



Shenzhen CTL Testing Technology Co., Ltd.
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TEST REPORT

Ordinance Article 2 paragraph 1 item (19)

Report Reference No.: CTL2511142041-MIC

Compiled by:
(position+printed name+signature)

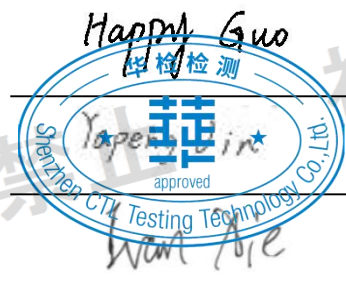
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Ivan Xie
(Manager)



Product Name: PT09-NWO JAPAN Custom

Model/Type reference: PT09-NWO JAPAN Custom

List Model(s): N/A

Trade Mark: Prodolita

Applicant's name: NWO JAPAN.IIc

Address of applicant: 502 Grandia Nagaki, 2-1-51 Nagaki-cho, Matsuyama-shi, Ehime, Japan

Test Firm: Shenzhen CTL Testing Technology Co., Ltd.

Address of Test Firm: Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055

Test specification:

Standard: Ordinance Article 2 paragraph 1 item (19)

TRF Originator: Shenzhen CTL Testing Technology Co., Ltd.

Master TRF: Dated 2011-01

Date of receipt of test item: Dec. 03, 2025

Date of Test Date: Dec. 03, 2025-Dec. 17, 2025

Date of Issue: Dec. 18, 2025

Result: Pass

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TEST REPORT

Test Report No. :	CTL2511142041-MIC	Dec. 18, 2025 Date of issue
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Equipment under Test : PT09-NWO JAPAN Custom

Sample No : CTL251114204001

Model /Type : PT09-NWO JAPAN Custom

Listed Models : N/A

Applicant : **NWO JAPAN.Ilc**

Address : 502 Grandia Nagaki, 2-1-51 Nagaki-cho, Matsuyama-shi,
Ehime, Japan

Manufacturer : **Shenzhen Prodo Technology Co., Ltd**

Address : Room 406, Building 1, Pengtengda Industrial Zone, Dalang
Street, Longhua District, Shenzhen, China

Test result	Pass *
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* In the configuration tested, the EUT complied with the standards specified page 5.

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Table of Contents

Page

1. SUMMARY.....	5
1.1. TEST STANDARDS.....	5
1.2. TEST DESCRIPTION.....	5
1.3. TEST FACILITY.....	6
1.4. MEASUREMENT UNCERTAINTY.....	6
2. GENERAL INFORMATION.....	7
2.1. ENVIRONMENTAL CONDITIONS.....	7
2.2. GENERAL DESCRIPTION OF EUT.....	7
2.3. DESCRIPTION OF TEST MODES.....	8
2.4. MEASUREMENT INSTRUMENTS LIST.....	8
3. TEST CONDITIONS AND RESULTS.....	10
3.1. FREQUENCY ERROR.....	10
3.2. ANTENNA OUTPUT POWER AND OUTPUT POWER TOLERANCE.....	11
3.3. OCCUPIED BANDWIDTH.....	12
3.4. UNWANTED EMISSION STRENGTH.....	13
3.5. SECONDARY RADIATED EMISSION STRENGTH.....	14
3.6. CONSTRUCTION PROTECTION METHOD.....	15
3.7. INTERFERENCE PREVENTION FUNCTION.....	16
3.8. CARRIER SENSE CAPABILITY.....	17
3.9. NUMBER OF CARRIERS.....	18
4. TEST SETUP PHOTOS OF THE EUT.....	19
5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT.....	20

1. SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[MIC Notice No.88 Appendix No.43](#)

1.2. Test Description

Test Item	Result
Frequency Error	Pass
Antenna Output Power and Output Power Tolerance	Pass
Occupied Bandwidth	Pass
Unwanted Emission Strength	Pass
Secondary Radiated Emission Strength	Pass
Construction protection method	Pass
Interference Prevention Function	Pass
Carrier Sense Capability	Pass
Number of Carriers	Pass

1.3. Test Facility

1.3.1 Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No. 3011, Shahexi Road, Nanshan, Shenzhen 518055 China

There is one 3m semi-anechoic chamber and two line conducted labs for final test. The Test Sites meet the requirements in documents ANSI C63.4 and CISPR 32/EN 55032 requirements.

1.3.2 Laboratory accreditation

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

CNAS-Lab Code: L7497

Shenzhen CTL Testing Technology Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 4343.01

Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

IC Registration No.: 9618B

CAB identifier: CN0041

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with Registration No.: 9618B.

FCC-Registration No.: 399832

Designation No.: CN1216

Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 399832.

1.4. Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal).

Parameter	Uncertainty
Frequency error / 99%&90% bandwidth	$\pm 1.62 \times 10^{-6}$
Total RF power, conducted	$\pm 0.8\text{dB}$
Spurious emissions, conducted	$\pm 0.8\text{dB}$
DC and low frequency voltages	$\pm 0.05\%$
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

2. GENERAL INFORMATION

2.1. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Voltage	DC Power	Normal Voltage	DC:3.70V
		High Voltage	DC:4.07V
		Low Voltage	DC:3.33V
	DC RF Module	Normal Voltage	DC:3.30V
		High Voltage	DC:3.63V
		Low Voltage	DC:2.97V
Other	Normal Temperature	25°C	
	Relative Humidity	55 %	
	Air Pressure	989 hPa	

Note:

During the input supply voltage to the EUT from the external power source is varied by $\pm 10\%$, the fluctuation of input voltage to the circuit of RF unit of test equipment is exceed $\pm 1\%$. So, all measurement has been conducted by normal and limit voltage.

2.2. General Description of EUT

Product Name:	PT09-NWO JAPAN Custom
Model/Type reference:	PT09-NWO JAPAN Custom
Power supply:	Powered by a 3.7V DC battery Charging Input: DC 5V
Hardware Version:	V1.0
Software Version:	V1.0
2.4G WIFI	
Supported type:	802.11b/802.11g/802.11n(HT20)/802.11n(HT40)
Modulation:	802.11b: DSSS 802.11g/802.11n(HT20)/802.11n(HT40):OFDM
Operation frequency:	802.11b/802.11g/802.11n(HT20):2412MHz~2472MHz 802.11n(HT40):2422MHz~2462MHz
Channel number:	802.11b/802.11g/802.11n(HT20):13 802.11n(HT40):9
Channel separation:	5MHz
Antenna type:	PCB Antenna
Antenna gain:	2.54dBi

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

Note 2: Antenna gain provided by the applicant.

2.3. Description of Test Modes

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List WIFI:

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442		

Note: Test performed at the lowest/middle/highest frequencies selected in the list above for EUT supported while working on specified mode.

2.4. Measurement Instruments List

RF conducted							
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Institution	Calibration Date	Calibration Due Date
1	Spectrum Analyzer	Keysight	N9020A	MY53420874	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/03	2026/07/02
2	WIDEBAND RADIO COMMUNICATION TESTER	RS	CMW500	1201.0002K50-107930-CD	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/03	2026/07/02
3	Power Measurement Module	TSTPASS	TSPS2023R	TSCB220016	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/03	2026/07/02
4	DC Source	Agilent	E3632A	MY40015577	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/03	2026/07/02
5	Temperature Humidity Chamber	JingBang	TLHW-64B	/	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/03	2026/07/02
6	Temperature/Humidity Meter	Ji Yu	MC501	/	Guangdong Jingheng Detection Tecanology	2025/07/03	2026/07/02

					Co.,Ltd.		
7	Oscilloscope	Tektronix Inc. Beaverton, OR, U.S.A.	TDS 3012C	C011550	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/05/01	2026/04/30
Test Software							
Name of Software				Version			
TST-PASS				V2.0.1			

Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law.

- ☐ (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.
- ☒ (c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.

3. Test conditions and Results

3.1. Frequency Error

LIMIT

±50ppm

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: non-modulation

Spectrum Condition:

Frequency: test frequency

Span: 1MHz

RBW: 10KHz

VBW: 10KHz

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Section 1 from CTL2511142041-MIC_2.4G_WIFI_Appendix.

3.2. Antenna Output Power and Output Power Tolerance

LIMIT

- DS ≤ 10 mW/MHz
- OFDM $20\text{MHz} \leq 10$ mW/MHz
 $40\text{MHz} \leq 5$ mW/MHz

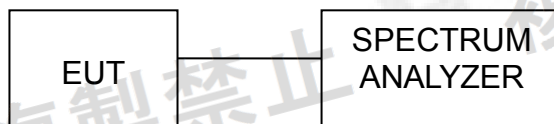
The Output Power Tolerance must be within +20%.

E.i.r.p:

- DS: 12.14-22.14dBm/MHz
- OFDM 20MHz : 12.14-22.14dBm/MHz
 40MHz : 9.13-19.13 dBm/MHz

Note: E.I.R.P will not be applied to the transmission antenna which has a gain of 2.14dBi or less.

TEST CONFIGURATION



TEST PROCEDURE

Step 1:

Connect the UUT to the spectrum analyzer as TEST CONFIGURATION and use the following settings:

- Centre Frequency: The centre frequency of the channel under test.
- RBW: 1 MHz
- VBW: 1 MHz
- Span: Wide enough to cover the complete power envelope of the signal of the UUT.
- Detector: Peak
- Trace Mode: Max Hold

Step 2:

When the trace is complete, find the peak value of the power envelope and record the frequency.

Step 3:

Make the following changes to the settings of the spectrum analyzer:

- Centre Frequency: Equal to the frequency recorded in step 2.
- Span: 0 MHz
- RBW: 1 MHz
- VBW: 1 MHz
- Detector: RMS
- Trace Mode: Clear Write

TEST RESULTS

Raw data reference to Section 3 from CTL2511142041-MIC_2.4G_WIFI_Appendix.

3.3. OCCUPIED BANDWIDTH

LIMIT

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM $\leq$ 40 MHz, DS $\leq$ 26 MHz; Others $\leq$ 26 MHz
- Spread factor $>$ 5.

TEST CONFIGURATION



TEST PROCEDURE

1. Setting of SA is following as fellow:
RBW: 300 kHz
VB: 300 kHz
Sweep time: Auto
Sweep Mode: Continuous sweep
Detect mode: Positive peak
Trace mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.
3. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 90% of occupied bandwidth to measure spread bandwidth.
4. Spread Factor=Spread Bandwidth/modulation rate. The modulation rate: MR=1.375Mbps for 802.11b

TEST RESULTS

Raw data reference to Section 2 from CTL2511142041-MIC_2.4G_WIFI_Appendix.

3.4. Unwanted Emission Strength

LIMIT

Below 2387 MHz: 2.5 μ W/MHz or less

2387 to 2400 MHz: 25 μ W/MHz or less

2483.5 Through 2496.5 MHz: 25 μ W/MHz or less

Over 2496.5 MHz: 2.5 μ W/MHz or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Section 4 from CTL2511142041-MIC_2.4G_WIFI_Appendix.

3.5. Secondary Radiated Emission Strength

LIMIT

Below 1GHz: 4.0nW or less

Above 1GHz: 20nW or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW:100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Section 5 from CTL2511142041-MIC_2.4G_WIFI_Appendix.

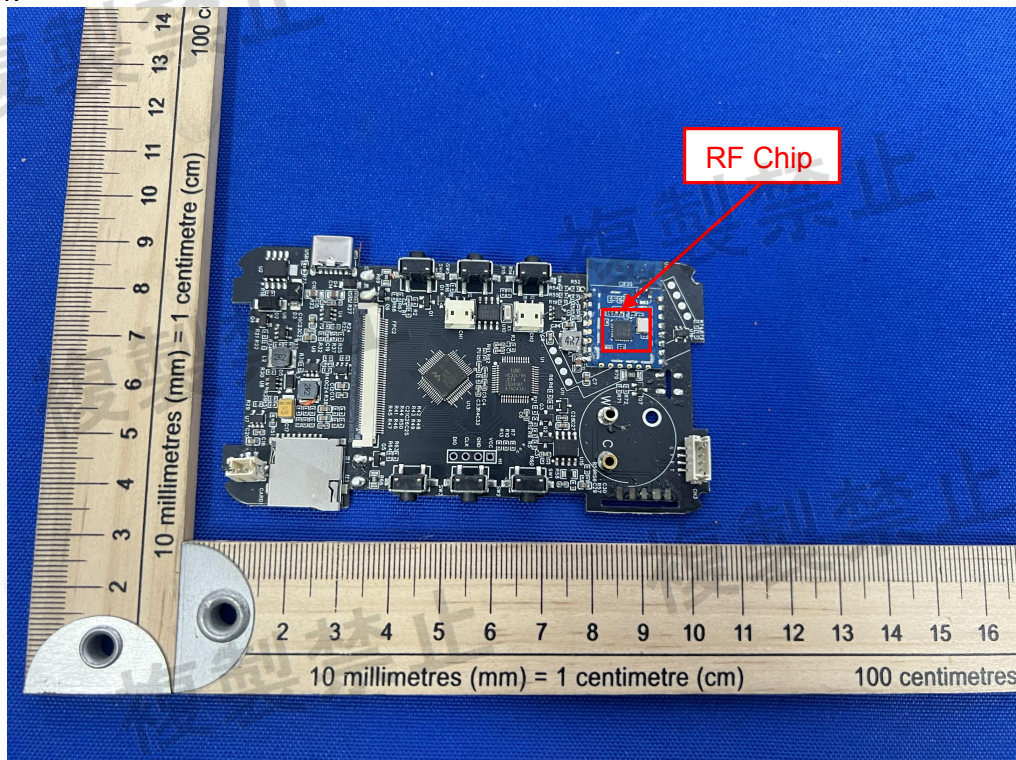
3.6. Construction protection method

Requirement

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily

Confirmation method

All high-frequency parts and modulation parts are grouped in one IC, which is not easily modified by the end user.



3.7. Interference Prevention Function

Requirement

Clarify, the one automatically to transmit and to receive identification code with the wireless equipment of the wireless station used in the same premises.

Interference Prevention FunctionConfirm

A communication link was made where the ID code is correct (Identical).

TEST PROCEDURE

1. Connect the EUT in network
2. Open the software
3. We can get the information as follows:

TEST RESULTS

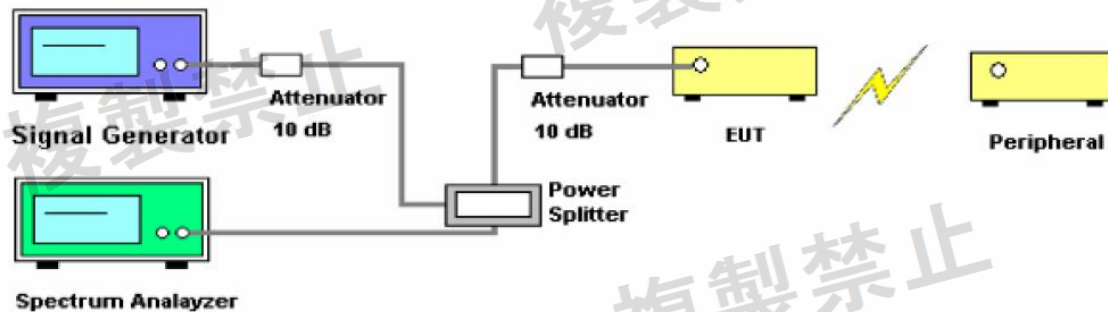
MAC: C1:BE:BE:C2:8E:4D

3.8. Carrier Sense Capability

Limit

EUT stop RF transmission signal after carrier inject to EUT for the OFDM system with occupied frequency bandwidth below 38MHz and exceed 26MHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Set The EUT state in "normal mode link with wireless router".
2. 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 is the test frequency).
3. Turn off the RF signal of the SG.
4. EUT have transmitted the maximum modulation signal and fixed channelize.
5. Setting the spectrum as fellow:
RBW/VBW=1MHz/1MHz
Span=50MHz
Sweep time=auto
Sweep mode=continuous
Detect mode=positive peak
6. SG RF signal on.
7. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous transmitted signal.

TEST RESULTS

Good, Compliant

3.9. Number of Carriers

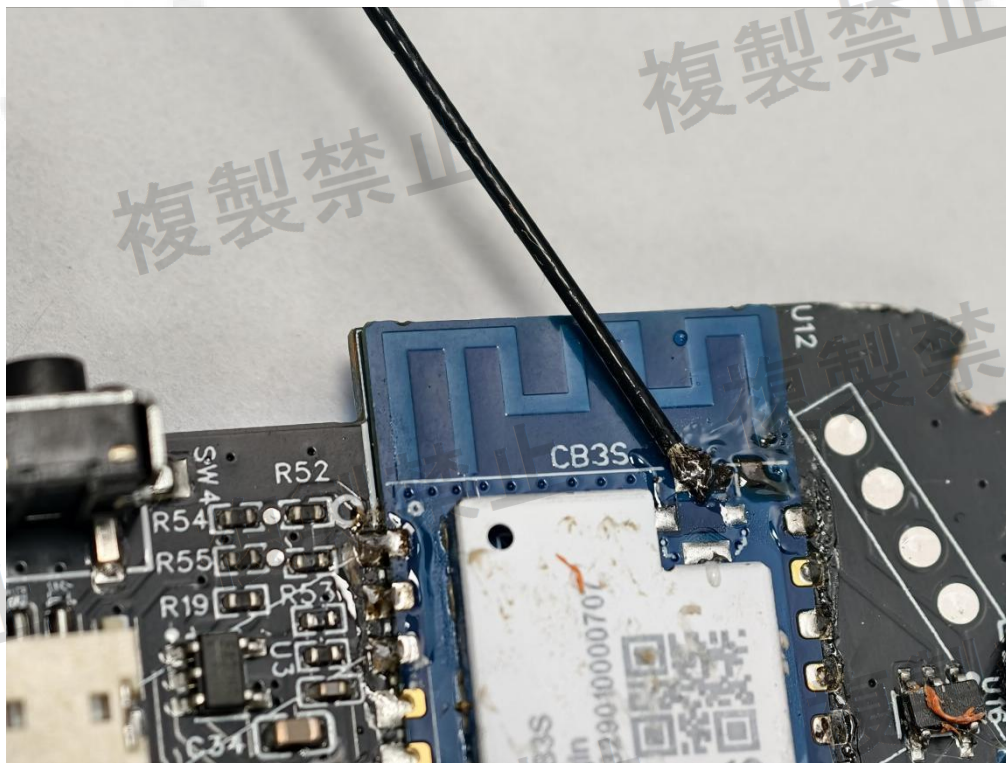
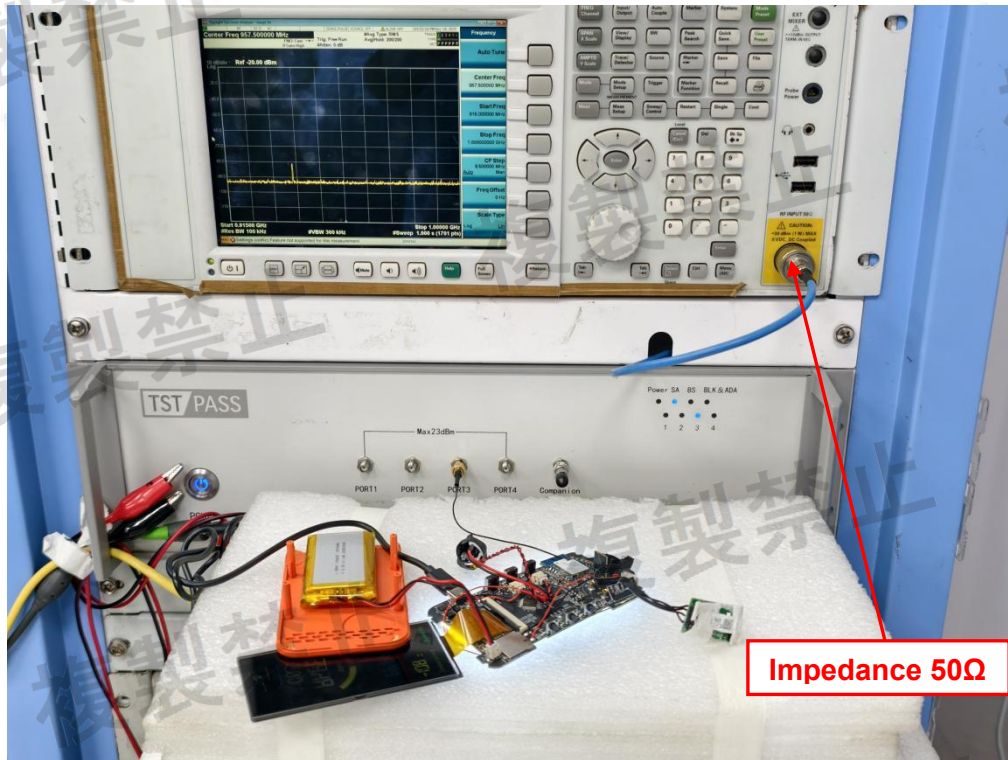
LIMIT

The number of carriers: 1 or more/MHz

TEST RESULTS

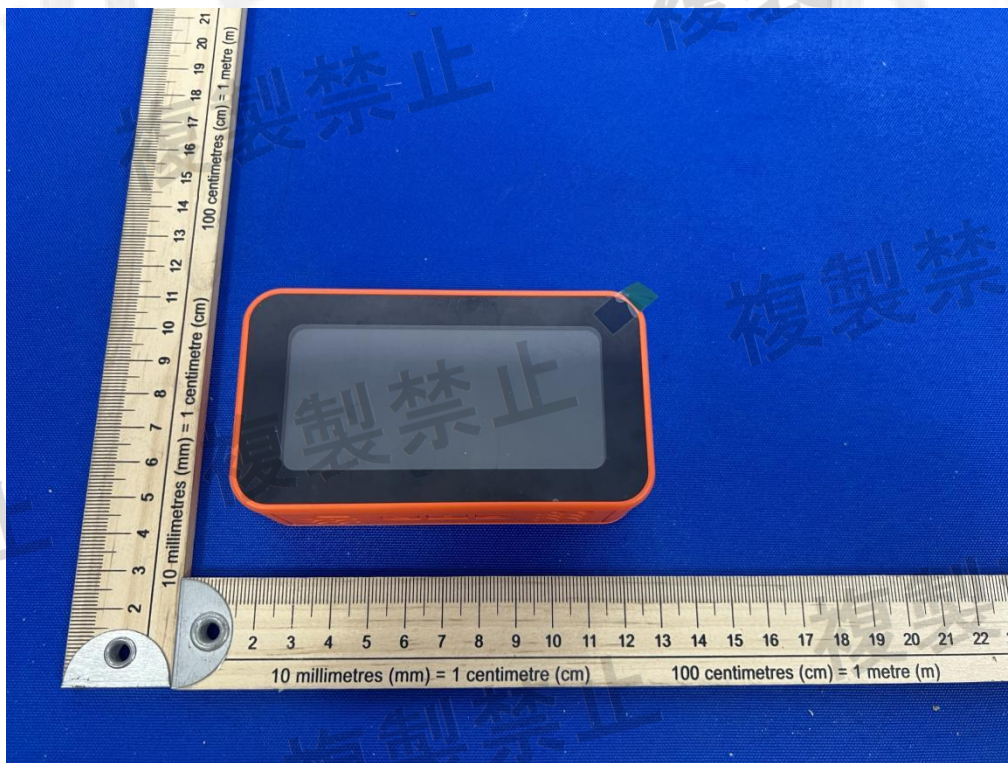
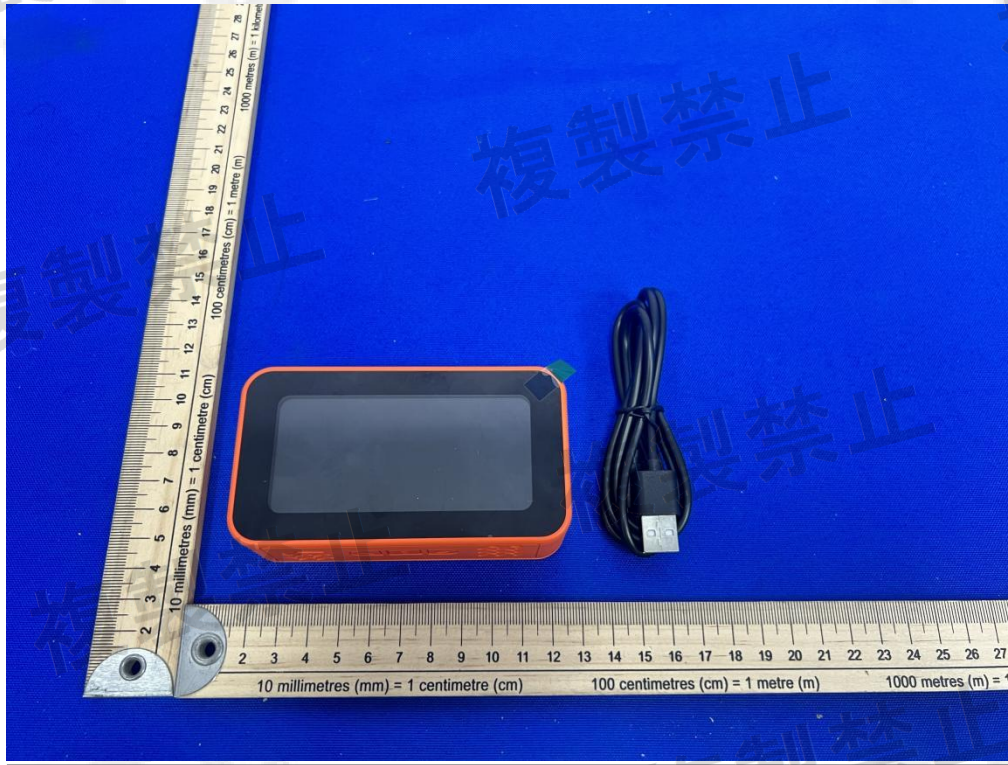
This device has more than 1 sub-carrier in 1MHz, compliances with the requirement.

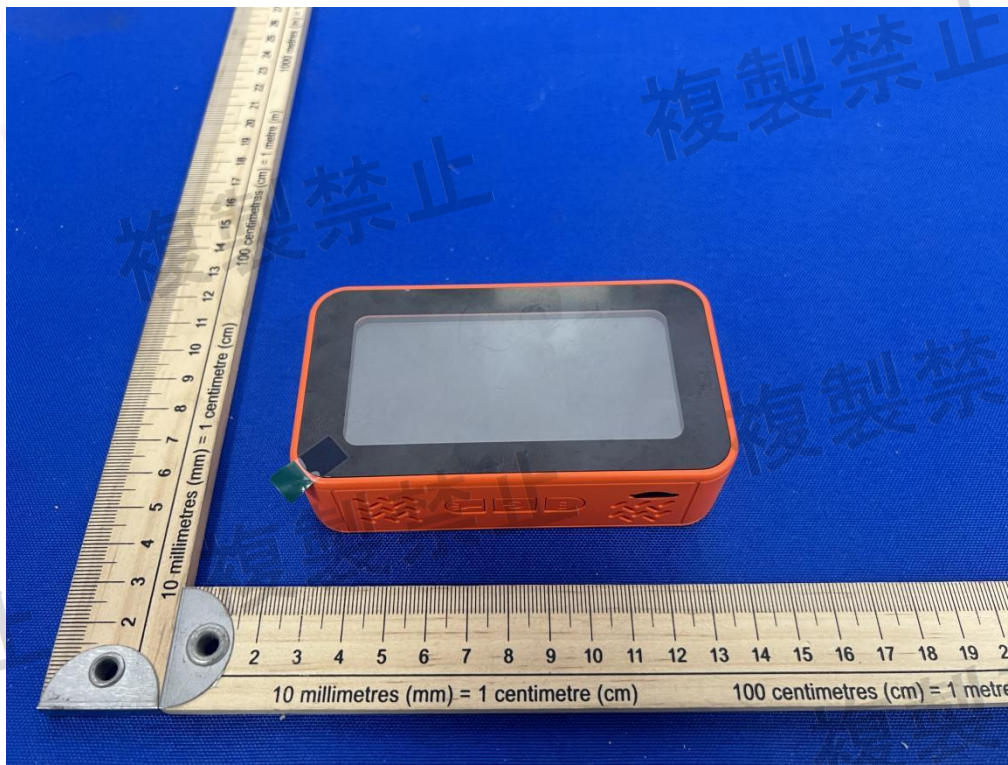
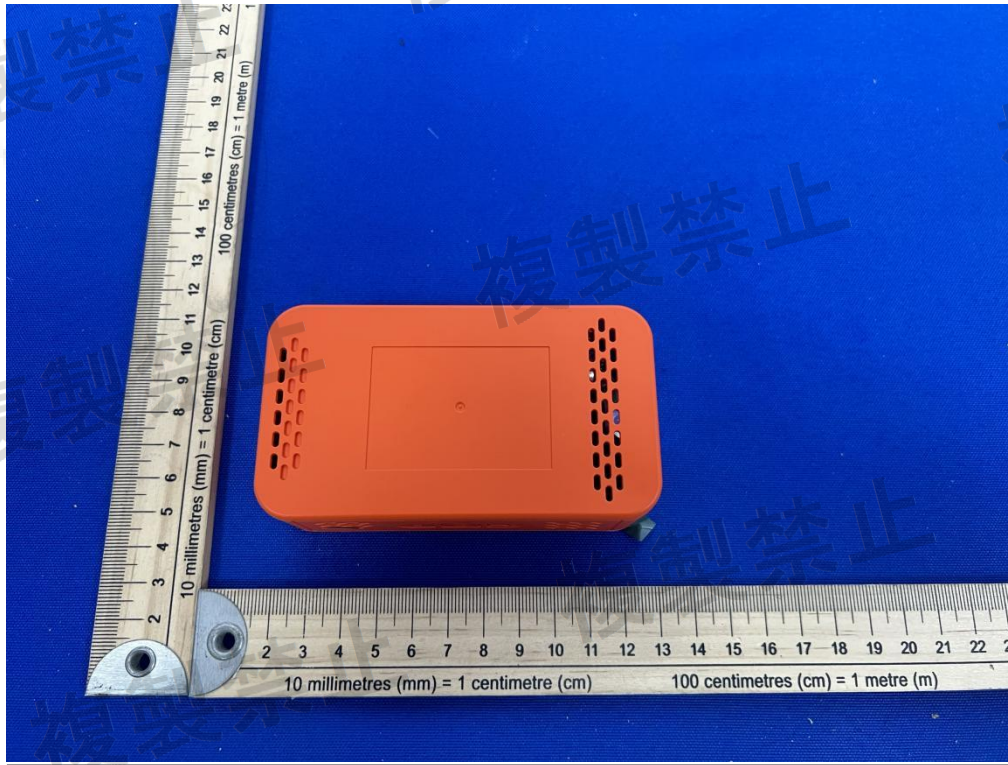
4. Test Setup Photos of the EUT

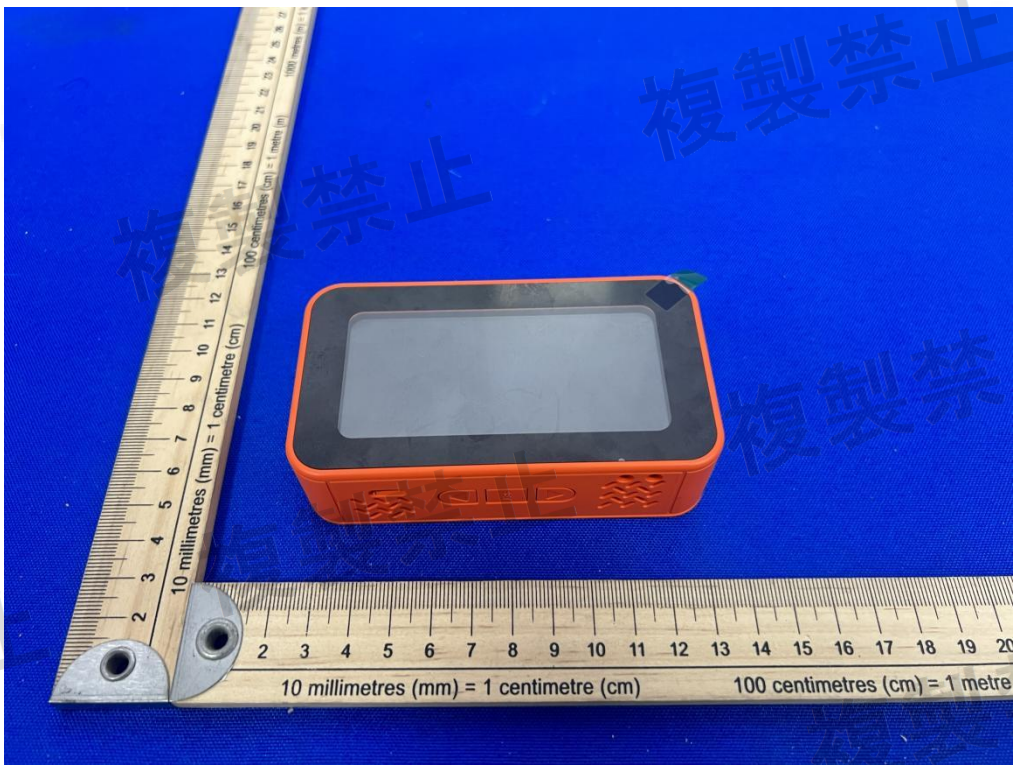
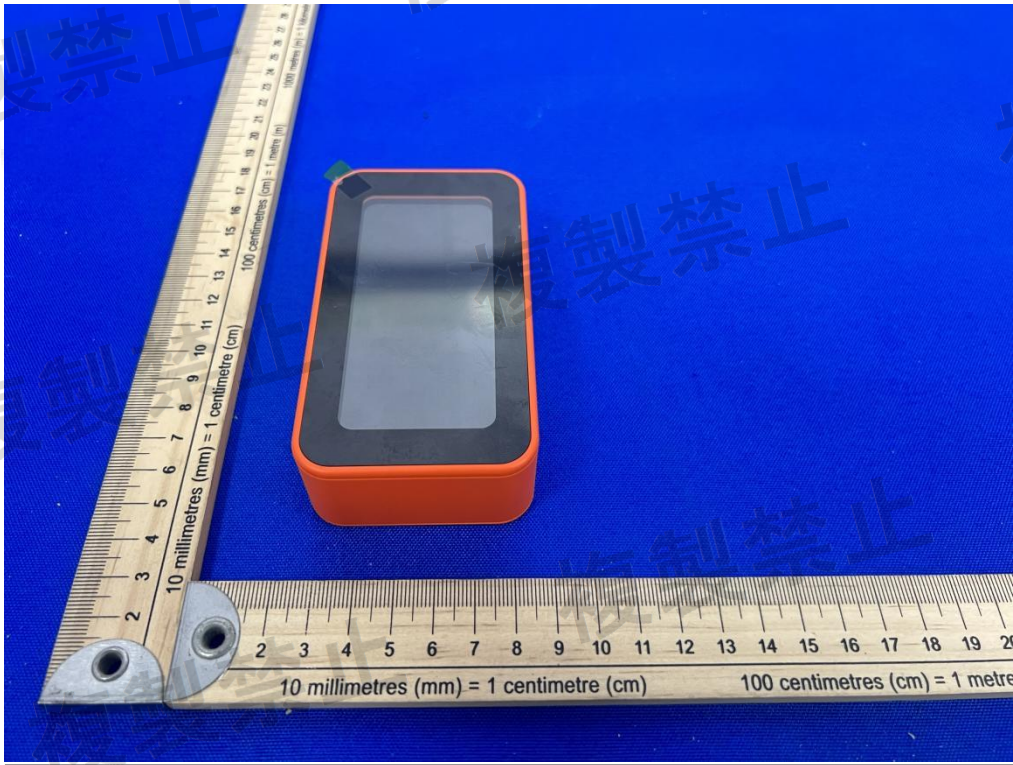


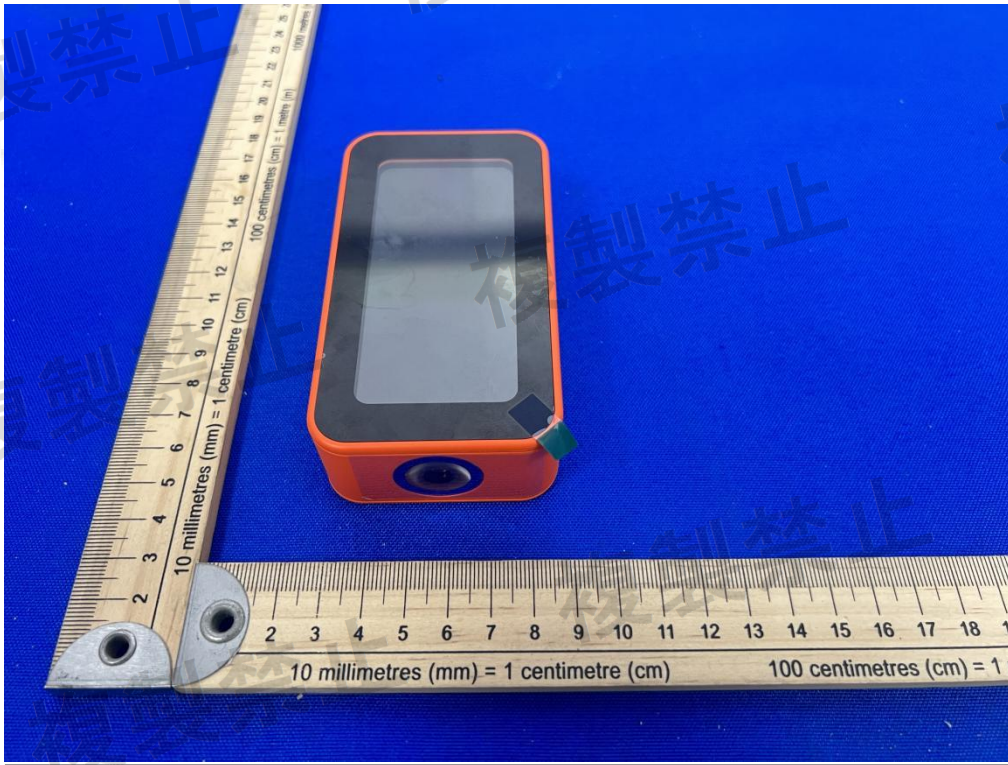
5. External and Internal Photos of the EUT

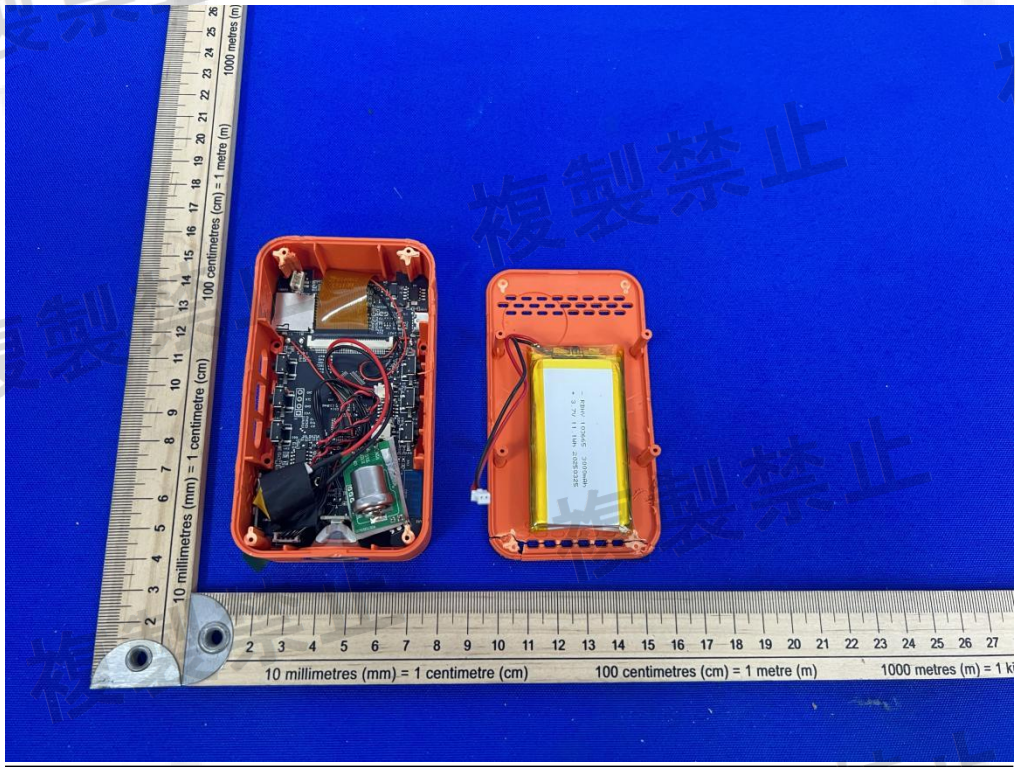
External Photos of the EUT

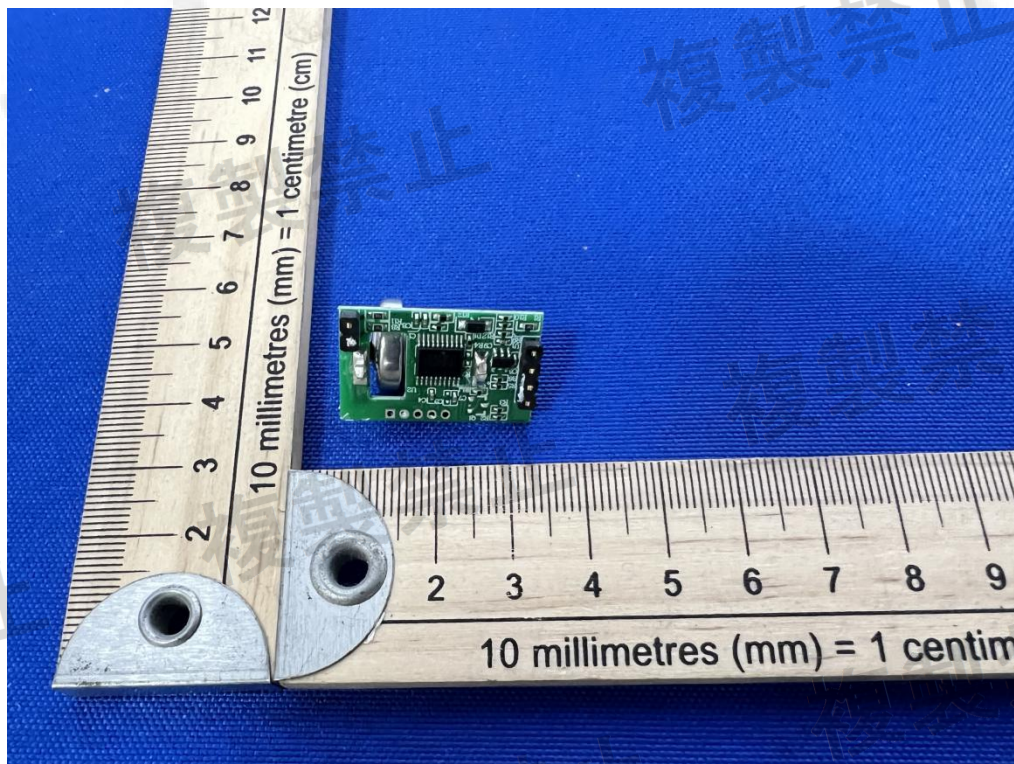
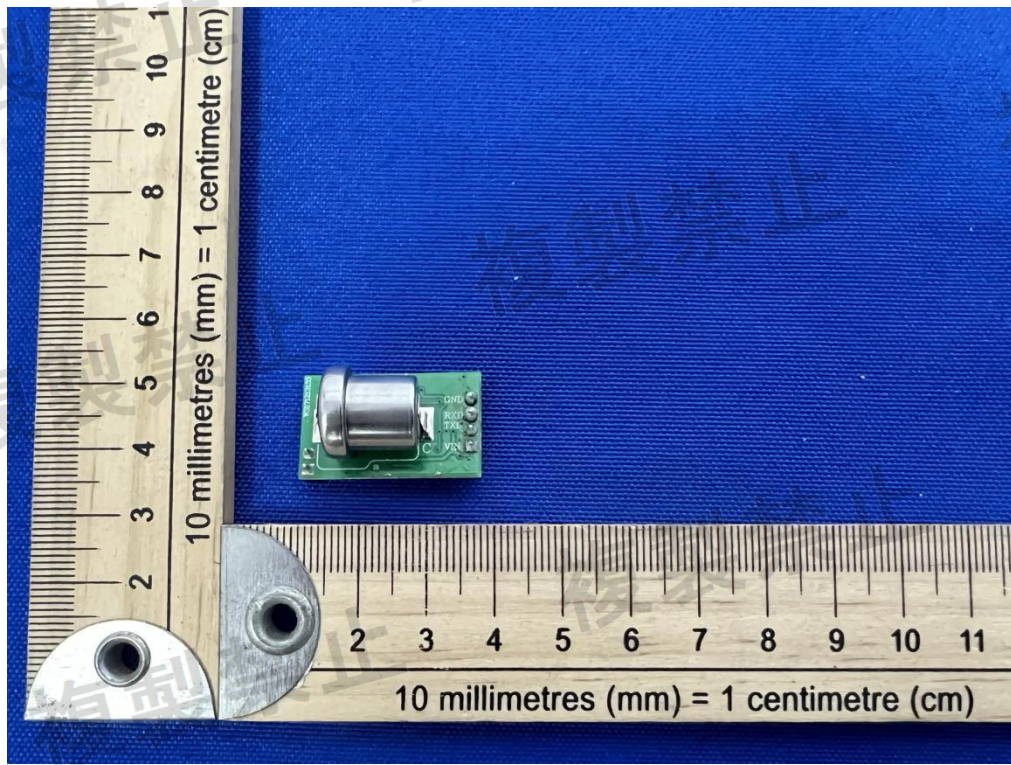


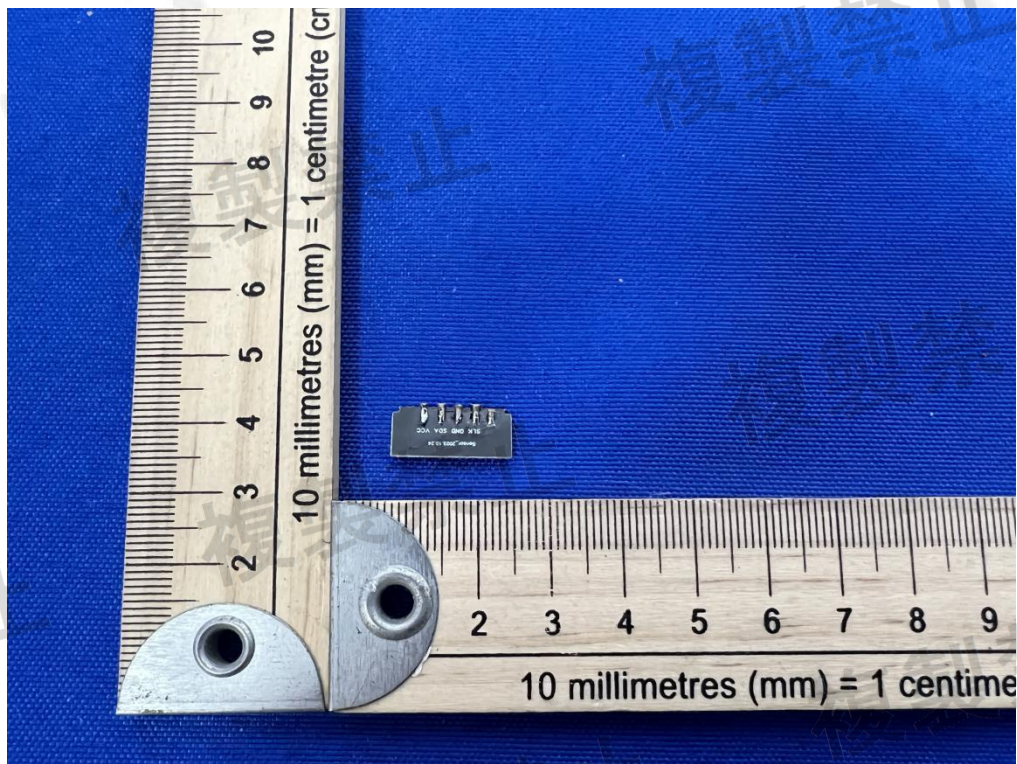
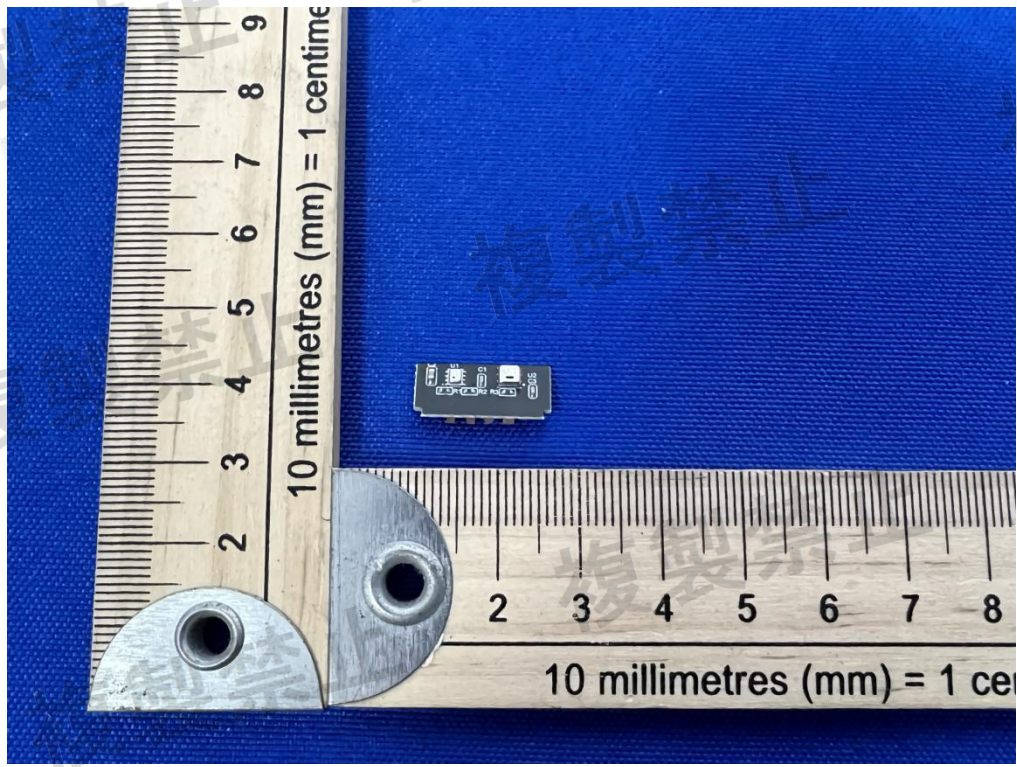


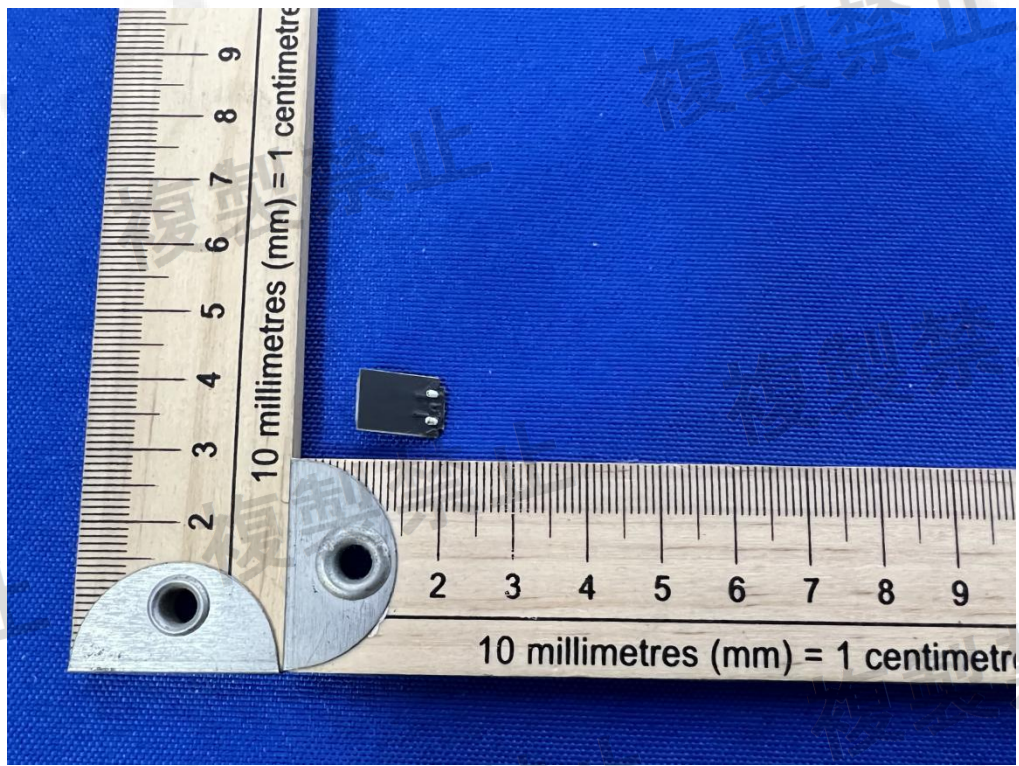
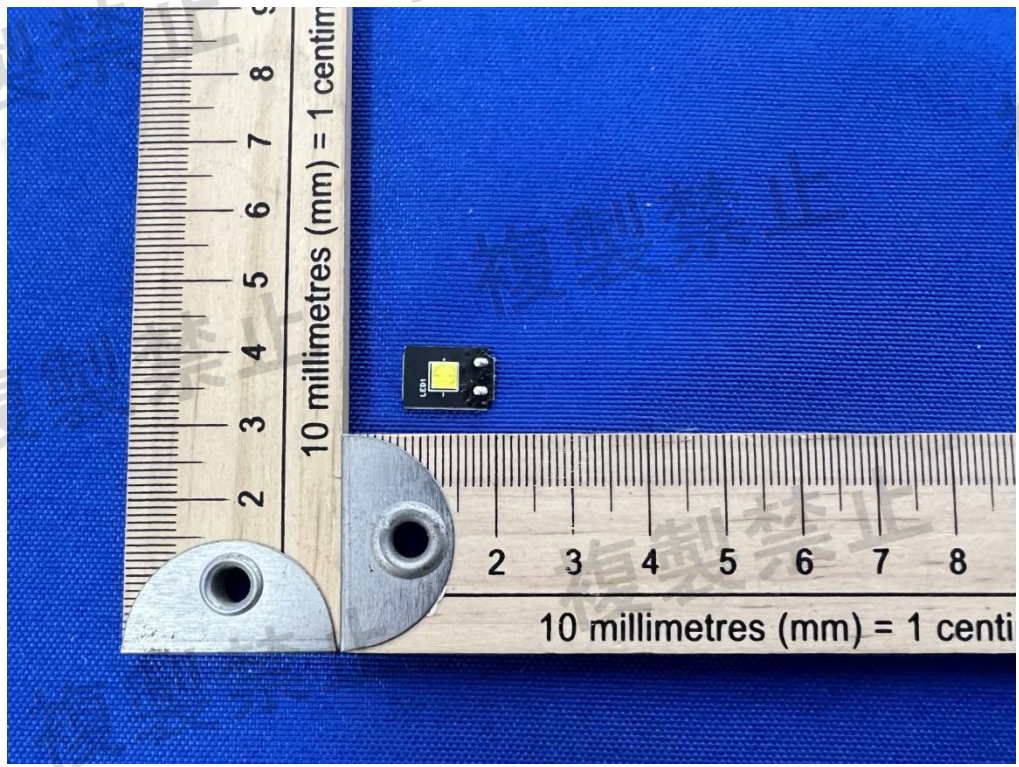


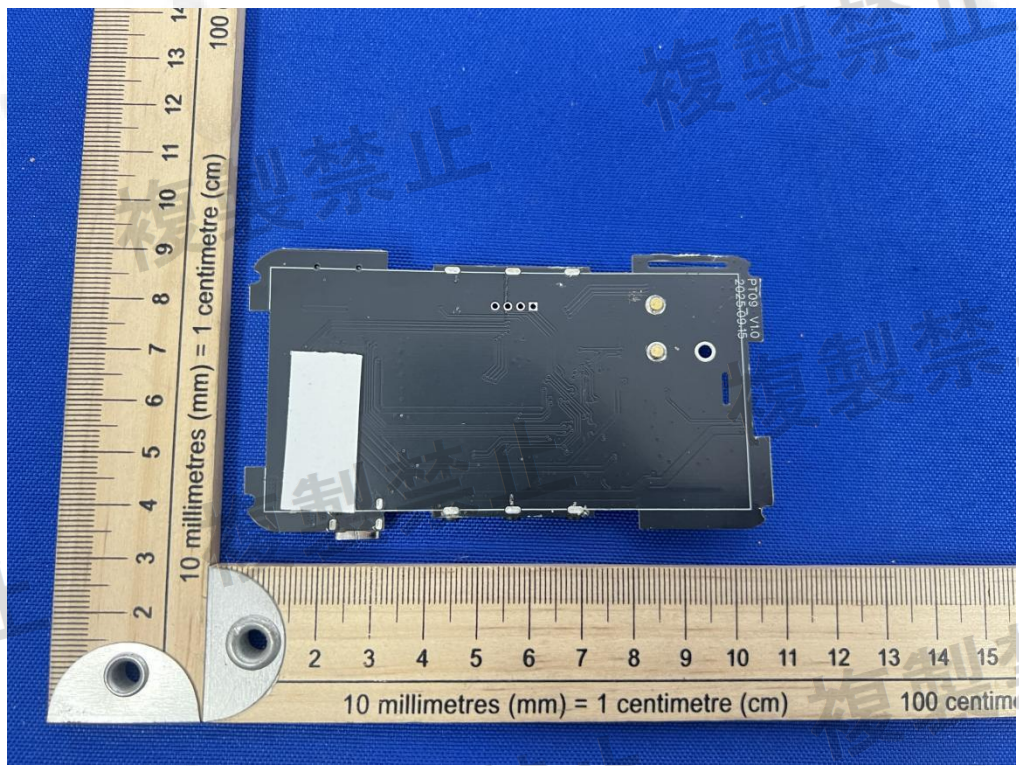
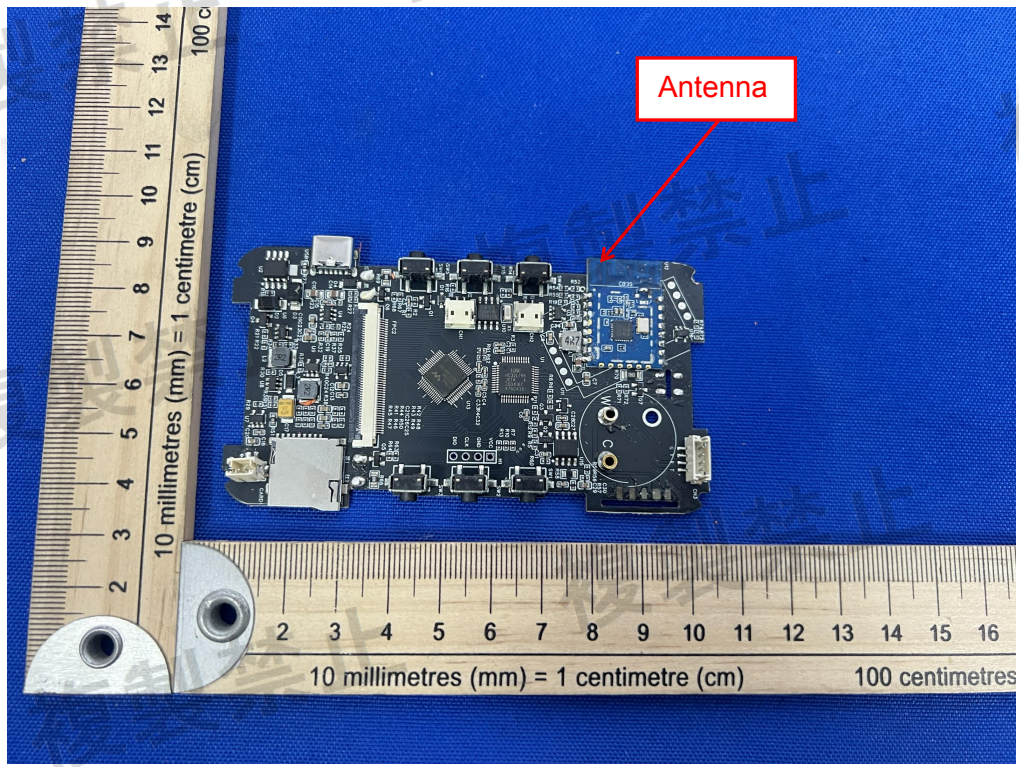


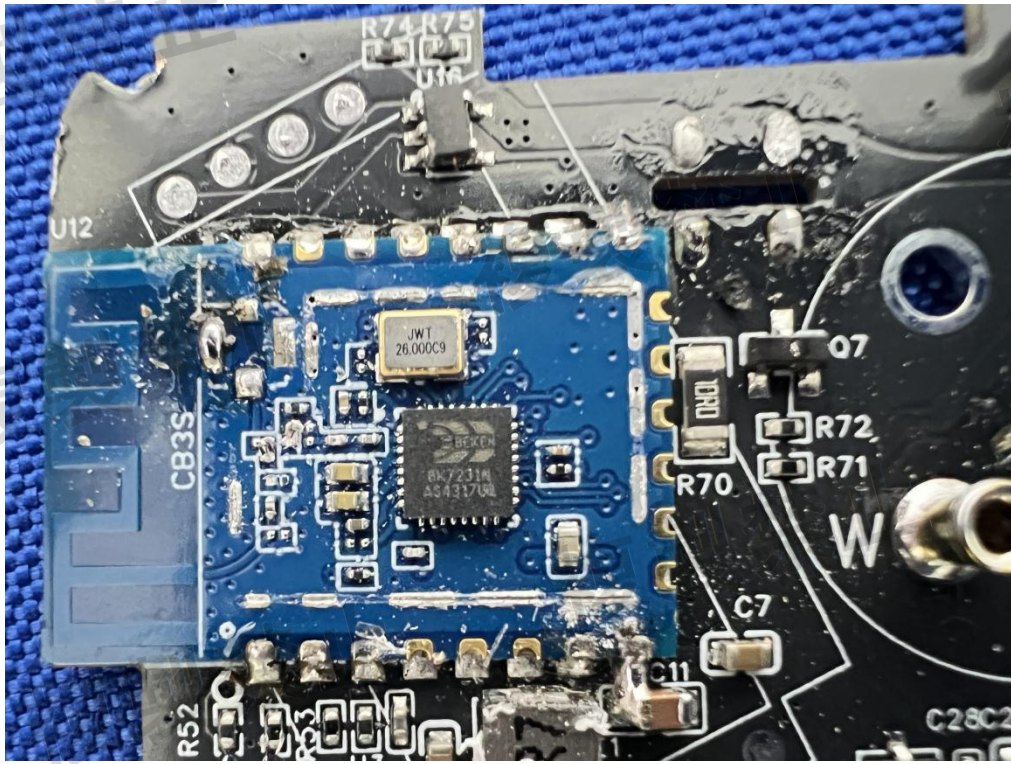
Internal Photos of EUT











*****THE END*****