



RF TEST REPORT

Product Name: Refrigerator(Mini-bar)

Model Name: C32B-1

Issued For : BARTECH SYSTEMS INTERNATIONAL INC.

6000 S. Eastern Ave., Ste 12C, Las Vegas, NV 89119, USA

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
District, Shenzhen, Guangdong, China

Report Number: LGT24C043RF01

Sample Received Date: Mar. 12, 2024

Date of Test: Mar. 12, 2024 – Mar. 28, 2024

Date of Issue: Jan 20, 2025

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TEST REPORT CERTIFICATION

Applicant: BARTECH SYSTEMS INTERNATIONAL INC.
Address: 6000 S. Eastern Ave., Ste 12C, Las Vegas, NV 89119, USA
Manufacturer: BARTECH SYSTEMS INTERNATIONAL INC.
Address: 6000 S. Eastern Ave., Ste 12C, Las Vegas, NV 89119, USA
Product Name: Refrigerator(Mini-bar)
Trademark: N/A
Model Name: C32B-1
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
Article 2 Paragraph 1 of Item 19, annex 43 and annex 1& STD-T66 V3.7& Notification No.88	PASS

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Revision History

Rev.	Issue Date	Revisions
00	Jan 20, 2025	Initial Issue



1. SUMMARY OF THE TEST RESULTS

Test procedures according to the technical standards: STD-T66 V3.7 and MIC Notice No.88 Appendix No.43.

Rule Section	Description of Test	Judgement
3.2	Frequency Error	PASS
3.2	Occupied Bandwidth (99%), Spread-spectrum Bandwidth (90%)	PASS
3.2	Unwanted Emission Intensity	PASS
3.2	Power Error	PASS
3.3	Limitation of Collateral Emission of Receiver	PASS
3.6	Transmission Radiation power	PASS
3.2	Transmission Radiation Angle Width (3dB Beamwidth)	N/A
3.4	Radio Interference Prevention Capability	PASS
3.2	Spreading Factor	PASS
Note (2)	Carrier Sense Capability	N/A
3.7 Note (4)	Construction Protection Confirmation	PASS

Note:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) Article 2 Paragraph 1 of Item 19, annex 43 and annex 1 & Notification No.88.
- (3) Please refer to Japan Radio Protection Declaration.



1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	FCC Registration No.: 746540
	A2LA Certificate No.: 6727.01
	CAB ID: CN0136

1.2 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 output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	Frequency tolerance	$\pm 0.02\text{ppm}$

Note: The measurement uncertainty is not included in the test result.



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Refrigerator(Mini-bar)	
Trademark:	N/A	
Model Name:	C32B-1	
Series Model:	N/A	
Model Difference:	N/A	
Product Description:	Operation Frequency:	802.11b/g/n(20MHz): 2412~2472 MHz 802.11n(40MHz):2422~2462MHz
	Modulation Type:	802.11b(DSSS): CCK, DQPSK, DBPSK 802.11g(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK, QPSK,16-QAM,64-QAM
	Bit Rate of Transmitter:	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): MCS7~MCS0: 65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): MCS7~MCS0: 135/121.5/108/81/54/40.5/27/13.5 Mbps
	Number Of Channel:	802.11b/g/n20: 13CH 802.11n40: 9CH
	Antenna Designation:	small cigarette pole antenna
	AntennaGain(dBi):	3.43
	Duty Cycle:	>98%
	Based on the application, features, or specification exhibited in User Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User Manual.	
	Channel List:	Please refer to the Note 3.
Rating:	100V ~ 50/60Hz 1.5A	
Hardware Version:	JR-PRO10C-SMT-R	
Software Version:	Version 5-2	
Connecting I/O Port(s):	Please refer to the Note 1.	

Note:

1.For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2.The antenna information refers to the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.



3.

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

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11b/g/n (HT20)		For 802.11n (HT40)	
Channel	Freq.(MHz)	Channel	Freq.(MHz)
01	2412	03	2422
07	2442	07	2442
13	2472	11	2462

2.2 DESCRIPTION OF THE TEST MODES

Pretest Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH1	1 Mbps
Mode 2	TX IEEE 802.11b CH7	1 Mbps
Mode 3	TX IEEE 802.11 b CH13	1 Mbps
Mode 4	TX IEEE 802.11g CH1	6 Mbps
Mode 5	TX IEEE 802.11g CH7	6 Mbps
Mode 6	TX IEEE 802.11g CH13	6 Mbps
Mode 7	TX IEEE 802.11n HT20 CH1	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH7	MCS 0
Mode 9	TX IEEE 802.11n HT20 CH13	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH3	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH7	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH11	MCS 0



2.3 TABLE FOR PARAMETERS OF THE TEST SOFTWARE SETTING

Type	Mode Or Modulation type	ANT Gain(dBi)	Power Setting	Software For Testing
2.4G WIFI	802.11b	3.43	55	EspRFTestTool_v2.8
	802.11g		20	
	802.11n(HT20)		25	
	802.11n(HT40)		25	

2.4 TEST CONDITIONS

The WIFI module was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in allModes to determine worst case levels.

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input DC Power(V)	100	110	90
RF Chip Input DC Power(V)	3.300	3.321	3.278
Voltage Variation (%)	/	0.64	-0.67

Note: 1. Voltage Variation (%)

= (RF chip Input high or Low Voltage - RF chip Input Normal Voltage)/ RF chip Input Normal Voltage* 100

2. RF chip Input DC power fluctuation is verified at the power input PIN of the RF chip.

When the input supply voltage to the EUT from the external power source is varied by +/- 10%, the output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%, and the DC power fluctuation at the power input PIN of the RF chip is equal to or less than +/-1%.Exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

During the measurement the environmental conditions:

Normal Temperature: 24.5°C

Relative Humidity: 53 %

Air Pressure: 989 hPa



2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
1	Power cord	N/A	N/A	N/A	2.2m

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Note:

(1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.7 EQUIPMENTS LIST FOR ALL TEST ITEMS

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until	Classification
Signal Analyzer	Keysight	N9010B	MY60242508	2024.08.05	2025.08.04	(c)
Signal Analyzer	Keysight	N9020A	MY50530994	2024.03.09	2025.03.08	(c)
RF Automatic Test system	MW	MW100-RFCB	MW220324LG-33	2024.03.09	2025.03.08	(c)
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2024.03.09	2025.03.08	(c)
Temperature & Humidity test chamber	AISRY	LX-1000L	171200018	2024.03.09	2025.03.08	(c)
Attenuator	eastsheep	90db	N.A	2024.03.09	2025.03.08	(c)
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2024.03.11	2025.03.10	(c)
Digital multimeter	MASTECH	MS8261	MBGBC83053	2024.03.09	2025.03.08	(c)
Programmable Power Supply	GW	GPC-6030D	E876807	2024.03.09	2025.03.08	(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.



3. FREQUENCY ERROR

3.1 LIMIT

Item	Limits
Frequency Error	$\pm 50\text{ppm}$

3.2 TEST PROCEDURES

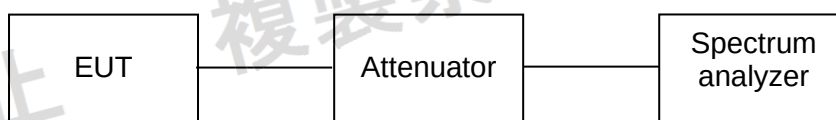
The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RBW / VBW	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- (1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
- (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.

3.3 TEST SETUP



3.4 TEST RESULT

For the measurement records, refer to the appendix I.



4. ANTENNA POWER

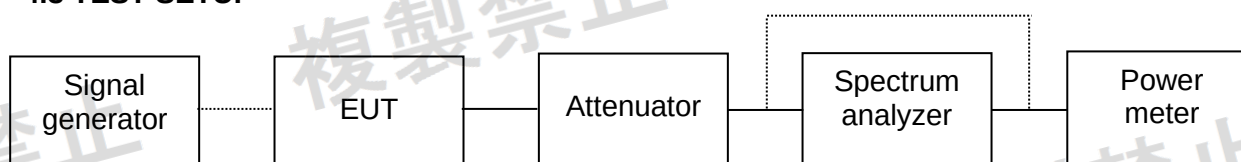
4.1 LIMIT

Item	Limits
Antenna PowerDensity	$\leq 3\text{mW/MHz}$ (FH from 2400 – 2483.5 MHz) $\leq 10\text{mW/MHz}$ (OFDM, DS from 2400~2483.5MHz, 802.11b/g/n HT20) $\leq 5\text{mW/MHz}$ (OFDM, DS from 2400~2483.5MHz, 802.11n HT40) $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)
Power Error	+20%, -80% (Base on manufacturer declare power)

4.2 TEST PROCEDURE

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. EUT turn to test frequency channel and keep continuous transmitting.
3. Connected the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averGauging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
4. Reading the output power from the Power meter as P_{EUT} .
5. Turn the Signal generator to frequency channel the same as the EUT.
6. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averGauging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
7. Turn the level of Signal generator, scan with the power meter until the power equal to P_{EUT} , the level of Signal generator recorded as "P".
8. The antenna power of EUT is "P".
9. EIRP power="P"+antenna gain.

4.3 TEST SETUP



4.4 TEST DEVIATION

There is no deviation with the original standard.

4.5 TEST RESULT

For the measurement records, refer to the appendix I.



5. EIRP POWER

5.1 LIMIT

Item	Limits
Radiation powerEIRP	FH form 2400 – 2483.5MHz,EIRP $\leq$ 6.91dBm/MHz CCK/OFDM/DBPSK (2400~2483.5MHz) OFDM or DS other than (802.11b/g/n HT20) EIRP $\leq$ 12.14 dBm/MHz OFDM or DS other than (802.11n HT40) EIRP $\leq$ 9.13dBm/MHz Other from 2400~2483.5MHz: 12.14 dBm or less

5.2 TEST RESULT

For the measurement records, refer to the appendix I.



6. OCCUPIED BANDWIDTH AND SPREADING BANDWIDTH

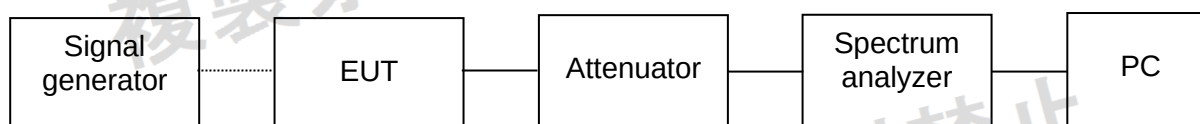
6.1 LIMIT

Item	Limits
Occupied Band Width:	83.5MHz for FHSS; 26MHz for DSSS and OFDM; 26 ~ 40MHz for OFDM(HT40)
Spreading Bandwidth:	≥ 500 kHz (FH, DS)

6.2 TEST PROCEDURES

1. 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), 83.5MHz (For FHSS Device) or 38MHz (For OFDM (HT 40)).
2. SA set to 90% of occupied bandwidth to measure Spread Spectrum Bandwidth and must greater than 500kHz.

6.3 TEST SETUP



6.4 TEST DEVIATION

There is no deviation with the original standard.

6.6 TEST RESULT

For the measurement records, refer to the appendix I.



7. UNWANTED EMISSION INTENSITY MEASUREMENT

7.1 LIMIT

Item	Limits
TX Spurious Emission	$\leq 2.5 \text{ mW/MHz}$ ($30\text{MHz} \leq f \leq 1000\text{MHz}$)
	$\leq 2.5 \text{ }\mu\text{W/MHz}$ ($1000\text{MHz} < f \leq 2387\text{MHz}$)
	$\leq 25 \text{ }\mu\text{W/MHz}$ ($2387\text{MHz} < f \leq 2400\text{MHz}$)
	$\leq 25 \text{ }\mu\text{W/MHz}$ ($2483.5\text{MHz} \leq f < 2496.5\text{MHz}$)
	$\leq 2.5 \text{ }\mu\text{W/MHz}$ ($2496.5\text{MHz} \leq f < 12500\text{MHz}$)

7.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

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

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 2.5 μ W.
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.
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.
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
7. SA adjusted to start frequency 2496.5MHz and stop frequency 12750MHz, then to mark peak reading value + cable loss shall be less than 2.5 μ W
8. When we tested 30MHz-1GHz, we used the RB 100KHz setting for the test. The limit on the test chart was converted. The conversion formula: $-26\text{dBm} + 10 \cdot \log(100\text{K}/1\text{M}) = -36\text{dBm}$.
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.



7.3 TEST SETUP



7.4 TEST DEVIATION

There is no deviation with the original standard.

7.5 TEST RESULT

For the measurement records, refer to the appendix I.



8. IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

8.1 LIMIT

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

8.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

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

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) / 1 MHz (above 1GHz emissions) / 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.

8.3 TEST RESULT

For the measurement records, refer to the appendix I.



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

9.1 LIMIT

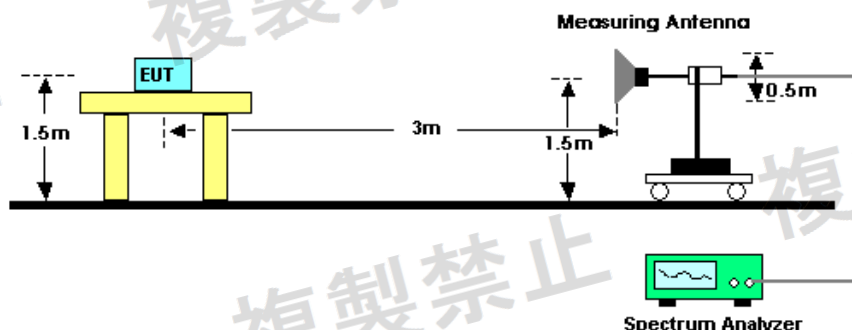
Item	Limits
3dB antenna beam width	$e \leq 360/A$ (The A is 10 in maximum) $A = \{EIRP \text{ Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW /MHz}, 3\text{mW/MHz})\}\}$ Shall be 1 when A is lower than 1

9.2 TEST PROCEDURES

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

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. "E" is the half-power beam width (angle between two points at which radiated power becomes 1/2).
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 $360/A$ (The A is 10 in maximum).
 $e \leq 360/A$ (The A is 10 in maximum)
 $A = \{EIRP \text{ Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW/MHz}, 3\text{mW/MHz})\}\}$
Shall be 1 when A is lower than 1

9.3 TEST SETUP



9.4 TEST DEVIATION

There is no deviation with the original standard.

9.6 TEST RESULT

As the EUT max EIRP is less than 12.14dBm, so the test is not applicable and skipped.



10. RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

10.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

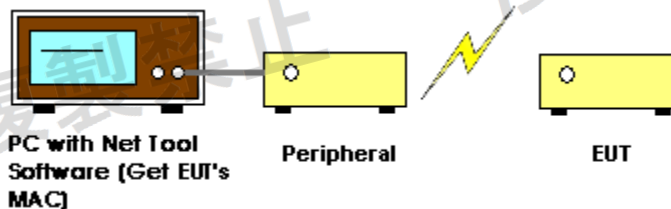
10.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

10.3 TEST PROCEDURES

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

10.4 TEST SETUP



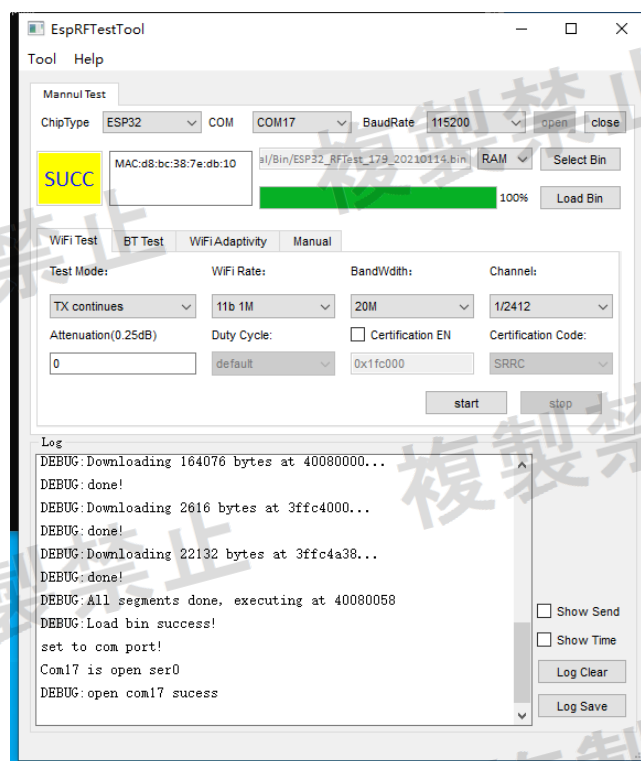
10.5 TEST DEVIATION

There is no deviation with the original standard.



10.6 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

The MAC address is D8-BC-38-7E-DB-10.



11. CARRIER SENSE CAPABILITY

11.1 INTERFERENCE PREVENTION FUNCTION

11.2 TEST REQUIREMENT

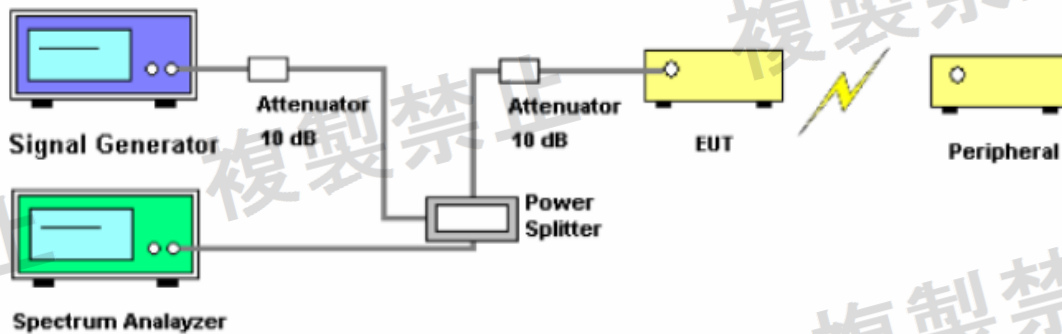
MIC Notice No.88 Appendix No.43

Article 2, Paragraph 1, Item 19 Rules Section 10

11.3 TEST PROCEDURE

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is (on $22.79 + G - 20 \cdot \log(f) \text{ dBm}$) (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=0MHz, 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

❖ Measurement System Diagram



❖ Conditions of Application Equipment (EUT)

- The EUT state shall be "normal mode link with wireless router".

11.4 TEST RESULT

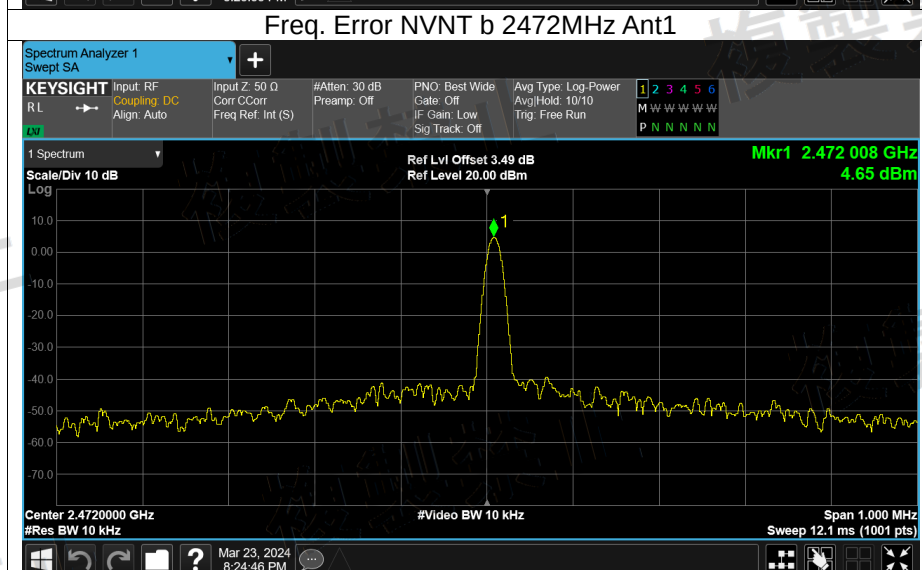
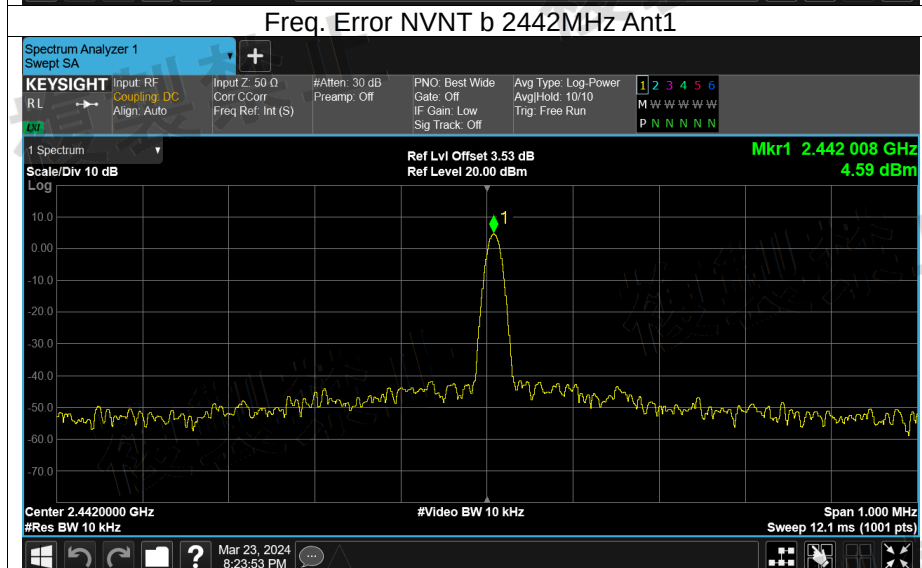
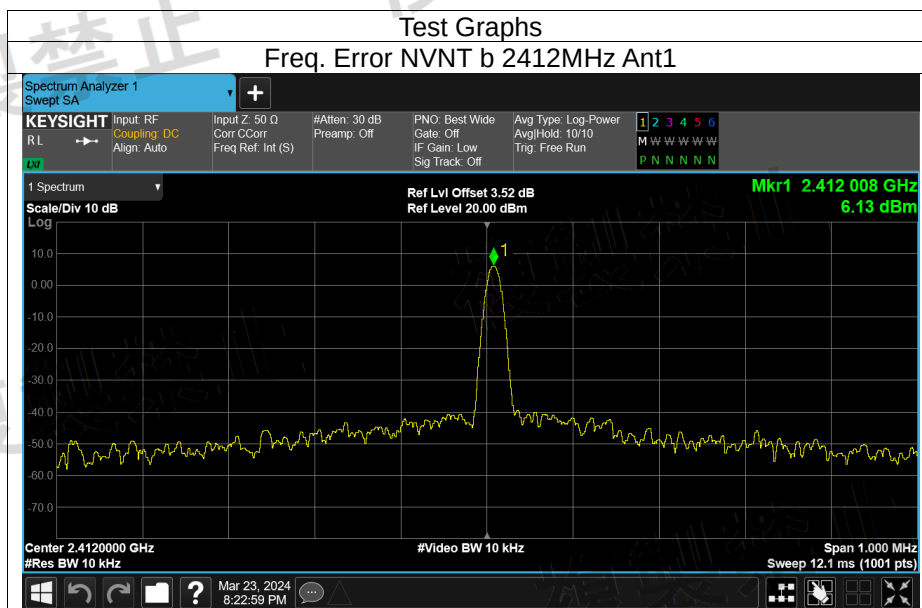
Not Applicable, Only applied to greater than 26mhz and less than 38mhz product.

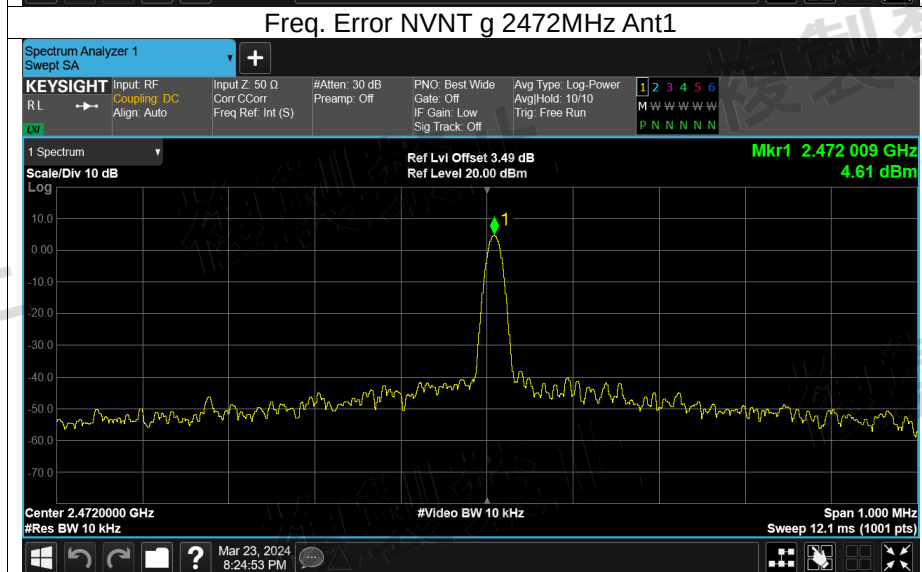
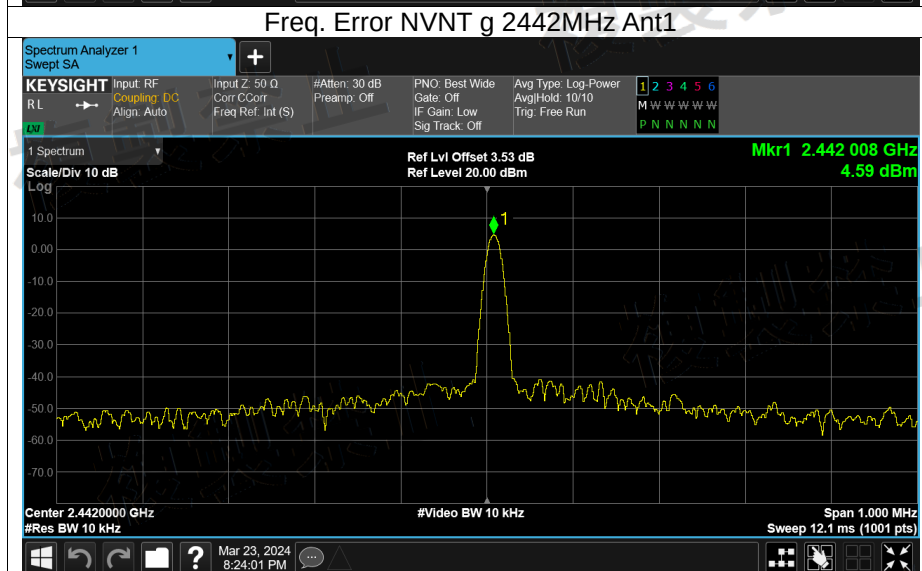
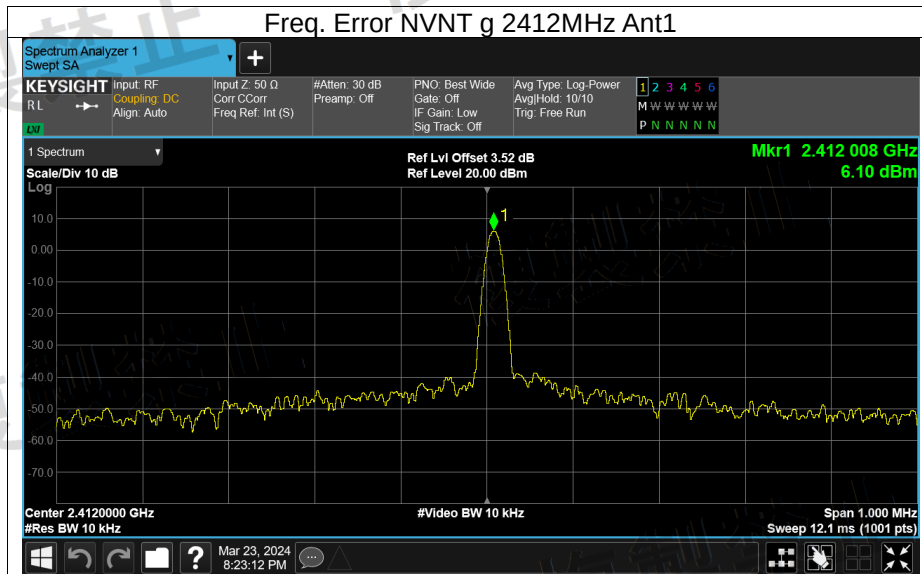


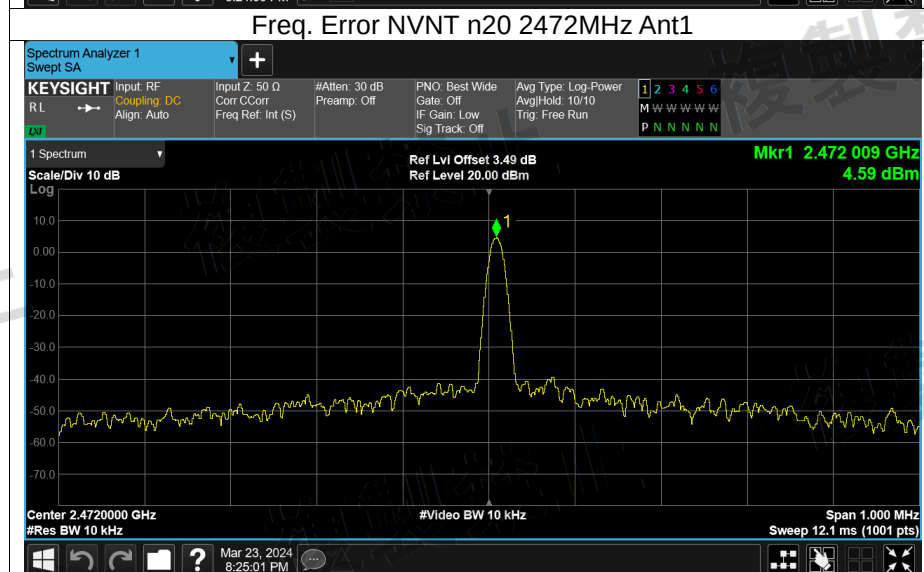
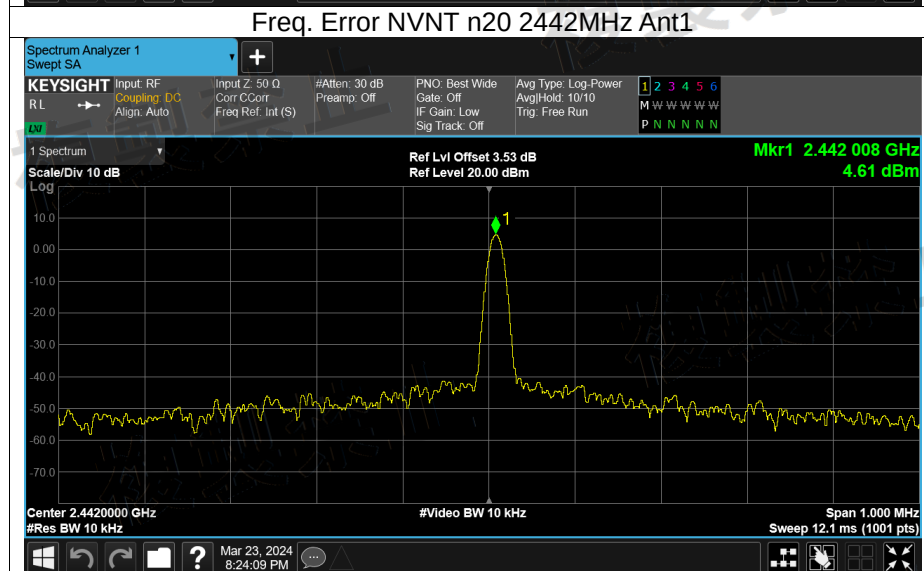
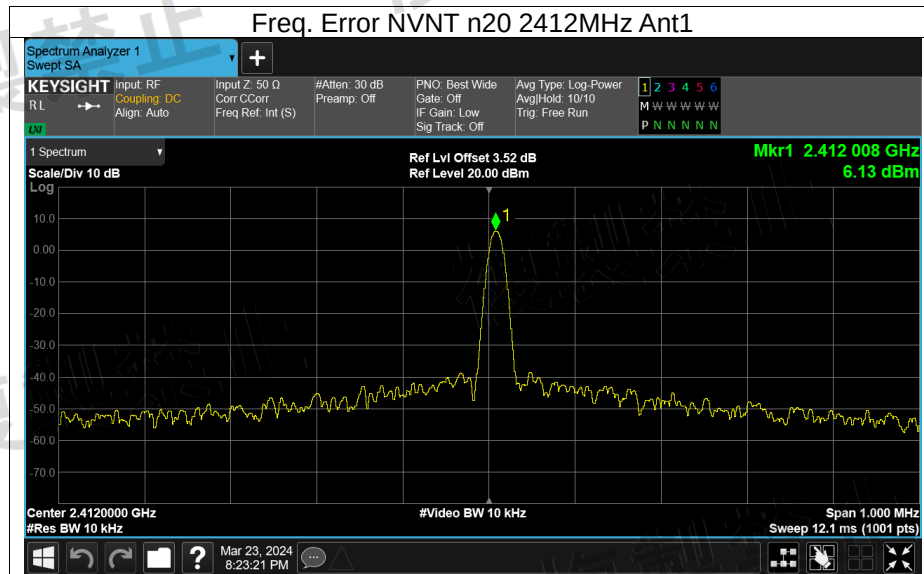
APPENDIX I - TEST RESULT

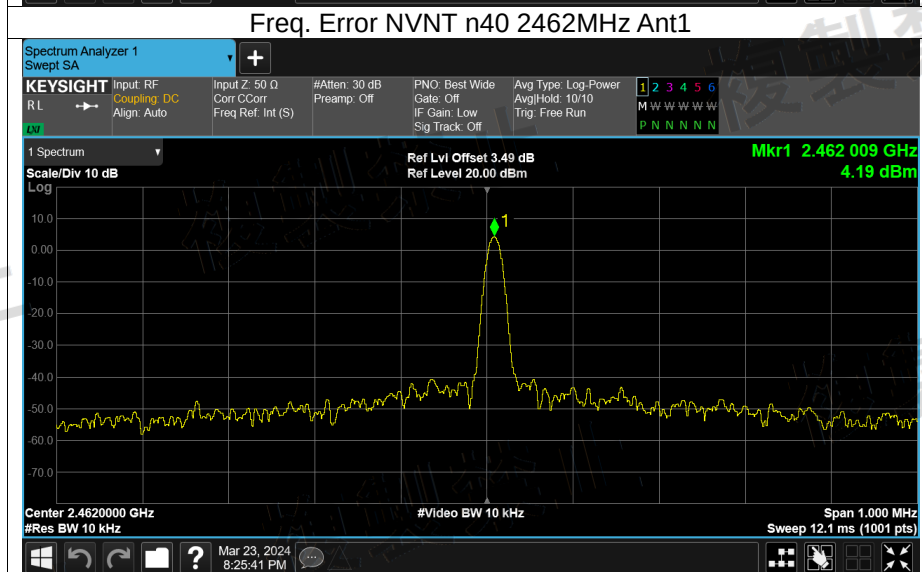
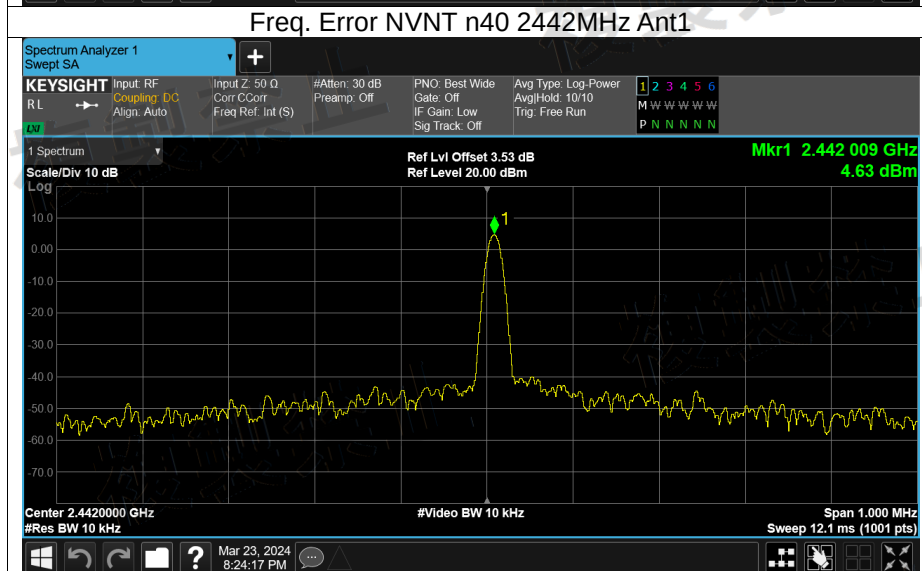
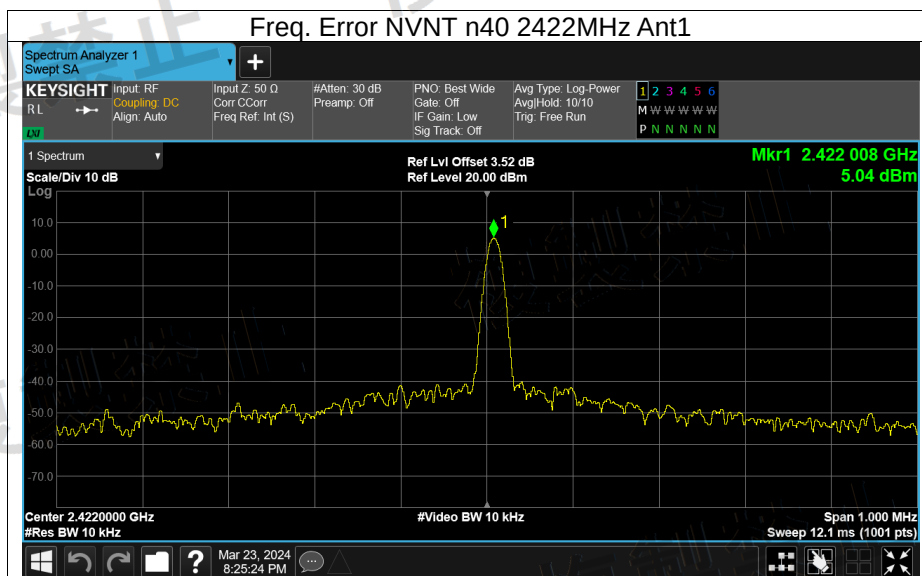
FREQUENCY ERROR

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	b	2412	Ant1	2412.008	8000	3.32	±50	Pass
NVNT	b	2442	Ant1	2442.008	8000	3.28	±50	Pass
NVNT	b	2472	Ant1	2472.008	8000	3.24	±50	Pass
NVNT	g	2412	Ant1	2412.008	8000	3.32	±50	Pass
NVNT	g	2442	Ant1	2442.008	8000	3.28	±50	Pass
NVNT	g	2472	Ant1	2472.009	9000	3.64	±50	Pass
NVNT	n20	2412	Ant1	2412.008	8000	3.32	±50	Pass
NVNT	n20	2442	Ant1	2442.008	8000	3.28	±50	Pass
NVNT	n20	2472	Ant1	2472.009	9000	3.64	±50	Pass
NVNT	n40	2422	Ant1	2422.008	8000	3.3	±50	Pass
NVNT	n40	2442	Ant1	2442.009	9000	3.69	±50	Pass
NVNT	n40	2462	Ant1	2462.009	9000	3.66	±50	Pass











ANTENNA POWER

Condition	Mode	Frequency (MHz)	Antenna	Power (dBm/MHz)	Antenna Power (mW/MHz)	Limit (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Upper Limit (%)	Lower Limit (%)	Verdict
NVNT	b	2412	Ant1	8.48	7.047	10	6	17.45	20	-80	Pass
NVNT	b	2442	Ant1	6.51	4.477	10	6	-25.38	20	-80	Pass
NVNT	b	2472	Ant1	6.76	4.742	10	6	-20.97	20	-80	Pass
NVNT	g	2412	Ant1	7.89	6.152	10	6	2.53	20	-80	Fail
NVNT	g	2442	Ant1	6.28	4.246	10	6	-29.23	20	-80	Fail
NVNT	g	2472	Ant1	6.69	4.667	10	6	-22.22	20	-80	Fail
NVNT	n20	2412	Ant1	5.77	3.776	10	4	-5.60	20	-80	Fail
NVNT	n20	2442	Ant1	3.73	2.36	10	4	-41.00	20	-80	Fail
NVNT	n20	2472	Ant1	4.89	3.083	10	4	-22.93	20	-80	Fail
NVNT	n40	2422	Ant1	2.33	1.71	5	2	-14.50	20	-80	Fail
NVNT	n40	2442	Ant1	1.36	1.368	5	2	-31.60	20	-80	Fail
NVNT	n40	2462	Ant1	1.6	1.445	5	2	-27.75	20	-80	Fail

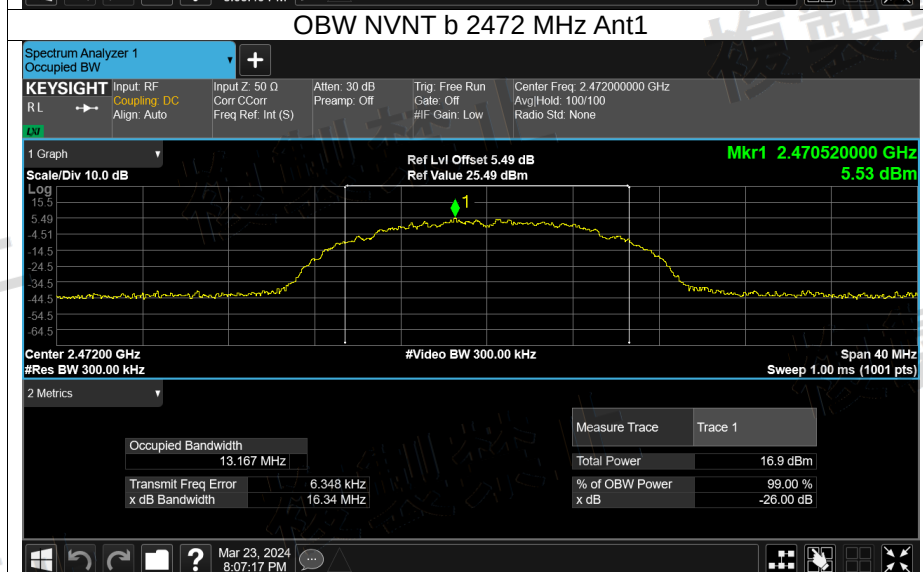
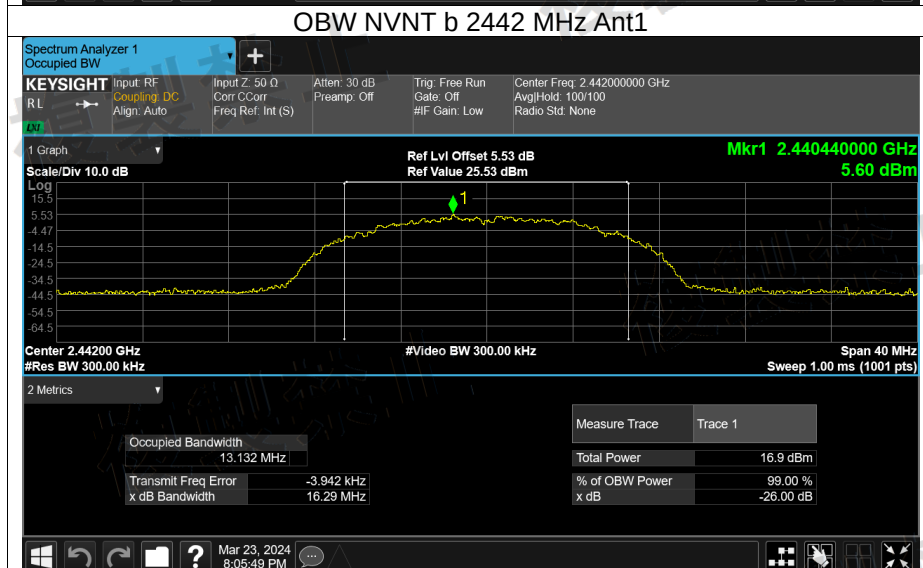
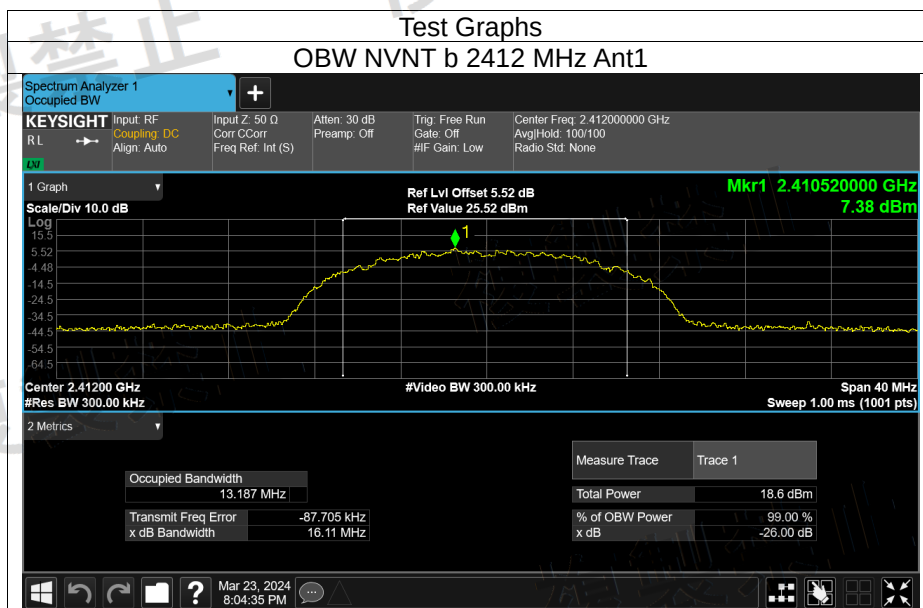
EIRP POWER

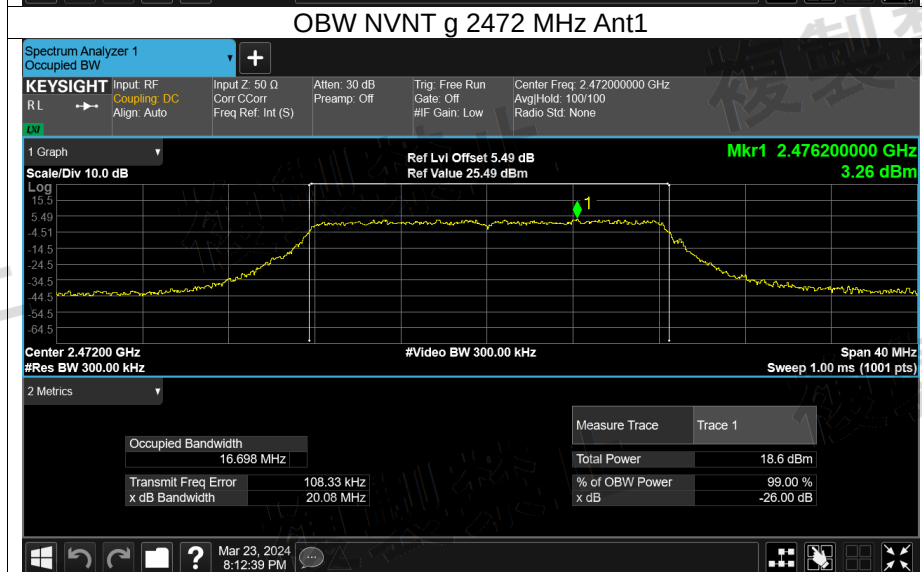
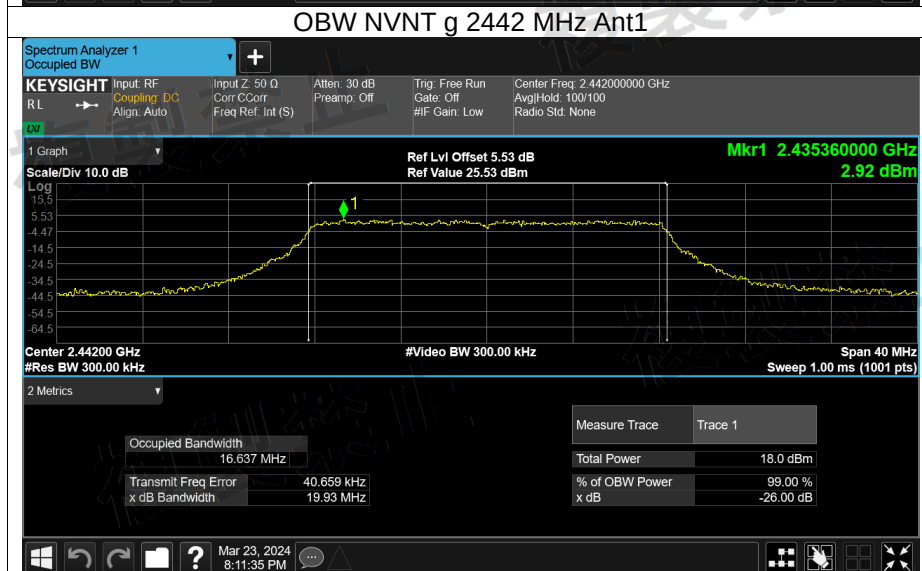
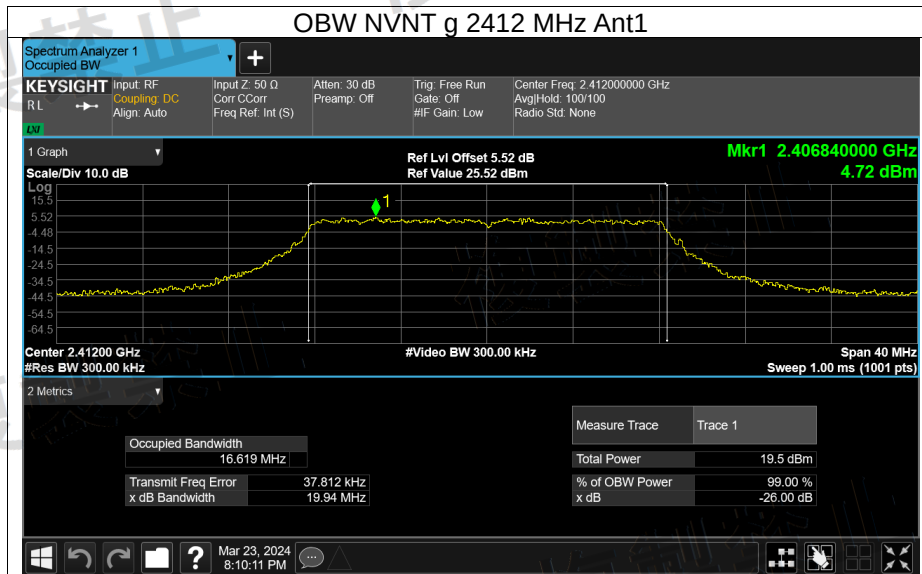
Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (dBm/MHz)	Gain (dBi)	EIRP Power (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	b	2412	Ant1	8.48	3.43	11.91	12.14	Pass
NVNT	b	2442	Ant1	6.51	3.43	9.94	12.14	Pass
NVNT	b	2472	Ant1	6.76	3.43	10.19	12.14	Pass
NVNT	g	2412	Ant1	7.89	3.43	11.32	12.14	Pass
NVNT	g	2442	Ant1	6.28	3.43	9.71	12.14	Pass
NVNT	g	2472	Ant1	6.69	3.43	10.12	12.14	Pass
NVNT	n20	2412	Ant1	5.77	3.43	9.20	12.14	Pass
NVNT	n20	2442	Ant1	3.73	3.43	7.16	12.14	Pass
NVNT	n20	2472	Ant1	4.89	3.43	8.32	12.14	Pass
NVNT	n40	2422	Ant1	2.33	3.43	5.76	9.13	Pass
NVNT	n40	2442	Ant1	1.36	3.43	4.79	9.13	Pass
NVNT	n40	2462	Ant1	1.6	3.43	5.03	9.13	Pass

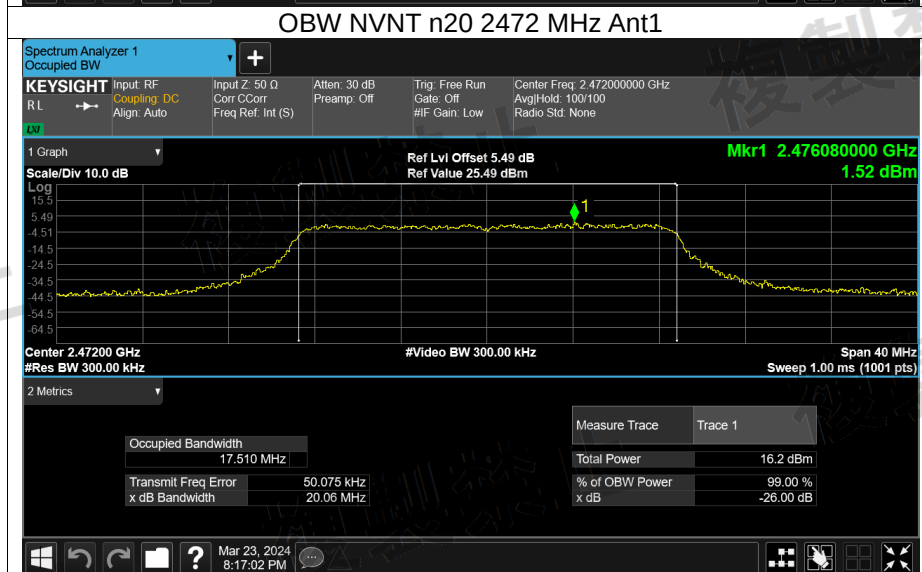
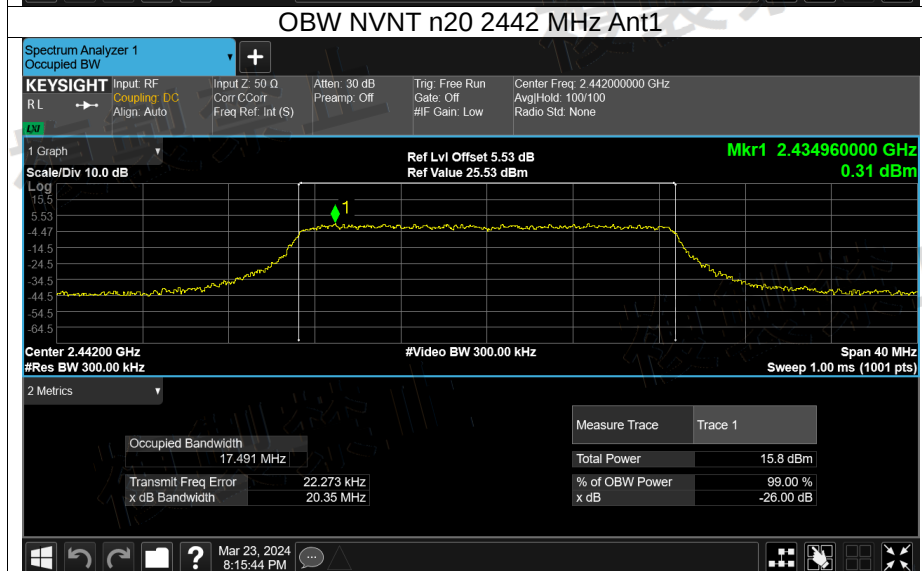
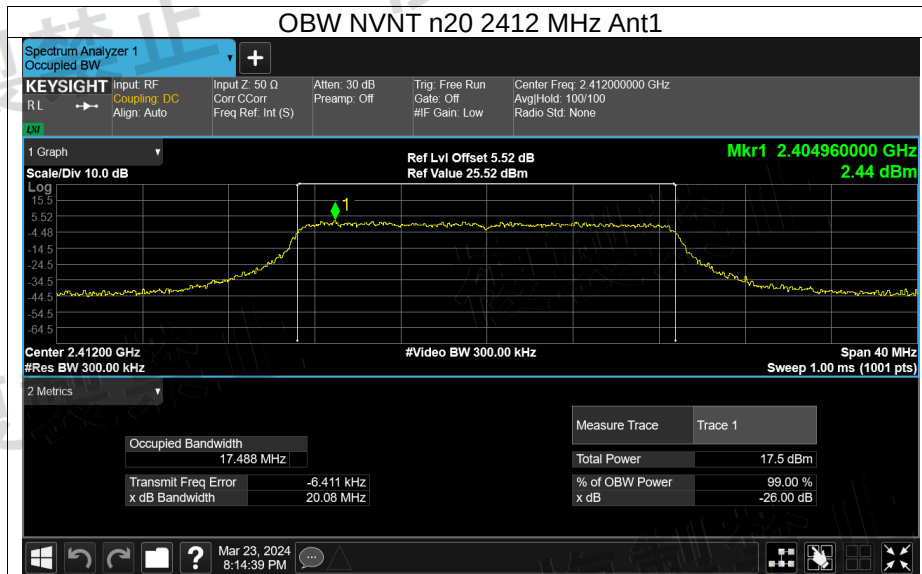


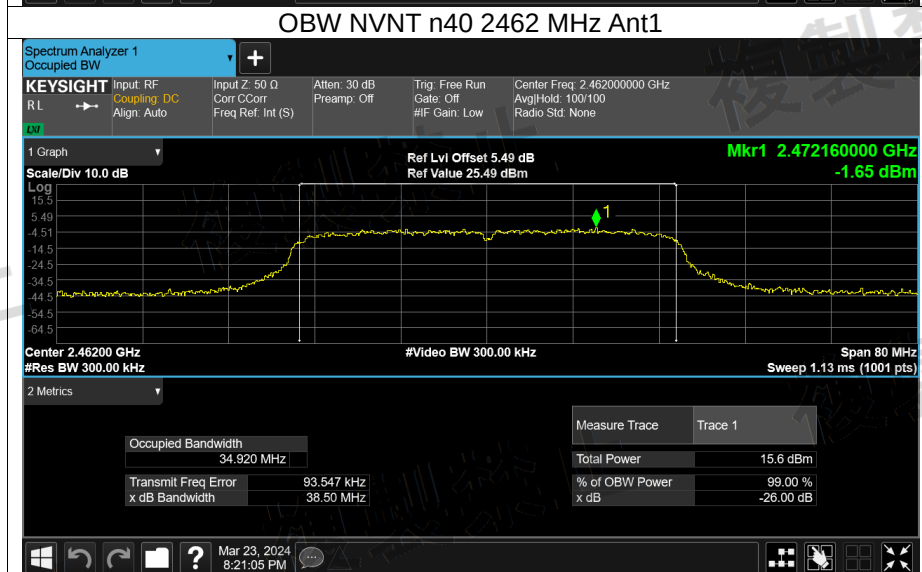
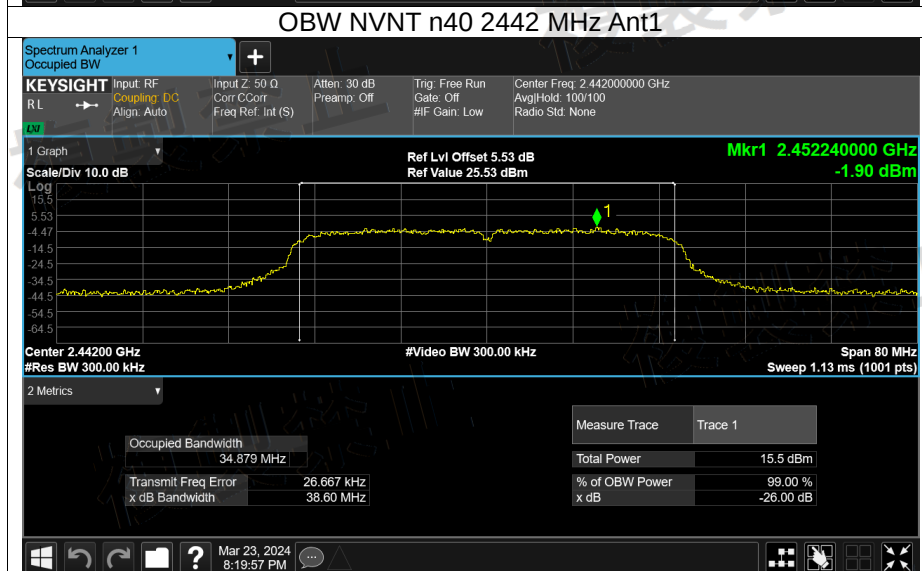
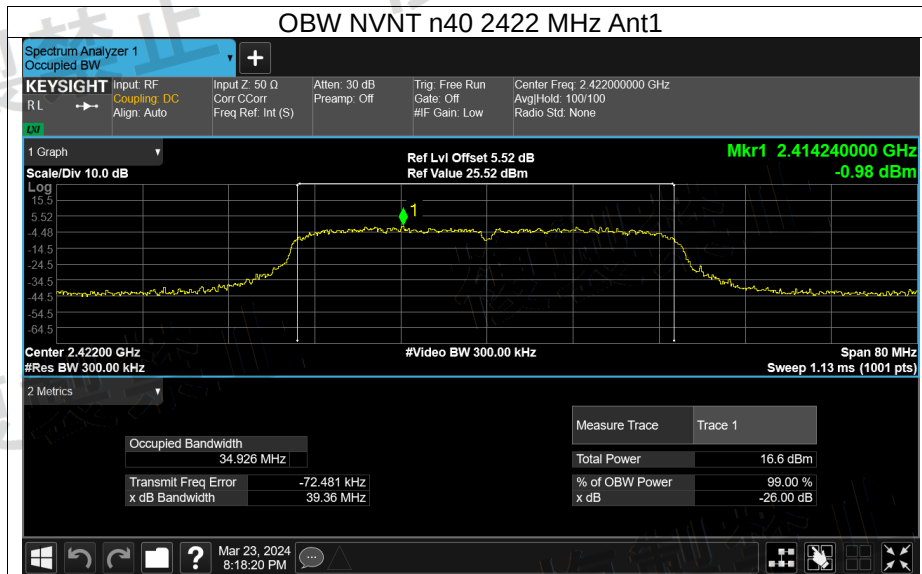
OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.187
NVNT	b	2442	Ant1	13.132
NVNT	b	2472	Ant1	13.167
NVNT	g	2412	Ant1	16.619
NVNT	g	2442	Ant1	16.637
NVNT	g	2472	Ant1	16.698
NVNT	n20	2412	Ant1	17.488
NVNT	n20	2442	Ant1	17.491
NVNT	n20	2472	Ant1	17.51
NVNT	n40	2422	Ant1	34.926
NVNT	n40	2442	Ant1	34.879
NVNT	n40	2462	Ant1	34.92









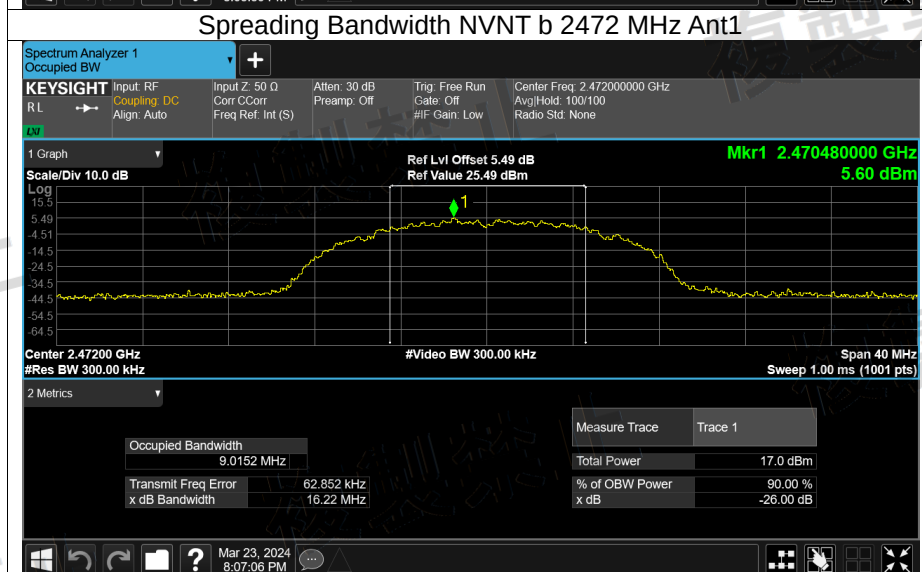
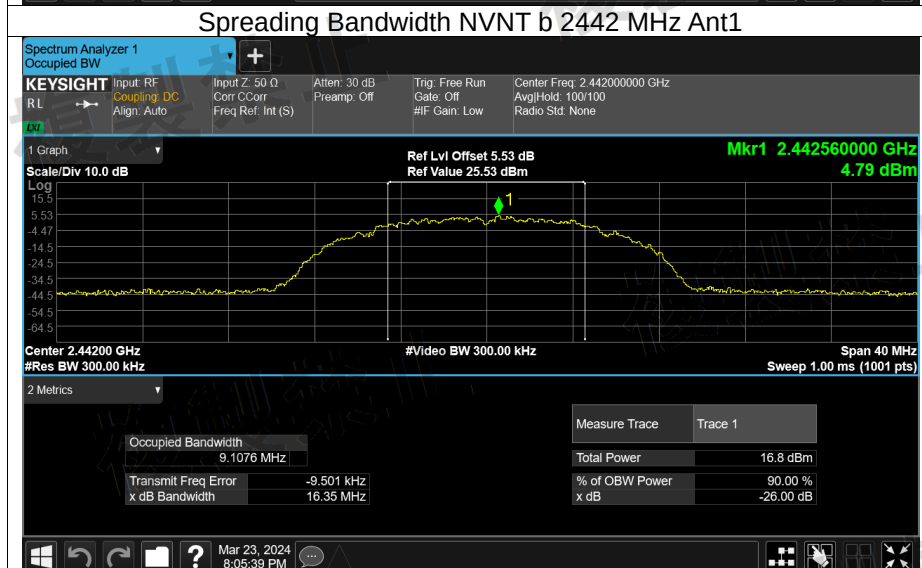
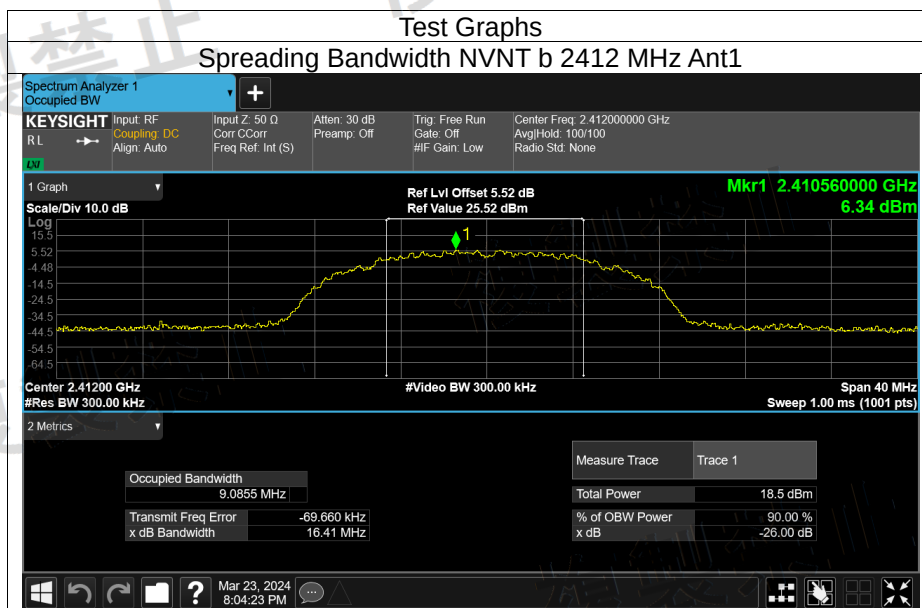


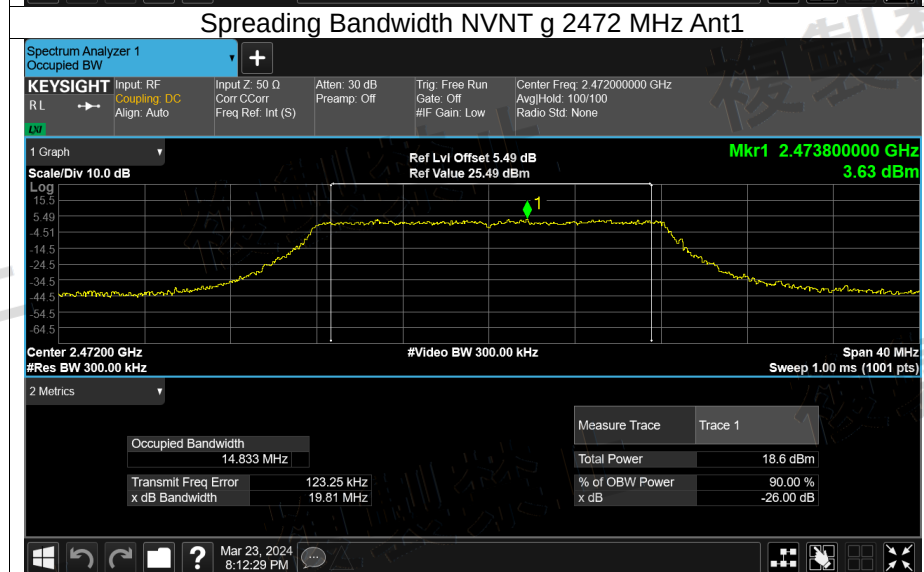
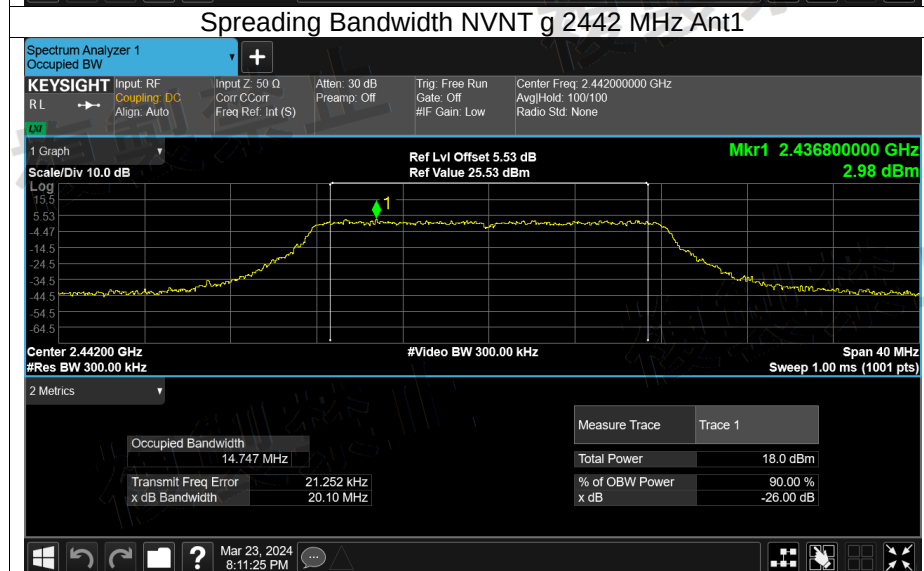
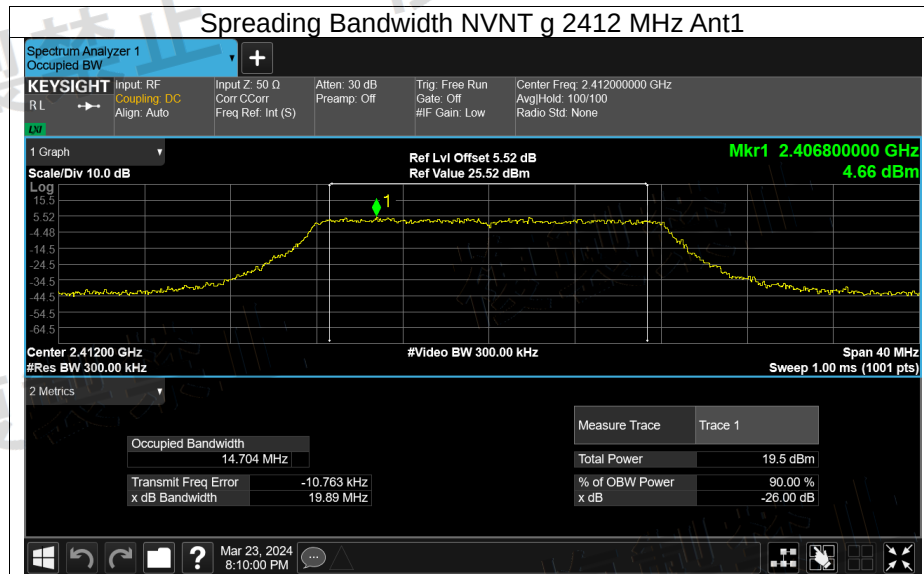
SPREADING BANDWIDTH

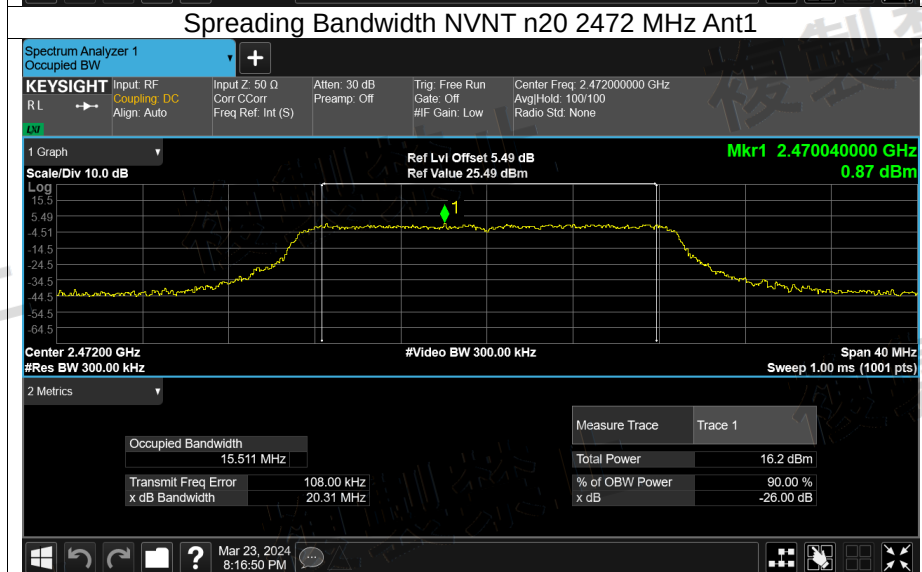
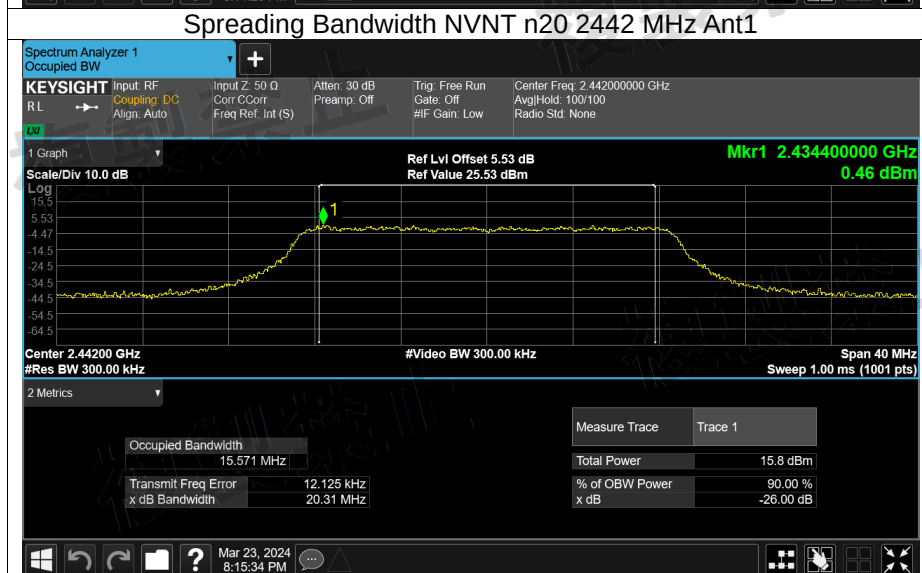
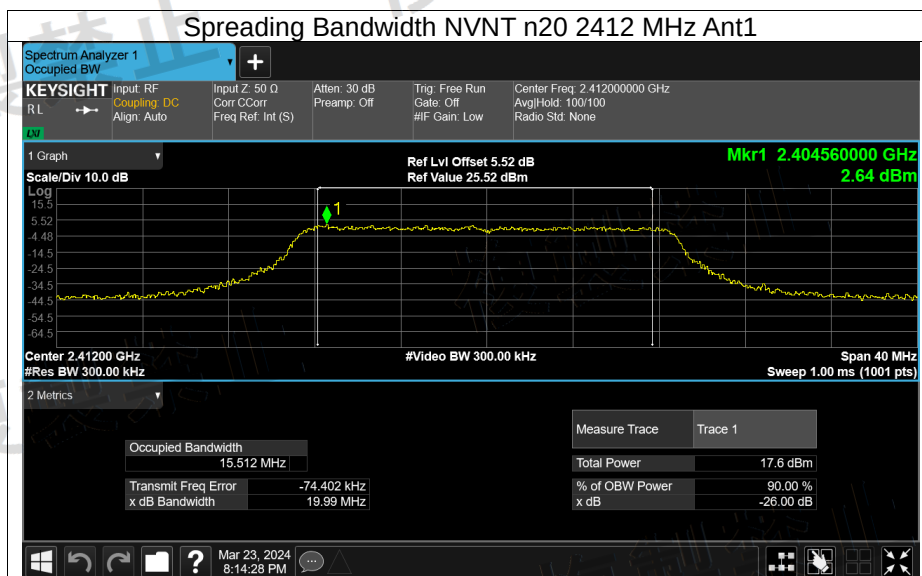
Condition	Mode	Frequency (MHz)	Antenna	90% OBW (MHz)	Limit (MHz)	Verdict
NVNT	b	2412	Ant1	9.085	0.5	Pass
NVNT	b	2442	Ant1	9.108	0.5	Pass
NVNT	b	2472	Ant1	9.015	0.5	Pass
NVNT	g	2412	Ant1	14.704	0.5	Pass
NVNT	g	2442	Ant1	14.747	0.5	Pass
NVNT	g	2472	Ant1	14.833	0.5	Pass
NVNT	n20	2412	Ant1	15.512	0.5	Pass
NVNT	n20	2442	Ant1	15.571	0.5	Pass
NVNT	n20	2472	Ant1	15.511	0.5	Pass
NVNT	n40	2422	Ant1	29.559	0.5	Pass
NVNT	n40	2442	Ant1	29.636	0.5	Pass
NVNT	n40	2462	Ant1	29.657	0.5	Pass

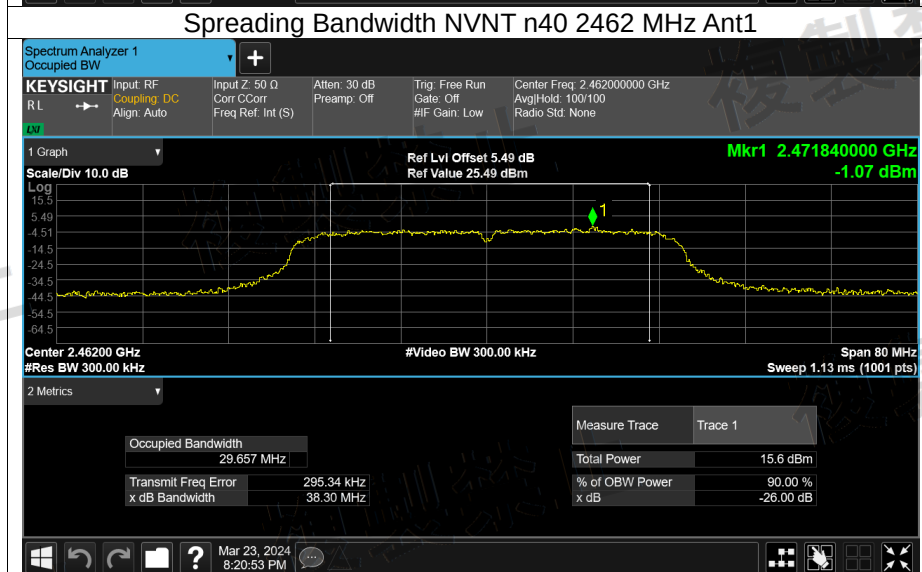
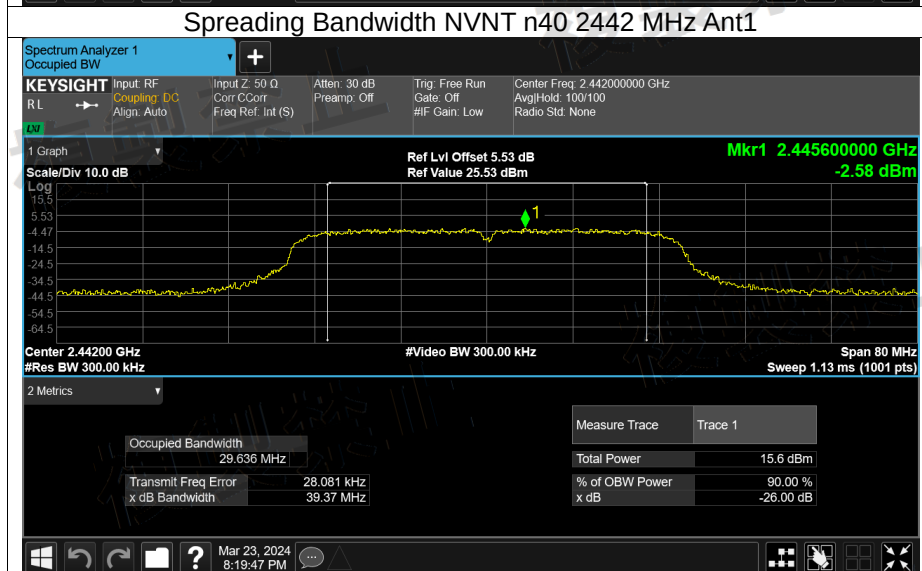
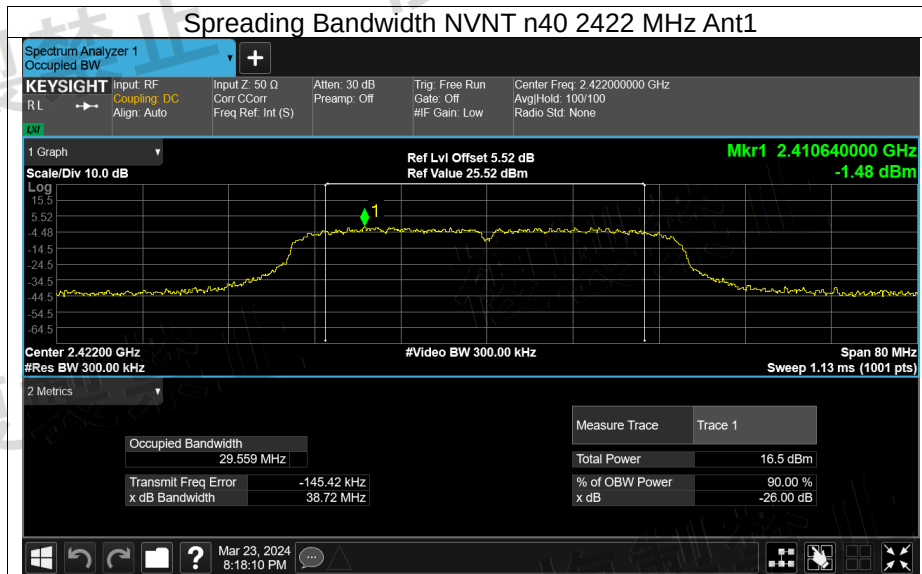
Condition	Mode	Frequency (MHz)	Spread BW 90% (MHz)	Frequency corresponding to transmission rate	Spreading factor	Limit
NVNT	b	2412	9.085	1.375	6.61	≥ 5
NVNT	b	2442	9.108	1.375	6.62	≥ 5
NVNT	b	2472	9.015	1.375	6.56	≥ 5

Note: Spreading factor=(Spreading bandwidth) / (Frequency corresponding to transmission rate)









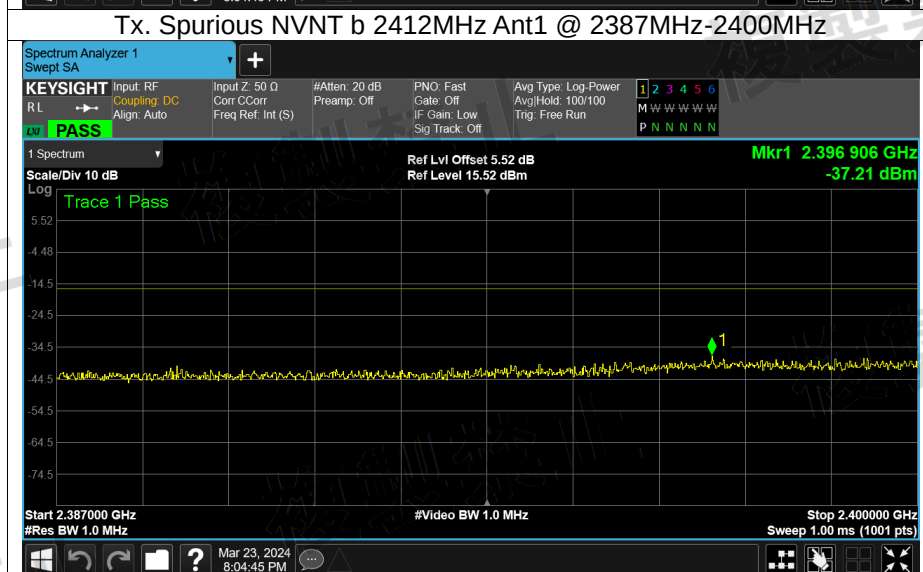
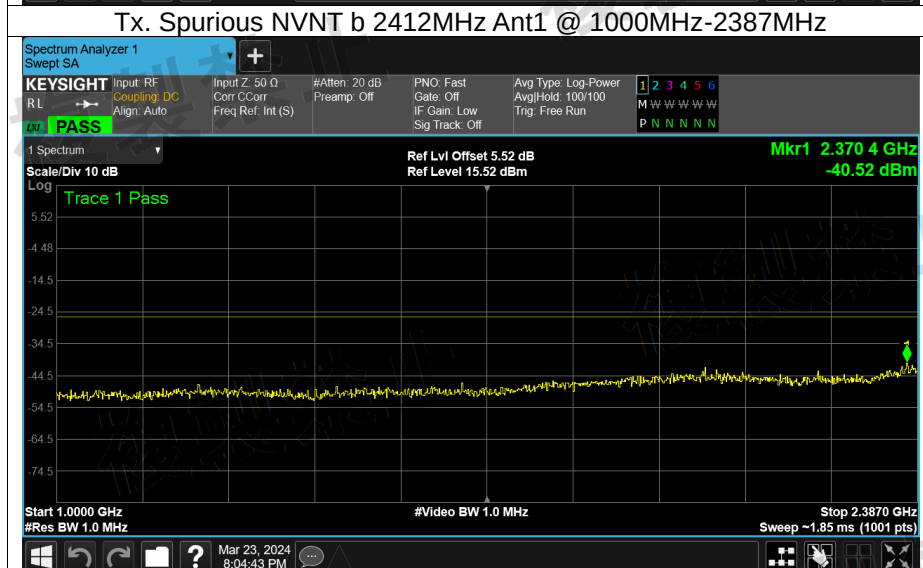
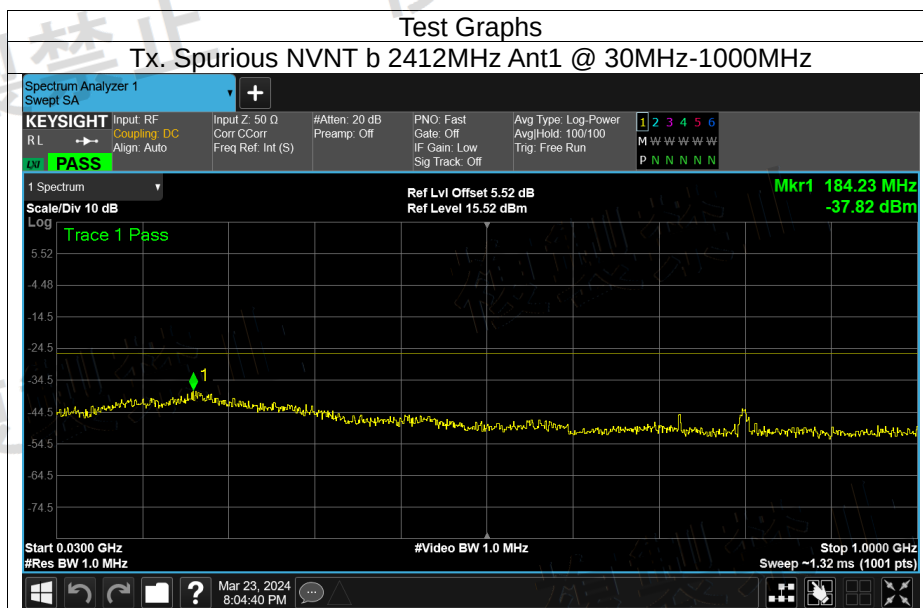


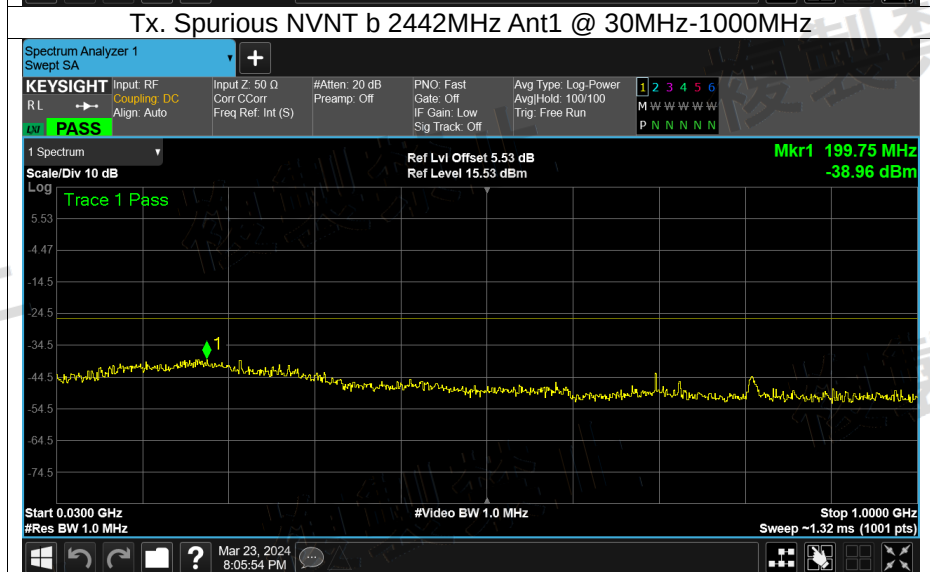
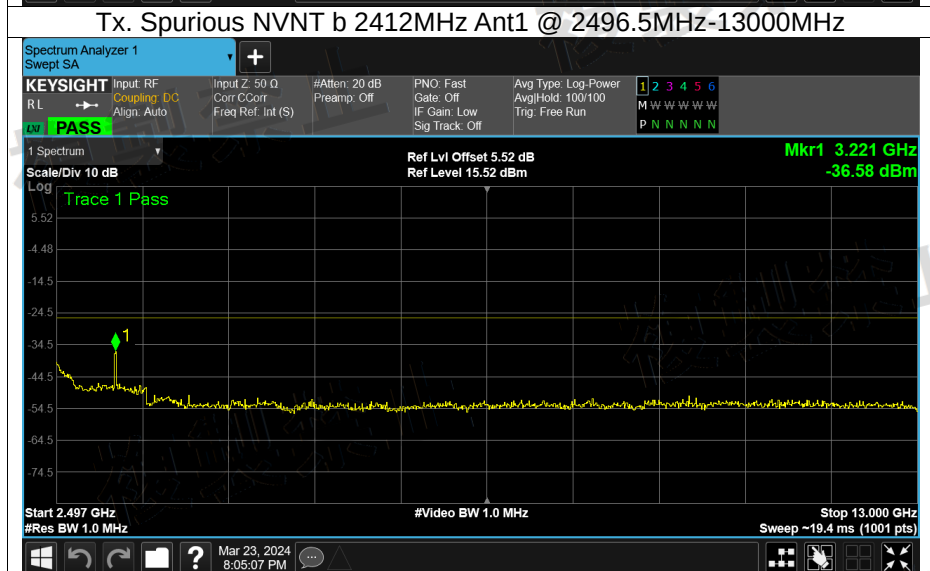
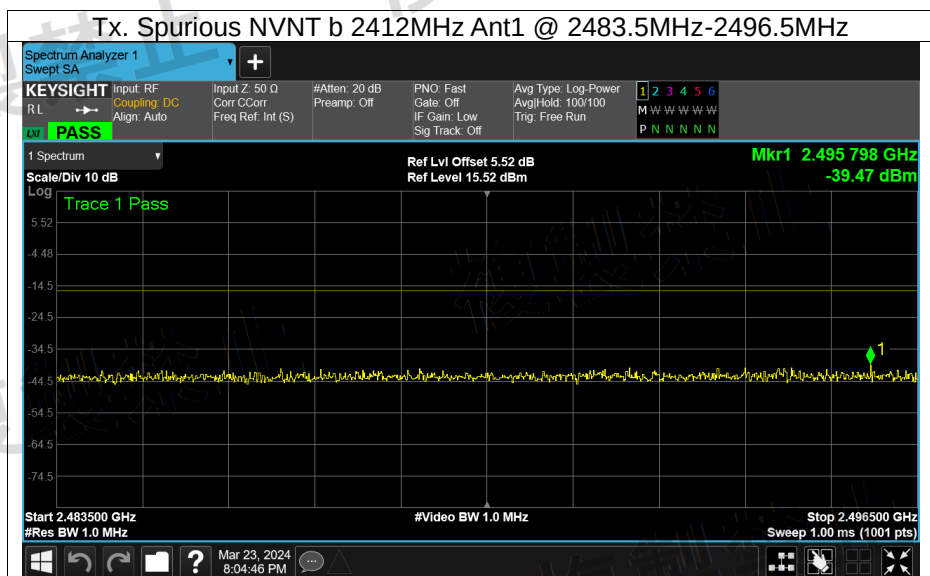
TX SPURIOUS EMISSION

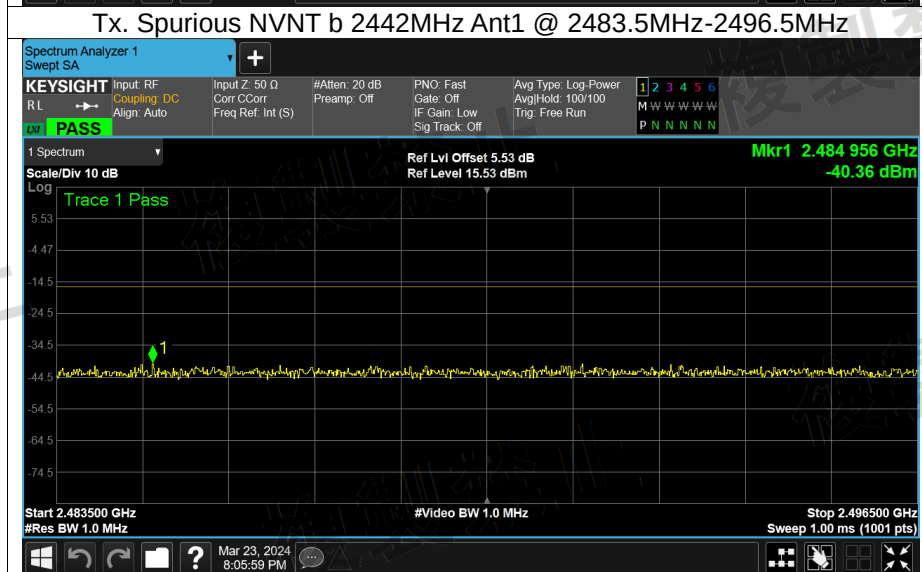
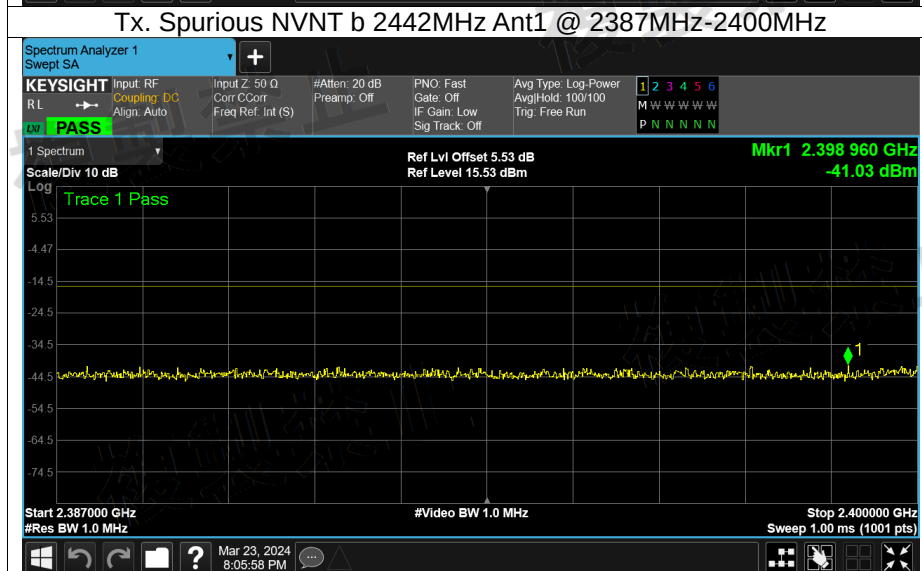
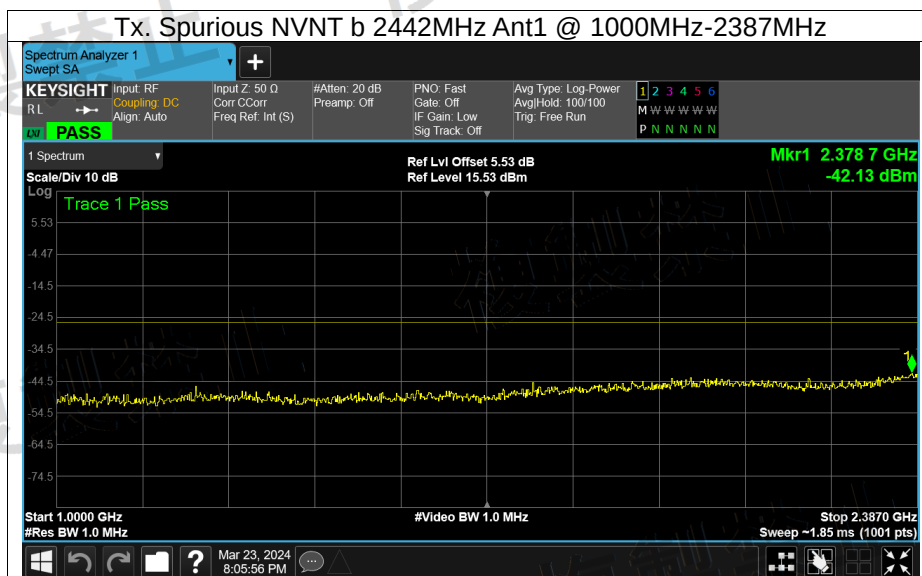
Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit Start(dBm)	Limit Stop (dBm)	Verdict
NVNT	b	2412	Ant1	30-1000	184.23	-37.82	-26	-26	Pass
NVNT	b	2412	Ant1	1000-2387	2370.36	-40.52	-26	-26	Pass
NVNT	b	2412	Ant1	2387-2400	2396.91	-37.21	-16	-16	Pass
NVNT	b	2412	Ant1	2483.5-2496.5	2495.8	-39.47	-16	-16	Pass
NVNT	b	2412	Ant1	2496.5-13000	3221.24	-36.58	-26	-26	Pass
NVNT	b	2442	Ant1	30-1000	199.75	-38.96	-26	-26	Pass
NVNT	b	2442	Ant1	1000-2387	2378.68	-42.13	-26	-26	Pass
NVNT	b	2442	Ant1	2387-2400	2398.96	-41.03	-16	-16	Pass
NVNT	b	2442	Ant1	2483.5-2496.5	2484.96	-40.36	-16	-16	Pass
NVNT	b	2442	Ant1	2496.5-13000	3252.75	-38.1	-26	-26	Pass
NVNT	b	2472	Ant1	30-1000	173.56	-37.57	-26	-26	Pass
NVNT	b	2472	Ant1	1000-2387	2373.13	-41.55	-26	-26	Pass
NVNT	b	2472	Ant1	2387-2400	2397.09	-41.04	-16	-16	Pass
NVNT	b	2472	Ant1	2483.5-2496.5	2485	-37.52	-16	-16	Pass
NVNT	b	2472	Ant1	2496.5-13000	3294.77	-39.56	-26	-26	Pass
NVNT	g	2412	Ant1	30-1000	185.2	-37.52	-26	-26	Pass
NVNT	g	2412	Ant1	1000-2387	2380.07	-40.47	-26	-26	Pass
NVNT	g	2412	Ant1	2387-2400	2400	-26.64	-16	-16	Pass
NVNT	g	2412	Ant1	2483.5-2496.5	2484.24	-40.56	-16	-16	Pass
NVNT	g	2412	Ant1	2496.5-13000	3221.24	-37	-26	-26	Pass
NVNT	g	2442	Ant1	30-1000	176.47	-38.07	-26	-26	Pass
NVNT	g	2442	Ant1	1000-2387	2363.42	-41.61	-26	-26	Pass
NVNT	g	2442	Ant1	2387-2400	2399.86	-40.62	-16	-16	Pass
NVNT	g	2442	Ant1	2483.5-2496.5	2493.89	-40.11	-16	-16	Pass
NVNT	g	2442	Ant1	2496.5-13000	3252.75	-37.76	-26	-26	Pass
NVNT	g	2472	Ant1	30-1000	188.11	-38.41	-26	-26	Pass
NVNT	g	2472	Ant1	1000-2387	2363.42	-41.21	-26	-26	Pass
NVNT	g	2472	Ant1	2387-2400	2389.02	-41.44	-16	-16	Pass
NVNT	g	2472	Ant1	2483.5-2496.5	2483.59	-24.37	-16	-16	Pass
NVNT	g	2472	Ant1	2496.5-13000	2496.5	-39.28	-26	-26	Pass
NVNT	n20	2412	Ant1	30-1000	705.12	-35.71	-26	-26	Pass
NVNT	n20	2412	Ant1	1000-2387	2380.07	-41.6	-26	-26	Pass
NVNT	n20	2412	Ant1	2387-2400	2399.86	-28.06	-16	-16	Pass
NVNT	n20	2412	Ant1	2483.5-2496.5	2495.15	-39.1	-16	-16	Pass
NVNT	n20	2412	Ant1	2496.5-13000	3221.24	-36.46	-26	-26	Pass
NVNT	n20	2442	Ant1	30-1000	113.42	-38.49	-26	-26	Pass
NVNT	n20	2442	Ant1	1000-2387	2378.68	-40.63	-26	-26	Pass
NVNT	n20	2442	Ant1	2387-2400	2399.87	-40.42	-16	-16	Pass
NVNT	n20	2442	Ant1	2483.5-2496.5	2492.72	-40.04	-16	-16	Pass
NVNT	n20	2442	Ant1	2496.5-13000	3252.75	-38.19	-26	-26	Pass
NVNT	n20	2472	Ant1	30-1000	182.29	-38.05	-26	-26	Pass
NVNT	n20	2472	Ant1	1000-2387	2338.46	-41.46	-26	-26	Pass
NVNT	n20	2472	Ant1	2387-2400	2399.88	-40.1	-16	-16	Pass
NVNT	n20	2472	Ant1	2483.5-2496.5	2483.6	-26.32	-16	-16	Pass
NVNT	n20	2472	Ant1	2496.5-13000	3294.77	-39.86	-26	-26	Pass
NVNT	n40	2422	Ant1	30-1000	110.51	-38.06	-26	-26	Pass
NVNT	n40	2422	Ant1	1000-2387	2387	-40.74	-26	-26	Pass
NVNT	n40	2422	Ant1	2387-2400	2399.8	-29.24	-16	-16	Pass
NVNT	n40	2422	Ant1	2483.5-2496.5	2493.43	-39.32	-16	-16	Pass
NVNT	n40	2422	Ant1	2496.5-13000	3231.75	-36.3	-26	-26	Pass
NVNT	n40	2442	Ant1	30-1000	207.51	-38.21	-26	-26	Pass
NVNT	n40	2442	Ant1	1000-2387	2367.58	-41.6	-26	-26	Pass
NVNT	n40	2442	Ant1	2387-2400	2390.65	-39.63	-16	-16	Pass
NVNT	n40	2442	Ant1	2483.5-2496.5	2489.53	-39.9	-16	-16	Pass
NVNT	n40	2442	Ant1	2496.5-13000	3252.75	-37.84	-26	-26	Pass

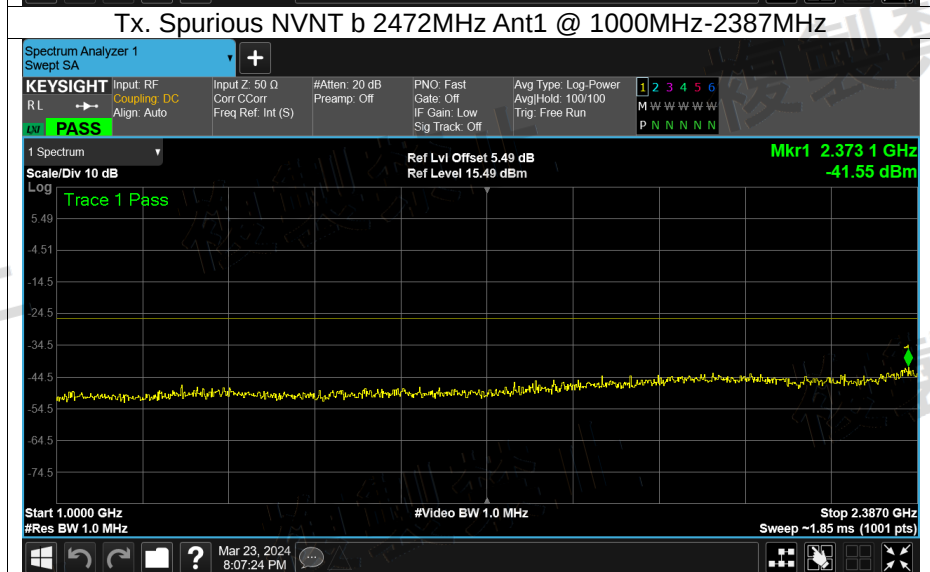
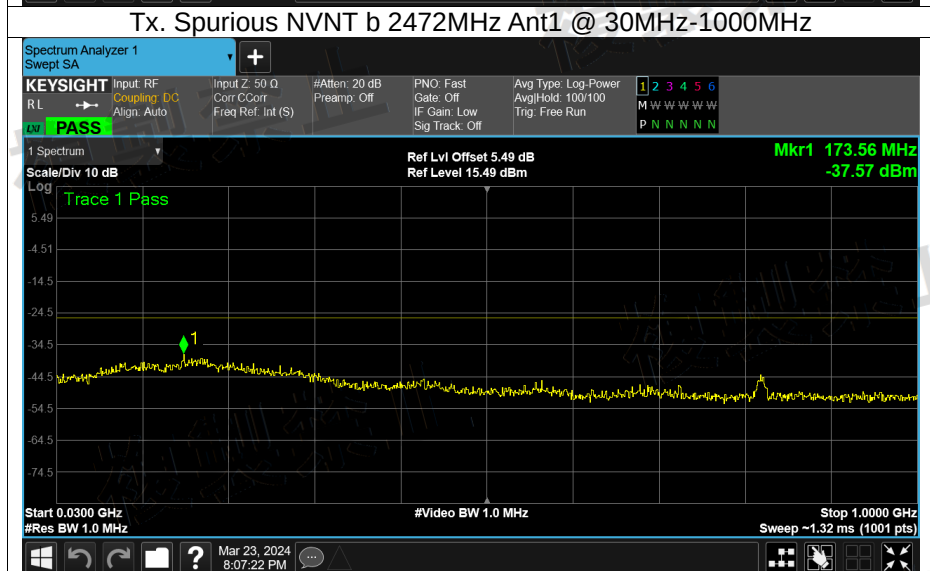
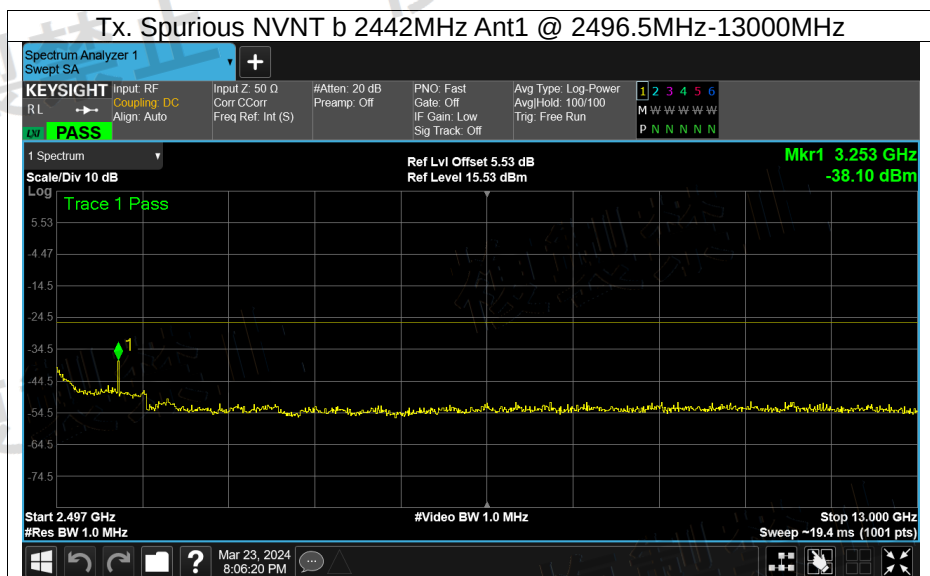


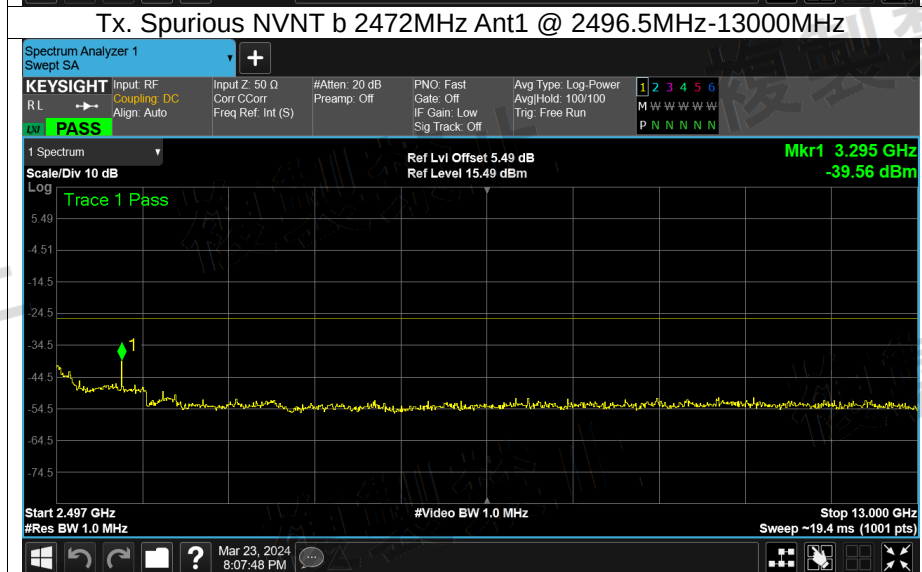
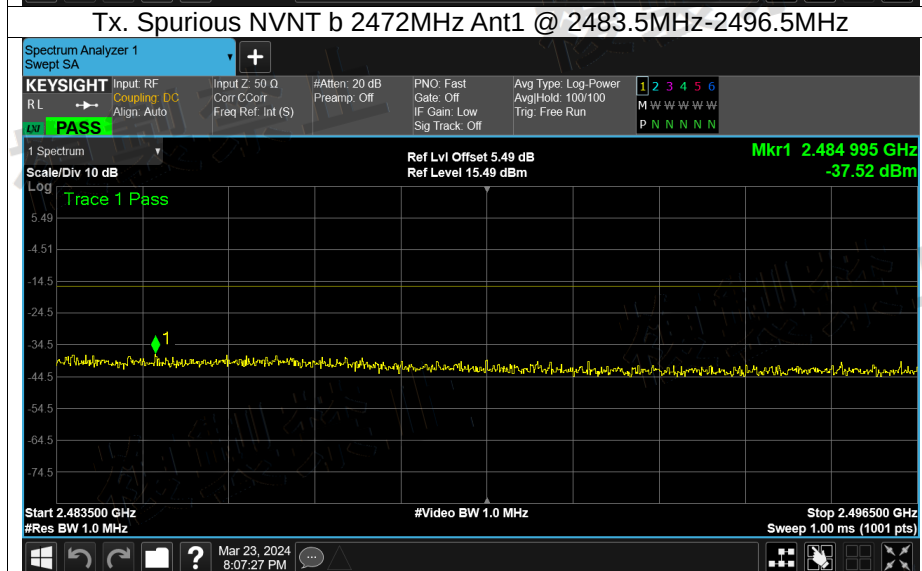
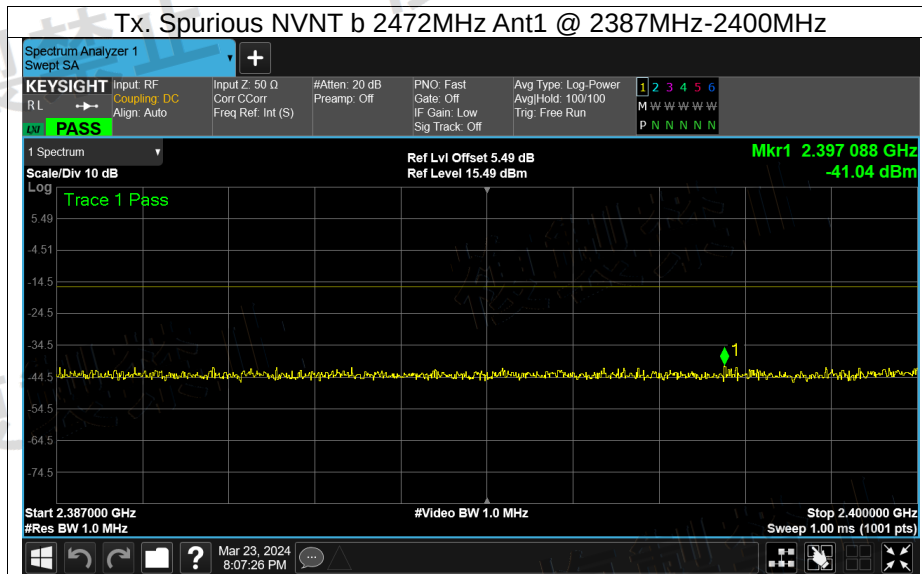
NVNT	n40	2462	Ant1	30-1000	178.41	-38.02	-26	-26	Pass
NVNT	n40	2462	Ant1	1000-2387	2364.81	-41.87	-26	-26	Pass
NVNT	n40	2462	Ant1	2387-2400	2392.98	-40.33	-16	-16	Pass
NVNT	n40	2462	Ant1	2483.5-2496.5	2483.73	-28.37	-16	-16	Pass
NVNT	n40	2462	Ant1	2496.5-13000	2496.5	-37.48	-26	-26	Pass

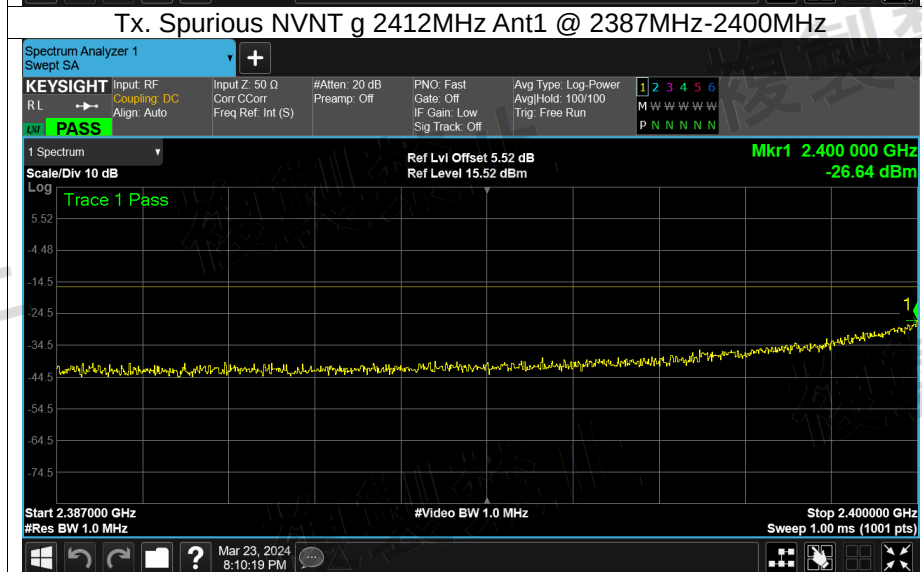
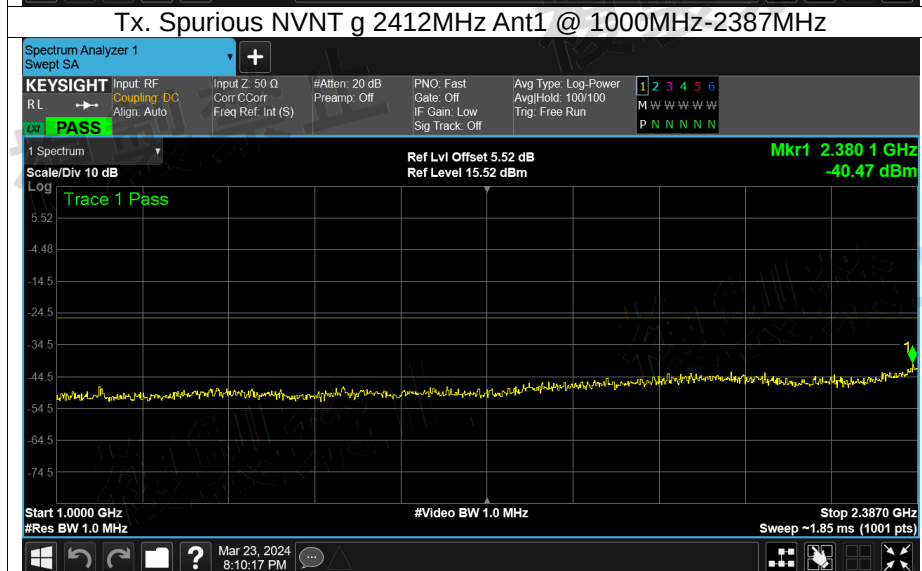
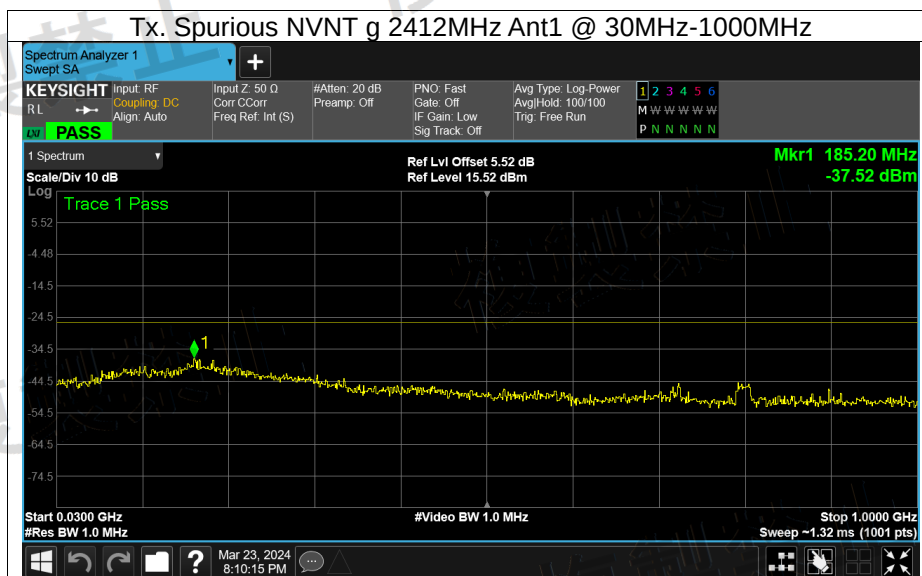


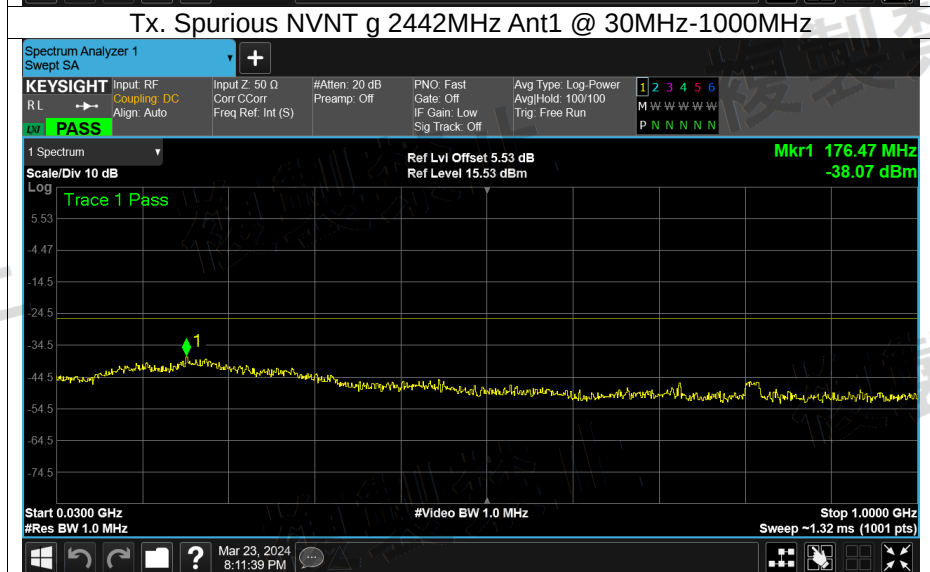
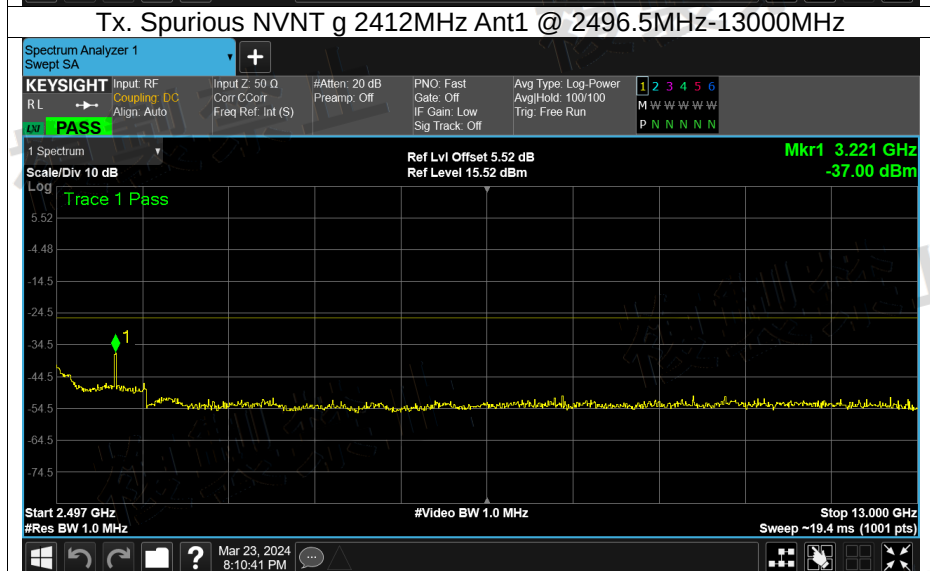
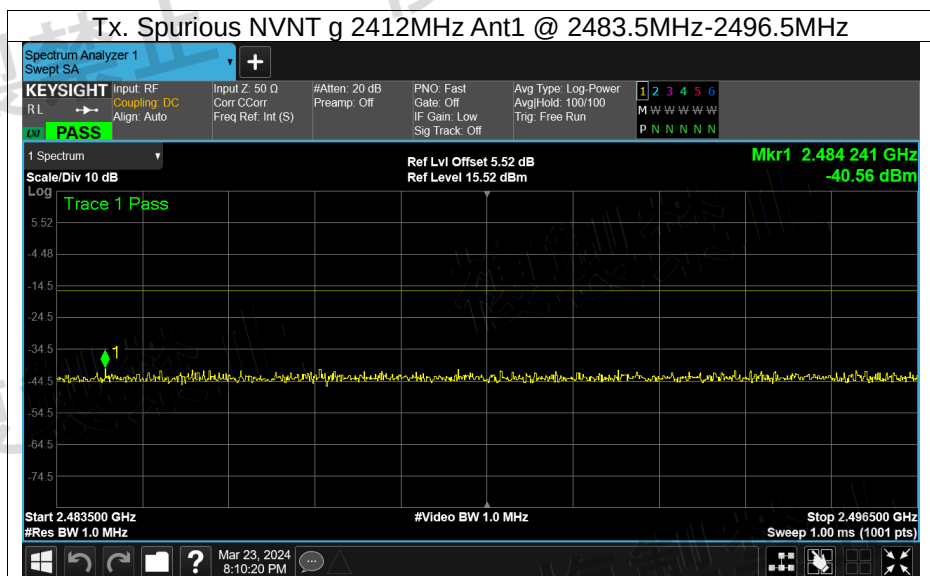


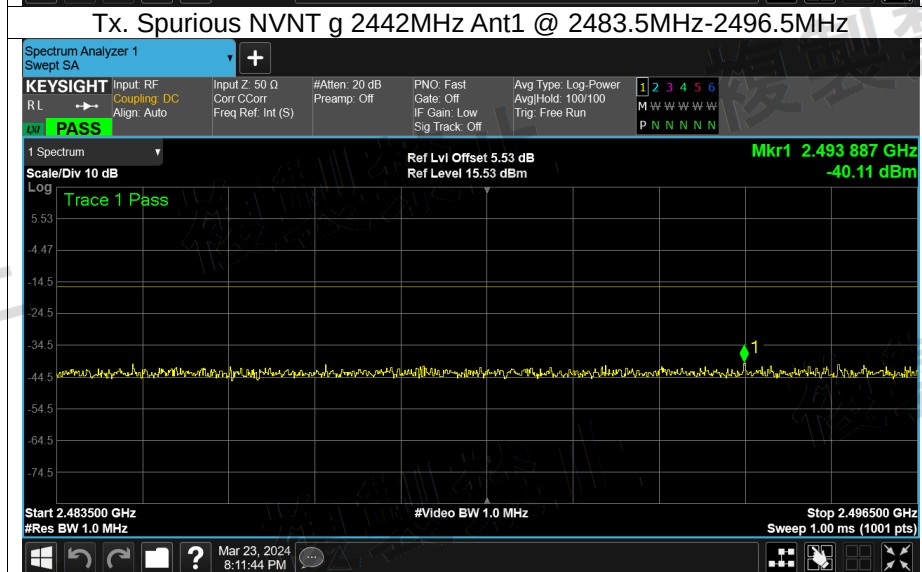
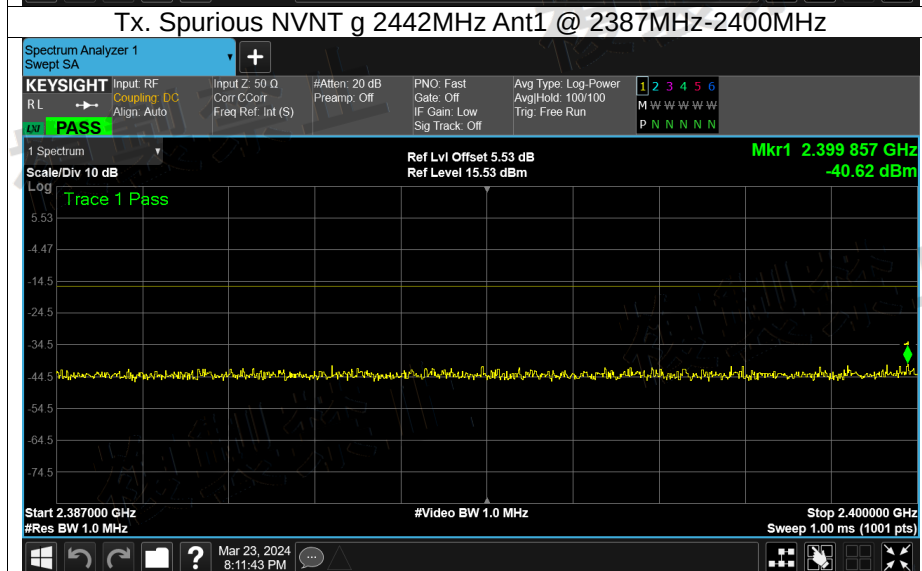
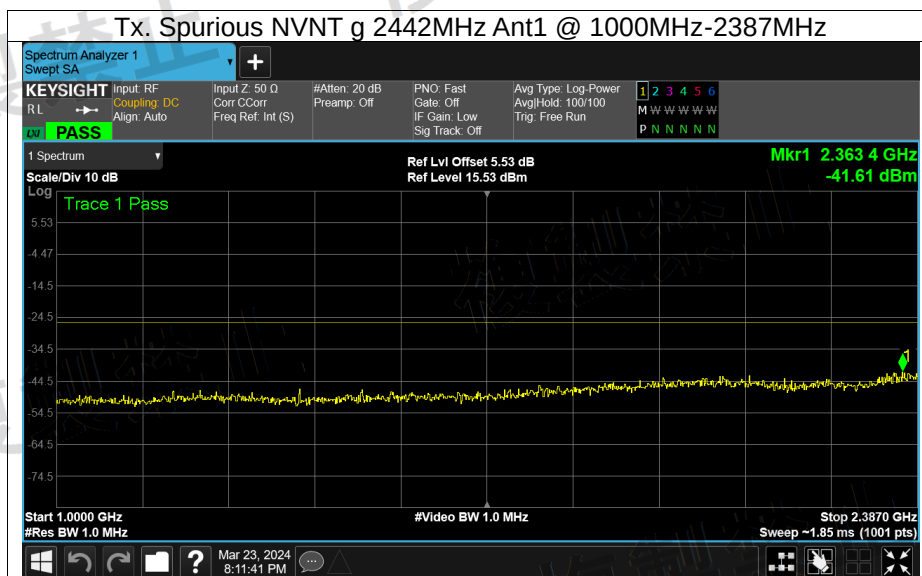


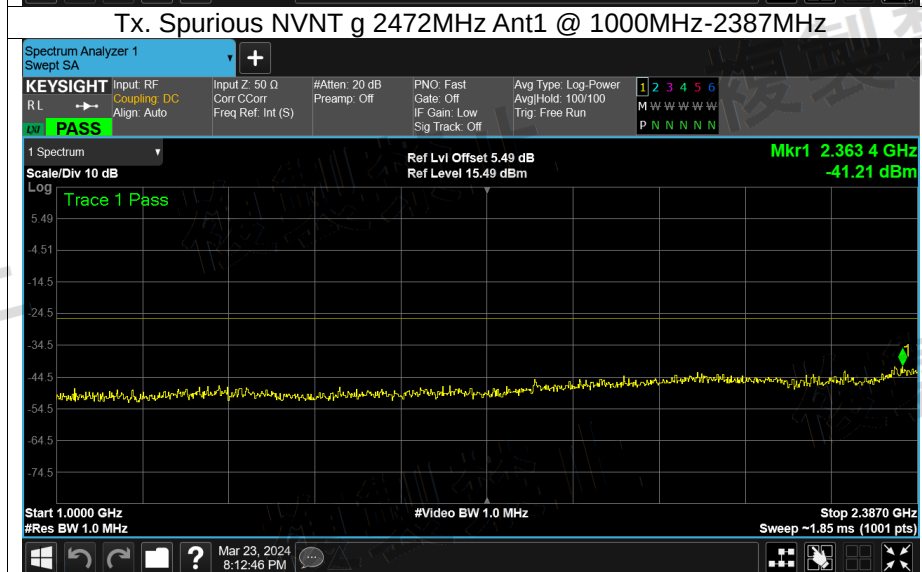
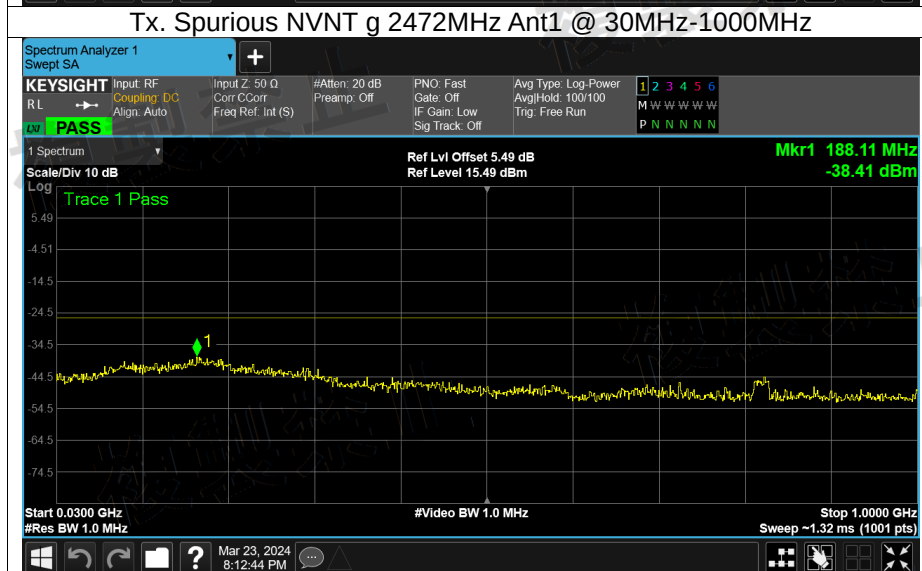
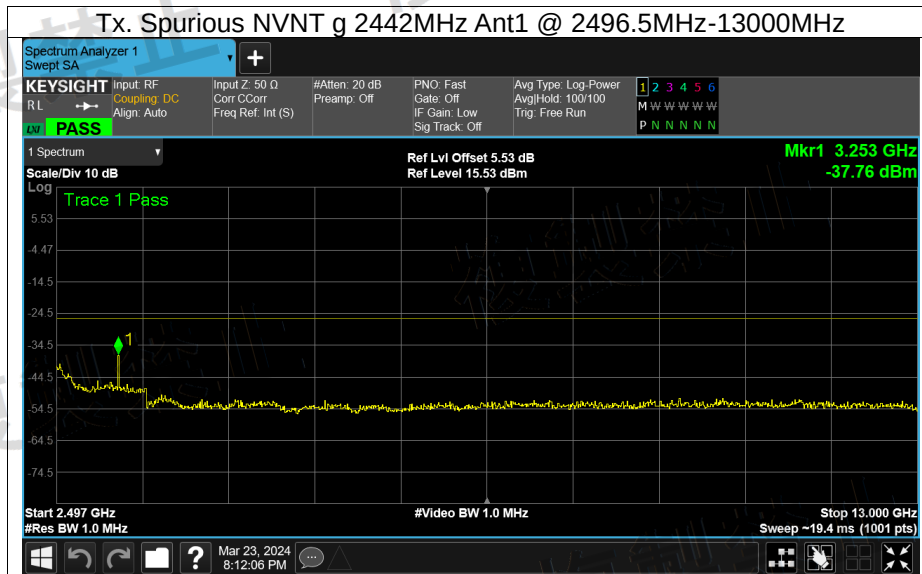


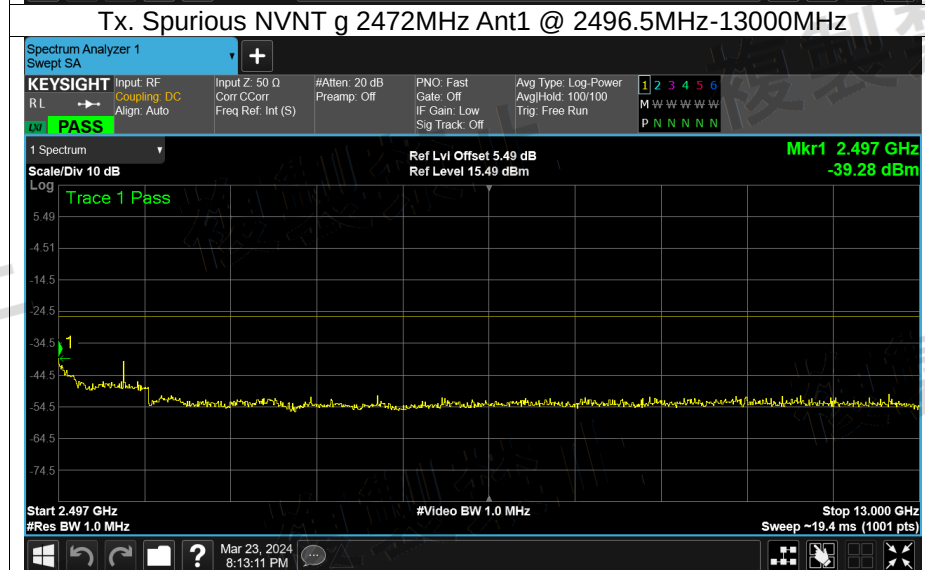
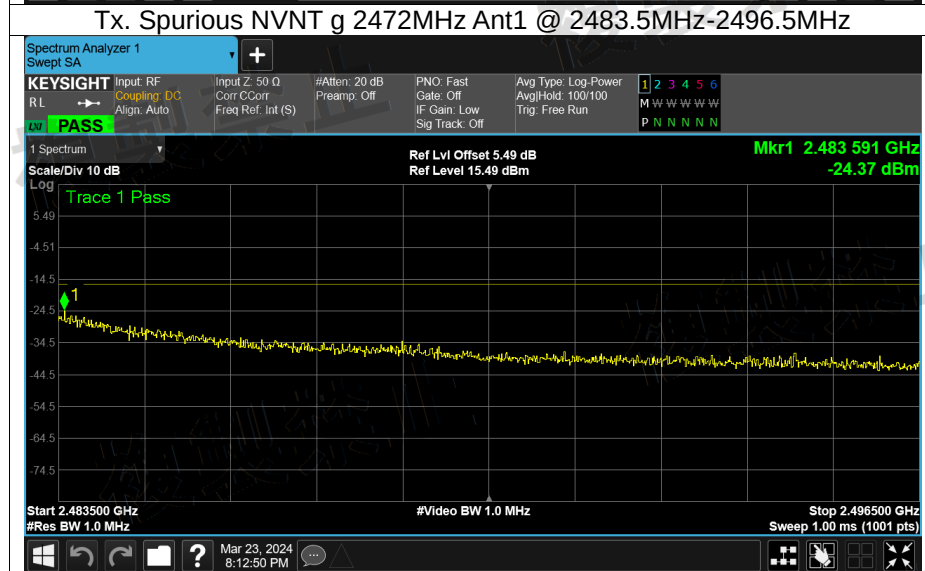
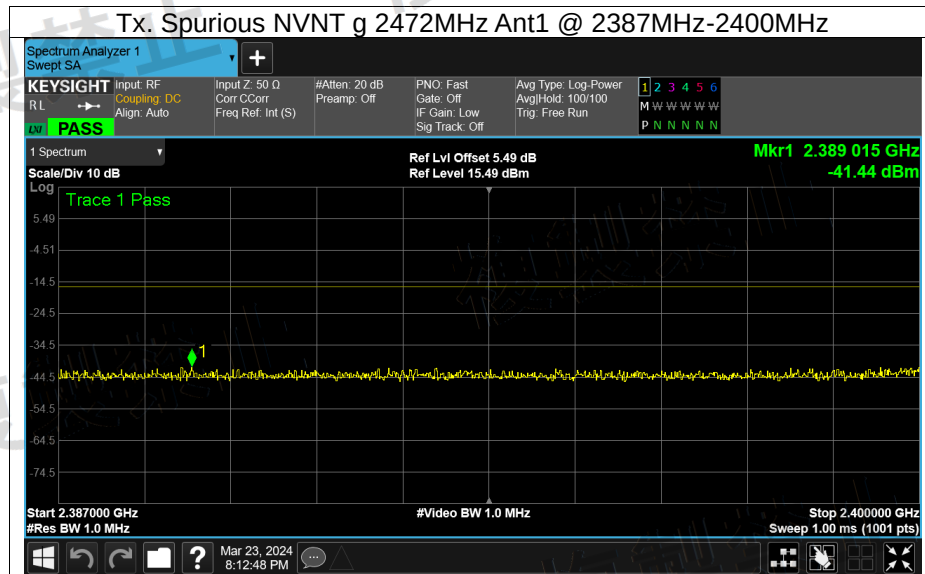


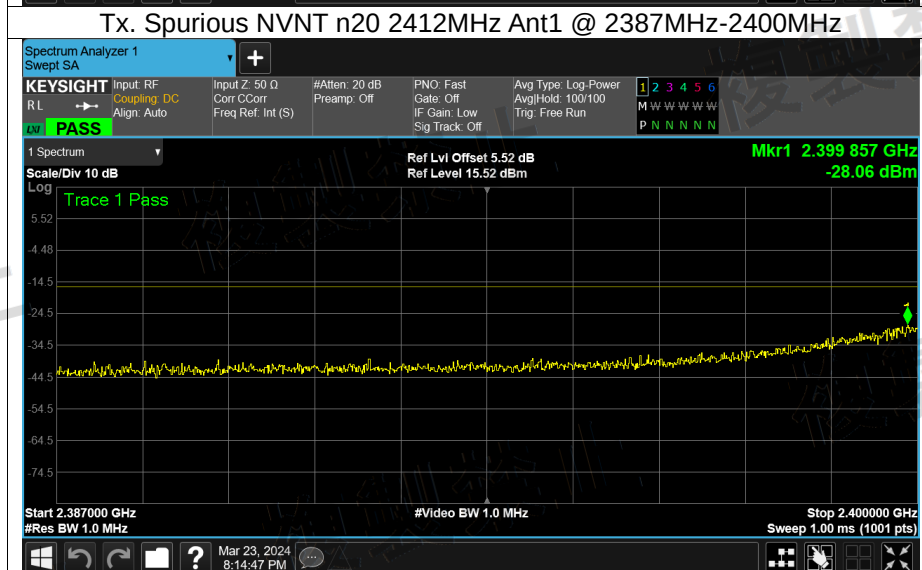
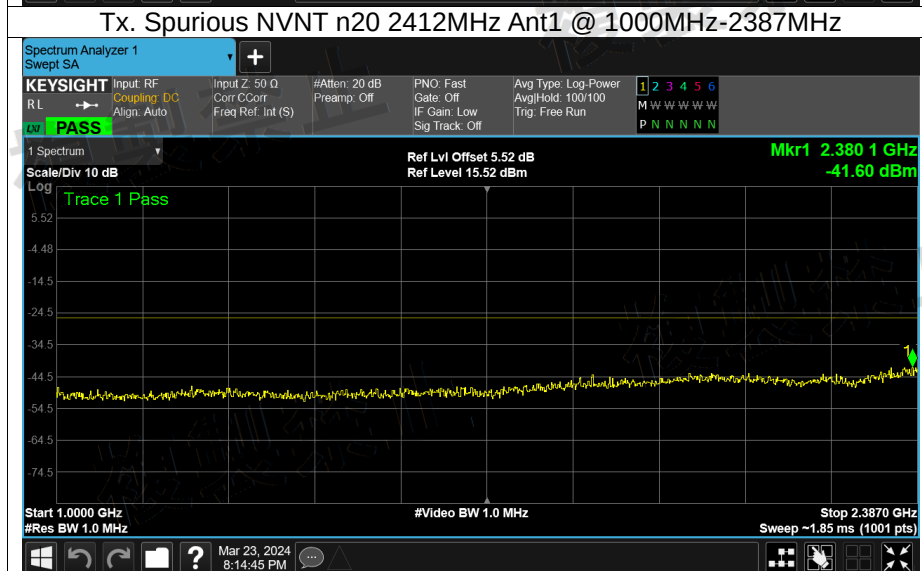
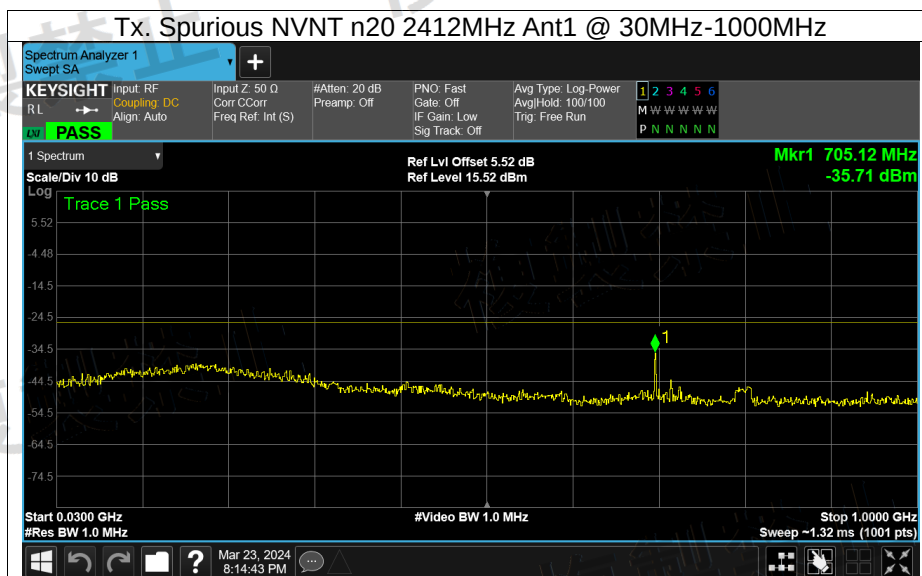


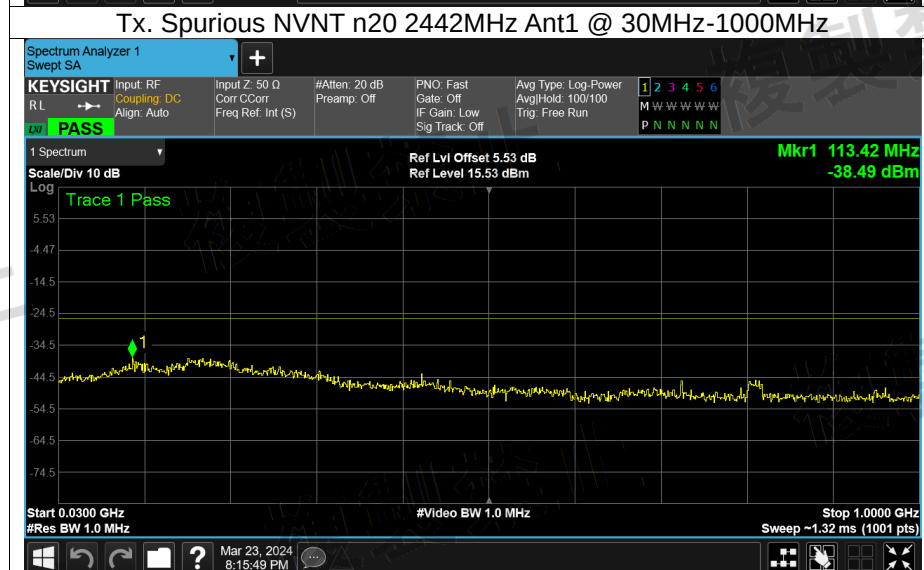
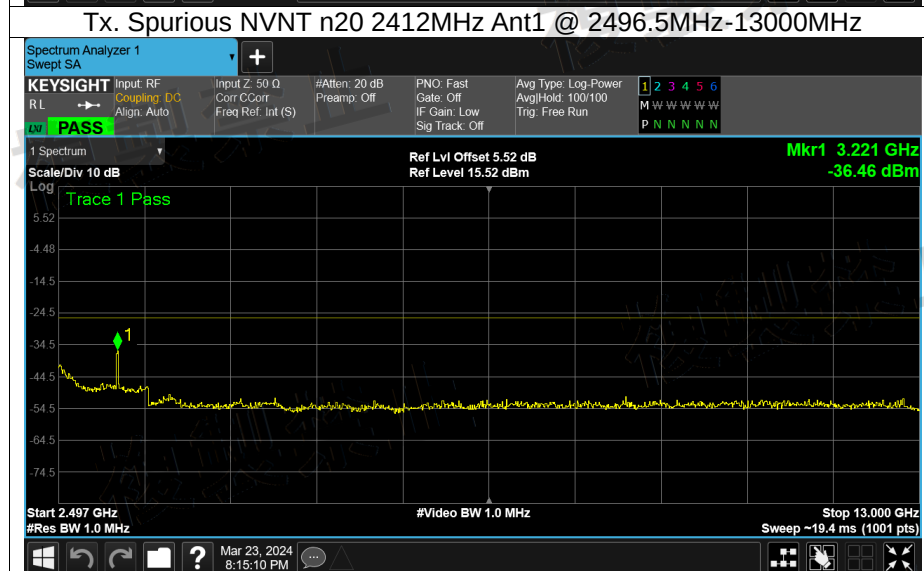
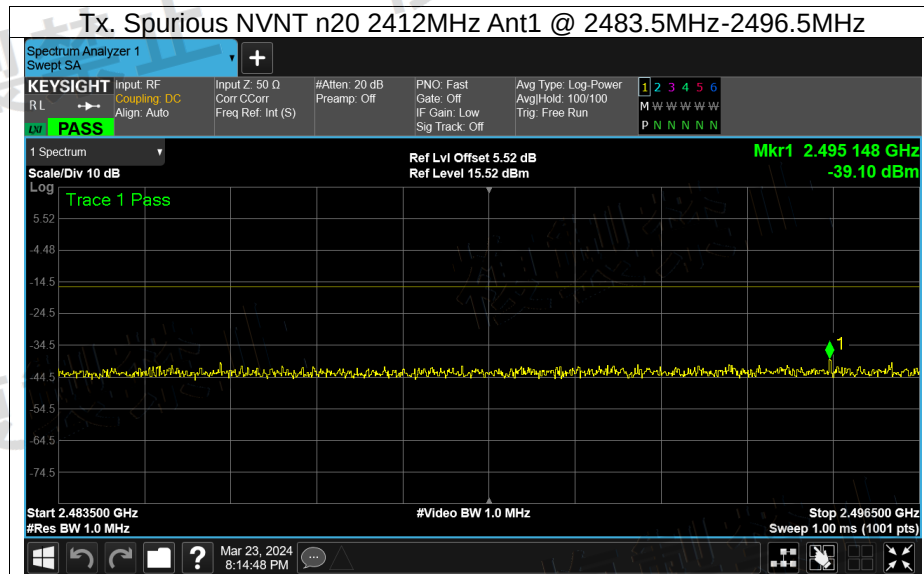


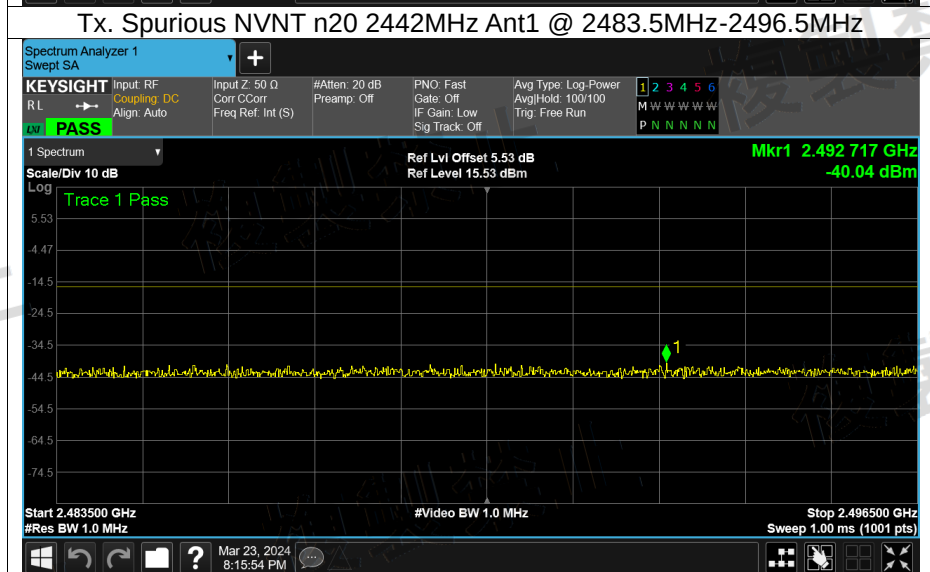
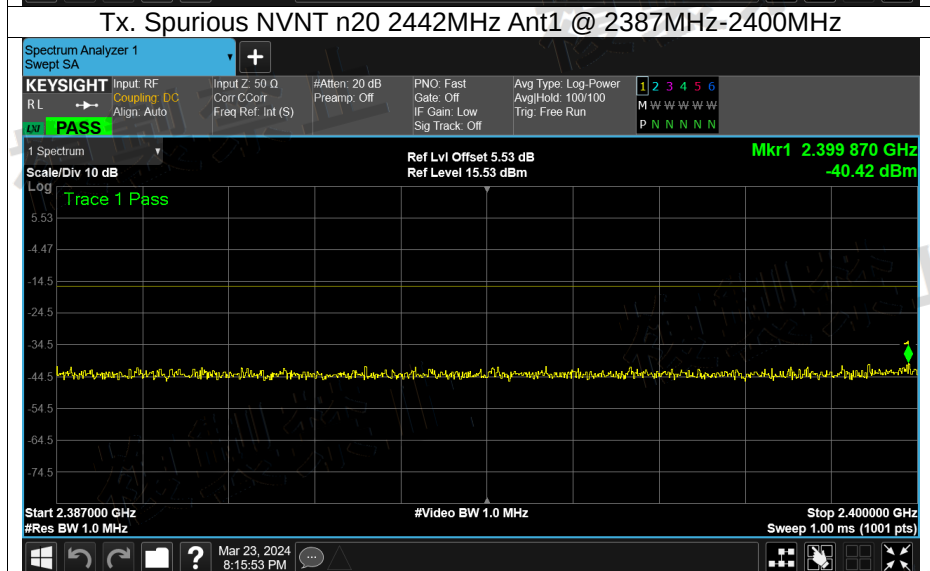
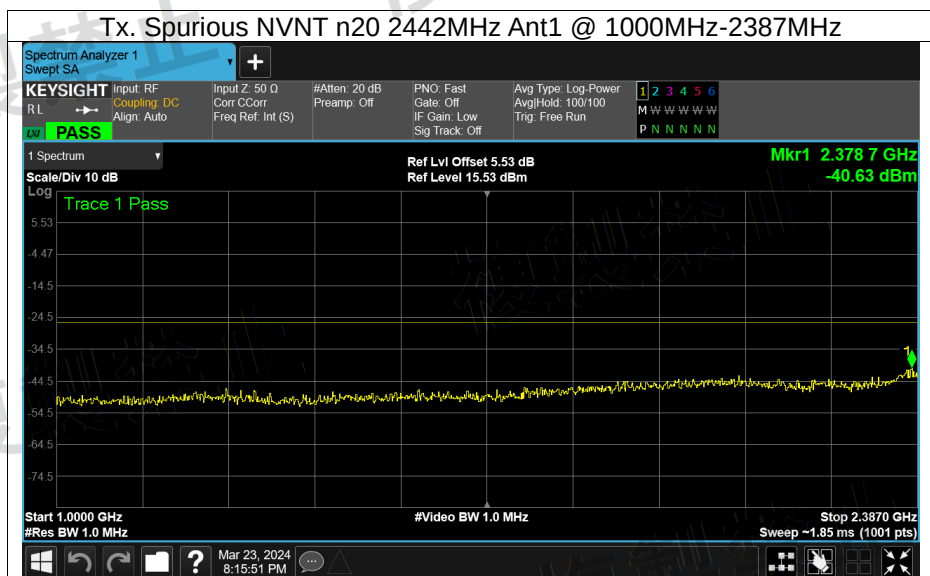


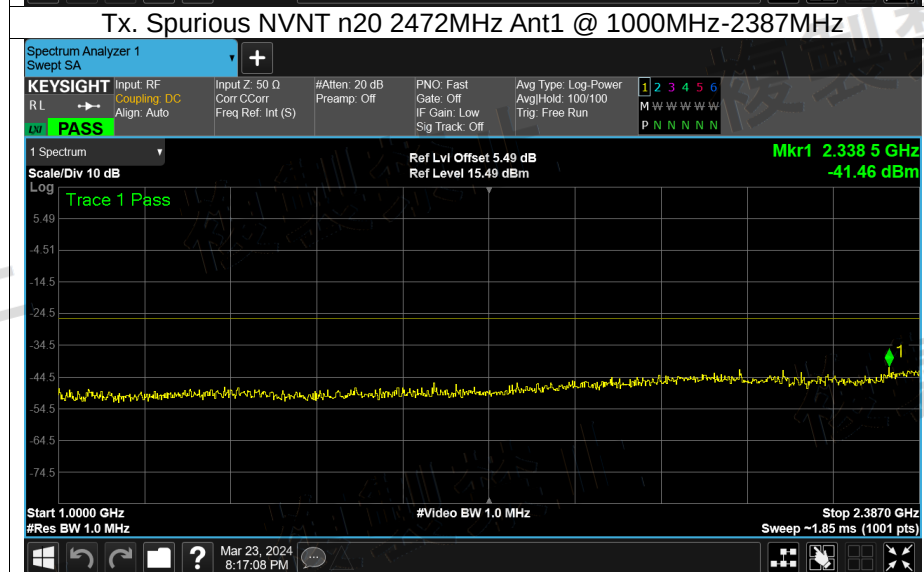
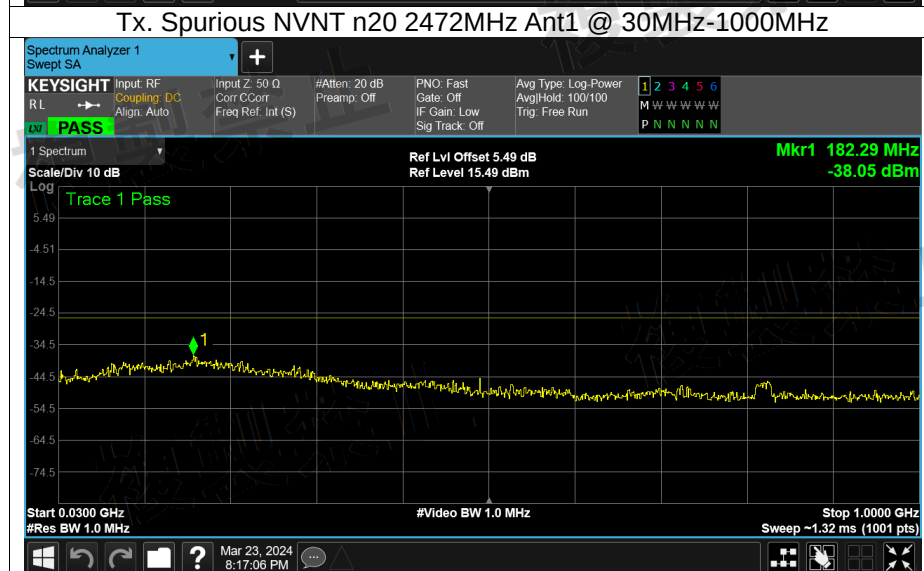
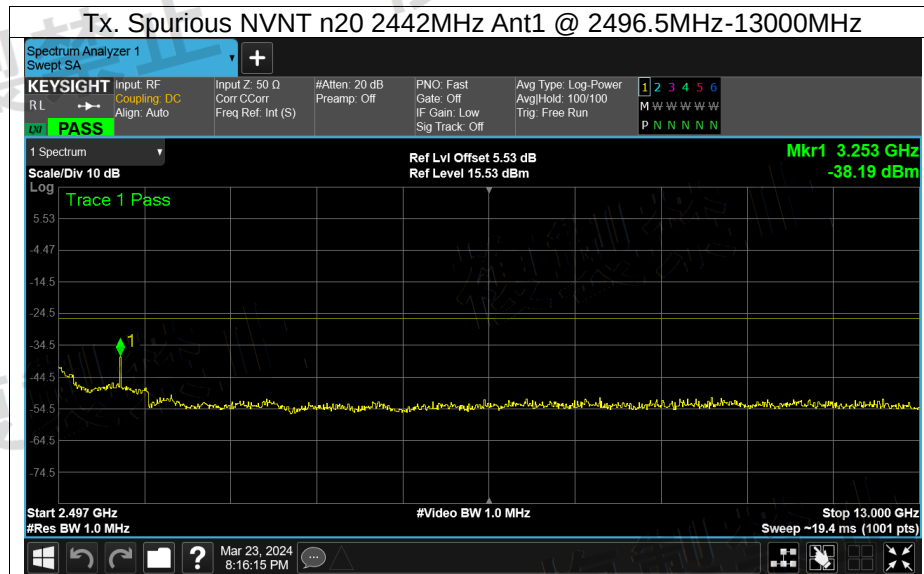


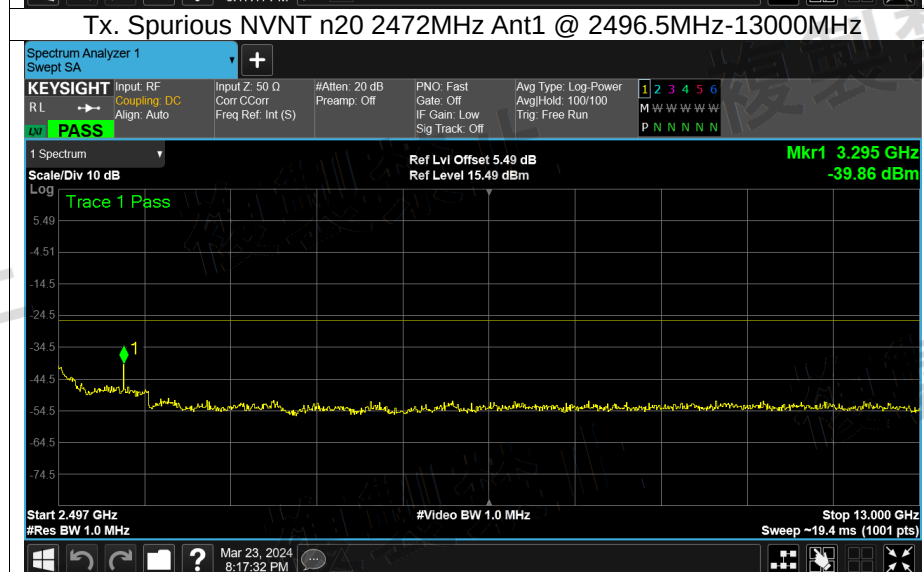
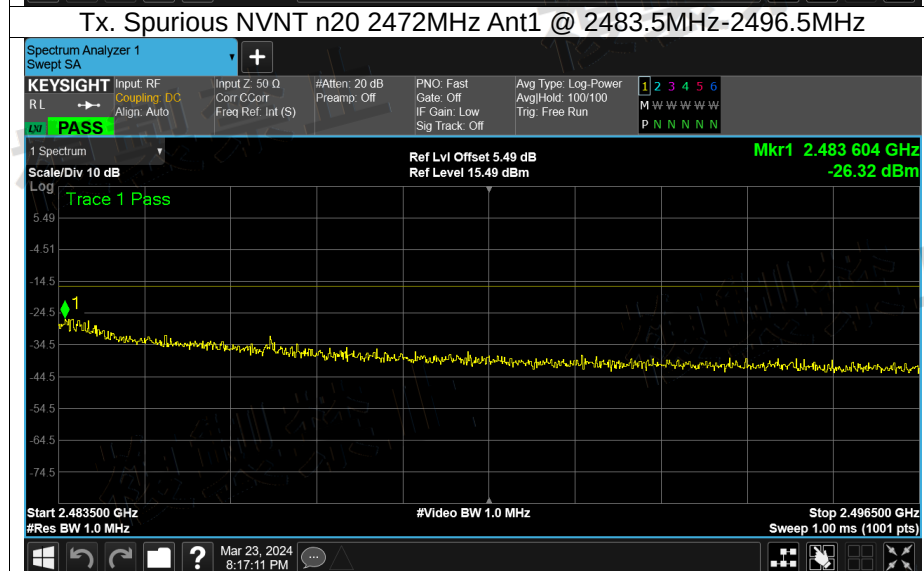
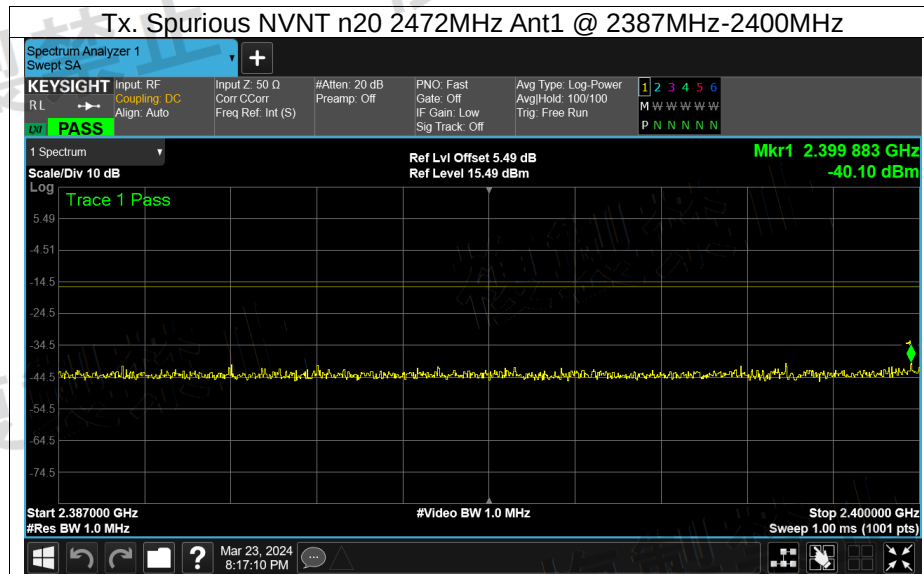


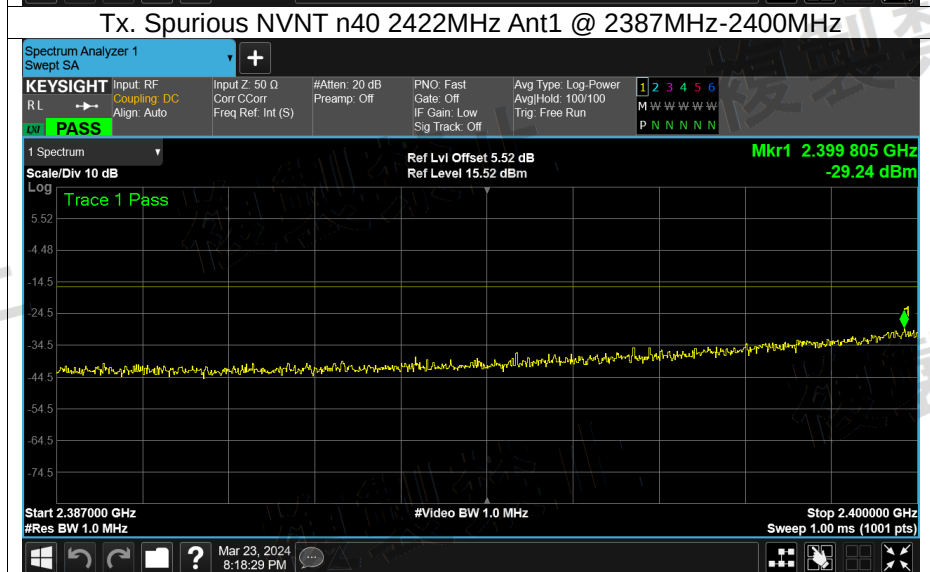
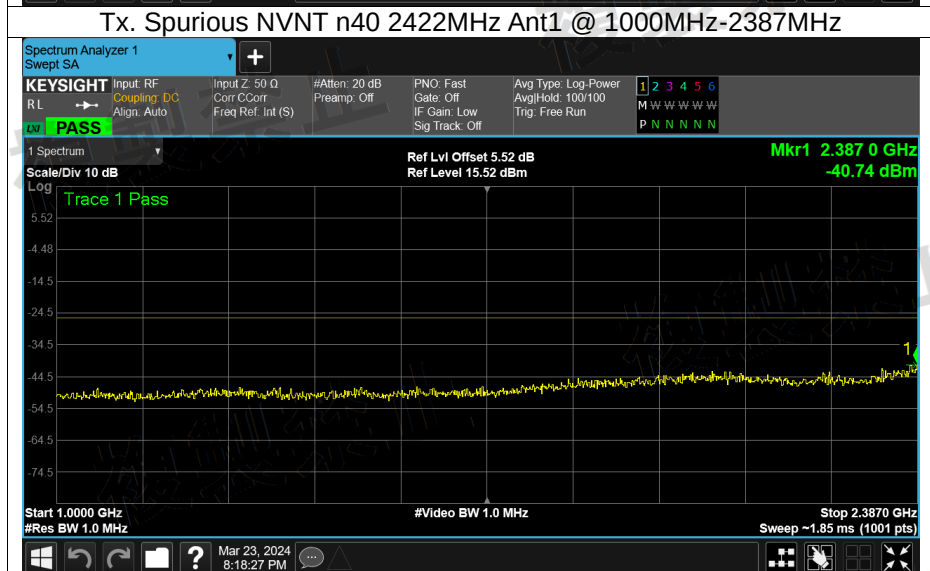
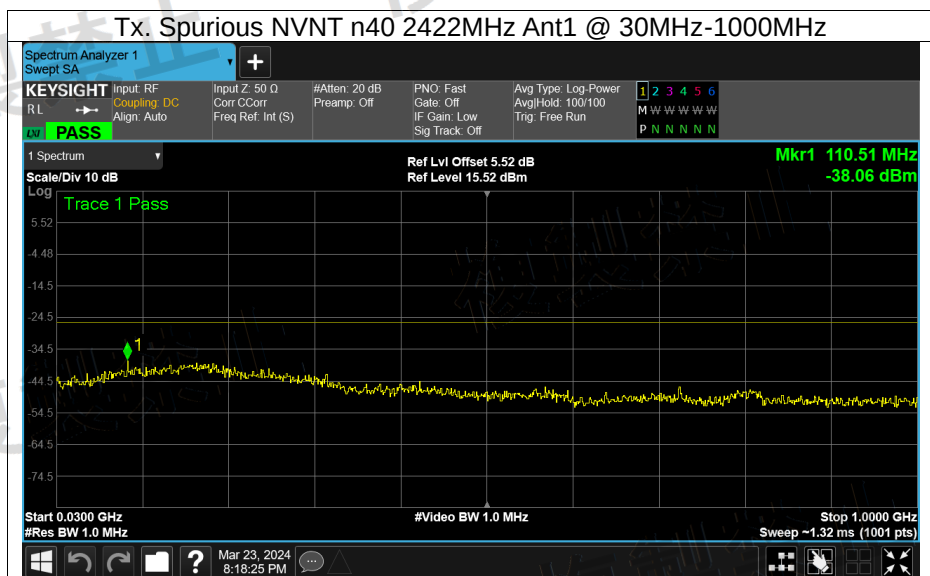


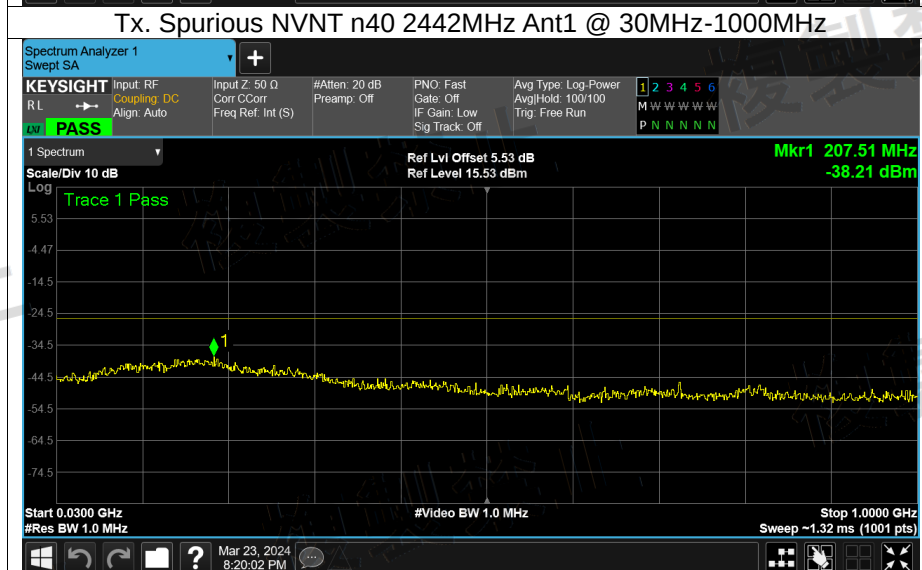
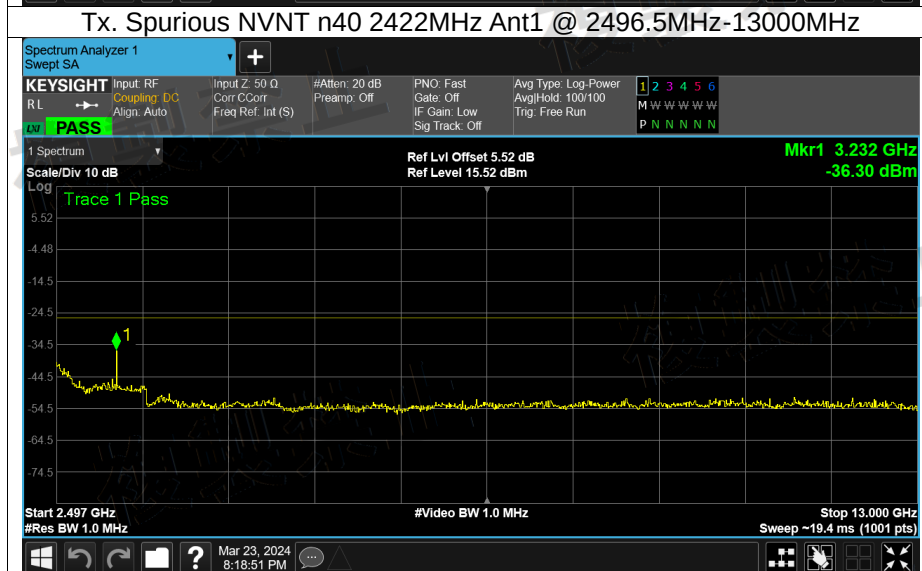
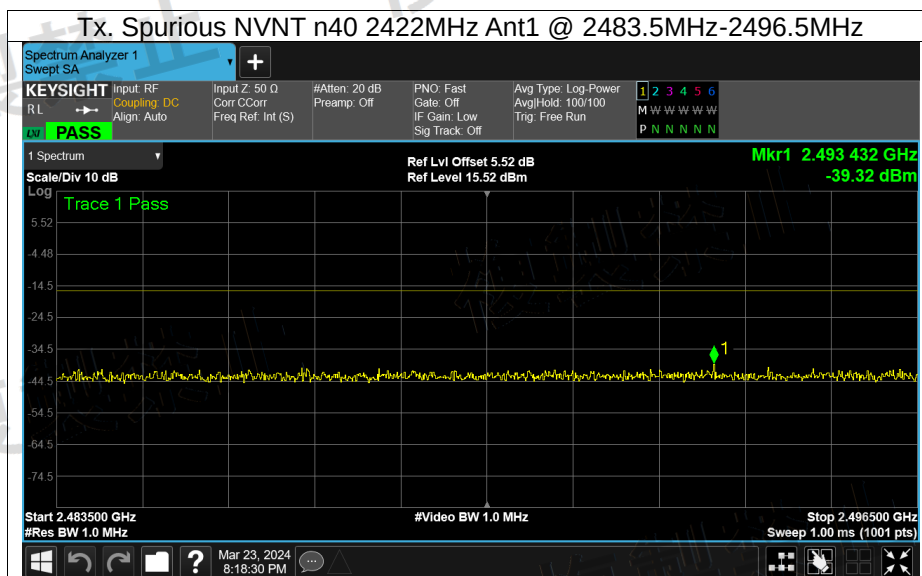


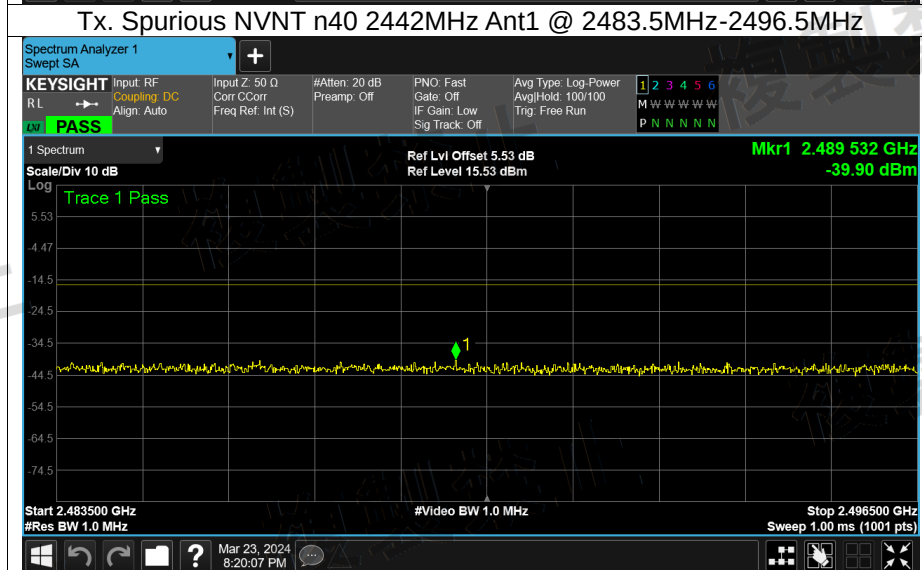
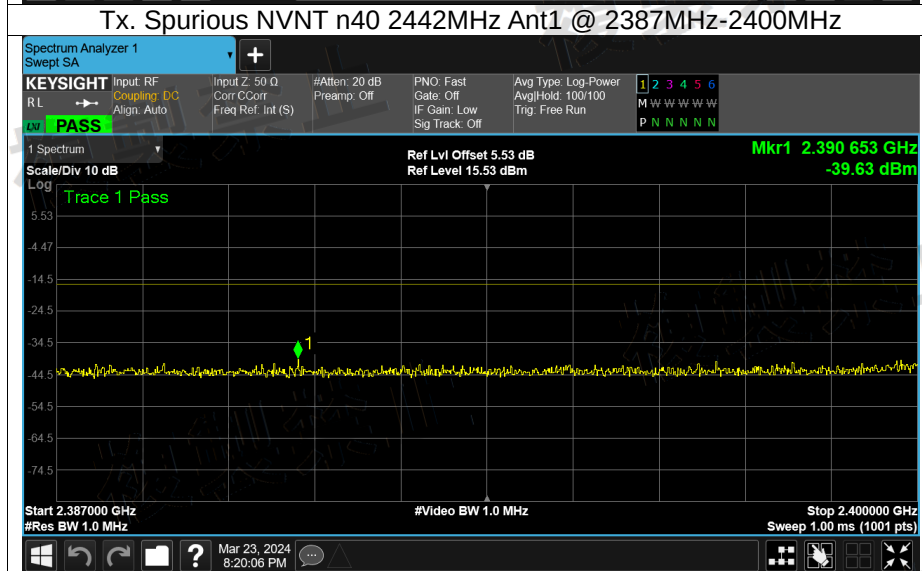
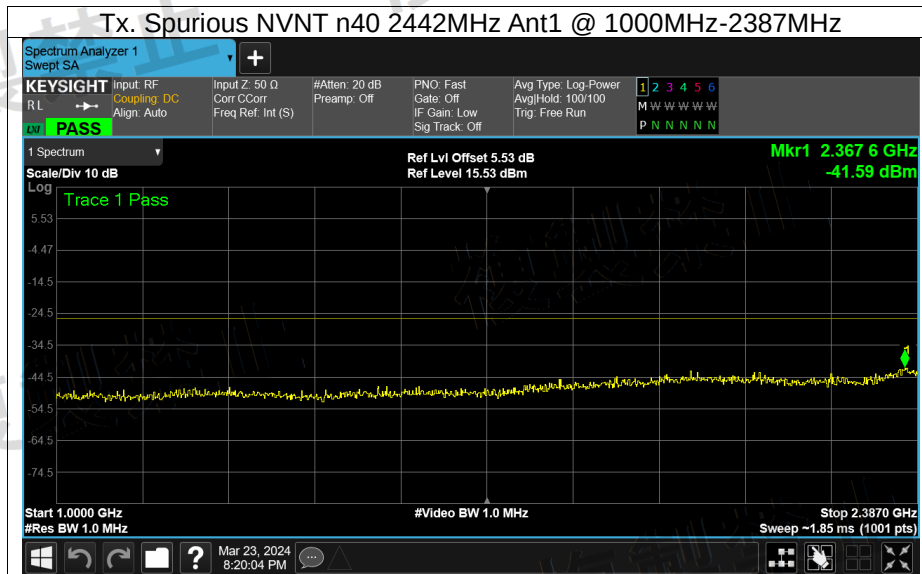


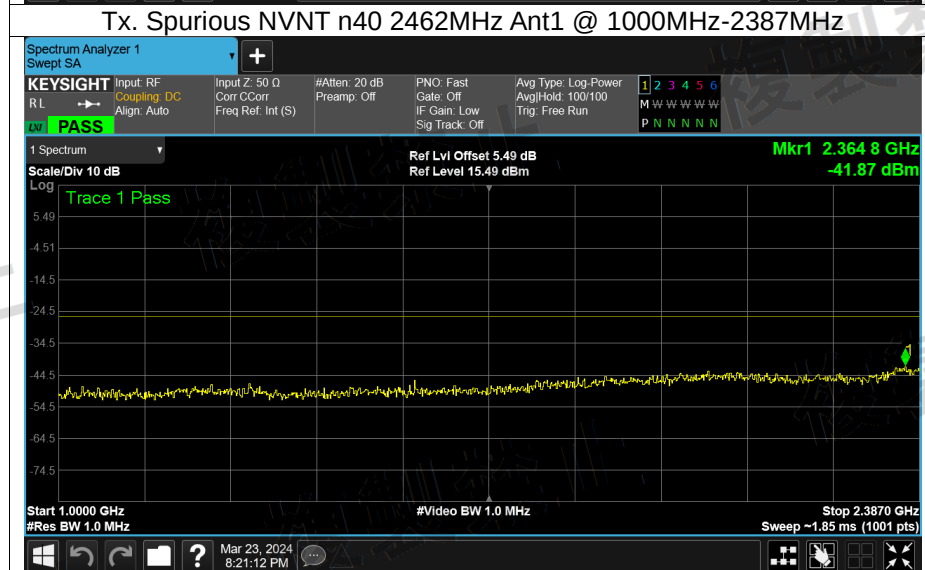
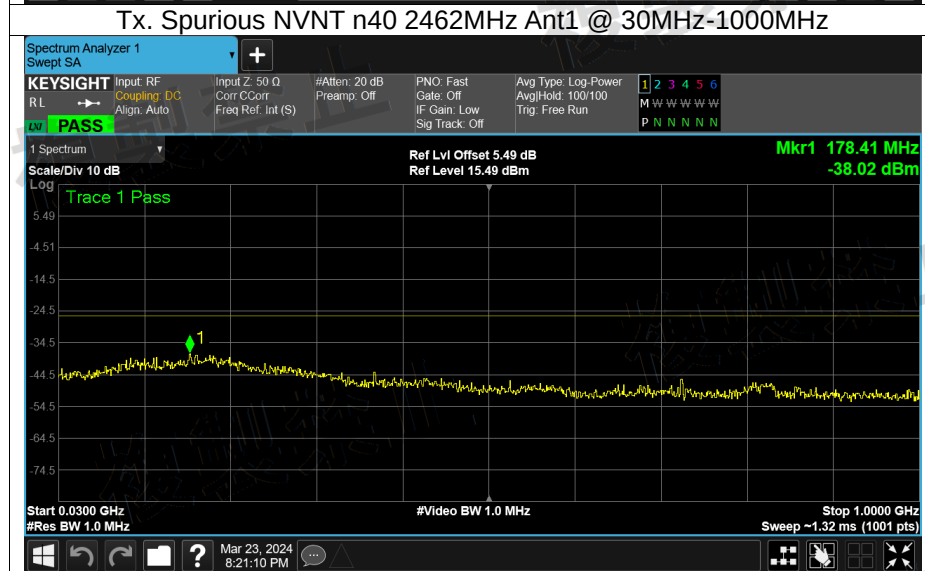
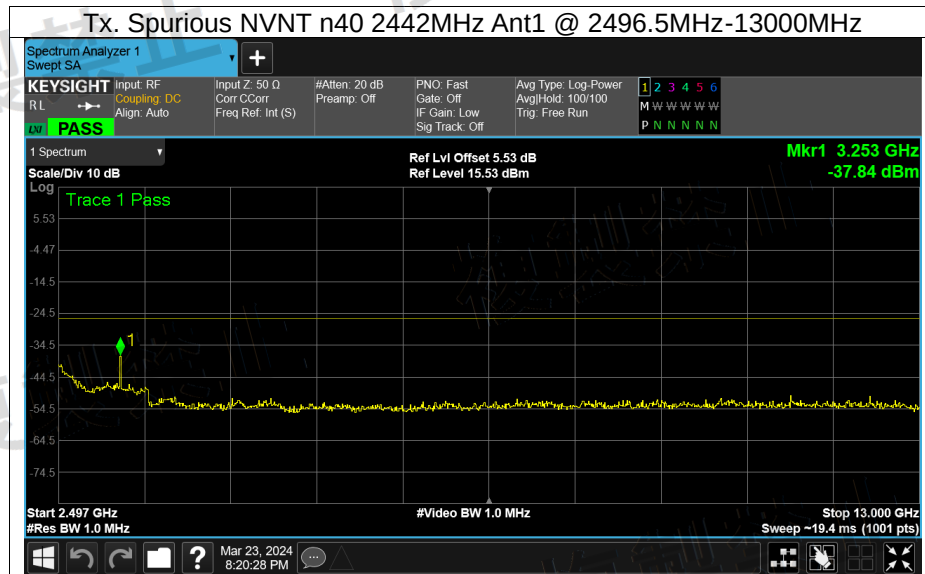


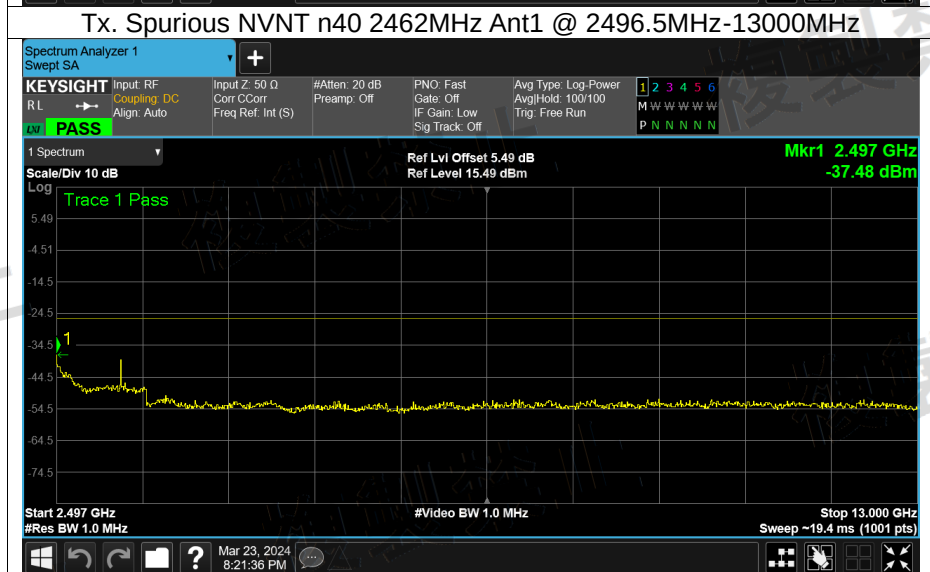
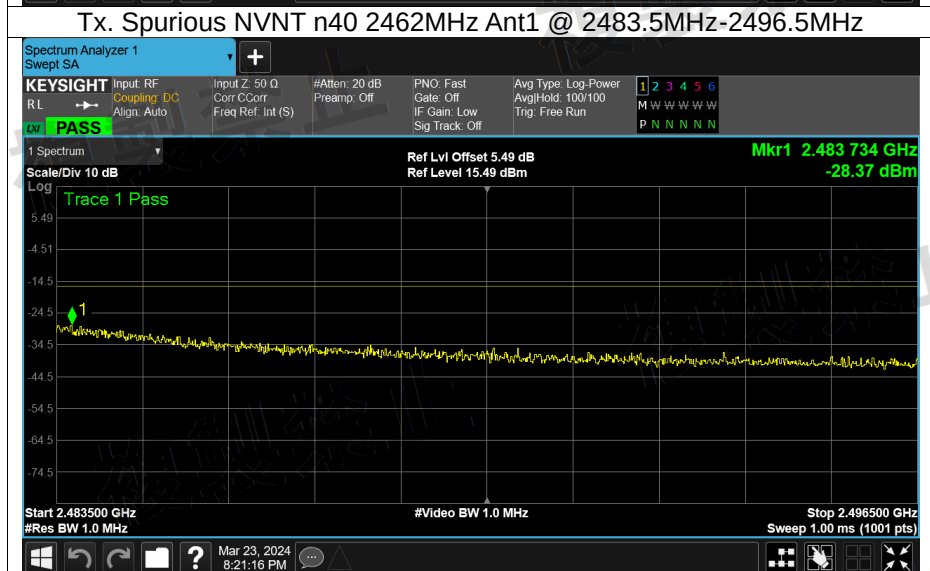
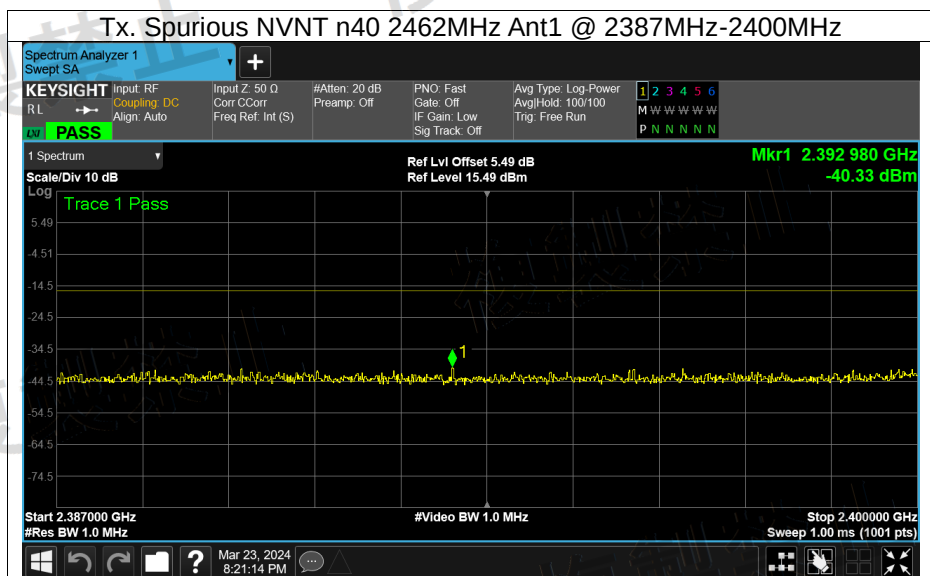








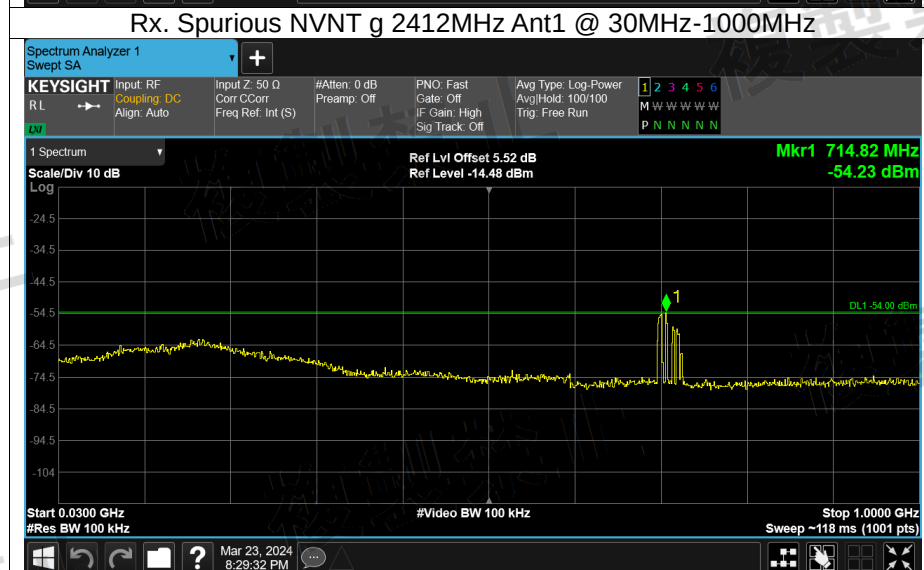
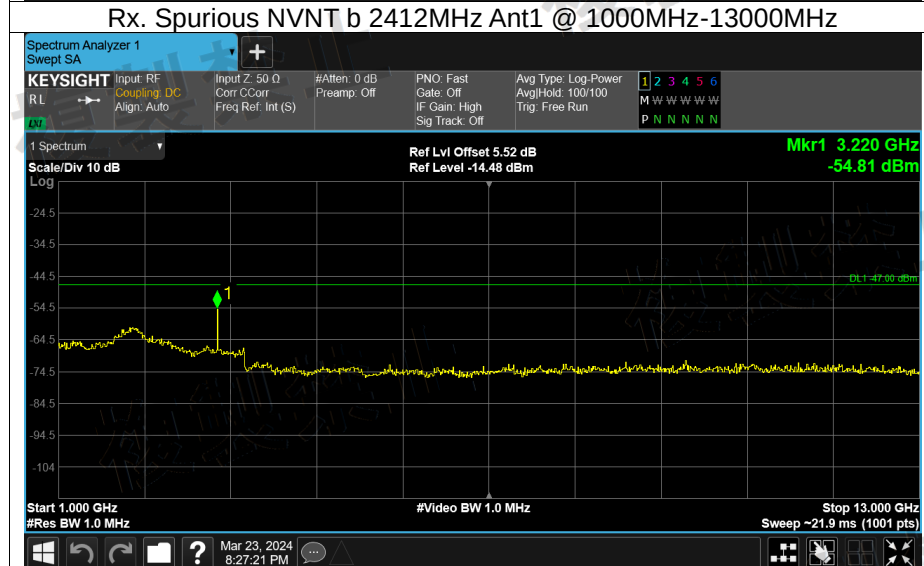
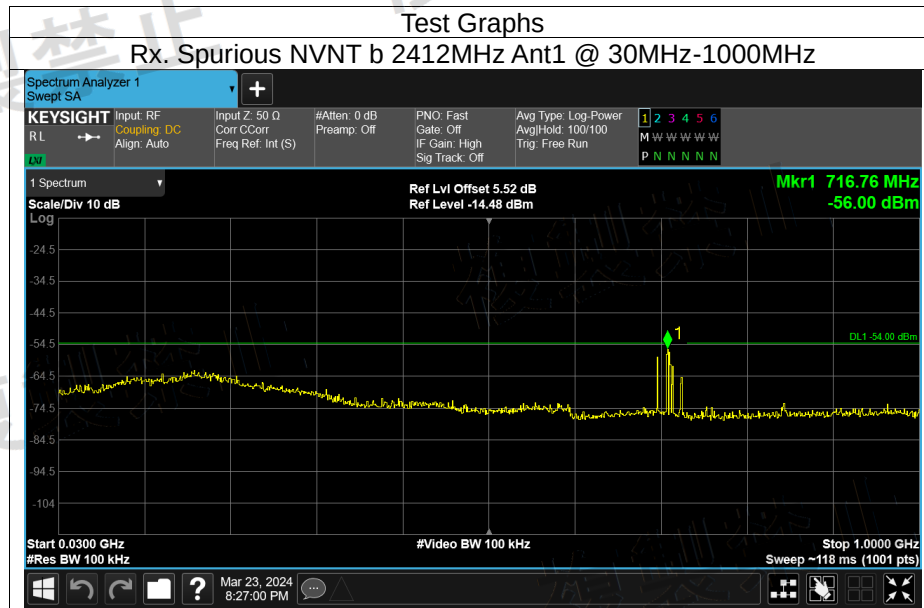


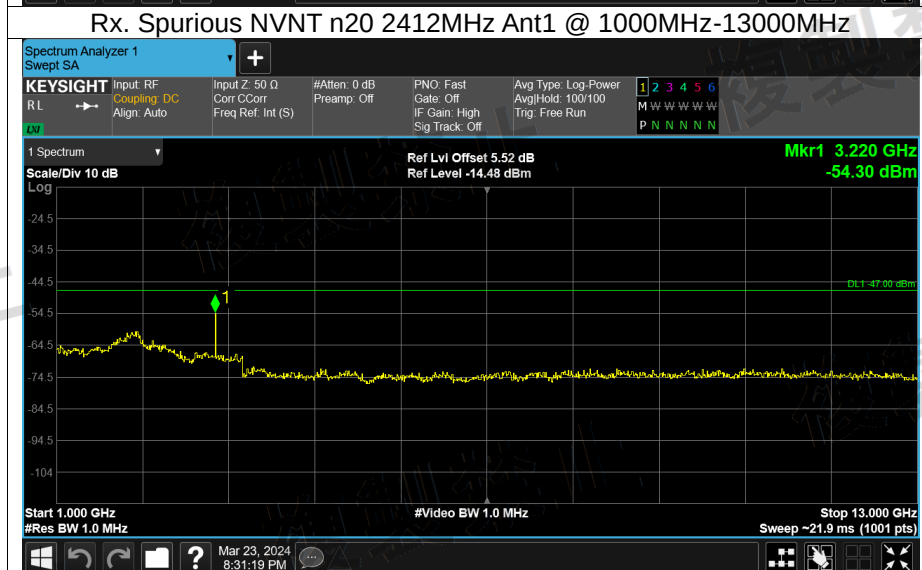
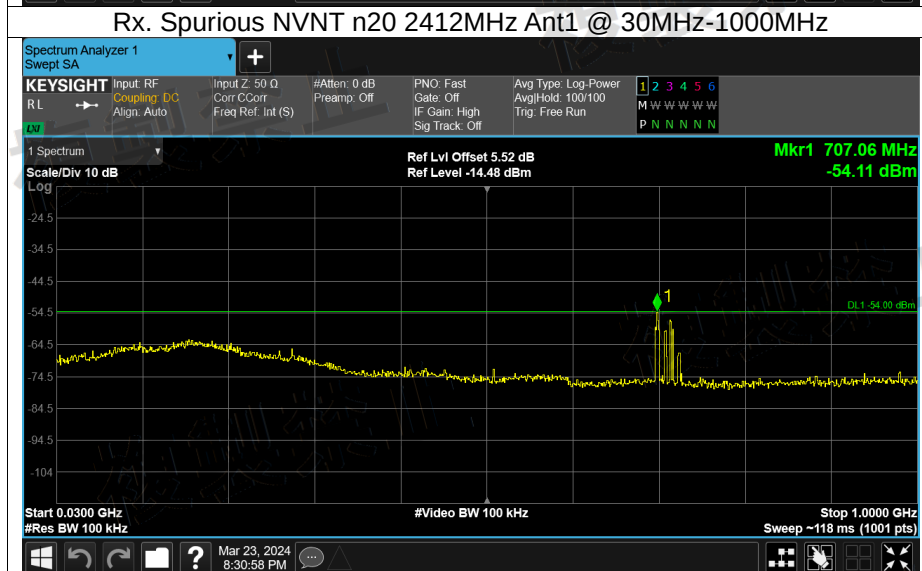
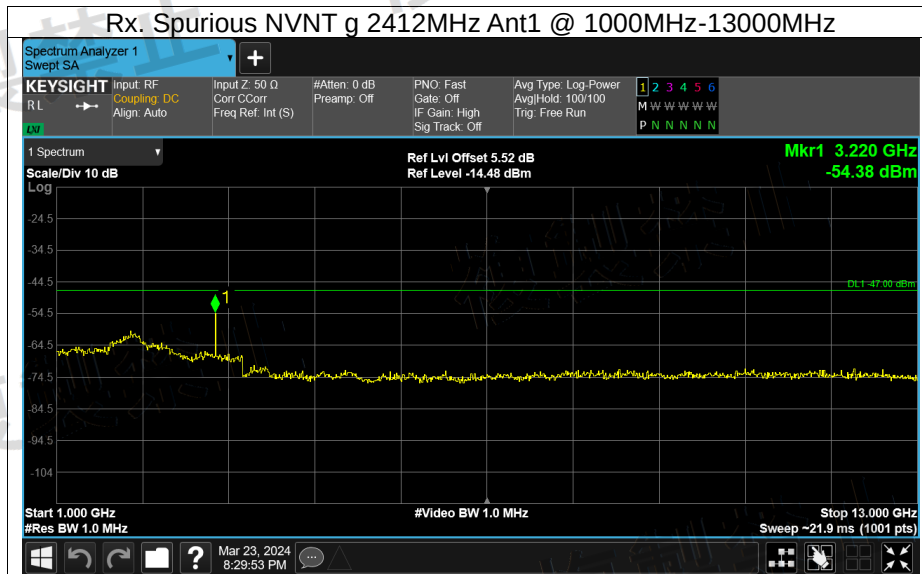


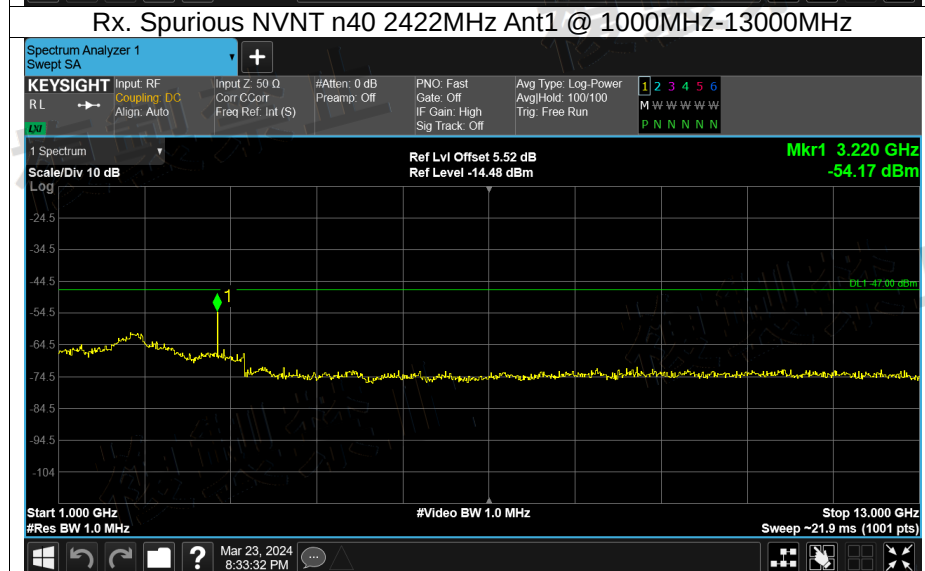
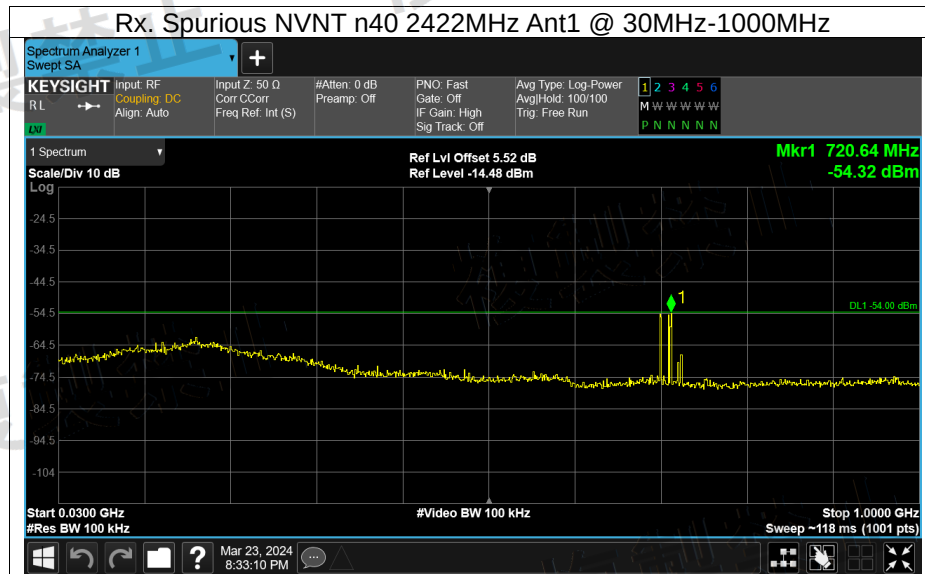


RX SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	30-1000	716.76	-56	-54	Pass
NVNT	b	2412	Ant1	1000-13000	3220	-54.81	-47	Pass
NVNT	g	2412	Ant1	30-1000	714.82	-54.23	-54	Pass
NVNT	g	2412	Ant1	1000-13000	3220	-54.38	-47	Pass
NVNT	n20	2412	Ant1	30-1000	707.06	-54.11	-54	Pass
NVNT	n20	2412	Ant1	1000-13000	3220	-54.3	-47	Pass
NVNT	n40	2422	Ant1	30-1000	720.64	-54.32	-54	Pass
NVNT	n40	2422	Ant1	1000-13000	3220	-54.17	-47	Pass



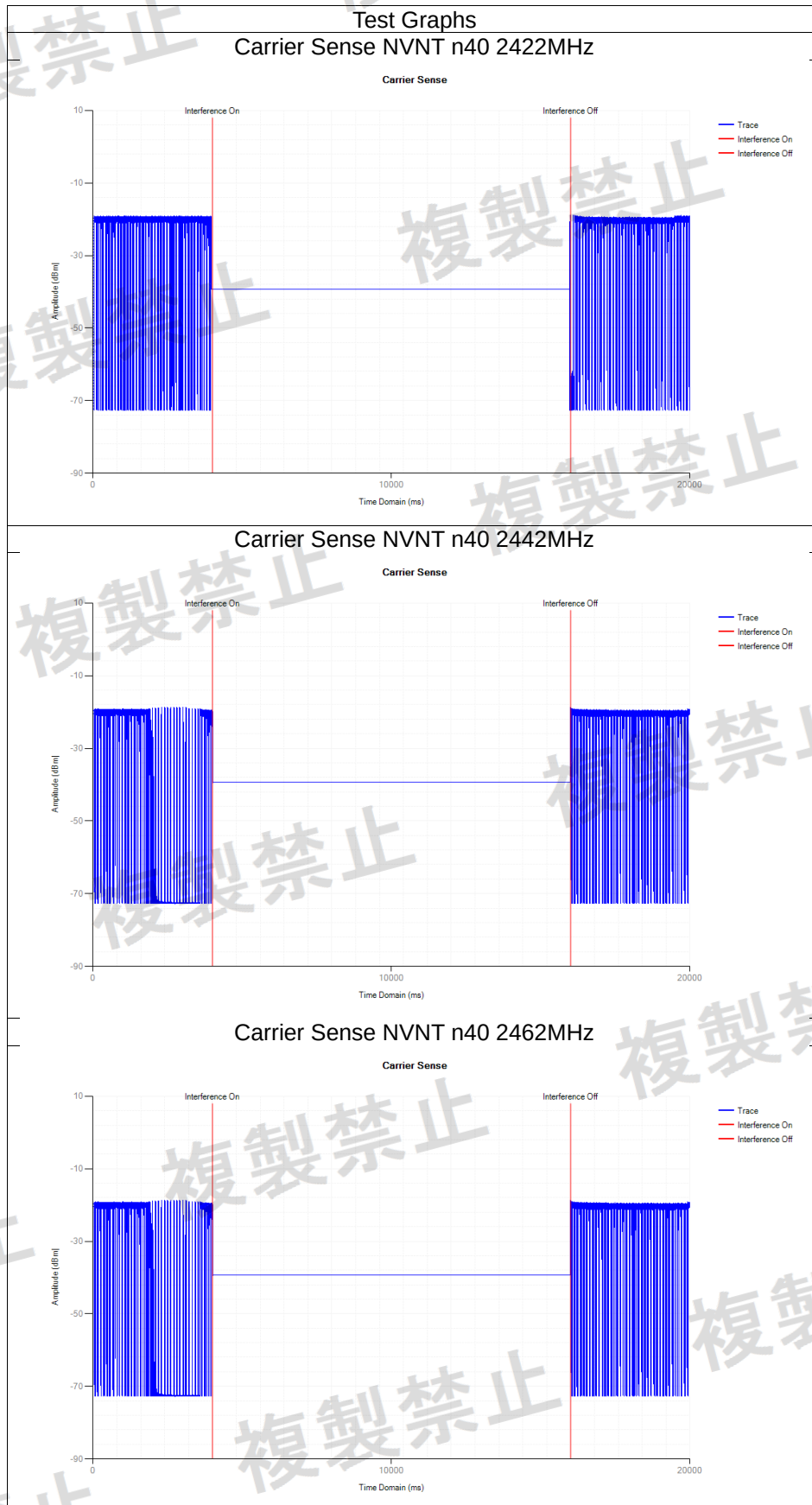






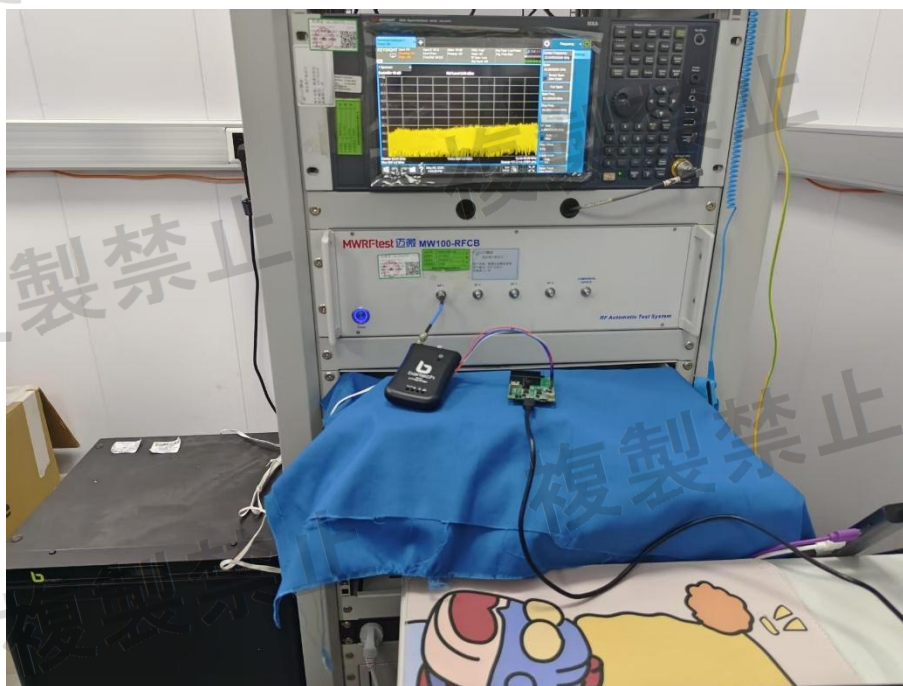
CARRIER SENSE

Condition	Mode	Frequency (MHz)	Antenna	Verdict
NVNT	n40	2422	Ant1	PASS
NVNT	n40	2442	Ant1	PASS
NVNT	n40	2462	Ant1	PASS





APPENDIX II - TEST SETUP PHOTOS



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