# TEST REPORT

| | | |
|---|---|---|
| **Product Name** | : | 65 Inch Outdoor Display |
| **Brand Name** | : | N/A |
| **Model** | : | SG-MPV65K |
| **Series Model** | : | SG-MPV65K2 |
| **Applicant** | : | **Rentacom Hokkaido Co., Ltd.** |
| **Address** | : | 2-4, Higashi 7-chome, Minami 1-jo, Chuo-ku, Sapporo City, Hokkaido, Japan 060-0051 |
| **Manufacturer** | : | **Kontech Smart Display (Guangdong) Co.,LTD** |
| **Address** | : | 6F-7F No.1 building,Fushun Technology Park,Shatian town, Huizhou,Guangdong China 516269 |
| **Standard(s)** | : | Article 2, paragraph 1, item 19 |
| **Date of Receipt** | : | May.26, 2025 |
| **Date of Test** | : | May.26, 2025~ Jul.23, 2025 |
| **Issued Date** | : | Feb.02, 2026 |

**Issued By:** **Guangdong Asia Hongke Test Technology Limited**
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Tel.: +86 0755-230967639 Fax.: +86 0755-230967639

**Reviewed by:** Aalen.Ye **Approved by:** Allen Wang

Note: This device has been tested and found to comply with the standard(s) listed, this 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. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

## Report Revise Record

| Report Version | Issued Date | Notes |
|---|---|---|
| M0 | Feb.02, 2026 | Initial Release;<br>Derived from AiTSZ-250526141TW1-M2<br>Add series models |

複製禁止

# Contents


**1 TEST SUMMARY ..... 4**

1.1 TEST STANDARDS ..... 4
1.2 TEST SUMMARY ..... 4
1.3 TEST FACILITY ..... 5
1.4 MEASUREMENT UNCERTAINTY ..... 5

**2 GENGENERAL INFORMATION ..... 6**

2.1 ENVIRONMENTAL CONDITIONS ..... 6
2.2 GENERAL DESCRIPTION OF EUT ..... 6
2.3 DESCRIPTION OF TEST MODES AND TEST FREQUENCY ..... 7
2.4 EQUIPMENT LIST FOR THE TEST ..... 7
2.5 TABLE FOR PARAMETERS OF TEST SOFTWARE SETTING ..... 8
2.6 TEST VOLTAGE ..... 8

**3 TEST CONDITIONS AND RESULTS ..... 9**

3.1 FREQUENCY ERROR ..... 9
3.2 ANTENNA OUTPUT POWER AND OUTPUT POWER TOLERANCE ..... 10
3.3 OCCUPIED BANDWIDTH AND SPREADING BANDWIDTH ..... 11
3.4 DWELL TIME ..... 12
3.5 UNWANTED EMISSION STRENGTH ..... 13
3.6 SECONDARY RADIATED EMISSION STRENGTH ..... 14
3.7 CONSTRUCTION PROTECTION METHOD ..... 15
3.8 INTERFERENCE PREVENTION FUNCTION ..... 16

**4 TEST SETUP PHOTOS ..... 17**

**5 PHOTOS OF THE EUT ..... 18**


複製禁止

# 1 TEST SUMMARY

## 1.1 Test Standards

The tests were performed according to following standards:

MIC Notice No.88 Appendix No.43

## 1.2 Test Summary

| 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 |

複製禁止

## 1.3 Test Facility

**Test Laboratory:**
**Guangdong Asia Hongke Test Technology Limited**
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:
**FCC-Registration No.: 251906 Designation Number: CN1376**
Guangdong Asia Hongke Test Technology Limited 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.

**IC —Registration No.: 31737 CAB identifier: CN0165**
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

**A2LA-Lab Cert. No.: 7133.01**
Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

## 1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the Guangdong Asia Hongke Test Technology Limited’s quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Asia Hongke laboratory is reported:

| Test | Measurement Uncertainty | Notes |
|---|---|---|
| Power Line Conducted Emission | 150KHz~30MHz ±1.20 dB | (1) |
| Radiated Emission | 9KHz~30Hz ±3.10dB | (1) |
| Radiated Emission | 9KHz~1GHz ±3.75dB | (1) |
| Radiated Emission | 1GHz~18GHz ±3.88 dB | (1) |
| Radiated Emission | 18GHz-40GHz ±3.88dB | (1) |
| RF power, conducted | 30MHz~6GHz ±0.16dB | (1) |
| RF power density, conducted | ±0.24dB | (1) |
| Spurious emissions, conducted | ±0.21dB | (1) |
| Temperature | ±1℃ | (1) |
| Humidity | ±3% | (1) |
| DC and low frequency voltages | ±1.5% | (1) |
| Time | ±2% | (1) |
| Duty cycle | ±2% | (1) |

The report uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%

複製禁止

# 2 GENGENERAL INFORMATION

## 2.1 Environmental conditions

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

| | | |
|---|---|---|
| Voltage | Normal Voltage | AC 100V |
| | High Voltage | AC 110V |
| | Low Voltage | DC 90V |
| Other | Normal Temperature | 25°C |
| | Relative Humidity | 55 % |
| | Air Pressure | 989 hPa |

## 2.2 General Description of EUT

| | |
|---|---|
| Product Name: | 65 Inch Outdoor Display |
| Model/Type reference: | SG-MPV65K |
| Serial Model: | SG-MPV65K2 |
| Model difference: | All models are same as the samples except model name, all the models are electrical identical same mechanical structure and design. |
| Power Rating: | Input:100-240V∽50/60Hz 10A |
| Adapter Information: | N/A |
| Hardware Version: | V1.0 |
| Software Version: | V1.0 |
| Sample(s) Status: | AiTSZ-250526141-1(Normal sample)<br>AiTSZ-250526141-2(Engineer sample) |
| **Bluetooth:** | |
| Version: | Supported BR/EDR |
| Modulation: | GFSK, π/4DQPSK, 8DPSK |
| Operation frequency: | 2402MHz~2480MHz |
| Channel number: | 79 |
| Channel separation: | 1MHz |
| Antenna type: | Diople antenna |
| Antenna gain: | 3.75 dBi |

**Remark:**
The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

複製禁止

## 2.3 Description of Test Modes and Test Frequency

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:

| 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 Equipment List for the Test

| No | Test Equipment | Manufacturer | Model No | Serial No | Cal. Date | Cal. Due Date |
|---|---|---|---|---|---|---|
| 1 | Spectrum Analyzer | Keysight | N9020A | MY51280643 | 2024.09.25 | 2025.09.24 |
| 2 | DC Power supply | Manson | HCS-3604 | G521100129 | 2024.09.24 | 2025.09.23 |
| 3 | Digital Phosphor Oscilloscope | Tektronix | TDS3012 | B021220 | 2024.09.24 | 2025.09.23 |
| 4 | Signal Generator | Agilent | N5182A | MY50143009 | 2024.09.25 | 2025.09.24 |
| 5 | Power meter | Agilent | E4419B | MY45102079 | 2024.09.25 | 2025.09.24 |
| 6 | Test software | TST | TST Pass | V2.0 | N/A | N/A |

Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law".
Cal. Lab: GUANGZHOULISAICALIBRATION AND TESTING CO.,LTD.

複製禁止

## 2.5 Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

| Test Software Version | CMD Command | | |
|---|---|---|---|
| Frequency | 2402MHz | 2441MHz | 2480MHz |
| Bluetooth | Default | Default | Default |

## 2.6 Test Voltage

**POWER SUPPLY VOLTAGE FLUCTUATION TEST**

| Voltage Fluctuation Test | Normal Voltage | High Voltage +10% of Normal Voltage | Low Voltage -10% of Normal Voltage |
|---|---|---|---|
| Power supply | AC 100V | AC 110V | AC 90V |
| Output To RF Module | DC 3.30V | DC 3.366V | DC 3.252V |
| Voltage Variation (%) | -- | 2% | -1.45% |

Note:
Voltage Variation (%)
= (Output high or Low Voltage - Output Normal Voltage)/ Output Normal Voltage* 100
During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.
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 exceed ±1%. So, all measurement has been conducted by normal and limit voltage.

複製禁止

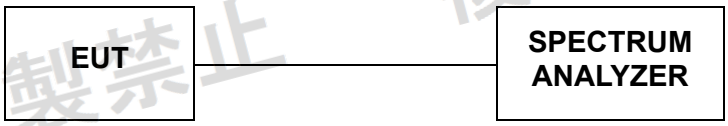
# 3 Test conditions and Results

## 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 Appendix RF test data for BT.

複製禁止

## 3.2 Antenna Output Power and Output Power Tolerance

**LIMIT**

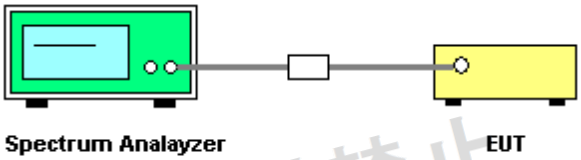
- ≤ 3 mW /MHz(FHSS from 2402-2480 MHz)
- ≤ 10 mW/MHz (OFDM, DSSS from 2400-2483.5 MHz)
- ≤ 10 mW (other from 2400-2483.5 MHz)

The Output Power Tolerance must be within +20%, -∞%.
E.i.r.p:

- ≤12.14dBm/MHz(OFDM,DS form 2400-2483.5MHz)

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 set the UUT in FHSS mode, use the following settings:

Setting of SA is following as follow:

- RBW=1MHz
- VBW=1MHz
- Sweep time: 20ms
- Sweep point:: 30001
- 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.

**TEST RESULTS**

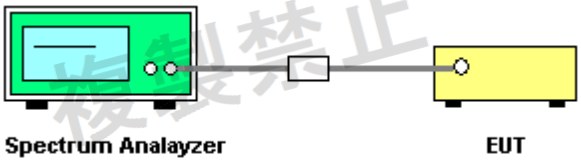
Raw data reference to Appendix RF test data for BT.

## 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 Appendix RF test data for BT.

複製禁止

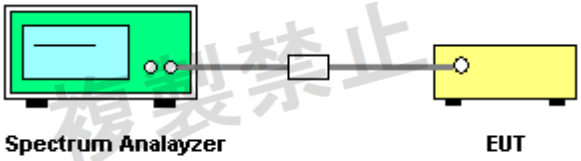
## 3.4 Dwell time

**LIMIT**

0.4 second or less

NOTE: Dwell time only applicable to FHSS system device.

**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: 10001
- Sweep time: 20ms
- Trace:Clear
- Detector mode: Positive peak

**TEST RESULTS**

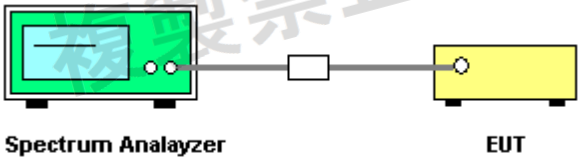
Raw data reference to Appendix RF test data for BT.

## 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: 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**

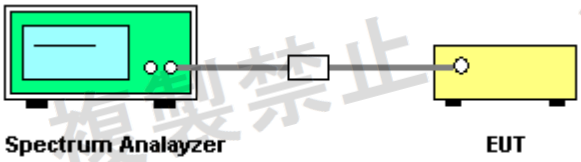
Raw data reference to Appendix RF test data for BT.

## 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 Appendix RF test data for BT.

## 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**

We apply the product for Japan RF certification, The number of chip pins is greater than 10, and the distance between the pins is less than 1mm, so the chip is not easily damaged.

複製禁止

## 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**

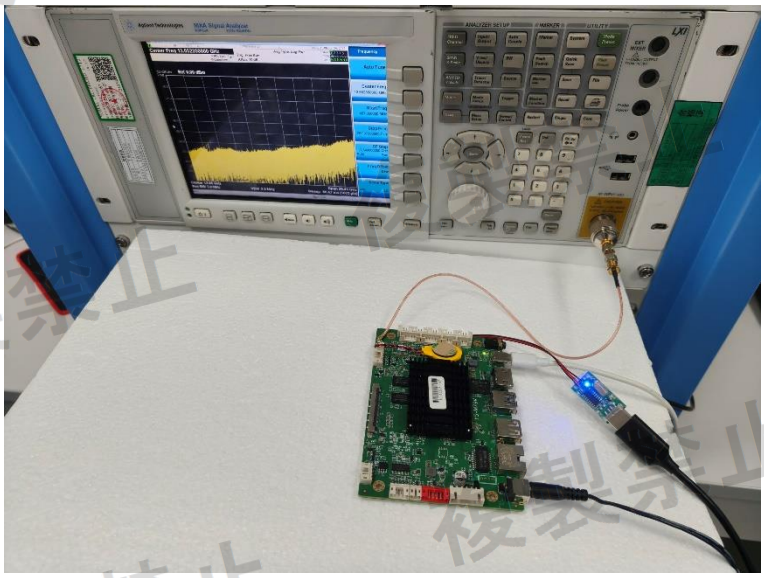
1. Connect the EUT in network
2. Open the software
3. We can get the information as follows:

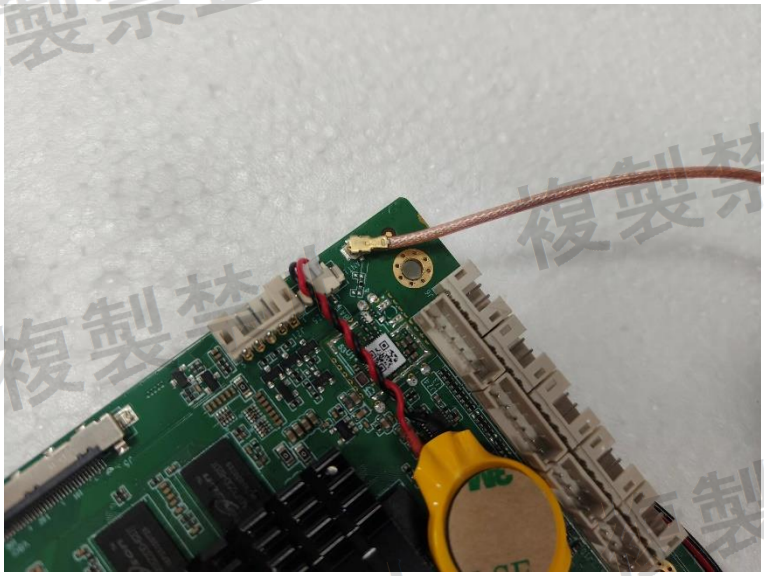
**TEST RESULTS**

BT MAC: C0:E7:04:25:C7:C7

複製禁止

# 4 TEST SETUP PHOTOS

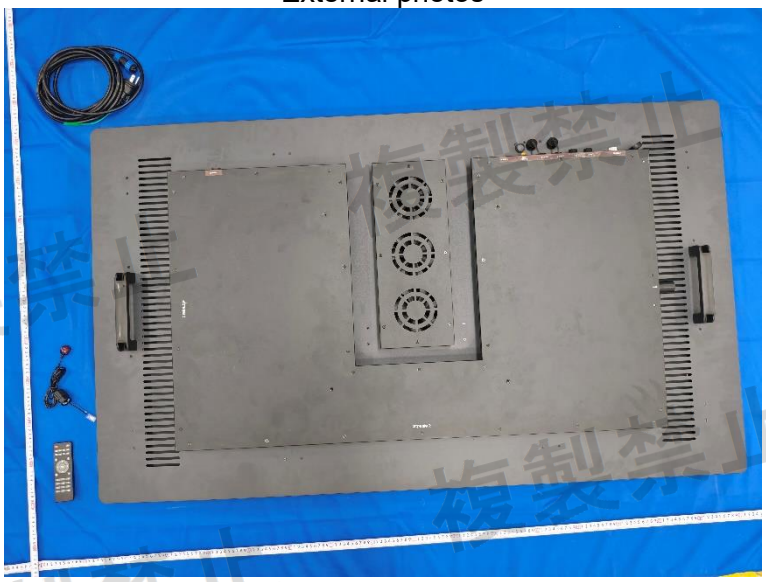


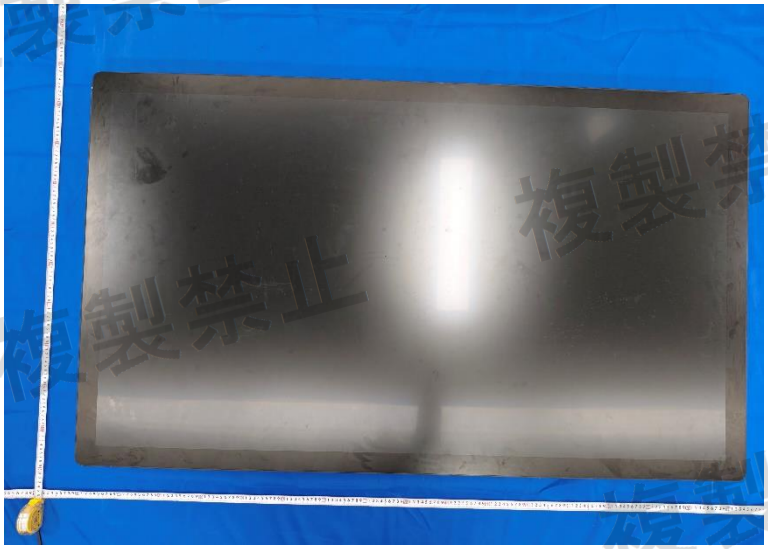


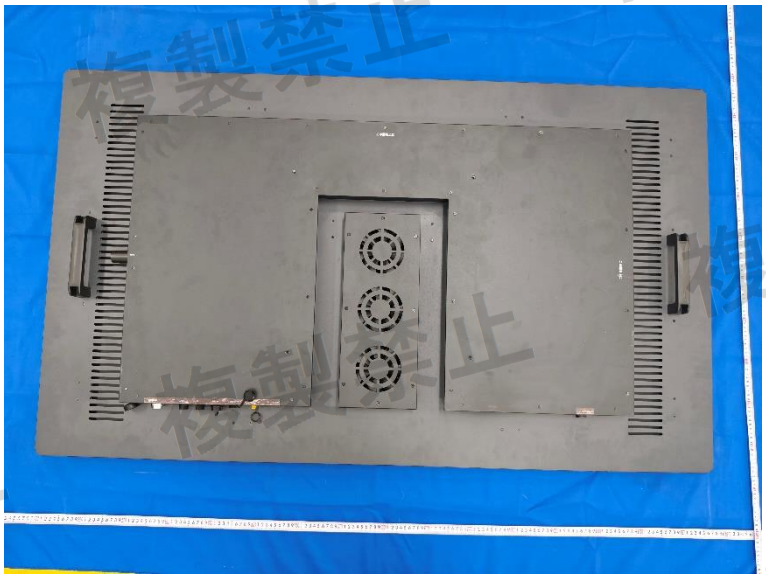
複製禁止

# 5 PHOTOS OF THE EUT

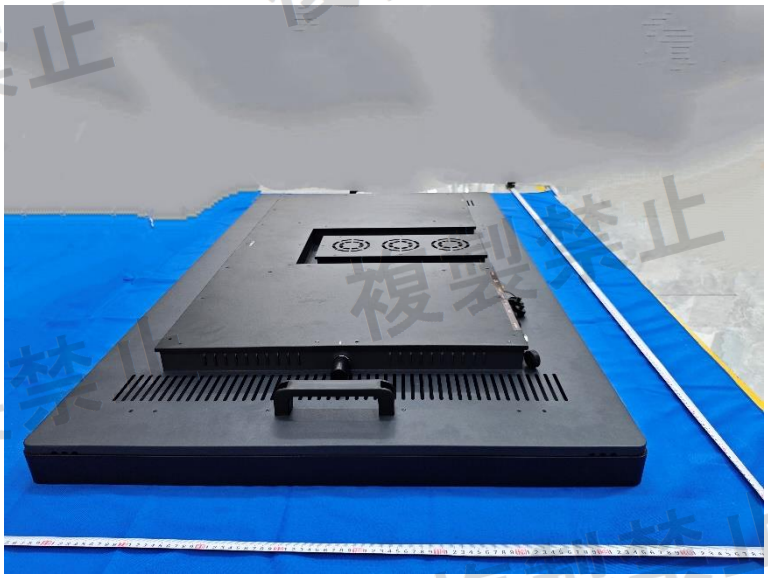
External photos

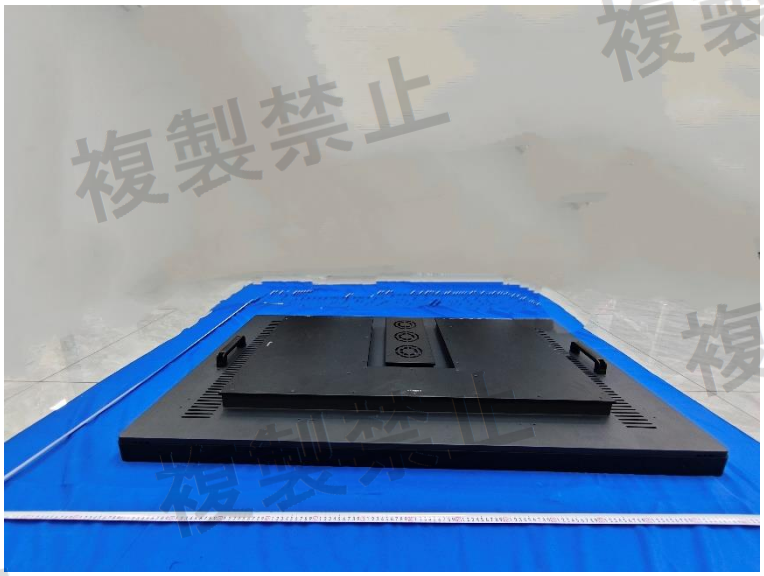




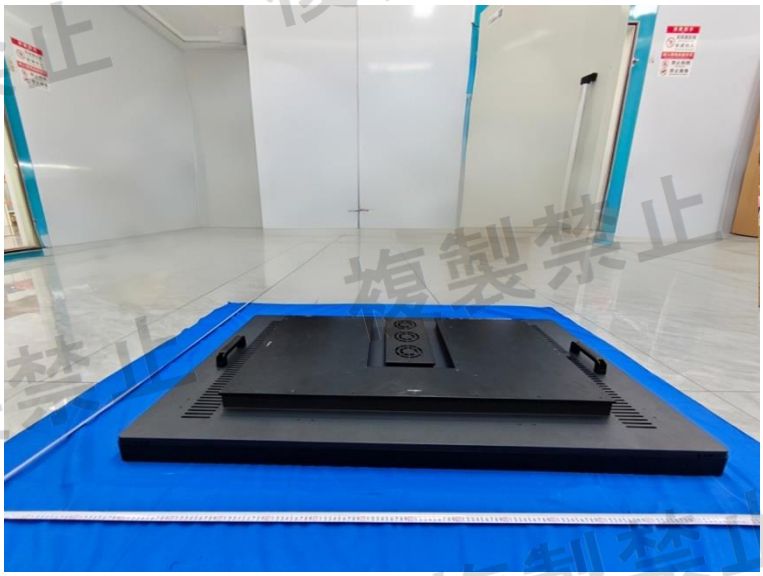


複製禁止





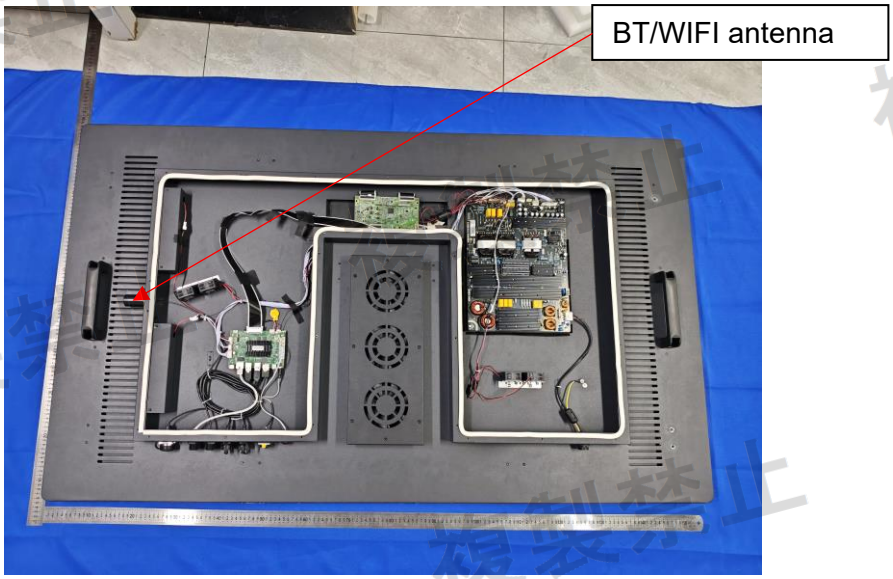
複製禁止

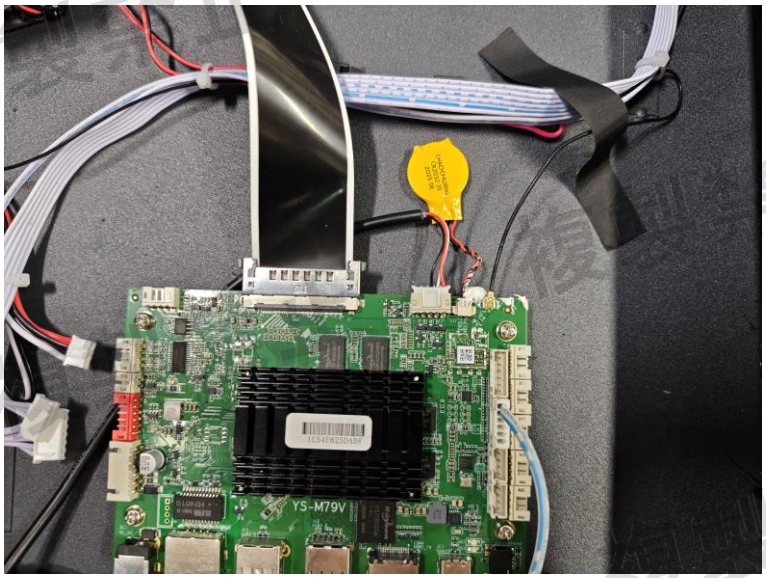


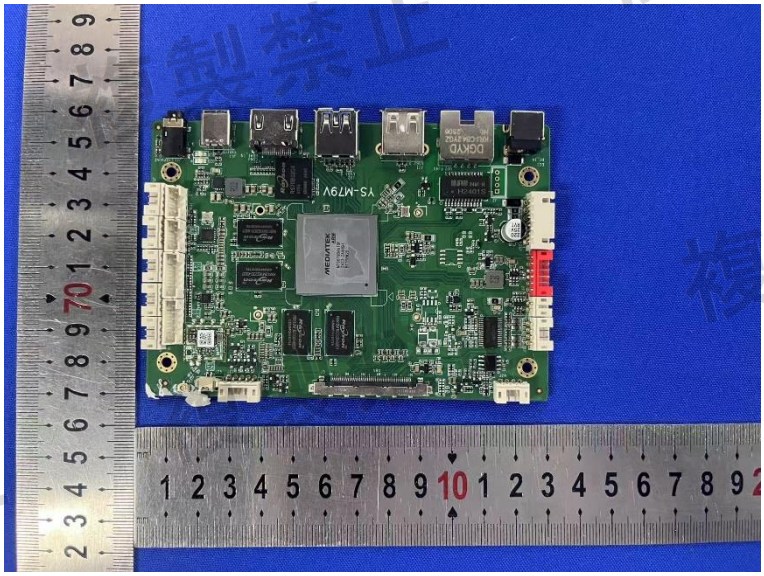
複製禁止

複製禁止

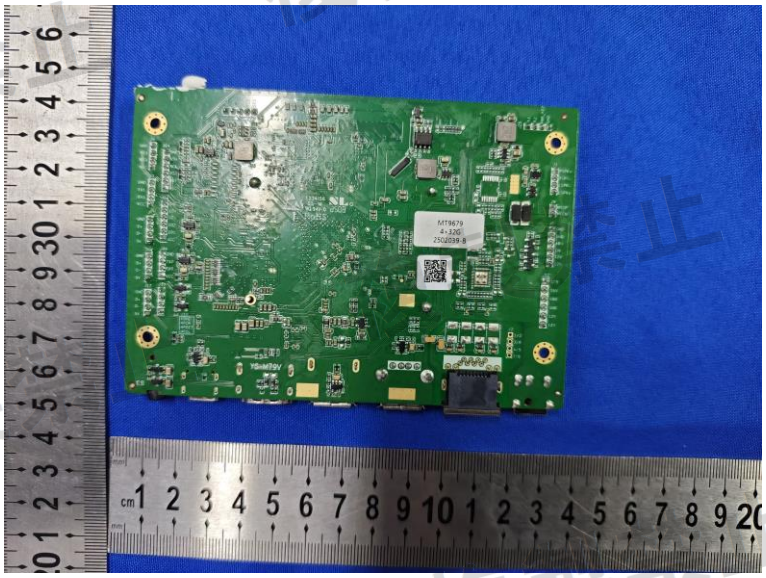
Internal photos

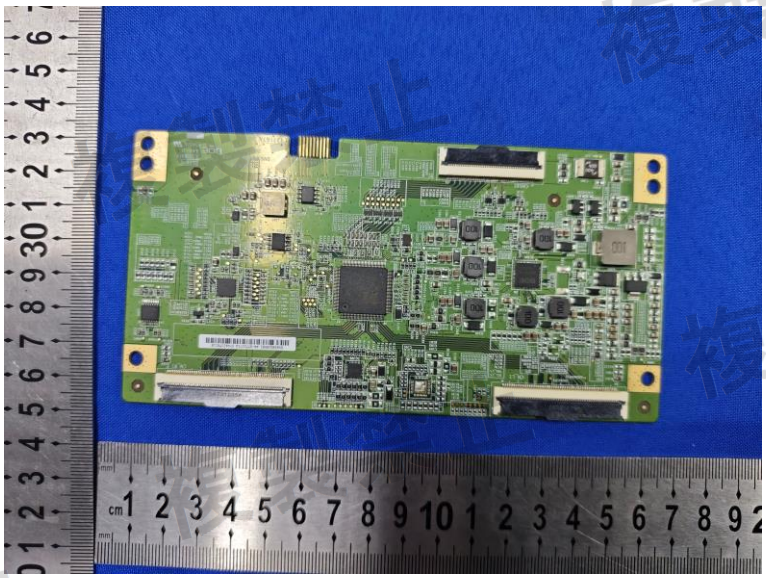


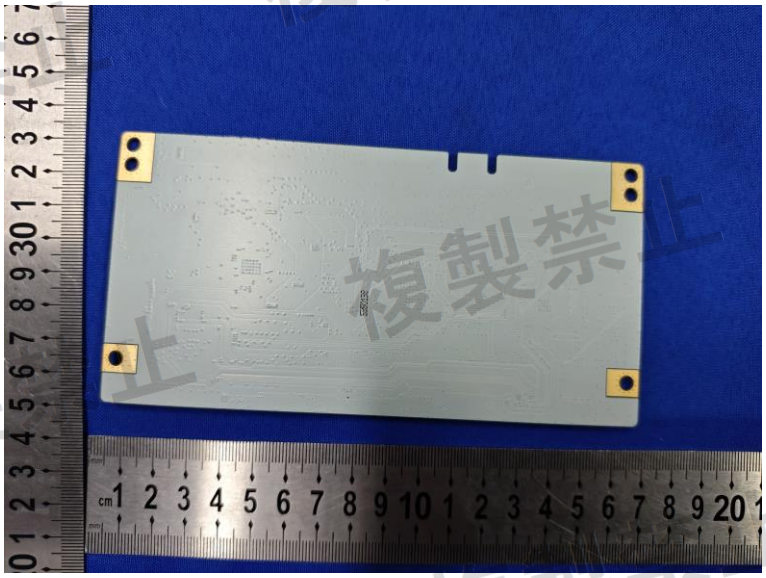



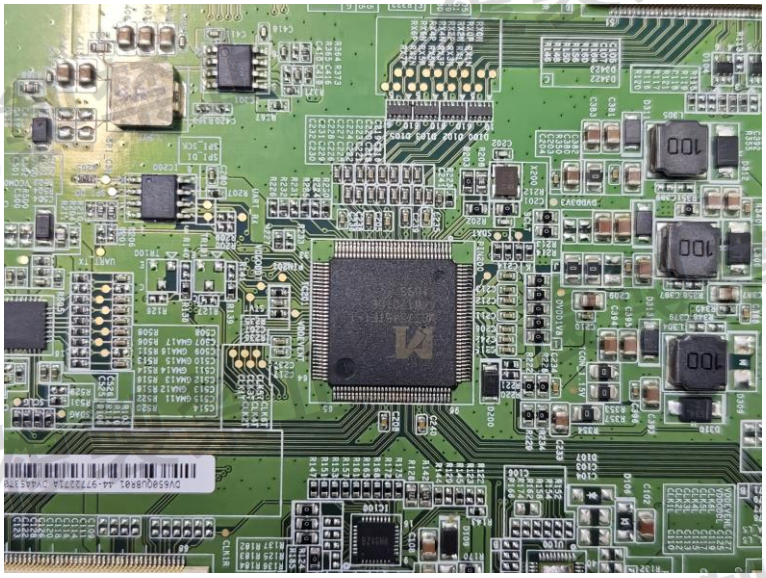

複製禁止

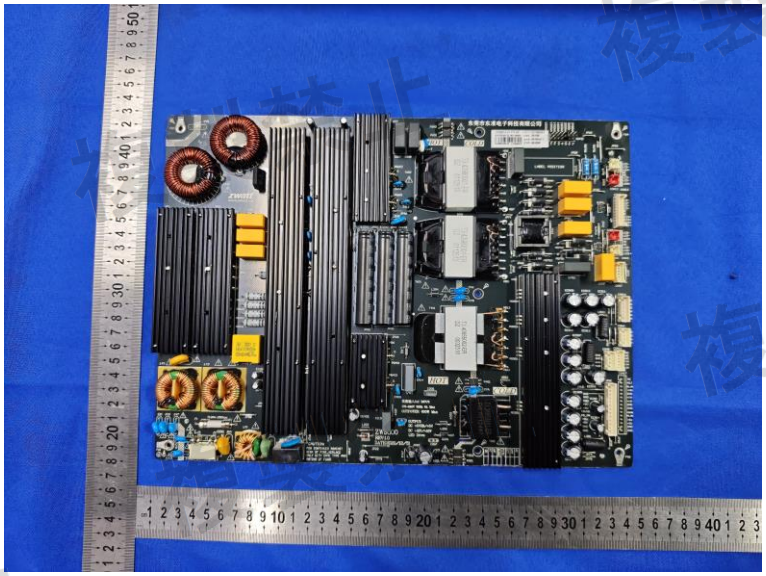




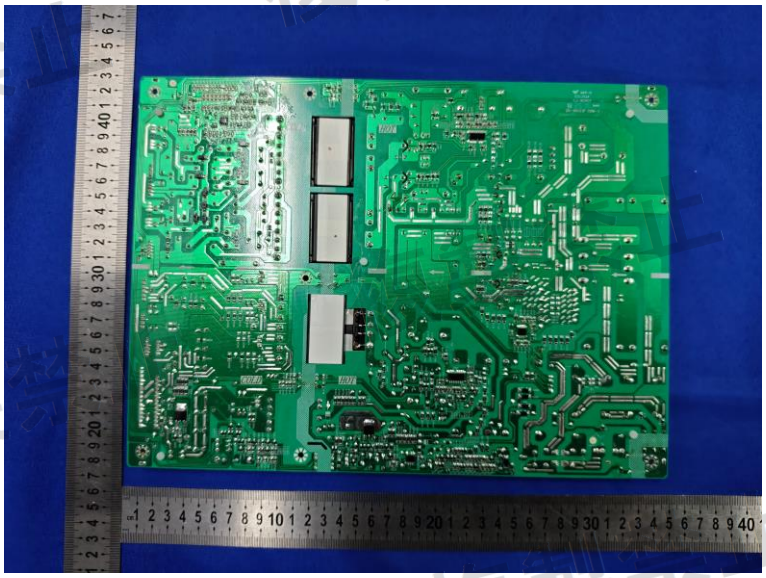
複製禁止







複製禁止



********** End of Report **********

複製禁止