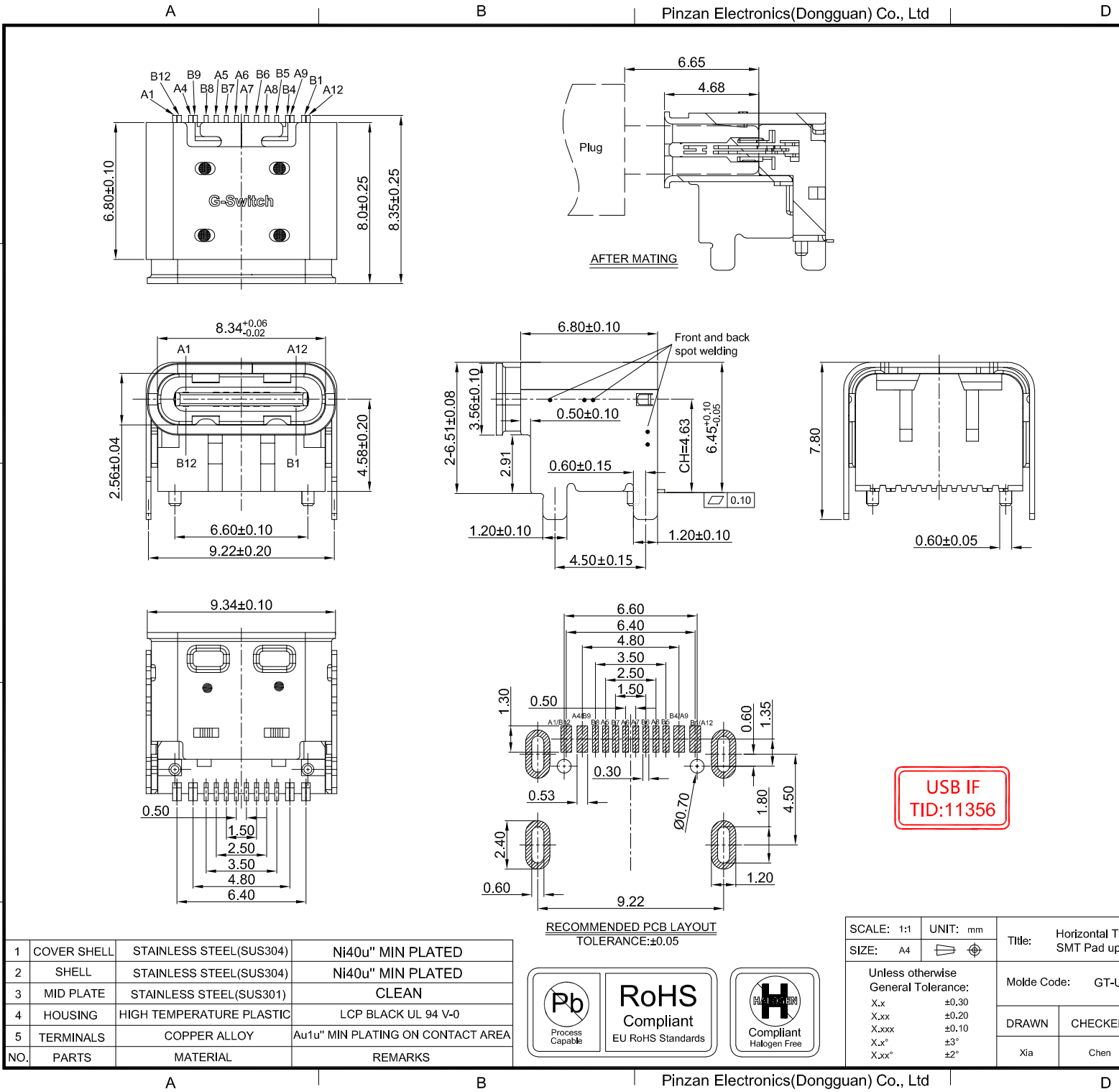


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品赞电子(东莞)有限公司



G-Switch USB-C Specification:

- Current rated: 5A on vbus/1.25A on vconn/0.25A on other
- Voltage rating: 24V AC
- Withstanding voltage: 100V AC/minute
- Contact resistance: 40mΩ Max
- Insulation resistance: 100MΩ Min
- Operating temperature: -40°C ~ +85°C
- Mating force: 5N~20N
- Unmating force: 8N~20N
- Durability cycle:10,000 cycles
- 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

SCALE: 1:1	UNIT: mm	Title: Horizontal Type-c 16P Female SMT Pad up2.9 CH=4.63 L=8.0mm	
SIZE: A4		Molde Code: GT-USB-9016C01	
Unless otherwise General Tolerance: X..x ±0.30 X..xx ±0.20 X..xxx ±0.10 X..x° ±3° X..xx° ±2°		DRAWN	CHECKED
		APPROVED	DATE
		Xia	Chen
		Chen	2023.02.01

品赞科技®
www.dg-switch.com

REV: A0	SHEET: 1/1
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中国认可
国际互认
检测
TESTING
CNAS L13628

EN IEC 62680-1-3 Test Report

24T04N002261-001-COM

For

Type-C Receptacle Connector

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

Product Name: Horizontal Type-c 16P Female SMT Pad up2.9

CH=4.63 L=8.0mm

Model Name: GT-USB-9016C01

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.

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NO.24T04N002261-001-COM

REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04N002261-001-COM	V1	First release	2024-11-05

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



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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: 2024-09-19

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 up2.9 CH=4.63 L=8.0mm
Model Name:	GT-USB-9016C01
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

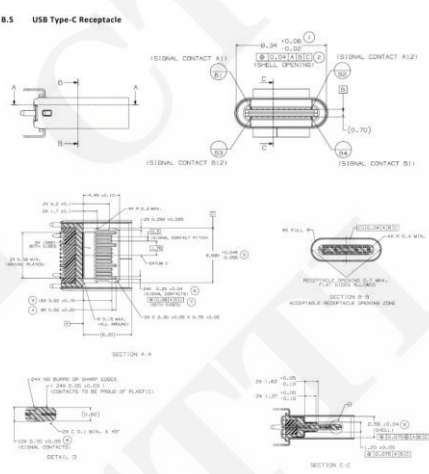
1. EN IEC 62680-1-3:2022, Universal serial bus interfaces for data and power_Part 1-3Common components-USB Type-C(r) cable and connector specification

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 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. • Measure at 20 mV (max) open, circuit at 100 mA.	The following requirements apply to the power and signal contacts: • 40 mΩ (max) initial for VBUS, GND and all other contacts. • 50 mΩ maximum after initial easurement.
3.7.8.2	Dielectric Withstanding Voltage	EIA 364-20 Applicable to both receptacle and plug. • 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 Applicable to both receptacle and plug. 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	8.5 USB Type-C Receptacle  Figure B-5 USB Type-C Receptacle Using SECTION A-A	Table B-5 Receptacle Critical Dimensions for Receptacles Using SECTION A-A in Figure B-5 <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>8.34</td><td>0.04</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>6.000</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> Notes: 1. All values are in millimeters.	Description	Dimension	+ Tol.	- Tol.	1. Receptacle inside opening	8.34	0.04	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	6.000	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	8.34	0.04	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																																								
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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	EIA 364-13 The insertion force test shall be done at a maximum speed of 12.5 mm (0.492") per minute.	Within the range from 5 N to 20 N. This requirement does not apply to the plugs that are used for direct docking without a cable.																																								
3.8.1.2	Extraction force	EIA 364-13 The extraction force test shall be done at a maximum speed of 12.5 mm (0.492") per minute.	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: a) 33 % of the initial reading, and b) within the range of 8 N to 20 N. 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.																																								
3.8.1.3	Durability	EIA 364-09	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.																																								
3.8.1.6	4-Axis Continuity	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.	No discontinuities greater than 1 microsecond duration in any of the four orientations tested.																																								

5.3. Environmental

Clause	Test Item	Test Procedure	Requirement
3.8.2	Temperature life	EIA 364-17, Method A. 105° C without applied voltage for 120 hours. 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 Test Condition VII, Test Letter D	No evidence of physical damages and no discontinuity longer than 1 microsecond. 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 10 Cycles –55°C and +85°C.	No evidence of any physical damage. 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 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. 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
Group A-4	
No.	Test Item
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
Group A-7	
No.	Test Item
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
Group B-1	
No.	Test Item
B-1-4	4-Axis Continuity
Group B-5	
No.	Test Item
B-5-1	Critical Dimensions
Group B-6	
No.	Test Item
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

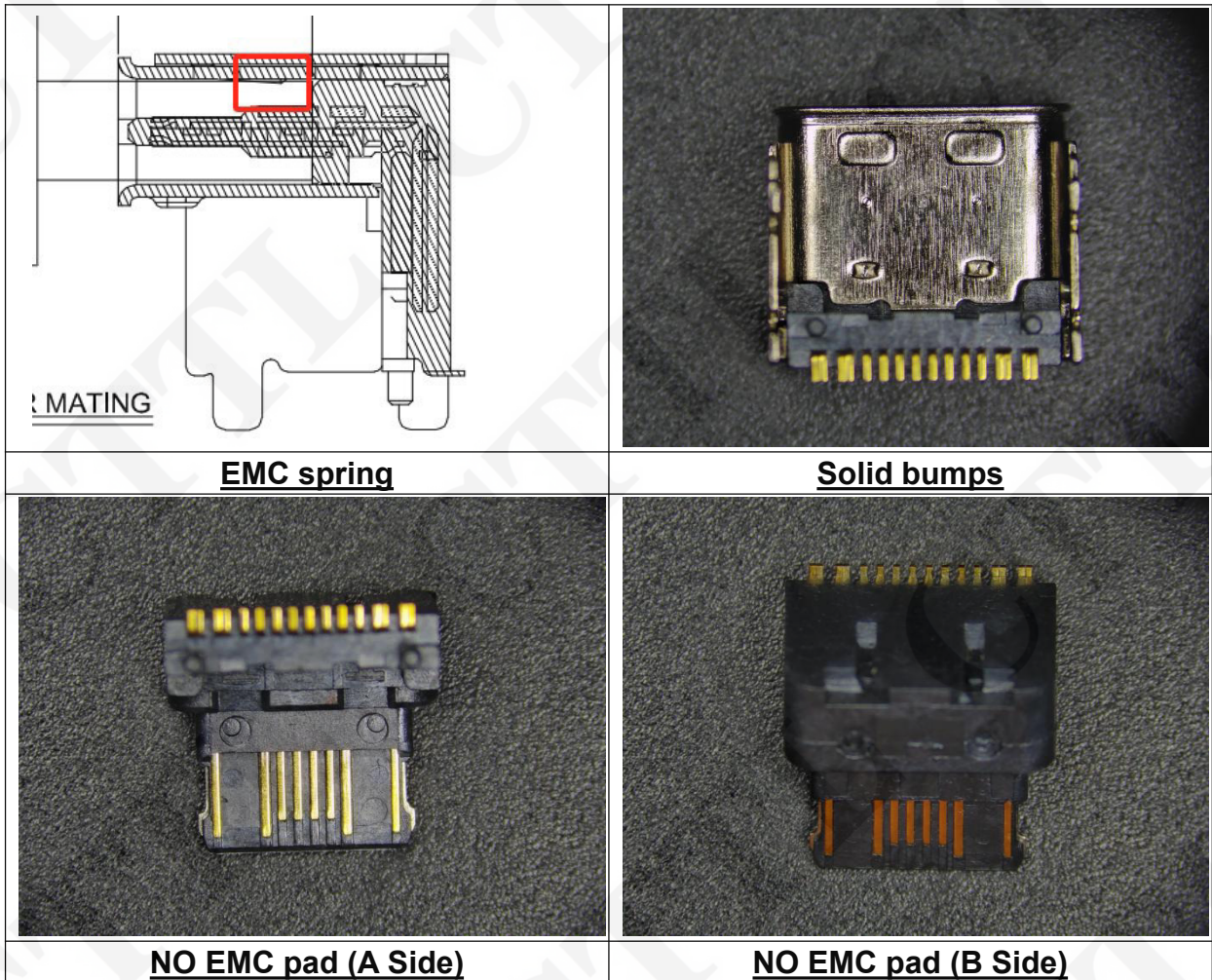
Construction				
Testing Period	Measure environment		Test Engineer	Test Result
2024/09/19	Temperature(°C)	25.2	Huang Siwei	Pass
	Humidity (RH)	79.3 %		

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: Receptacle configurations with a conductive shell. The requirements apply to the receptacle contact dimensions shown in ALTERNATE SECTION A-A Figure B-5. 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
2024/09/19	Temperature(°C)	25.2	Huang Siwei	Pass
	Humidity (RH)	79.3 %		

Test data: (Unit:mm)			
B-5-1 Critical Dimensions – Receptacle			
Description	Sample Coding		
	UT69aa	UT70aa	UT71aa
1.Receptacle inside opening (8.32~8.40)	8.3830	8.3918	8.3842
2.Receptacle insider opening position tolerance (0.04 with datum A/B/C)	0.0340	0.0276	0.0000
3.Receptacle signal pin length (3.35~3.65)	3.4709	3.5680	3.4866
4.Pin length delta (0.30~0.70)	0.4546	0.4979	0.4626
5.Tongue width (6.635~6.735)	6.6815	6.7036	6.6836
6.Contact width (0.21~0.29)	0.2688	0.2732	0.2653
7.Contact width position tolerance (0.08 with datum A/B/C)	0.0606	0.0616	0.0474
8. Tongue thickness (0.65~0.75)	0.7424	0.7413	0.7462
9.Receptacle inside thickness (2.52~2.60)	2.5700	2.5834	2.5762
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. 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. 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. 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.					

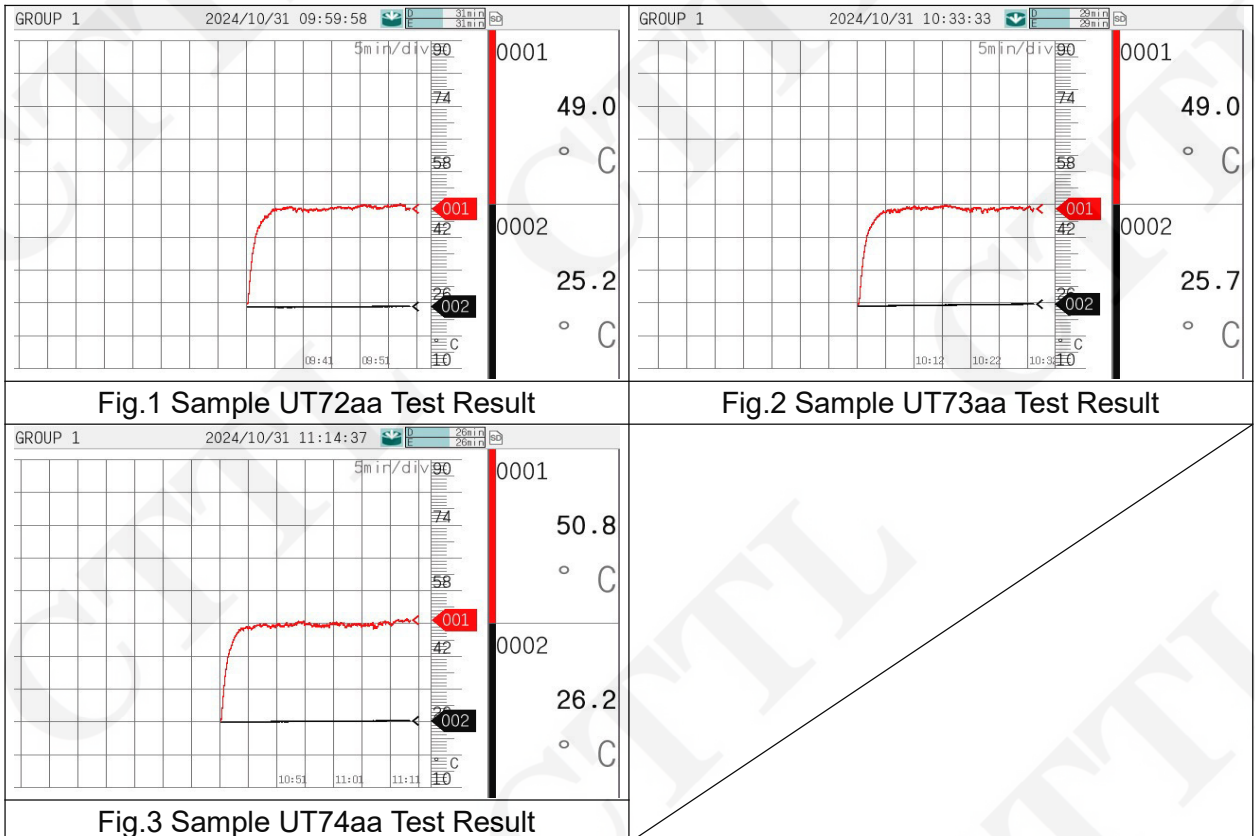
8.6. Clause 3.7.8.4 Contact Current Rating

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）. 2、 1.25A applied to the Vconn pin（i.e.,B5）,terminated. 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

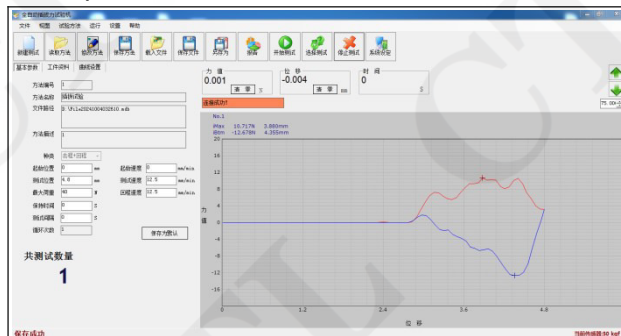


Fig.4 Insertion Force



Fig.5 Initial Extraction Force

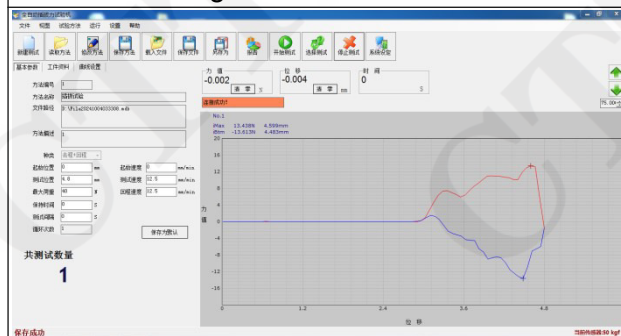


Fig.6 32nd Extraction Force

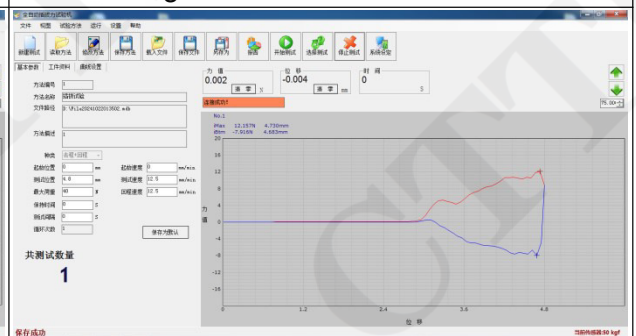


Fig.7 Final Extraction Force

Sample UT52aa

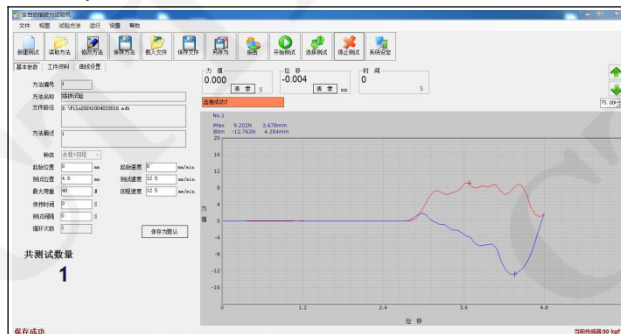


Fig.8 Insertion Force

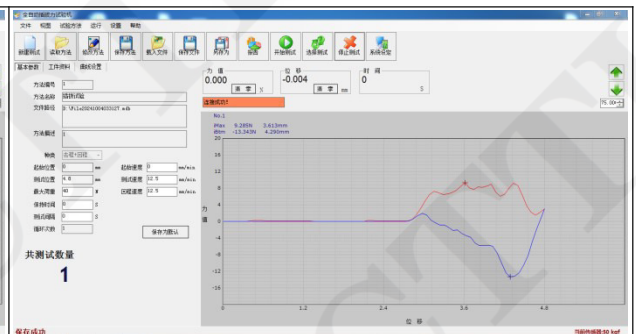


Fig.9 Initial Extraction Force

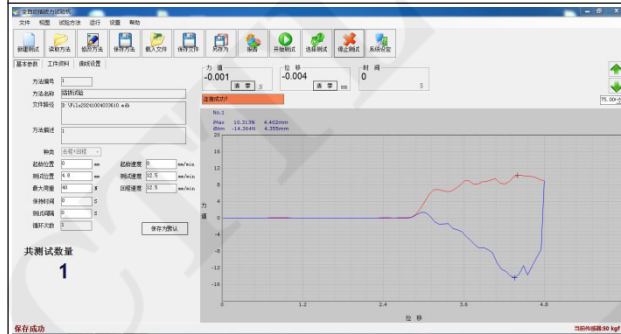


Fig.10 32nd Extraction Force

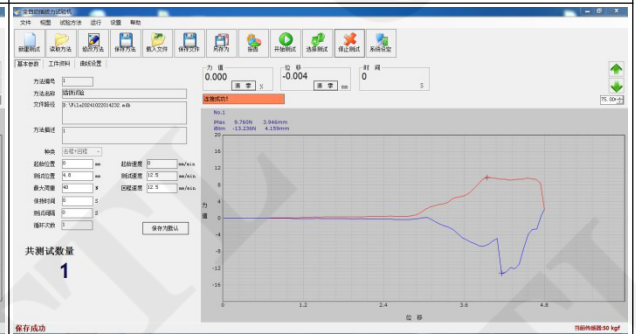


Fig.11 Final Extraction Force

Sample UT53aa

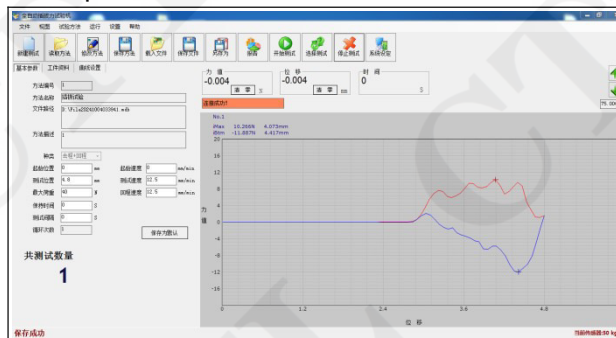


Fig.12 Insertion Force



Fig.13 Initial Extraction Force

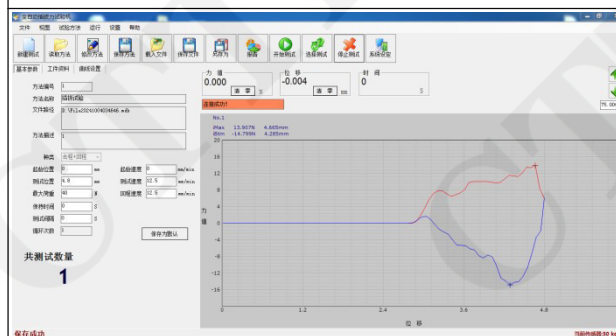


Fig.14 32nd Extraction Force

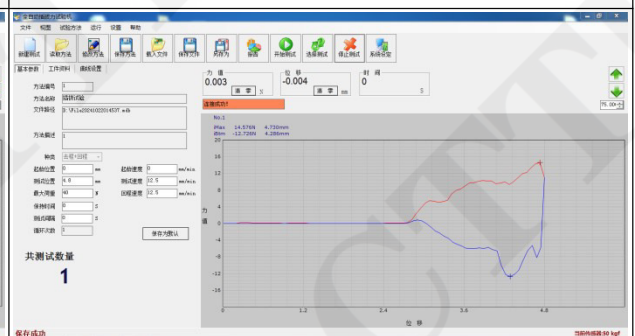


Fig.15 Final Extraction Force

Sample UT54aa

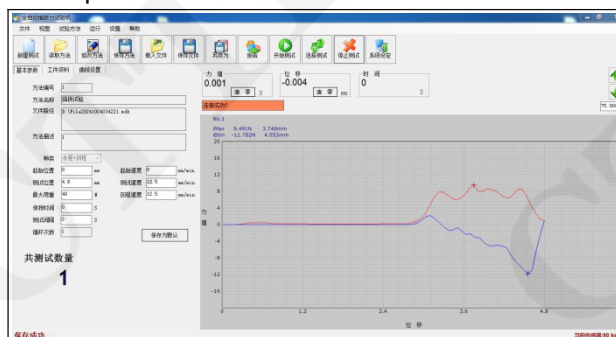


Fig.16 Insertion Force

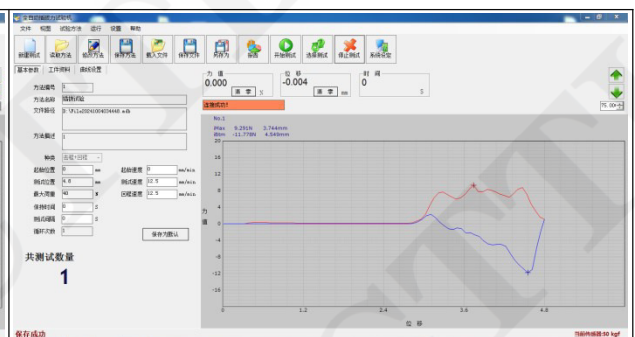


Fig.17 Initial Extraction Force



Fig.18 32nd Extraction Force

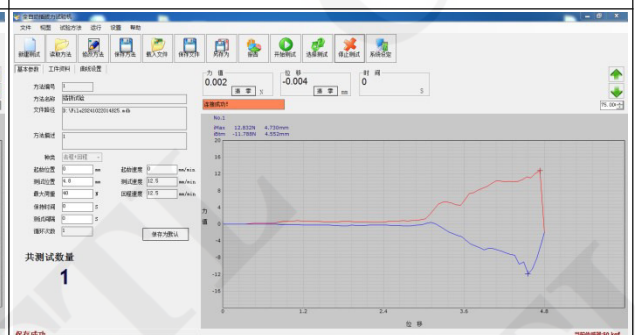


Fig.19 Final Extraction Force

Sample UT55aa

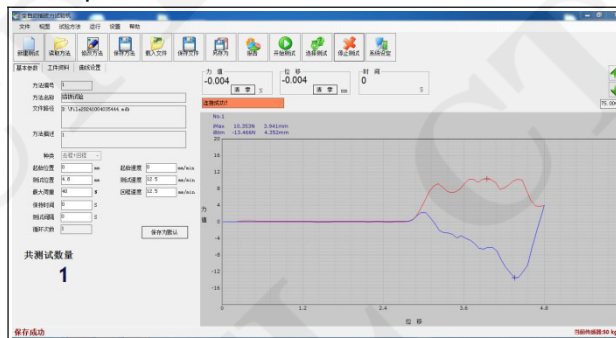


Fig.20 Insertion Force

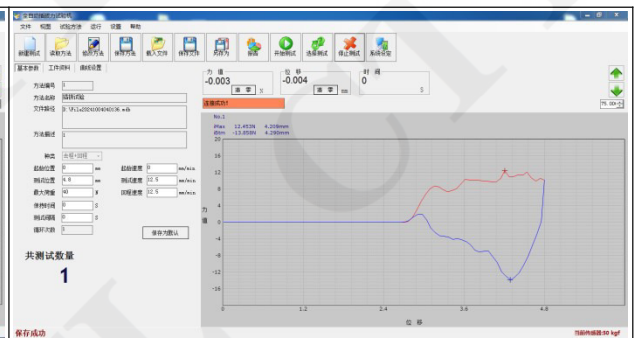


Fig.21 Initial Extraction Force

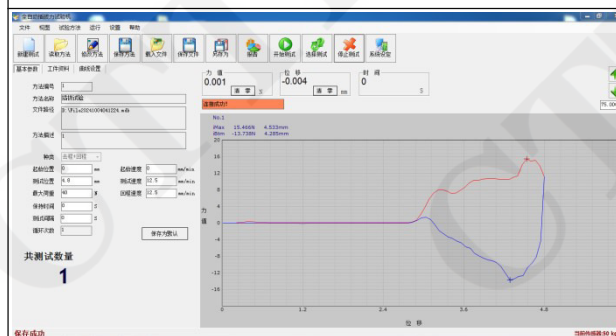


Fig.22 32nd Extraction Force

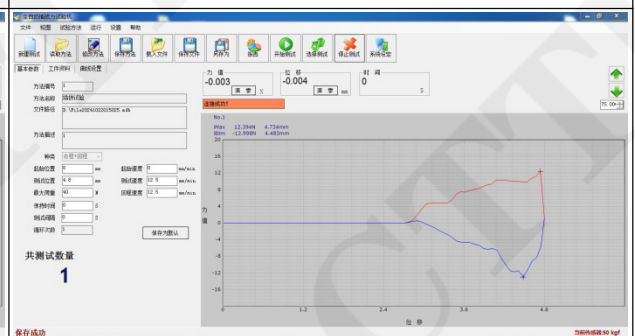


Fig.23 Final Extraction Force

Sample UT56aa

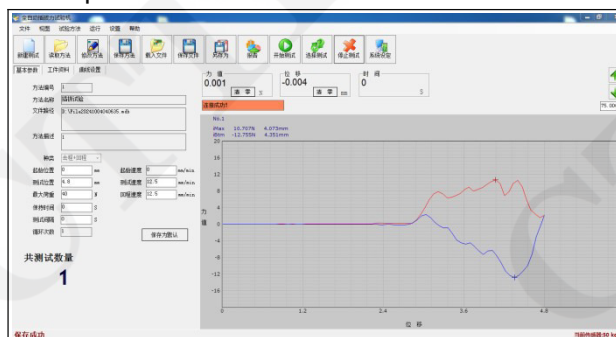


Fig.24 Insertion Force

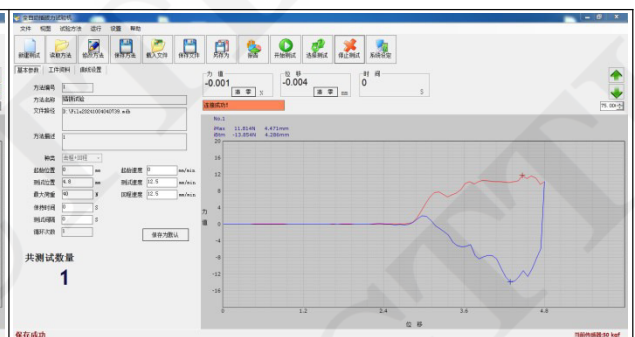


Fig.25 Initial Extraction Force



Fig.26 32nd Extraction Force

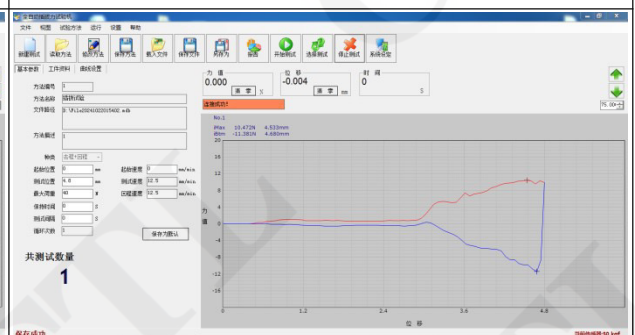
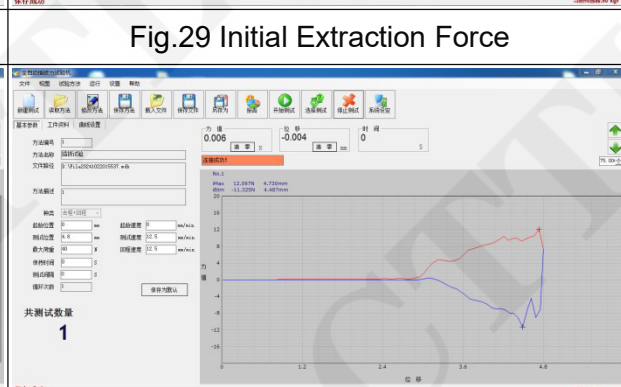
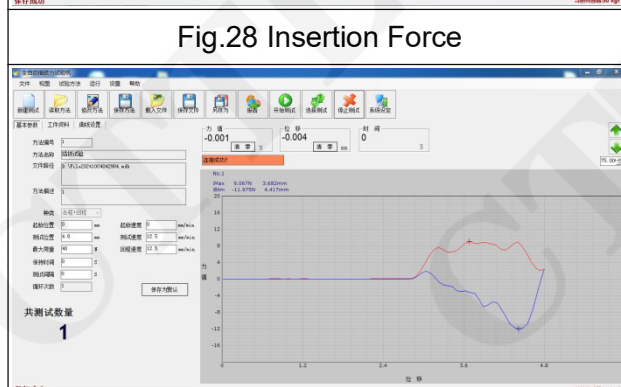
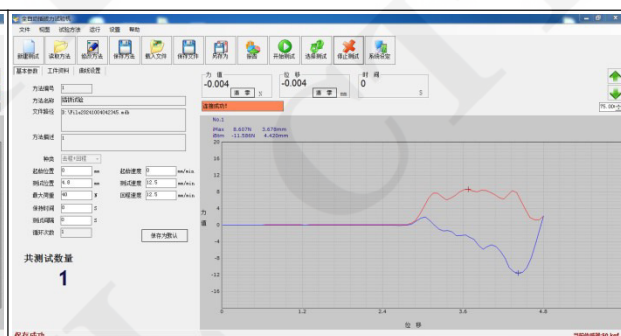
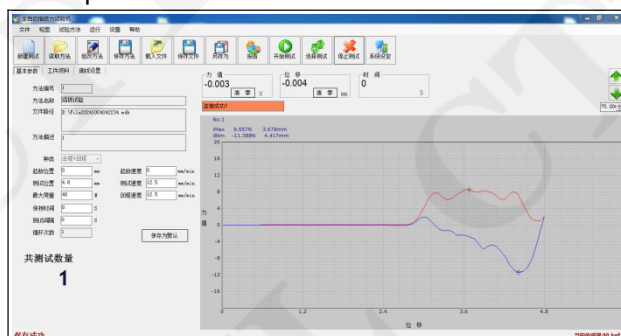
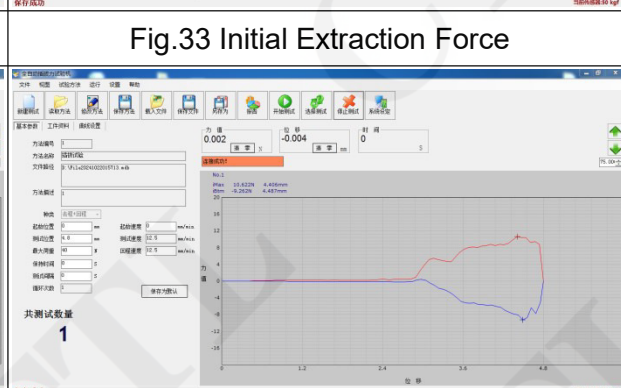
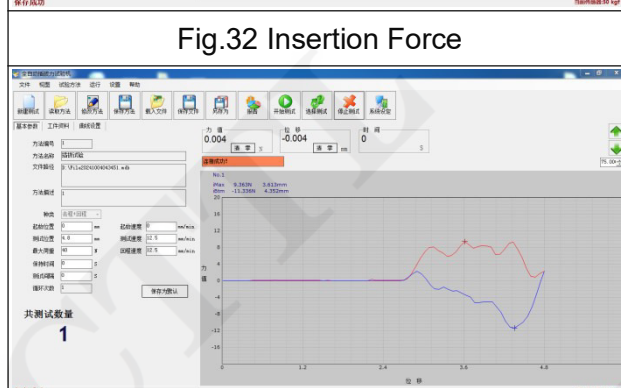
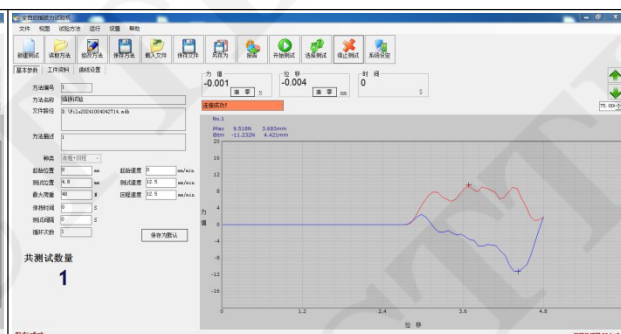
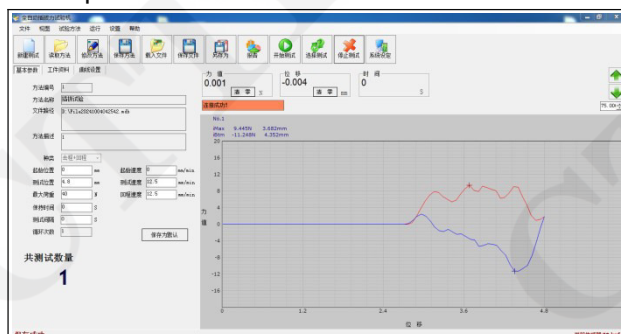


Fig.27 Final Extraction Force

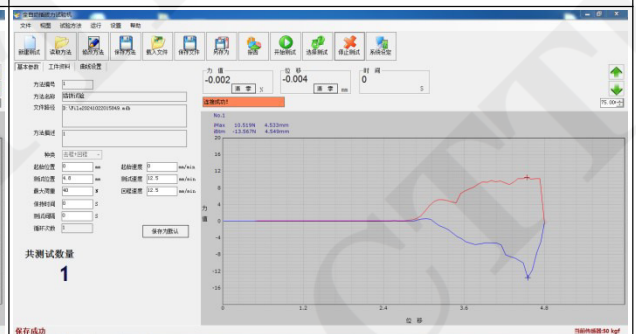
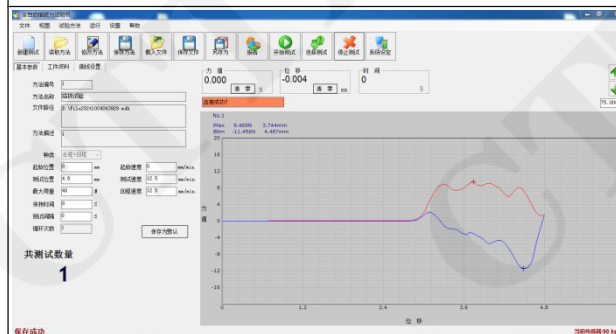
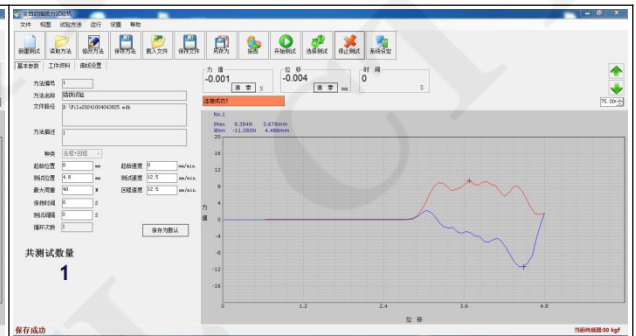
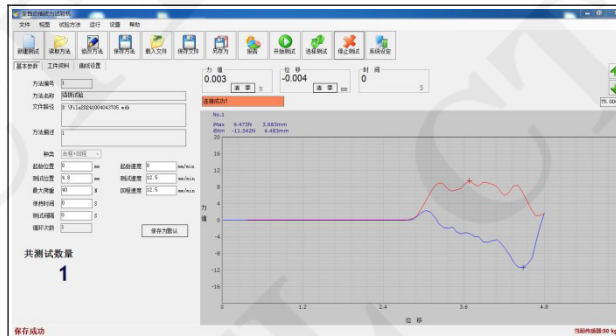
Sample UT57aa



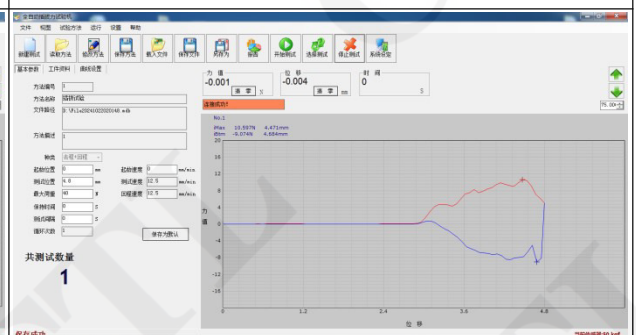
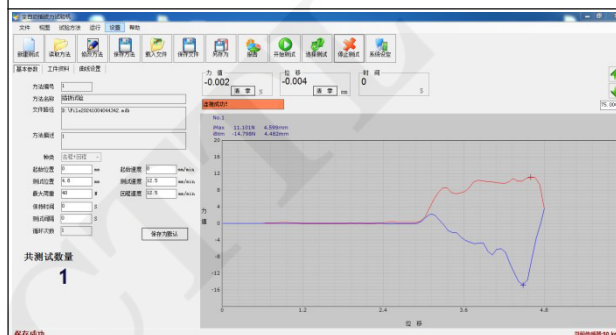
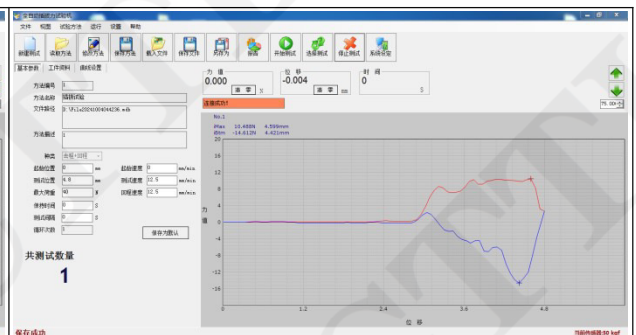
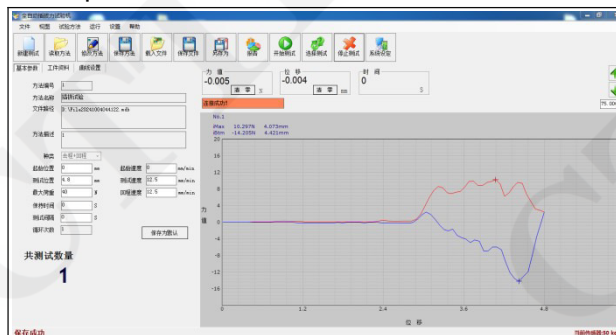
Sample UT58aa



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. 2468 cycles (normal) + 2500 cycles (Rotate the receptacle 180°) + 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. 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

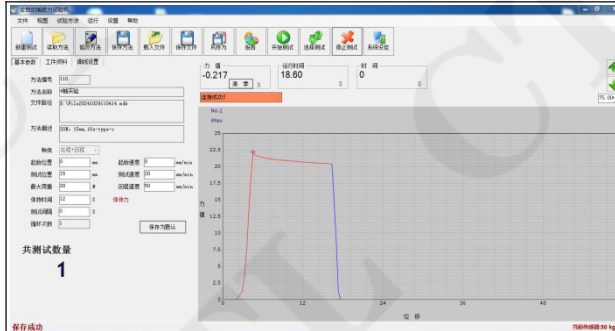


Fig.44 0 degree

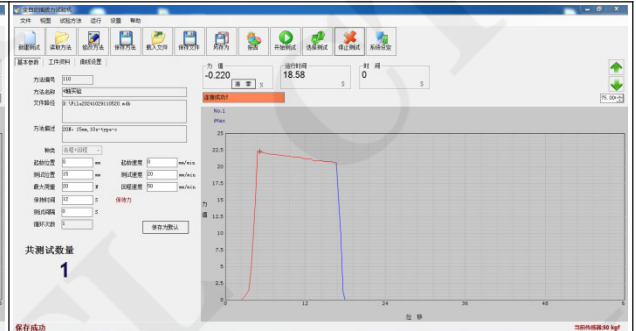


Fig.45 180 degree

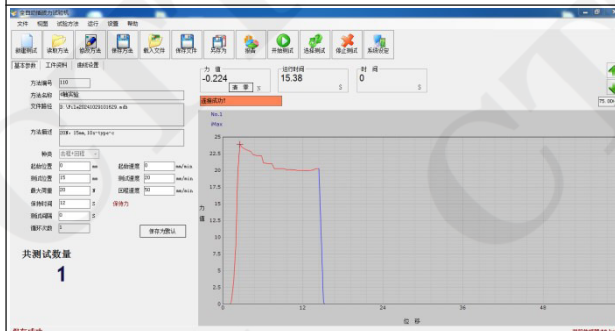


Fig.46 90 degree

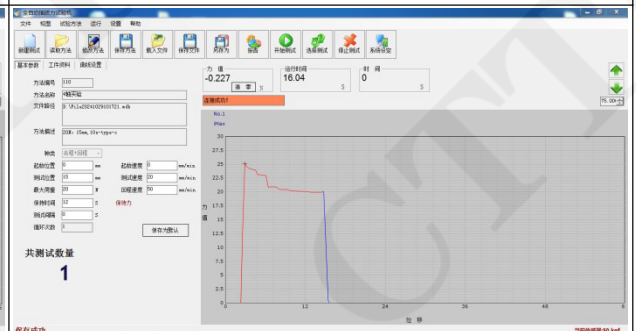


Fig.47 270 degree

Sample UT62aa

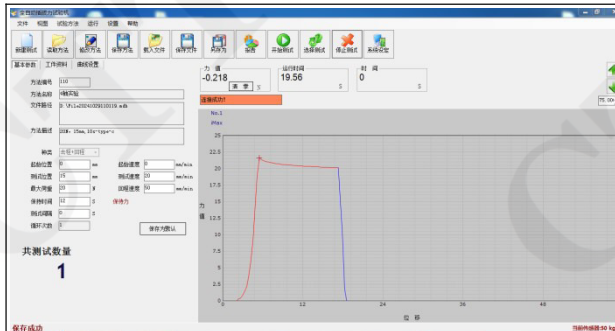


Fig.48 0 degree

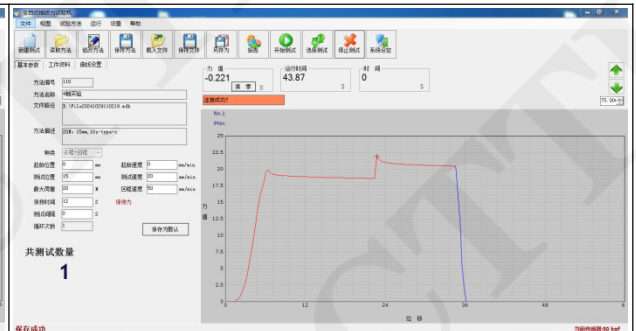


Fig.49 180 degree

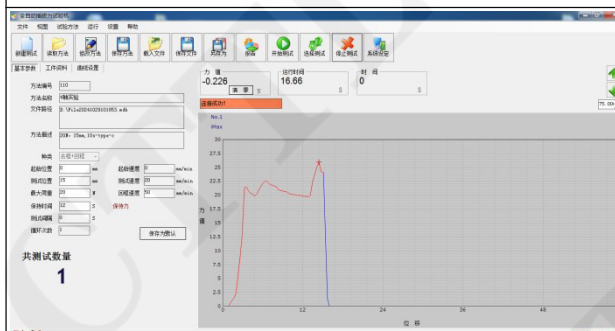


Fig.50 90 degree

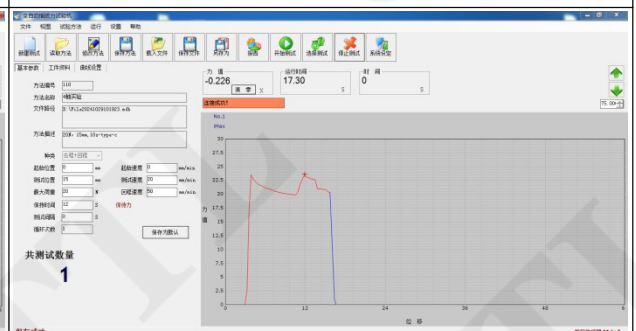


Fig.51 270 degree

Sample UT63aa

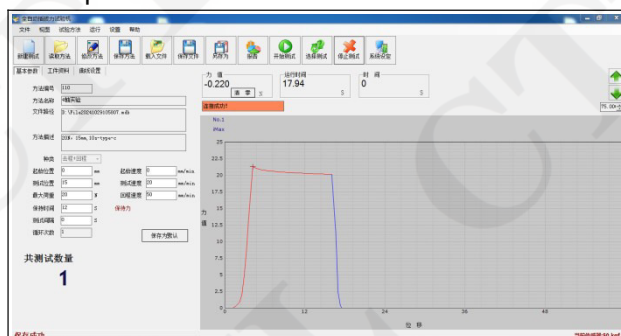


Fig.52 0 degree

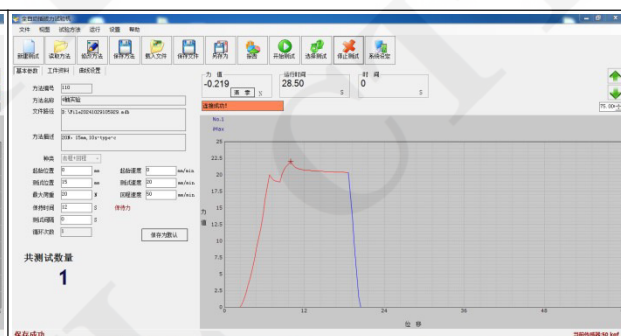


Fig.53 180 degree

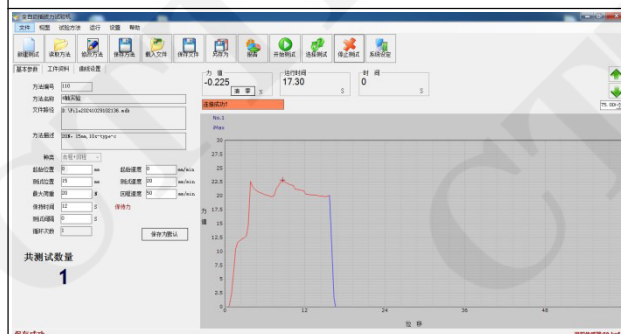


Fig.54 90 degree

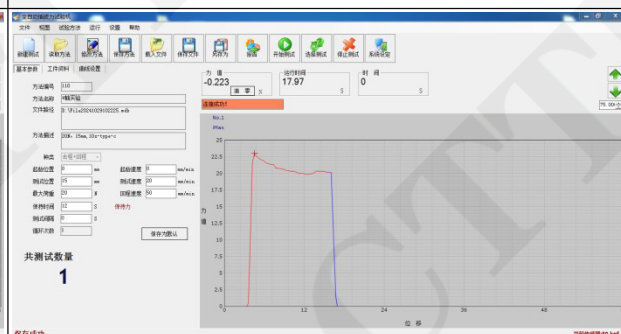


Fig.55 270 degree

Sample UT64aa

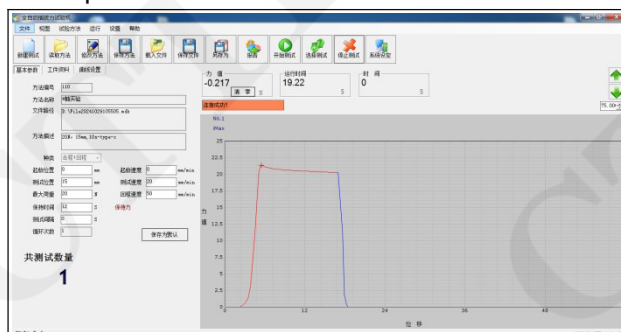


Fig.56 0 degree

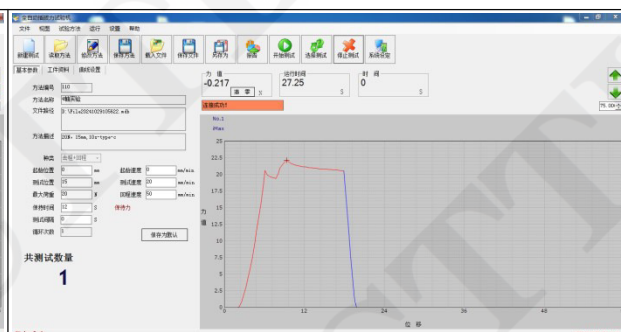


Fig.57 180 degree

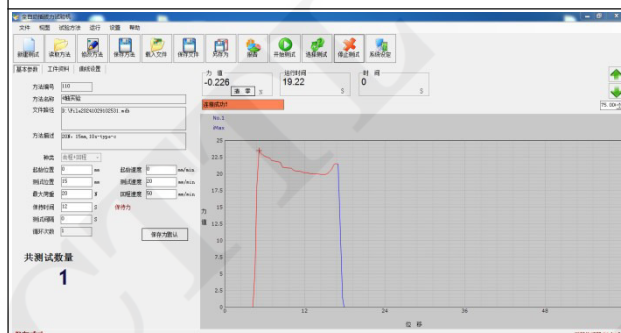


Fig.58 90 degree

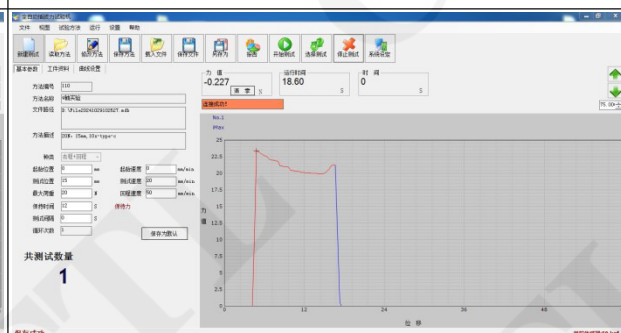


Fig.59 270 degree

Figure 1 displays two side-by-side software interfaces comparing test results (left) and simulation results (right). Both interfaces show a graph of Force (力) versus Displacement (位移). The left interface, labeled '测试软件' (Test Software), shows a peak force of -0.222 N. The right interface, labeled '仿真软件' (Simulation Software), shows a peak force of -0.217 N. Both graphs show a red curve for the test result and a blue curve for the simulation result. The test results are labeled '共测试数量 1' (Total test quantity 1) and the simulation results are labeled '共测试数量 1' (Total test quantity 1).

Fig.61 180 degree

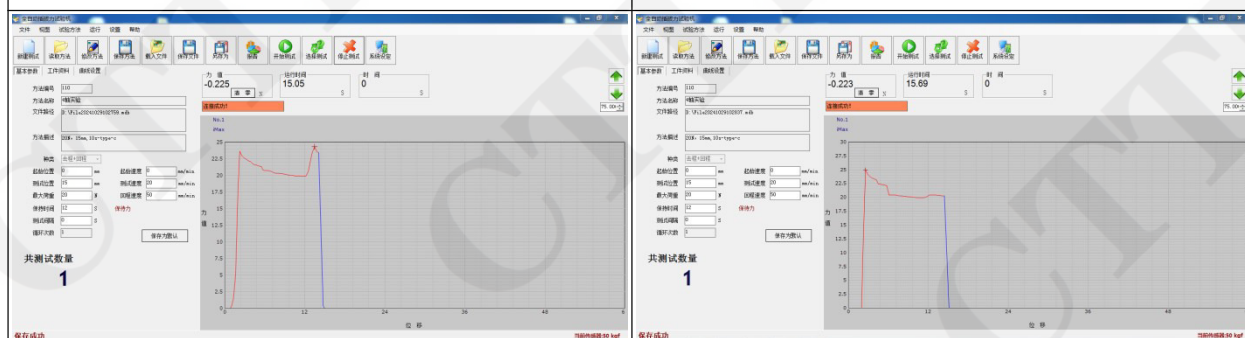


Fig.63 270 degree

Fig.65 180 degree

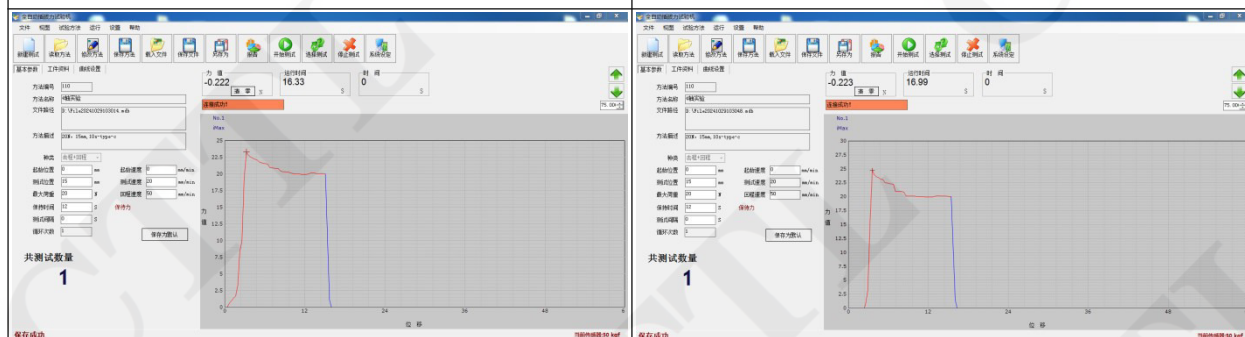


Fig.67 270 degree

Sample UT67aa

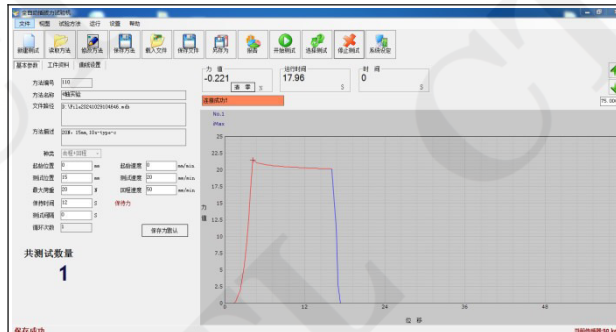


Fig.68 0 degree

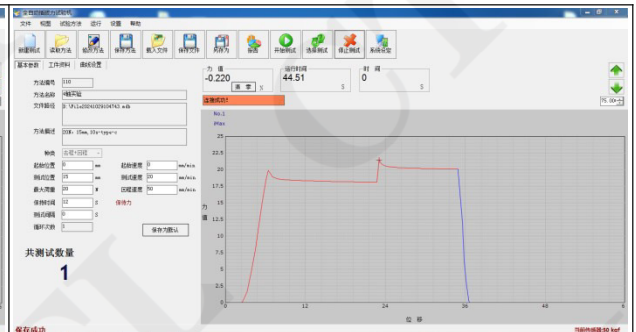


Fig.69 180 degree

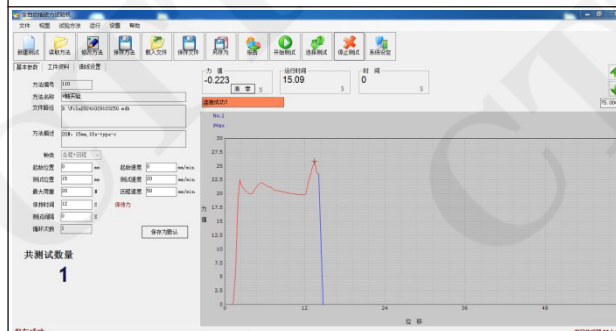


Fig.70 90 degree

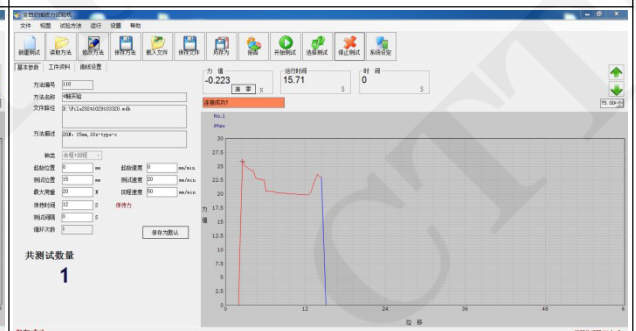


Fig.71 270 degree

Sample UT68aa

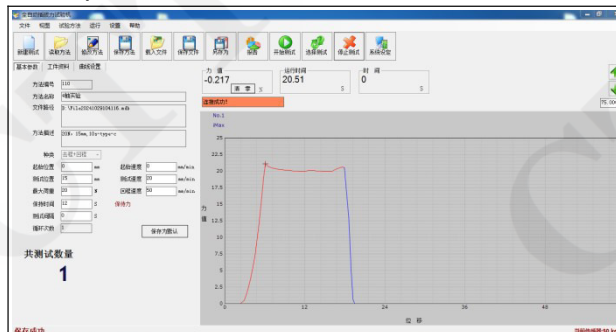


Fig.72 0 degree

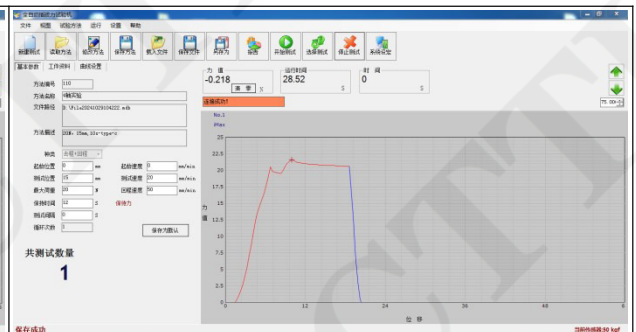


Fig.73 180 degree

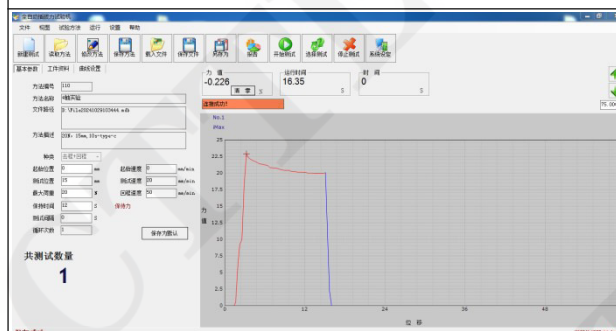


Fig.74 90 degree

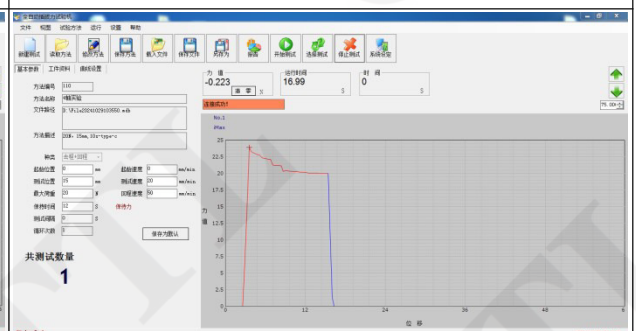


Fig.75 270 degree

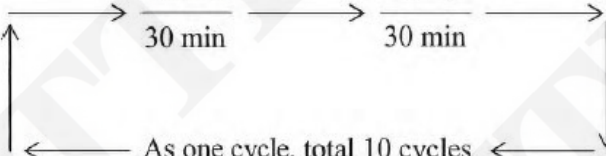
8.12. Clause 3.8.2 Temperature life

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	Mated: $-55_{-5}^0\text{ }^{\circ}\text{C}$  $85_{+2}^0\text{ }^{\circ}\text{C}$, 10 cycles. High/low temperature transfer time within 5 min.			
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	Mated: Temperature of 25℃±3℃ relative humidity of 80% ±3% to Temperature of 65℃±3℃ relative humidity of 50% ±3% , Thermal ramp time 0.5 hour , maintain 1 hour, 24 cycles.			
	Temperature 65℃ 25℃ Humidity 80 %R.H. 50 %R.H. Time 1.0 h 0.5 h 1.0 h 0.5 h ← As one cycle, total 24 cycles →			
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; Frequency:20-500Hz; 15min./axis for 3 axis (X,Y,Z); Power spectral density:0.02g ² /Hz, Acceleration:3.1grms.			
Criteria	No evidence of physical damages. No discontinuities of 1us or greater duration happened			

A-3-5 Vibration Curve

Sample UT21aa to UT25aa

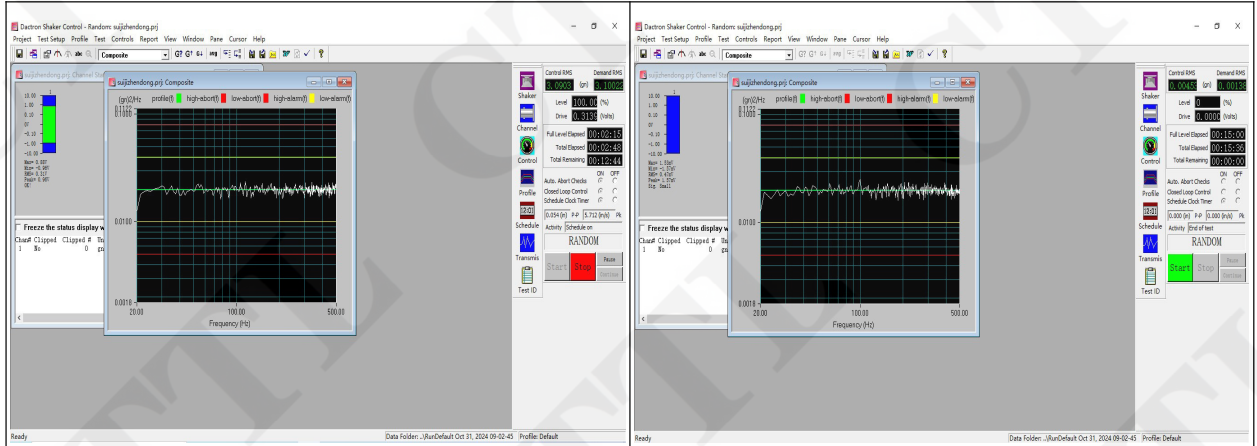


Fig.76 X-axis Under Testing

Fig.77 X-axis After Testing

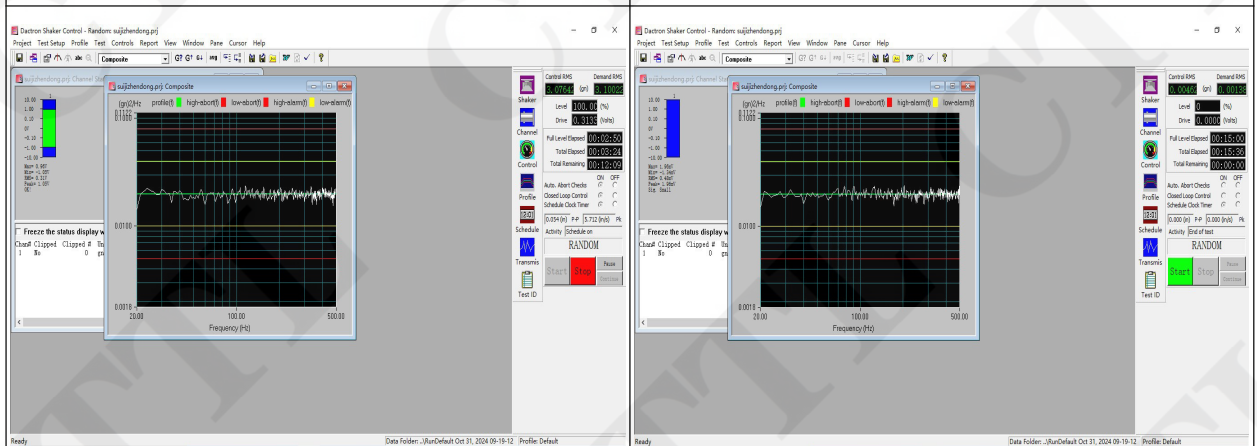


Fig.78 Y-axis Under Testing

Fig.79 Y-axis After Testing

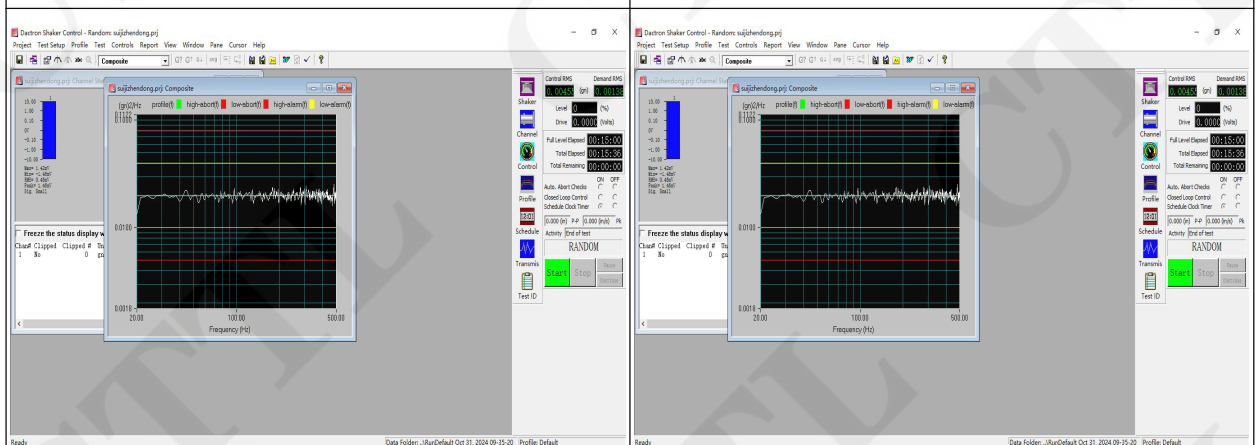


Fig.80 Z-axis Under Testing

Fig.81 Z-axis After Testing

Sample UT26aa to UT30aa

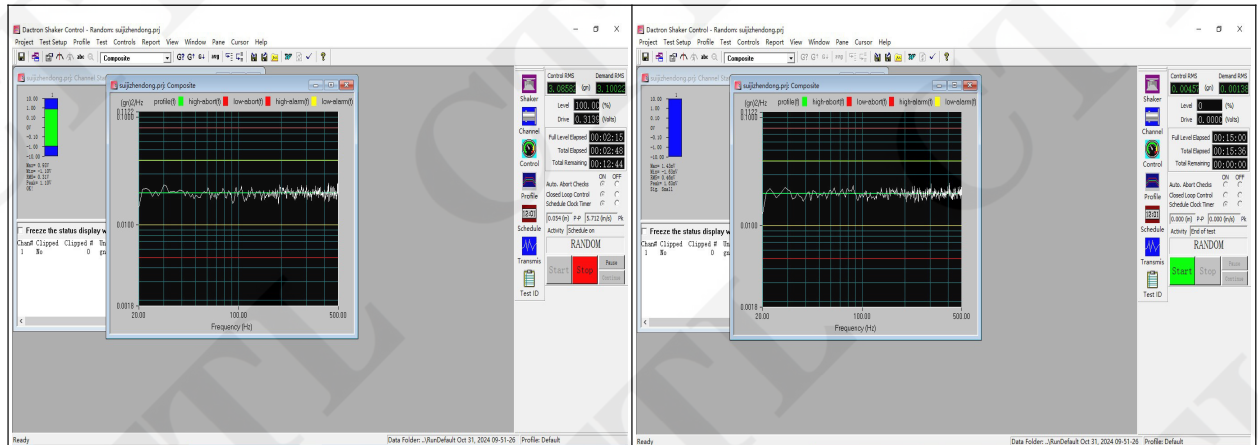


Fig.82 X-axis Under Testing

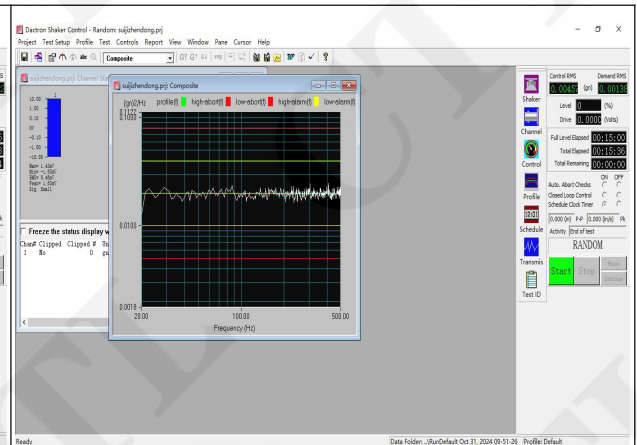


Fig.83 X-axis After Testing

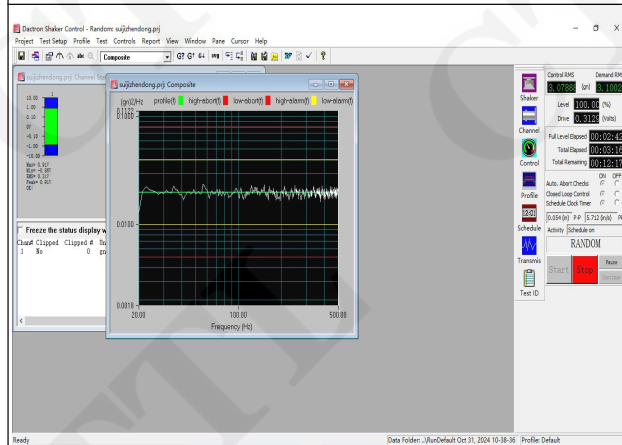


Fig.84 Y-axis Under Testing

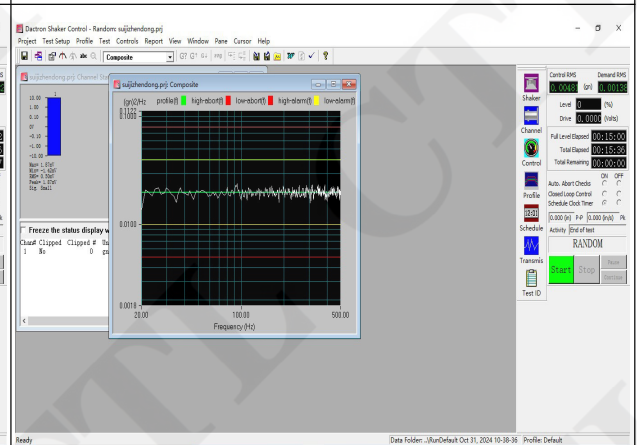


Fig.85 Y-axis After Testing

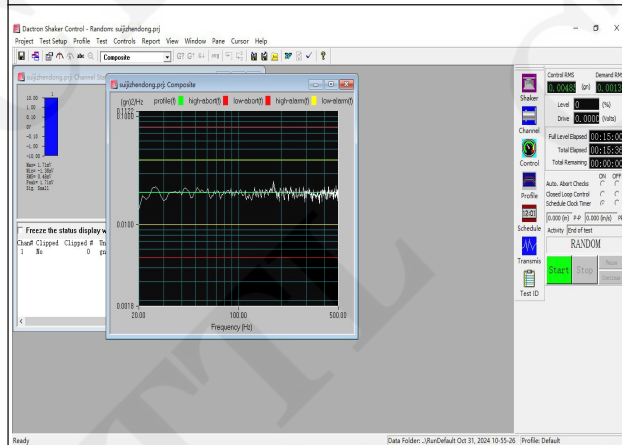


Fig.86 Z-axis Under Testing

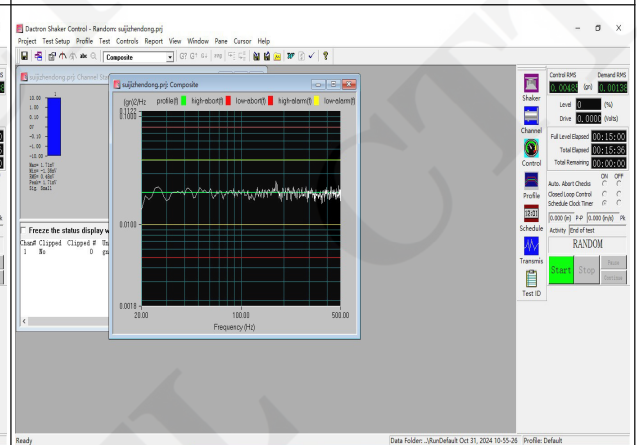


Fig.87 Z-axis After Testing

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(°C)	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 SO2:(100±20) ppb; Temperature:(30±1)°C; Humidity:(70±2)%RH 1/3 days and then unmated for 2/3 days. 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 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

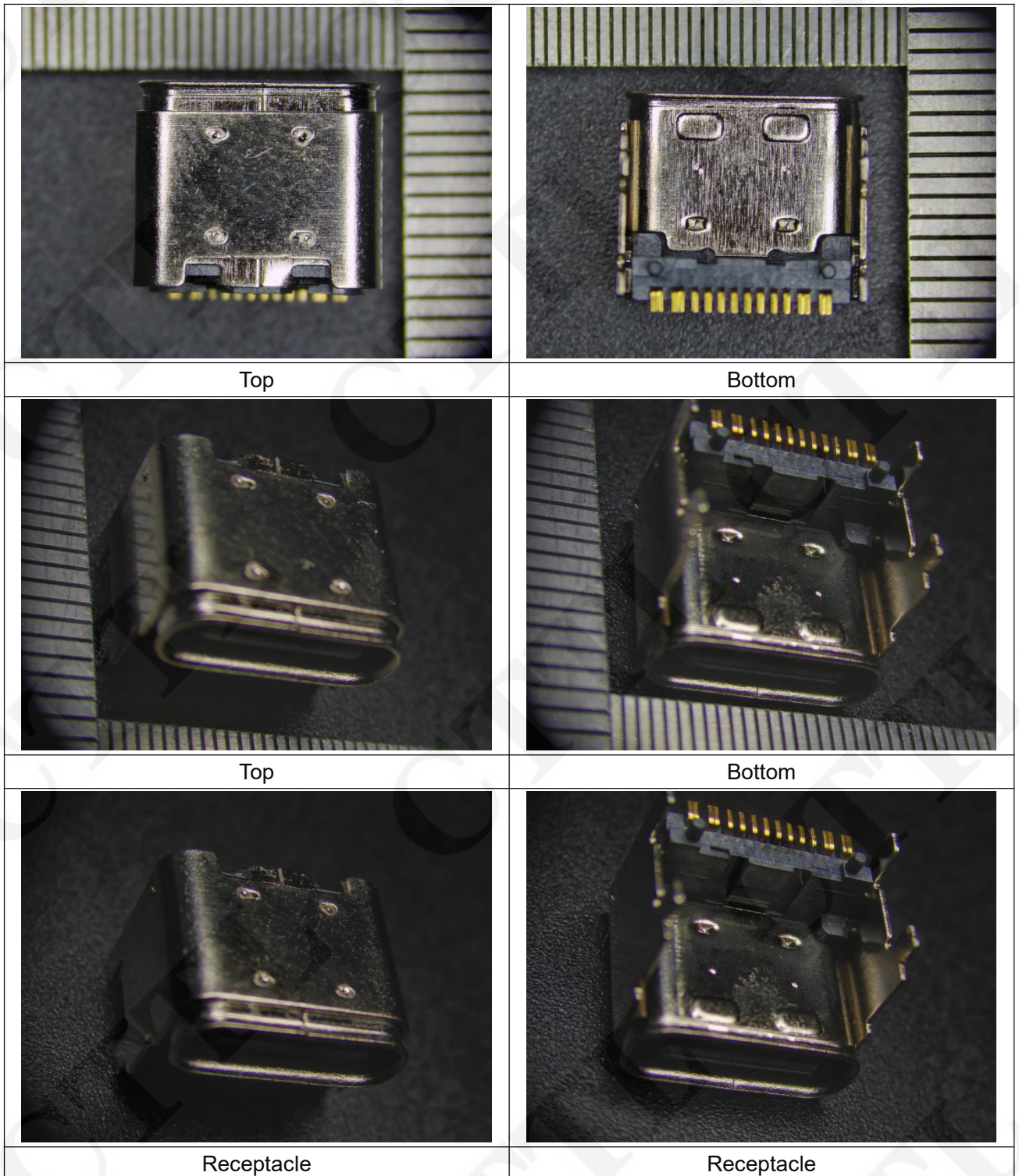
Name	Model	Serial number	Calibration Date	Expire Date
Oven Machine (ESPEC)	LC-213	1010170285	2023.11.24	2024.11.23
Thermal Shock Chamber(ESPEC)	TSE-12-A	161003228	2023.12.05	2024.12.04
Temperature & Humidity Chamber	GPL-2	0010-003613	2023.11.24	2024.11.23
Mixed Flow Gas Chamber(Yamasaki)	GH-180/VL	705	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



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

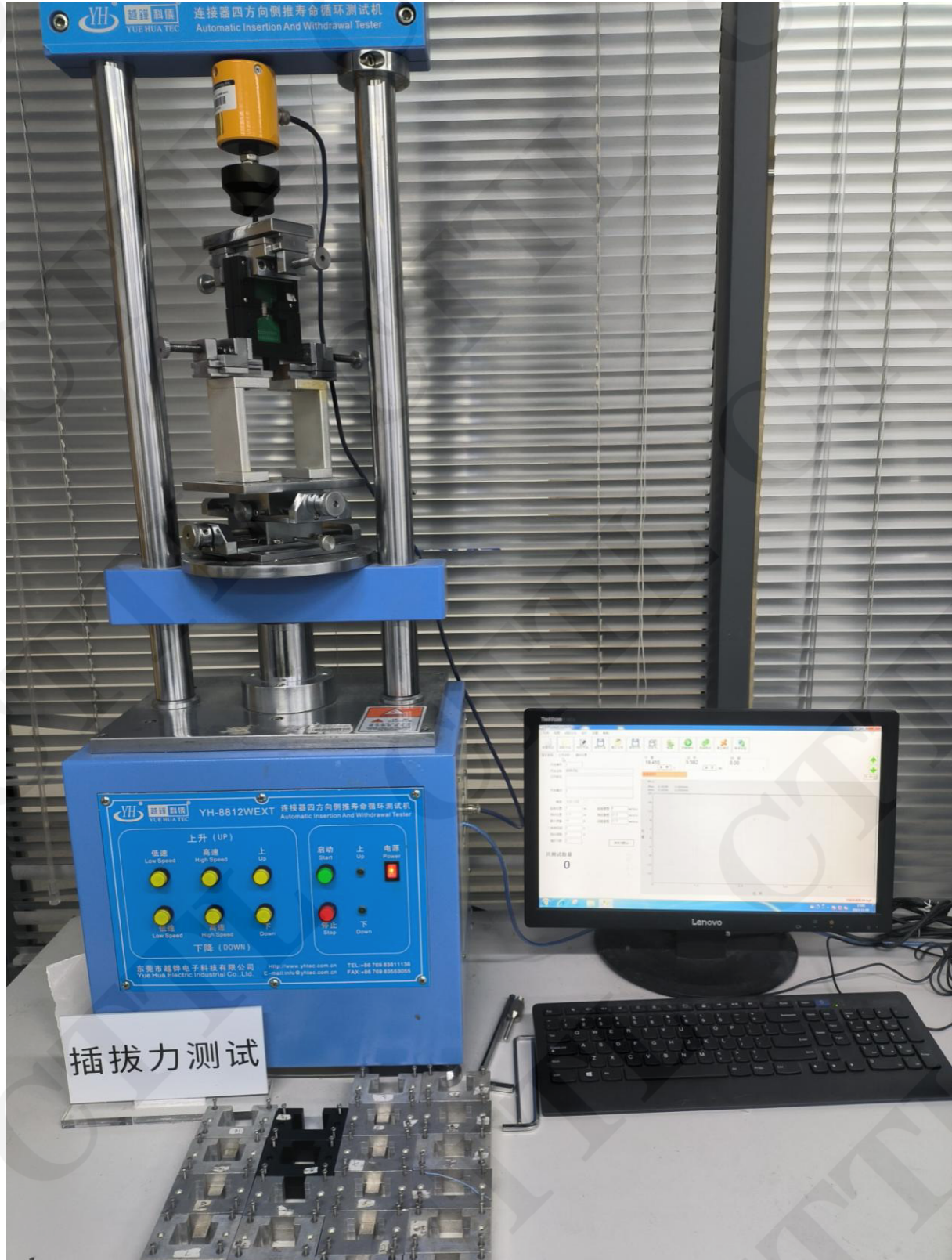
ANNEX A: UUT photograph



ANNEX B: Drawing



ANNEX C: Insertion Force & Extraction Force Test Layout



ANNEX D: Durability Test Layout



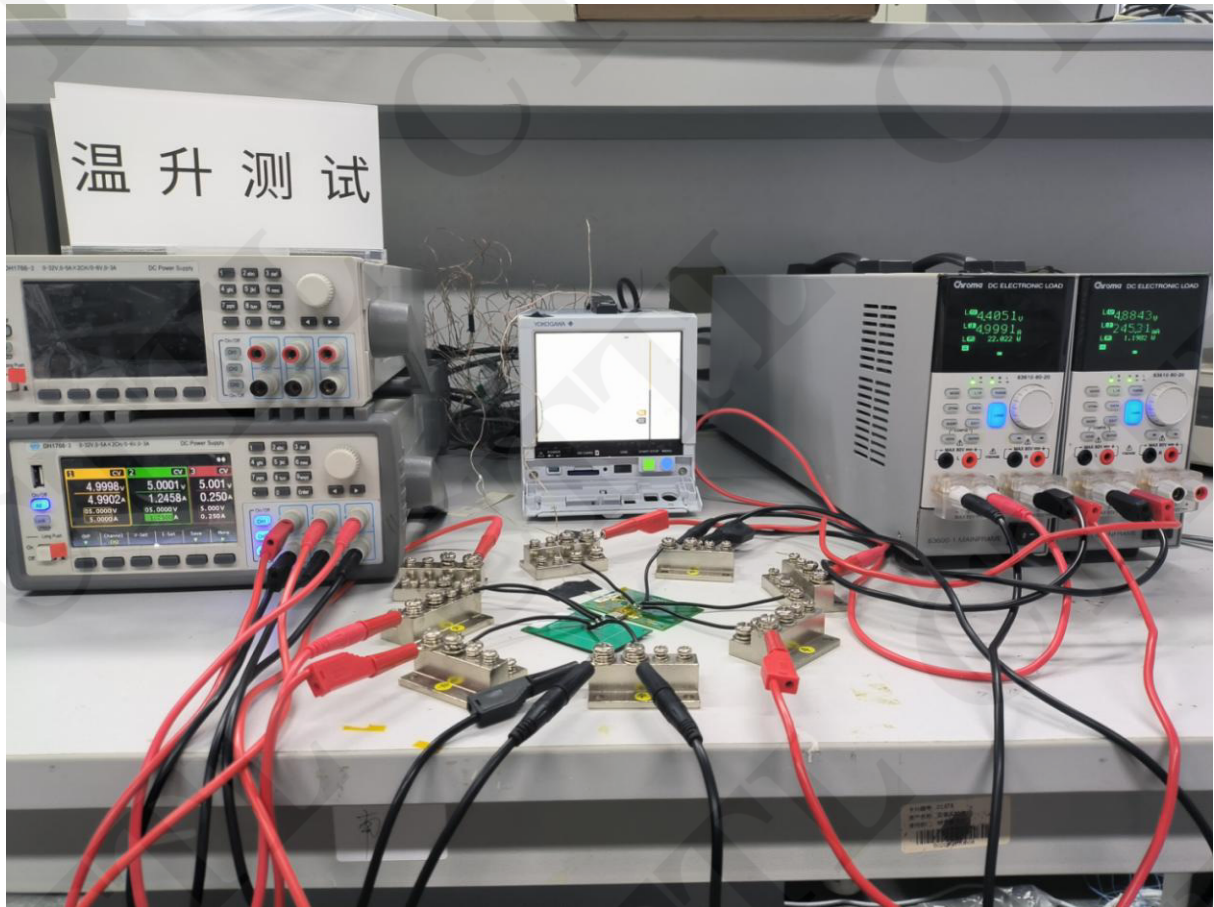
ANNEX E: Dielectric withstanding voltage Test Layout



ANNEX F: Vibration Test Layout



ANNEX G: Contact Current Rating Test Layout



END OF REPORT