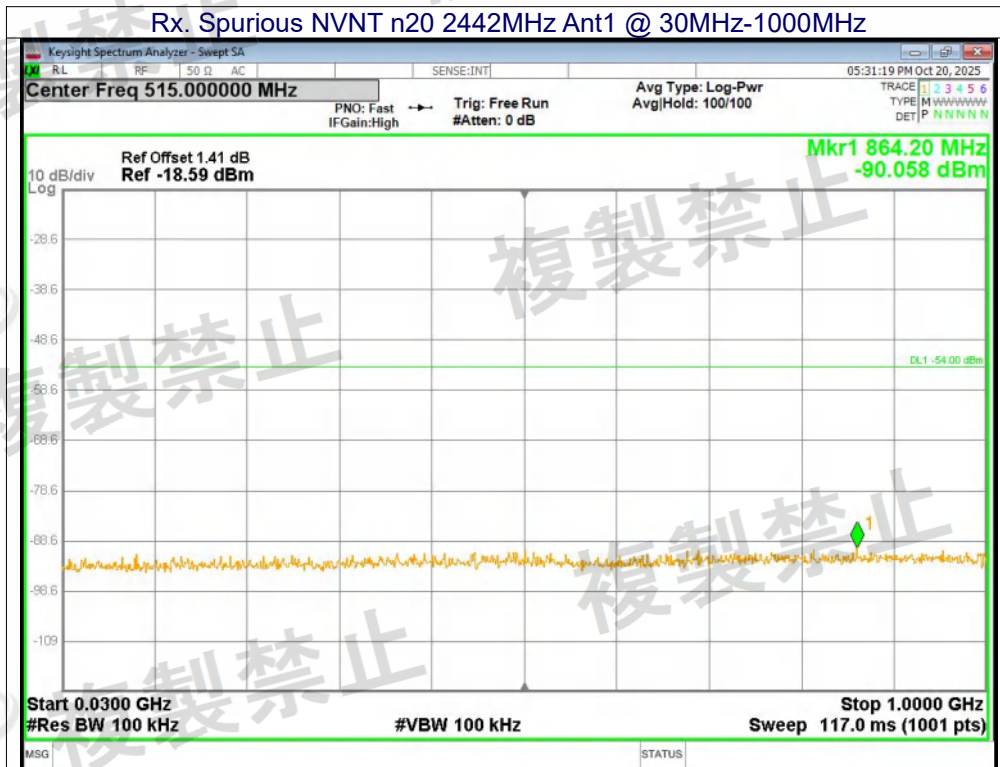
Rx. Spurious NVNT g 2472MHz Ant1 @ 30MHz-1000MHz

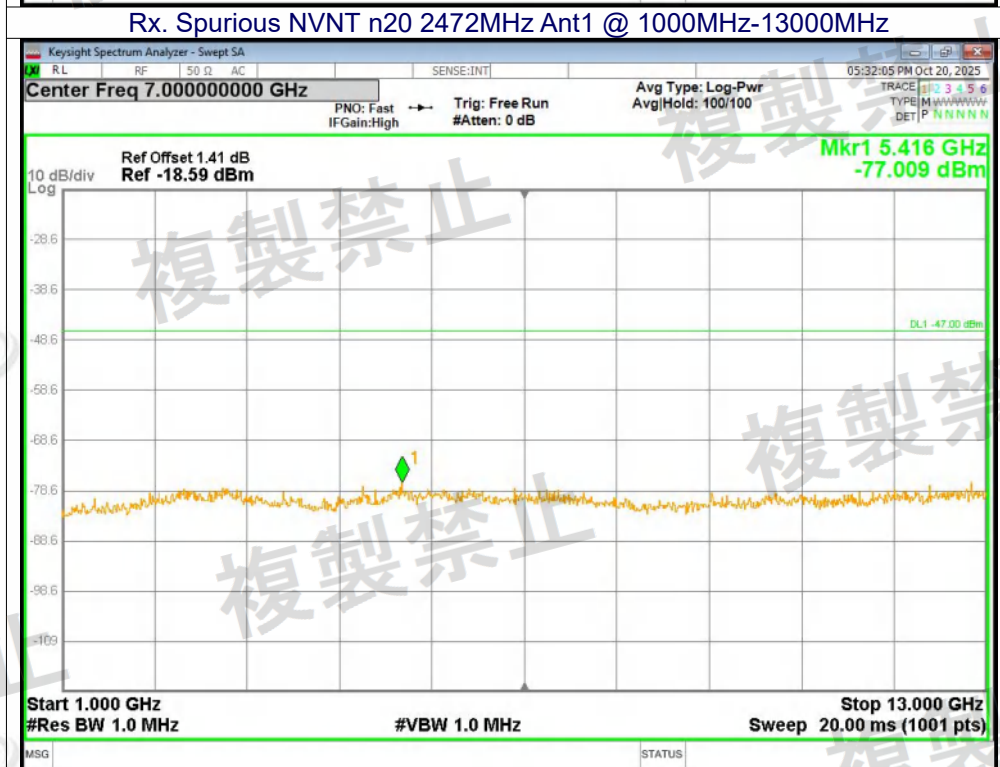
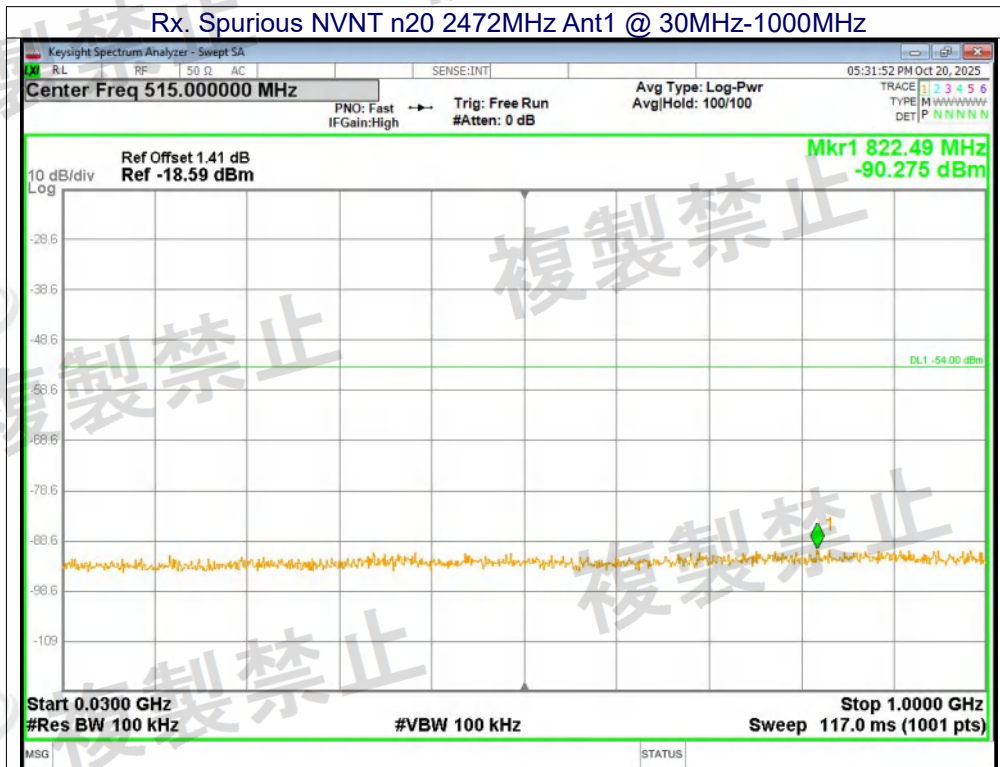


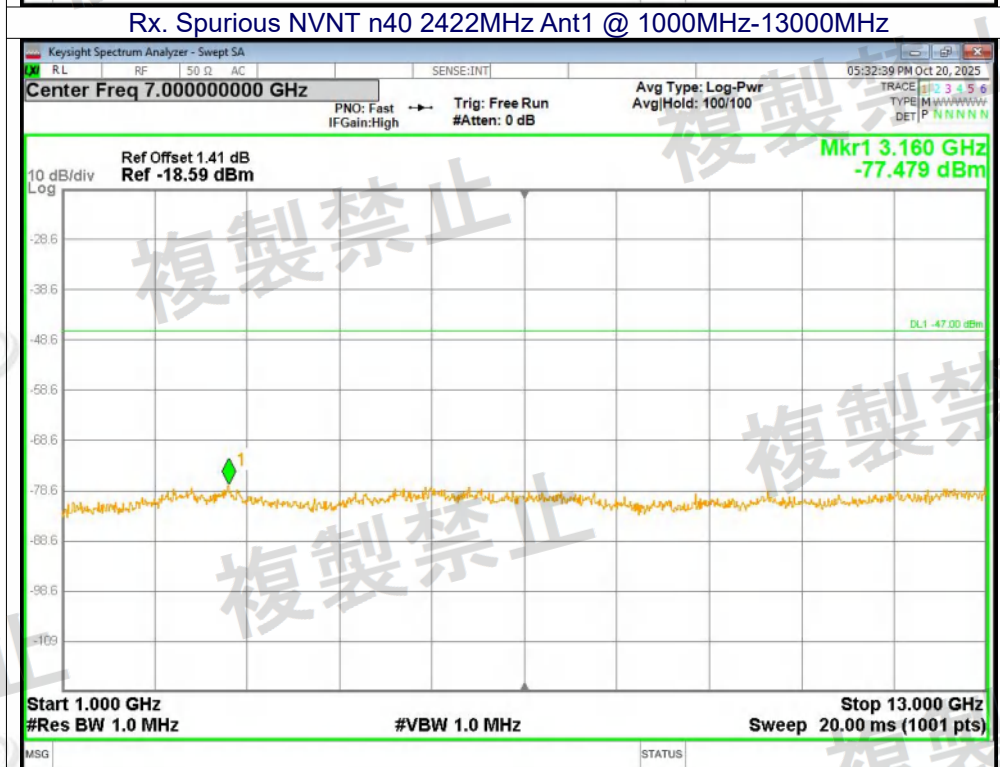
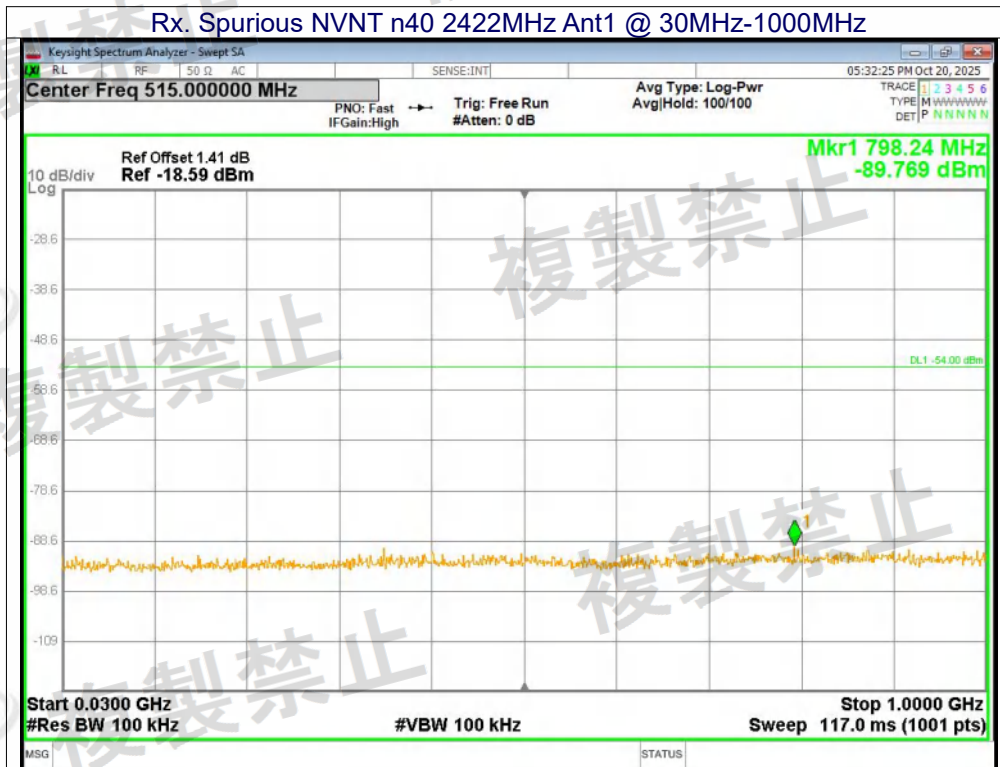
Rx. Spurious NVNT g 2472MHz Ant1 @ 1000MHz-13000MHz

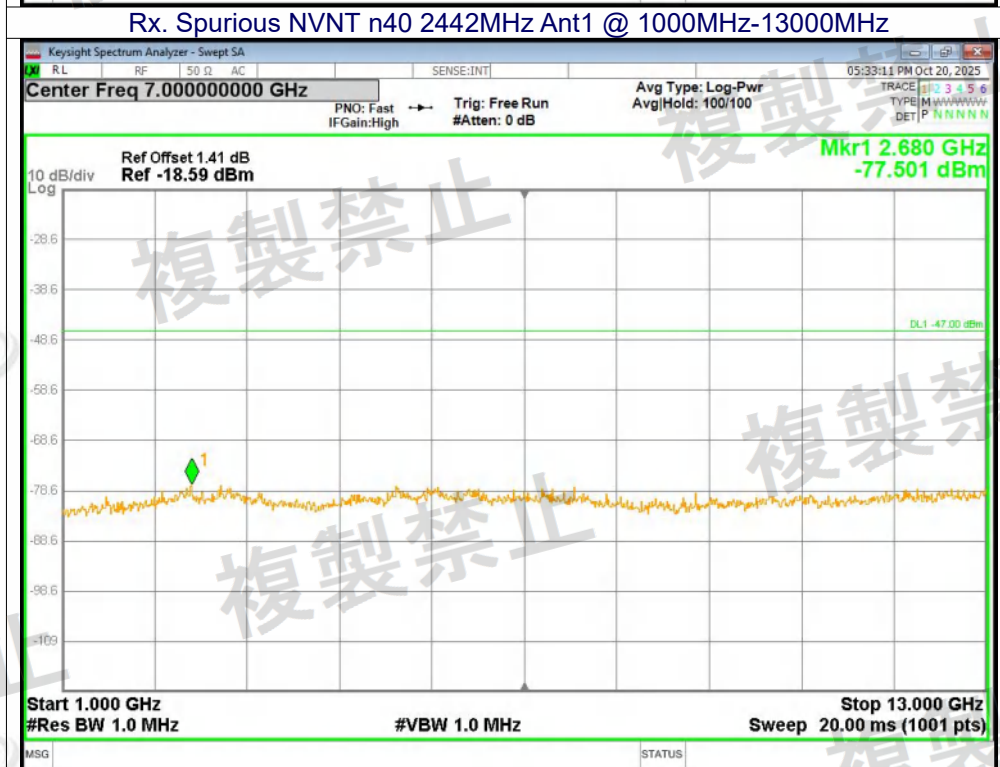
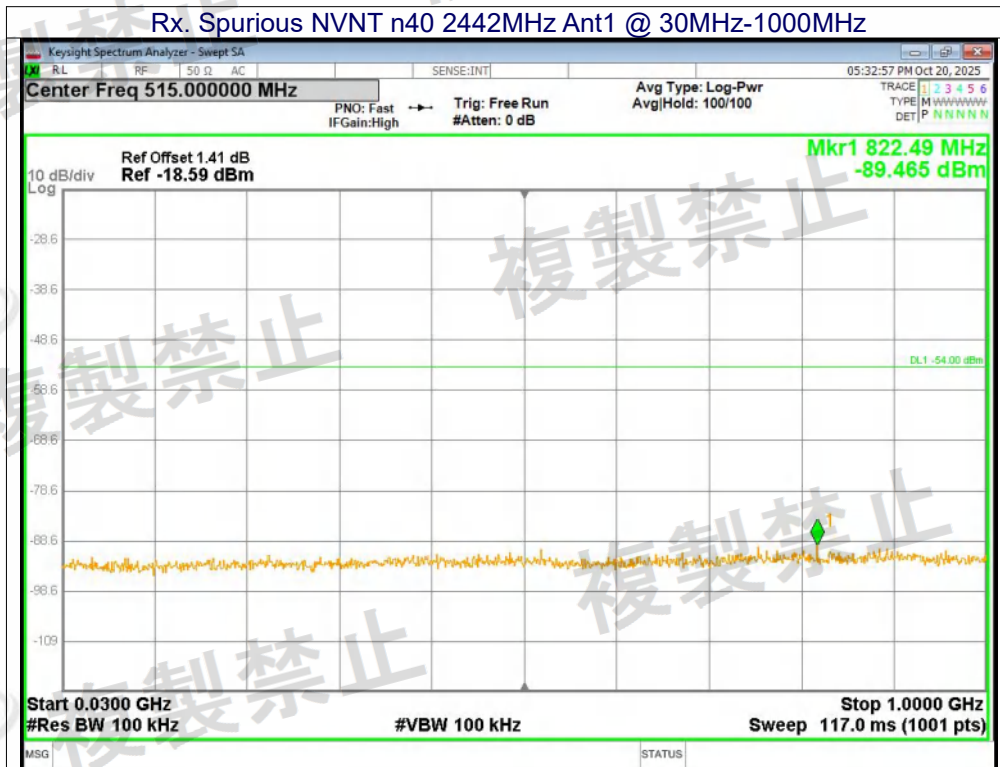


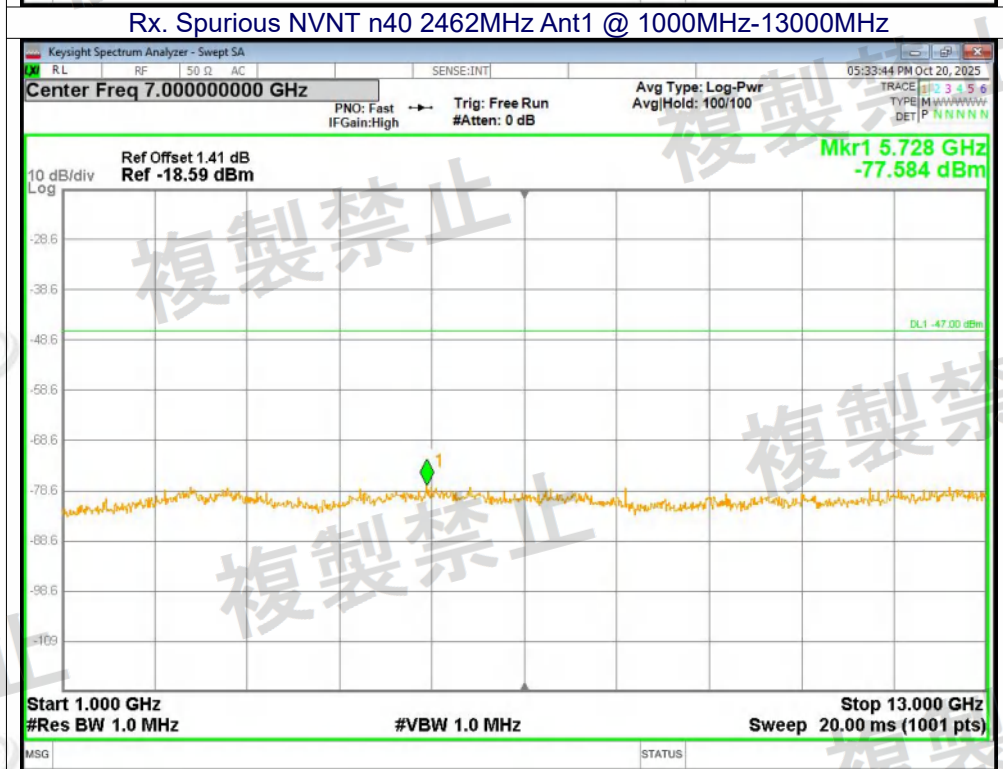
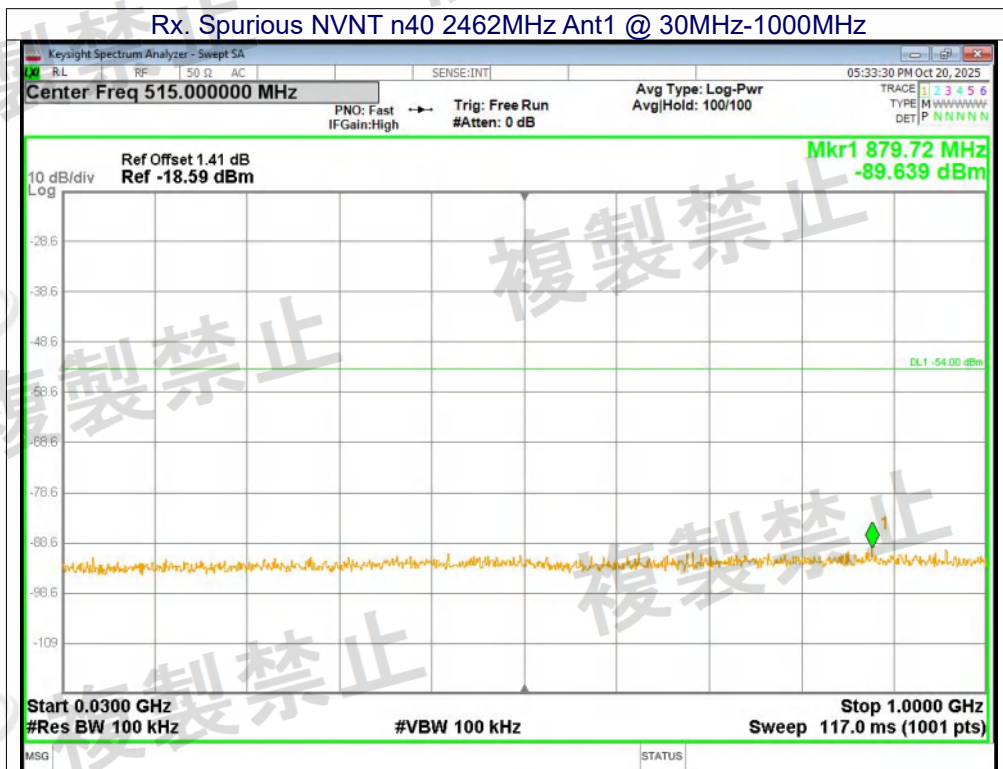












***** END OF REPORT *****