



Shenzhen CTL Testing Technical Services Co., Ltd.
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TEST REPORT

Ordinance Article 2 paragraph 1 item (19)

Report Reference No.: GML2605288011-MIC01

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Product Name: IoT Probe

Model/Type reference: WiFi

List Model(s): WiFi V1.3, WiFi V1.5, WiFi Link

Trade Mark: Sentek Wi-Fi Link

Applicant's name: Sentek Pty Ltd

Address of applicant: 77 Magill Road, Stepney 5069, South Australia, Australia

Test Firm: Shenzhen CTL Testing Technical Services Co., Ltd.

Address of Test Firm: No. 101, Building 1, Phase 1, Longbang Industrial Park, No. 8
Jianyuan Road, Shutianpu Community, Matian Street, Guangming
District, Shenzhen, China

Test specification:

Standard: Ordinance Article 2 paragraph 1 item (19)

TRF Originator: Shenzhen CTL Testing Technical Services Co., Ltd.

Master TRF: Dated 2011-01

Date of receipt of test item: May 28, 2026

Date of sampling: May 28, 2026

Date of Test Date: May 28, 2026 – Jun. 15, 2026

Date of Issue: Jun. 16, 2026

Result: Pass

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TEST REPORT

Test Report No. :	GML2605288011-MIC01	Jun. 16, 2026
		Date of issue

Equipment under Test : IoT Probe

Sample No. GML2605288011

Model /Type : WiFi

Listed Models : WiFi V1.3, WiFi V1.5, WiFi Link

Applicant : Sentek Pty Ltd

Address : 77 Magill Road, Stepney 5069, South Australia,
Australia

Manufacturer : Sentek Pty Ltd

Address : 77 Magill Road, Stepney 5069, South Australia,
Australia

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

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

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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 and Spread spectrum bandwidth	Pass
Unwanted Emission Strength	Pass
Secondary Radiated Emission Strength	Pass
Construction Protection Method	Pass
Carrier Sense Capability	Pass
Interference Prevention Function	Pass
Number of carrier	Pass (Note)

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

1.3. Test Facility

1.3.1 Address of the test laboratory

Shenzhen CTL Testing Technical Services Co., Ltd.

No. 101, Building 1, Phase 1, Longbang Industrial Park, No. 8 Tianyuan Road, Shutianpu Community, Matian Street, Guangming District, Shenzhen, 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: L14175

Shenzhen CTL Testing Technical Services 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.

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 3.7V
		High Voltage	DC 4.26V
		Low Voltage	DC 3.15V
	DC RF Module	Normal Voltage	DC 3.30V
		High Voltage	DC 3.30V
		Low Voltage	DC 3.30V
Other		Normal Temperature	25°C
		Relative Humidity	55 %
		Air Pressure	989 hPa

During the input supply voltage to the EUT from the external power source is varied by +/-10%, the fluctuation of input voltage to the circuit of RF unit of test equipment is less than $\pm 1\%$. so all test performed at normal voltage only.

2.2. General Description of EUT

Product Name:	IoT Probe
Model/Type reference:	WiFi
Power supply:	DC 3.7V from battery(Charging DC 5V)
Hardware version:	v1.3
Software version:	V1.0
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:	-3.89 dBi

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

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 on 2.4G Band:

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

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	Spectrum Analyzer	Keysight	N9020A	MY53281830	2025/08/06	2026/08/05
2	RF control Unit	Tonscend	JS0806-2	20J8060323	2025/08/06	2026/08/05
3	Signal generator	Agilent	N5182A	MY50140030	2025/08/06	2026/08/05
4	DC power supply	Agilent	E3632A	MY51350447	2025/08/06	2026/08/05
5	Oscilloscope	Tektronix	DPO4101	/	2025/08/06	2026/08/05
Test Software						
Name of Software				Version		
JS1120-3				V3.6.21		

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

Calibration agency: Guangzhou Lisai Calibration and Testing Co.,Ltd.

☐ (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: 300 KHz

RBW: 10 KHz

VBW: 10 KHz

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Annex for MIC 2.4G WIFI Appendix A.

3.2. Antenna Output Power and Output Power Tolerance

LIMIT

- DS ≤ 10 mW/MHz
- OFDM 20MHz ≤ 10 mW/MHz
40MHz ≤ 5 mW/MHz

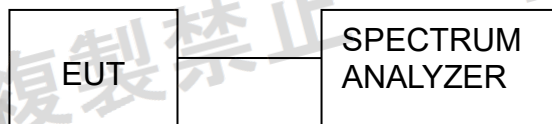
The Output Power Tolerance must be within +20%, -∞%.

E.i.r.p:

- DS: 12.14-22.14 dBm/MHz
- OFDM 20MHz: 12.14-22.14 dBm/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 2.14 dBi 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 Annex for MIC 2.4G WIFI Appendix B.

3.3. Occupied Bandwidth And Spreading Bandwidth

LIMIT

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM(802.11n(HT40)):26-40MHz;OFDM(802.11g/n(HT20)) $\leq$ 26MHz, DS $\leq$ 26 MHz; Others $\leq$ 26 MHz
- Spread Bandwidth: $\geq$ 500 kHz(FH,DS)
- 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 Annex for MIC 2.4G WIFI Appendix C and Appendix D.

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-12.5GHz

RBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Annex for MIC 2.4G WIFI Appendix E.

Note:SA set to from 2.4965GHz to 12.75GHz, plot shows from 2.497GHz to 12.75GHz as of SA's default format.

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-12.5GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Raw data reference to Annex for MIC 2.4G WIFI Appendix F.

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

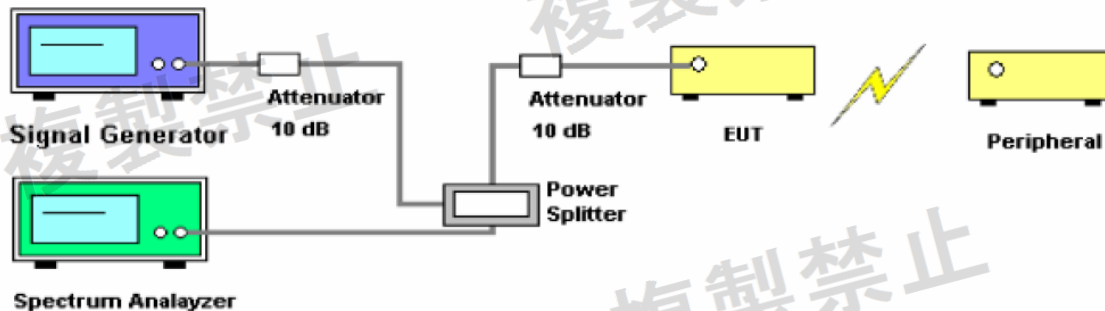
All high-frequency section and modulation section packet in one IC, End user can not modify easily.

3.7. Carrier Sense Capability

Limit

EUT stop RF transmission signal after carrier inject to EUT for the OFDM system with occupied frequency bandwidth below 40MHz 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 $22.79 + G - 20 \cdot \log(f)$ dBm) (G is the antenna gain f 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 follow :
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

Carrier sense time: 5.9ms

Good Compliant

3.8. 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 Function Confirm

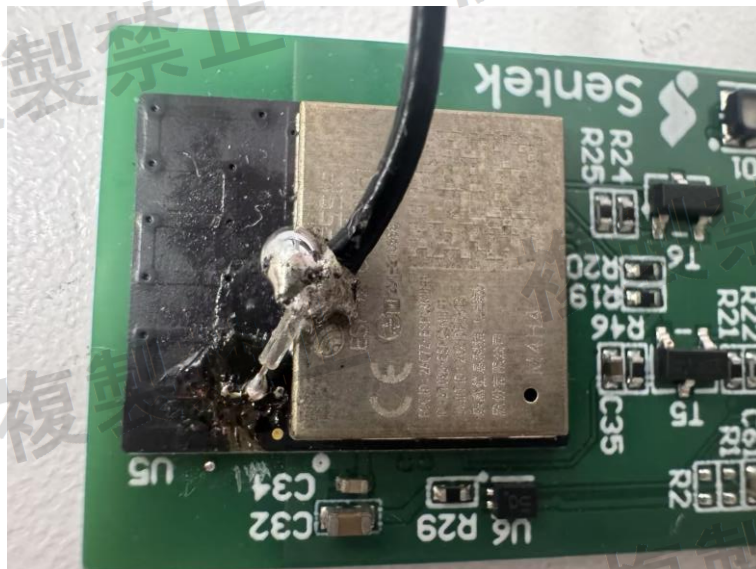
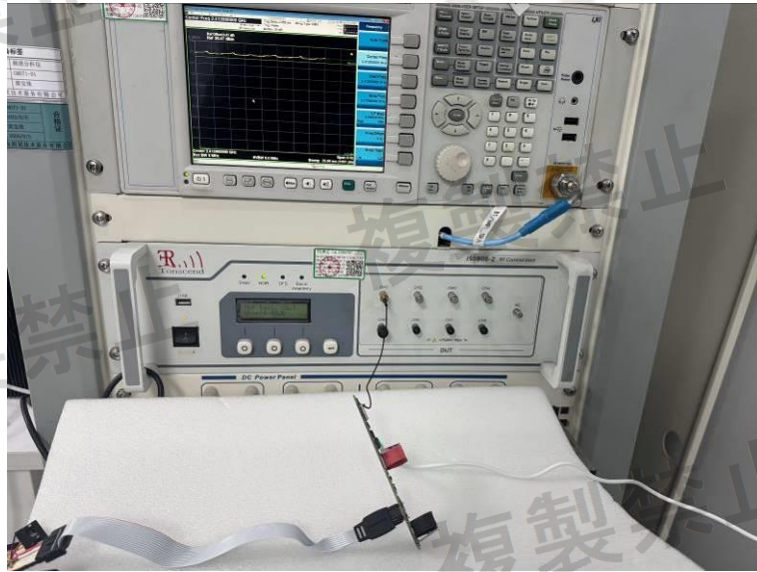
A communication link was made where the ID code is correct (Identical).

TEST PROCEDURE

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

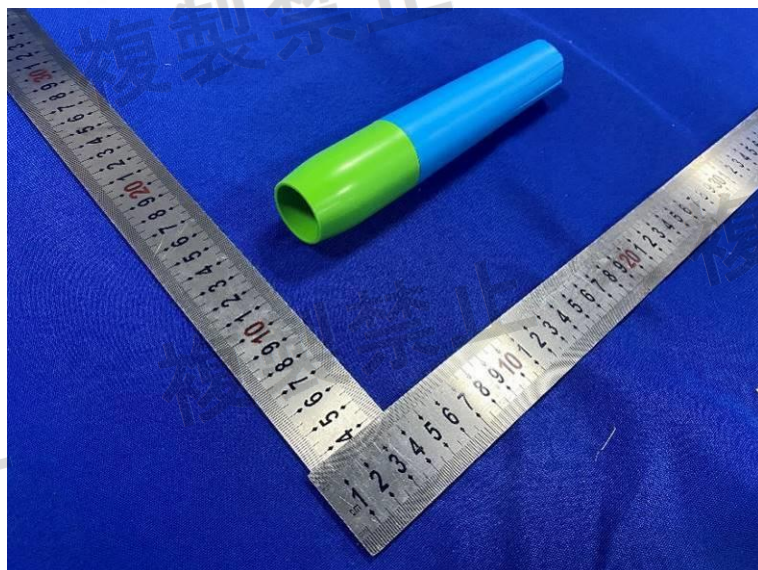
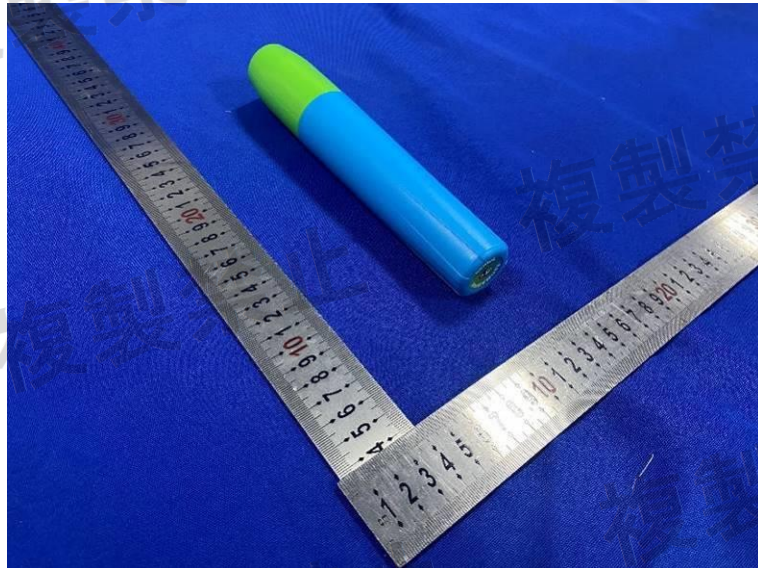
MAC:30:30:f9:bc:db:84

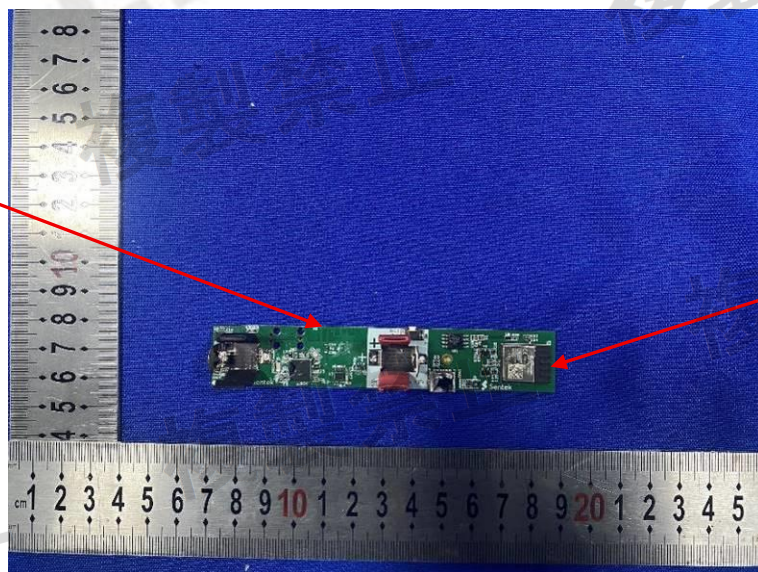
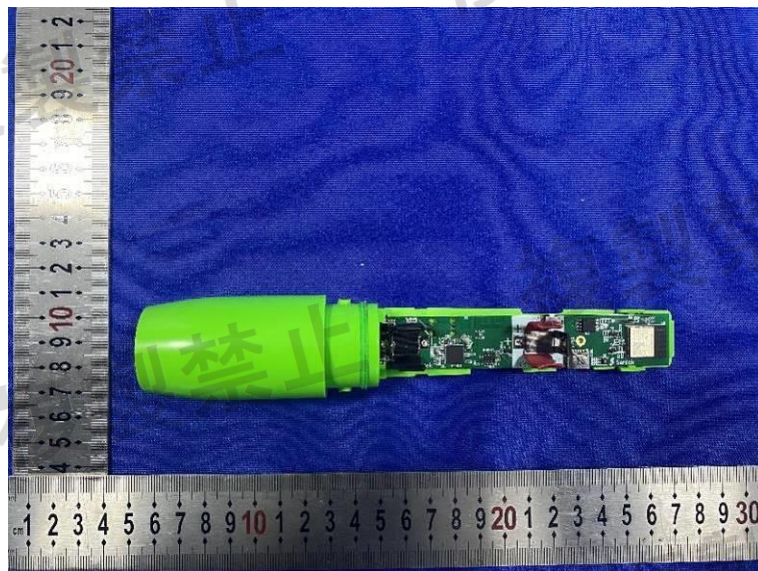
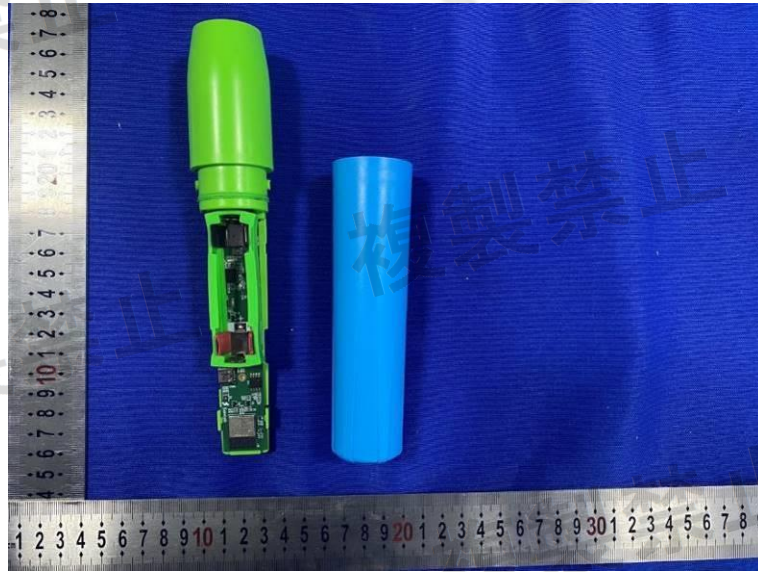
4. Test Setup Photos of the EUT



5. External and Internal Photos of the EUT

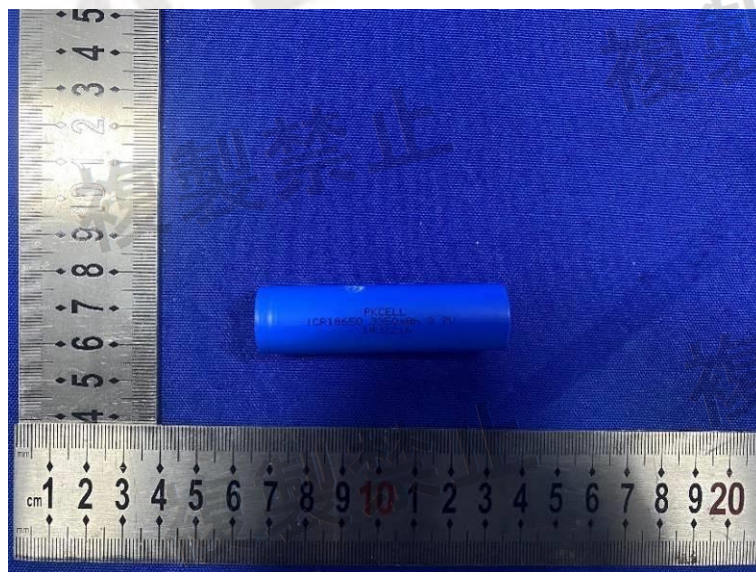
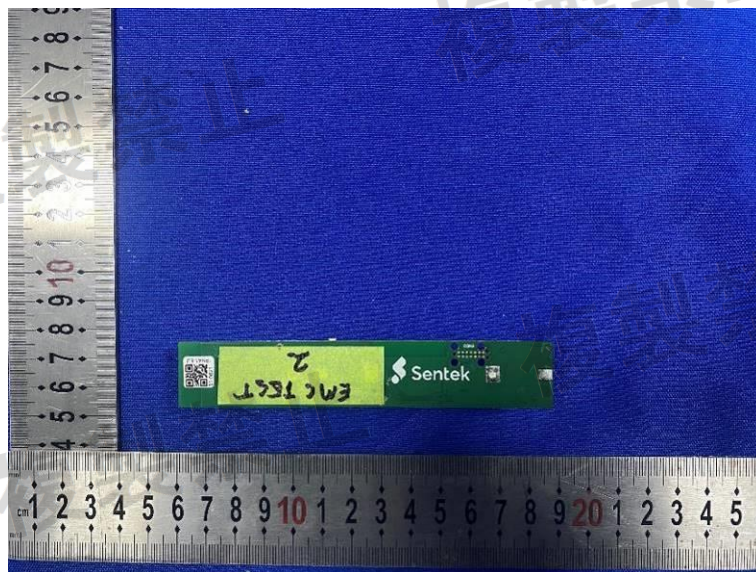
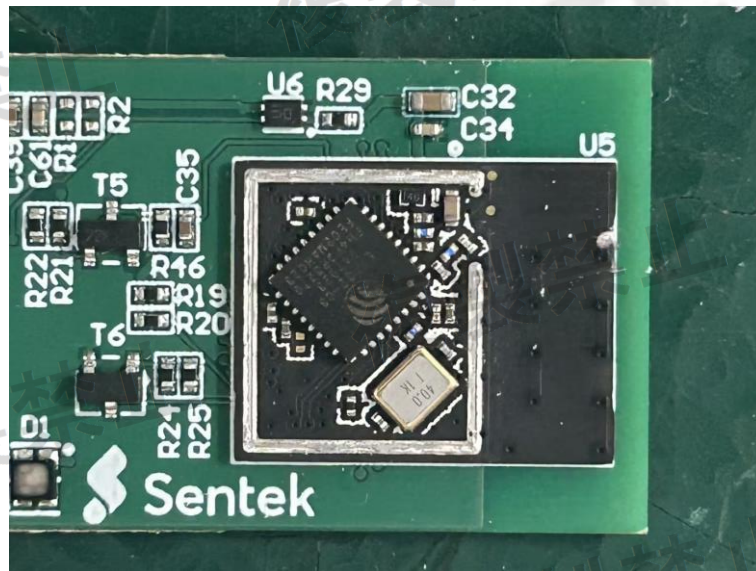
External Photos of EUT



Internal Photos of EUT

BT Antenna

WIFI Antenna



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