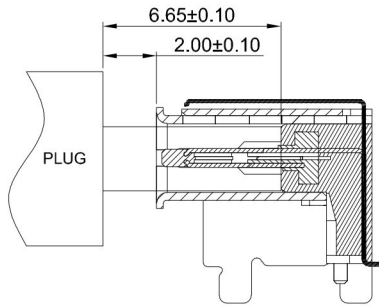
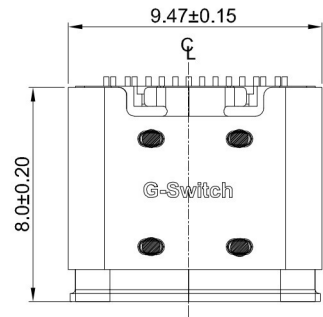
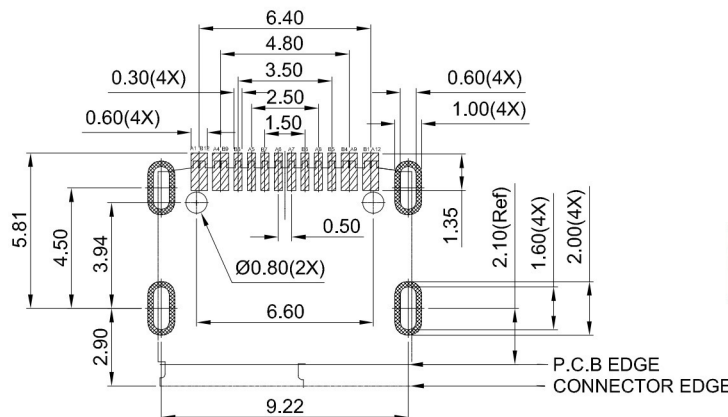
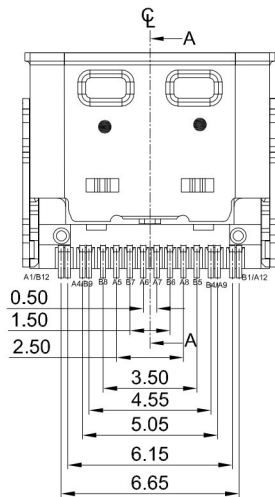
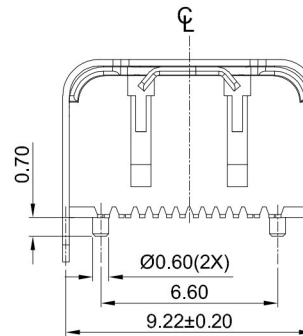
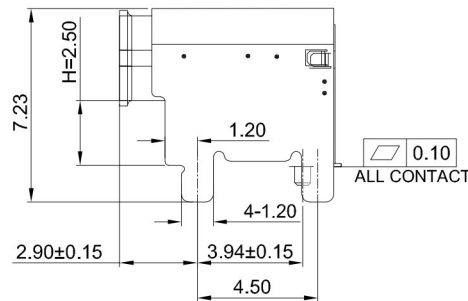


AFTER MATING



USB IF  
TID:11355

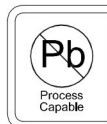
### G-Switch USB-C Specification:

- 1.Current rated: 5A on vbus/1.25A on vconn/0.25A on other
- 2.Withstanding voltage: 100V AC/minute
- 3.Contact resistance: 40mΩ Max
- 4.Insulation resistance: 100MΩ Min
- 5.Operating temperature: -40°C ~ +85°C
- 6.Mating force: 5N~20N
- 7.Unmating force: 8N~20N
- 8.Durability cycle:10,000 cycles
- 9.Compliant with: IEC62680-1-3

| A1    | A2  | A3  | A4    | A5     | A6     | A7     | A8     | A9    | A10 | A11 | A12   |
|-------|-----|-----|-------|--------|--------|--------|--------|-------|-----|-----|-------|
| GND   |     |     | VBUS  | CC1    | D+     | D-     | SBU1   | VBUS  |     |     | GND   |
| First |     |     | First | Second | Second | Second | Second | First |     |     | First |
| B12   | B11 | B10 | B9    | B8     | B7     | B6     | B5     | B4    | B3  | B2  | B1    |
| GND   |     |     | VBUS  | SBU2   | D-     | D+     | CC2    | VBUS  |     |     | GND   |
| First |     |     | First | Second | Second | Second | Second | First |     |     | First |

| NO. | PARTS       | MATERIAL                 | REMARKS                           |
|-----|-------------|--------------------------|-----------------------------------|
| 1   | TOP SHELL   | STAINLESS STEEL304       | Ni40u" MIN PLATED                 |
| 2   | FRONT SHELL | STAINLESS STEEL304       | Ni40u" MIN PLATED                 |
| 3   | MID PLATE   | STAINLESS STEEL301       | CLEAN                             |
| 4   | HOUSING     | HIGH TEMPERATURE PLASTIC | BLACK UL 94 V-0                   |
| 5   | TERMINALS   | COPPER ALLOY C7025       | Au1u" MIN PLATING ON CONTACT AREA |

RECOMMENDED PCB LAYOUT  
TOLERANCE:±0.05



RoHS  
Compliant  
EU RoHS Standards



SCALE: 1:1 UNIT: mm  
SIZE: A4

Unless otherwise  
General Tolerance:

X.x ±0.30  
X.xx ±0.20  
X.xxx ±0.10  
X\* ±3°

Title: Horizontal Type-c 16P Female  
SMT Pad Up2.5 CH=4.05 L=8.0mm

Molde Code: GT-USB-9016B01

| DRAWN | CHECKED | APPROVED | DATE       |
|-------|---------|----------|------------|
| Xia   | Chen    | Chen     | 2023.02.01 |

品赞科技®  
**b-Switch**  
www.dg-switch.com

REV: A0 SHEET: 1/1



中国认可  
国际互认  
检测  
TESTING  
CNAS L13628

# EN IEC 62680-1-3 Test Report

24T04N002264-001-COM

For

## Type-C Receptacle Connector

**Company Name:** Pinzan Electronics (Dongguan) Co., Ltd

**Product Name:** Horizontal Type-c 16P Female SMT Pad Up2.5

CH=4.05 L=8.0mm

**Model Name:** GT-USB-9016B01

**Hardware Version:** A0

**Issued Date:** 2024-11-05

### Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

### Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000.

Tel: +86(0)755-33322000, Fax: +86(0)755-33322001

Email: yewu@saict.ac.cn, www.saict.ac.cn





NO.24T04N002264-001-COM

## **REPORT HISTORY**

| Report Number        | Revision | Description   | Issue Date |
|----------------------|----------|---------------|------------|
| 24T04N002264-001-COM | V1       | First release | 2024-11-05 |

Note: the latest revision of the test report supersedes all previous versions.



## **CONTENTS**

|                                                                  |           |
|------------------------------------------------------------------|-----------|
| <b>1. Test Laboratory .....</b>                                  | <b>1</b>  |
| <b>1.1. Testing Location .....</b>                               | <b>1</b>  |
| <b>1.2. Testing Environment .....</b>                            | <b>1</b>  |
| <b>1.3. Project Data .....</b>                                   | <b>1</b>  |
| <b>1.4. Signature .....</b>                                      | <b>1</b>  |
| <b>2. Client Information .....</b>                               | <b>1</b>  |
| <b>2.1. Applicant Information .....</b>                          | <b>1</b>  |
| <b>2.2. Manufacturer Information .....</b>                       | <b>1</b>  |
| <b>3. Unit Under Test (UUT) Information .....</b>                | <b>2</b>  |
| <b>3.1. About UUT .....</b>                                      | <b>2</b>  |
| <b>3.2. Sample Coding .....</b>                                  | <b>2</b>  |
| <b>4. Reference Documents .....</b>                              | <b>3</b>  |
| <b>5. USB Type-C Compliance Requirements .....</b>               | <b>3</b>  |
| <b>5.1. DC Electrical .....</b>                                  | <b>3</b>  |
| <b>5.2. Mechanical .....</b>                                     | <b>4</b>  |
| <b>5.3. Environmental .....</b>                                  | <b>5</b>  |
| <b>6. Test Procedure .....</b>                                   | <b>6</b>  |
| <b>7. Test Result Summary .....</b>                              | <b>9</b>  |
| <b>8. Test Detail .....</b>                                      | <b>10</b> |
| <b>8.1. Clause 3.2.1 (6) Construction .....</b>                  | <b>10</b> |
| <b>8.2. Clause 3.2.1 (8) Critical Dimensions .....</b>           | <b>12</b> |
| <b>8.3. Clause 3.7.8.1 Low level contact resistance .....</b>    | <b>13</b> |
| <b>8.4. Clause 3.7.8.2 Dielectric withstanding voltage .....</b> | <b>35</b> |
| <b>8.5. Clause 3.7.8.3 Insulation Resistance .....</b>           | <b>36</b> |
| <b>8.6. Clause 3.7.8.4 Contact Current Rating .....</b>          | <b>37</b> |
| <b>8.7. Clause 3.8.1.1 Insertion force .....</b>                 | <b>38</b> |
| <b>8.8. Clause 3.8.1.1 Extraction force .....</b>                | <b>38</b> |
| <b>8.9. Clause 3.8.1.3 Durability .....</b>                      | <b>45</b> |
| <b>8.10. Clause 3.8.1.3 Reseating .....</b>                      | <b>47</b> |
| <b>8.11. Clause 3.8.1.6 4-Axis Continuity .....</b>              | <b>47</b> |



|                                                               |    |
|---------------------------------------------------------------|----|
| 8.12. Clause 3.8.2 Temperature life .....                     | 52 |
| 8.13. Clause 3.8.2 Thermal shock .....                        | 52 |
| 8.14. Clause 3.8.2 Cyclic temperature and humidity .....      | 53 |
| 8.15. Clause 3.8.2 Vibration .....                            | 53 |
| 8.16. Clause 3.8.2 Mixed flowing gas .....                    | 56 |
| 8.17. Clause 3.8.2 Thermal disturbance .....                  | 56 |
| 9. Test Equipments Utilized .....                             | 57 |
| ANNEX A: UUT photograph .....                                 | 59 |
| ANNEX B: Drawing .....                                        | 60 |
| ANNEX C: Insertion Force & Extraction Force Test Layout ..... | 61 |
| ANNEX D: Durability Test Layout .....                         | 62 |
| ANNEX E: Dielectric withstanding voltage Test Layout .....    | 63 |
| ANNEX F: Vibration Test Layout .....                          | 64 |
| ANNEX G: Contact Current Rating Test Layout .....             | 65 |



## 1. Test Laboratory

### 1.1. Testing Location

Location: SAICT

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road,  
Futian District, Shenzhen, Guangdong, P. R. China 518000

### 1.2. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 25-85%RH

Atmospheric pressure 86-106kPa

### 1.3. Project Data

Testing Start Date: 2024-09-06

Testing End Date: 2024-10-31

### 1.4. Signature

Su Kun

Prepared this test report

Wang Yang

Reviewed this test report

Wei Ming

Approved this test report

## 2. Client Information

### 2.1. Applicant Information

Company Name: Pinzan Electronics (Dongguan) Co., Ltd

Address : Room 701, Workshop 2, Optical Technology Innovation Center,  
Xinhong, Marina Bay New District, Dongguan City

City: Dongguan

Country: China

Telephone: 0769-82388879

Email: feng@g-switch.cn

### 2.2. Manufacturer Information

Company Name: Pinzan Electronics (Dongguan) Co., Ltd

Address : Room 701, Workshop 2, Optical Technology Innovation Center,  
Xinhong, Marina Bay New District, Dongguan City

City: Dongguan

Country: China

Telephone: 0769-82388879

Email: feng@g-switch.cn



### **3. Unit Under Test (UUT) Information**

#### **3.1. About UUT**

|                   |                                                               |
|-------------------|---------------------------------------------------------------|
| Description:      | USB 2.0 Type-C Receptacle Connector                           |
| Brand Name:       | Pinzan Electronics (Dongguan) Co., Ltd                        |
| Marketing Name:   | Horizontal Type-c 16P Female SMT Pad Up2.5 CH=4.05<br>L=8.0mm |
| Model Name:       | GT-USB-9016B01                                                |
| Hardware Version: | A0                                                            |

#### **3.2. Sample Coding**

| Test Group | Number of Plug/Receptacle | Qty of Specimen |
|------------|---------------------------|-----------------|
| Group A-1  | UT01aa to UT10aa          | 10 pcs          |
| Group A-2  | UT11aa to UT20aa          | 10 pcs          |
| Group A-3  | UT21aa to UT30aa          | 10 pcs          |
| Group A-4  | UT31aa to UT50aa          | 20 pcs          |
| Group A-7  | UT51aa to UT60aa          | 10 pcs          |
| Group B-1  | UT61aa to UT68aa          | 8 pcs           |
| Group B-5  | UT69aa to UT71aa          | 3 pcs           |
| Group B-6  | UT72aa to UT74aa          | 3 pcs           |



#### 4. Reference Documents

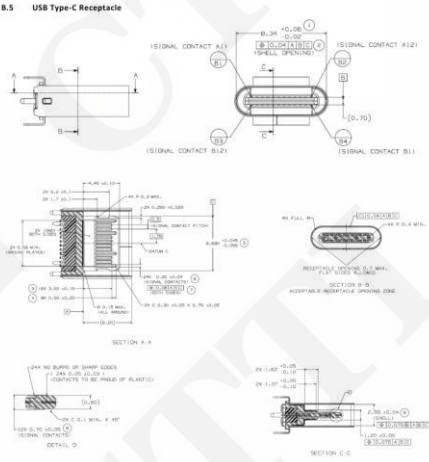
1. EN IEC 62680-1-3:2022, Universal serial bus interfaces for data and power\_Part 1-3Common components-USB Type-C(r) cable and connector specification

#### 5. USB Type-C Compliance Requirements

##### 5.1. DC Electrical

| Clause  | Test Item                           | Test Procedure                                                                                                                                                                                                                                                                                                                                               | Requirement                                                                                                                                                                    |
|---------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.7.8.1 | Low Level Contact Resistance (LLCR) | EIA 364-23<br>The low level contact resistance (LLCR) measurement is made across the plug and receptacle mated contacts and does not include any internal paddle cards or substrates of the plug or receptacle. The test boards shall be provided with the connectors to be tested.<br>• Measure at 20 mV (max) open, circuit at 100 mA.                     | The following requirements apply to the power and signal contacts:<br>• 40 mΩ (max) initial for VBUS, GND and all other contacts.<br>• 50 mΩ maximum after initial easurement. |
| 3.7.8.2 | Dielectric Withstanding Voltage     | EIA 364-20<br>Applicable to both receptacle and plug.<br>• Measurement per Method B.                                                                                                                                                                                                                                                                         | The dielectric shall withstand 100 VAC (RMS) for one minute at sea level after the environmental stress defined in Table 4-8, Test Group A-7.                                  |
| 3.7.8.3 | Insulation Resistance               | EIA 364-21<br>Applicable to both receptacle and plug.<br>See Table 4-8 Test Group A-7.                                                                                                                                                                                                                                                                       | A minimum of 100 MΩ insulation resistance is required between adjacent contacts of unmated and mated connectors.                                                               |
| 3.7.8.4 | Contact Current Rating              | A current of 5 A shall be applied collectively to VBUS pins (i.e., pins A4, A9, B4, and B9) and 1.25 A shall be applied to the VCONN pin (i.e., B5) as applicable, terminated through the corresponding GND pins (i.e., pins A1, A12, B1, and B12). A minimum current of 0.25 A shall also be applied individually to all the other contacts, as applicable. | The temperature rise of the outside shell surface of the mated pair above the VBUS and GND contacts shall not exceed 30°C above the ambient temperature.                       |

## 5.2. Mechanical

| Clause                                          | Test Item             | Test Procedure                                                                                                                                                                              | Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
|-------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|--------|--------|------------------------------|------|------|------|-------------------------------------------------|-----------------------|-----|-----|---------------------------------|------|------|------|---------------------|------|------|------|-----------------|-------|-------|-------|------------------|------|------|------|-------------------------------------|-----------------------|-----|-----|---------------------|------|------|------|--------------------------------|------|------|------|
| 3.2.1                                           | Critical Dimensions   | <p><b>8.5 USB Type-C Receptacle</b></p>  <p><b>Figure B-5 USB Type-C Receptacle Using SECTION A-A</b></p> | <p><b>Table B-5 Receptacle Critical Dimensions for Receptacles Using SECTION A-A in Figure B-5</b></p> <table border="1"> <thead> <tr> <th>Description</th><th>Dimension</th><th>+ Tol.</th><th>- Tol.</th></tr> </thead> <tbody> <tr> <td>1. Receptacle inside opening</td><td>8.38</td><td>0.06</td><td>0.02</td></tr> <tr> <td>2. Receptacle inside opening position tolerance</td><td>0.04 with datum A/B/C</td><td>n/a</td><td>n/a</td></tr> <tr> <td>3. Receptacle signal pin length</td><td>3.50</td><td>0.15</td><td>0.15</td></tr> <tr> <td>4. Pin length datum</td><td>0.30</td><td>0.20</td><td>0.20</td></tr> <tr> <td>5. Tongue width</td><td>6.900</td><td>0.045</td><td>0.055</td></tr> <tr> <td>6. Contact width</td><td>0.25</td><td>0.04</td><td>0.04</td></tr> <tr> <td>7. Contact width position tolerance</td><td>0.08 with datum A/B/C</td><td>n/a</td><td>n/a</td></tr> <tr> <td>8. Tongue thickness</td><td>0.70</td><td>0.05</td><td>0.05</td></tr> <tr> <td>9. Receptacle inside thickness</td><td>2.56</td><td>0.05</td><td>0.04</td></tr> </tbody> </table> <p>Notes:<br/>1. All values are in millimeters.</p> | Description | Dimension | + Tol. | - Tol. | 1. Receptacle inside opening | 8.38 | 0.06 | 0.02 | 2. Receptacle inside opening position tolerance | 0.04 with datum A/B/C | n/a | n/a | 3. Receptacle signal pin length | 3.50 | 0.15 | 0.15 | 4. Pin length datum | 0.30 | 0.20 | 0.20 | 5. Tongue width | 6.900 | 0.045 | 0.055 | 6. Contact width | 0.25 | 0.04 | 0.04 | 7. Contact width position tolerance | 0.08 with datum A/B/C | n/a | n/a | 8. Tongue thickness | 0.70 | 0.05 | 0.05 | 9. Receptacle inside thickness | 2.56 | 0.05 | 0.04 |
| Description                                     | Dimension             | + Tol.                                                                                                                                                                                      | - Tol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 1. Receptacle inside opening                    | 8.38                  | 0.06                                                                                                                                                                                        | 0.02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 2. Receptacle inside opening position tolerance | 0.04 with datum A/B/C | n/a                                                                                                                                                                                         | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 3. Receptacle signal pin length                 | 3.50                  | 0.15                                                                                                                                                                                        | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 4. Pin length datum                             | 0.30                  | 0.20                                                                                                                                                                                        | 0.20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 5. Tongue width                                 | 6.900                 | 0.045                                                                                                                                                                                       | 0.055                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 6. Contact width                                | 0.25                  | 0.04                                                                                                                                                                                        | 0.04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 7. Contact width position tolerance             | 0.08 with datum A/B/C | n/a                                                                                                                                                                                         | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 8. Tongue thickness                             | 0.70                  | 0.05                                                                                                                                                                                        | 0.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 9. Receptacle inside thickness                  | 2.56                  | 0.05                                                                                                                                                                                        | 0.04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 3.8.1.1                                         | Insertion force       | <p>EIA 364-13</p> <p>The insertion force test shall be done at a maximum speed of 12.5 mm (0.492") per minute.</p>                                                                          | <p>Within the range from 5 N to 20 N.</p> <p>This requirement does not apply to the plugs that are used for direct docking without a cable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 3.8.1.2                                         | Extraction force      | <p>EIA 364-13</p> <p>The extraction force test shall be done at a maximum speed of 12.5 mm (0.492") per minute.</p>                                                                         | <p>Within the range of 8 N to 20 N, measured after a preconditioning of five insertion/extraction cycles (i.e., the sixth extraction). After an additional twenty-five insertion/extraction cycles, the extraction force shall be measured again (i.e., the thirtysecond extraction) and the extraction force shall be within:</p> <ul style="list-style-type: none"> <li>a) 33 % of the initial reading, and</li> <li>b) within the range of 8 N to 20 N.</li> </ul> <p>The extraction force shall be within the range of 6 N to 20 N after 10,000 insertion/extraction cycles. This requirement does not apply to the plugs that are used for direct docking without a cable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 3.8.1.3                                         | Durability            | <p>EIA 364-09</p>                                                                                                                                                                           | <p>10,000 cycles minimum. Low level contact resistance and dielectric withstanding voltage shall be checked to be within spec after the 10,000 durability cycles according to Table 4-8, Test Group A-7.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |
| 3.8.1.6                                         | 4-Axis Continuity     | <p>See Appendix D for detailed test fixtures and procedures. Plug and Receptacle: Subject the mating interface to the moments defined in appendix D for at least 10 seconds.</p>            | <p>No discontinuities greater than 1 microsecond duration in any of the four orientations tested.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |           |        |        |                              |      |      |      |                                                 |                       |     |     |                                 |      |      |      |                     |      |      |      |                 |       |       |       |                  |      |      |      |                                     |                       |     |     |                     |      |      |      |                                |      |      |      |

### 5.3. Environmental

| Clause | Test Item                       | Test Procedure                                                                                                                                                                                                                                                                                      | Requirement                                                                                                                                                     |
|--------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.8.2  | Temperature life                | EIA 364-17, Method A.<br>105° C without applied voltage for 120 hours.<br>105° C without applied voltage for 72 hours when used as preconditioning.                                                                                                                                                 | Low level contact resistance meets spec before and after the Temperature Life test.                                                                             |
| 3.8.2  | Vibration                       | EIA 364-28<br>Test Condition VII, Test Letter D                                                                                                                                                                                                                                                     | No evidence of physical damages and no discontinuity longer than 1 microsecond.<br>Low level contact resistance meets spec before and after the Vibration test. |
| 3.8.2  | Cyclic temperature and humidity | EIA 364-31                                                                                                                                                                                                                                                                                          | Low level contact resistance meets spec before and after the Cyclic Temperature and Humidity test.                                                              |
| 3.8.2  | Thermal shock                   | EIA 364-32, Test Condition I<br>10 Cycles –55°C and +85°C.                                                                                                                                                                                                                                          | No evidence of any physical damage.<br>Low level contact resistance meets spec before and after the Thermal Shock test.                                         |
| 3.8.2  | Mixed flowing gas               | IA 364-65, Class II A<br>Samples should be placed in an environmentally controlled 'test chamber' that is monitored by a gas analyzing system for controlled concentrations of the specified gas mixture. Test coupons shall also be used and the weight gain reported.<br>Test duration is 7 days. | Low level contact resistance meets spec before and after the Mixed Flowing Gas test.                                                                            |

## 6. Test Procedure

For the DC electrical, Mechanical and Environmental compliance requirements of Type-C connector, refer to the grouping and test methods in the EIA364.1000.01 standard to implement the test.

| Group A-1 |                                 |
|-----------|---------------------------------|
| No.       | Test Item                       |
| A-1-1     | Low level contact resistance    |
| A-1-2     | Durability (preconditioning)    |
| A-1-3     | Temperature life                |
| A-1-4     | Low level contact resistance    |
| A-1-5     | Reseating                       |
| A-1-6     | Low level contact resistance    |
| Group A-2 |                                 |
| No.       | Test Item                       |
| A-2-1     | Low level contact resistance    |
| A-2-2     | Durability (preconditioning)    |
| A-2-3     | Thermal shock                   |
| A-2-4     | Low level contact resistance    |
| A-2-5     | Cyclic temperature and humidity |
| A-2-6     | Low level contact resistance    |
| A-2-7     | Reseating                       |
| A-2-8     | Low level contact resistance    |
| Group A-3 |                                 |
| No.       | Test Item                       |
| A-3-1     | Low level contact resistance    |

|                  |                                    |
|------------------|------------------------------------|
| A-3-2            | Durability (preconditioning)       |
| A-3-3            | Temperature life (preconditioning) |
| A-3-4            | Low level contact resistance       |
| A-3-5            | Vibration                          |
| A-3-6            | Low level contact resistance       |
| <b>Group A-4</b> |                                    |
| <b>No.</b>       | <b>Test Item</b>                   |
| A-4-1            | Low level contact resistance       |
| A-4-2            | Durability (preconditioning)       |
| A-4-3            | Temperature life (preconditioning) |
| A-4-4            | Low level contact resistance       |
| A-4-5            | Mixed flowing gas                  |
| A-4-6            | Low level contact resistance       |
| A-4-7            | Thermal disturbance                |
| A-4-8            | Low level contact resistance       |
| A-4-9            | Reseating                          |
| A-4-10           | Low level contact resistance       |
| <b>Group A-7</b> |                                    |
| <b>No.</b>       | <b>Test Item</b>                   |
| A-7-1            | Dielectric withstanding voltage    |
| A-7-2            | Low level contact resistance       |
| A-7-3            | Durability (preconditioning)       |
| A-7-4            | Insertion force                    |
| A-7-5            | Extraction force                   |

|                  |                                 |
|------------------|---------------------------------|
| A-7-6            | Durability                      |
| A-7-7            | Extraction force                |
| A-7-8            | Durability                      |
| A-7-9            | Extraction force                |
| A-7-10           | Low level contact resistance    |
| A-7-11           | Dielectric withstanding voltage |
| A-7-12           | Insulation Resistance           |
| <b>Group B-1</b> |                                 |
| <b>No.</b>       | <b>Test Item</b>                |
| B-1-4            | 4-Axis Continuity               |
| <b>Group B-5</b> |                                 |
| <b>No.</b>       | <b>Test Item</b>                |
| B-5-1            | Critical Dimensions             |
| <b>Group B-6</b> |                                 |
| <b>No.</b>       | <b>Test Item</b>                |
| B-6-1            | Contact Current Rating          |



## 7. Test Result Summary

| Test Item                       | Clause    | Result |
|---------------------------------|-----------|--------|
| Construction                    | 3.2.1 (6) | Pass   |
| Critical Dimensions             | 3.2.1 (8) | Pass   |
| Low level contact resistance    | 3.7.8.1   | Pass   |
| Dielectric withstanding voltage | 3.7.8.2   | Pass   |
| Insulation Resistance           | 3.7.8.3   | Pass   |
| Contact Current Rating          | 3.7.8.4   | Pass   |
| Insertion force                 | 3.8.1.1   | Pass   |
| Extraction force                | 3.8.1.2   | Pass   |
| Durability                      | 3.8.1.3   | Pass   |
| Reseating                       | 3.8.1.3   | Pass   |
| 4-Axis Continuity               | 3.8.1.6   | Pass   |
| Temperature life                | 3.8.2     | Pass   |
| Thermal shock                   | 3.8.2     | Pass   |
| Cyclic temperature and humidity | 3.8.2     | Pass   |
| Vibration                       | 3.8.2     | Pass   |
| Mixed flowing gas               | 3.8.2     | Pass   |
| Thermal disturbance             | 3.8.2     | Pass   |



## 8. Test Detail

### 8.1. Clause 3.2.1 (6) Construction

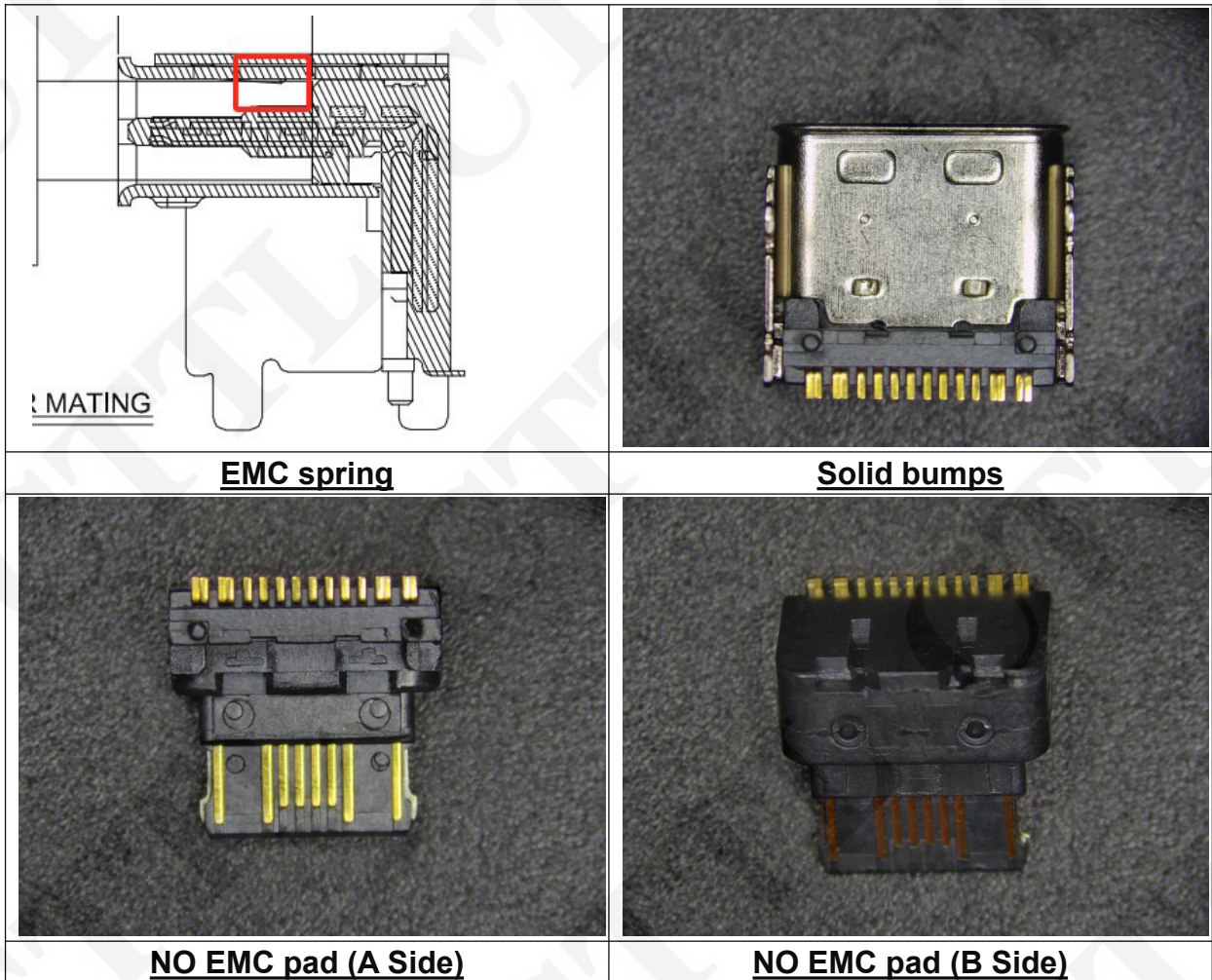
| Construction   |                     |        |               |             |
|----------------|---------------------|--------|---------------|-------------|
| Testing Period | Measure environment |        | Test Engineer | Test Result |
| 2024/09/06     | Temperature(°C)     | 25.2   | Huang Siwei   | Pass        |
|                | Humidity (RH)       | 73.4 % |               |             |

| EMC ground return path                                                                                                                                                                                                                             |               |        |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|--------|
| Description                                                                                                                                                                                                                                        | Sample Coding |        |        |
|                                                                                                                                                                                                                                                    | UT69aa        | UT70aa | UT71aa |
| 1.EMC spring                                                                                                                                                                                                                                       | Y             | Y      | Y      |
| 2.EMC pad                                                                                                                                                                                                                                          | N             | N      | N      |
| 3.Solid bumps                                                                                                                                                                                                                                      | Y             | Y      | Y      |
| 4.Distance between the bumps $\geq 2.43\text{mm}$                                                                                                                                                                                                  | N/A           | N/A    | N/A    |
| Result                                                                                                                                                                                                                                             | Pass          | Pass   | Pass   |
| Note:<br>Receptacle configurations with a conductive shell.<br>The requirements apply to the receptacle contact dimensions shown in ALTERNATE SECTION A-A<br>Figure B-5.<br>Receptacle configuration with respect to mounting surface: Right angle |               |        |        |

### Number of pins: 16

| <u>A1</u>  | <u>A2</u>  | <u>A3</u>  | <u>A4</u> | <u>A5</u> | <u>A6</u> | <u>A7</u> | <u>A8</u> | <u>A9</u> | <u>A10</u> | <u>A11</u> | <u>A12</u> |
|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|
| ✓          | N/A        | N/A        | ✓         | ✓         | ✓         | ✓         | ✓         | ✓         | N/A        | N/A        | ✓          |
| <u>B12</u> | <u>B11</u> | <u>B10</u> | <u>B9</u> | <u>B8</u> | <u>B7</u> | <u>B6</u> | <u>B5</u> | <u>B4</u> | <u>B3</u>  | <u>B2</u>  | <u>B1</u>  |
| ✓          | N/A        | N/A        | ✓         | ✓         | ✓         | ✓         | ✓         | ✓         | N/A        | N/A        | ✓          |

**EMC Springs/bumps/EMC Pad photograph**



## 8.2. Clause 3.2.1 (8) Critical Dimensions

| B-5-1 Critical Dimensions |                     |        |               |             |
|---------------------------|---------------------|--------|---------------|-------------|
| Testing Period            | Measure environment |        | Test Engineer | Test Result |
| 2024/09/06                | Temperature(°C)     | 25.2   | Huang Siwei   | Pass        |
|                           | Humidity (RH)       | 73.4 % |               |             |

| Test data: (Unit:mm)                                                    |               |        |        |
|-------------------------------------------------------------------------|---------------|--------|--------|
| B-5-1 Critical Dimensions – Receptacle                                  |               |        |        |
| Description                                                             | Sample Coding |        |        |
|                                                                         | UT69aa        | UT70aa | UT71aa |
| 1.Receptacle inside opening (8.32~8.40)                                 | 8.3729        | 8.3764 | 8.3701 |
| 2.Receptacle insider opening position tolerance (0.04 with datum A/B/C) | 0.0346        | 0.0284 | 0.0228 |
| 3.Receptacle signal pin length (3.35~3.65)                              | 3.4993        | 3.4264 | 3.4944 |
| 4.Pin length delta (0.30~0.70)                                          | 0.4833        | 0.4935 | 0.5073 |
| 5.Tongue width (6.635~6.735)                                            | 6.6816        | 6.6536 | 6.6734 |
| 6.Contact width (0.21~0.29)                                             | 0.2779        | 0.2750 | 0.2801 |
| 7.Contact width position tolerance (0.08 with datum A/B/C)              | 0.0500        | 0.0516 | 0.0540 |
| 8. Tongue thickness (0.65~0.75)                                         | 0.7323        | 0.7488 | 0.7435 |
| 9.Receptacle inside thickness (2.52~2.60)                               | 2.5896        | 2.5876 | 2.5906 |
| Decision result                                                         | Pass          | Pass   | Pass   |



### 8.3. Clause 3.7.8.1 Low level contact resistance

| A-1-1      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/16                              | Temperature(℃)                                                  | 23.1   | Zhan Weilong  | Pass        |
|                                         | Humidity (RH)                                                   | 63.8 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤40 mΩ （Initial）                                                |        |               |             |

| A-1-1 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT01aa                                  | 35.0 | N/A | N/A | 36.0 | 32.2 | 34.0 | 33.7 | 33.7 | 27.9 | N/A | N/A | 28.5 |
| UT02aa                                  | 34.8 | N/A | N/A | 35.7 | 32.6 | 34.1 | 33.9 | 32.7 | 27.3 | N/A | N/A | 28.5 |
| UT03aa                                  | 35.0 | N/A | N/A | 35.5 | 33.1 | 33.7 | 33.9 | 32.0 | 26.7 | N/A | N/A | 28.6 |
| UT04aa                                  | 36.5 | N/A | N/A | 38.4 | 33.2 | 35.4 | 35.2 | 33.4 | 28.2 | N/A | N/A | 28.8 |
| UT05aa                                  | 35.5 | N/A | N/A | 36.2 | 33.6 | 34.8 | 34.1 | 33.0 | 27.1 | N/A | N/A | 28.3 |
| UT06aa                                  | 35.1 | N/A | N/A | 36.1 | 33.3 | 34.3 | 34.5 | 34.0 | 26.1 | N/A | N/A | 27.6 |
| UT07aa                                  | 35.4 | N/A | N/A | 36.6 | 34.1 | 34.6 | 34.3 | 33.1 | 27.3 | N/A | N/A | 27.8 |
| UT08aa                                  | 35.5 | N/A | N/A | 36.5 | 34.2 | 33.6 | 33.9 | 32.8 | 27.0 | N/A | N/A | 28.2 |
| UT09aa                                  | 34.6 | N/A | N/A | 35.5 | 32.7 | 34.2 | 34.3 | 32.7 | 27.6 | N/A | N/A | 28.4 |
| UT10aa                                  | 34.3 | N/A | N/A | 35.2 | 33.4 | 33.3 | 34.8 | 32.4 | 26.9 | N/A | N/A | 28.0 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT01aa                                  | 33.0 | N/A | N/A | 32.4 | 32.7 | 31.5 | 31.8 | 32.3 | 32.7 | N/A | N/A | 30.6 |
| UT02aa                                  | 31.9 | N/A | N/A | 31.6 | 31.8 | 31.8 | 31.2 | 31.1 | 32.0 | N/A | N/A | 30.3 |
| UT03aa                                  | 32.1 | N/A | N/A | 32.7 | 31.4 | 31.3 | 32.0 | 31.8 | 31.9 | N/A | N/A | 30.6 |
| UT04aa                                  | 33.5 | N/A | N/A | 32.5 | 31.7 | 31.4 | 30.9 | 31.6 | 31.8 | N/A | N/A | 30.7 |
| UT05aa                                  | 32.1 | N/A | N/A | 32.5 | 32.9 | 31.2 | 31.0 | 31.2 | 31.3 | N/A | N/A | 30.1 |
| UT06aa                                  | 32.7 | N/A | N/A | 32.3 | 30.9 | 31.1 | 30.8 | 31.1 | 31.5 | N/A | N/A | 29.6 |
| UT07aa                                  | 32.5 | N/A | N/A | 32.8 | 31.2 | 31.3 | 30.9 | 31.5 | 32.3 | N/A | N/A | 29.9 |
| UT08aa                                  | 32.4 | N/A | N/A | 31.9 | 31.4 | 31.8 | 31.6 | 32.8 | 33.9 | N/A | N/A | 30.5 |
| UT09aa                                  | 32.6 | N/A | N/A | 32.9 | 32.0 | 31.7 | 31.3 | 32.2 | 32.3 | N/A | N/A | 30.9 |
| UT10aa                                  | 32.1 | N/A | N/A | 32.4 | 32.2 | 31.9 | 32.1 | 32.0 | 32.5 | N/A | N/A | 30.2 |



| A-1-4      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/21                              | Temperature(℃)                                                  | 23.1   | Zhan Weilong  | Pass        |
|                                         | Humidity (RH)                                                   | 64.3 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-1-4 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT01aa                                  | 36.0 | N/A | N/A | 36.3 | 32.5 | 34.5 | 34.2 | 33.8 | 28.8 | N/A | N/A | 29.1 |
| UT02aa                                  | 35.3 | N/A | N/A | 36.3 | 34.2 | 35.1 | 34.3 | 34.0 | 27.2 | N/A | N/A | 28.7 |
| UT03aa                                  | 35.0 | N/A | N/A | 35.7 | 33.1 | 33.8 | 34.7 | 32.1 | 27.0 | N/A | N/A | 28.7 |
| UT04aa                                  | 30.5 | N/A | N/A | 37.6 | 33.4 | 35.8 | 34.8 | 33.0 | 28.7 | N/A | N/A | 29.2 |
| UT05aa                                  | 35.2 | N/A | N/A | 36.2 | 35.1 | 35.1 | 34.9 | 33.4 | 27.1 | N/A | N/A | 28.7 |
| UT06aa                                  | 35.5 | N/A | N/A | 36.3 | 33.7 | 35.0 | 34.9 | 34.0 | 26.3 | N/A | N/A | 28.4 |
| UT07aa                                  | 35.2 | N/A | N/A | 38.5 | 35.8 | 35.0 | 35.1 | 34.0 | 27.4 | N/A | N/A | 28.5 |
| UT08aa                                  | 35.6 | N/A | N/A | 36.5 | 33.2 | 33.8 | 35.0 | 32.7 | 27.4 | N/A | N/A | 28.9 |
| UT09aa                                  | 34.9 | N/A | N/A | 35.7 | 32.7 | 34.1 | 34.1 | 32.8 | 27.4 | N/A | N/A | 28.8 |
| UT10aa                                  | 34.7 | N/A | N/A | 34.7 | 33.2 | 33.4 | 34.1 | 32.7 | 27.1 | N/A | N/A | 29.2 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT01aa                                  | 33.7 | N/A | N/A | 33.7 | 34.0 | 33.0 | 33.1 | 34.3 | 34.4 | N/A | N/A | 32.4 |
| UT02aa                                  | 32.6 | N/A | N/A | 32.3 | 35.0 | 31.9 | 31.4 | 32.1 | 32.1 | N/A | N/A | 30.5 |
| UT03aa                                  | 32.8 | N/A | N/A | 33.2 | 31.6 | 31.7 | 32.3 | 32.6 | 32.7 | N/A | N/A | 30.8 |
| UT04aa                                  | 32.6 | N/A | N/A | 32.4 | 32.5 | 32.1 | 31.9 | 32.0 | 32.5 | N/A | N/A | 30.9 |
| UT05aa                                  | 32.7 | N/A | N/A | 32.5 | 36.2 | 32.1 | 31.4 | 32.3 | 32.2 | N/A | N/A | 30.7 |
| UT06aa                                  | 33.4 | N/A | N/A | 32.5 | 31.6 | 31.4 | 31.0 | 31.0 | 31.0 | N/A | N/A | 30.1 |
| UT07aa                                  | 33.1 | N/A | N/A | 33.8 | 32.1 | 32.6 | 31.6 | 32.9 | 32.9 | N/A | N/A | 30.3 |
| UT08aa                                  | 32.4 | N/A | N/A | 32.2 | 32.1 | 32.4 | 32.4 | 32.3 | 33.4 | N/A | N/A | 31.3 |
| UT09aa                                  | 32.6 | N/A | N/A | 33.0 | 32.2 | 31.8 | 31.8 | 32.5 | 32.1 | N/A | N/A | 31.1 |
| UT10aa                                  | 32.4 | N/A | N/A | 33.2 | 33.3 | 32.3 | 33.2 | 33.0 | 33.5 | N/A | N/A | 30.9 |



| A-1-6      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/21                              | Temperature(℃)                                                  | 23.1   | Zhan Weilong  | Pass        |
|                                         | Humidity (RH)                                                   | 64.3 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-1-6 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT01aa                                  | 35.8 | N/A | N/A | 35.7 | 32.4 | 33.2 | 34.9 | 32.0 | 27.5 | N/A | N/A | 28.7 |
| UT02aa                                  | 35.5 | N/A | N/A | 33.9 | 32.1 | 33.1 | 33.7 | 33.7 | 27.5 | N/A | N/A | 29.2 |
| UT03aa                                  | 36.6 | N/A | N/A | 35.5 | 33.9 | 34.6 | 34.8 | 33.3 | 28.2 | N/A | N/A | 28.6 |
| UT04aa                                  | 36.5 | N/A | N/A | 33.2 | 33.5 | 34.4 | 33.8 | 32.0 | 28.7 | N/A | N/A | 29.6 |
| UT05aa                                  | 36.4 | N/A | N/A | 33.1 | 33.6 | 34.0 | 34.9 | 32.8 | 28.8 | N/A | N/A | 29.6 |
| UT06aa                                  | 35.2 | N/A | N/A | 34.2 | 33.1 | 33.8 | 33.0 | 33.0 | 27.5 | N/A | N/A | 29.8 |
| UT07aa                                  | 35.5 | N/A | N/A | 35.5 | 33.2 | 33.4 | 33.4 | 32.0 | 28.2 | N/A | N/A | 29.8 |
| UT08aa                                  | 35.8 | N/A | N/A | 35.9 | 33.4 | 33.3 | 33.5 | 32.1 | 28.9 | N/A | N/A | 29.2 |
| UT09aa                                  | 35.8 | N/A | N/A | 35.1 | 33.0 | 34.2 | 33.3 | 32.5 | 27.2 | N/A | N/A | 29.0 |
| UT10aa                                  | 36.5 | N/A | N/A | 35.7 | 32.1 | 33.5 | 34.7 | 32.9 | 27.4 | N/A | N/A | 29.8 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT01aa                                  | 32.5 | N/A | N/A | 32.2 | 31.7 | 31.2 | 31.4 | 32.8 | 32.8 | N/A | N/A | 30.9 |
| UT02aa                                  | 33.2 | N/A | N/A | 32.7 | 32.0 | 31.6 | 32.2 | 32.3 | 33.9 | N/A | N/A | 31.1 |
| UT03aa                                  | 32.3 | N/A | N/A | 33.4 | 31.1 | 32.8 | 31.8 | 31.8 | 32.2 | N/A | N/A | 30.1 |
| UT04aa                                  | 32.2 | N/A | N/A | 33.9 | 32.3 | 32.9 | 31.4 | 31.2 | 33.9 | N/A | N/A | 30.3 |
| UT05aa                                  | 33.7 | N/A | N/A | 32.3 | 31.6 | 31.7 | 32.0 | 32.0 | 33.0 | N/A | N/A | 30.7 |
| UT06aa                                  | 32.6 | N/A | N/A | 33.6 | 32.6 | 31.3 | 32.1 | 31.0 | 32.0 | N/A | N/A | 31.4 |
| UT07aa                                  | 33.0 | N/A | N/A | 33.5 | 31.9 | 31.5 | 31.5 | 31.5 | 33.4 | N/A | N/A | 30.3 |
| UT08aa                                  | 33.2 | N/A | N/A | 33.0 | 31.6 | 32.3 | 32.9 | 32.3 | 32.8 | N/A | N/A | 30.4 |
| UT09aa                                  | 32.0 | N/A | N/A | 32.8 | 32.4 | 32.6 | 32.8 | 32.8 | 32.3 | N/A | N/A | 31.8 |
| UT10aa                                  | 34.0 | N/A | N/A | 32.3 | 32.2 | 31.6 | 33.0 | 31.2 | 33.6 | N/A | N/A | 31.2 |



| A-2-1      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/16                              | Temperature(℃)                                                  | 23.6   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 62.9 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤40 mΩ （Initial）                                                |        |               |             |

| A-2-1 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT11aa                                  | 35.0 | N/A | N/A | 35.8 | 33.0 | 34.5 | 34.4 | 33.5 | 27.2 | N/A | N/A | 28.0 |
| UT12aa                                  | 34.8 | N/A | N/A | 35.4 | 32.1 | 33.9 | 34.0 | 31.8 | 27.2 | N/A | N/A | 27.7 |
| UT13aa                                  | 34.5 | N/A | N/A | 34.8 | 32.3 | 33.2 | 33.0 | 32.3 | 27.0 | N/A | N/A | 28.0 |
| UT14aa                                  | 35.3 | N/A | N/A | 35.0 | 32.3 | 33.5 | 33.7 | 32.0 | 27.6 | N/A | N/A | 28.2 |
| UT15aa                                  | 34.5 | N/A | N/A | 35.8 | 32.8 | 34.3 | 34.3 | 32.8 | 26.8 | N/A | N/A | 28.3 |
| UT16aa                                  | 34.8 | N/A | N/A | 35.1 | 32.4 | 33.6 | 33.7 | 32.6 | 27.6 | N/A | N/A | 29.0 |
| UT17aa                                  | 34.7 | N/A | N/A | 35.9 | 32.5 | 33.7 | 33.8 | 32.1 | 26.7 | N/A | N/A | 28.5 |
| UT18aa                                  | 34.2 | N/A | N/A | 34.2 | 32.1 | 33.6 | 33.5 | 31.3 | 26.9 | N/A | N/A | 27.7 |
| UT19aa                                  | 34.5 | N/A | N/A | 35.2 | 32.5 | 34.0 | 33.5 | 32.7 | 27.1 | N/A | N/A | 28.2 |
| UT20aa                                  | 35.4 | N/A | N/A | 36.2 | 32.8 | 34.5 | 33.9 | 33.3 | 26.8 | N/A | N/A | 28.1 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT11aa                                  | 30.2 | N/A | N/A | 34.4 | 31.9 | 31.4 | 32.2 | 32.5 | 32.7 | N/A | N/A | 30.9 |
| UT12aa                                  | 32.2 | N/A | N/A | 32.5 | 31.6 | 31.1 | 32.1 | 31.4 | 32.6 | N/A | N/A | 30.8 |
| UT13aa                                  | 32.1 | N/A | N/A | 31.8 | 31.2 | 31.2 | 31.2 | 31.6 | 32.7 | N/A | N/A | 30.0 |
| UT14aa                                  | 33.1 | N/A | N/A | 31.2 | 31.9 | 31.6 | 31.4 | 32.3 | 32.2 | N/A | N/A | 30.8 |
| UT15aa                                  | 32.8 | N/A | N/A | 32.0 | 31.4 | 31.0 | 31.4 | 31.4 | 31.8 | N/A | N/A | 30.1 |
| UT16aa                                  | 34.5 | N/A | N/A | 32.8 | 32.2 | 32.1 | 32.8 | 32.1 | 30.8 | N/A | N/A | 31.0 |
| UT17aa                                  | 32.5 | N/A | N/A | 32.5 | 31.7 | 32.3 | 31.6 | 31.6 | 32.8 | N/A | N/A | 30.3 |
| UT18aa                                  | 32.2 | N/A | N/A | 32.2 | 31.5 | 31.4 | 31.1 | 31.8 | 32.7 | N/A | N/A | 30.3 |
| UT19aa                                  | 32.8 | N/A | N/A | 31.9 | 31.9 | 32.1 | 32.3 | 32.3 | 32.5 | N/A | N/A | 30.4 |
| UT20aa                                  | 32.3 | N/A | N/A | 32.3 | 31.6 | 31.6 | 31.2 | 31.7 | 32.2 | N/A | N/A | 30.3 |

| A-2-4      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/17                              | Temperature(℃)                                                  | 23.2   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 67.7 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-2-4 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT11aa                                  | 35.9 | N/A | N/A | 35.9 | 33.4 | 34.8 | 35.2 | 34.6 | 27.7 | N/A | N/A | 28.6 |
| UT12aa                                  | 34.9 | N/A | N/A | 36.1 | 32.5 | 33.8 | 33.8 | 32.0 | 27.2 | N/A | N/A | 28.1 |
| UT13aa                                  | 34.4 | N/A | N/A | 34.5 | 32.0 | 33.0 | 33.2 | 32.1 | 27.4 | N/A | N/A | 28.2 |
| UT14aa                                  | 36.4 | N/A | N/A | 35.8 | 32.6 | 34.0 | 34.5 | 32.5 | 29.2 | N/A | N/A | 28.6 |
| UT15aa                                  | 35.3 | N/A | N/A | 35.2 | 33.3 | 34.1 | 33.9 | 33.1 | 27.3 | N/A | N/A | 28.9 |
| UT16aa                                  | 34.6 | N/A | N/A | 35.1 | 32.2 | 33.5 | 34.1 | 32.9 | 27.3 | N/A | N/A | 29.2 |
| UT17aa                                  | 35.0 | N/A | N/A | 36.2 | 33.1 | 33.8 | 34.3 | 33.0 | 26.6 | N/A | N/A | 28.4 |
| UT18aa                                  | 34.5 | N/A | N/A | 34.3 | 32.8 | 33.8 | 34.2 | 32.1 | 27.0 | N/A | N/A | 28.2 |
| UT19aa                                  | 34.6 | N/A | N/A | 35.4 | 32.3 | 33.6 | 33.7 | 32.9 | 27.3 | N/A | N/A | 28.2 |
| UT20aa                                  | 35.2 | N/A | N/A | 36.1 | 32.6 | 34.6 | 34.6 | 33.5 | 26.8 | N/A | N/A | 28.2 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT11aa                                  | 31.2 | N/A | N/A | 33.2 | 32.2 | 31.6 | 32.2 | 32.6 | 33.8 | N/A | N/A | 20.3 |
| UT12aa                                  | 32.6 | N/A | N/A | 33.1 | 31.8 | 31.8 | 32.0 | 32.1 | 32.5 | N/A | N/A | 31.1 |
| UT13aa                                  | 32.5 | N/A | N/A | 31.8 | 31.8 | 31.3 | 31.7 | 32.0 | 32.7 | N/A | N/A | 30.2 |
| UT14aa                                  | 33.5 | N/A | N/A | 32.2 | 32.4 | 32.5 | 32.1 | 33.0 | 33.2 | N/A | N/A | 31.4 |
| UT15aa                                  | 32.8 | N/A | N/A | 32.3 | 32.4 | 32.5 | 31.9 | 32.5 | 32.2 | N/A | N/A | 30.7 |
| UT16aa                                  | 32.8 | N/A | N/A | 32.5 | 32.3 | 31.9 | 32.4 | 32.3 | 32.7 | N/A | N/A | 30.9 |
| UT17aa                                  | 33.3 | N/A | N/A | 32.6 | 31.7 | 32.4 | 31.8 | 31.9 | 32.8 | N/A | N/A | 30.3 |
| UT18aa                                  | 32.4 | N/A | N/A | 32.3 | 31.9 | 32.2 | 31.8 | 32.1 | 33.2 | N/A | N/A | 30.4 |
| UT19aa                                  | 33.3 | N/A | N/A | 32.0 | 32.0 | 32.5 | 32.2 | 32.6 | 32.4 | N/A | N/A | 30.5 |
| UT20aa                                  | 32.4 | N/A | N/A | 32.5 | 31.4 | 31.5 | 31.6 | 31.9 | 32.1 | N/A | N/A | 30.4 |



| A-2-6      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/21                              | Temperature(℃)                                                  | 23.4   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 66.3 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-2-6 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT11aa                                  | 35.6 | N/A | N/A | 37.0 | 33.3 | 34.0 | 33.3 | 33.4 | 26.6 | N/A | N/A | 28.2 |
| UT12aa                                  | 35.8 | N/A | N/A | 35.5 | 33.2 | 34.9 | 33.4 | 32.3 | 27.0 | N/A | N/A | 28.8 |
| UT13aa                                  | 35.1 | N/A | N/A | 35.9 | 32.6 | 33.8 | 33.9 | 33.8 | 27.7 | N/A | N/A | 28.4 |
| UT14aa                                  | 34.8 | N/A | N/A | 36.5 | 32.6 | 33.6 | 33.8 | 32.3 | 27.8 | N/A | N/A | 28.6 |
| UT15aa                                  | 34.9 | N/A | N/A | 36.5 | 32.8 | 33.3 | 33.7 | 33.3 | 26.8 | N/A | N/A | 28.6 |
| UT16aa                                  | 35.0 | N/A | N/A | 35.1 | 33.3 | 34.3 | 33.8 | 32.9 | 27.1 | N/A | N/A | 28.2 |
| UT17aa                                  | 35.7 | N/A | N/A | 36.9 | 32.3 | 34.6 | 33.9 | 32.8 | 28.0 | N/A | N/A | 28.4 |
| UT18aa                                  | 34.4 | N/A | N/A | 35.1 | 32.1 | 34.9 | 33.2 | 32.1 | 26.8 | N/A | N/A | 28.8 |
| UT19aa                                  | 35.6 | N/A | N/A | 35.7 | 32.3 | 34.7 | 33.4 | 33.6 | 27.1 | N/A | N/A | 28.4 |
| UT20aa                                  | 35.4 | N/A | N/A | 35.7 | 33.1 | 33.5 | 34.4 | 33.1 | 27.5 | N/A | N/A | 28.2 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT11aa                                  | 32.3 | N/A | N/A | 32.3 | 31.8 | 32.9 | 32.6 | 33.0 | 32.4 | N/A | N/A | 30.4 |
| UT12aa                                  | 33.9 | N/A | N/A | 33.3 | 31.8 | 31.8 | 32.9 | 32.5 | 34.0 | N/A | N/A | 30.7 |
| UT13aa                                  | 32.5 | N/A | N/A | 32.1 | 32.1 | 32.3 | 32.8 | 32.1 | 33.7 | N/A | N/A | 30.4 |
| UT14aa                                  | 32.9 | N/A | N/A | 32.4 | 31.8 | 31.6 | 32.5 | 32.7 | 33.6 | N/A | N/A | 31.2 |
| UT15aa                                  | 32.1 | N/A | N/A | 34.0 | 31.8 | 31.9 | 32.9 | 32.0 | 32.8 | N/A | N/A | 31.6 |
| UT16aa                                  | 31.5 | N/A | N/A | 33.7 | 32.0 | 32.6 | 31.5 | 32.9 | 33.3 | N/A | N/A | 31.4 |
| UT17aa                                  | 31.3 | N/A | N/A | 32.5 | 32.4 | 31.4 | 31.9 | 31.5 | 32.6 | N/A | N/A | 31.5 |
| UT18aa                                  | 33.7 | N/A | N/A | 34.0 | 32.5 | 32.5 | 32.6 | 32.8 | 33.4 | N/A | N/A | 30.2 |
| UT19aa                                  | 31.1 | N/A | N/A | 32.1 | 32.5 | 31.7 | 31.2 | 32.0 | 32.1 | N/A | N/A | 31.6 |
| UT20aa                                  | 33.8 | N/A | N/A | 32.9 | 32.1 | 31.2 | 32.3 | 32.1 | 33.0 | N/A | N/A | 31.8 |

| A-2-8      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/21                              | Temperature(℃)                                                  | 23.4   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 66.3 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-2-8 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT11aa                                  | 35.7 | N/A | N/A | 36.0 | 33.6 | 33.5 | 33.6 | 33.4 | 26.2 | N/A | N/A | 28.6 |
| UT12aa                                  | 34.9 | N/A | N/A | 36.5 | 33.1 | 33.3 | 34.8 | 33.5 | 26.6 | N/A | N/A | 28.3 |
| UT13aa                                  | 35.2 | N/A | N/A | 36.0 | 33.9 | 34.3 | 33.6 | 33.4 | 27.1 | N/A | N/A | 29.0 |
| UT14aa                                  | 35.1 | N/A | N/A | 35.8 | 32.4 | 33.8 | 34.2 | 32.6 | 26.4 | N/A | N/A | 29.0 |
| UT15aa                                  | 34.6 | N/A | N/A | 36.0 | 33.7 | 34.6 | 34.0 | 32.2 | 27.4 | N/A | N/A | 28.7 |
| UT16aa                                  | 34.5 | N/A | N/A | 36.1 | 32.2 | 34.1 | 33.4 | 32.4 | 26.1 | N/A | N/A | 28.4 |
| UT17aa                                  | 34.9 | N/A | N/A | 36.0 | 33.9 | 34.5 | 34.9 | 33.1 | 27.6 | N/A | N/A | 28.7 |
| UT18aa                                  | 34.4 | N/A | N/A | 35.9 | 32.8 | 34.4 | 34.8 | 33.7 | 27.5 | N/A | N/A | 28.2 |
| UT19aa                                  | 35.1 | N/A | N/A | 35.0 | 32.4 | 34.2 | 33.8 | 33.2 | 27.5 | N/A | N/A | 28.4 |
| UT20aa                                  | 35.9 | N/A | N/A | 35.5 | 33.5 | 33.9 | 34.2 | 33.3 | 28.0 | N/A | N/A | 28.4 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT11aa                                  | 32.7 | N/A | N/A | 32.7 | 31.6 | 31.8 | 31.9 | 31.6 | 32.1 | N/A | N/A | 31.1 |
| UT12aa                                  | 31.9 | N/A | N/A | 33.3 | 32.4 | 32.8 | 31.6 | 32.7 | 33.6 | N/A | N/A | 31.2 |
| UT13aa                                  | 33.7 | N/A | N/A | 32.5 | 32.5 | 31.2 | 31.9 | 32.0 | 33.2 | N/A | N/A | 31.1 |
| UT14aa                                  | 32.6 | N/A | N/A | 32.1 | 32.8 | 33.0 | 33.0 | 31.6 | 34.0 | N/A | N/A | 30.9 |
| UT15aa                                  | 33.0 | N/A | N/A | 32.6 | 31.1 | 32.6 | 32.6 | 32.6 | 33.1 | N/A | N/A | 30.3 |
| UT16aa                                  | 32.4 | N/A | N/A | 33.1 | 31.2 | 31.4 | 31.7 | 32.0 | 33.9 | N/A | N/A | 30.4 |
| UT17aa                                  | 31.9 | N/A | N/A | 33.6 | 32.5 | 31.7 | 31.2 | 32.8 | 32.3 | N/A | N/A | 31.9 |
| UT18aa                                  | 33.5 | N/A | N/A | 32.5 | 31.8 | 32.3 | 32.8 | 32.3 | 32.6 | N/A | N/A | 31.2 |
| UT19aa                                  | 33.8 | N/A | N/A | 33.1 | 32.8 | 31.5 | 32.1 | 32.8 | 33.2 | N/A | N/A | 30.2 |
| UT20aa                                  | 32.6 | N/A | N/A | 33.6 | 32.8 | 32.5 | 32.3 | 32.8 | 33.0 | N/A | N/A | 30.9 |



| A-3-1      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/16                              | Temperature(℃)                                                  | 23.8   | Su Kun        | Pass        |
|                                         | Humidity (RH)                                                   | 72.0 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤40 mΩ（Initial）                                                 |        |               |             |

| A-3-1 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT21aa                                  | 34.5 | N/A | N/A | 35.9 | 32.9 | 33.9 | 34.0 | 32.6 | 27.3 | N/A | N/A | 28.5 |
| UT22aa                                  | 35.1 | N/A | N/A | 37.6 | 33.6 | 35.6 | 36.1 | 33.9 | 27.2 | N/A | N/A | 29.1 |
| UT23aa                                  | 34.6 | N/A | N/A | 35.0 | 32.4 | 33.6 | 33.4 | 32.1 | 27.0 | N/A | N/A | 27.6 |
| UT24aa                                  | 35.2 | N/A | N/A | 35.9 | 33.2 | 34.2 | 35.6 | 36.5 | 31.2 | N/A | N/A | 28.5 |
| UT25aa                                  | 35.3 | N/A | N/A | 35.5 | 32.3 | 35.0 | 34.7 | 33.0 | 26.5 | N/A | N/A | 28.7 |
| UT26aa                                  | 36.0 | N/A | N/A | 36.5 | 33.1 | 35.6 | 34.9 | 33.8 | 27.6 | N/A | N/A | 28.3 |
| UT27aa                                  | 34.5 | N/A | N/A | 34.4 | 33.1 | 34.3 | 33.4 | 32.0 | 26.9 | N/A | N/A | 28.2 |
| UT28aa                                  | 35.8 | N/A | N/A | 37.5 | 34.1 | 35.1 | 37.8 | 37.5 | 26.9 | N/A | N/A | 28.4 |
| UT29aa                                  | 35.8 | N/A | N/A | 38.0 | 33.0 | 35.9 | 35.3 | 35.9 | 27.3 | N/A | N/A | 28.5 |
| UT30aa                                  | 36.0 | N/A | N/A | 36.9 | 33.2 | 34.5 | 34.8 | 32.7 | 27.1 | N/A | N/A | 28.6 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT21aa                                  | 32.2 | N/A | N/A | 32.4 | 32.0 | 31.7 | 31.9 | 31.9 | 32.3 | N/A | N/A | 30.2 |
| UT22aa                                  | 32.8 | N/A | N/A | 33.6 | 33.0 | 32.9 | 31.9 | 32.3 | 32.1 | N/A | N/A | 30.7 |
| UT23aa                                  | 32.2 | N/A | N/A | 32.0 | 31.5 | 31.5 | 31.1 | 30.9 | 31.6 | N/A | N/A | 30.2 |
| UT24aa                                  | 32.4 | N/A | N/A | 32.0 | 31.7 | 31.4 | 31.0 | 31.9 | 32.6 | N/A | N/A | 30.1 |
| UT25aa                                  | 32.4 | N/A | N/A | 32.7 | 32.0 | 31.6 | 31.6 | 32.5 | 32.3 | N/A | N/A | 30.5 |
| UT26aa                                  | 33.0 | N/A | N/A | 33.3 | 31.6 | 32.0 | 31.4 | 31.7 | 32.1 | N/A | N/A | 31.1 |
| UT27aa                                  | 32.2 | N/A | N/A | 31.8 | 31.4 | 31.8 | 31.4 | 31.6 | 32.2 | N/A | N/A | 29.9 |
| UT28aa                                  | 36.4 | N/A | N/A | 33.0 | 31.6 | 31.9 | 31.6 | 31.7 | 32.4 | N/A | N/A | 30.4 |
| UT29aa                                  | 33.6 | N/A | N/A | 33.6 | 31.6 | 32.2 | 31.3 | 32.0 | 32.9 | N/A | N/A | 30.3 |
| UT30aa                                  | 31.7 | N/A | N/A | 32.6 | 31.3 | 31.5 | 31.3 | 31.5 | 31.7 | N/A | N/A | 30.1 |



| A-3-4      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/28                              | Temperature(℃)                                                  | 23.4   | Su Kun        | Pass        |
|                                         | Humidity (RH)                                                   | 61.0 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-3-4 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT21aa                                  | 34.5 | N/A | N/A | 35.8 | 33.1 | 33.9 | 34.1 | 33.0 | 26.9 | N/A | N/A | 28.6 |
| UT22aa                                  | 35.2 | N/A | N/A | 36.5 | 32.9 | 35.0 | 35.3 | 33.2 | 28.0 | N/A | N/A | 28.3 |
| UT23aa                                  | 35.9 | N/A | N/A | 36.0 | 33.4 | 34.4 | 34.1 | 33.1 | 27.5 | N/A | N/A | 28.0 |
| UT24aa                                  | 35.5 | N/A | N/A | 35.8 | 34.0 | 35.0 | 35.6 | 32.1 | 28.6 | N/A | N/A | 28.9 |
| UT25aa                                  | 35.8 | N/A | N/A | 36.8 | 32.9 | 34.8 | 34.2 | 32.7 | 26.8 | N/A | N/A | 28.8 |
| UT26aa                                  | 35.8 | N/A | N/A | 36.9 | 33.7 | 35.3 | 35.2 | 34.0 | 28.0 | N/A | N/A | 28.6 |
| UT27aa                                  | 35.6 | N/A | N/A | 34.8 | 33.2 | 35.0 | 34.2 | 31.9 | 36.0 | N/A | N/A | 28.7 |
| UT28aa                                  | 35.9 | N/A | N/A | 35.7 | 33.1 | 35.0 | 37.5 | 33.5 | 27.2 | N/A | N/A | 28.2 |
| UT29aa                                  | 35.8 | N/A | N/A | 37.3 | 33.5 | 37.2 | 35.7 | 33.4 | 27.1 | N/A | N/A | 29.0 |
| UT30aa                                  | 35.0 | N/A | N/A | 36.2 | 32.5 | 34.4 | 34.1 | 32.7 | 27.5 | N/A | N/A | 28.4 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT21aa                                  | 32.1 | N/A | N/A | 32.2 | 31.7 | 31.8 | 31.7 | 31.2 | 32.4 | N/A | N/A | 30.4 |
| UT22aa                                  | 32.4 | N/A | N/A | 33.1 | 32.3 | 32.0 | 31.8 | 31.8 | 32.2 | N/A | N/A | 30.9 |
| UT23aa                                  | 33.5 | N/A | N/A | 32.8 | 31.8 | 31.9 | 31.9 | 31.1 | 31.7 | N/A | N/A | 30.5 |
| UT24aa                                  | 33.7 | N/A | N/A | 32.3 | 32.5 | 32.0 | 31.7 | 32.8 | 33.4 | N/A | N/A | 30.5 |
| UT25aa                                  | 32.7 | N/A | N/A | 33.0 | 31.7 | 32.3 | 32.3 | 31.9 | 32.3 | N/A | N/A | 30.7 |
| UT26aa                                  | 33.4 | N/A | N/A | 32.8 | 31.4 | 32.1 | 31.5 | 32.4 | 32.2 | N/A | N/A | 30.9 |
| UT27aa                                  | 33.1 | N/A | N/A | 32.0 | 32.5 | 32.4 | 31.8 | 31.7 | 32.4 | N/A | N/A | 29.9 |
| UT28aa                                  | 33.4 | N/A | N/A | 32.4 | 31.6 | 31.4 | 30.9 | 32.3 | 31.9 | N/A | N/A | 30.6 |
| UT29aa                                  | 33.7 | N/A | N/A | 34.2 | 32.1 | 34.2 | 32.0 | 31.9 | 32.5 | N/A | N/A | 30.5 |
| UT30aa                                  | 32.6 | N/A | N/A | 32.5 | 31.8 | 32.1 | 31.5 | 31.7 | 32.2 | N/A | N/A | 30.5 |

| A-3-6      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/31                              | Temperature(℃)                                                  | 24.2   | Su Kun        | Pass        |
|                                         | Humidity (RH)                                                   | 62.0 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-3-6 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT21aa                                  | 34.9 | N/A | N/A | 37.3 | 33.5 | 34.5 | 34.0 | 32.8 | 27.1 | N/A | N/A | 28.4 |
| UT22aa                                  | 36.4 | N/A | N/A | 37.2 | 34.2 | 37.5 | 34.9 | 33.2 | 27.4 | N/A | N/A | 28.5 |
| UT23aa                                  | 35.6 | N/A | N/A | 38.8 | 33.2 | 34.4 | 35.9 | 34.9 | 27.0 | N/A | N/A | 29.6 |
| UT24aa                                  | 43.0 | N/A | N/A | 37.0 | 35.7 | 36.4 | 48.9 | 47.2 | 29.7 | N/A | N/A | 29.2 |
| UT25aa                                  | 37.0 | N/A | N/A | 37.1 | 33.3 | 34.2 | 34.0 | 32.5 | 26.2 | N/A | N/A | 28.8 |
| UT26aa                                  | 37.2 | N/A | N/A | 37.2 | 33.4 | 35.0 | 34.9 | 34.3 | 27.8 | N/A | N/A | 29.2 |
| UT27aa                                  | 31.2 | N/A | N/A | 34.6 | 32.5 | 33.6 | 33.4 | 32.7 | 31.5 | N/A | N/A | 27.7 |
| UT28aa                                  | 35.2 | N/A | N/A | 36.6 | 33.1 | 34.7 | 40.8 | 33.7 | 27.3 | N/A | N/A | 28.9 |
| UT29aa                                  | 35.8 | N/A | N/A | 40.1 | 33.9 | 36.3 | 35.2 | 35.3 | 27.3 | N/A | N/A | 28.8 |
| UT30aa                                  | 36.5 | N/A | N/A | 38.3 | 33.2 | 34.9 | 34.4 | 32.5 | 27.9 | N/A | N/A | 28.8 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT21aa                                  | 33.0 | N/A | N/A | 32.2 | 32.7 | 32.2 | 32.2 | 32.4 | 33.7 | N/A | N/A | 31.1 |
| UT22aa                                  | 34.2 | N/A | N/A | 32.5 | 33.1 | 32.2 | 32.2 | 32.0 | 32.8 | N/A | N/A | 31.1 |
| UT23aa                                  | 30.9 | N/A | N/A | 34.5 | 32.8 | 33.2 | 44.8 | 32.3 | 34.0 | N/A | N/A | 31.5 |
| UT24aa                                  | 36.5 | N/A | N/A | 33.7 | 32.7 | 32.9 | 32.4 | 33.7 | 33.0 | N/A | N/A | 31.4 |
| UT25aa                                  | 32.2 | N/A | N/A | 33.2 | 31.7 | 32.4 | 32.9 | 31.8 | 32.3 | N/A | N/A | 30.9 |
| UT26aa                                  | 33.0 | N/A | N/A | 33.0 | 32.7 | 32.1 | 32.3 | 32.1 | 32.6 | N/A | N/A | 30.7 |
| UT27aa                                  | 32.8 | N/A | N/A | 32.5 | 32.0 | 31.7 | 32.1 | 31.8 | 32.8 | N/A | N/A | 30.1 |
| UT28aa                                  | 33.8 | N/A | N/A | 33.1 | 31.3 | 32.0 | 30.9 | 31.8 | 32.0 | N/A | N/A | 30.3 |
| UT29aa                                  | 32.7 | N/A | N/A | 32.7 | 32.4 | 32.5 | 31.1 | 32.0 | 32.1 | N/A | N/A | 30.3 |
| UT30aa                                  | 32.1 | N/A | N/A | 32.6 | 31.9 | 32.3 | 32.3 | 32.3 | 32.2 | N/A | N/A | 30.8 |



| A-4-1      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/16                              | Temperature(℃)                                                  | 23.4   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 64.2 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤40 mΩ （Initial）                                                |        |               |             |

| A-4-1 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT31aa                                  | 34.8 | N/A | N/A | 35.3 | 32.5 | 34.0 | 33.6 | 32.6 | 26.9 | N/A | N/A | 28.4 |
| UT32aa                                  | 34.2 | N/A | N/A | 35.5 | 31.9 | 33.3 | 33.8 | 32.3 | 27.0 | N/A | N/A | 28.1 |
| UT33aa                                  | 35.9 | N/A | N/A | 35.8 | 33.0 | 34.4 | 34.6 | 33.4 | 27.4 | N/A | N/A | 28.4 |
| UT34aa                                  | 35.6 | N/A | N/A | 36.1 | 32.8 | 33.7 | 33.9 | 32.8 | 26.6 | N/A | N/A | 28.2 |
| UT35aa                                  | 35.1 | N/A | N/A | 35.6 | 32.9 | 34.8 | 34.2 | 32.6 | 26.8 | N/A | N/A | 27.8 |
| UT36aa                                  | 34.9 | N/A | N/A | 35.0 | 33.2 | 33.7 | 33.5 | 32.1 | 27.3 | N/A | N/A | 27.3 |
| UT37aa                                  | 36.0 | N/A | N/A | 36.2 | 32.4 | 34.8 | 33.6 | 33.1 | 27.8 | N/A | N/A | 28.9 |
| UT38aa                                  | 35.0 | N/A | N/A | 35.4 | 32.3 | 33.9 | 33.7 | 32.5 | 26.7 | N/A | N/A | 28.4 |
| UT39aa                                  | 35.1 | N/A | N/A | 36.8 | 33.4 | 35.3 | 34.8 | 33.7 | 26.9 | N/A | N/A | 27.7 |
| UT40aa                                  | 35.6 | N/A | N/A | 36.3 | 33.5 | 34.6 | 34.1 | 32.8 | 26.5 | N/A | N/A | 28.2 |
| UT41aa                                  | 35.1 | N/A | N/A | 36.0 | 32.8 | 34.5 | 35.5 | 32.6 | 26.7 | N/A | N/A | 28.3 |
| UT42aa                                  | 34.2 | N/A | N/A | 34.7 | 32.5 | 33.6 | 33.4 | 32.0 | 26.9 | N/A | N/A | 28.0 |
| UT43aa                                  | 35.5 | N/A | N/A | 35.6 | 33.4 | 35.1 | 34.4 | 32.7 | 27.8 | N/A | N/A | 28.6 |
| UT44aa                                  | 34.2 | N/A | N/A | 34.4 | 32.1 | 33.7 | 33.8 | 32.5 | 27.0 | N/A | N/A | 27.9 |
| UT45aa                                  | 35.2 | N/A | N/A | 35.7 | 32.5 | 34.5 | 34.1 | 32.4 | 26.4 | N/A | N/A | 28.4 |
| UT46aa                                  | 36.3 | N/A | N/A | 37.8 | 33.0 | 34.3 | 34.3 | 33.1 | 27.7 | N/A | N/A | 28.5 |
| UT47aa                                  | 34.7 | N/A | N/A | 35.7 | 32.7 | 33.9 | 34.3 | 32.4 | 27.0 | N/A | N/A | 28.0 |
| UT48aa                                  | 35.9 | N/A | N/A | 35.9 | 32.5 | 34.6 | 33.9 | 33.1 | 27.7 | N/A | N/A | 28.8 |
| UT49aa                                  | 34.9 | N/A | N/A | 34.2 | 32.1 | 37.0 | 37.8 | 35.0 | 28.1 | N/A | N/A | 28.5 |
| UT50aa                                  | 34.4 | N/A | N/A | 35.3 | 31.9 | 33.8 | 33.9 | 32.2 | 27.4 | N/A | N/A | 27.9 |

| A-4-1 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT31aa                                  | 32.4 | N/A | N/A | 32.2 | 32.1 | 32.4 | 31.6 | 32.7 | 32.4 | N/A | N/A | 31.1 |
| UT32aa                                  | 32.6 | N/A | N/A | 32.1 | 32.2 | 32.2 | 32.1 | 32.8 | 32.9 | N/A | N/A | 31.0 |
| UT33aa                                  | 32.9 | N/A | N/A | 34.8 | 31.4 | 31.7 | 31.5 | 31.8 | 32.5 | N/A | N/A | 32.6 |
| UT34aa                                  | 32.8 | N/A | N/A | 33.0 | 31.9 | 31.4 | 30.6 | 31.9 | 31.4 | N/A | N/A | 29.9 |
| UT35aa                                  | 33.3 | N/A | N/A | 32.7 | 31.4 | 31.2 | 31.5 | 32.5 | 32.5 | N/A | N/A | 30.8 |
| UT36aa                                  | 32.9 | N/A | N/A | 32.8 | 31.1 | 31.5 | 31.7 | 31.2 | 31.9 | N/A | N/A | 30.1 |
| UT37aa                                  | 32.6 | N/A | N/A | 33.7 | 32.4 | 31.7 | 31.6 | 32.2 | 32.9 | N/A | N/A | 30.6 |
| UT38aa                                  | 32.4 | N/A | N/A | 32.1 | 32.1 | 32.3 | 31.8 | 32.5 | 32.3 | N/A | N/A | 30.8 |
| UT39aa                                  | 32.6 | N/A | N/A | 32.4 | 31.2 | 31.4 | 30.9 | 31.6 | 31.3 | N/A | N/A | 29.8 |
| UT40aa                                  | 32.6 | N/A | N/A | 32.7 | 31.4 | 31.8 | 30.9 | 32.4 | 32.2 | N/A | N/A | 30.7 |
| UT41aa                                  | 33.0 | N/A | N/A | 32.4 | 31.5 | 31.7 | 31.6 | 32.0 | 32.6 | N/A | N/A | 30.8 |
| UT42aa                                  | 32.5 | N/A | N/A | 31.9 | 31.5 | 31.4 | 31.7 | 32.0 | 32.5 | N/A | N/A | 31.1 |
| UT43aa                                  | 33.8 | N/A | N/A | 33.4 | 32.4 | 31.7 | 31.6 | 31.7 | 32.4 | N/A | N/A | 30.9 |
| UT44aa                                  | 32.5 | N/A | N/A | 32.1 | 31.9 | 31.7 | 31.9 | 32.1 | 32.1 | N/A | N/A | 30.5 |
| UT45aa                                  | 32.1 | N/A | N/A | 32.7 | 31.1 | 31.1 | 30.9 | 31.1 | 31.8 | N/A | N/A | 30.2 |
| UT46aa                                  | 32.5 | N/A | N/A | 33.4 | 31.7 | 31.9 | 31.6 | 32.0 | 32.7 | N/A | N/A | 30.9 |
| UT47aa                                  | 32.5 | N/A | N/A | 32.5 | 31.8 | 31.4 | 31.9 | 31.8 | 32.2 | N/A | N/A | 30.9 |
| UT48aa                                  | 32.9 | N/A | N/A | 32.7 | 31.7 | 32.5 | 31.8 | 31.9 | 32.1 | N/A | N/A | 30.8 |
| UT49aa                                  | 36.8 | N/A | N/A | 32.1 | 32.2 | 32.6 | 32.6 | 32.8 | 33.4 | N/A | N/A | 33.4 |
| UT50aa                                  | 32.5 | N/A | N/A | 32.5 | 31.8 | 32.8 | 32.0 | 32.5 | 32.5 | N/A | N/A | 30.4 |

| A-4-4      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/21                              | Temperature(℃)                                                  | 23.1   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 65.5 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-4-4 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT31aa                                  | 35.9 | N/A | N/A | 35.9 | 34.0 | 34.1 | 33.9 | 32.6 | 27.5 | N/A | N/A | 28.6 |
| UT32aa                                  | 35.3 | N/A | N/A | 33.2 | 32.8 | 33.9 | 33.5 | 33.9 | 26.9 | N/A | N/A | 27.1 |
| UT33aa                                  | 35.6 | N/A | N/A | 35.8 | 33.0 | 33.8 | 33.9 | 32.6 | 26.5 | N/A | N/A | 27.3 |
| UT34aa                                  | 35.4 | N/A | N/A | 35.2 | 33.2 | 33.8 | 33.9 | 32.9 | 26.8 | N/A | N/A | 27.2 |
| UT35aa                                  | 36.2 | N/A | N/A | 34.5 | 33.4 | 33.9 | 33.3 | 33.3 | 26.7 | N/A | N/A | 28.3 |
| UT36aa                                  | 35.4 | N/A | N/A | 35.4 | 33.0 | 33.7 | 34.4 | 32.4 | 28.0 | N/A | N/A | 27.8 |
| UT37aa                                  | 37.0 | N/A | N/A | 35.6 | 33.5 | 33.9 | 34.4 | 32.2 | 26.9 | N/A | N/A | 28.8 |
| UT38aa                                  | 35.2 | N/A | N/A | 35.9 | 33.5 | 34.6 | 33.6 | 32.5 | 27.8 | N/A | N/A | 27.6 |
| UT39aa                                  | 35.5 | N/A | N/A | 35.4 | 32.7 | 34.8 | 33.5 | 32.4 | 27.5 | N/A | N/A | 27.8 |
| UT40aa                                  | 36.6 | N/A | N/A | 34.0 | 32.2 | 33.6 | 33.7 | 32.3 | 27.6 | N/A | N/A | 28.0 |
| UT41aa                                  | 36.5 | N/A | N/A | 33.2 | 32.3 | 34.5 | 33.4 | 32.0 | 27.1 | N/A | N/A | 28.8 |
| UT42aa                                  | 36.2 | N/A | N/A | 34.9 | 32.4 | 33.4 | 34.3 | 33.1 | 27.0 | N/A | N/A | 27.9 |
| UT43aa                                  | 36.7 | N/A | N/A | 34.7 | 33.1 | 34.2 | 33.2 | 33.8 | 26.9 | N/A | N/A | 28.5 |
| UT44aa                                  | 36.8 | N/A | N/A | 34.3 | 32.9 | 33.4 | 33.3 | 32.4 | 27.9 | N/A | N/A | 28.8 |
| UT45aa                                  | 35.1 | N/A | N/A | 34.0 | 32.8 | 34.9 | 34.6 | 33.3 | 26.4 | N/A | N/A | 27.2 |
| UT46aa                                  | 37.0 | N/A | N/A | 35.6 | 33.1 | 33.1 | 34.9 | 33.5 | 27.4 | N/A | N/A | 28.1 |
| UT47aa                                  | 36.7 | N/A | N/A | 33.2 | 33.6 | 33.2 | 34.1 | 34.0 | 26.2 | N/A | N/A | 27.8 |
| UT48aa                                  | 35.7 | N/A | N/A | 33.9 | 32.2 | 34.4 | 33.9 | 33.6 | 26.5 | N/A | N/A | 27.2 |
| UT49aa                                  | 35.9 | N/A | N/A | 35.7 | 33.3 | 33.9 | 34.7 | 32.7 | 26.6 | N/A | N/A | 27.3 |
| UT50aa                                  | 36.3 | N/A | N/A | 33.3 | 32.4 | 33.1 | 34.0 | 33.8 | 27.0 | N/A | N/A | 27.0 |



| A-4-4 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT31aa                                  | 32.5 | N/A | N/A | 33.1 | 32.6 | 32.5 | 32.9 | 31.3 | 31.9 | N/A | N/A | 30.3 |
| UT32aa                                  | 33.3 | N/A | N/A | 33.0 | 32.0 | 32.6 | 32.5 | 32.2 | 31.7 | N/A | N/A | 31.9 |
| UT33aa                                  | 33.5 | N/A | N/A | 33.0 | 31.3 | 32.5 | 32.9 | 31.1 | 32.0 | N/A | N/A | 31.9 |
| UT34aa                                  | 32.1 | N/A | N/A | 32.0 | 32.8 | 32.1 | 31.5 | 32.6 | 31.9 | N/A | N/A | 30.4 |
| UT35aa                                  | 33.9 | N/A | N/A | 33.0 | 31.3 | 31.9 | 32.9 | 32.2 | 31.7 | N/A | N/A | 31.8 |
| UT36aa                                  | 31.9 | N/A | N/A | 32.5 | 32.3 | 31.7 | 32.6 | 31.1 | 33.2 | N/A | N/A | 31.5 |
| UT37aa                                  | 33.5 | N/A | N/A | 32.8 | 32.2 | 31.4 | 32.5 | 31.8 | 31.4 | N/A | N/A | 31.9 |
| UT38aa                                  | 31.4 | N/A | N/A | 34.0 | 32.5 | 32.7 | 32.3 | 32.4 | 33.3 | N/A | N/A | 31.4 |
| UT39aa                                  | 31.2 | N/A | N/A | 33.5 | 32.7 | 32.7 | 32.9 | 31.5 | 32.3 | N/A | N/A | 31.2 |
| UT40aa                                  | 33.6 | N/A | N/A | 32.9 | 32.4 | 31.4 | 31.5 | 33.0 | 31.9 | N/A | N/A | 31.5 |
| UT41aa                                  | 31.4 | N/A | N/A | 33.1 | 32.5 | 31.5 | 31.8 | 32.3 | 31.7 | N/A | N/A | 31.5 |
| UT42aa                                  | 31.0 | N/A | N/A | 33.2 | 32.2 | 31.3 | 31.9 | 31.0 | 33.4 | N/A | N/A | 31.4 |
| UT43aa                                  | 32.1 | N/A | N/A | 32.9 | 32.8 | 32.6 | 33.0 | 32.4 | 31.2 | N/A | N/A | 30.7 |
| UT44aa                                  | 32.6 | N/A | N/A | 32.3 | 32.8 | 31.5 | 31.0 | 32.0 | 31.1 | N/A | N/A | 30.0 |
| UT45aa                                  | 31.2 | N/A | N/A | 33.5 | 31.1 | 31.8 | 31.1 | 32.1 | 32.6 | N/A | N/A | 30.7 |
| UT46aa                                  | 31.8 | N/A | N/A | 32.1 | 33.0 | 32.4 | 32.1 | 31.7 | 31.8 | N/A | N/A | 30.9 |
| UT47aa                                  | 31.6 | N/A | N/A | 32.4 | 32.7 | 31.4 | 32.3 | 31.3 | 32.2 | N/A | N/A | 31.9 |
| UT48aa                                  | 33.3 | N/A | N/A | 33.6 | 31.8 | 31.9 | 31.6 | 31.1 | 31.4 | N/A | N/A | 30.5 |
| UT49aa                                  | 33.6 | N/A | N/A | 33.1 | 31.9 | 31.6 | 32.4 | 31.4 | 32.9 | N/A | N/A | 31.0 |
| UT50aa                                  | 31.6 | N/A | N/A | 33.1 | 32.5 | 31.8 | 31.4 | 31.6 | 32.4 | N/A | N/A | 31.3 |

| A-4-6      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/28                              | Temperature(℃)                                                  | 24.2   | Huang Siwei   | Pass        |
|                                         | Humidity (RH)                                                   | 65.5 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤50 mΩ                                                          |        |               |             |

| A-4-6 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT31aa                                  | 35.6 | N/A | N/A | 34.7 | 32.1 | 32.1 | 33.8 | 32.1 | 27.6 | N/A | N/A | 64.7 |
| UT32aa                                  | 34.4 | N/A | N/A | 34.5 | 31.9 | 33.6 | 33.6 | 32.1 | 27.0 | N/A | N/A | 28.7 |
| UT33aa                                  | 35.2 | N/A | N/A | 35.7 | 32.6 | 34.6 | 34.8 | 33.7 | 28.0 | N/A | N/A | 28.2 |
| UT34aa                                  | 36.0 | N/A | N/A | 36.4 | 33.4 | 34.2 | 34.7 | 33.4 | 26.6 | N/A | N/A | 28.4 |
| UT35aa                                  | 35.6 | N/A | N/A | 35.7 | 32.5 | 34.4 | 34.2 | 32.4 | 26.6 | N/A | N/A | 27.9 |
| UT36aa                                  | 35.4 | N/A | N/A | 35.5 | 33.9 | 34.8 | 33.6 | 32.4 | 27.5 | N/A | N/A | 27.6 |
| UT37aa                                  | 35.1 | N/A | N/A | 35.8 | 32.9 | 34.4 | 33.4 | 33.2 | 27.7 | N/A | N/A | 28.7 |
| UT38aa                                  | 34.9 | N/A | N/A | 34.8 | 33.2 | 33.5 | 33.6 | 32.1 | 27.3 | N/A | N/A | 28.5 |
| UT39aa                                  | 35.6 | N/A | N/A | 34.2 | 34.3 | 34.5 | 34.3 | 33.1 | 27.6 | N/A | N/A | 28.1 |
| UT40aa                                  | 35.1 | N/A | N/A | 37.1 | 33.2 | 34.9 | 35.2 | 32.9 | 27.4 | N/A | N/A | 28.2 |
| UT41aa                                  | 35.6 | N/A | N/A | 36.6 | 33.7 | 35.7 | 36.5 | 34.5 | 26.9 | N/A | N/A | 29.4 |
| UT42aa                                  | 34.2 | N/A | N/A | 35.0 | 32.6 | 34.3 | 34.2 | 32.6 | 26.9 | N/A | N/A | 27.7 |
| UT43aa                                  | 36.4 | N/A | N/A | 35.3 | 33.4 | 34.6 | 34.2 | 32.5 | 26.7 | N/A | N/A | 28.7 |
| UT44aa                                  | 34.0 | N/A | N/A | 35.0 | 32.8 | 36.8 | 34.1 | 32.1 | 27.3 | N/A | N/A | 28.3 |
| UT45aa                                  | 35.1 | N/A | N/A | 36.1 | 33.2 | 34.1 | 33.8 | 33.1 | 26.5 | N/A | N/A | 28.6 |
| UT46aa                                  | 36.4 | N/A | N/A | 39.1 | 33.4 | 35.7 | 34.7 | 33.5 | 27.4 | N/A | N/A | 28.9 |
| UT47aa                                  | 34.7 | N/A | N/A | 35.6 | 33.2 | 33.7 | 34.2 | 32.5 | 27.0 | N/A | N/A | 28.2 |
| UT48aa                                  | 35.3 | N/A | N/A | 37.8 | 32.9 | 34.8 | 34.3 | 33.0 | 27.6 | N/A | N/A | 27.3 |
| UT49aa                                  | 35.9 | N/A | N/A | 3.0  | 40.9 | 49.9 | 46.0 | 47.7 | 27.7 | N/A | N/A | 27.5 |
| UT50aa                                  | 34.8 | N/A | N/A | 35.0 | 32.2 | 33.6 | 33.7 | 32.0 | 26.9 | N/A | N/A | 27.8 |

| A-4-6 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT31aa                                  | 31.9 | N/A | N/A | 32.1 | 32.7 | 32.8 | 33.6 | 32.7 | 33.2 | N/A | N/A | 32.5 |
| UT32aa                                  | 32.9 | N/A | N/A | 32.9 | 32.3 | 32.5 | 31.7 | 32.6 | 33.0 | N/A | N/A | 30.9 |
| UT33aa                                  | 32.8 | N/A | N/A | 34.5 | 31.3 | 31.2 | 31.5 | 32.0 | 32.0 | N/A | N/A | 32.1 |
| UT34aa                                  | 32.1 | N/A | N/A | 33.2 | 31.9 | 31.7 | 30.9 | 31.8 | 31.4 | N/A | N/A | 29.8 |
| UT35aa                                  | 33.3 | N/A | N/A | 32.9 | 31.2 | 31.5 | 31.4 | 32.4 | 32.5 | N/A | N/A | 30.5 |
| UT36aa                                  | 33.1 | N/A | N/A | 32.5 | 31.7 | 31.4 | 31.5 | 31.5 | 32.0 | N/A | N/A | 29.9 |
| UT37aa                                  | 32.8 | N/A | N/A | 33.5 | 32.3 | 31.5 | 31.7 | 32.0 | 32.8 | N/A | N/A | 31.2 |
| UT38aa                                  | 32.2 | N/A | N/A | 32.2 | 32.3 | 32.9 | 32.1 | 33.1 | 32.9 | N/A | N/A | 31.2 |
| UT39aa                                  | 32.4 | N/A | N/A | 32.6 | 31.2 | 31.7 | 30.7 | 31.6 | 31.6 | N/A | N/A | 30.9 |
| UT40aa                                  | 32.8 | N/A | N/A | 32.6 | 31.3 | 31.1 | 31.0 | 31.7 | 31.3 | N/A | N/A | 29.9 |
| UT41aa                                  | 33.1 | N/A | N/A | 32.6 | 32.0 | 32.1 | 31.8 | 32.3 | 33.4 | N/A | N/A | 30.6 |
| UT42aa                                  | 32.8 | N/A | N/A | 32.1 | 31.6 | 31.6 | 32.0 | 33.1 | 32.7 | N/A | N/A | 31.1 |
| UT43aa                                  | 34.2 | N/A | N/A | 33.1 | 32.2 | 32.3 | 31.9 | 32.3 | 32.9 | N/A | N/A | 30.8 |
| UT44aa                                  | 32.8 | N/A | N/A | 31.9 | 31.6 | 32.1 | 32.0 | 32.0 | 32.3 | N/A | N/A | 30.7 |
| UT45aa                                  | 31.9 | N/A | N/A | 32.8 | 30.8 | 31.4 | 31.1 | 31.6 | 32.3 | N/A | N/A | 30.7 |
| UT46aa                                  | 32.7 | N/A | N/A | 33.1 | 32.8 | 32.3 | 31.7 | 32.7 | 32.5 | N/A | N/A | 31.0 |
| UT47aa                                  | 32.9 | N/A | N/A | 32.5 | 32.5 | 31.9 | 32.1 | 32.3 | 32.7 | N/A | N/A | 31.4 |
| UT48aa                                  | 33.0 | N/A | N/A | 32.5 | 31.8 | 32.9 | 32.6 | 32.7 | 32.2 | N/A | N/A | 30.9 |
| UT49aa                                  | 34.1 | N/A | N/A | 32.2 | 32.4 | 32.4 | 33.0 | 33.3 | 33.7 | N/A | N/A | 30.2 |
| UT50aa                                  | 33.9 | N/A | N/A | 32.2 | 31.6 | 32.5 | 32.1 | 34.1 | 33.3 | N/A | N/A | 30.7 |

**A-4-8 Low level contact resistance**

| Testing Period | Measure environment                                             |        | Test Engineer | Test Result |
|----------------|-----------------------------------------------------------------|--------|---------------|-------------|
| 2024/10/29     | Temperature(℃)                                                  | 23.4   | Huang Siwei   | Pass        |
|                | Humidity (RH)                                                   | 66.4 % |               |             |
| Test condition | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria       | ≤50 mΩ                                                          |        |               |             |

**A-4-8 Low Level Contact Resistance (mΩ)**

| Sample Coding | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
|---------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| UT31aa        | 35.3 | N/A | N/A | 35.1 | 33.8 | 34.6 | 33.4 | 33.6 | 27.9 | N/A | N/A | 27.3 |
| UT32aa        | 35.3 | N/A | N/A | 35.6 | 32.4 | 34.5 | 35.0 | 33.1 | 27.5 | N/A | N/A | 28.6 |
| UT33aa        | 36.7 | N/A | N/A | 33.5 | 33.9 | 34.3 | 34.3 | 32.3 | 26.5 | N/A | N/A | 28.4 |
| UT34aa        | 35.8 | N/A | N/A | 33.9 | 33.5 | 34.1 | 33.4 | 33.0 | 26.6 | N/A | N/A | 27.3 |
| UT35aa        | 36.5 | N/A | N/A | 33.8 | 33.6 | 33.8 | 34.1 | 34.0 | 26.1 | N/A | N/A | 27.1 |
| UT36aa        | 36.0 | N/A | N/A | 34.3 | 32.0 | 34.2 | 33.2 | 33.4 | 27.2 | N/A | N/A | 27.1 |
| UT37aa        | 35.7 | N/A | N/A | 33.0 | 32.7 | 34.5 | 34.6 | 33.5 | 27.6 | N/A | N/A | 27.0 |
| UT38aa        | 36.1 | N/A | N/A | 34.9 | 33.8 | 33.1 | 33.9 | 33.8 | 26.2 | N/A | N/A | 27.5 |
| UT39aa        | 36.4 | N/A | N/A | 34.9 | 33.5 | 34.3 | 33.5 | 32.3 | 27.0 | N/A | N/A | 27.5 |
| UT40aa        | 36.5 | N/A | N/A | 33.3 | 33.0 | 34.4 | 33.8 | 32.7 | 27.7 | N/A | N/A | 27.4 |
| UT41aa        | 36.0 | N/A | N/A | 35.2 | 32.8 | 34.6 | 34.8 | 32.5 | 27.4 | N/A | N/A | 27.7 |
| UT42aa        | 35.4 | N/A | N/A | 35.2 | 33.9 | 34.6 | 33.9 | 32.9 | 26.8 | N/A | N/A | 27.6 |
| UT43aa        | 36.3 | N/A | N/A | 33.6 | 33.6 | 34.6 | 34.4 | 33.5 | 26.2 | N/A | N/A | 29.0 |
| UT44aa        | 36.4 | N/A | N/A | 35.5 | 33.2 | 33.9 | 34.1 | 33.5 | 26.4 | N/A | N/A | 28.6 |
| UT45aa        | 35.9 | N/A | N/A | 34.5 | 32.0 | 33.5 | 34.2 | 32.7 | 27.5 | N/A | N/A | 27.1 |
| UT46aa        | 36.4 | N/A | N/A | 35.0 | 32.7 | 34.4 | 33.8 | 32.4 | 26.1 | N/A | N/A | 28.9 |
| UT47aa        | 36.1 | N/A | N/A | 35.3 | 32.5 | 33.1 | 33.7 | 33.7 | 26.2 | N/A | N/A | 28.7 |
| UT48aa        | 35.6 | N/A | N/A | 33.4 | 33.3 | 34.1 | 34.1 | 32.3 | 27.8 | N/A | N/A | 28.5 |
| UT49aa        | 36.6 | N/A | N/A | 34.9 | 32.0 | 33.4 | 34.1 | 32.5 | 26.2 | N/A | N/A | 28.2 |
| UT50aa        | 35.5 | N/A | N/A | 33.4 | 32.5 | 34.7 | 34.5 | 32.0 | 26.6 | N/A | N/A | 28.1 |

| A-4-8 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT31aa                                  | 31.1 | N/A | N/A | 33.7 | 32.5 | 31.4 | 31.3 | 32.1 | 32.8 | N/A | N/A | 30.4 |
| UT32aa                                  | 31.9 | N/A | N/A | 32.5 | 31.2 | 32.5 | 31.5 | 31.9 | 33.5 | N/A | N/A | 31.2 |
| UT33aa                                  | 31.9 | N/A | N/A | 32.7 | 31.6 | 31.9 | 31.9 | 32.4 | 31.5 | N/A | N/A | 30.9 |
| UT34aa                                  | 31.2 | N/A | N/A | 32.6 | 32.1 | 31.8 | 31.1 | 31.4 | 33.5 | N/A | N/A | 31.7 |
| UT35aa                                  | 32.6 | N/A | N/A | 32.5 | 32.0 | 32.2 | 32.6 | 32.9 | 32.0 | N/A | N/A | 31.2 |
| UT36aa                                  | 31.3 | N/A | N/A | 33.5 | 32.2 | 31.0 | 31.5 | 31.3 | 31.7 | N/A | N/A | 31.4 |
| UT37aa                                  | 33.1 | N/A | N/A | 33.0 | 32.1 | 31.0 | 31.9 | 31.1 | 33.6 | N/A | N/A | 30.9 |
| UT38aa                                  | 31.4 | N/A | N/A | 32.0 | 32.8 | 31.3 | 33.0 | 31.4 | 31.1 | N/A | N/A | 30.5 |
| UT39aa                                  | 31.3 | N/A | N/A | 33.4 | 32.4 | 32.0 | 32.3 | 32.7 | 33.2 | N/A | N/A | 30.5 |
| UT40aa                                  | 32.4 | N/A | N/A | 33.8 | 32.2 | 31.3 | 33.0 | 32.6 | 32.9 | N/A | N/A | 31.4 |
| UT41aa                                  | 32.1 | N/A | N/A | 32.1 | 32.2 | 31.9 | 32.5 | 32.2 | 33.5 | N/A | N/A | 31.2 |
| UT42aa                                  | 32.5 | N/A | N/A | 33.4 | 32.6 | 32.5 | 33.0 | 32.4 | 32.8 | N/A | N/A | 30.8 |
| UT43aa                                  | 32.0 | N/A | N/A | 33.6 | 32.4 | 32.1 | 32.8 | 32.3 | 32.0 | N/A | N/A | 31.0 |
| UT44aa                                  | 31.9 | N/A | N/A | 33.1 | 32.5 | 31.5 | 32.0 | 31.9 | 33.4 | N/A | N/A | 31.0 |
| UT45aa                                  | 31.7 | N/A | N/A | 32.7 | 31.2 | 32.4 | 32.6 | 31.2 | 31.1 | N/A | N/A | 31.4 |
| UT46aa                                  | 31.3 | N/A | N/A | 33.0 | 31.9 | 32.7 | 32.4 | 31.3 | 32.8 | N/A | N/A | 31.4 |
| UT47aa                                  | 31.3 | N/A | N/A | 32.1 | 32.9 | 32.1 | 31.0 | 32.3 | 34.0 | N/A | N/A | 30.4 |
| UT48aa                                  | 33.6 | N/A | N/A | 32.9 | 32.0 | 32.6 | 31.6 | 32.2 | 31.6 | N/A | N/A | 30.8 |
| UT49aa                                  | 32.0 | N/A | N/A | 32.6 | 31.0 | 31.4 | 31.5 | 31.8 | 31.1 | N/A | N/A | 31.8 |
| UT50aa                                  | 32.1 | N/A | N/A | 32.6 | 31.1 | 31.7 | 32.9 | 32.7 | 33.2 | N/A | N/A | 31.8 |





| A-4-10      Low level contact resistance |                                                                 |        |               |             |
|------------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                           | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/29                               | Temperature(℃)                                                  | 23.4   | Huang Siwei   | Pass        |
|                                          | Humidity (RH)                                                   | 66.4 % |               |             |
| Test condition                           | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                 | ≤50 mΩ                                                          |        |               |             |

| A-4-10 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|------------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                            | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT31aa                                   | 36.1 | N/A | N/A | 34.1 | 32.0 | 33.8 | 34.5 | 33.6 | 26.2 | N/A | N/A | 28.4 |
| UT32aa                                   | 35.1 | N/A | N/A | 35.6 | 33.6 | 33.6 | 34.7 | 33.2 | 28.0 | N/A | N/A | 28.3 |
| UT33aa                                   | 35.5 | N/A | N/A | 35.3 | 32.2 | 33.4 | 34.1 | 33.8 | 27.0 | N/A | N/A | 27.8 |
| UT34aa                                   | 36.9 | N/A | N/A | 33.7 | 32.9 | 34.4 | 34.6 | 33.6 | 27.4 | N/A | N/A | 27.4 |
| UT35aa                                   | 36.3 | N/A | N/A | 34.9 | 32.3 | 34.6 | 34.8 | 32.2 | 26.3 | N/A | N/A | 27.7 |
| UT36aa                                   | 36.4 | N/A | N/A | 33.1 | 32.8 | 34.5 | 34.5 | 33.7 | 27.3 | N/A | N/A | 28.4 |
| UT37aa                                   | 35.8 | N/A | N/A | 35.1 | 32.8 | 34.6 | 33.1 | 32.7 | 27.2 | N/A | N/A | 27.7 |
| UT38aa                                   | 35.6 | N/A | N/A | 33.5 | 33.5 | 33.2 | 33.6 | 32.6 | 26.5 | N/A | N/A | 27.0 |
| UT39aa                                   | 36.2 | N/A | N/A | 35.9 | 33.4 | 33.8 | 33.3 | 32.6 | 26.3 | N/A | N/A | 28.1 |
| UT40aa                                   | 35.3 | N/A | N/A | 33.5 | 33.5 | 33.6 | 33.4 | 32.5 | 26.9 | N/A | N/A | 28.5 |
| UT41aa                                   | 35.3 | N/A | N/A | 35.1 | 33.1 | 34.1 | 33.5 | 33.5 | 26.2 | N/A | N/A | 27.4 |
| UT42aa                                   | 36.5 | N/A | N/A | 35.4 | 32.0 | 34.7 | 33.3 | 33.2 | 26.2 | N/A | N/A | 28.5 |
| UT43aa                                   | 36.4 | N/A | N/A | 35.0 | 32.6 | 34.4 | 34.6 | 32.5 | 26.2 | N/A | N/A | 28.3 |
| UT44aa                                   | 35.0 | N/A | N/A | 34.7 | 33.8 | 33.2 | 33.8 | 33.3 | 26.4 | N/A | N/A | 28.2 |
| UT45aa                                   | 35.5 | N/A | N/A | 33.2 | 32.8 | 33.3 | 34.1 | 33.0 | 27.8 | N/A | N/A | 28.0 |
| UT46aa                                   | 36.2 | N/A | N/A | 33.8 | 32.7 | 33.8 | 33.3 | 33.4 | 26.9 | N/A | N/A | 27.0 |
| UT47aa                                   | 36.5 | N/A | N/A | 33.7 | 33.4 | 34.2 | 34.3 | 33.4 | 26.8 | N/A | N/A | 28.5 |
| UT48aa                                   | 35.5 | N/A | N/A | 35.7 | 33.6 | 33.9 | 33.0 | 32.5 | 27.6 | N/A | N/A | 27.5 |
| UT49aa                                   | 36.2 | N/A | N/A | 35.8 | 32.5 | 33.7 | 34.6 | 32.8 | 26.4 | N/A | N/A | 28.3 |
| UT50aa                                   | 36.9 | N/A | N/A | 35.8 | 32.8 | 34.7 | 33.1 | 33.0 | 26.9 | N/A | N/A | 28.1 |

| A-4-10 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|------------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                            | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT31aa                                   | 33.0 | N/A | N/A | 33.3 | 31.6 | 31.8 | 31.0 | 32.2 | 33.2 | N/A | N/A | 30.9 |
| UT32aa                                   | 33.7 | N/A | N/A | 32.4 | 31.9 | 32.7 | 31.3 | 31.6 | 31.0 | N/A | N/A | 30.3 |
| UT33aa                                   | 33.3 | N/A | N/A | 33.8 | 32.9 | 32.0 | 31.6 | 32.2 | 32.5 | N/A | N/A | 31.7 |
| UT34aa                                   | 31.3 | N/A | N/A | 32.7 | 31.1 | 32.8 | 32.0 | 32.3 | 32.9 | N/A | N/A | 30.6 |
| UT35aa                                   | 33.1 | N/A | N/A | 32.9 | 31.2 | 31.8 | 32.2 | 32.4 | 32.7 | N/A | N/A | 31.5 |
| UT36aa                                   | 33.8 | N/A | N/A | 33.7 | 31.5 | 31.5 | 32.9 | 32.2 | 33.9 | N/A | N/A | 31.1 |
| UT37aa                                   | 32.5 | N/A | N/A | 33.4 | 32.8 | 32.9 | 31.4 | 31.3 | 33.1 | N/A | N/A | 31.2 |
| UT38aa                                   | 33.1 | N/A | N/A | 33.5 | 31.4 | 31.6 | 32.1 | 31.5 | 32.4 | N/A | N/A | 31.1 |
| UT39aa                                   | 31.1 | N/A | N/A | 33.1 | 32.3 | 32.1 | 32.0 | 31.9 | 32.6 | N/A | N/A | 30.7 |
| UT40aa                                   | 32.6 | N/A | N/A | 33.2 | 31.3 | 32.4 | 32.9 | 32.0 | 32.5 | N/A | N/A | 31.8 |
| UT41aa                                   | 32.3 | N/A | N/A | 32.6 | 32.7 | 32.0 | 32.4 | 33.0 | 33.8 | N/A | N/A | 31.4 |
| UT42aa                                   | 31.9 | N/A | N/A | 32.9 | 32.1 | 32.2 | 31.0 | 32.2 | 33.3 | N/A | N/A | 31.0 |
| UT43aa                                   | 33.4 | N/A | N/A | 32.4 | 31.2 | 31.5 | 32.3 | 31.5 | 31.4 | N/A | N/A | 31.6 |
| UT44aa                                   | 33.8 | N/A | N/A | 33.4 | 32.2 | 32.1 | 32.0 | 31.8 | 33.7 | N/A | N/A | 31.8 |
| UT45aa                                   | 34.0 | N/A | N/A | 33.8 | 32.2 | 32.0 | 32.5 | 32.2 | 32.8 | N/A | N/A | 30.5 |
| UT46aa                                   | 33.7 | N/A | N/A | 32.9 | 31.6 | 31.5 | 32.7 | 32.0 | 33.4 | N/A | N/A | 32.0 |
| UT47aa                                   | 32.6 | N/A | N/A | 33.4 | 32.4 | 32.9 | 31.4 | 31.5 | 33.4 | N/A | N/A | 32.0 |
| UT48aa                                   | 32.3 | N/A | N/A | 32.8 | 32.7 | 31.0 | 31.2 | 31.0 | 31.5 | N/A | N/A | 31.9 |
| UT49aa                                   | 31.5 | N/A | N/A | 33.4 | 32.0 | 32.0 | 32.6 | 31.7 | 33.9 | N/A | N/A | 31.9 |
| UT50aa                                   | 31.9 | N/A | N/A | 32.8 | 32.1 | 31.2 | 31.9 | 32.8 | 31.5 | N/A | N/A | 31.4 |

| A-7-2      Low level contact resistance |                                                                 |        |               |             |
|-----------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                          | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/03                              | Temperature(℃)                                                  | 24.3   | Su Kun        | Pass        |
|                                         | Humidity (RH)                                                   | 57.0 % |               |             |
| Test condition                          | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                | ≤40 mΩ （Initial）                                                |        |               |             |

| A-7-2 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|-----------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                           | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT51aa                                  | 35.9 | N/A | N/A | 35.5 | 33.2 | 34.8 | 33.6 | 31.4 | 26.6 | N/A | N/A | 28.4 |
| UT52aa                                  | 35.8 | N/A | N/A | 34.9 | 31.6 | 33.6 | 33.5 | 32.0 | 26.6 | N/A | N/A | 28.0 |
| UT53aa                                  | 35.7 | N/A | N/A | 36.3 | 34.0 | 34.9 | 34.8 | 33.3 | 27.7 | N/A | N/A | 28.0 |
| UT54aa                                  | 34.0 | N/A | N/A | 34.7 | 32.9 | 33.7 | 33.9 | 31.8 | 27.0 | N/A | N/A | 28.3 |
| UT55aa                                  | 35.0 | N/A | N/A | 35.5 | 32.3 | 34.0 | 33.5 | 32.5 | 27.1 | N/A | N/A | 28.0 |
| UT56aa                                  | 34.9 | N/A | N/A | 35.7 | 32.3 | 33.5 | 33.8 | 32.2 | 27.1 | N/A | N/A | 27.7 |
| UT57aa                                  | 34.8 | N/A | N/A | 35.1 | 32.1 | 33.3 | 33.5 | 32.1 | 26.9 | N/A | N/A | 27.7 |
| UT58aa                                  | 34.6 | N/A | N/A | 34.1 | 32.5 | 33.2 | 33.9 | 32.0 | 27.3 | N/A | N/A | 28.3 |
| UT59aa                                  | 32.6 | N/A | N/A | 34.0 | 32.0 | 33.1 | 33.3 | 31.5 | 27.6 | N/A | N/A | 27.4 |
| UT60aa                                  | 34.2 | N/A | N/A | 34.9 | 32.4 | 34.1 | 34.2 | 33.2 | 27.3 | N/A | N/A | 27.8 |
| Sample Coding                           | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT51aa                                  | 32.6 | N/A | N/A | 38.4 | 31.3 | 31.3 | 31.1 | 32.1 | 31.9 | N/A | N/A | 31.2 |
| UT52aa                                  | 32.0 | N/A | N/A | 31.6 | 31.2 | 31.5 | 31.0 | 31.5 | 32.0 | N/A | N/A | 30.4 |
| UT53aa                                  | 32.4 | N/A | N/A | 35.1 | 31.6 | 31.8 | 31.2 | 31.4 | 32.1 | N/A | N/A | 30.3 |
| UT54aa                                  | 32.4 | N/A | N/A | 32.0 | 31.6 | 31.7 | 32.1 | 31.6 | 32.2 | N/A | N/A | 30.6 |
| UT55aa                                  | 32.0 | N/A | N/A | 31.9 | 30.7 | 30.8 | 30.7 | 30.9 | 31.4 | N/A | N/A | 30.2 |
| UT56aa                                  | 32.2 | N/A | N/A | 32.2 | 31.0 | 30.7 | 31.0 | 31.5 | 32.1 | N/A | N/A | 29.9 |
| UT57aa                                  | 32.4 | N/A | N/A | 32.0 | 31.7 | 31.4 | 31.1 | 31.9 | 32.2 | N/A | N/A | 33.1 |
| UT58aa                                  | 32.3 | N/A | N/A | 32.0 | 31.7 | 31.7 | 31.7 | 32.0 | 32.7 | N/A | N/A | 30.6 |
| UT59aa                                  | 32.0 | N/A | N/A | 32.1 | 31.6 | 31.4 | 31.0 | 31.4 | 31.8 | N/A | N/A | 30.8 |
| UT60aa                                  | 32.6 | N/A | N/A | 32.1 | 31.2 | 31.4 | 31.1 | 31.3 | 31.9 | N/A | N/A | 30.1 |

| A-7-10      Low level contact resistance |                                                                 |        |               |             |
|------------------------------------------|-----------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                           | Measure environment                                             |        | Test Engineer | Test Result |
| 2024/10/22                               | Temperature(℃)                                                  | 23.8   | Su Kun        | Pass        |
|                                          | Humidity (RH)                                                   | 63.3 % |               |             |
| Test condition                           | Mated; Maximum open circuit voltage 20 mV; Test current 100 mA. |        |               |             |
| Criteria                                 | ≤50 mΩ                                                          |        |               |             |

| A-7-10 Low Level Contact Resistance (mΩ) |      |     |     |      |      |      |      |      |      |     |     |      |
|------------------------------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|
| Sample Coding                            | A1   | A2  | A3  | A4   | A5   | A6   | A7   | A8   | A9   | A10 | A11 | A12  |
| UT51aa                                   | 37.3 | N/A | N/A | 36.5 | 37.3 | 39.3 | 34.6 | 36.8 | 28.3 | N/A | N/A | 29.3 |
| UT52aa                                   | 34.7 | N/A | N/A | 35.5 | 30.0 | 30.7 | 39.4 | 36.8 | 29.4 | N/A | N/A | 32.9 |
| UT53aa                                   | 35.8 | N/A | N/A | 36.3 | 35.4 | 36.3 | 36.1 | 37.2 | 28.2 | N/A | N/A | 29.7 |
| UT54aa                                   | 37.7 | N/A | N/A | 35.6 | 37.9 | 40.0 | 35.5 | 32.7 | 29.3 | N/A | N/A | 30.6 |
| UT55aa                                   | 34.8 | N/A | N/A | 36.9 | 34.9 | 37.3 | 35.4 | 34.9 | 27.2 | N/A | N/A | 28.8 |
| UT56aa                                   | 35.1 | N/A | N/A | 39.1 | 34.7 | 38.8 | 36.4 | 36.8 | 28.0 | N/A | N/A | 29.6 |
| UT57aa                                   | 32.1 | N/A | N/A | 31.2 | 39.0 | 36.8 | 35.5 | 38.5 | 28.1 | N/A | N/A | 36.0 |
| UT58aa                                   | 35.2 | N/A | N/A | 36.0 | 34.4 | 34.7 | 34.5 | 35.7 | 27.4 | N/A | N/A | 30.3 |
| UT59aa                                   | 34.8 | N/A | N/A | 36.1 | 33.2 | 38.2 | 37.0 | 39.4 | 27.7 | N/A | N/A | 29.1 |
| UT60aa                                   | 35.9 | N/A | N/A | 36.1 | 33.8 | 36.6 | 37.6 | 37.1 | 32.1 | N/A | N/A | 29.7 |
| Sample Coding                            | B1   | B2  | B3  | B4   | B5   | B6   | B7   | B8   | B9   | B10 | B11 | B12  |
| UT51aa                                   | 35.4 | N/A | N/A | 36.5 | 32.6 | 32.5 | 34.4 | 32.0 | 33.4 | N/A | N/A | 33.2 |
| UT52aa                                   | 37.8 | N/A | N/A | 37.4 | 34.9 | 36.7 | 33.6 | 34.0 | 30.3 | N/A | N/A | 40.0 |
| UT53aa                                   | 36.3 | N/A | N/A | 34.0 | 33.2 | 34.3 | 33.2 | 36.7 | 35.0 | N/A | N/A | 31.7 |
| UT54aa                                   | 30.5 | N/A | N/A | 36.3 | 30.1 | 36.9 | 37.5 | 34.4 | 35.6 | N/A | N/A | 31.4 |
| UT55aa                                   | 34.6 | N/A | N/A | 34.5 | 32.3 | 32.7 | 33.3 | 31.7 | 33.5 | N/A | N/A | 30.8 |
| UT56aa                                   | 34.6 | N/A | N/A | 39.1 | 35.3 | 33.1 | 33.4 | 36.7 | 34.0 | N/A | N/A | 31.4 |
| UT57aa                                   | 37.2 | N/A | N/A | 35.5 | 34.0 | 34.2 | 33.5 | 34.2 | 32.8 | N/A | N/A | 31.4 |
| UT58aa                                   | 34.0 | N/A | N/A | 33.2 | 33.2 | 32.8 | 32.7 | 33.2 | 33.4 | N/A | N/A | 31.7 |
| UT59aa                                   | 33.2 | N/A | N/A | 32.5 | 39.2 | 34.4 | 34.5 | 35.9 | 33.4 | N/A | N/A | 33.1 |
| UT60aa                                   | 33.3 | N/A | N/A | 33.3 | 34.8 | 34.2 | 33.5 | 35.0 | 33.4 | N/A | N/A | 31.5 |

#### 8.4. Clause 3.7.8.2 Dielectric withstanding voltage

| A-7-1 Dielectric withstanding voltage |                                                                                                                                                                                            |        |               |             |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                        | Measure environment                                                                                                                                                                        |        | Test Engineer | Test Result |
| 2024/10/01                            | Temperature(℃)                                                                                                                                                                             | 26.2   | Su Kun        | Pass        |
|                                       | Humidity (RH)                                                                                                                                                                              | 68.8 % |               |             |
| Test condition                        | Mated; 100 VAC (RMS), 1 min.<br>The test voltage shall be applied between adjacent contacts.                                                                                               |        |               |             |
| Criteria                              | A failure is the occurrence of adisruptive discharge as evidenced by flashover (surface discharge), sparkover (air discharge), breakdown (puncture discharge) or leakage in excess of 5 mA |        |               |             |

| A-7-11 Dielectric withstanding voltage |                                                                                                                                                                                            |        |               |             |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                         | Measure environment                                                                                                                                                                        |        | Test Engineer | Test Result |
| 2024/10/22                             | Temperature(℃)                                                                                                                                                                             | 26.9   | Su Kun        | Pass        |
|                                        | Humidity (RH)                                                                                                                                                                              | 58.9 % |               |             |
| Test condition                         | Mated; 100 VAC (RMS), 1 min.<br>The test voltage shall be applied between adjacent contacts.                                                                                               |        |               |             |
| Criteria                               | A failure is the occurrence of adisruptive discharge as evidenced by flashover (surface discharge), sparkover (air discharge), breakdown (puncture discharge) or leakage in excess of 5 mA |        |               |             |



### 8.5. Clause 3.7.8.3 Insulation Resistance

| A-7-12      Insulation Resistance |                                                                                                   |        |               |             |
|-----------------------------------|---------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                    | Measure environment                                                                               |        | Test Engineer | Test Result |
| 2024/10/22                        | Temperature(℃)                                                                                    | 26.9   | Su Kun        | Pass        |
|                                   | Humidity (RH)                                                                                     | 58.9 % |               |             |
| Test condition                    | Mated and Unmated, 500 Vdc, 2min.<br>The test voltage shall be applied between adjacent contacts. |        |               |             |
| Criteria                          | ≥100MΩ                                                                                            |        |               |             |

| A-7-12 Insulation Resistance (GΩ)                |        |        |        |        |        |
|--------------------------------------------------|--------|--------|--------|--------|--------|
| Sample Coding                                    | UT51aa | UT52aa | UT53aa | UT54aa | UT55aa |
| Test contacts                                    |        |        |        |        |        |
| A4 to A5                                         | 5.6    | 5.6    | 5.6    | 5.6    | 5.6    |
| A5 to A6                                         | 18.5   | 18.5   | 18.5   | 18.5   | 18.5   |
| A6 to A7                                         | 12.5   | 12.5   | 12.5   | 12.5   | 12.5   |
| B4 to B5                                         | 10.4   | 10.4   | 10.4   | 10.4   | 10.4   |
| B5 to B6                                         | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    |
| Sample Coding                                    | UT56aa | UT57aa | UT28aa | UT59aa | UT60aa |
| Test contacts                                    |        |        |        |        |        |
| A4 to A5                                         | 5.6    | 5.6    | 5.6    | 5.6    | 5.6    |
| A5 to A6                                         | 18.5   | 18.5   | 18.5   | 18.5   | 18.5   |
| A6 to A7                                         | 12.5   | 12.5   | 12.5   | 12.5   | 12.5   |
| B4 to B5                                         | 10.4   | 10.4   | 10.4   | 10.4   | 10.4   |
| B5 to B6                                         | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    |
| Note: Followed by the specific resistance value. |        |        |        |        |        |

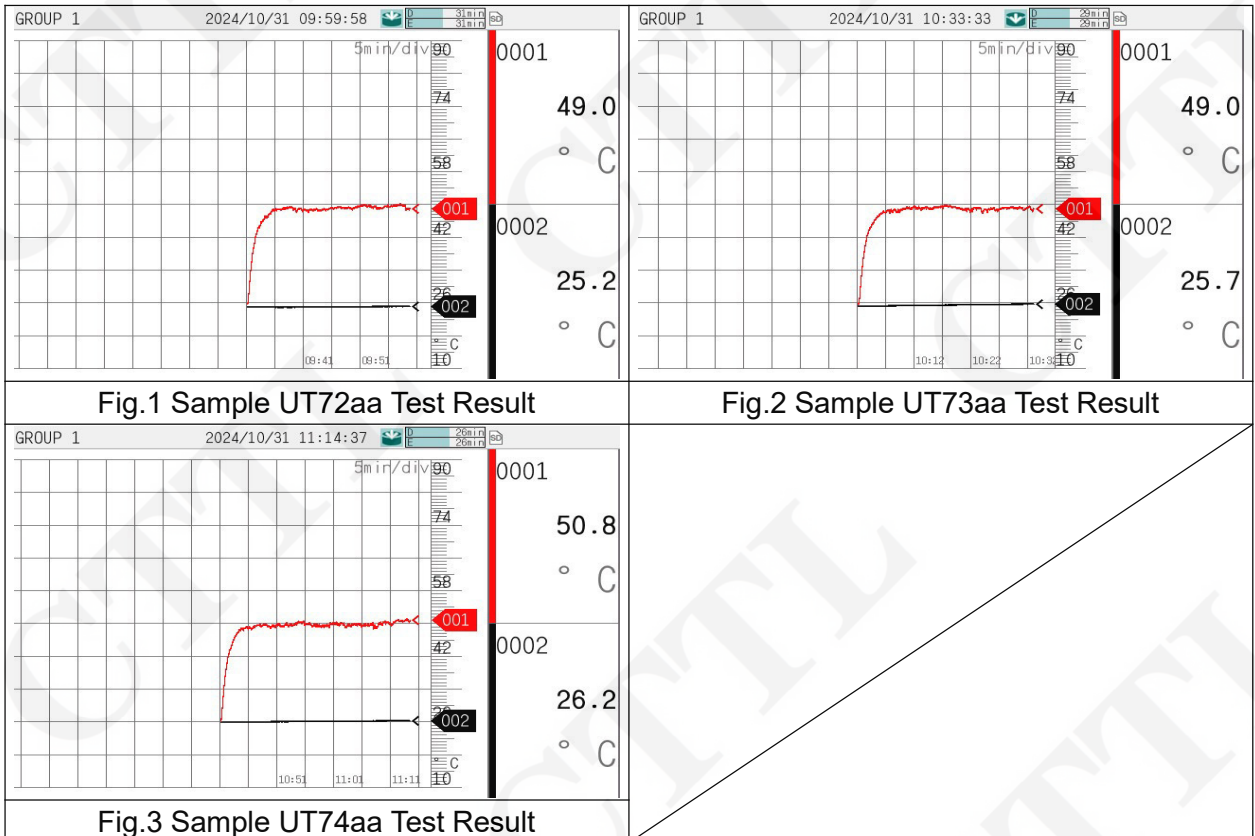
## 8.6. Clause 3.7.8.4 Contact Current Rating

| B-6-1                      Contact Current Rating |                                                                                                                                                                                            |        |               |             |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period                                    | Measure environment                                                                                                                                                                        |        | Test Engineer | Test Result |
| 2024/10/31                                        | Temperature(℃)                                                                                                                                                                             | 24.9   | Su Kun        | Pass        |
|                                                   | Humidity (RH)                                                                                                                                                                              | 62.0 % |               |             |
| Test condition                                    | 1、 5A applied collectively to VBUS pins（i.e.,pins A4,A9,B4,and B9）.<br>2、 1.25A applied to the Vconn pin（i.e.,B5）,terminated.<br>3、 0.25 A applied individually to all the other contacts. |        |               |             |
| Criteria                                          | The temperature rise shall not exceed 30℃ at the outside surface of the shell.                                                                                                             |        |               |             |

| B-6-1 Contact Current Rating |                          |                               |                       |
|------------------------------|--------------------------|-------------------------------|-----------------------|
| Sample Coding                | Ambient temperature (°C) | Thermocouple temperature (°C) | Temperature rise (°C) |
| UT72aa                       | 25.2                     | 49.0                          | 23.8                  |
| UT73aa                       | 25.7                     | 49.0                          | 23.3                  |
| UT74aa                       | 26.2                     | 50.8                          | 24.6                  |

Note: Temperature rise of sample = Thermocouple temperature - Ambient temperature.

### B-6 Temperature Rise Curve



### 8.7. Clause 3.8.1.1 Insertion force

| A-7-4      Insertion Force |                                            |        |               |             |
|----------------------------|--------------------------------------------|--------|---------------|-------------|
| Testing Period             | Measure environment                        |        | Test Engineer | Test Result |
| 2024/10/04                 | Temperature(℃)                             | 24.5   | Su Kun        | Pass        |
|                            | Humidity (RH)                              | 53.0 % |               |             |
| Test condition             | Speed: 12.5mm/min; Insertion depth: 4.8mm. |        |               |             |
| Criteria                   | Insertion force:5N~20N                     |        |               |             |

| A-7-4 Insertion Force |        |        |        |        |        |
|-----------------------|--------|--------|--------|--------|--------|
| Sample Coding         | UT51aa | UT52aa | UT53aa | UT54aa | UT55aa |
| Insertion force (N)   | 10.7   | 9.2    | 10.3   | 9.5    | 10.4   |
| Sample Coding         | UT56aa | UT57aa | UT58aa | UT59aa | UT60aa |
| Insertion force (N)   | 10.7   | 8.6    | 9.4    | 9.5    | 10.3   |

### 8.8. Clause 3.8.1.1 Extraction force

| A-7-5      Extraction Force |                                             |        |               |             |
|-----------------------------|---------------------------------------------|--------|---------------|-------------|
| Testing Period              | Measure environment                         |        | Test Engineer | Test Result |
| 2024/10/04                  | Temperature(℃)                              | 24.5   | Su Kun        | Pass        |
|                             | Humidity (RH)                               | 53.0 % |               |             |
| Test condition              | Speed: 12.5mm/min; Extraction depth: 4.8mm. |        |               |             |
| Criteria                    | Extraction force: 8N~20N(Initial reading)   |        |               |             |

| A-7-7      Extraction Force |                                                       |        |               |             |
|-----------------------------|-------------------------------------------------------|--------|---------------|-------------|
| Testing Period              | Measure environment                                   |        | Test Engineer | Test Result |
| 2024/10/04                  | Temperature(℃)                                        | 24.5   | Su Kun        | Pass        |
|                             | Humidity (RH)                                         | 53.0 % |               |             |
| Test condition              | Speed: 12.5mm/min; Extraction depth: 4.8mm.           |        |               |             |
| Criteria                    | Extraction force: 8N~20N; 33% of the initial reading. |        |               |             |

| A-7-9      Extraction Force |                                             |        |               |             |
|-----------------------------|---------------------------------------------|--------|---------------|-------------|
| Testing Period              | Measure environment                         |        | Test Engineer | Test Result |
| 2024/10/22                  | Temperature(℃)                              | 23.8   | Su Kun        | Pass        |
|                             | Humidity (RH)                               | 63.3 % |               |             |
| Test condition              | Speed: 12.5mm/min; Extraction depth: 4.8mm. |        |               |             |
| Criteria                    | Extraction force: 6N~20N.                   |        |               |             |

| A-7-5 Extraction Force                      |        |        |        |        |        |
|---------------------------------------------|--------|--------|--------|--------|--------|
| Sample Coding                               | UT51aa | UT52aa | UT53aa | UT54aa | UT55aa |
| Extraction force (N)                        | 13.2   | 13.3   | 12.0   | 11.8   | 13.9   |
| Sample Coding                               | UT56aa | UT57aa | UT58aa | UT59aa | UT60aa |
| Extraction force (N)                        | 13.8   | 11.6   | 11.2   | 11.4   | 14.6   |
| A-7-7 Extraction Force                      |        |        |        |        |        |
| Sample Coding                               | UT51aa | UT52aa | UT53aa | UT54aa | UT55aa |
| Extraction force (N)                        | 13.6   | 14.4   | 14.8   | 12.6   | 13.7   |
| $\frac{ (A-7-7)-(A-7-5) }{(A-7-5)} * 100\%$ | 3.03%  | 8.27%  | 23.33% | 6.78%  | 1.44%  |
| Sample Coding                               | UT56aa | UT57aa | UT58aa | UT59aa | UT60aa |
| Extraction force (N)                        | 14.6   | 12.0   | 11.3   | 11.5   | 14.8   |
| $\frac{ (A-7-7)-(A-7-5) }{(A-7-5)} * 100\%$ | 5.42%  | 3.45%  | 0.89%  | 0.88%  | 1.37%  |
| A-7-9 Extraction Force                      |        |        |        |        |        |
| Sample Coding                               | UT51aa | UT52aa | UT53aa | UT54aa | UT55aa |
| Extraction force (N)                        | 7.9    | 13.2   | 12.7   | 11.8   | 13.0   |
| Sample Coding                               | UT56aa | UT57aa | UT58aa | UT59aa | UT60aa |
| Extraction force (N)                        | 11.4   | 11.3   | 9.3    | 13.6   | 9.1    |

# A-7 Mechanical Curve

Sample UT51aa

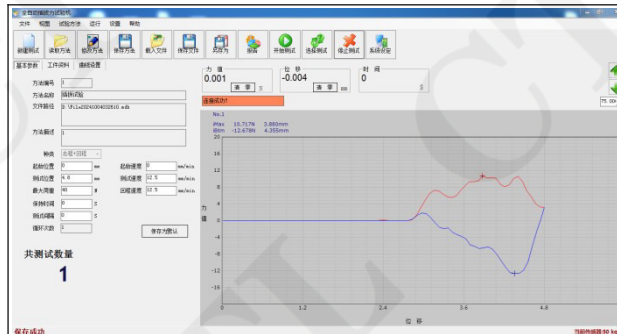


Fig.4 Insertion Force



Fig.5 Initial Extraction Force

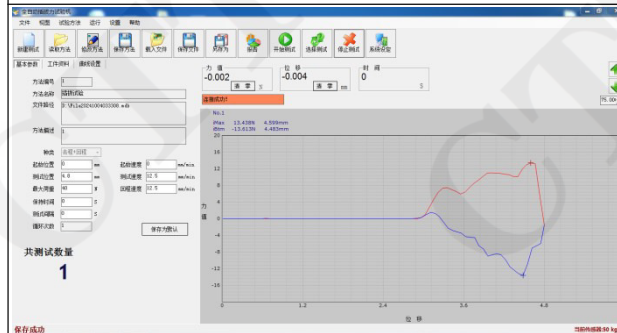


Fig.6 32nd Extraction Force

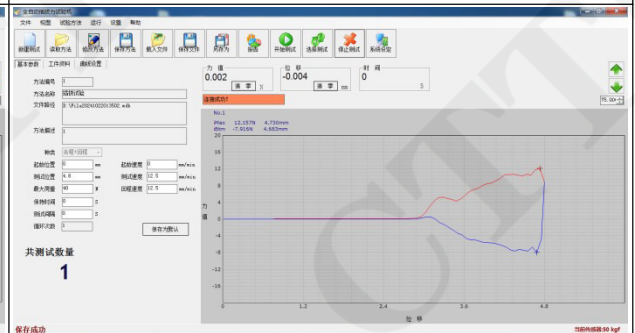


Fig.7 Final Extraction Force

Sample UT52aa

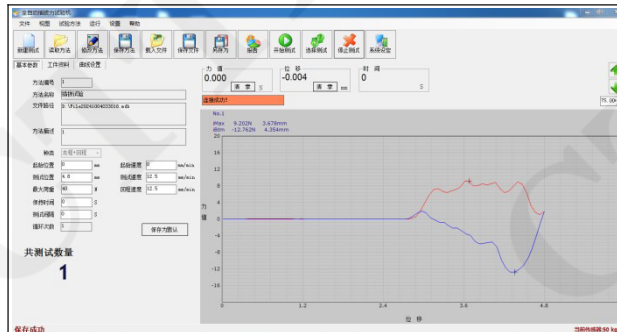


Fig.8 Insertion Force

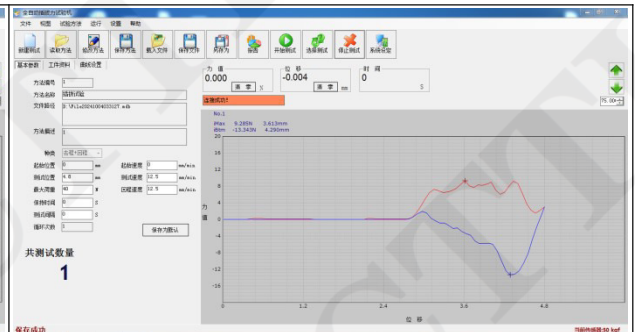


Fig.9 Initial Extraction Force

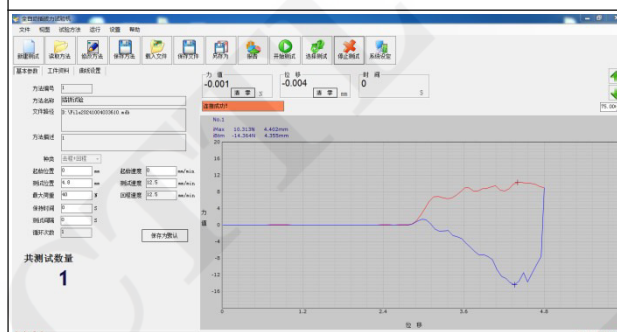


Fig.10 32nd Extraction Force

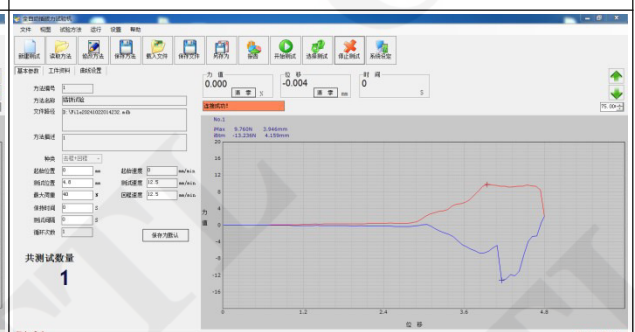


Fig.11 Final Extraction Force



## Sample UT53aa

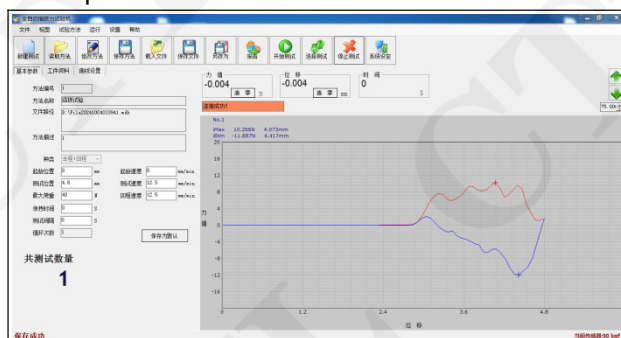


Fig.12 Insertion Force

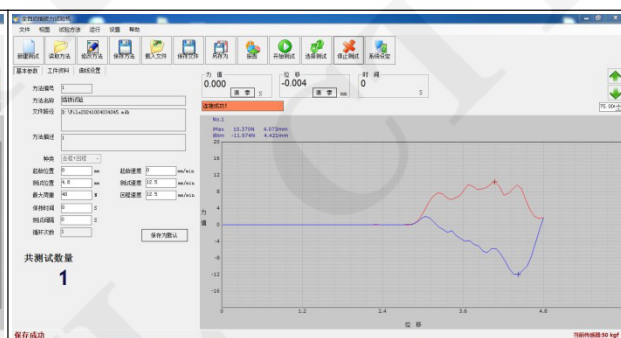


Fig.13 Initial Extraction Force

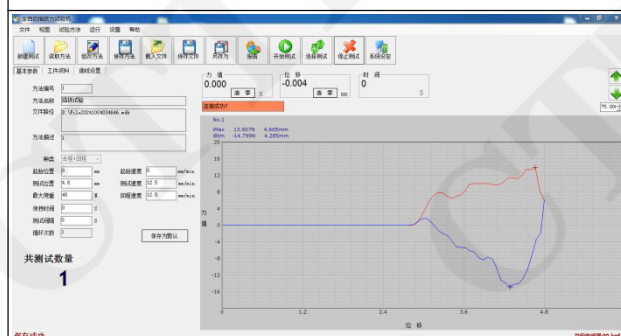


Fig.14 32nd Extraction Force

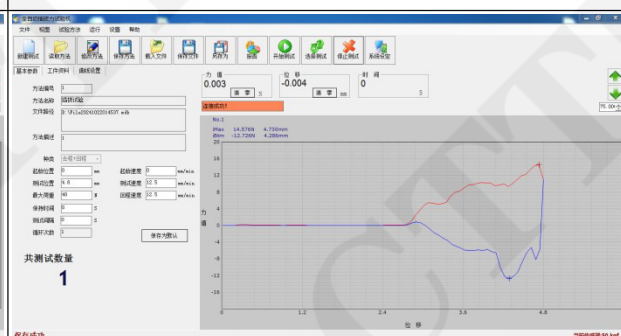


Fig.15 Final Extraction Force

## Sample UT54aa

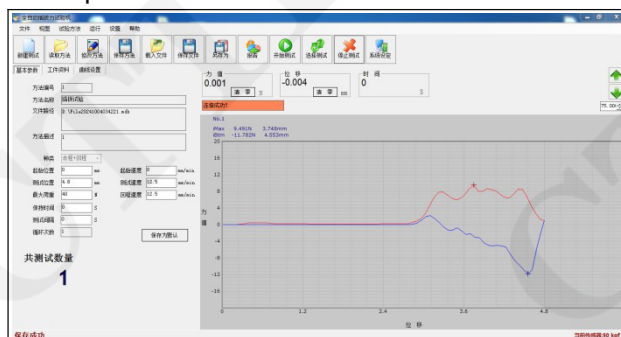


Fig.16 Insertion Force

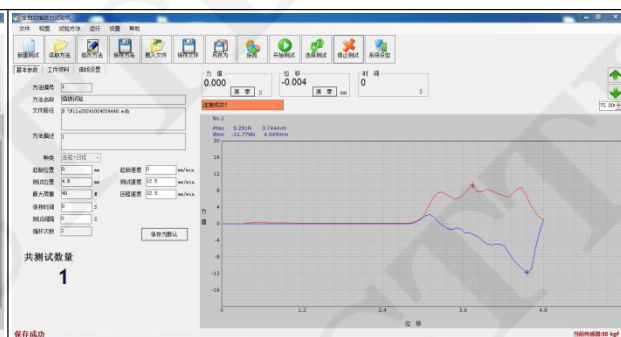


Fig.17 Initial Extraction Force

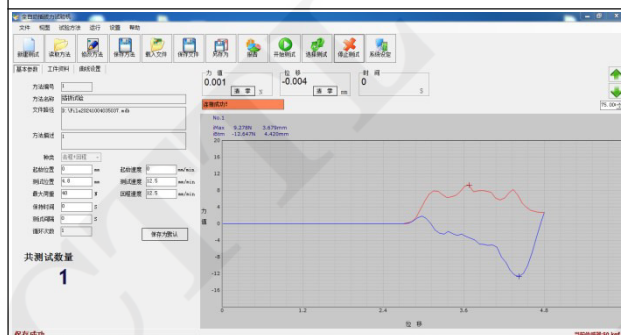


Fig.18 32nd Extraction Force

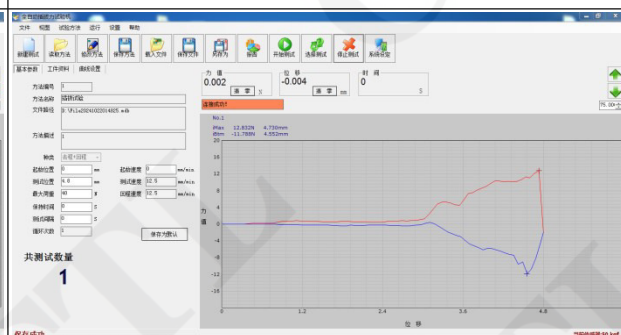


Fig.19 Final Extraction Force

## Sample UT55aa

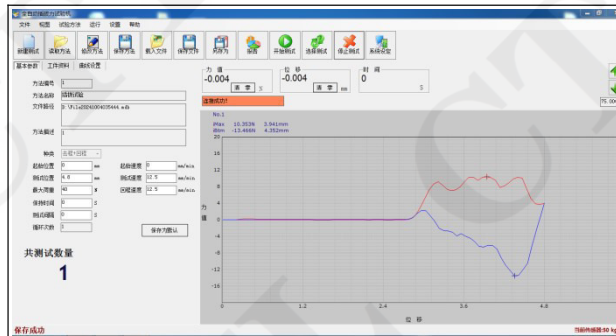


Fig.20 Insertion Force

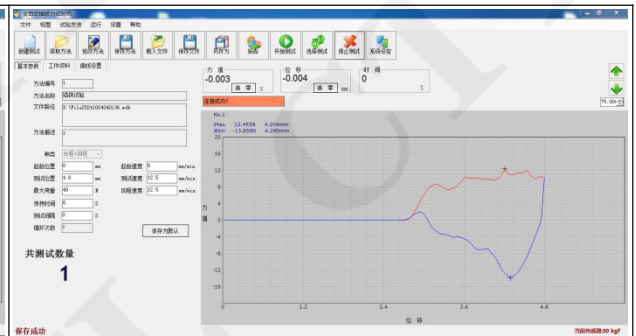


Fig.21 Initial Extraction Force

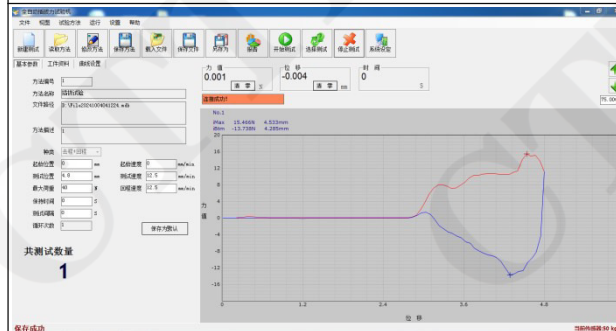


Fig.22 32nd Extraction Force

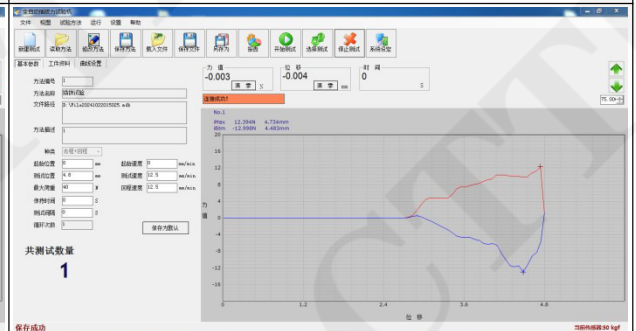


Fig.23 Final Extraction Force

## Sample UT56aa

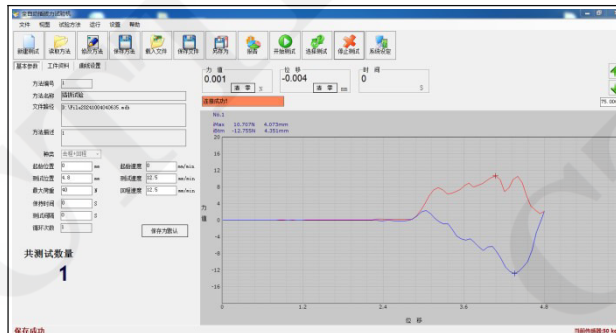


Fig.24 Insertion Force

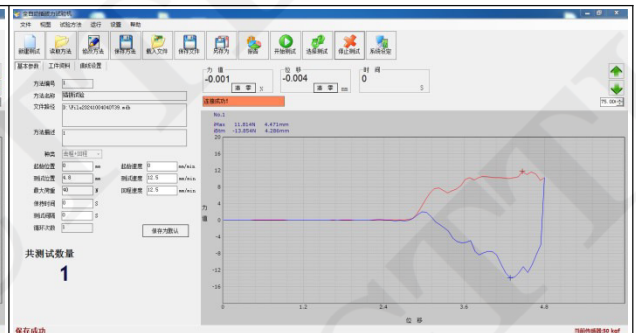


Fig.25 Initial Extraction Force



Fig.26 32nd Extraction Force

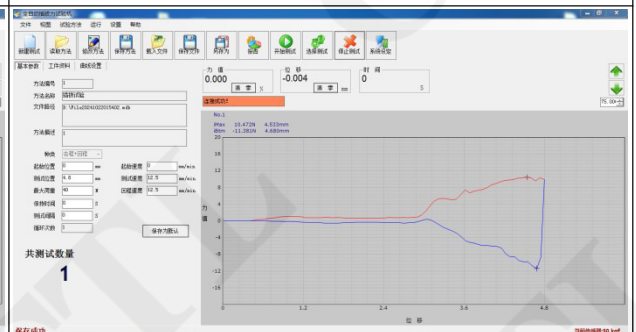


Fig.27 Final Extraction Force

## Sample UT57aa

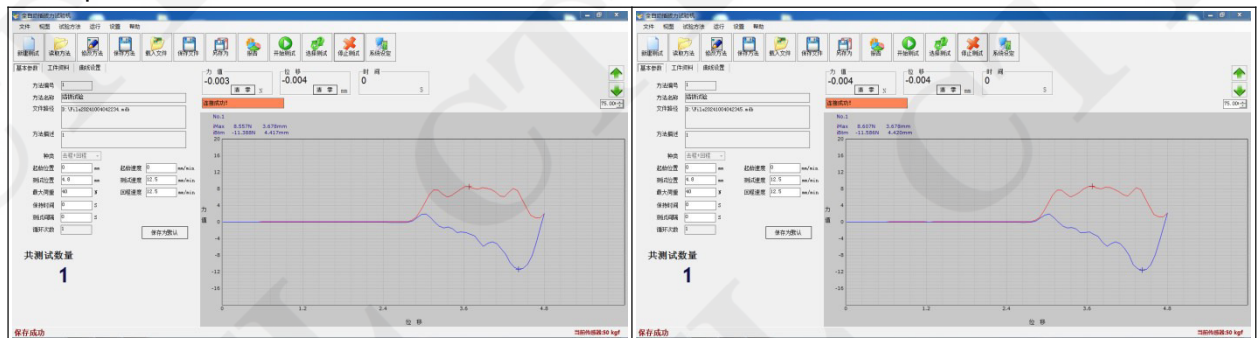


Fig.28 Insertion Force

Fig.29 Initial Extraction Force

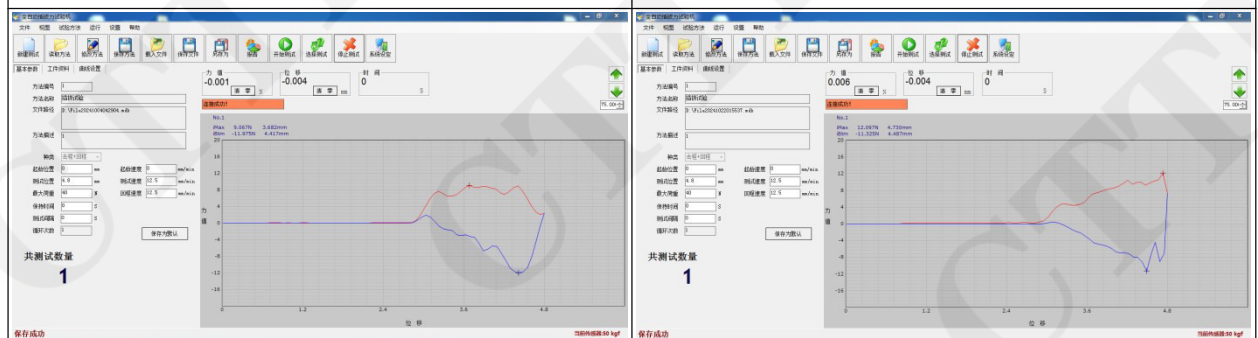


Fig.30 32nd Extraction Force

Fig.31 Final Extraction Force

## Sample UT58aa

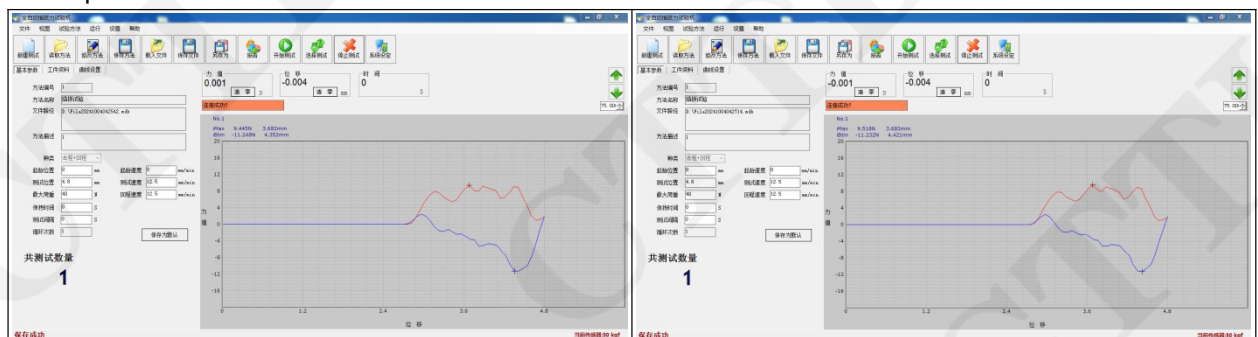


Fig.32 Insertion Force

Fig.33 Initial Extraction Force

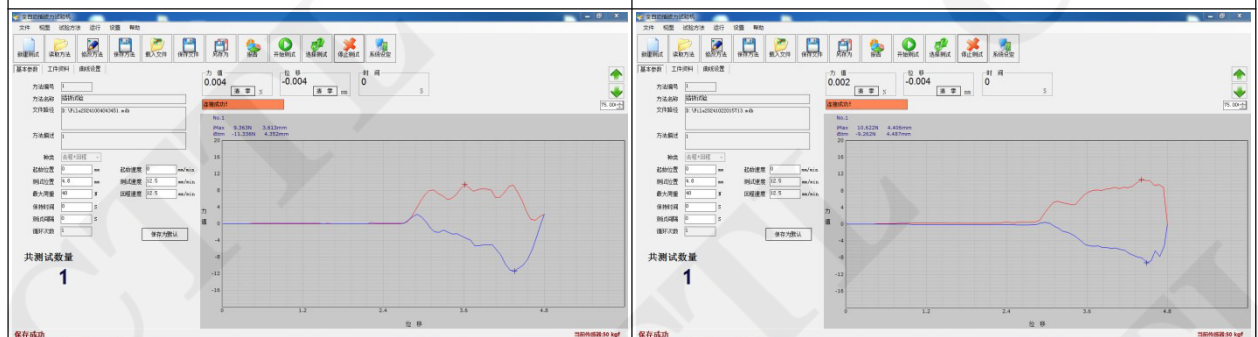
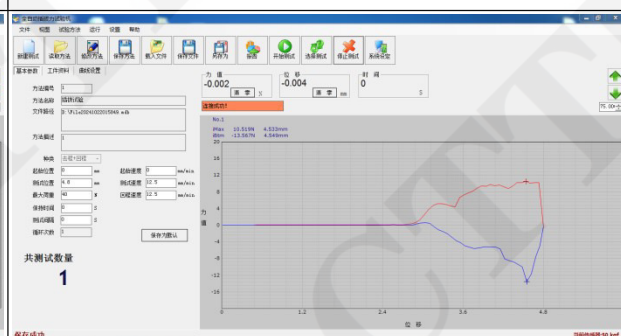
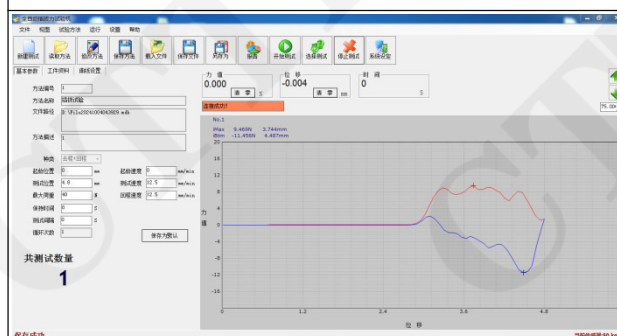
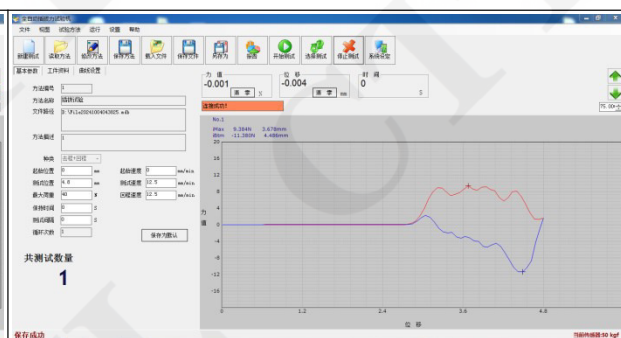
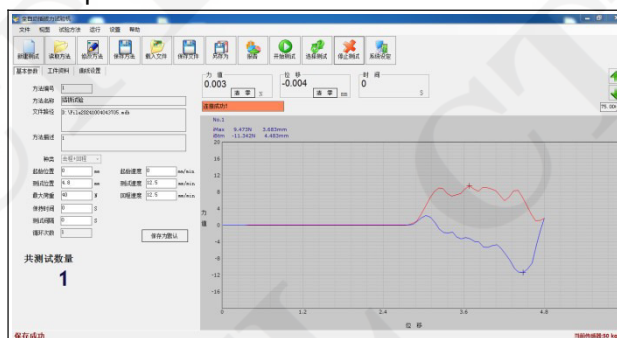


Fig.34 32nd Extraction Force

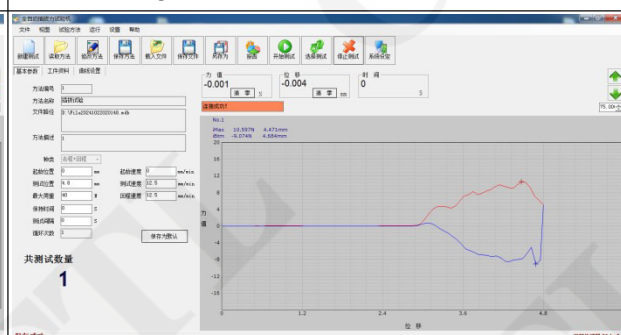
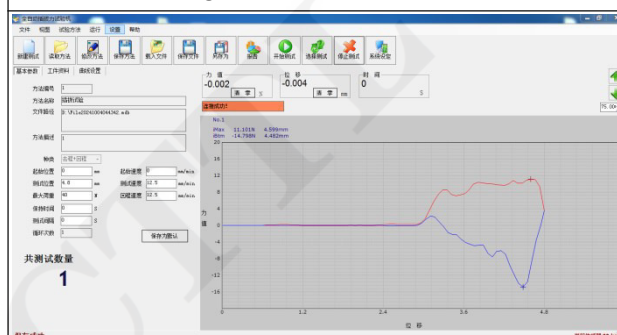
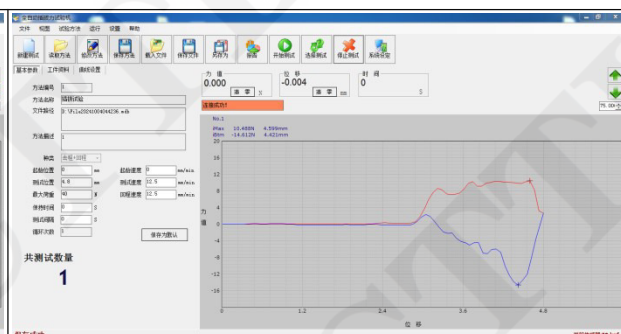
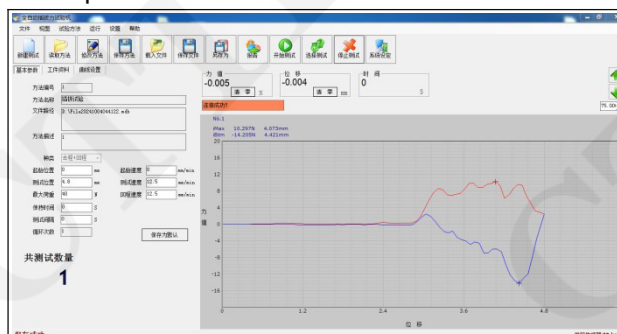
Fig.35 Final Extraction Force



## Sample UT59aa



## Sample UT60aa



### 8.9. Clause 3.8.1.3 Durability

| A-1-2 Durability |                                                         |        |               |             |
|------------------|---------------------------------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment                                     |        | Test Engineer | Test Result |
| 2024/10/16       | Temperature(℃)                                          | 23.1   | Zhan Weilong  | Pass        |
|                  | Humidity (RH)                                           | 63.8 % |               |             |
| Test condition   | Auto cycle; cycle rate: 500±50/h; Number of cycles: 50. |        |               |             |
| Criteria         | No evidence of physical damages.                        |        |               |             |

| A-2-2 Durability |                                                         |        |               |             |
|------------------|---------------------------------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment                                     |        | Test Engineer | Test Result |
| 2024/10/16       | Temperature(℃)                                          | 23.6   | Huang Siwei   | Pass        |
|                  | Humidity (RH)                                           | 62.9 % |               |             |
| Test condition   | Auto cycle; cycle rate: 500±50/h; Number of cycles: 50. |        |               |             |
| Criteria         | No evidence of physical damages.                        |        |               |             |

| A-3-2      Durability |                                                         |        |               |             |
|-----------------------|---------------------------------------------------------|--------|---------------|-------------|
| Testing Period        | Measure environment                                     |        | Test Engineer | Test Result |
| 2024/10/16            | Temperature(℃)                                          | 23.8   | Su Kun        | Pass        |
|                       | Humidity (RH)                                           | 72.0 % |               |             |
| Test condition        | Auto cycle; cycle rate: 500±50/h; Number of cycles: 50. |        |               |             |
| Criteria              | No evidence of physical damages.                        |        |               |             |

| A-4-2      Durability |                                                         |        |               |             |
|-----------------------|---------------------------------------------------------|--------|---------------|-------------|
| Testing Period        | Measure environment                                     |        | Test Engineer | Test Result |
| 2024/10/16            | Temperature(℃)                                          | 23.4   | Huang Siwei   | Pass        |
|                       | Humidity (RH)                                           | 64.2 % |               |             |
| Test condition        | Auto cycle; cycle rate: 500±50/h; Number of cycles: 50. |        |               |             |
| Criteria              | No evidence of physical damages.                        |        |               |             |

| A-7-3      Durability |                                  |        |               |             |
|-----------------------|----------------------------------|--------|---------------|-------------|
| Testing Period        | Measure environment              |        | Test Engineer | Test Result |
| 2024/10/03            | Temperature(℃)                   | 24.3   | Su Kun        | Pass        |
|                       | Humidity (RH)                    | 57.0 % |               |             |
| Test condition        | Manual mating/unmating 4 cycles. |        |               |             |
| Criteria              | No evidence of physical damages. |        |               |             |





| A-7-6 Durability |                                   |        |               |             |
|------------------|-----------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment               |        | Test Engineer | Test Result |
| 2024/10/04       | Temperature(℃)                    | 24.5   | Su Kun        | Pass        |
|                  | Humidity (RH)                     | 53.0 % |               |             |
| Test condition   | Manual mating/unmating 25 cycles. |        |               |             |
| Criteria         | No evidence of physical damages.  |        |               |             |

| A-7-8 Durability      |                                                                                                                                                                                                    |               |               |             |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|-------------|
| Testing Period        | Measure environment                                                                                                                                                                                |               | Test Engineer | Test Result |
| 2024/10/20-2024/10/21 | Temperature(℃)                                                                                                                                                                                     | 23.5 - 24.8   | Su Kun        | Pass        |
|                       | Humidity (RH)                                                                                                                                                                                      | 63.5 - 68.7 % |               |             |
| Test condition        | Auto cycle, cycle rate: 500±50/h; Number of cycles: 10000.<br>2468 cycles (normal) + 2500 cycles (Rotate the receptacle 180°) +<br>2500 cycles (normal) + 2500 cycles (Rotate the receptacle 180°) |               |               |             |
| Criteria              | No evidence of physical damages.                                                                                                                                                                   |               |               |             |

### 8.10. Clause 3.8.1.3 Reseating

| A-1-5 Re-seating |                                  |        |               |             |
|------------------|----------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment              |        | Test Engineer | Test Result |
| 2024/10/21       | Temperature(℃)                   | 23.1   | Zhan Weilong  | Pass        |
|                  | Humidity (RH)                    | 64.3 % |               |             |
| Test condition   | Manual mating/unmating 3 cycles. |        |               |             |
| Criteria         | No evidence of physical damages. |        |               |             |

| A-2-7 Re-seating |                                  |        |               |             |
|------------------|----------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment              |        | Test Engineer | Test Result |
| 2024/10/21       | Temperature(℃)                   | 23.4   | Huang Siwei   | Pass        |
|                  | Humidity (RH)                    | 66.3 % |               |             |
| Test condition   | Manual mating/unmating 3 cycles. |        |               |             |
| Criteria         | No evidence of physical damages. |        |               |             |

| A-4-9 Re-seating |                                  |        |               |             |
|------------------|----------------------------------|--------|---------------|-------------|
| Testing Period   | Measure environment              |        | Test Engineer | Test Result |
| 2024/10/29       | Temperature(℃)                   | 23.4   | Huang Siwei   | Pass        |
|                  | Humidity (RH)                    | 66.4 % |               |             |
| Test condition   | Manual mating/unmating 3 cycles. |        |               |             |
| Criteria         | No evidence of physical damages. |        |               |             |

### 8.11. Clause 3.8.1.6 4-Axis Continuity

| B-1-4 4-Axis Continuity |                                                                                                                   |        |               |             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period          | Measure environment                                                                                               |        | Test Engineer | Test Result |
| 2024/10/29              | Temperature(℃)                                                                                                    | 24.1   | Su Kun        | Pass        |
|                         | Humidity (RH)                                                                                                     | 65.0 % |               |             |
| Test condition          | Mated, 20N Force at 15 mm from receptacle shell mating edge.<br>Duration: 10 seconds; Direction: 0, 90, 180, 270. |        |               |             |
| Criteria                | No discontinuities greater than 1.0 microsecond during 10 seconds at each axis.                                   |        |               |             |

## B-1-4 Mechanical Curve

Sample UT61aa

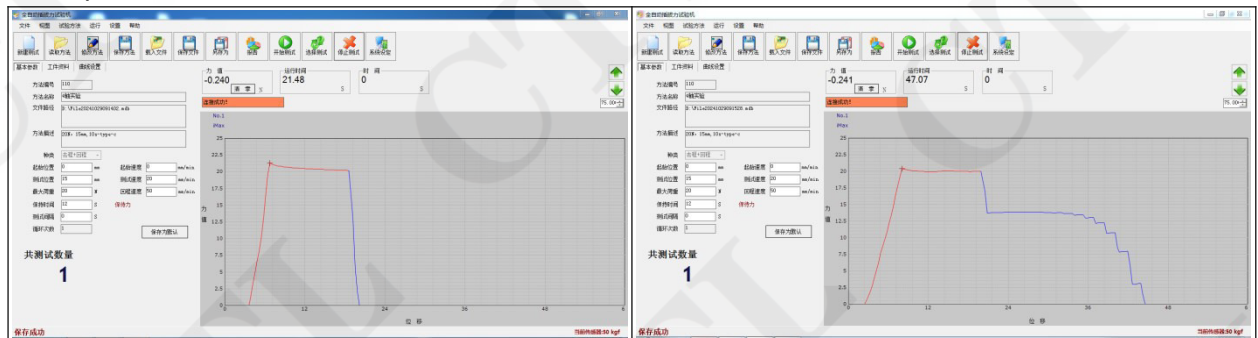


Fig.44 0 degree

Fig.45 180 degree

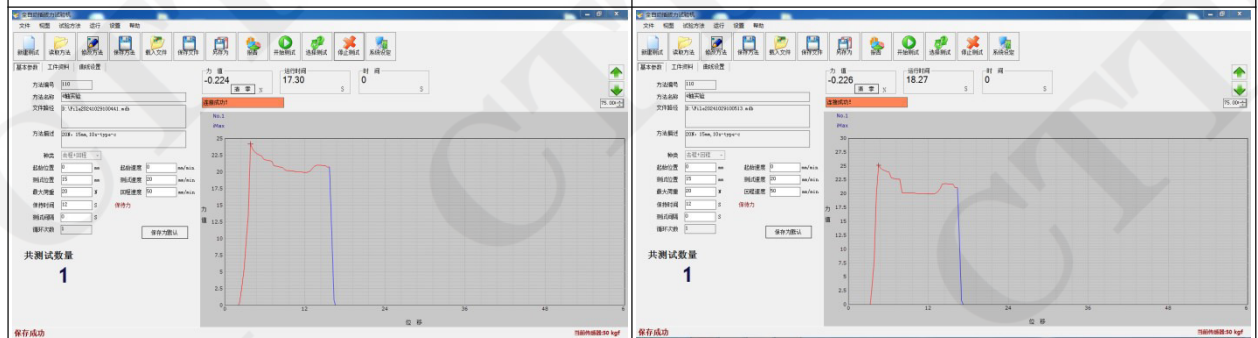


Fig.46 90 degree

Fig.47 270 degree

Sample UT62aa

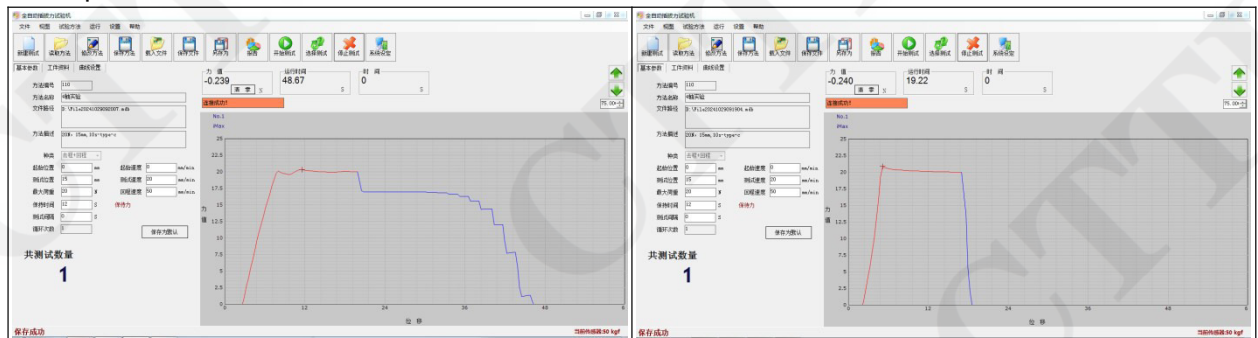


Fig.48 0 degree

Fig.49 180 degree

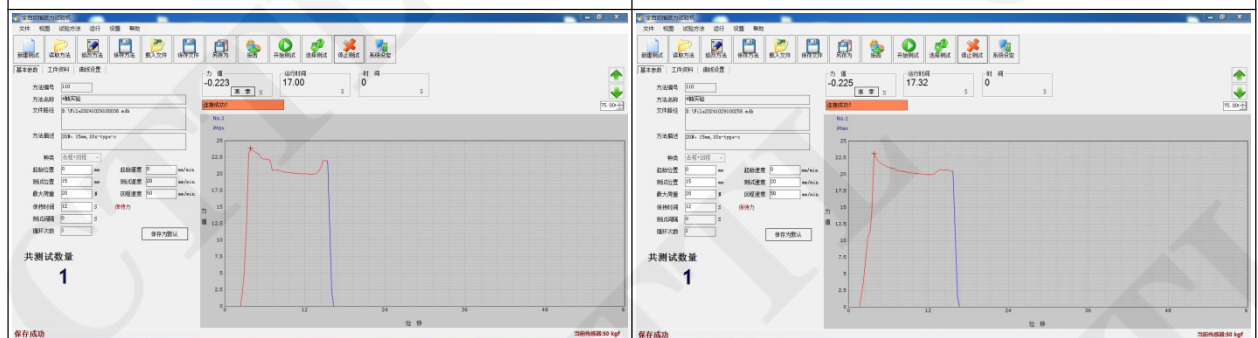
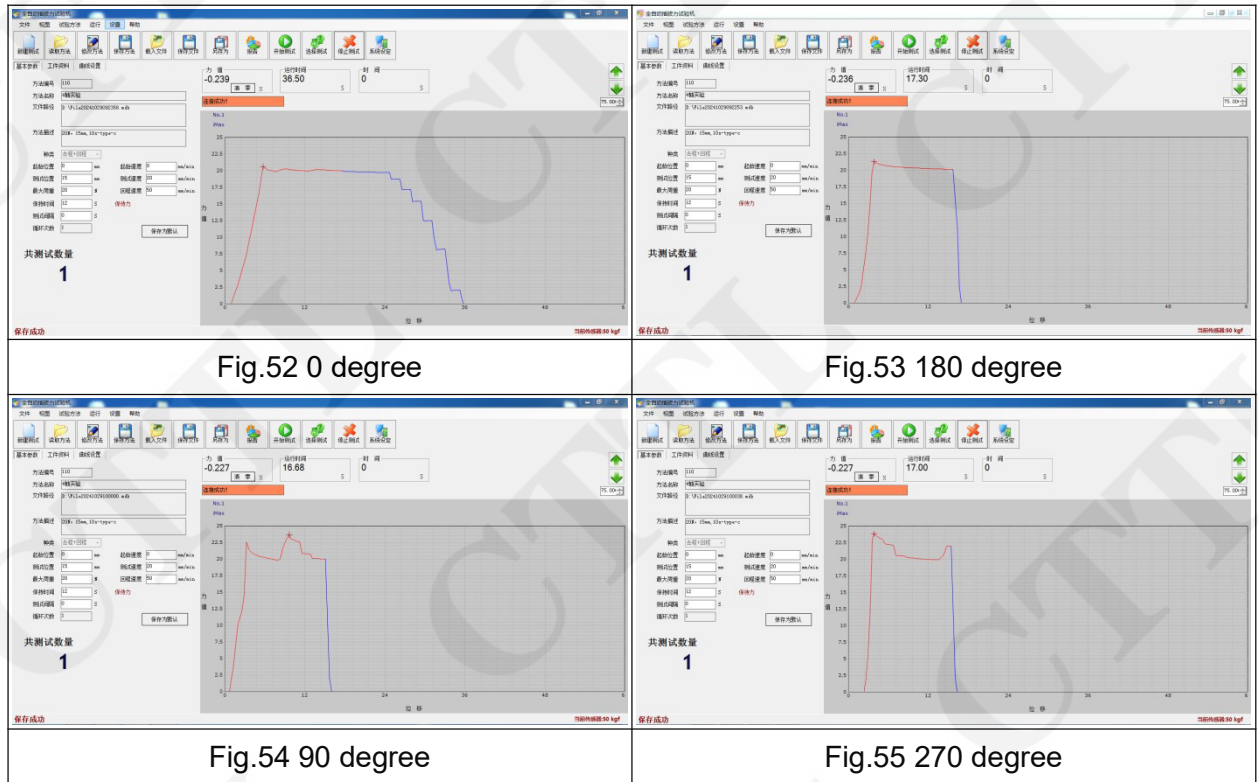


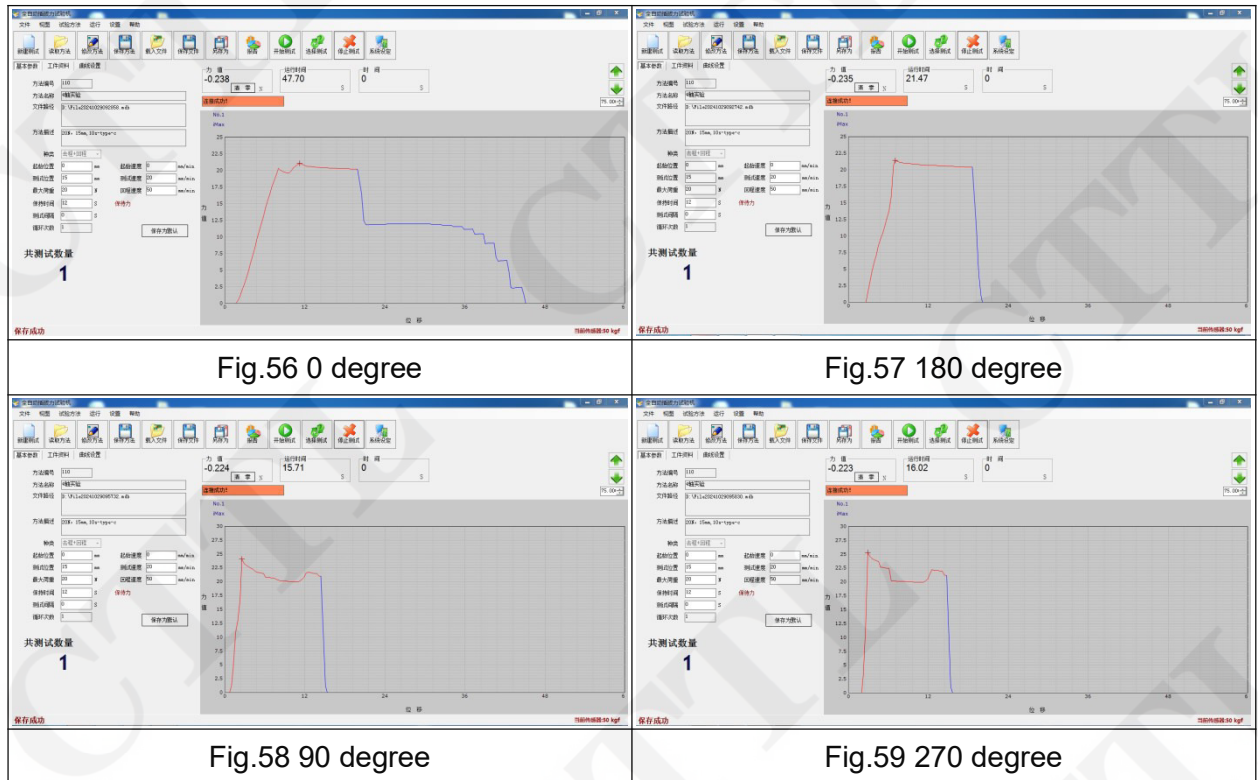
Fig.50 90 degree

Fig.51 270 degree

## Sample UT63aa



## Sample UT64aa





## Sample UT65aa

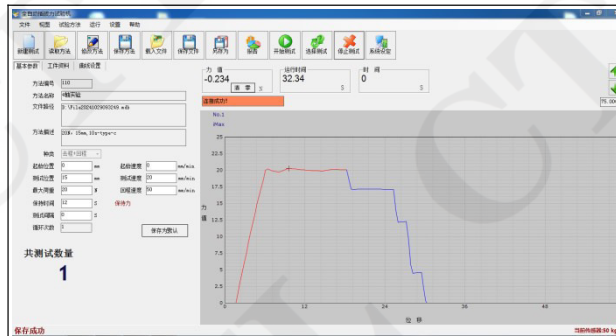


Fig.60 0 degree

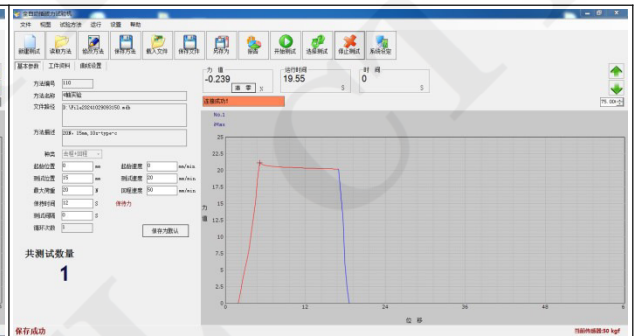


Fig.61 180 degree

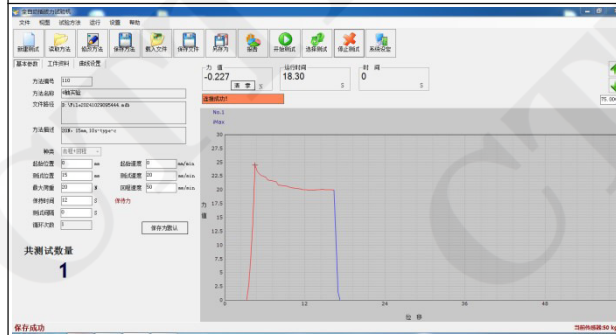


Fig.62 90 degree

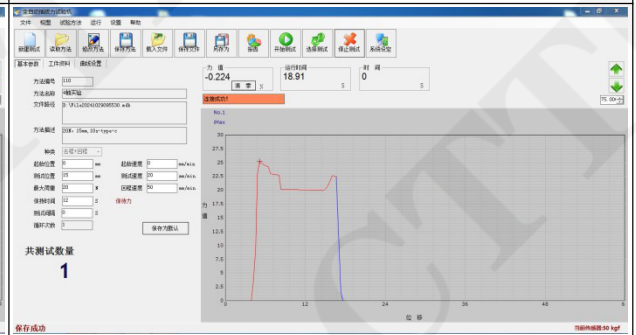


Fig.63 270 degree

## Sample UT66aa

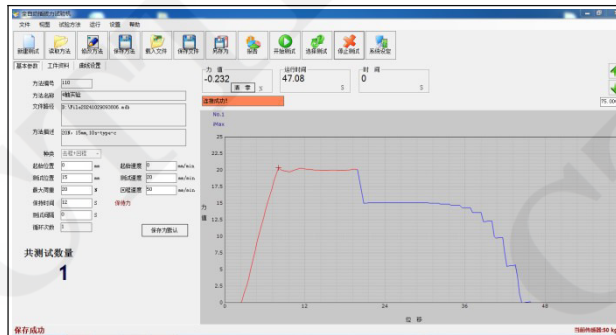


Fig.64 0 degree

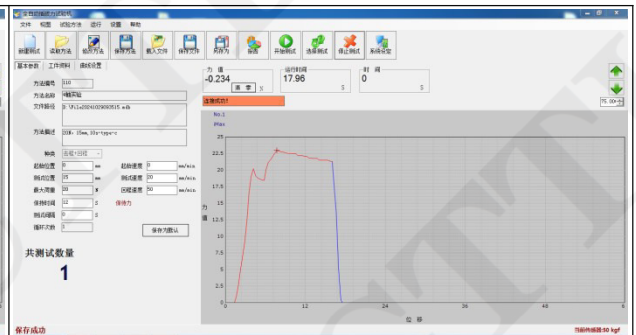


Fig.65 180 degree

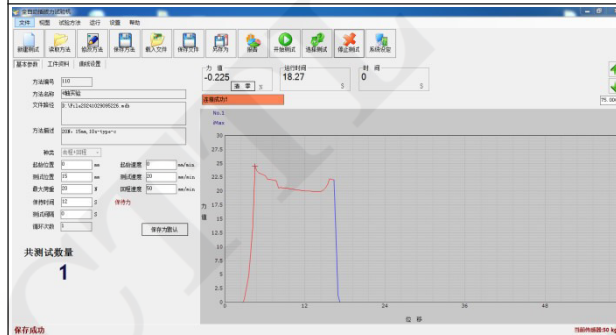


Fig.66 90 degree

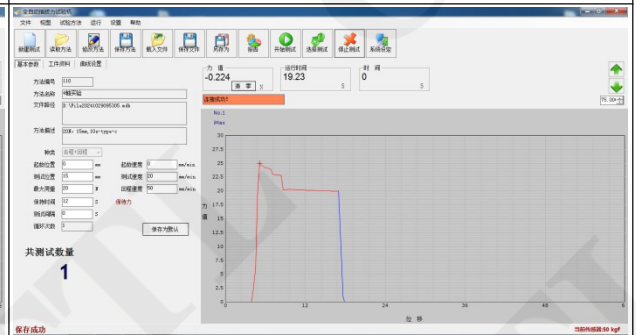


Fig.67 270 degree



# Sample UT67aa

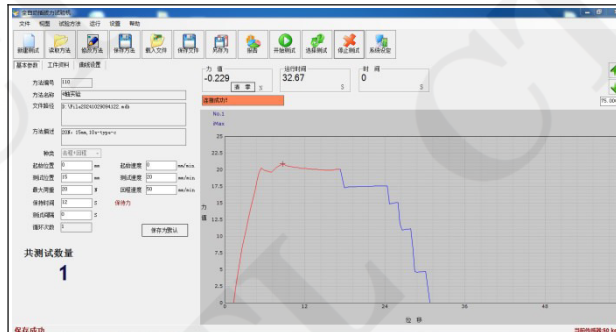


Fig.68 0 degree

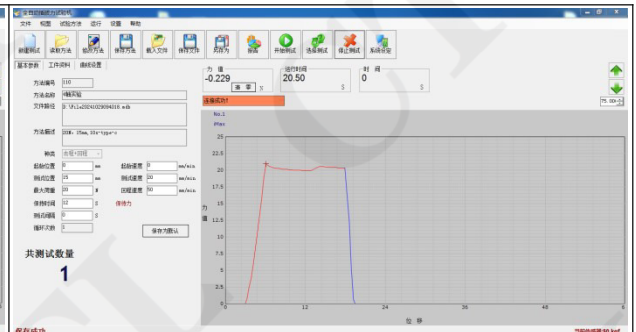


Fig.69 180 degree

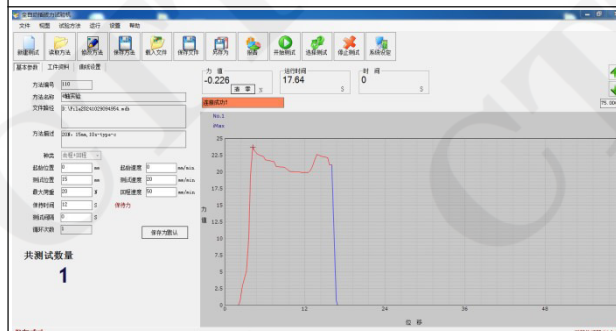


Fig.70 90 degree

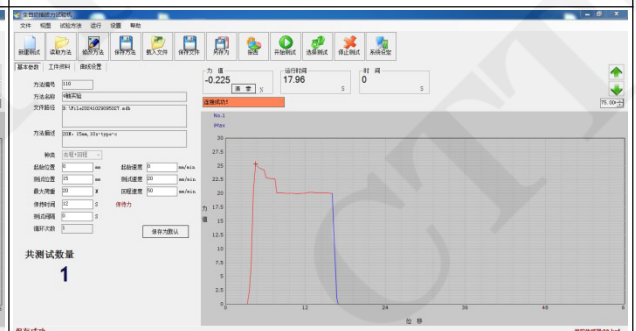


Fig.71 270 degree

# Sample UT68aa

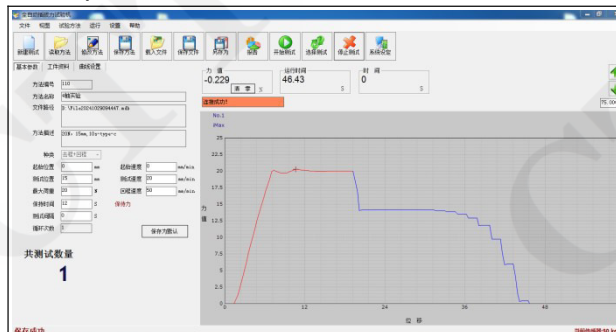


Fig.72 0 degree

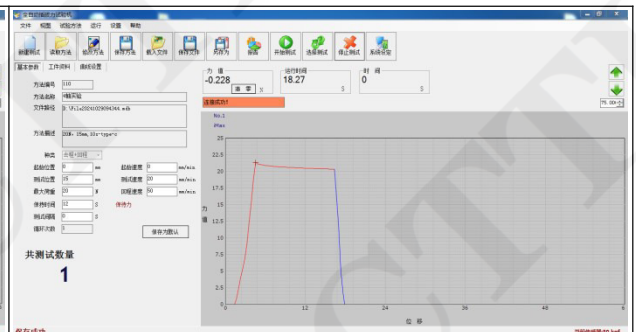


Fig.73 180 degree

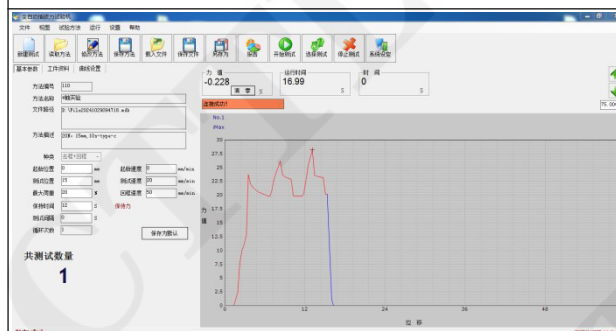


Fig.74 90 degree

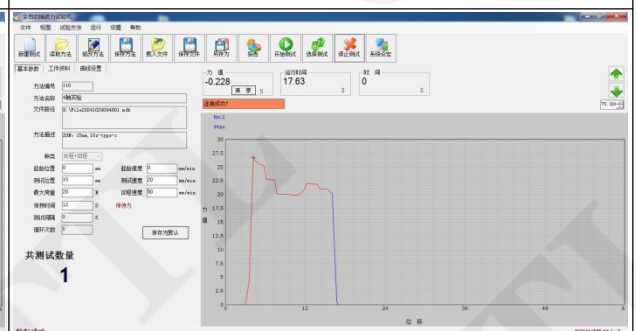


Fig.75 270 degree

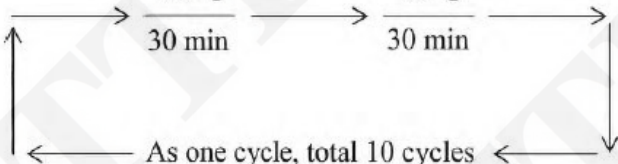
### 8.12. Clause 3.8.2 Temperature life

| A-1-3      Temperature Life |                                             |               |               |             |
|-----------------------------|---------------------------------------------|---------------|---------------|-------------|
| Testing Period              | Measure environment                         |               | Test Engineer | Test Result |
| 2024/10/16-2024/10/21       | Temperature(℃)                              | 22.7 - 23.4   | Zhan Weilong  | Pass        |
|                             | Humidity (RH)                               | 64.3 - 68.5 % |               |             |
| Test condition              | Mated; Temperature: 105±2℃; Duration: 120h. |               |               |             |
| Criteria                    | No evidence of physical damages.            |               |               |             |

| A-3-3      Temperature Life |                                            |               |               |             |
|-----------------------------|--------------------------------------------|---------------|---------------|-------------|
| Testing Period              | Measure environment                        |               | Test Engineer | Test Result |
| 2024/10/16-2024/10/19       | Temperature(℃)                             | 21.3 - 25.2   | Su Kun        | Pass        |
|                             | Humidity (RH)                              | 63.0 - 72.0 % |               |             |
| Test condition              | Mated; Temperature: 105±2℃; Duration: 72h. |               |               |             |
| Criteria                    | No evidence of physical damages.           |               |               |             |

| A-4-3      Temperature Life |                                            |               |               |             |
|-----------------------------|--------------------------------------------|---------------|---------------|-------------|
| Testing Period              | Measure environment                        |               | Test Engineer | Test Result |
| 2024/10/16-2024/10/19       | Temperature(℃)                             | 23.4 - 24.6   | Huang Siwei   | Pass        |
|                             | Humidity (RH)                              | 63.2 - 66.7 % |               |             |
| Test condition              | Mated; Temperature: 105±2℃; Duration: 72h. |               |               |             |
| Criteria                    | No evidence of physical damages.           |               |               |             |

### 8.13. Clause 3.8.2 Thermal shock

| A-2-3 Thermal Shock   |                                                                                                                                                                                                                                                                                     |               |               |             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|-------------|
| Testing Period        | Measure environment                                                                                                                                                                                                                                                                 |               | Test Engineer | Test Result |
| 2024/10/16-2024/10/17 | Temperature(°C)                                                                                                                                                                                                                                                                     | 23.1 - 24.5   | Huang Siwei   | Pass        |
|                       | Humidity (RH)                                                                                                                                                                                                                                                                       | 64.3 - 65.8 % |               |             |
| Test condition        | <p>Mated:</p> <p><math>-55_{-5}^0\text{ }^{\circ}\text{C}</math>  <math>85_{+2}^0\text{ }^{\circ}\text{C}</math>,</p> <p>10 cycles.</p> <p>High/low temperature transfer time within 5 min.</p> |               |               |             |
| Criteria              | No evidence of physical damages.                                                                                                                                                                                                                                                    |               |               |             |

### 8.14. Clause 3.8.2 Cyclic temperature and humidity

| A-2-5      Cyclic temperature and humidity |                                                                                                                                                                                                                                                                                                                                                                  |               |               |             |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|-------------|
| Testing Period                             | Measure environment                                                                                                                                                                                                                                                                                                                                              |               | Test Engineer | Test Result |
| 2024/10/17-2024/10/20                      | Temperature(℃)                                                                                                                                                                                                                                                                                                                                                   | 23.3 - 24.0   | Huang Siwei   | Pass        |
|                                            | Humidity (RH)                                                                                                                                                                                                                                                                                                                                                    | 63.4 - 67.8 % |               |             |
| Test condition                             | <p>Mated:</p> <p>Temperature of 25℃±3℃ relative humidity of 80% ±3% to</p> <p>Temperature of 65℃±3℃ relative humidity of 50% ±3% , Thermal</p>                                                                                                                                                                                                                   |               |               |             |
|                                            | <p>ramp time 0.5 hour , maintain 1 hour, 24 cycles.</p> <div><div><div><div><div>Temperature</div><div>65℃</div><div>25℃</div></div><div><div>Humidity</div><div>80 %R.H.</div><div>50 %R.H.</div></div><div><div>Time</div><div>1.0 h</div><div>0.5 h</div><div>1.0 h</div><div>0.5 h</div></div></div><div>← As one cycle, total 24 cycles →</div></div></div> |               |               |             |
| Criteria                                   | No evidence of physical damages.                                                                                                                                                                                                                                                                                                                                 |               |               |             |

### 8.15. Clause 3.8.2 Vibration

| A-3-5      Vibration |                                                                                                                                                            |        |               |             |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------|-------------|
| Testing Period       | Measure environment                                                                                                                                        |        | Test Engineer | Test Result |
| 2024/10/31           | Temperature(℃)                                                                                                                                             | 23.1   | Su Kun        | Pass        |
|                      | Humidity (RH)                                                                                                                                              | 58.0 % |               |             |
| Test condition       | Mated; random vibration;<br>Frequency:20-500Hz;<br>15min./axis for 3 axis (X,Y,Z);<br>Power spectral density:0.02g <sup>2</sup> /Hz, Acceleration:3.1grms. |        |               |             |
| Criteria             | No evidence of physical damages.<br>No discontinuities of 1us or greater duration happened                                                                 |        |               |             |

# A-3-5 Vibration Curve

Sample UT21aa to UT25aa

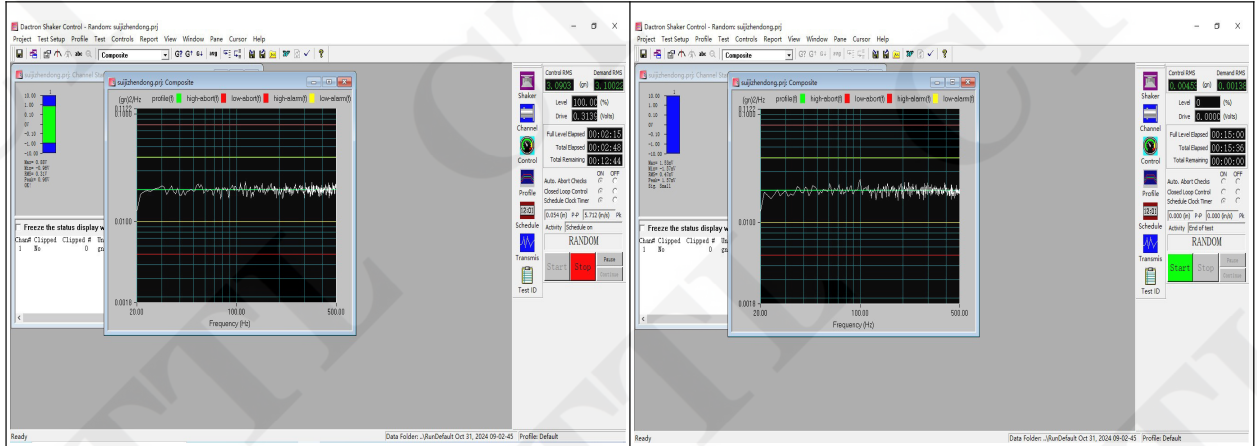


Fig.76 X-axis Under Testing

Fig.77 X-axis After Testing

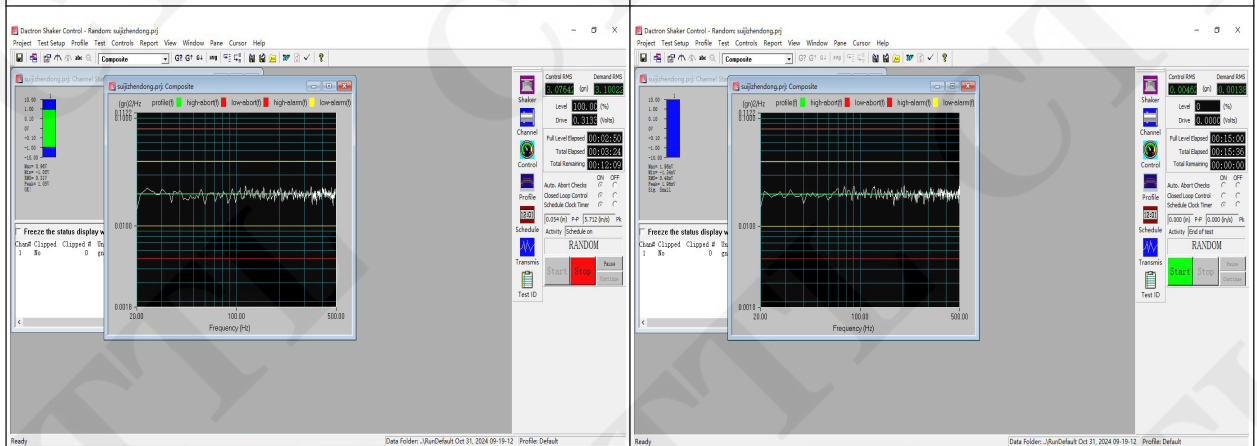


Fig.78 Y-axis Under Testing

Fig.79 Y-axis After Testing

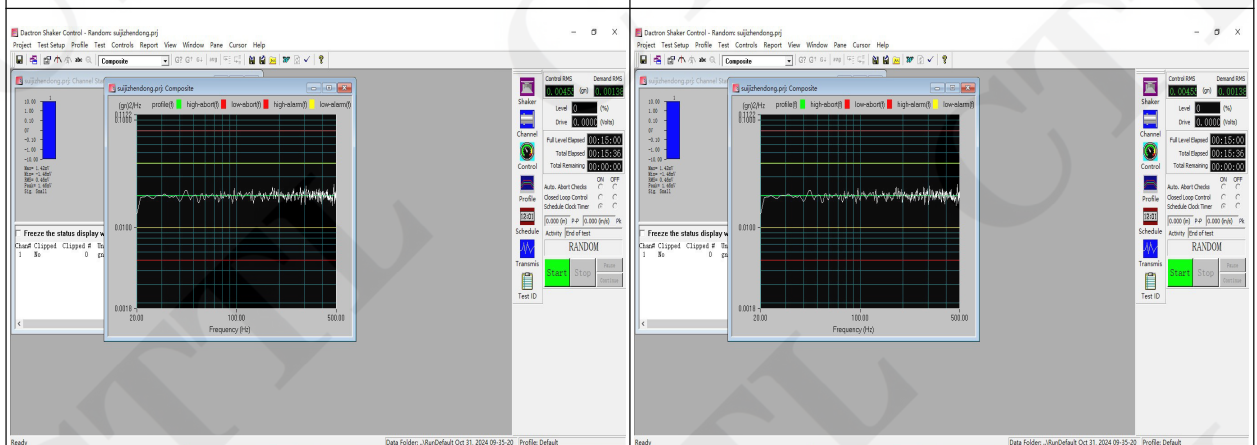


Fig.80 Z-axis Under Testing

Fig.81 Z-axis After Testing



## Sample UT26aa to UT30aa

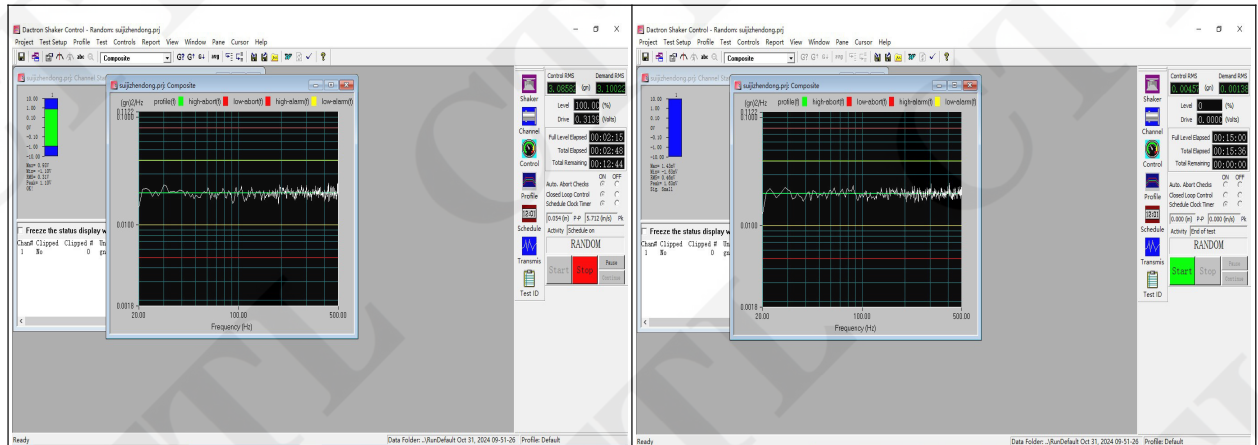


Fig.82 X-axis Under Testing

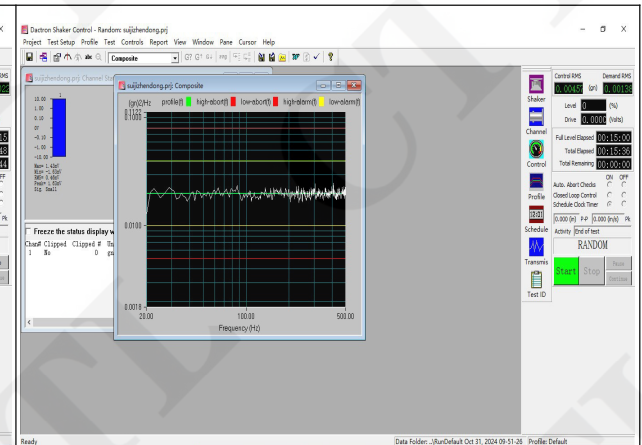


Fig.83 X-axis After Testing

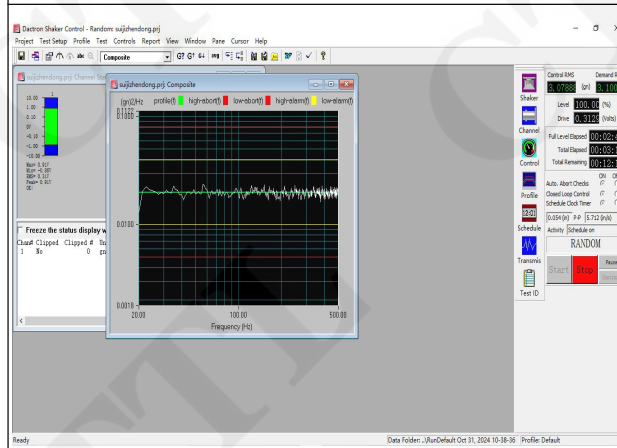


Fig.84 Y-axis Under Testing

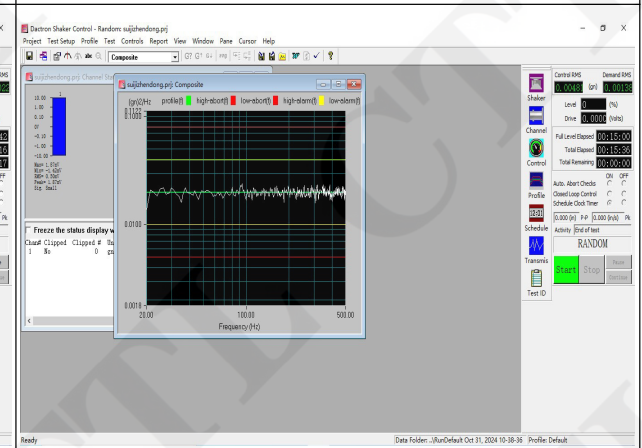


Fig.85 Y-axis After Testing

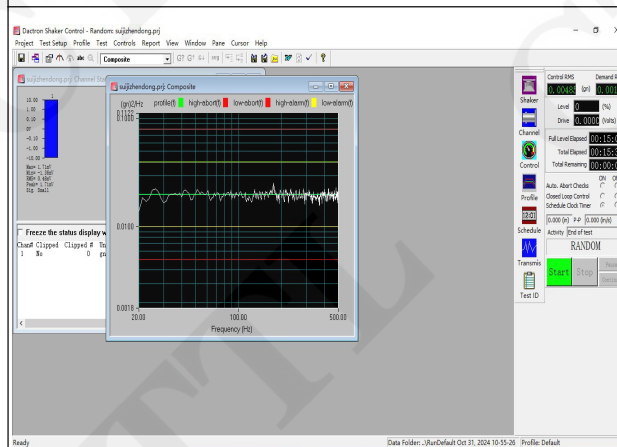


Fig.86 Z-axis Under Testing

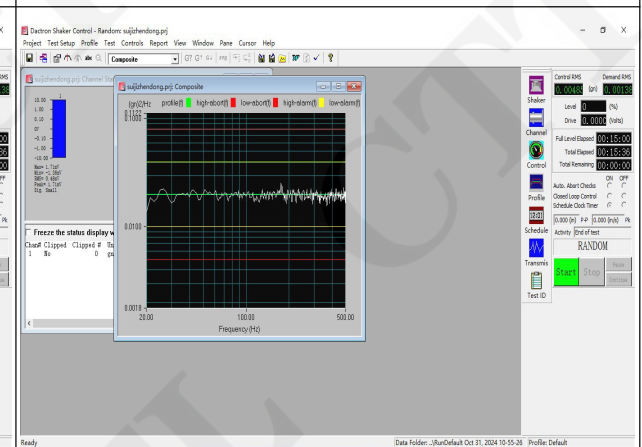


Fig.87 Z-axis After Testing



### 8.16. Clause 3.8.2 Mixed flowing gas

| A-4-5      Mixed flowing gas |                                                                                                                                                                                                                                     |               |               |             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|-------------|
| Testing Period               | Measure environment                                                                                                                                                                                                                 |               | Test Engineer | Test Result |
| 2024/10/21-2024/10/28        | Temperature(℃)                                                                                                                                                                                                                      | 23.7 - 25.6   | Huang Siwei   | Pass        |
|                              | Humidity (RH)                                                                                                                                                                                                                       | 62.3 - 69.5 % |               |             |
| Test condition               | CL2:(10±3) ppb;      No2:(200±50) ppb;    H2S:(10±5) ppb<br>SO2:(100±20) ppb;    Temperature:(30±1)℃;    Humidity:(70±2)%RH<br>1/3 days and then unmated for 2/3 days.<br>The others are exposed mated for full 7 days test period. |               |               |             |
| Criteria                     | No evidence of physical damages.                                                                                                                                                                                                    |               |               |             |

### 8.17. Clause 3.8.2 Thermal disturbance

| A-4-7 Thermal disturbance |                                                                                                                                                                                                                                                                                                                   |               |               |             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|-------------|
| Testing Period            | Measure environment                                                                                                                                                                                                                                                                                               |               | Test Engineer | Test Result |
| 2024/10/28-2024/10/29     | Temperature(℃)                                                                                                                                                                                                                                                                                                    | 23.1 - 23.9   | Huang Siwei   | Pass        |
|                           | Humidity (RH)                                                                                                                                                                                                                                                                                                     | 63.4 - 66.6 % |               |             |
| Test condition            | Mated<br>Cycle the connector or socket between 15 °C ± 3 °C and 85 °C ± 3 °C, as measured on the part. Ramps should be a minimum of 2 °C per minute, and dwell times should insure that the contacts reach the temperature extremes (a minimum of 5 minutes). Humidity is not controlled. Perform 10 such cycles. |               |               |             |
| Criteria                  | No evidence of physical damages.                                                                                                                                                                                                                                                                                  |               |               |             |

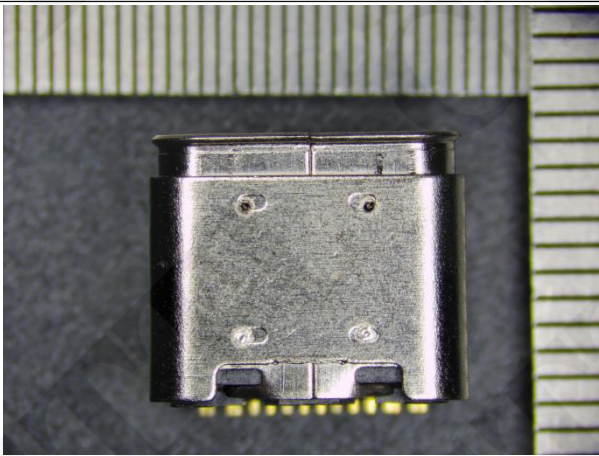
## 9. Test Equipments Utilized

| Name                             | Model          | Serial number | Calibration Date | Expire Date |
|----------------------------------|----------------|---------------|------------------|-------------|
| Oven Machine (ESPEC)             | LC-213         | 1010170285    | 2023.11.24       | 2024.11.23  |
| Thermal Shock Chamber(ESPEC)     | TSE-12-A       | 161003228     | 2023.12.05       | 2024.12.04  |
| Temperature & Humidity Chamber   | GPL-2          | 0010-003613   | 2023.11.24       | 2024.11.23  |
| Mixed Flow Gas Chamber(Yamasaki) | GH-180/VL      | 705           | 2023.12.05       | 2024.12.04  |
| Vibration machine                | V455-PAL1000 L | 1020385-1     | 2023.11.24       | 2024.11.23  |
| Durability Tester                | YH-8816USDT    | 17068816077   | 2023.11.27       | 2024.11.26  |
| Durability Tester                | YH-8816USDT    | 17068816079   | 2023.11.27       | 2024.11.26  |
| 4-axis Tester                    | YH-8812WEXT    | 17068812429   | 2023.11.27       | 2024.11.26  |
| 4-axis Tester                    | YH-8812WEXT    | 17068812430   | 2023.11.27       | 2024.11.26  |
| Microscope                       | MM-400/L       | 3413948       | 2023.11.27       | 2024.11.26  |
| Micro-ohmmeter                   | RM3545         | 170938239     | 2023.11.27       | 2024.11.26  |
| Electronic load meter            | 63610-80-20    | 636001001093  | 2023.11.27       | 2024.11.26  |
| Electronic load meter            | 63610-80-20    | 636001001094  | 2023.11.27       | 2024.11.26  |
| DC power supply                  | 9202B          | 652E22230     | 2023.11.27       | 2024.11.26  |
| Temperature rise test system     | GP10           | S5T909482     | 2023.11.27       | 2024.11.26  |
| Moment disconnection tester      | NM11B          | 20010112      | 2023.11.29       | 2024.11.28  |

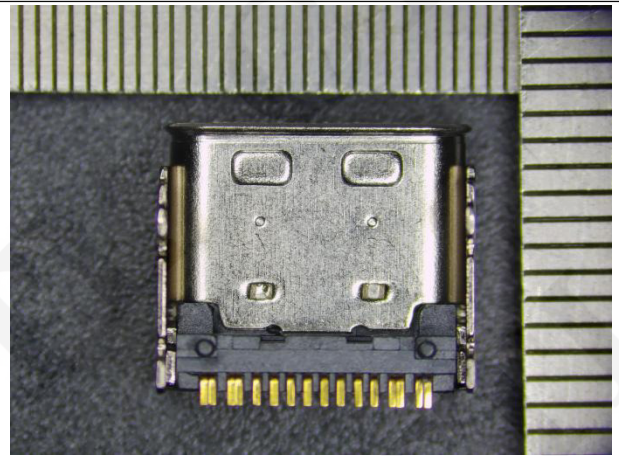


NO.24T04N002264-001-COM

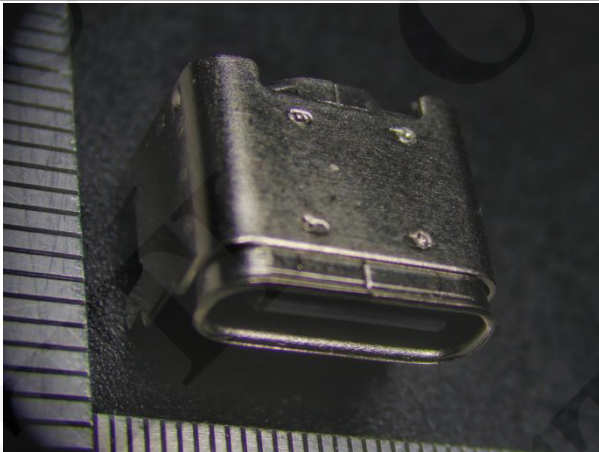
|                            |         |            |            |            |
|----------------------------|---------|------------|------------|------------|
| Electrical Safety Analyzer | TOS9201 | XK002479   | 2023.11.27 | 2024.11.26 |
| AVO meter                  | 87VC    | 37980325WS | 2023.11.27 | 2024.11.26 |

**ANNEX A: UUT photograph**

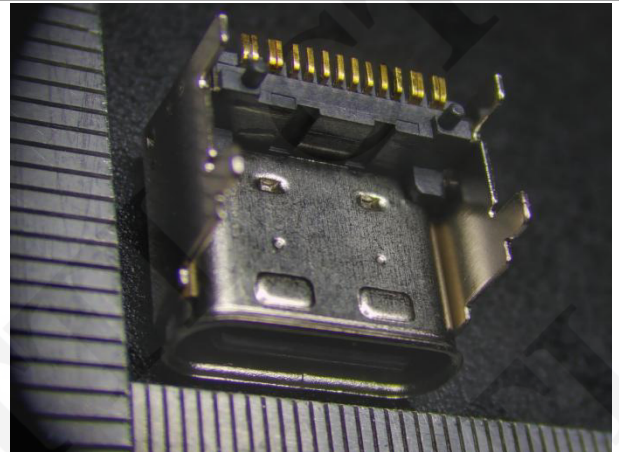
Top



Bottom



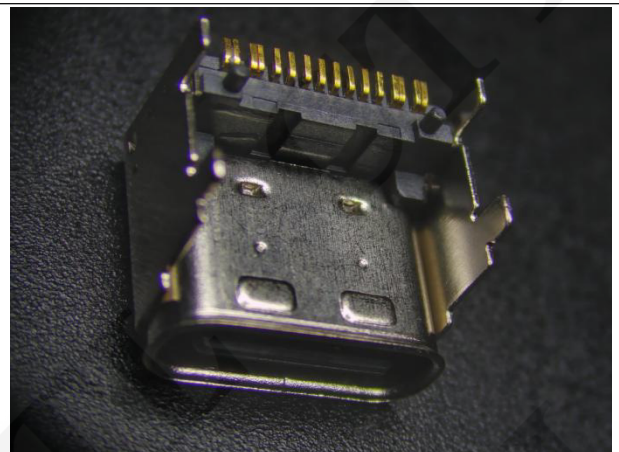
Top



Bottom



Receptacle



Receptacle



**Technical Drawing of USB-C Connector Assembly**

**Dimensions (mm):**

- Overall Length: 9.47±0.15
- Overall Width: 8.0±0.20
- Plug Length: 6.65±0.10
- Plug Width: 2.00±0.10
- After Mating: 7.23, 2.90±0.15, 4.1±0.20, 3.94±0.15, 4.50
- Connector Edge: 9.22, 6.40, 4.80, 2.50, 1.50, 0.60(4X), 0.30(4X), 0.60(4X), 0.50, 1.35, 2.10(Ref), 1.60(4X), 2.00(4X)
- Connector Edge: 9.22±0.20, 6.60, 0.70, 0.60(2X)

**Parts List Table:**

| NO. | PARTS       | MATERIAL                 | REMARKS                          |
|-----|-------------|--------------------------|----------------------------------|
| 1   | TOP SHELL   | STAINLESS STEEL 304      | NH40" MIN PLATED                 |
| 2   | FRONT SHELL | STAINLESS STEEL 304      | NH40" MIN PLATED                 |
| 3   | MID PLATE   | STAINLESS STEEL 301      | CLEAN                            |
| 4   | HOUSING     | HIGH TEMPERATURE PLASTIC | BLACK UL 94 V-0                  |
| 5   | TERMINALS   | COPPER ALLOY C7025       | AU+U MIN PLATING ON CONTACT AREA |

**RECOMMENDED PCB LAYOUT TOLERANCE: ±0.05**

**SCALE: 1:1**

**UNIT: mm**

**DATE: 2023.02.01**

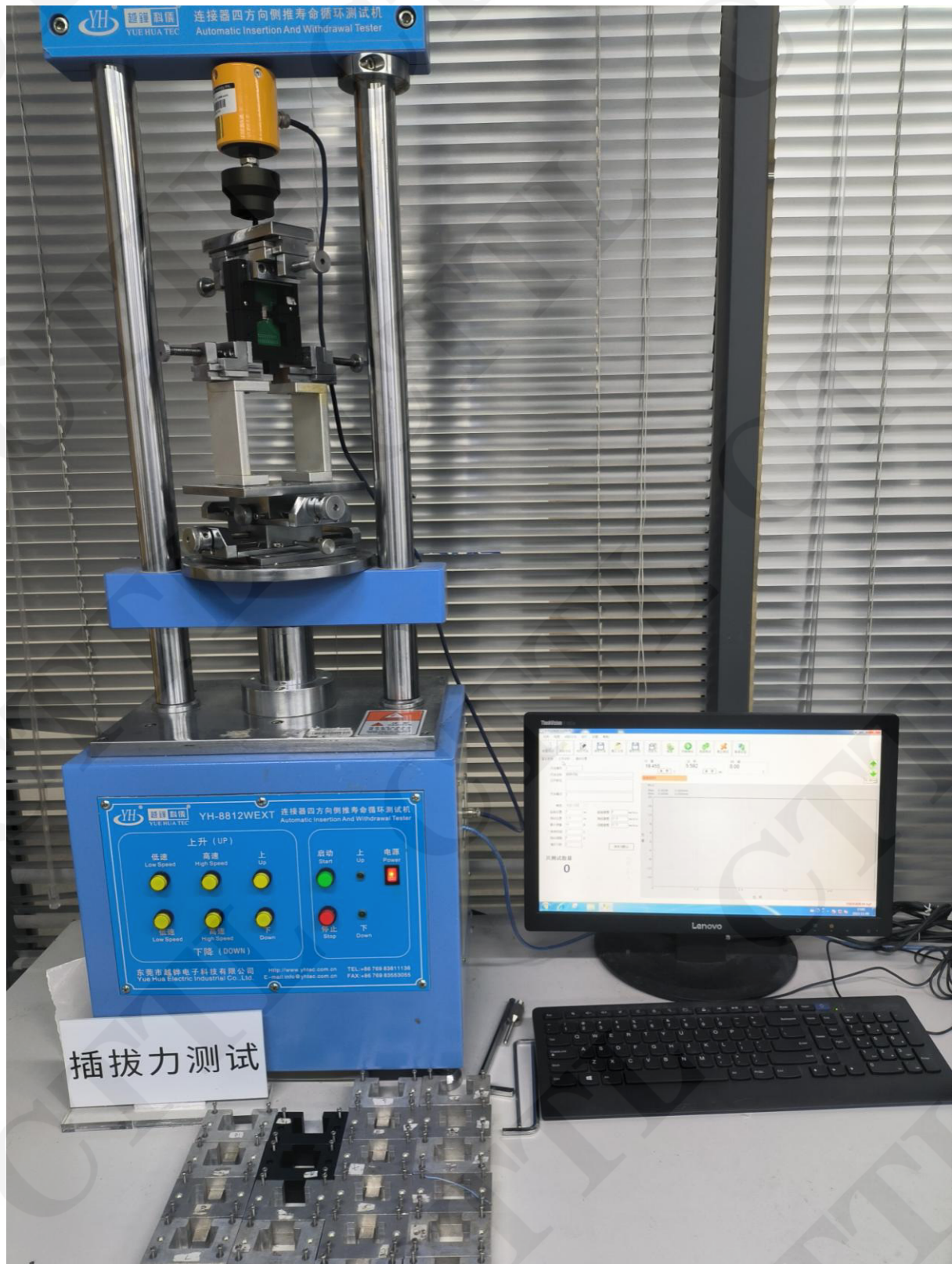
**REV: A/1**

**SHEET: 1/1**

**Pinzan Electronics (Dongguan) Co., Ltd**



## ANNEX C: Insertion Force & Extraction Force Test Layout



## ANNEX D: Durability Test Layout





## **ANNEX E: Dielectric withstanding voltage Test Layout**

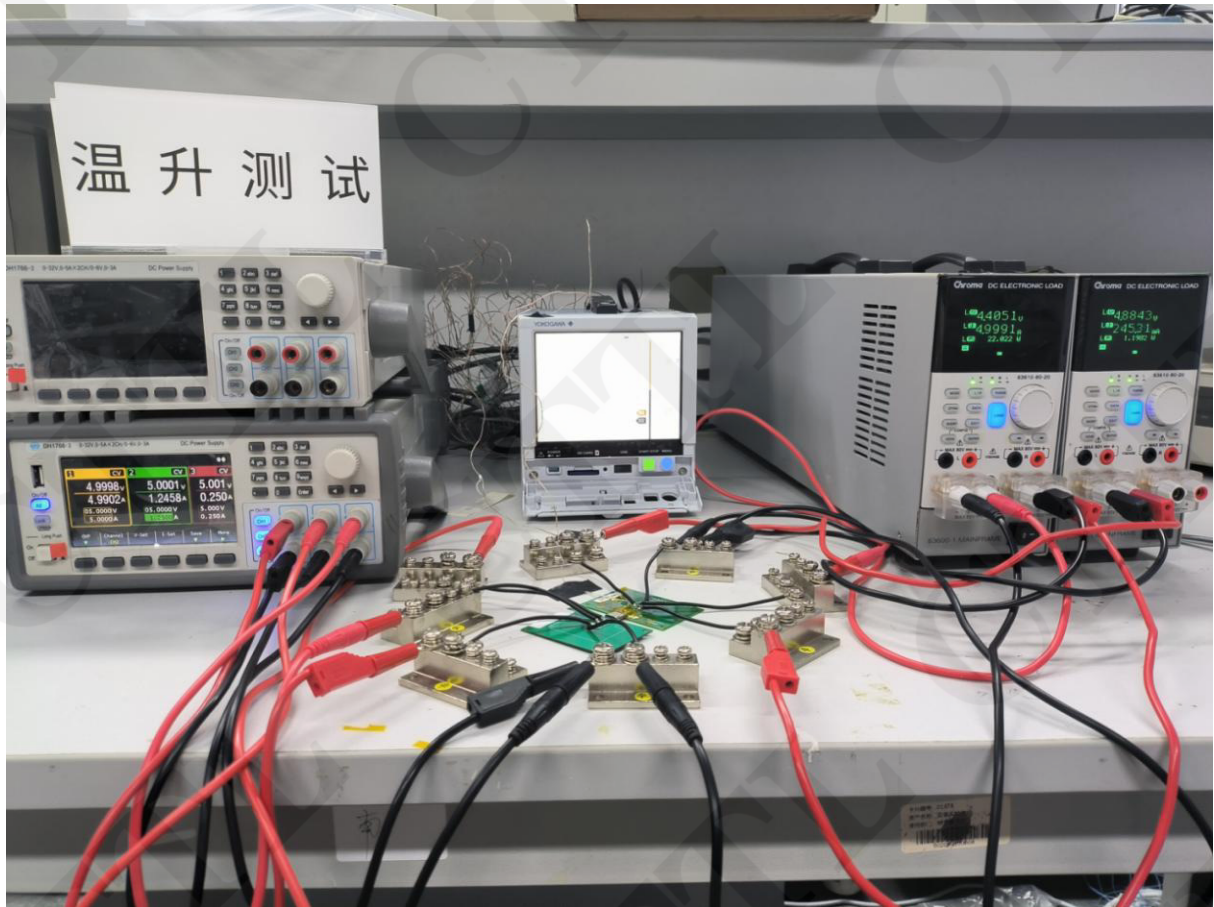


## ANNEX F: Vibration Test Layout





## ANNEX G: Contact Current Rating Test Layout



\*\*\*END OF REPORT\*\*\*