# RF TEST REPORT

Product Name: anti-loss device

Model Name: Y21

Issued For : Guangzhou Luxiang Trading Co., Ltd

No. 322, No. 812, Congyun Road, Baiyun District, Guangzhou

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: LGT25H121RF01

Sample Received Date: Aug.14, 2025

Date of Test: Aug.14, 2025 – Sep.13, 2025

Date of Issue: Sep.16, 2025

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# TEST REPORT CERTIFICATION

**Applicant:** Guangzhou Luxiang Trading Co., Ltd

Address: No. 322, No. 812, Congyun Road, Baiyun District, Guangzhou

**Manufacturer:** Guangzhou Luxiang Trading Co., Ltd

Address: No. 322, No. 812, Congyun Road, Baiyun District, Guangzhou

Product Name: anti-loss device

Trademark: N/A

Model Name: Y21

Sample Status: Normal

| APPLICABLE STANDARDS | |
|---|---|
| STANDARD | TEST RESULTS |
| Article 2 Paragraph 1 of Item 19, annex 43 and annex 1, MIC Notice No.88 Appendix No.43 | PASS |

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## Revision History

| Rev. | Issue Date | Contents |
|---|---|---|
| 00 | Sep.16, 2025 | Initial Issue |
| | | |

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## 1. SUMMARY OF THE TEST RESULTS

Test procedures according to the technical standards: annex 43 of Notification No.88.

| Rule Section | Description of Test | Judgement |
|---|---|---|
| 3.2 | Frequency Error | PASS |
| 3.2 | Occupied Bandwidth (99%) Spread-spectrumBandwidth (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 | N/A |
| Note(2) | Carrier Sense Capability | N/A |
| 3.7 | Construction Protection Confirmation | PASS |

Note:

(1) “N/A” means test is not applicable in this Test Report.

(2) Article 2 Paragraph 1 of Item 19.

(3) This device has more than 1 subcarrier in 1MHz, complicances with the requirement.

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## 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 | A2LA Certificate No.: 6727.01 |
| | FCC Registration No.: 746540 |
| | CAB ID: CN0136 |

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ±**U**, where expended uncertainty **U** is based on astandard 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 | ±0.71dB |
| 2 | Conducted emission | ±2.80dB |
| 3 | Temperature | ±0.5°C |

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

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF THE EUT

| | |
|---|---|
| Product Name: | anti-loss device |
| Test Model Name: | Y21 |
| Series Model: | N/A |
| Model Difference: | N/A |
| Product Description: | <table><tr><td>Operation Frequency:</td><td>2402~2480 MHz</td></tr><tr><td>Modulation Type:</td><td>GFSK (1M PHY, 2M PHY)</td></tr><tr><td>Number Of Channel:</td><td>40CH</td></tr><tr><td>Antenna Designation:</td><td>Chip antenna</td></tr><tr><td>Antenna Gain(dBi):</td><td>1.7</td></tr></table> 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. |
| Battery: | DC 3.0V/50mA |
| Hardware Version: | V1.1 |
| Software Version: | V1.0 |
| 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.

| Channel List | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 00 | 2402 | 14 | 2430 | 28 | 2458 |
| 01 | 2404 | 15 | 2432 | 29 | 2460 |
| 02 | 2406 | 16 | 2434 | 30 | 2462 |
| 03 | 2408 | 17 | 2436 | 31 | 2464 |
| 04 | 2410 | 18 | 2438 | 32 | 2466 |
| 05 | 2412 | 19 | 2440 | 33 | 2468 |
| 06 | 2414 | 20 | 2442 | 34 | 2470 |
| 07 | 2416 | 21 | 2444 | 35 | 2472 |
| 08 | 2418 | 22 | 2446 | 36 | 2474 |
| 09 | 2420 | 23 | 2448 | 37 | 2476 |
| 10 | 2422 | 24 | 2450 | 38 | 2478 |
| 11 | 2424 | 25 | 2452 | 39 | 2480 |
| 12 | 2426 | 26 | 2454 | -- | -- |
| 13 | 2428 | 27 | 2456 | -- | -- |

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 selectedchannel see below:

| Lowest frequency | | Middle frequency | | Highest frequency | |
|---|---|---|---|---|---|
| 00 | 2402 | 19 | 2440 | 39 | 2480 |

## 2.2 DESCRIPTION OF THE TEST MODES

| Pretest Mode | Description |
|---|---|
| Mode 1 | 1M PHY (CH00 CH19 CH39) |
| Mode 2 | 2M PHY (CH00 CH19 CH39) |

## 2.3 TABLE FOR PARAMETERS OF THE TEST SOFTWARE SETTING

| Type | Mode Or Modulation type | ANT Gain(dBi) | Power Setting | Software For Testing |
|---|---|---|---|---|
| BLE_1M PHY | GFSK | 1.7 | 1F | LeKit_v2.5.1a |
| BLE_2M PHY | GFSK | 1.7 | 1F | |

## 2.4 TEST CONDITIONS

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) | 3 | 3.3 | 2.7 |

Note: As the EUT was powered by DC 3Vdc, and with the voltage stabilizing circuit (the stabilizing circuit was internal integrated by chipset (ST17H65F) declared by chipset manufacturer, the chip voltage received floating not exceed +1% of nominal condition when working on extreme voltage, so all test performed at nominal voltage only.

During the measurement the environmental conditions：

## 2.5 TEST ENVIRONMENTAL

During the measurement the environmental conditions
Normal Temperature: 24.8°C
Relative Humidity: 54 %
Air Pressure: 989 hPa

## 2.6 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 |
|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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 | 2025.03.05 | 2026.03.04 | (c) |
| Signal Analyzer | Keysight | N9020A | MY50530994 | 2025.03.05 | 2026.03.04 | (c) |
| Signal Analyzer | R&S | FSV40-N | 102245 | 2025.02.17 | 2026.02.16 | (c) |
| RF Automatic Test system | MW | MW100-RFCB | MW220324LG-33 | 2025.03.06 | 2026.03.05 | (c) |
| MXG Vector Signal Generator | Keysight | N5182B | MY59100717 | 2025.03.05 | 2026.03.04 | (c) |
| Temperature& Humidity test chamber | AISRY | LX-1000L | 171200018 | 2025.07.30 | 2026.07.29 | (c) |
| Attenuator | eastsheep | 90db | N.A | 2025.03.06 | 2026.03.05 | (c) |
| Temperature & Humidity | JINGCHUANG | BT-3 | N.A | 2025.03.10 | 2026.03.09 | (c) |
| Digital multimeter | MASTECH | MS8261 | MBGBC83053 | 2025.03.05 | 2026.03.04 | (c) |
| Programmable Power Supply | Jiuyuan | QJ6010E | N.A | 2025.03.09 | 2026.03.08 | (c) |

Remark:
(a) Calibration conducted by the National institute of Information and Communications Technology (NICT) inJapan (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 (ActNo. 51 of 1992).
(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted bythe 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 columnof 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.
Test Equipment Calibration
All of the test equipment is effective use and calibration certification institution, LISAI, the address is No.8.South Street Shi li institute Guangzhou.Guangdong.China

## 3. FREQUENCY ERROR

### 3.1 LIMIT

| Item | Limits |
|---|---|
| Frequency Error | ±50ppm |

### 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 | ≦3mW/MHz (FH from 2400 – 2483.5 MHz)<br>≦10mW/MHz (OFDM,DS from2400~2483.5MHz,802.11b/g/n HT20)<br>≦5mW/MHz (OFDM,DS from2400~2483.5MHz,802.11n HT40)<br>≦10mW (Other from 2400~2483.5MHz) |
| Power Error | +20%, -80% (Base on manufacturer declare power) |

### 4.2 TEST PROCEDURE

1. EUT turn to test frequency channel and keep continuous transmiting.
2. Reading the output power from the Power meter as $P_{EUT.}$
3. Turn the Signal generator to frequency channel the same as the EUT.
4. 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”.
5. The antenna power of EUT is “P”.
6. 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. RADIATION POWER

### 5.1 LIMIT

| Item | Limits |
|---|---|
| Radiation powerEIRP | FH form 2400 – 2483.5MHz,EIRP≦6.91dBm/MHz<br>CCK/OFDM/DBPSK (2400~2483.5MHz)<br>OFDM or DS other than (802.11b/g/n HT20) EIRP≦12.14 dBm/MHz<br>OFDM or DS other than (802.11n HT40) EIRP≦9.13dBm/MHz<br>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 BANDWITH 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.

### 6.5 TEST RESULT

For the measurement records, refer to the appendix I.

## 7. UNWANTED EMISSION INTENSITY MEASUREMENT

### 7.1 LIMIT

| Item | Limits |
|---|---|
| TX Spurious Emission | ≦2.5 Mw/MHz (30MHz≦f≦1000MHz) |
| | ≦2.5 μW/MHz (1000MHz<f≦2387MHz) |
| | ≦25 μW/MHz (2387MHz<f≦2400MHz) |
| | ≦25 μW/MHz (2483.5MHz≦f<2496.5MHz) |
| | ≦2.5 μW/MHz (2496.5MHz≦f<12500MHz) |

### 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 2.5μW.
4. Setting of SA is following as 1000MHz and stop frequency 2387MHz, then to mark peak reading value + cable loss shall be less than 2.5μW.
5. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz, then to mark peak reading value + cable loss shall be less than 25μW.
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 25μW
7. SA adjusted to start frequency 2496.5MHz and stop frequency 12750MHz, then to mark peak reading value + cable loss shall be less than 2.5μW
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: -26dBm+10*log(100K/1M)=-36dBm.
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: | ≦ 4nW (f<1GHz) |
| | ≦ 20nW (1GHz≦ 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)<br>1 MHz (above 1GHz emissions) |
| VBW | 100 kHz (below 1GHz emissions)<br>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 < 1GHz, 2nW for f >= 1GHz), 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

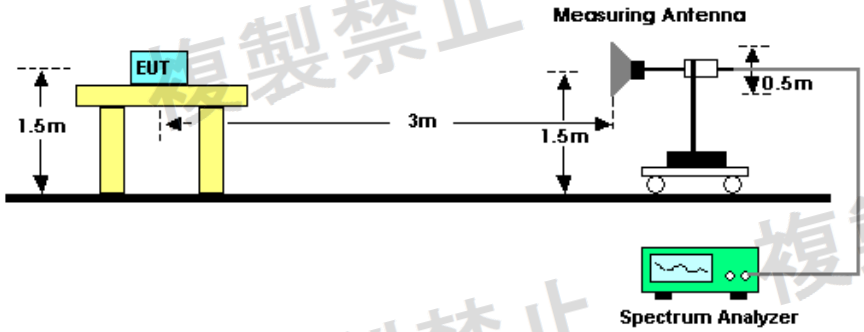
| Item | Limits |
|---|---|
| 3dB antenna beam width | e ≦ 360/A (The A is 10 in maximum)<br>A = {EIRP Power [mW/MHz] /{2.14dBi+output power(10mW /MHz, 3mW/MHz)}<br>Shall be 1 when A is lower than 1 |

### 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 receving signal position.
3. Rotate directions of the EUT horizontally and ertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within ± 50cm of EUT height and swing it to find the maximum output of measuing antenna. “E” is the half-power beam width (angle between two points at which radiated power becomes 1/2).
5. Caluate 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 ≦ 360/A (The A is 10 in maximum)
   A = {EIRP Power [mW/MHz] /{2.14dBi+output power(10mWMHz, 3mW/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.

### 9.5 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 |

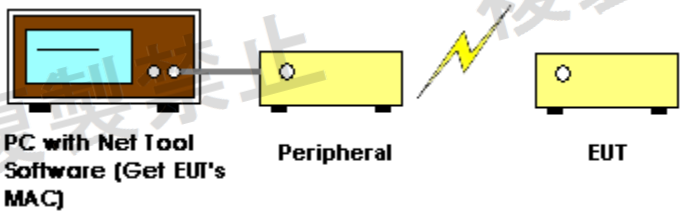
### 10.2 MEASURING ID CODE SOFTWARE

| 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 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.

### 10.4 TEST SETUP

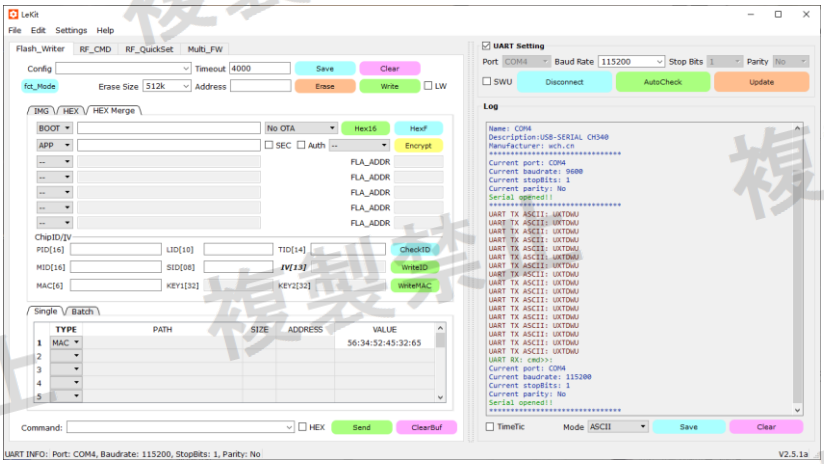



### 10.5 TEST DEVIATION

There is no deviation with the original standard.

### 10.6 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

The MAC address is 56:34:52:45:32:65



## 11. CARRIER SENSE CAPABILITY

### 11.1 INTERFERENCE PREVENTION FUNCTION

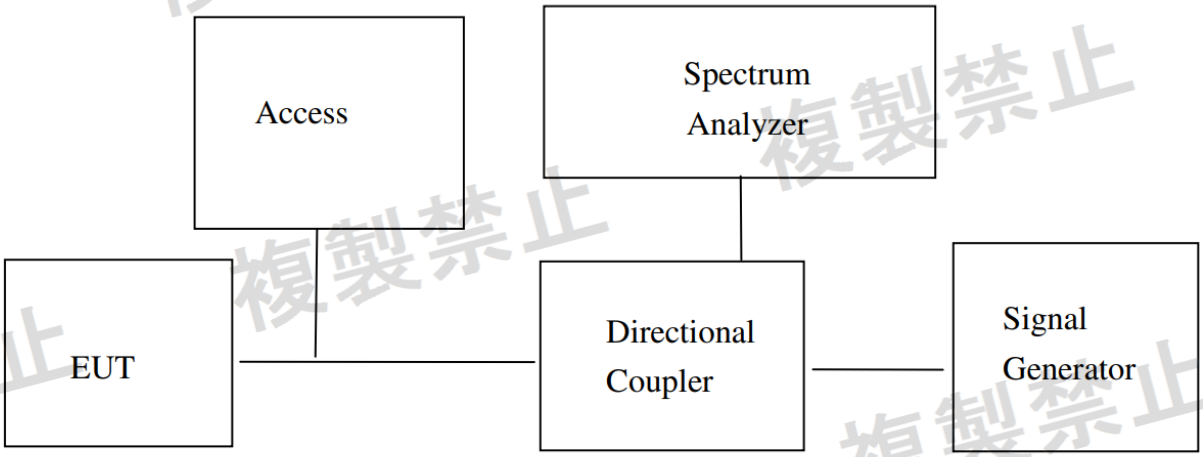
### 11.2 TEST REQUIREMENT

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 (22.79+G-20*log(f)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




### 11.4 TEST RESULT

Not applicable.

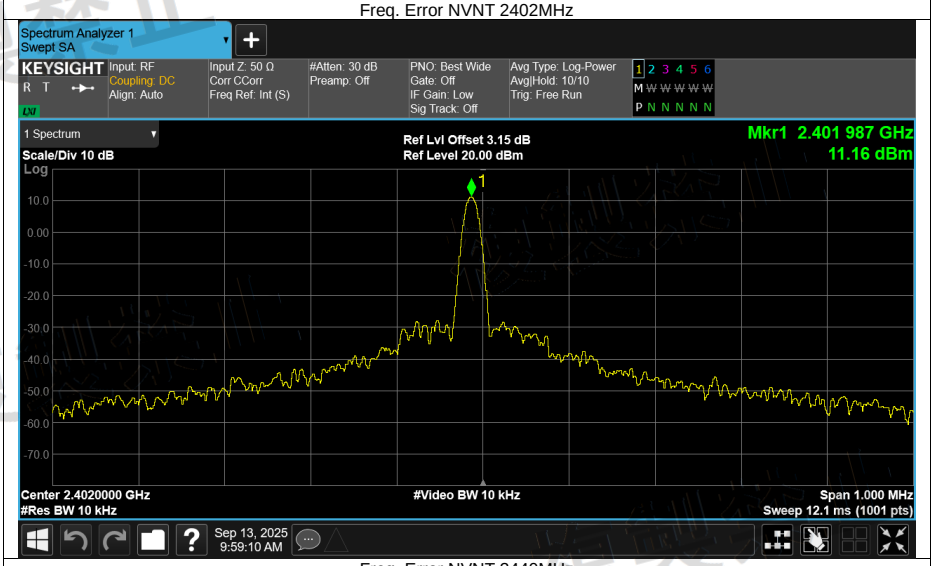
# APPENDIX I - TEST RESULTS

Frequency Error

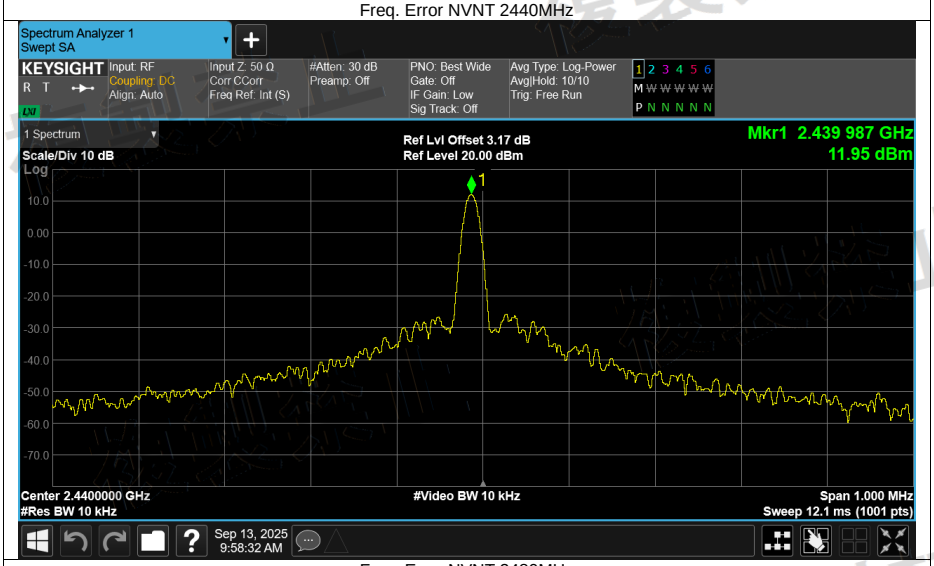
| Condition | Frequency (MHz) | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | 2402 | 2401.987 | -13000 | -5.41 | ±50 | Pass |
| NVNT | 2440 | 2439.987 | -13000 | -5.33 | ±50 | Pass |
| NVNT | 2480 | 2479.986 | -14000 | -5.65 | ±50 | Pass |

複製禁止

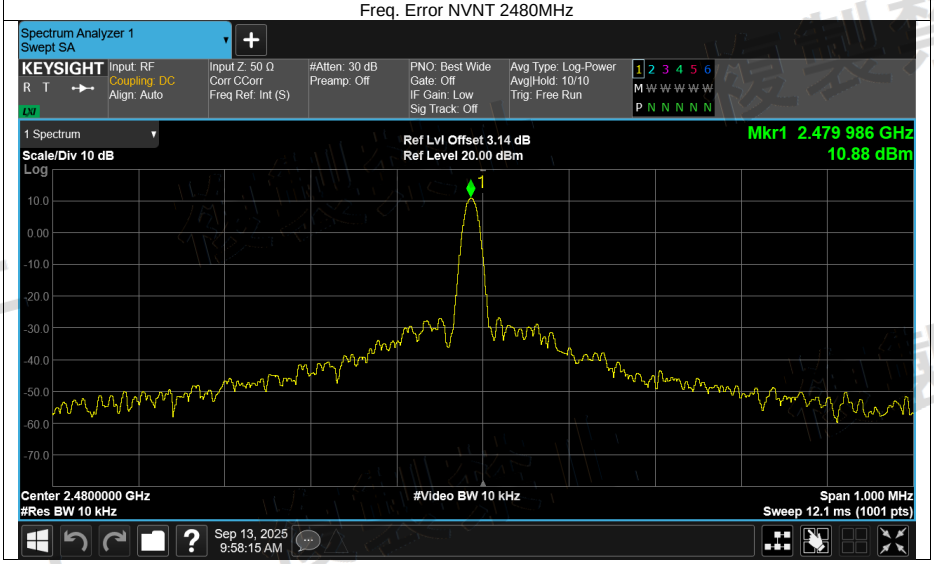
| Test Graphs |
| --- |
| Freq. Error NVNT 2402MHz |




| Freq. Error NVNT 2440MHz |
| --- |




| Freq. Error NVNT 2480MHz |
| --- |



Antenna Power

| Condition | Mode | Frequency (MHz) | Power (dBm) | Antenna Power (mW) | Limit (mW | Declared Power (mW) | Tolerance (%) | Upper Limit (%) | Lower Limit (%) | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| NVNT | BLE 1M | 2402 | 1.22 | 1.324 | 10 | 2 | -33.8 | 20 | -80 | Pass |
| NVNT | BLE 1M | 2440 | 0.55 | 1.135 | 10 | 2 | -43.25 | 20 | -80 | Pass |
| NVNT | BLE 1M | 2480 | -0.08 | 0.982 | 10 | 2 | -50.9 | 20 | -80 | Pass |
| NVNT | BLE 2M | 2402 | 1.11 | 1.291 | 10 | 2 | -35.45 | 20 | -80 | Pass |
| NVNT | BLE 2M | 2440 | 0.52 | 1.127 | 10 | 2 | -43.65 | 20 | -80 | Pass |
| NVNT | BLE 2M | 2480 | -0.09 | 0.979 | 10 | 2 | -51.05 | 20 | -80 | Pass |

複製禁止

EIRP Power

| Condition | Mode | Frequency (MHz) | Antenna Power (dBm) | Gain (dBi) | EIRP Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|
| NVNT | BLE 1M | 2402 | 1.22 | 1.7 | 2.92 | 12.14 | Pass |
| NVNT | BLE 1M | 2440 | 0.55 | 1.7 | 2.25 | 12.14 | Pass |
| NVNT | BLE 1M | 2480 | -0.08 | 1.7 | 1.62 | 12.14 | Pass |
| NVNT | BLE 2M | 2402 | 1.11 | 1.7 | 2.81 | 12.14 | Pass |
| NVNT | BLE 2M | 2440 | 0.52 | 1.7 | 2.22 | 12.14 | Pass |
| NVNT | BLE 2M | 2480 | -0.09 | 1.7 | 1.61 | 12.14 | Pass |

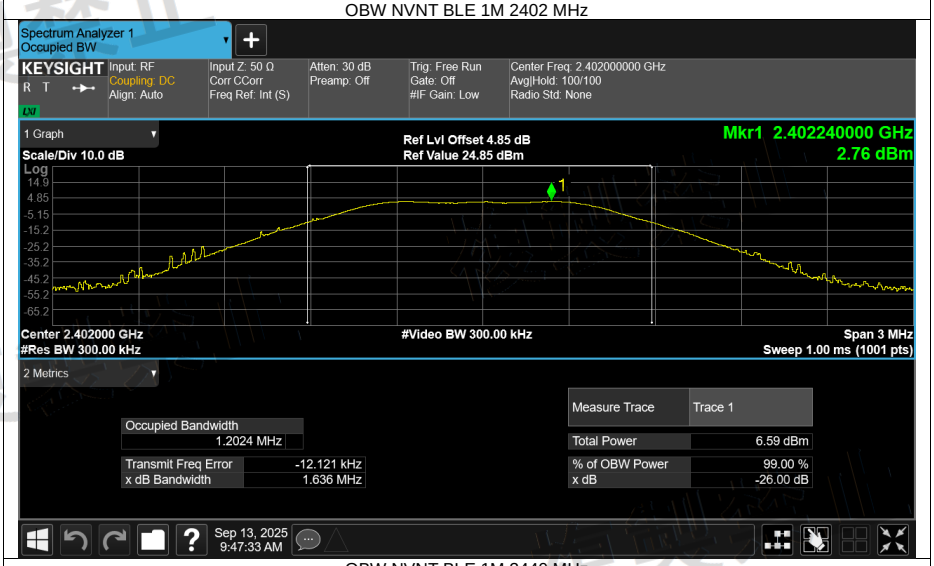
複製禁止

Occupied Channel Bandwidth

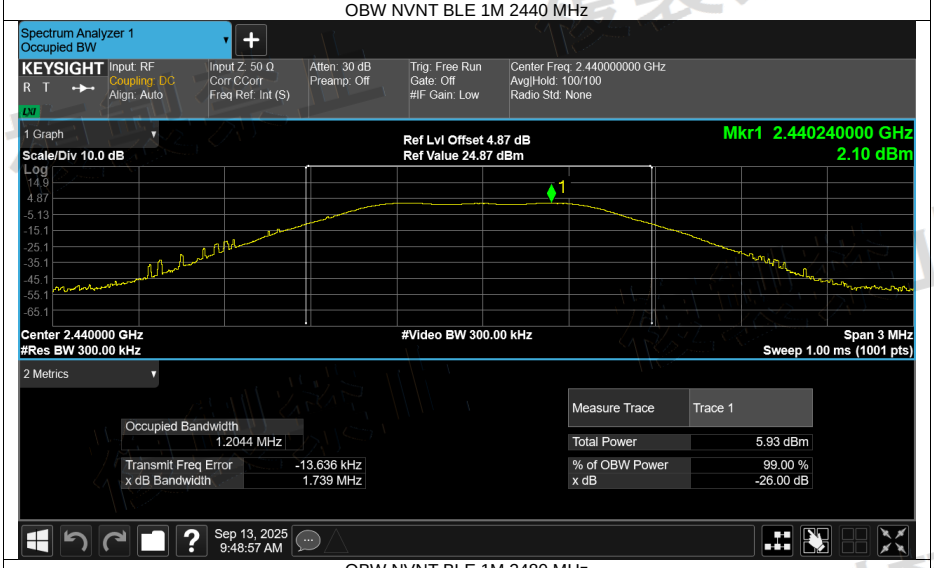
| Condition | Mode | Frequency (MHz) | 99% OBW (MHz) |
|---|---|---|---|
| NVNT | BLE 1M | 2402 | 1.202 |
| NVNT | BLE 1M | 2440 | 1.204 |
| NVNT | BLE 1M | 2480 | 1.202 |
| NVNT | BLE 2M | 2402 | 2.106 |
| NVNT | BLE 2M | 2440 | 2.11 |
| NVNT | BLE 2M | 2480 | 2.105 |

複製禁止

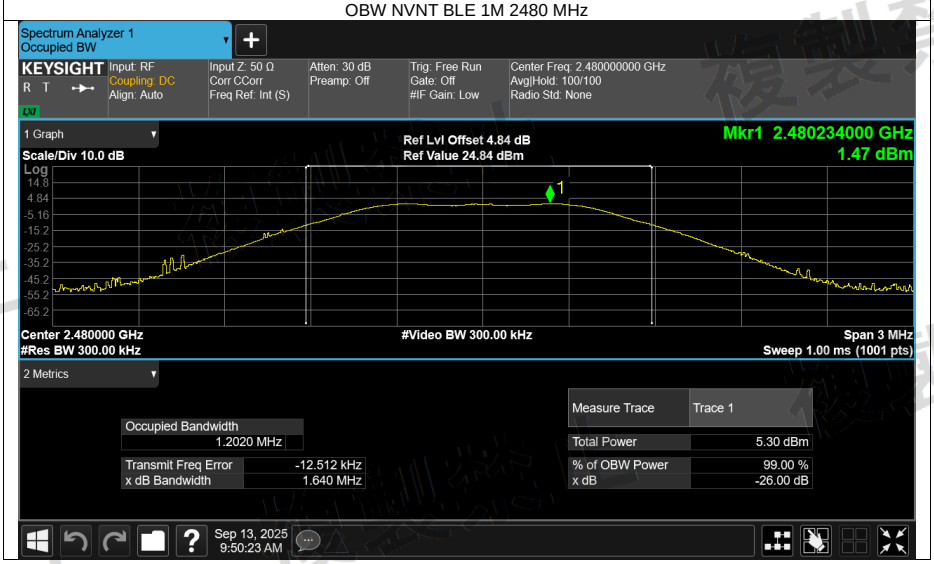
| Test Graphs |
| --- |
| OBW NVNT BLE 1M 2402 MHz |




| OBW NVNT BLE 1M 2440 MHz |
| --- |

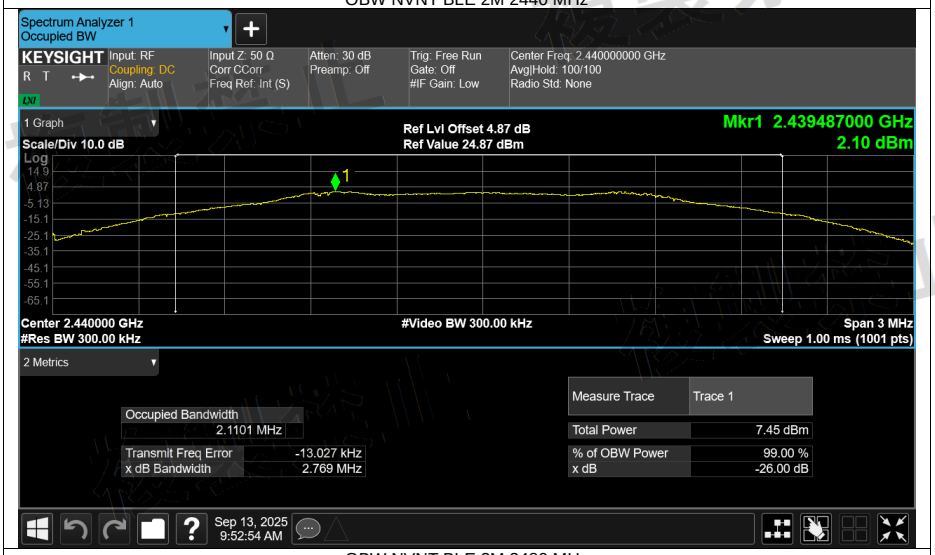



| OBW NVNT BLE 1M 2480 MHz |
| --- |

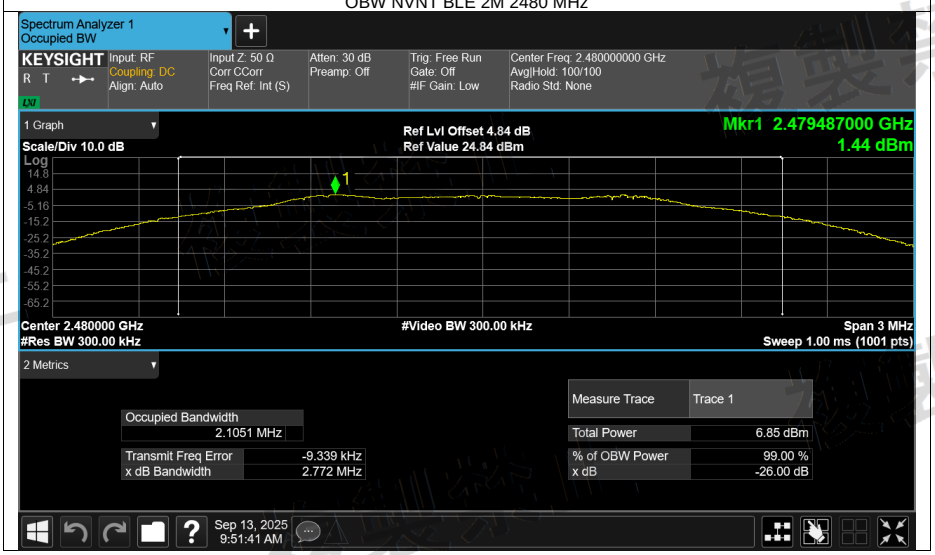


OBW NVNT BLE 2M 2402 MHz

OBW NVNT BLE 2M 2440 MHz




OBW NVNT BLE 2M 2480 MHz



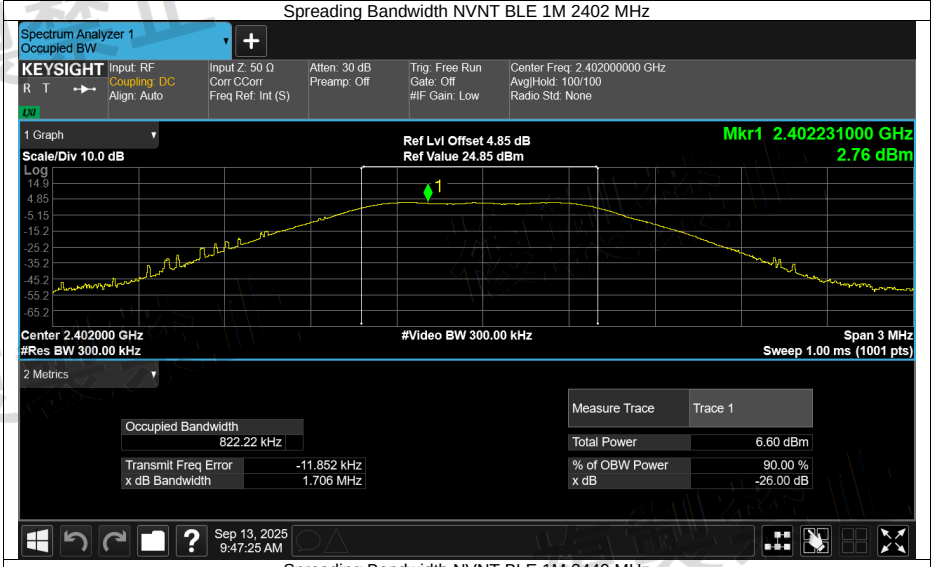
Spreading Bandwidth

| Condition | Mode | Frequency (MHz) | 90% OBW (MHz) | Limit (MHz) | Verdict |
|---|---|---|---|---|---|
| NVNT | BLE 1M | 2402 | 0.822 | 0.5 | Pass |
| NVNT | BLE 1M | 2440 | 0.823 | 0.5 | Pass |
| NVNT | BLE 1M | 2480 | 0.824 | 0.5 | Pass |
| NVNT | BLE 2M | 2402 | 1.368 | 0.5 | Pass |
| NVNT | BLE 2M | 2440 | 1.372 | 0.5 | Pass |
| NVNT | BLE 2M | 2480 | 1.371 | 0.5 | Pass |

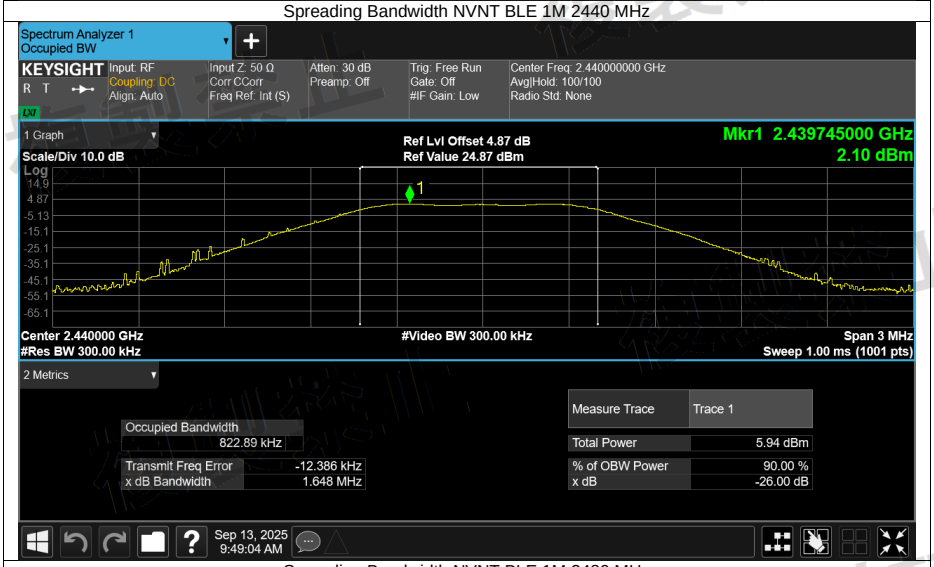
複製禁止

Test Graphs

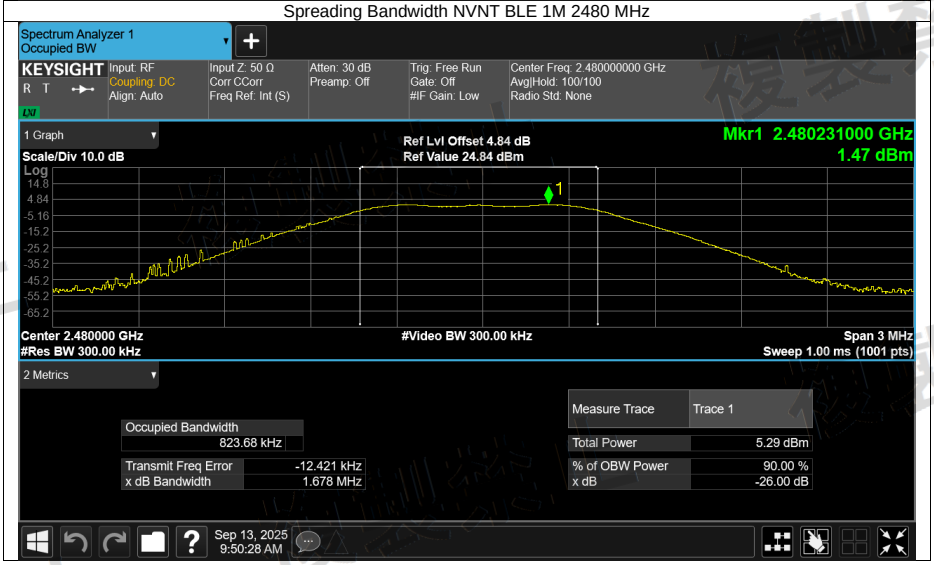
Spreading Bandwidth NVNT BLE 1M 2402 MHz



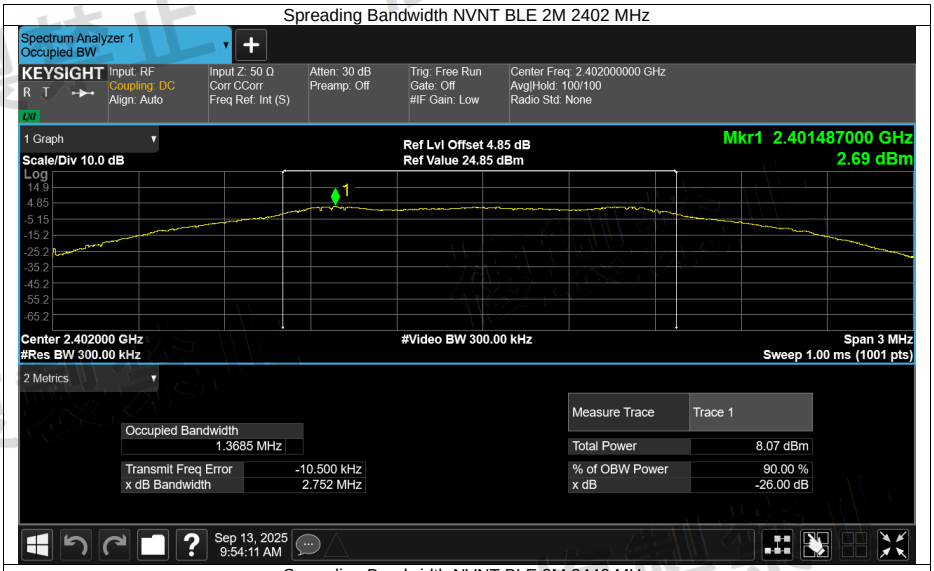

Spreading Bandwidth NVNT BLE 1M 2440 MHz



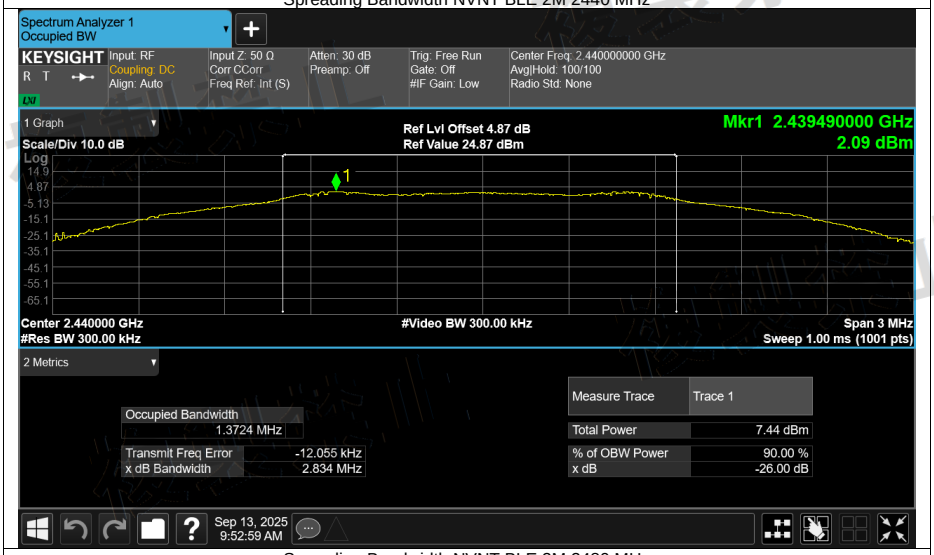

Spreading Bandwidth NVNT BLE 1M 2480 MHz



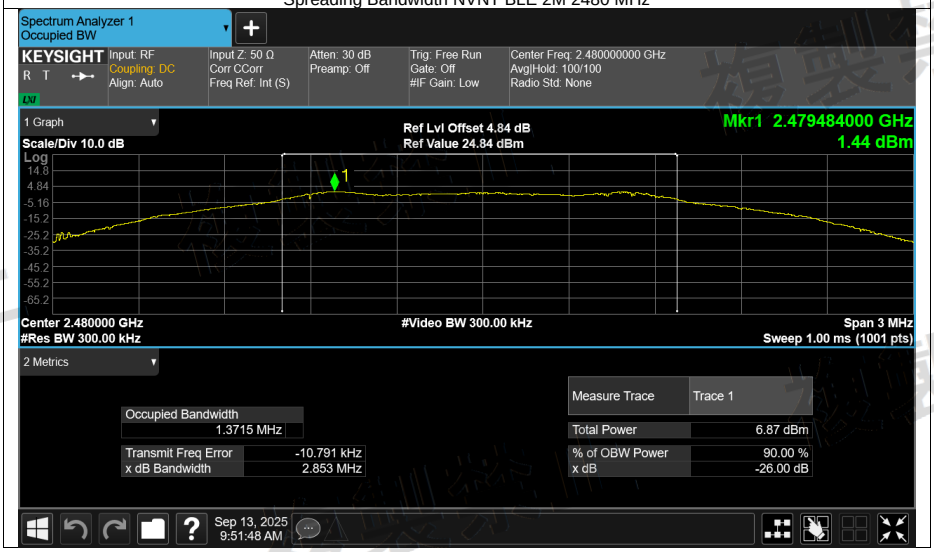
Spreading Bandwidth NVNT BLE 2M 2402 MHz




Spreading Bandwidth NVNT BLE 2M 2440 MHz

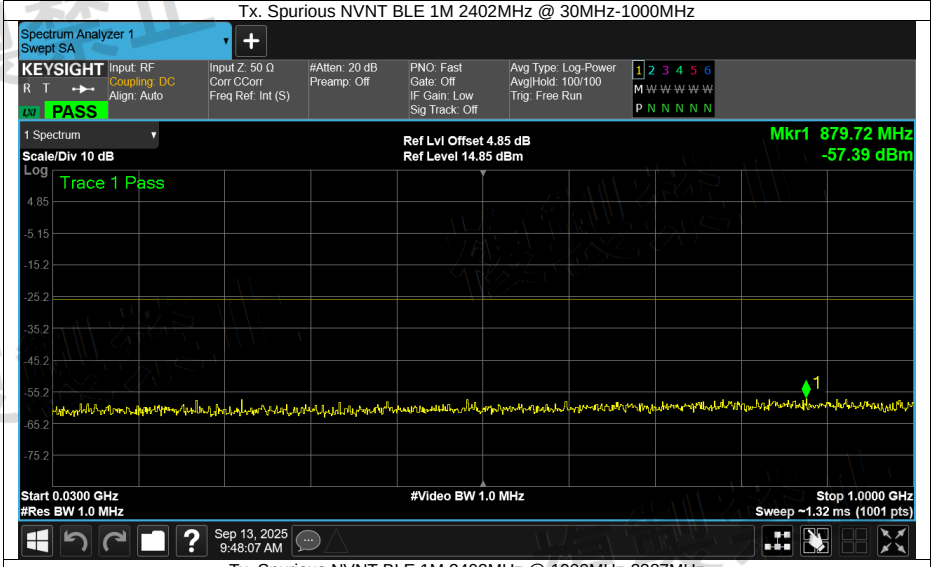
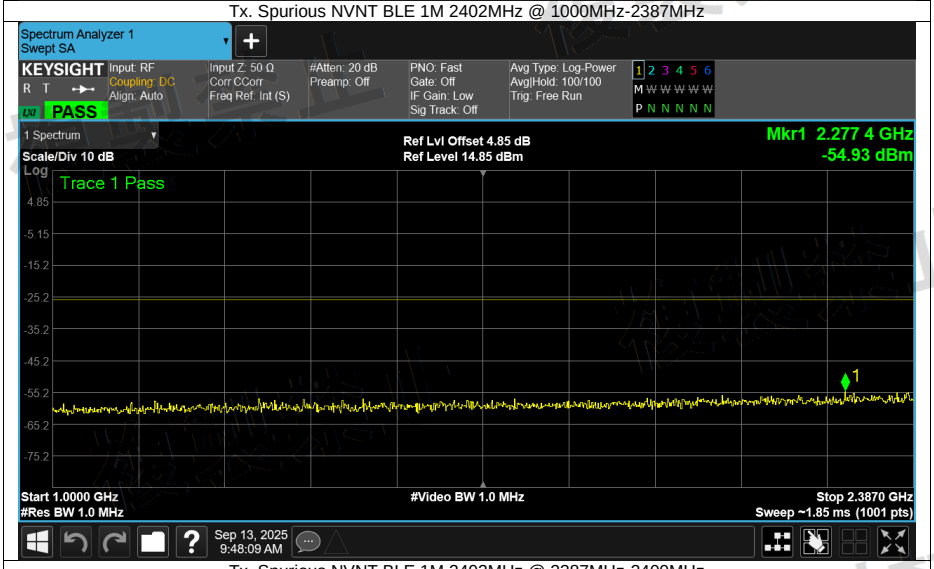
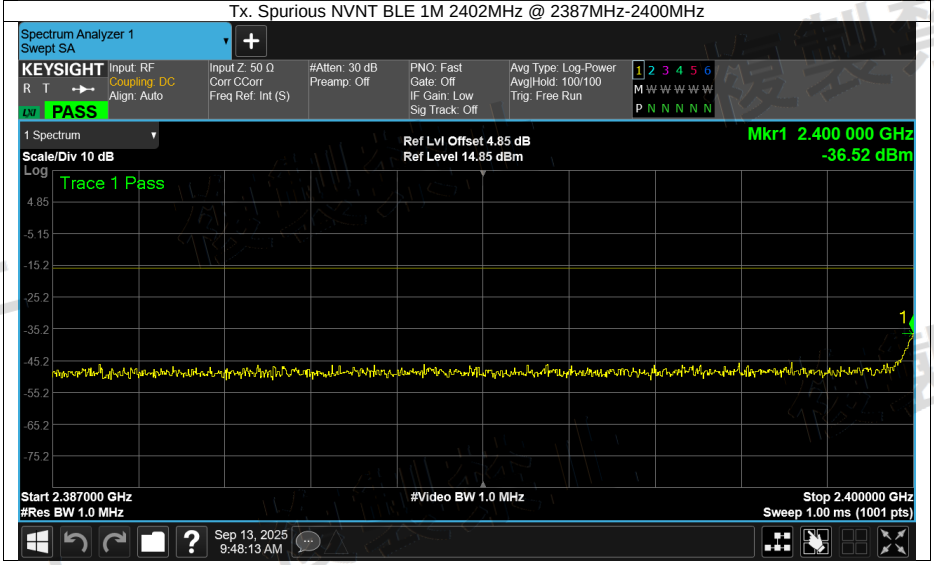



Spreading Bandwidth NVNT BLE 2M 2480 MHz

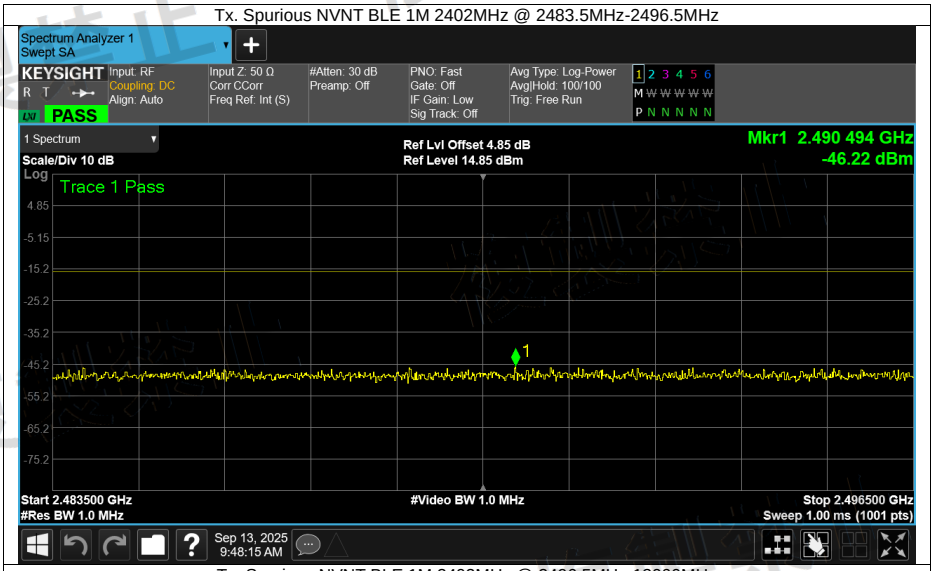


Tx Spurious Emission

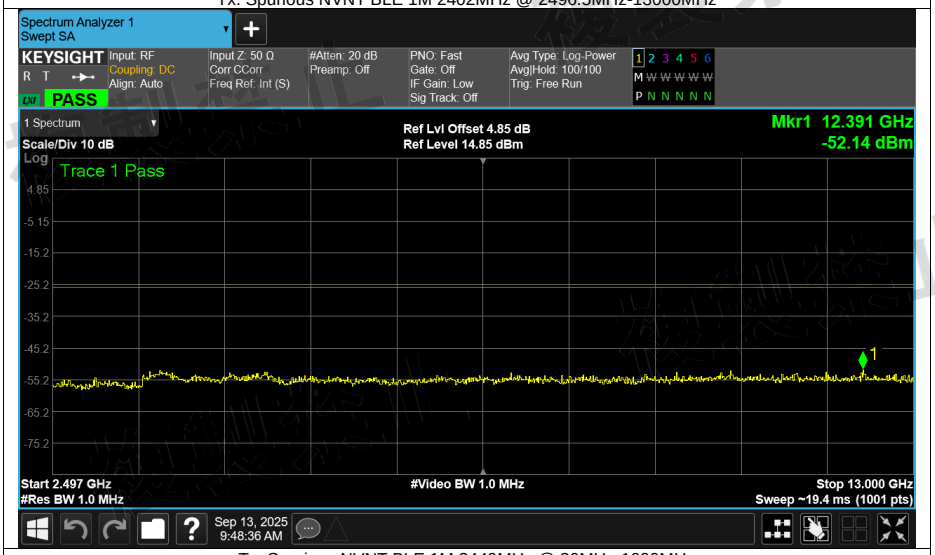
| Condition | Mode | Frequency (MHz) | Range (MHz) | Emission Frequency (MHz) | Max Value (dBm/MHz) | Max Value (uW/MHz) | Limit Start(uW/MHz) | Limit Stop (uW/MHz) | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| NVNT | BLE 1M | 2402 | 30-1000 | 879.72 | -57.39 | 0.0018 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2402 | 1000-2387 | 2277.43 | -54.93 | 0.0032 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2402 | 2387-2400 | 2400 | -36.52 | 0.2228 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2402 | 2483.5-2496.5 | 2490.49 | -46.22 | 0.0239 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2402 | 2496.5-13000 | 12390.8 | -52.14 | 0.0061 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2440 | 30-1000 | 965.08 | -57.23 | 0.0019 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2440 | 1000-2387 | 2332.91 | -54.66 | 0.0034 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2440 | 2387-2400 | 2396.63 | -45.97 | 0.0253 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2440 | 2483.5-2496.5 | 2491.14 | -45.65 | 0.0272 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2440 | 2496.5-13000 | 3777.93 | -51.49 | 0.0071 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2480 | 30-1000 | 959.26 | -55.46 | 0.0028 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2480 | 1000-2387 | 2277.43 | -55.1 | 0.0031 | 2.5 | 2.5 | Pass |
| NVNT | BLE 1M | 2480 | 2387-2400 | 2391.99 | -46.61 | 0.0218 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2480 | 2483.5-2496.5 | 2484.7 | -43.33 | 0.0465 | 25 | 25 | Pass |
| NVNT | BLE 1M | 2480 | 2496.5-13000 | 3872.46 | -51.87 | 0.0065 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2402 | 30-1000 | 839.95 | -57.65 | 0.0017 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2402 | 1000-2387 | 2373.13 | -54.88 | 0.0033 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2402 | 2387-2400 | 2399.97 | -18.4 | 14.4544 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2402 | 2483.5-2496.5 | 2486.69 | -46.02 | 0.025 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2402 | 2496.5-13000 | 10111.54 | -51.83 | 0.0066 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2440 | 30-1000 | 809.88 | -56.95 | 0.002 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2440 | 1000-2387 | 2310.71 | -54.56 | 0.0035 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2440 | 2387-2400 | 2389.67 | -45.9 | 0.0257 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2440 | 2483.5-2496.5 | 2490.12 | -45.55 | 0.0279 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2440 | 2496.5-13000 | 3840.95 | -52.25 | 0.006 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2480 | 30-1000 | 715.79 | -56.46 | 0.0023 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2480 | 1000-2387 | 2276.04 | -55.22 | 0.003 | 2.5 | 2.5 | Pass |
| NVNT | BLE 2M | 2480 | 2387-2400 | 2390.85 | -46.1 | 0.0245 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2480 | 2483.5-2496.5 | 2486.54 | -44.02 | 0.0396 | 25 | 25 | Pass |
| NVNT | BLE 2M | 2480 | 2496.5-13000 | 4838.78 | -51.94 | 0.0064 | 2.5 | 2.5 | Pass |

| Test Graphs |
| --- |
| Tx. Spurious NVNT BLE 1M 2402MHz @ 30MHz-1000MHz |
|  |
| Tx. Spurious NVNT BLE 1M 2402MHz @ 1000MHz-2387MHz |
|  |
| Tx. Spurious NVNT BLE 1M 2402MHz @ 2387MHz-2400MHz |
|  |

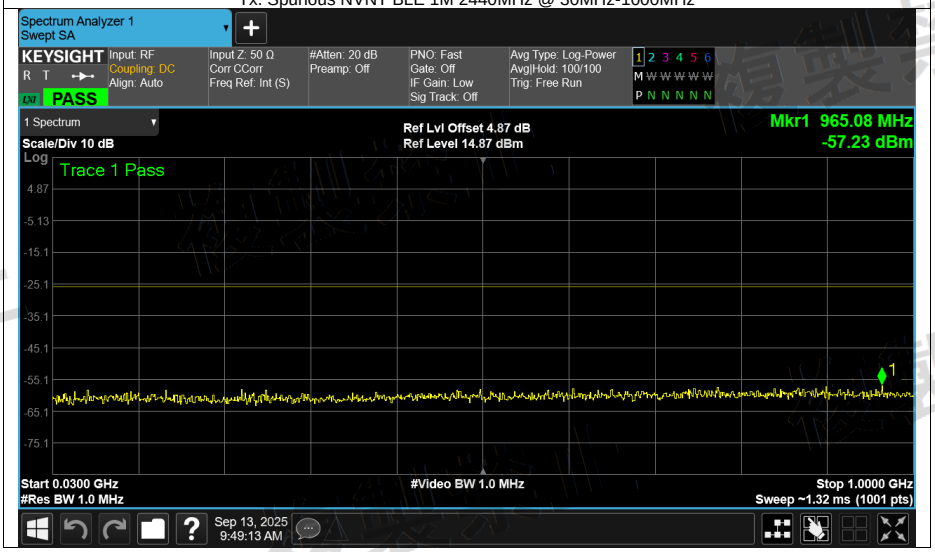
Tx. Spurious NVNT BLE 1M 2402MHz @ 2483.5MHz-2496.5MHz



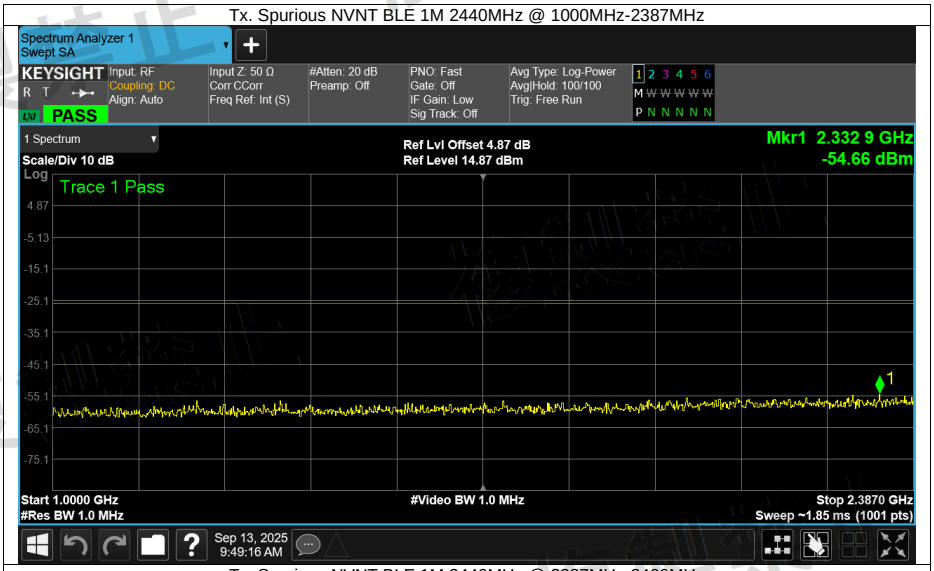

Tx. Spurious NVNT BLE 1M 2402MHz @ 2496.5MHz-13000MHz



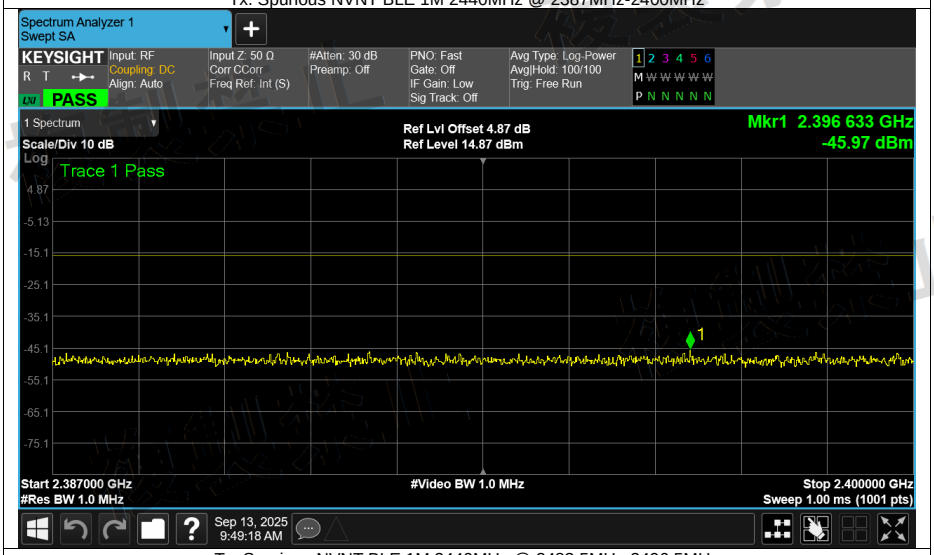

Tx. Spurious NVNT BLE 1M 2440MHz @ 30MHz-1000MHz



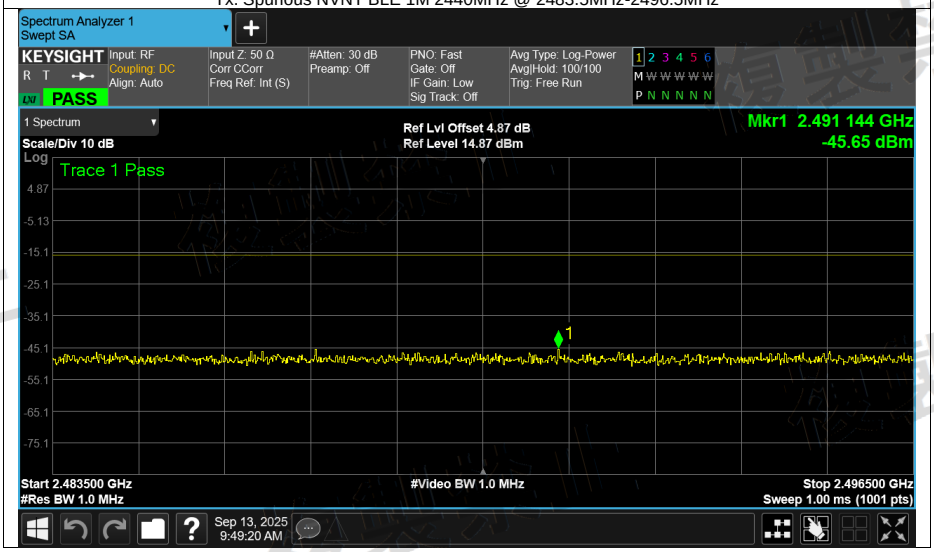
Tx. Spurious NVNT BLE 1M 2440MHz @ 1000MHz-2387MHz



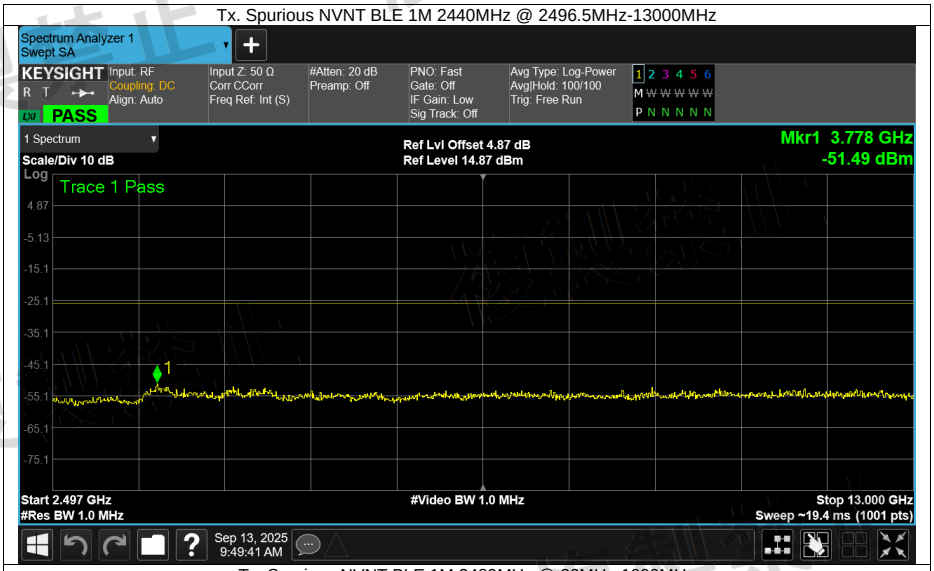

Tx. Spurious NVNT BLE 1M 2440MHz @ 2387MHz-2400MHz



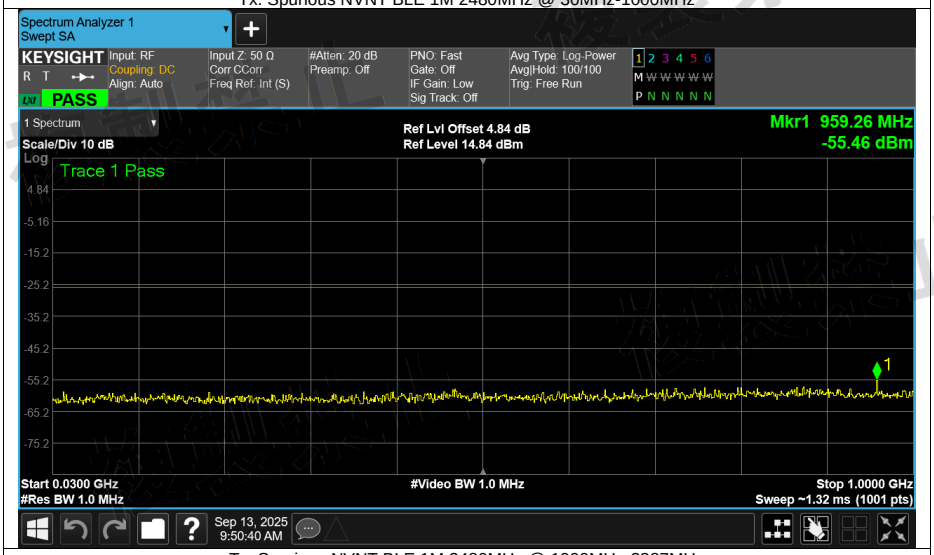

Tx. Spurious NVNT BLE 1M 2440MHz @ 2483.5MHz-2496.5MHz



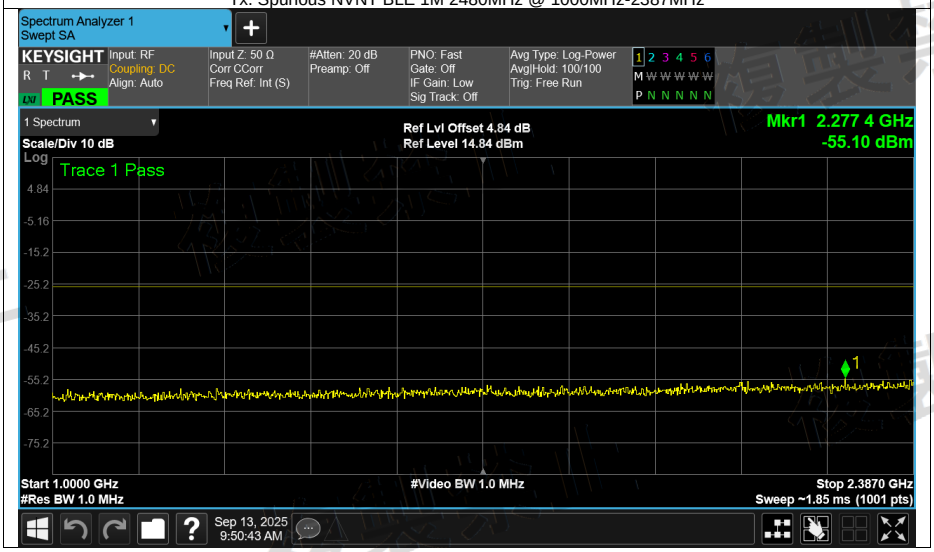
Tx. Spurious NVNT BLE 1M 2440MHz @ 2496.5MHz-13000MHz



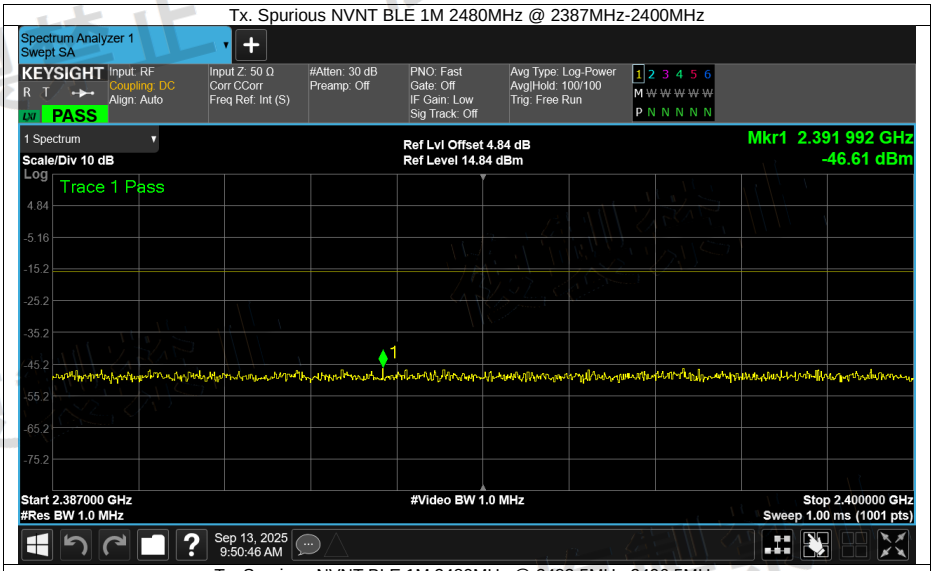

Tx. Spurious NVNT BLE 1M 2480MHz @ 30MHz-1000MHz



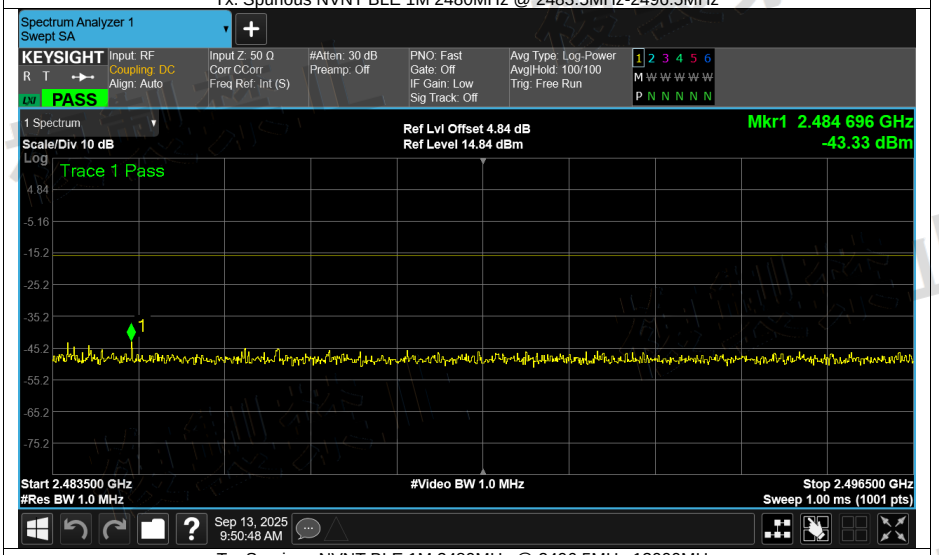

Tx. Spurious NVNT BLE 1M 2480MHz @ 1000MHz-2387MHz



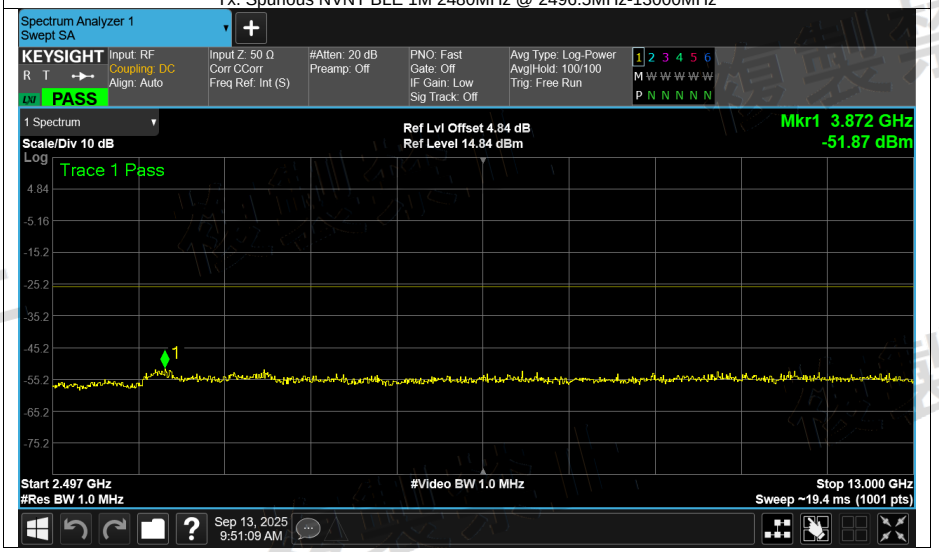
Tx. Spurious NVNT BLE 1M 2480MHz @ 2387MHz-2400MHz



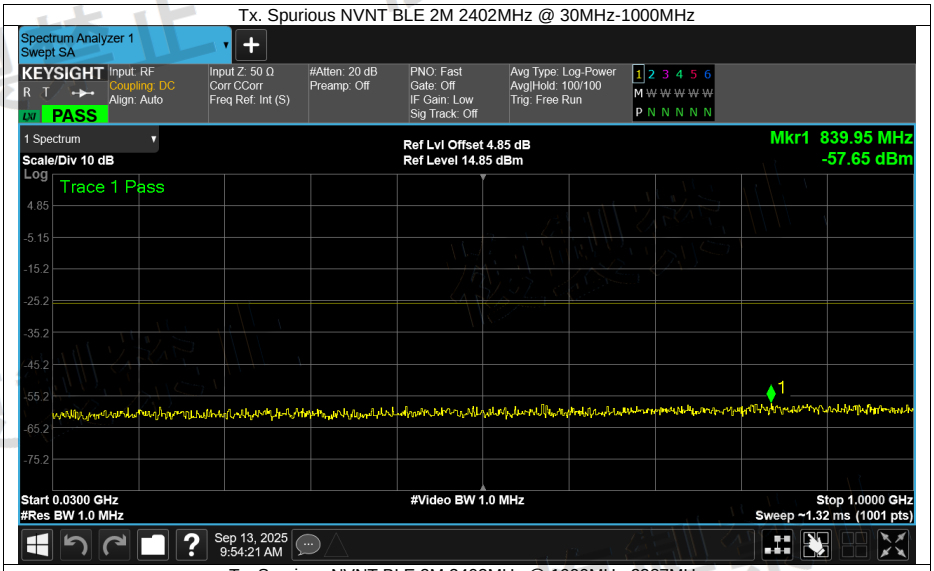

Tx. Spurious NVNT BLE 1M 2480MHz @ 2483.5MHz-2496.5MHz



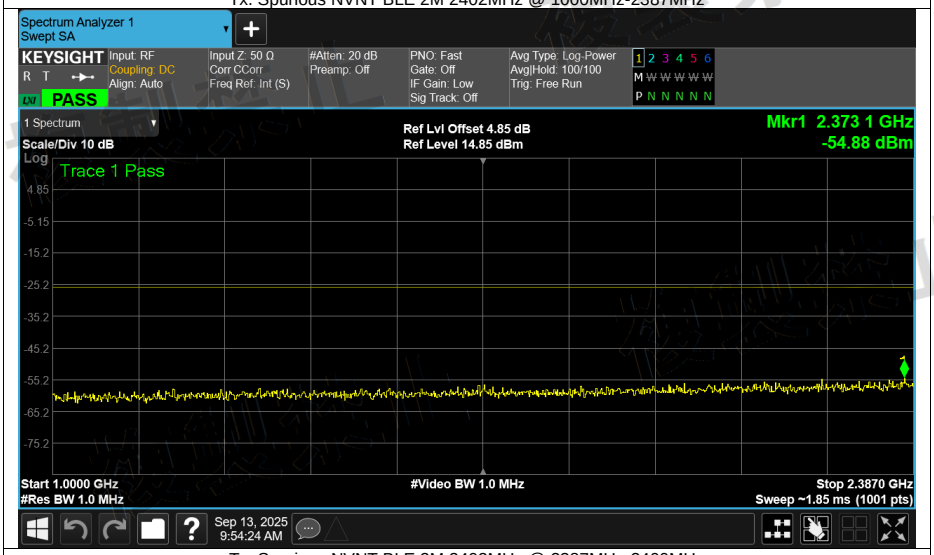

Tx. Spurious NVNT BLE 1M 2480MHz @ 2496.5MHz-13000MHz



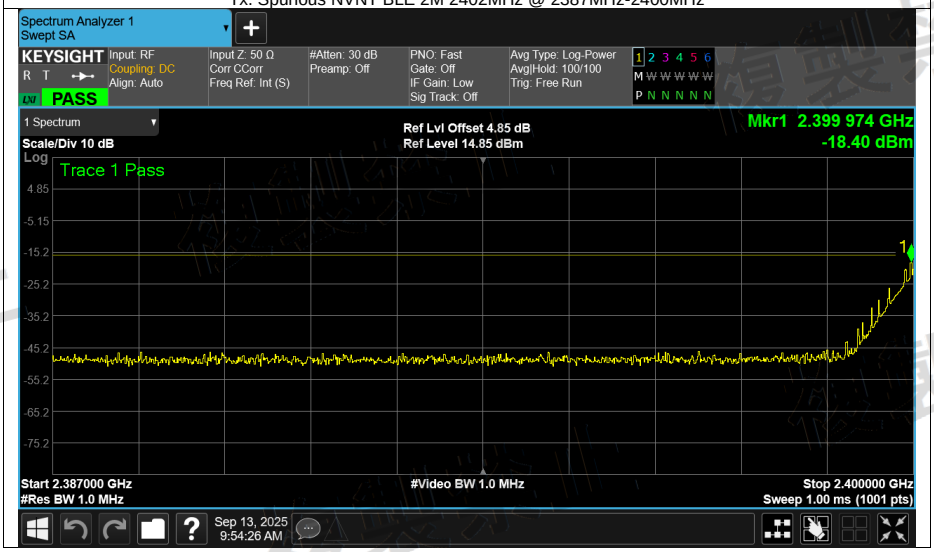
Tx. Spurious NVNT BLE 2M 2402MHz @ 30MHz-1000MHz



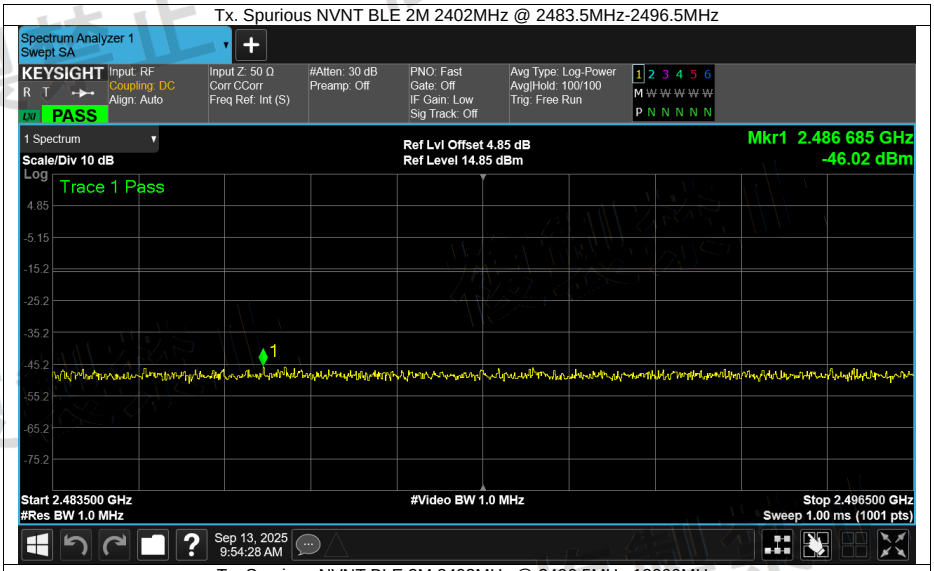

Tx. Spurious NVNT BLE 2M 2402MHz @ 1000MHz-2387MHz



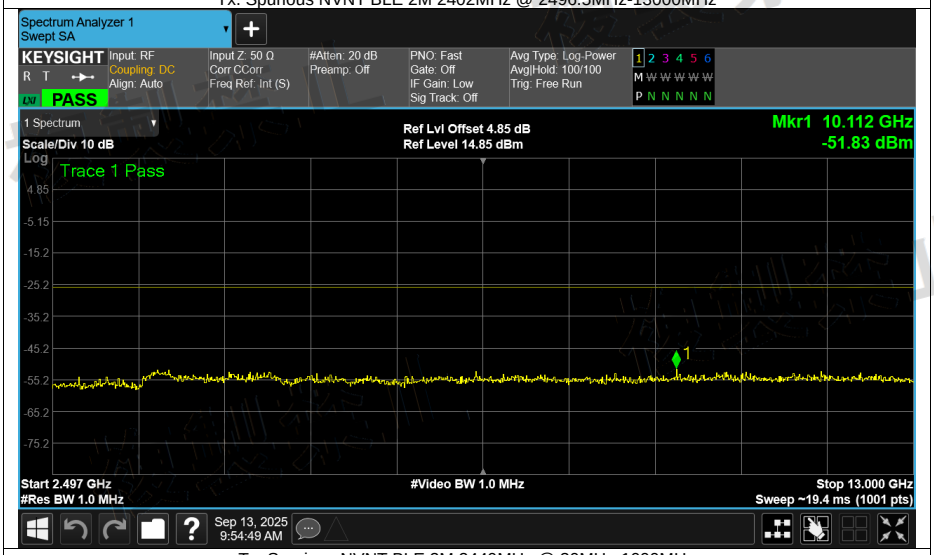

Tx. Spurious NVNT BLE 2M 2402MHz @ 2387MHz-2400MHz



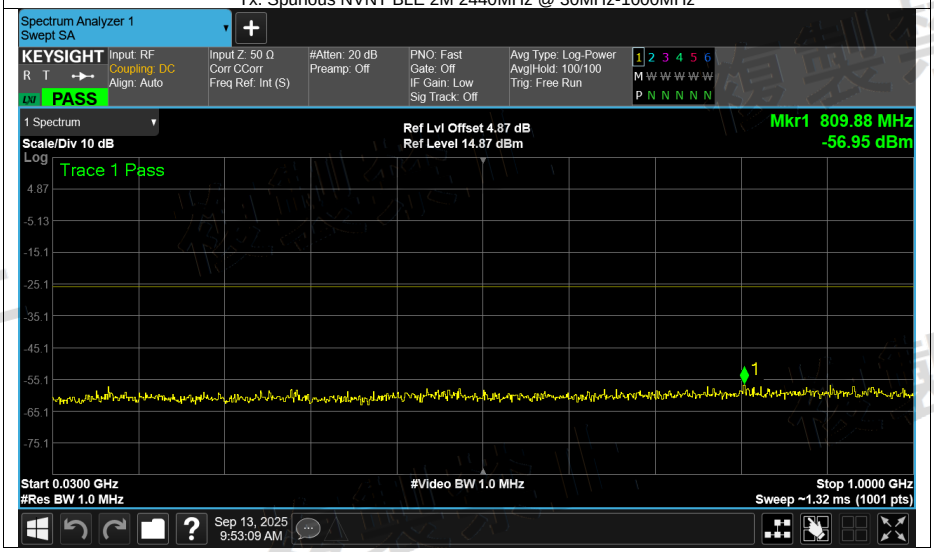
Tx. Spurious NVNT BLE 2M 2402MHz @ 2483.5MHz-2496.5MHz



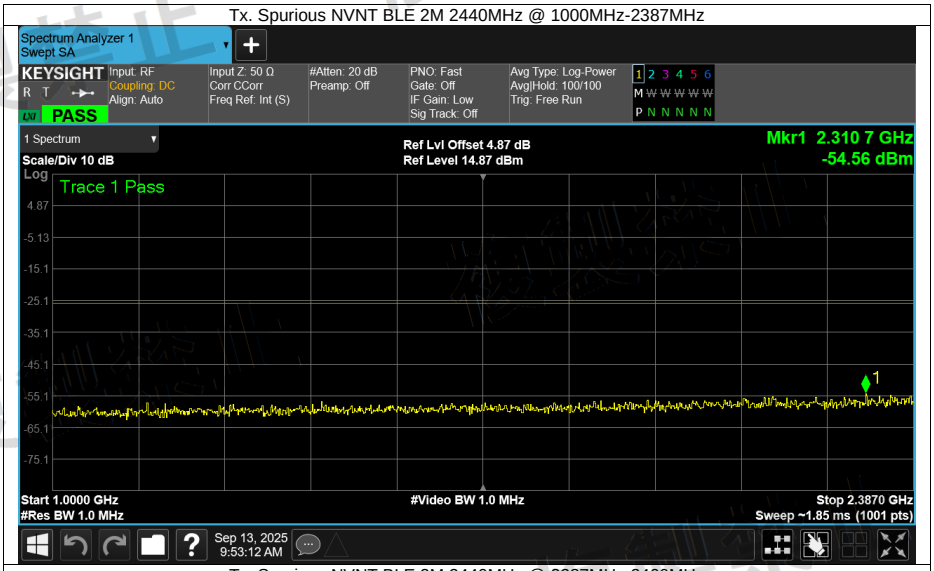

Tx. Spurious NVNT BLE 2M 2402MHz @ 2496.5MHz-13000MHz



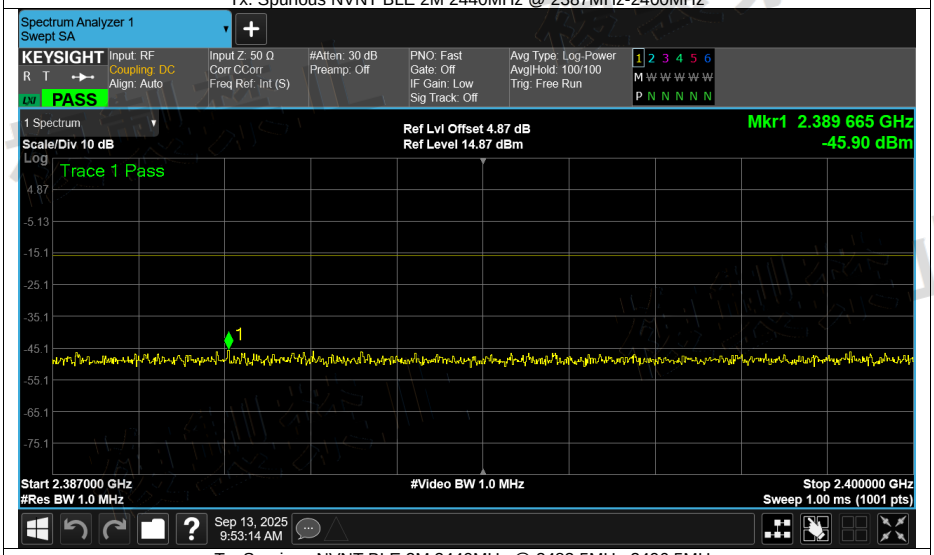

Tx. Spurious NVNT BLE 2M 2440MHz @ 30MHz-1000MHz



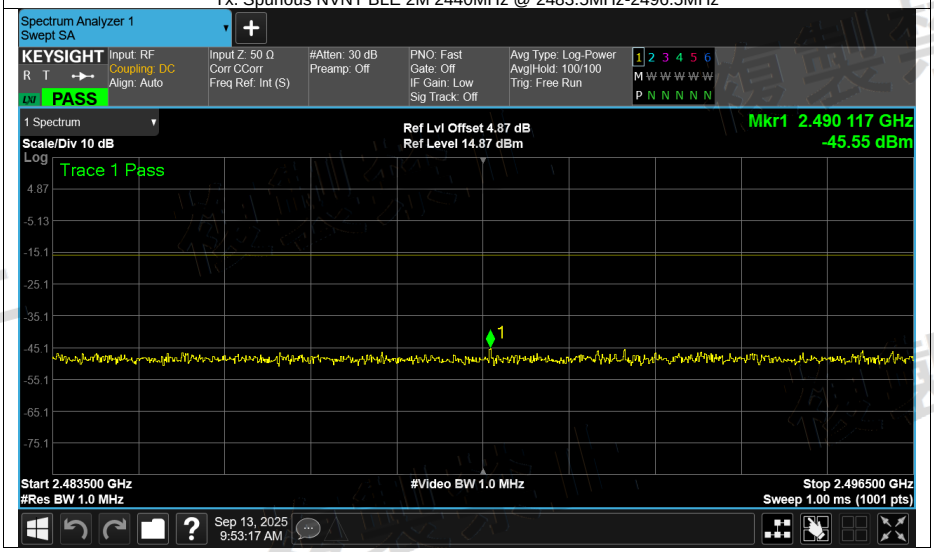
Tx. Spurious NVNT BLE 2M 2440MHz @ 1000MHz-2387MHz



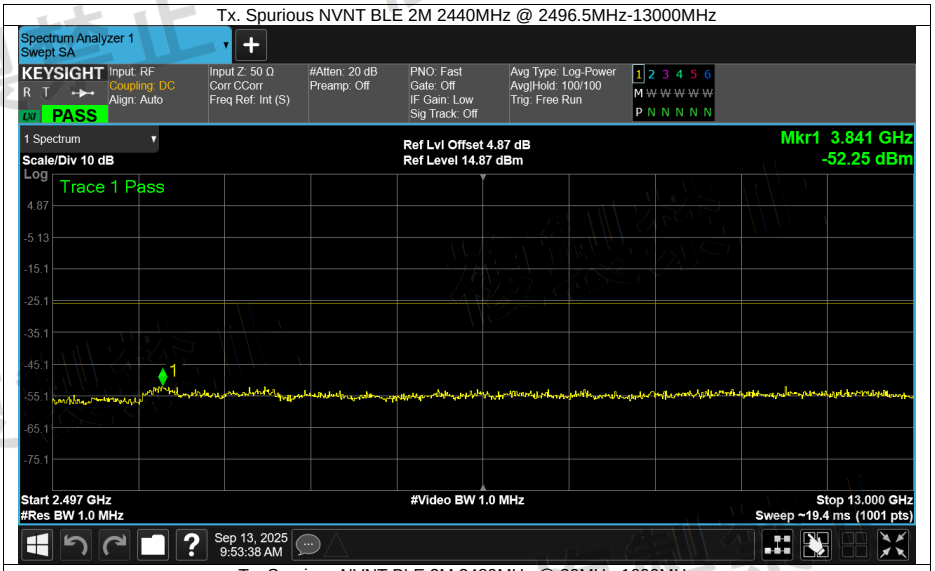

Tx. Spurious NVNT BLE 2M 2440MHz @ 2387MHz-2400MHz



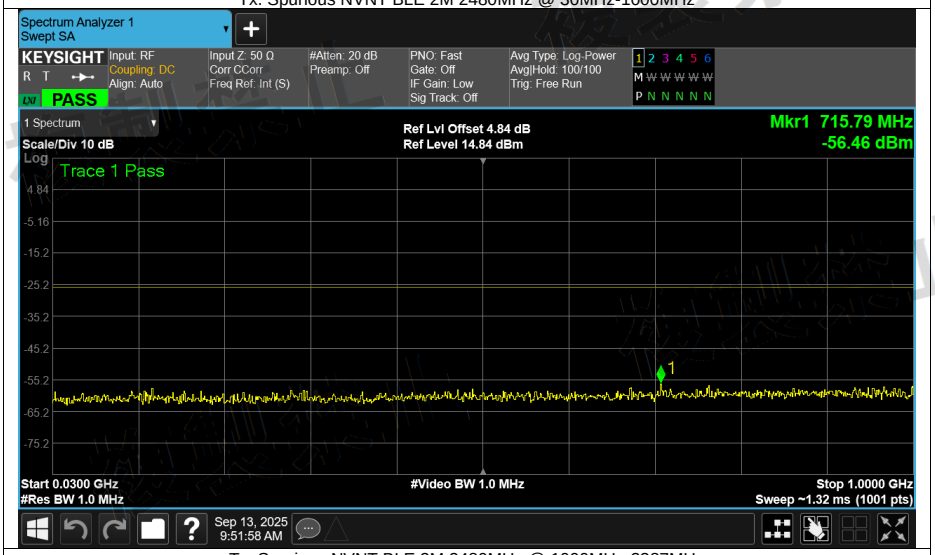

Tx. Spurious NVNT BLE 2M 2440MHz @ 2483.5MHz-2496.5MHz



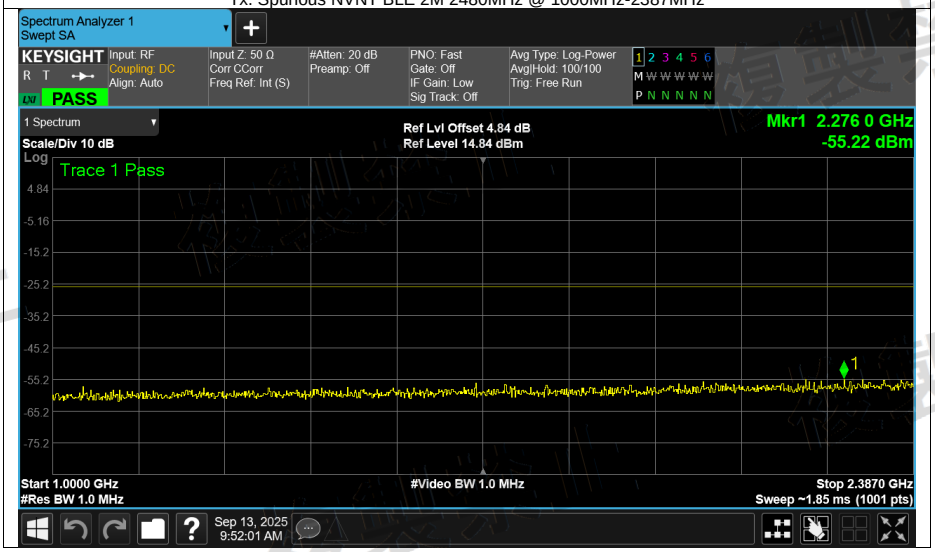
Tx. Spurious NVNT BLE 2M 2440MHz @ 2496.5MHz-13000MHz



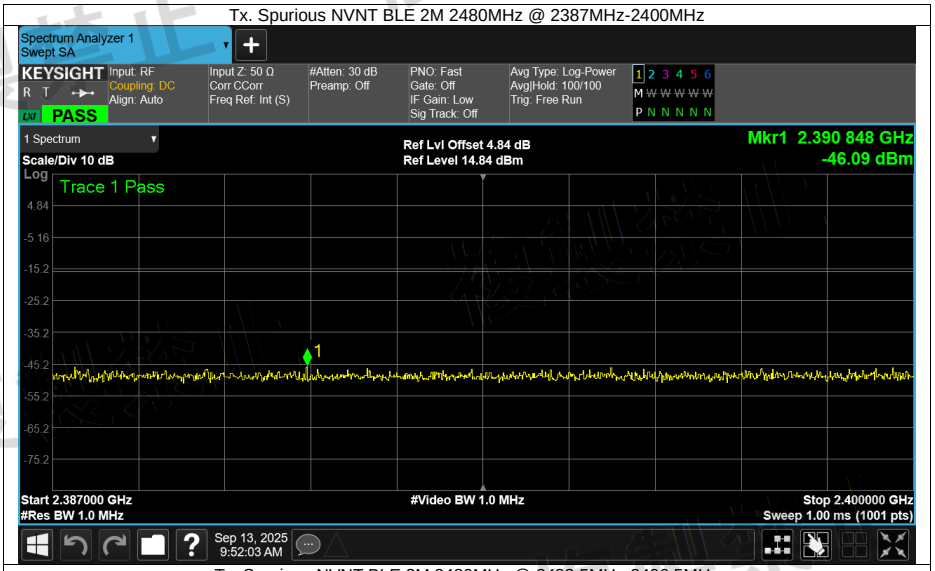

Tx. Spurious NVNT BLE 2M 2480MHz @ 30MHz-1000MHz



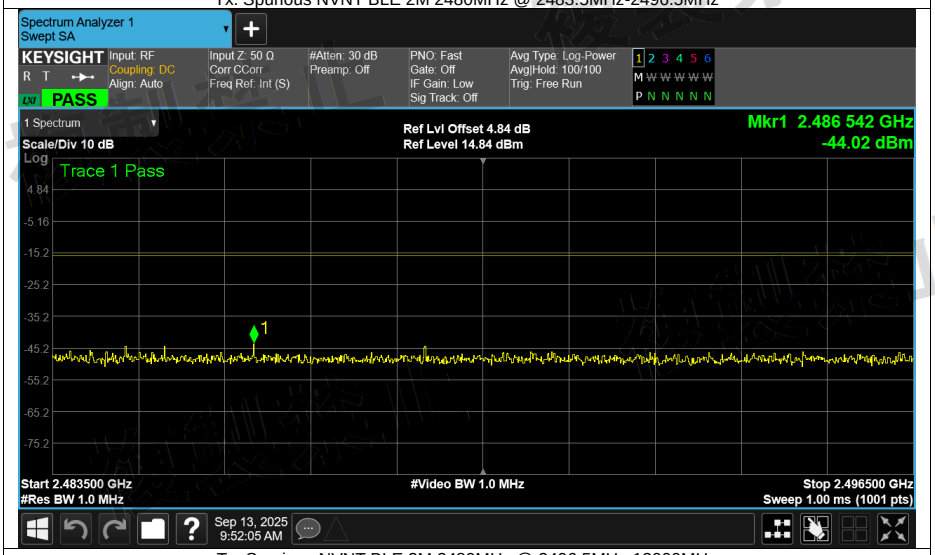

Tx. Spurious NVNT BLE 2M 2480MHz @ 1000MHz-2387MHz



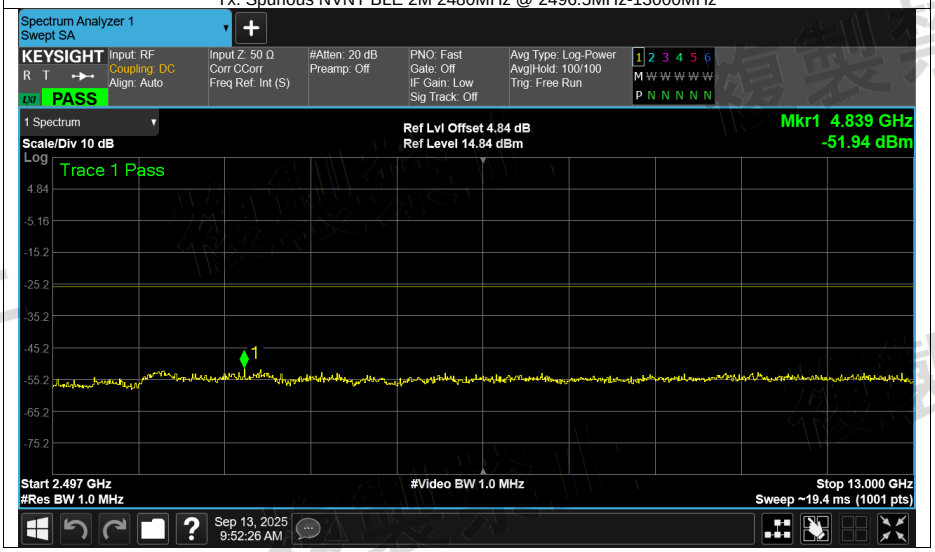
Tx. Spurious NVNT BLE 2M 2480MHz @ 2387MHz-2400MHz




Tx. Spurious NVNT BLE 2M 2480MHz @ 2483.5MHz-2496.5MHz




Tx. Spurious NVNT BLE 2M 2480MHz @ 2496.5MHz-13000MHz

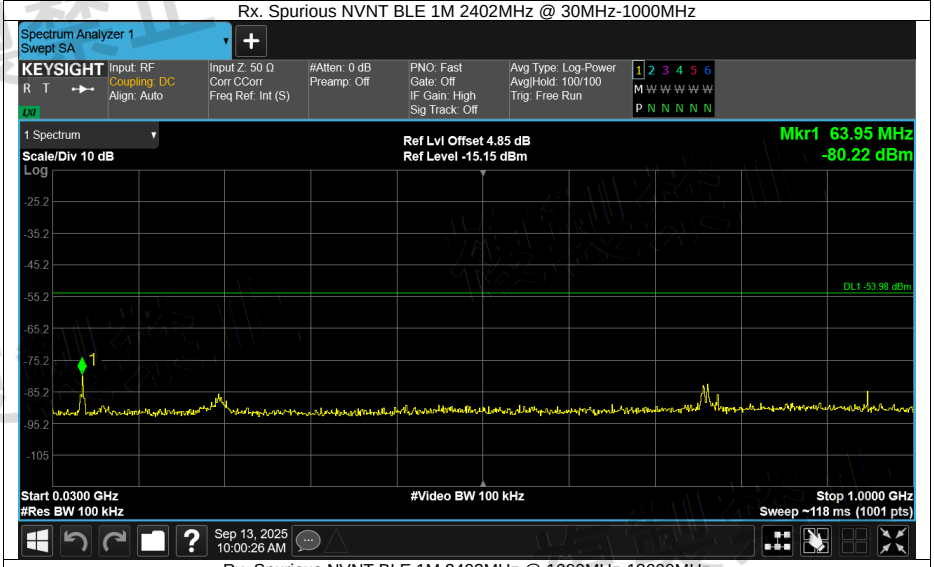


Rx Spurious Emission

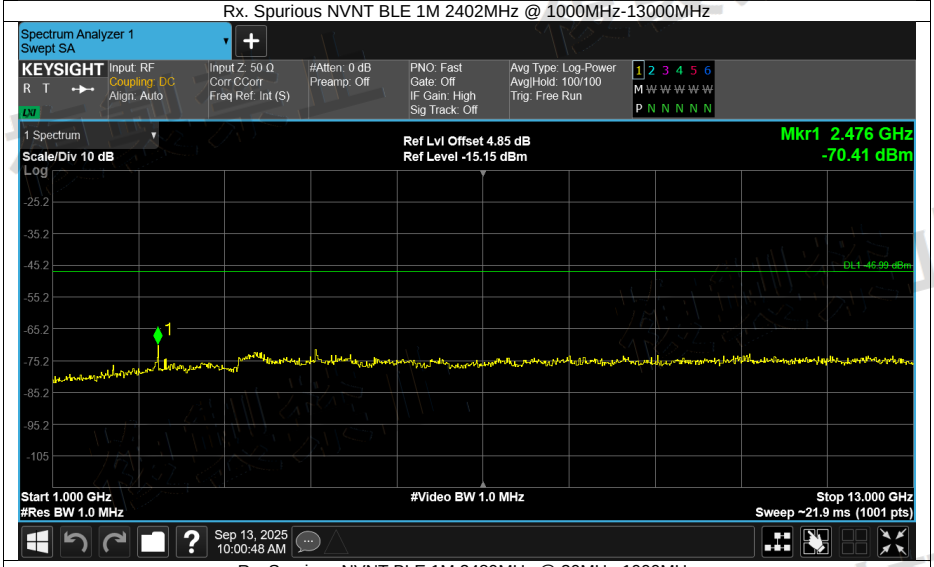
| Condition | Mode | Frequency (MHz) | Range (MHz) | Emission Frequency (MHz) | Max Value (dBm/MHz) | Max Value (nW/MHz) | Limit (nW/MHz) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | BLE 1M | 2402 | 30-1000 | 63.95 | -80.22 | 0.0095 | 4 | Pass |
| NVNT | BLE 1M | 2402 | 1000-13000 | 2476 | -70.41 | 0.091 | 20 | Pass |
| NVNT | BLE 1M | 2480 | 30-1000 | 63.95 | -80.89 | 0.0081 | 4 | Pass |
| NVNT | BLE 1M | 2480 | 1000-13000 | 3796 | -72.69 | 0.0538 | 20 | Pass |
| NVNT | BLE 2M | 2402 | 30-1000 | 63.95 | -80.05 | 0.0099 | 4 | Pass |
| NVNT | BLE 2M | 2402 | 1000-13000 | 2428 | -50.23 | 9.4842 | 20 | Pass |
| NVNT | BLE 2M | 2480 | 30-1000 | 63.95 | -81.25 | 0.0075 | 4 | Pass |
| NVNT | BLE 2M | 2480 | 1000-13000 | 2428 | -65.67 | 0.271 | 20 | Pass |

複製禁止

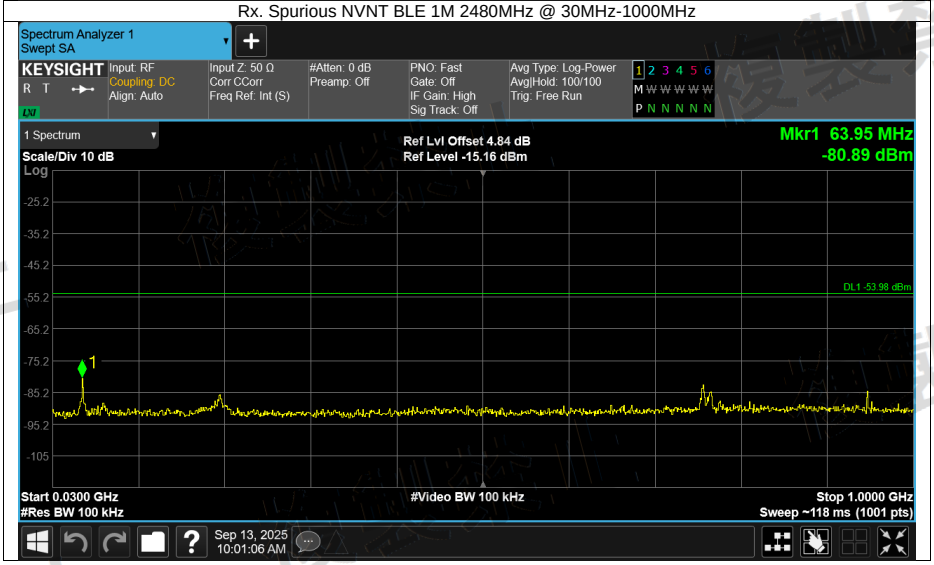
| Test Graphs |
| --- |
| Rx. Spurious NVNT BLE 1M 2402MHz @ 30MHz-1000MHz |



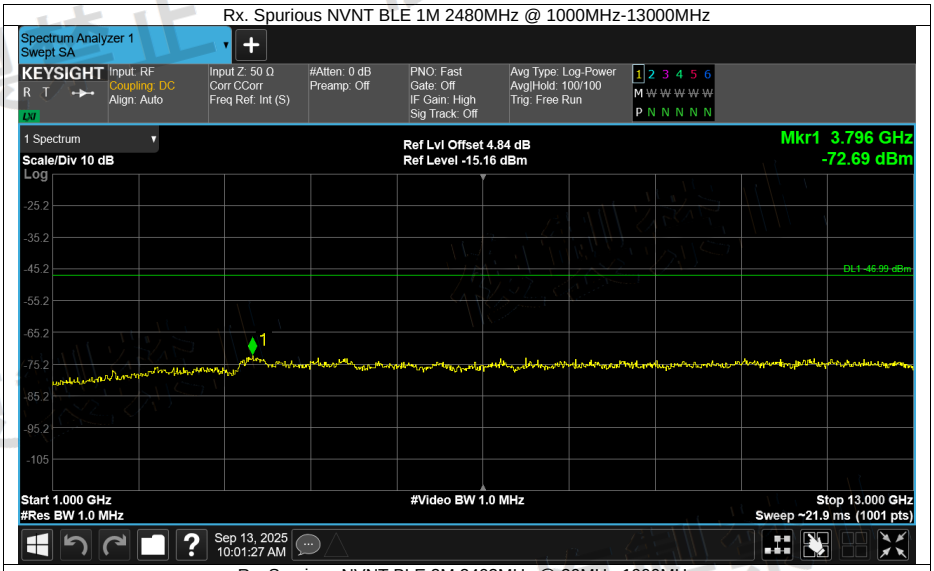

| Rx. Spurious NVNT BLE 1M 2402MHz @ 1000MHz-13000MHz |
| --- |



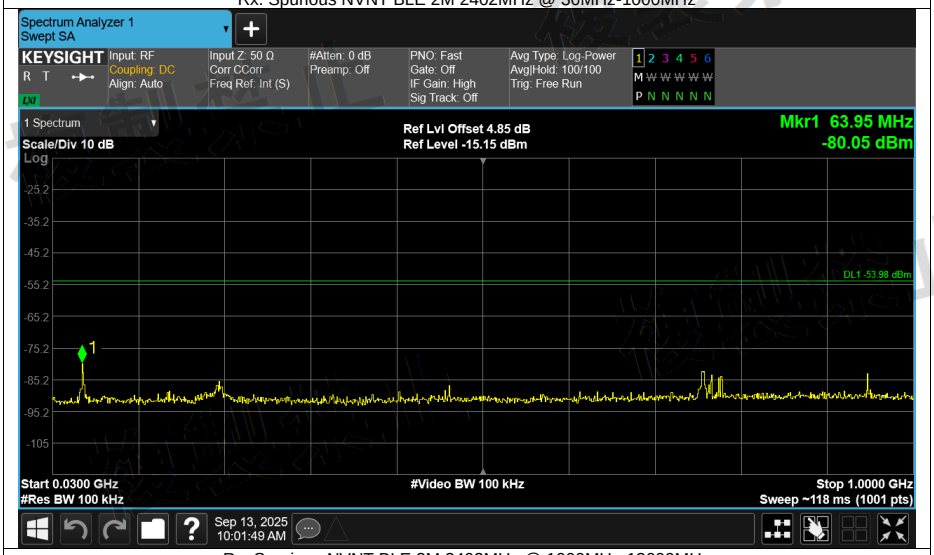

| Rx. Spurious NVNT BLE 1M 2480MHz @ 30MHz-1000MHz |
| --- |



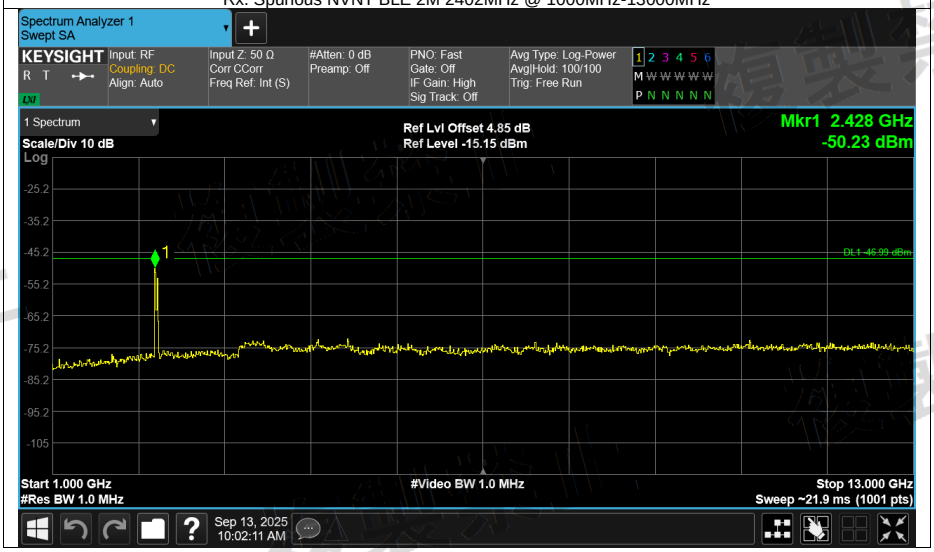
Rx. Spurious NVNT BLE 1M 2480MHz @ 1000MHz-13000MHz



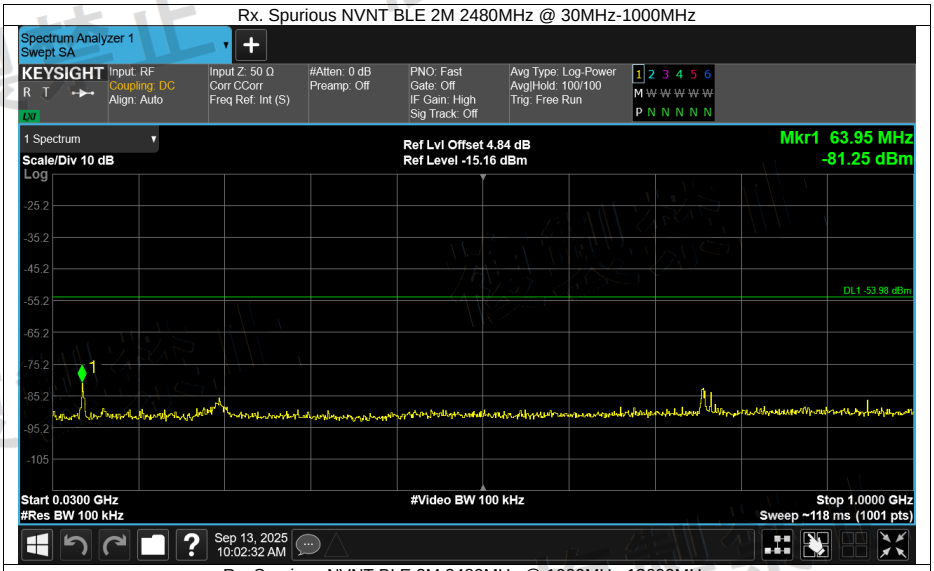

Rx. Spurious NVNT BLE 2M 2402MHz @ 30MHz-1000MHz



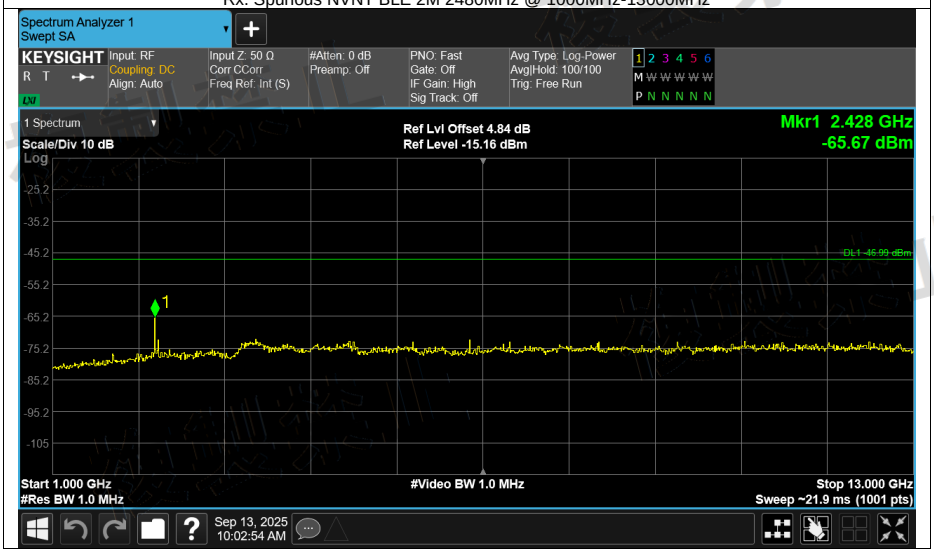

Rx. Spurious NVNT BLE 2M 2402MHz @ 1000MHz-13000MHz



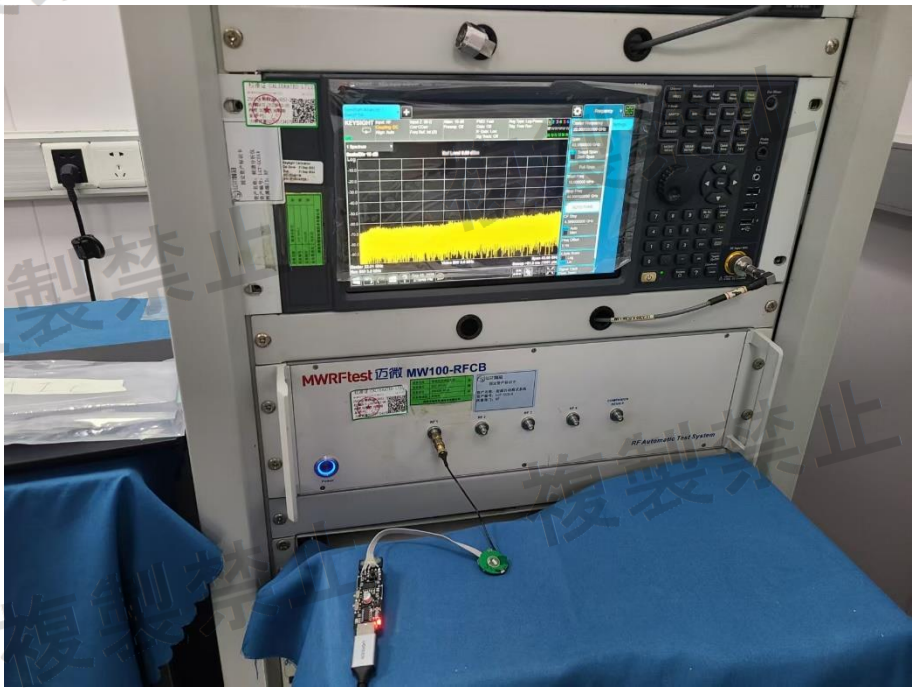
Rx. Spurious NVNT BLE 2M 2480MHz @ 30MHz-1000MHz




Rx. Spurious NVNT BLE 2M 2480MHz @ 1000MHz-13000MHz



# APPENDIX II - TEST SETUP PHOTOS



# APPENDIX III - PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Note: Please see the attached Y21_EUT Photos.

※※※※※END OF THE REPORT※※※※※