Shenzhen CTL Testing Technology Co., Ltd.
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TEST REPORT

Ordinance Article 2 paragraph 1 item (19)

Report Reference No. ..... :	**CTL2510312051-MIC01**	
Compiled by: (position+printed name+signature)	Happy Guo (File administrator)	Happy Guo
Tested by: (position+printed name+signature)	Jack Wang (Test Engineer)	Jack Wang
Approved by: (position+printed name+signature)	Ivan Xie (Manager)	Ivan Xie

Product Name.....:	Smart Watch
Model/Type reference.....:	SB09 Novus
List Model(s)..... :	SB10, SB16, SB17, SB18, SB19, SB20, SB25, SB26, SB27, SB28
Trade Mark.....:	N/A
Applicant's name.....:	**WINS Co., Ltd**
Address of applicant.....:	Edobori Center Building 9F 2-1-1 Edobori Nishi-ku Osaka city Japan
Test Firm.....:	**Shenzhen CTL Testing Technology Co., Ltd.**
Address of Test Firm.....:	Unit 01A&B&C&D-1, Building A3, Guangming Sci-Tech Park, Guan Guang Road, Fenghuang Subdistrict, Guangming District, Shenzhen, Guangdong, China
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 ..... :	Nov 11, 2025
Date of Test Date..... :	Nov 11, 2025- Nov 18, 2025
Date of Issue ..... :	Nov 20, 2025
Result.....:	**Pass**

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TEST REPORT

Test Report No. :	CTL2510312051-MIC01	Nov 20, 2025 Date of issue

Equipment under Test	:	Smart Watch
Sample No	:	CTL251031205001, CTL251031205002, CTL251031205003
Model /Type	:	SB09 Novus
Listed Models	:	SB10, SB16, SB17, SB18, SB19, SB20, SB25, SB26, SB27, SB28
Applicant	:	**WINS Co., Ltd**
Address	:	Edobori Center Building 9F 2-1-1 Edobori Nishi-ku Osaka city Japan
Manufacturer	:	**CMN TECHNOLOGY CO.,LIMITED**
Address	:	Bld 1,Mogen Creative Park,No.10 Shilong Tsai, Dalang Street, Longhua District, Shenzhen

Test result	**Pass ***

* 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.

** Modified History **

Revision	Description	Issued Data	Report No.	Remark
Version 1.0	Initial Test Report Release	Nov 20, 2025	CTL2510312051-MIC01	Tracy Qi

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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
Dwell time	Pass
Unwanted Emission Strength	Pass
Secondary Radiated Emission Strength	Pass
Construction protection method	Pass
Interference Prevention Function	Pass

1.3. Test Facility

1.3.1 Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.
Unit 01A&B&C&D-1, Building A3, Guangming Sci-Tech Park, Guan Guang Road, Fenghuang Subdistrict, Guangming District, Shenzhen, Guangdong, 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 C63.10 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: 2005 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	±1.9%
Antenna Power	± 1.18 dB
Occupied Bandwidth	±1.9%
Spread Bandwidth	±1.9%
Transmitter Spurious Emission Strength and Unwanted Emission Intensity	9kHz-7GHz:±1.09dB 7GHz-26.5GHz: ±3.27dB
Receiver Spurious Emission and Unwanted Emission Intensity	9kHz-7GHz:±1.09dB 7GHz-26.5GHz: ±3.27dB
Dwell Time	±0.11%
Humidity	±5%
Temperature	±1℃

2. GENERAL INFORMATION

2.1. Environmental conditions

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

Voltage	EUT Power	Normal Voltage	DC:3.80V
		High Voltage	DC:4.18V
		Low Voltage	DC: 3.42V
	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

Note:

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 ±1%. so all test performed at normal voltage only.

2.2. General Description of EUT

Product Name:	Smart Watch
Model/Type reference:	SB09 Novus
Power supply:	DC 3.8V from battery or charging by AC-DC adapter
Hardware version:	SB09
Software version:	MOY-9T44-2.0.2
Bluetooth	
Version:	Supported BR/EDR
Modulation:	GFSK, π/4DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	Built-in antenna
Antenna gain:	0dBi

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.
Note 3: This report is for Bluetooth only.

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 Bluetooth：

Channel	Frequency (MHz)
00	**2402**
01	2403
⋮	⋮
38	2440
39	**2441**
40	2442
⋮	⋮
77	2479
78	**2480**

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 agency	Calibration Date	Calibration Due Date
1	Spectrum Analyzer	Agilent	N9020A	US46220290	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/29	2026/04/28
2	Spectrum Analyzer	Keysight	N9020A	MY53420874	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/29	2026/04/28
3	Signal generator	Agilent	N5182A	MY50142850	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/29	2026/04/28
4	Signal Generator	Agilent	N5182A	MY52420355	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/29	2026/04/28
5	Power Sensor	Agilent	U2021XA	MY55130004	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/30	2026/04/29
6	Power Sensor	Agilent	U2021XA	MY54080012	Guangdong Jingheng Detection Tecanology	2025/04/29	2026/04/28

					Co.,Ltd.		
7	Power measurement module	TSTPASS	TSPS2023 R	TSCB220016	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/04/30	2026/04/29
8	Oscilloscope	Tektronix	TDS 1012C-SC	C011550	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/07/02	2026/07/01
9	Temperature/Humidity Meter	Shanghai jiyu	MC501	/	Guangdong Jingheng Detection Tecanology Co.,Ltd.	2025/05/06	2026/05/05

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.

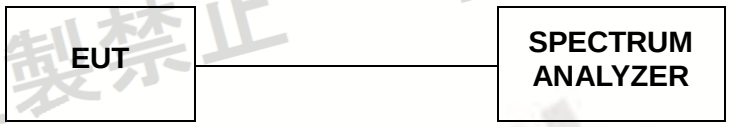
3. Test conditions and Results

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: 1 MHz
- RBW: 10 KHz
- VBW: 10 KHz
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

Raw data reference to section 1 from CTL2510312051-MIC01_Bluetooth_Appendix.

3.2. Antenna Output Power and Output Power Tolerance

LIMIT

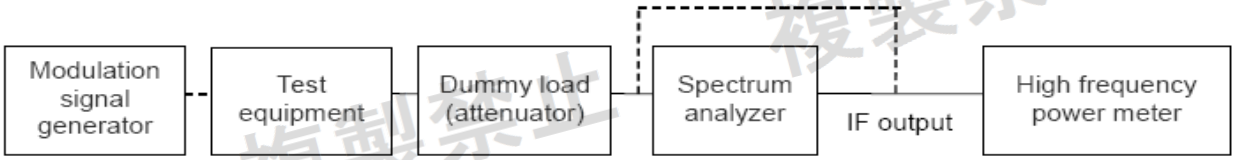
- ≤ 3 mW /MHz(FHSS from 2402-2480 MHz)
- ≤ 10 mW/MHz (OFDM, DSSS from 2400-2483.5 MHz)
- ≤ 10 mW (other from 2400-2483.5 MHz)

The Output Power Tolerance must be within 20%.

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

変調方式	使用周波数帯	空中線電力（最大）	EIRP（最大）	
			無指向性	ビーム指向性
DS	2,400～2,483.5MHz	10mW/MHz	12.14dBm/MHz	22.14dBm/MHz
OFDM1	2,400～2,483.5MHz	10mW/MHz	12.14dBm/MHz	22.14dBm/MHz
OFDM2	2,400～2,483.5MHz	5mW/MHz	9.14dBm/MHz	19.14dBm/MHz
FH、DS－FH	2,400～2,483.5MHz	3mW/MHz	6.91dBm/MHz	16.91dBm/MHz
FH－OFDM	2,427～2,470.75MHz を除く	10mW/MHz	12.14dBm/MHz	22.14dBm/MHz
上記以外	2,400～2,483.5MHz	10mW	12.14dBm	22.14dBm

TEST CONFIGURATION



TEST PROCEDURE

Step 1: Connect the UUT to the spectrum analyzer as TEST CONFIGURATION and set the UUT in FHSS mode, use the following settings:

• Setting of SA is following as fellow:

• RBW=1MHz

• VBW=1MHz

• Sweep time: 1ms

• Sweep point: 1001

• Detect mode: Sample

• Trace mode: Clear

Step 2: UUT have transmitted the maximum modulation signal and fixed channelize. SA set to 90% of occupied bandwidth to measure spread bandwidth. When the trace is complete record spread bandwidth in MHz.

Step 3: Connect the UUT to the Power meter as TEST CONFIGURATION and set the UUT in FHSS mode to measure max measured power in dBm and record.

Step 4: Converting max measured power(in Step 3) from dBm to mW and divided by spread bandwidth, then record this value as antenna output power.The test formula is shown below:

Antenna Power = AVG Power（mW/MHz）÷(Spread Bandwidth MHz*Duty cycle)

TEST RESULTS

Raw data reference to section 4 from CTL2510312051-MIC01_Bluetooth_Appendix.

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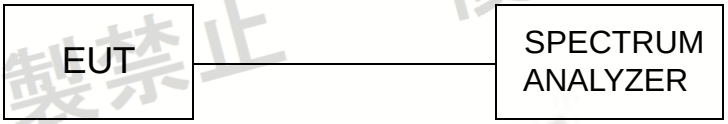
3.3. OCCUPIED BANDWIDTH AND SPREADING BANDWIDTH

LIMIT

- Occupied bandwidth: FH≤83.5 MHz; OFDM≤40 MHz, DS≤26 MHz; Others≤26 MHz
- Spread Bandwidth:≥ 500 kHz(FH,DS)
- Spread factor>5.

TEST CONFIGURATION



TEST PROCEDURE

1. Setting of SA is following as fellow:
   - RBW: under 3% of OBW
   - RBW=1MHz
   - VBW=1MHz
   - Sweep time: 1ms
   - Sweep point:: 1001
   - 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=1Mbps (declare by client)

TEST RESULTS

Raw data reference to section 2 and section 3 from CTL2510312051-MIC01_Bluetooth_Appendix.

3.4. Dwell time

LIMIT

0.4 second or less

*Note 1: Dwell time= (0.4(s) x spreading rate x sending time of 1burst (s)/(burst cycle(s) x No. of hopping channel)

Spreading rate: Spreading Bandwidth/symbol rate

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: test channel
- RBW: 1MHz
- VBW: 1MHz
- Sweep point: 30001
- Sweep time: 20ms
- Trace: Clear
- Detector mode: Positive peak

TEST RESULTS

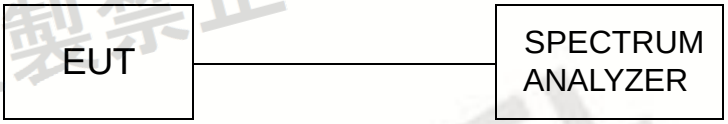
Raw data reference to section 5 from CTL2510312051-MIC01_Bluetooth_Appendix.

3.5. Unwanted Emission Strength

LIMIT

Below 2387 MHz: 2.5μW/MHz or less
2387 to 2400 MHz: 25μW/MHz or less
2483.5 Through 2496.5 MHz: 25μW/MHz or less
Over 2496.5 MHz: 2.5μW/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

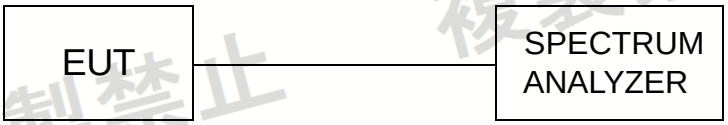
Raw data reference to section 6 from CTL2510312051-MIC01_Bluetooth_Appendix.

3.6. 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-12.75GHz
- RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.75GHz)
- VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.75GHz)
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

Raw data reference to section 7 from CTL2510312051-MIC01_Bluetooth_Appendix.

3.7. 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

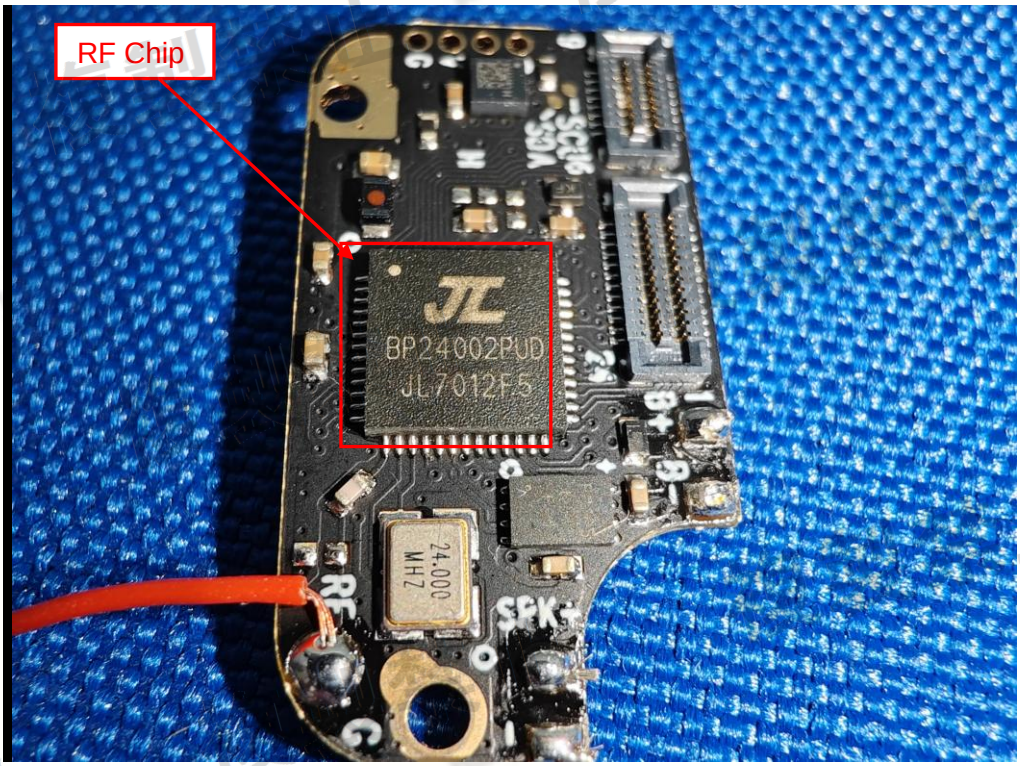
Confirmation method

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

The QFN52P-40-700X700N_JL7012F6 package dimensions is shown below, as we can see:

- Number of terminals: 52
- Terminal pitch: 0.5mm

It can meet the requirements of MIC structure protection.



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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).

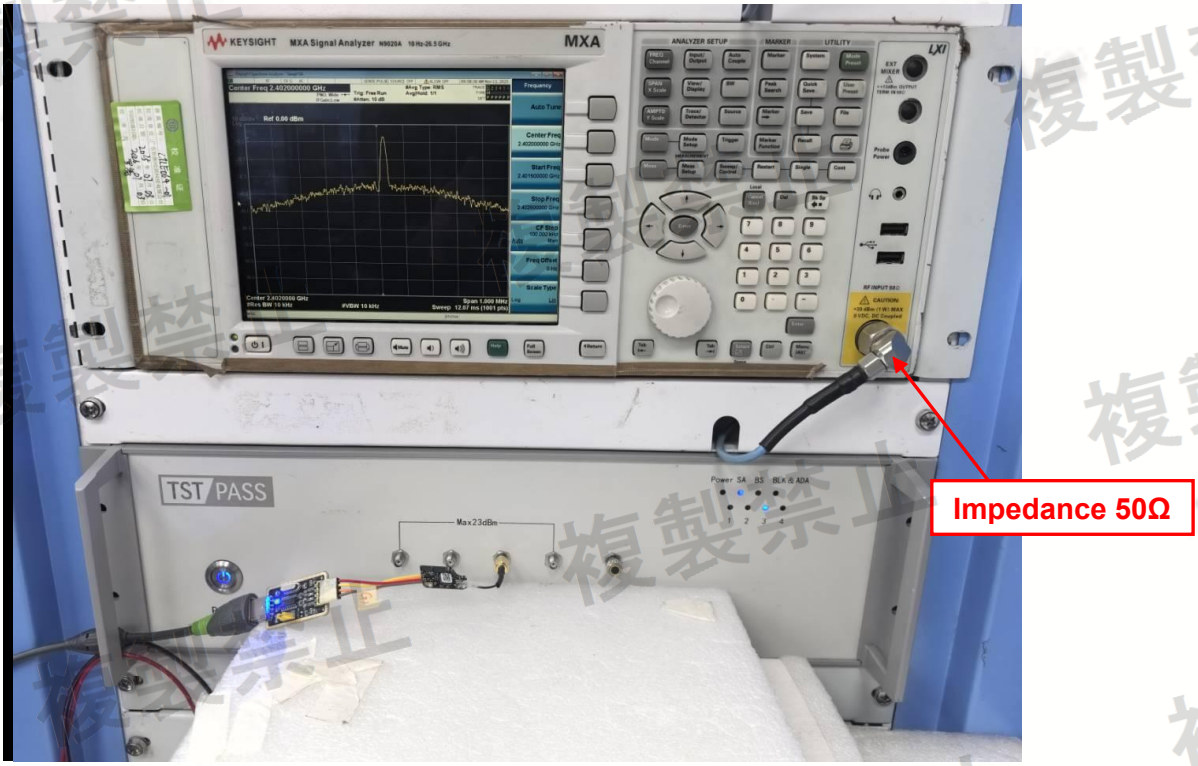
TEST PROCEDURE

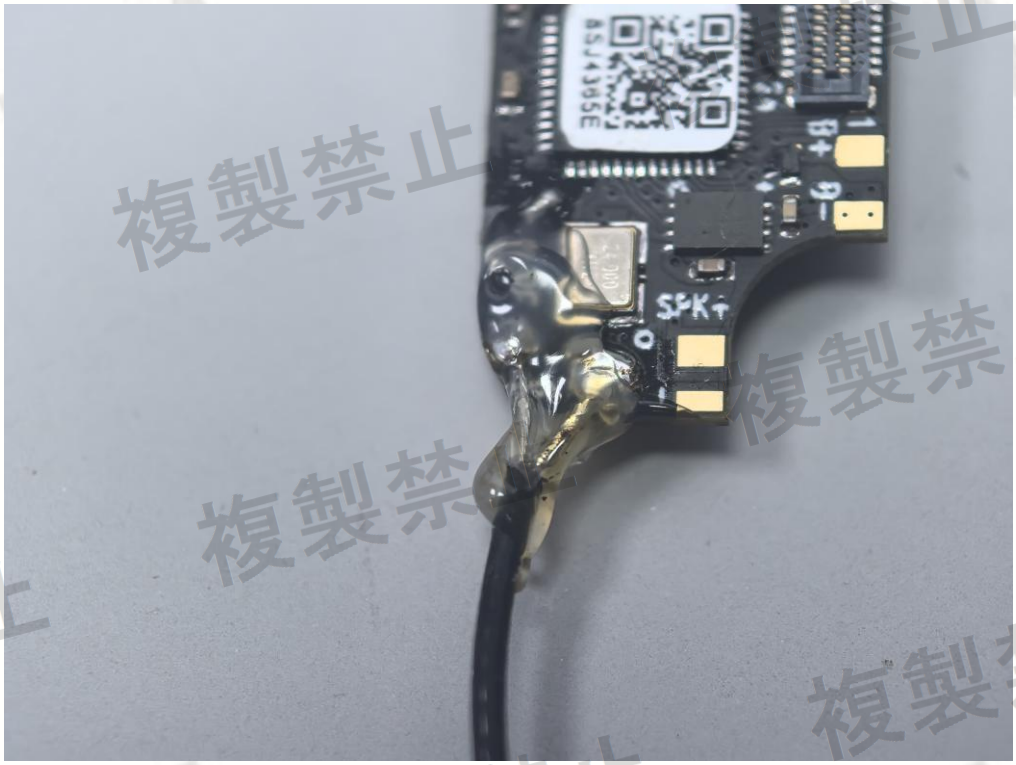
1. Connect the EUT in network
2. Open the software
3. We can get the information as follows:

TEST RESULTS

BT MAC: 39:9F:3E:92:E4:85

4. Test Setup Photos of the EUT





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5. External and Internal Photos of the EUT

External Photos of the EUT

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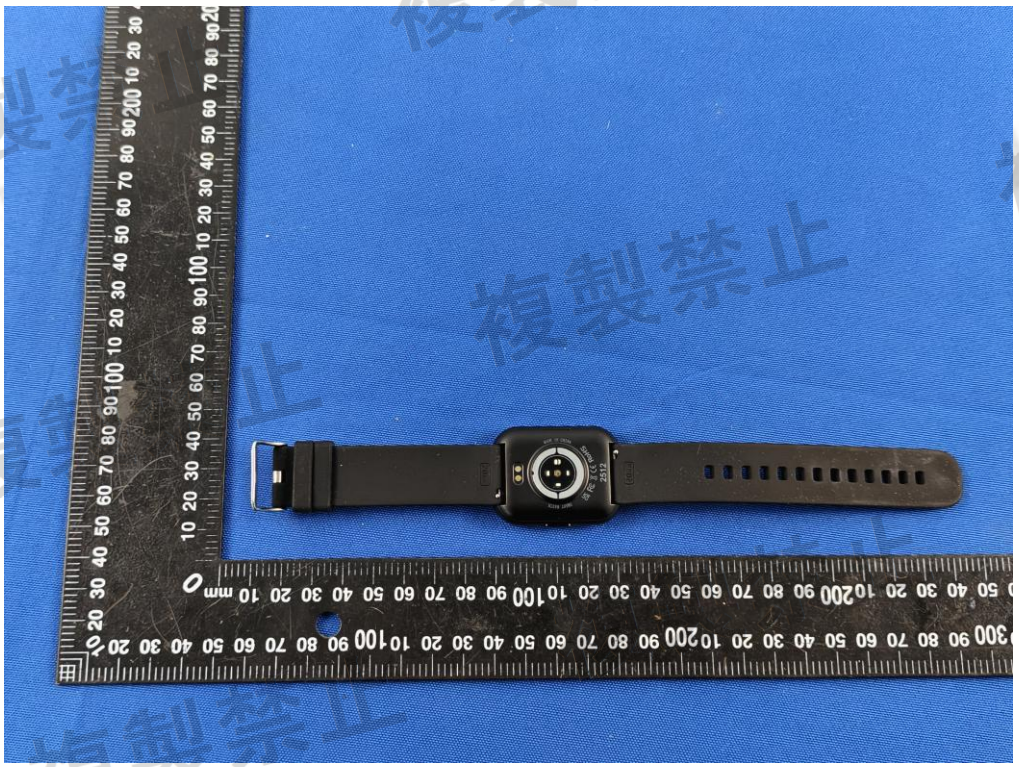

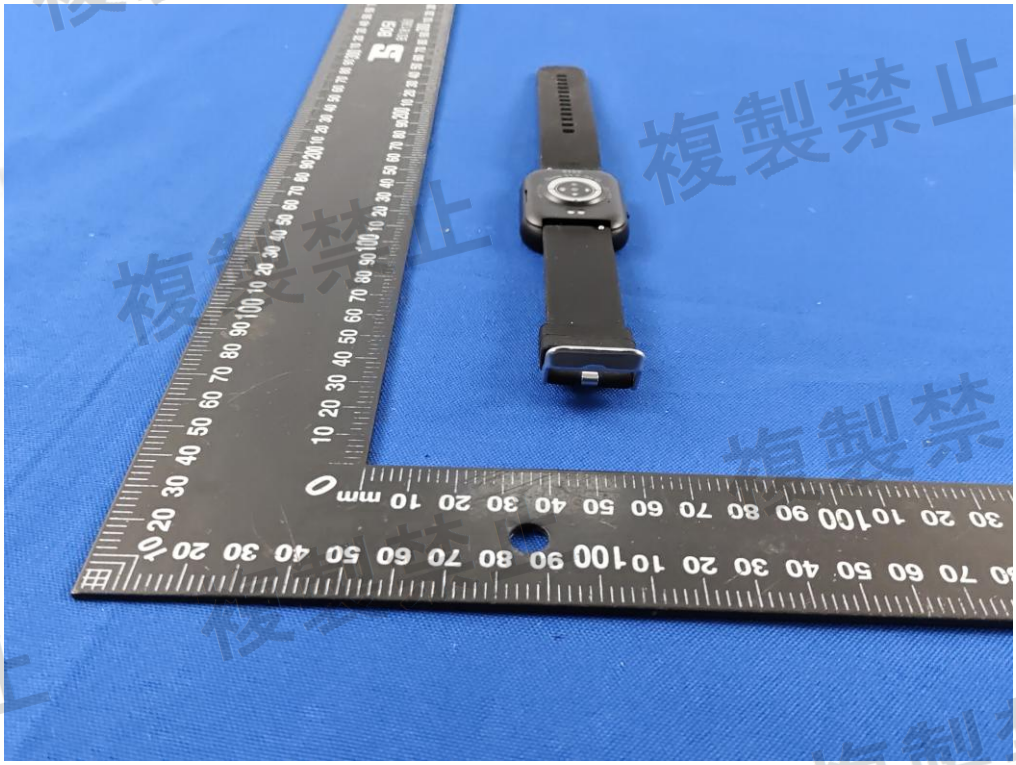

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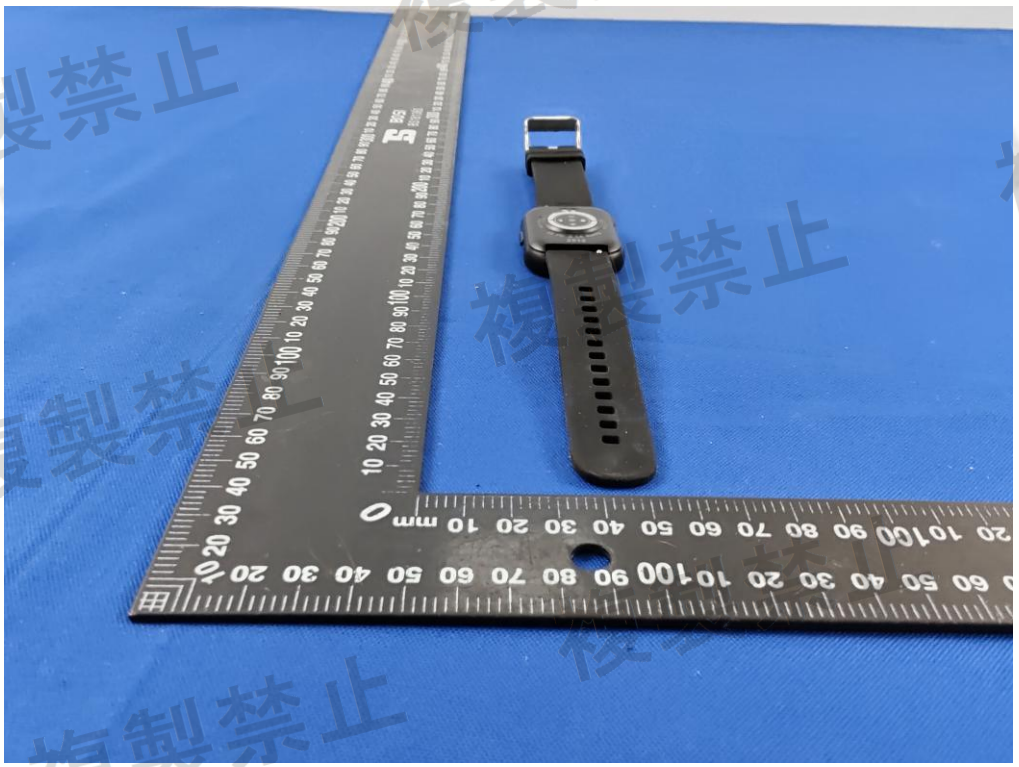
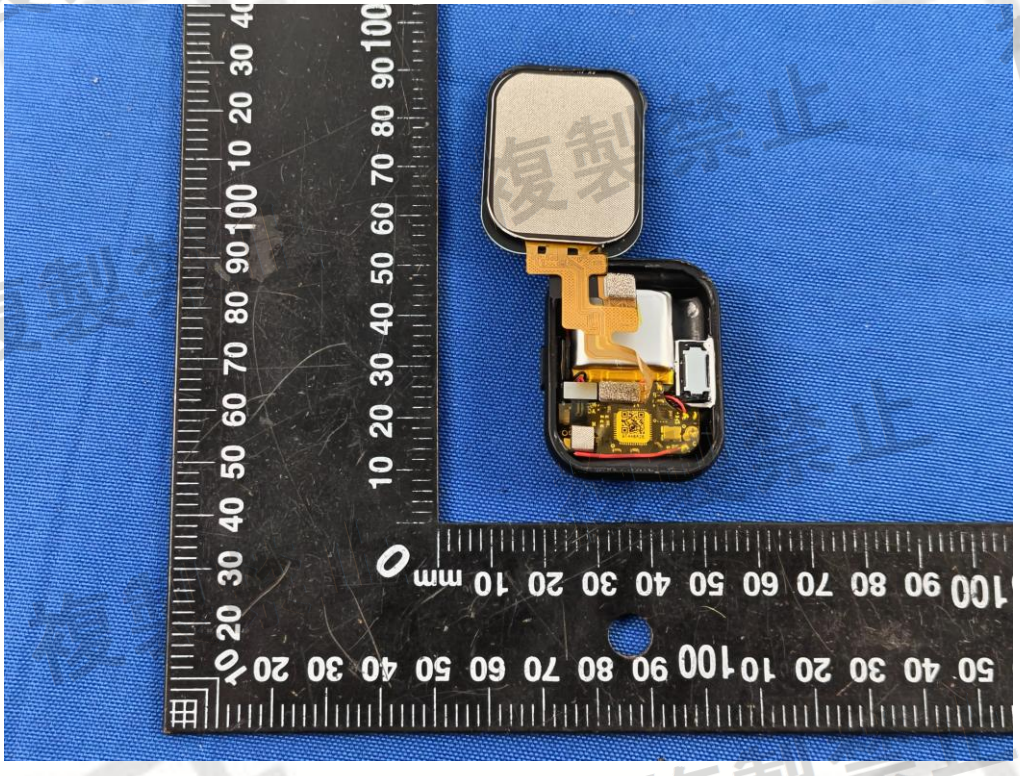
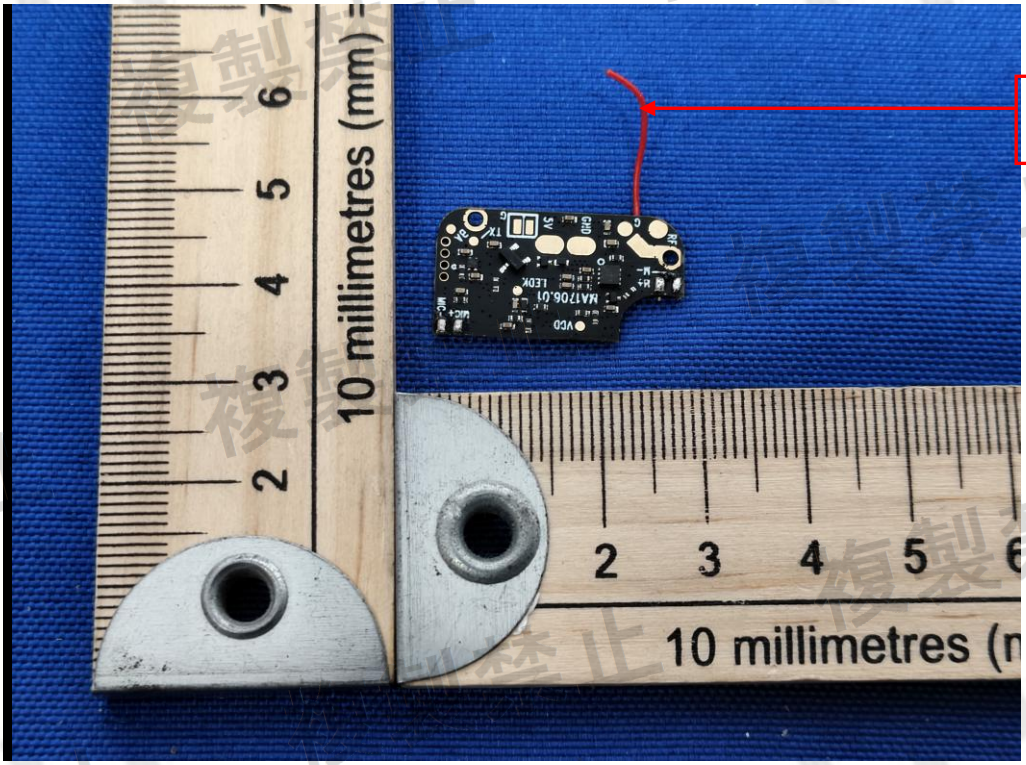
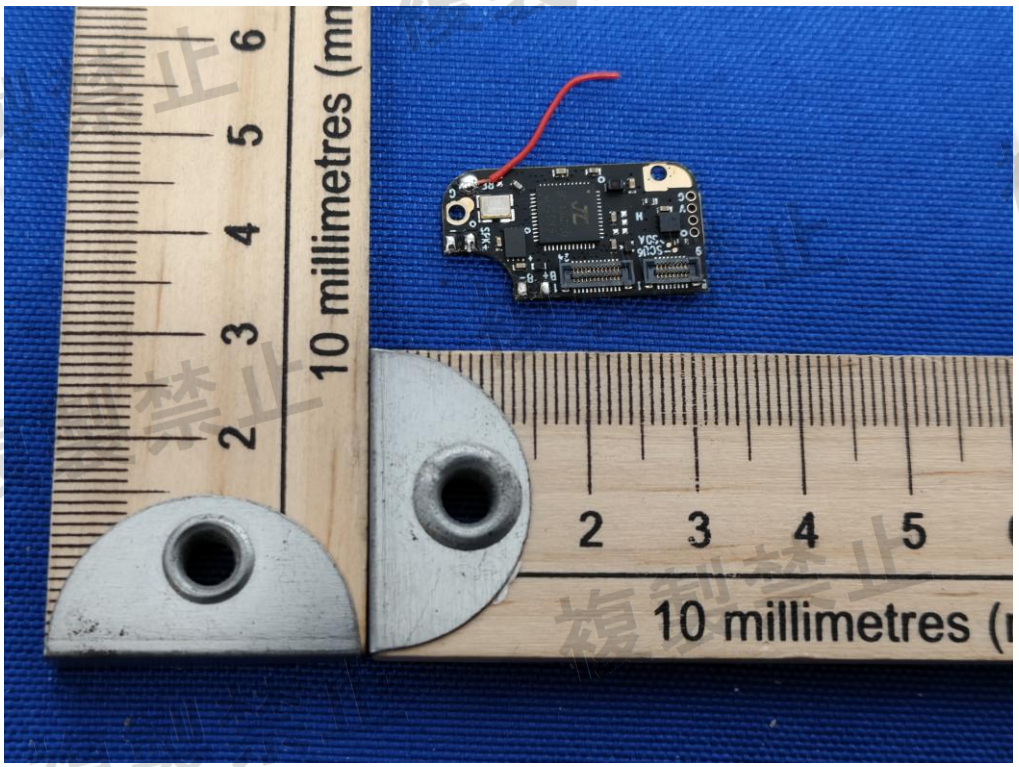
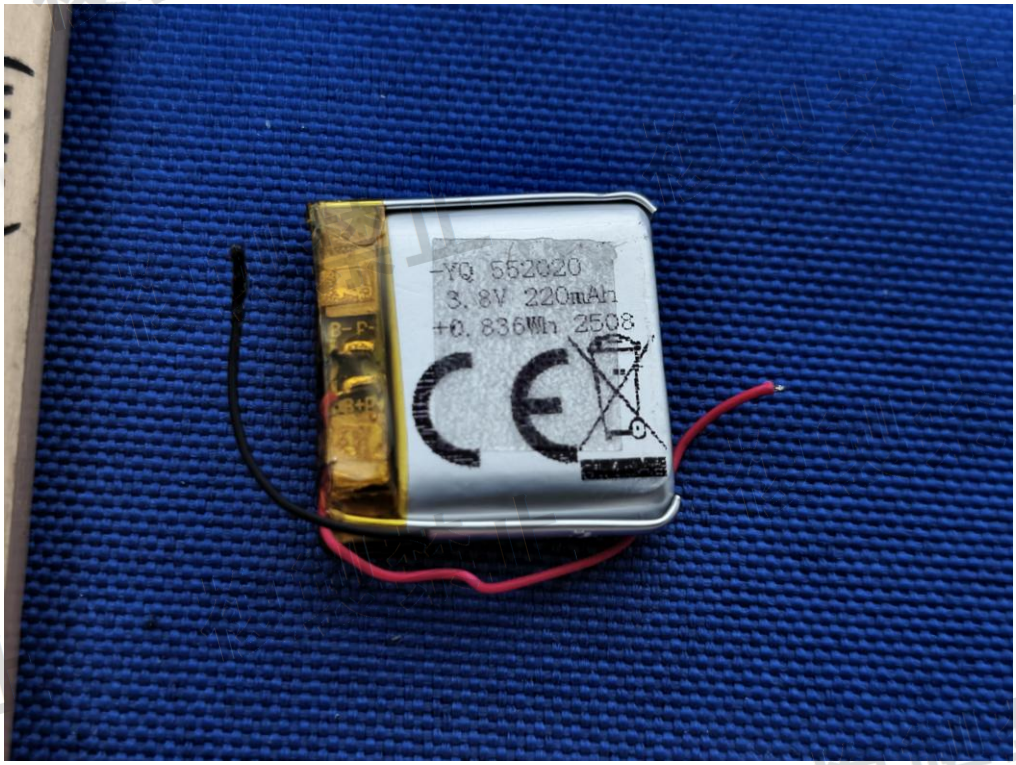


Internal Photos of EUT






10 millimetres (mm
10 millimetres (


YQ 552020
3.8V 220mAh
+0.836Wh 2508

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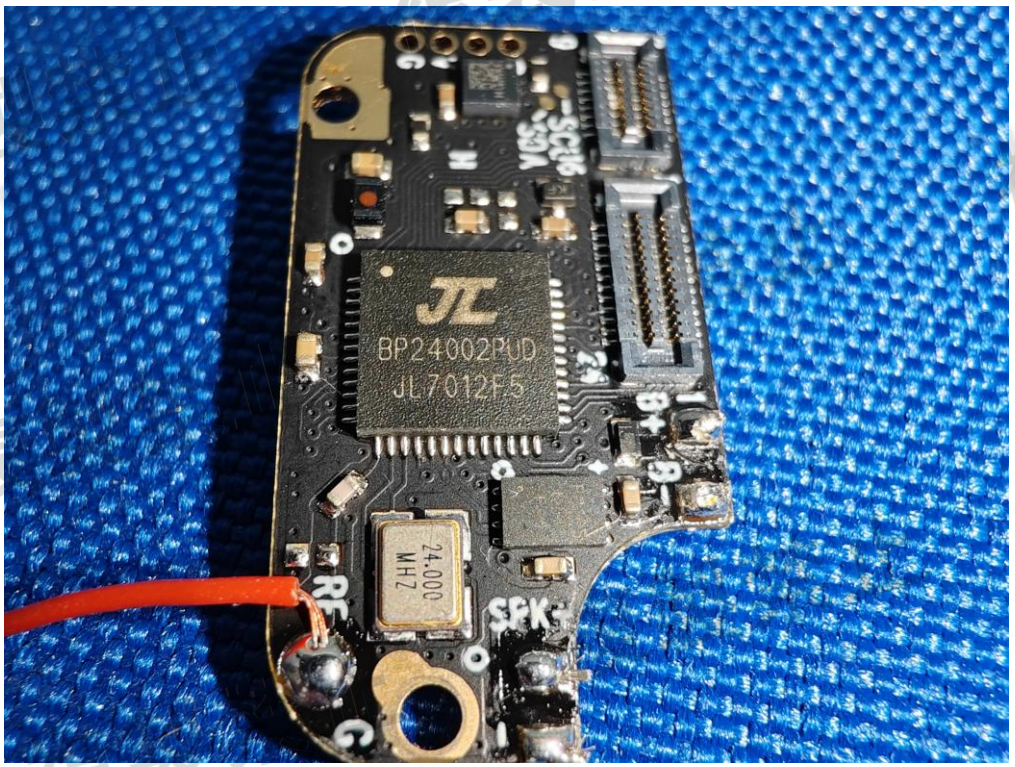

**********THE END**********

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