




# Shenzhen ORT Technical Services Co., Ltd.

## TEST REPORT

<b>Report Number</b> <b>ORTSZ240830112001-2</b>					
<b>Sample Name:</b>	Smartphone		<b>Applicant:</b>	Shenzhen Huafurui Technology Co., Ltd.	
<b>Model:</b>	KINGKONG STAR 2		<b>Address:</b>	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, China	
<b>Spec:</b>	Black		<b>Vendor or Supplier:</b>	Shenzhen Huafurui Technology Co., Ltd.	
<b>Brand:</b>	CUBOT		<b>Address:</b>	The same as above	
<b>Sample Quantity:</b>	6 Pcs		<b>Manufacturer:</b>	Shenzhen Huafurui Technology Co., Ltd.	
<b>Specimen Source:</b>	Submitted by applicant		<b>Address:</b>	The same as above	
<b>Received Date:</b>	2024.09.01	<b>Detection Date:</b>	2024.09.02~ 2023.09.05	<b>Report Date:</b>	2024.09.07
<b>Test Requirement:</b>	For further details, please refer to the following page(s).				
<b>Test Item:</b>	1.IPX9K Test; 2.IP6KX Test; 3.IP6X Test; 4.IPX8 Test; 5.Vibration Test; 6.Drop Test; 7.Combined Temperature and Shock Test.				
<b>Decision Rules:</b>	For further details, please refer to the following page(s).				
<b>Test Conclusion:</b>	Details see the summary of test results on the next page.				
<b>Tested By:</b>	Li WenFeng	<b>Date:</b>	Shenzhen ORT Technical Services Co., Ltd.  2024-09-07		
<b>Signature:</b>		2024-09-07			
<b>Checked By:</b>	Lonny Chen	<b>Date:</b>			
<b>Signature:</b>		2024-09-07			
<b>Approved By:</b>	Makoto. Wu	<b>Date:</b>			
<b>Signature:</b>		2024-09-07			

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## I Testing Overview

### 1. Sample information

Name	Model	Quantity	Sample No.
Smartphone	KINGKONG STAR 2	6Pcs	1#~6#

### 2. Summary of test results

No.	Test record	Test item	Sample test results		
			PASS	FAIL	N/A
1	Page 3 of this report	IPX9K Test	PASS	/	/
2	Page 3 of this report	IP6KX Test	PASS	/	/
3	Page 4 of this report	IP6X Test	PASS	/	/
4	Page 5 of this report	IPX8 Test	PASS	/	/
5	Page 6 of this report	Vibration Test	PASS	/	/
6	Page 6 of this report	Drop Test	PASS	/	/
7	Page 7 of this report	Combined Temperature and Shock Test	PASS	/	/

Note: 1. "PASS" means Conformity Rule, "FAIL" means Nonconformity Rule, and "N/A" means Not Applicable.

2. When customers have no Decision Rule requirements for Test setup, P.T.O For test records and test results.

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## II Test Records

### 1 Test Item: IPX9K Test

#### 1.1 Test Equipment:

No.	Name	Model No.	Equipment No.	Calibration Validity
1	High Temperature and High Pressure Jet Test Machine	TL-IPX9K-1000L	ORT-GYPS-01	2025.06.18

**1.2 Test Environment:** Temperature: 23.6°C; Relative Humidity: 59%RH.

**1.3 Test Method/Specification:** According to ISO 20653:2023.

#### 1.4 Test Conditions:

Rotation speed:	(5±1) r/min;
Spraying angle:	0°, 30°, 60°, 90°;
The distance from nozzle to enclosure surface:	100mm~150mm;
Water flow rate:	(14~16) L/min;
Water temperature:	(80±5)°C;
Duration:	30 s/Position.

#### 1.5 Acceptance Criteria:

Directional spray cleaning of the shell in any direction should not cause any damage.

#### 1.6 Test Result:

Sample No.	Inspection after test	Conclusion
1#	The appearance of the sample has no visible damage, the startup function is normal, and there is no water inside.	Pass

### 2 Test Item: IP6KX Test

#### 2.1 Test Equipment:

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Sand and Dust Test Chamber	TL-SC-1000	ORT-SC1000-01	2025.06.19
2	IP4X Test Probe	IP4X/1N Thrust	ORT-IP4X-01	2025.06.22

**2.2 Test Environment:** Temperature: 24.5°C; Relative Humidity: 59%RH .

**2.3 Test Method/Specification:** According to ISO 20653:2023.

#### 2.4 Test Conditions:

- 1) The level of protection indicated by the first characteristic for approaching hazardous components Number, first characteristic number 6 K 1.0mmΦ The test line should not be pierced and sufficient clearance should be maintained.
- 2) Protection against solid foreign objects represented by the first characteristic number and the first characteristic number 6 K.

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2.1 Mode dust movement: Air and dust mixing exercise for 6 s, pause for 15min

2.2 Test duration: 20 cycles

### 2.5 Acceptance Criteria:

After the test, the sample functions normally, and after disassembly and inspection, there is no dust inside.

### 2.6 Test Result:

Sample No.	Inspection after test	Conclusion
2#	The appearance of the sample has no visible damage, the startup function is normal, and there is no dust inside.	Pass

## 3 Test Item: IP6X Test

### 3.1 Test Equipment:

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Sand and Dust Test Chamber	TL-SC-1000	ORT-SC1000-01	2025.06.19
2	IP4X Test Probe	IP4X/1N Thrust	ORT-IP4X-01	2025.06.22

**3.2 Test Environment:** Temperature: 23.2℃ ;Relative Humidity: 60%RH.

**3.3 Test Method/Specification:** According to IEC 60529:1989/AMD2:2013/COR1:2019.

### 3.4 Test Conditions:

1) Degrees of protection against access to hazardous parts:

The test wire of  $\Phi 1.0\text{mm}$  shall not penetrate and adequate clearance shall be kept.

2) Degrees of protection against solid foreign objects:

2.1 During the experiment, the dosage of talc powder was  $2\text{ kg/m}^3$ , And test for 8 hours.

2.2 The enclosure under test is supported inside the test chamber and the pressure inside the enclosure is maintained below the surrounding atmospheric pressure by a vacuum pump. A volume of air 80 times the volume of the sample enclosure, the extraction rate of 40 volumes per hour, and test 2 hours.

### 3.5 Acceptance Criteria:

After the test, the sample functions normally, and after disassembly and inspection, there is no dust inside.

### 3.6 Test Result:

Sample No.	Inspection after test	Conclusion
3#	The appearance of the sample has no visible damage, the startup function is normal, and there is no dust inside.	Pass

## 4 Test Item: IPX8 Test

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**4.1 Test Equipment:**

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Water Immersion Pressure Tester	TL-IPX8-600	ORT-IPX8-01	2025.06.18

**4.2 Test Environment:** Temperature: 23.1°C; Relative Humidity: 60%RH.

**4.3 Test Method/Specification:** According to IEC 60529:1989/AMD2:2013/COR1:2019.

**4.4 Test Conditions:**

- Put the sample into the test device;
- Depth: 1.5 m; Test duration: 30 min;
- The temperature difference between the water and the sample is no more than 5 K.

**4.5 Acceptance Criteria:**

- After testing, check the functionality of the sample and whether there is water ingress inside the casing;
- Continuous immersion in water, if water enters, the amount of water entering the casing should not cause damage to the product.

**4.6 Test Result:**

Sample No.	Inspection after test	Conclusion
4#	The appearance of the sample has no visible damage, the startup function is normal, and there is no water inside.	Pass

**5 Test Item: Vibration Test**
**5.1 Test Equipment:**

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Vibration Tester	MPA406/M232A	ORTZD2000-01	2025.06.18

**5.2 Test Environment:** Temperature: 22.6°C; Relative Humidity: 59%RH.

**5.3 Test Method/Specification:** According to client's requirements.

**5.4 Test Conditions:**

Frequency (Hz)	Acceleration (g)	Displacement (mm)	Test axis	Test time
5~14	/	5.08	X, Y, Z axis	2 h/axis
14~33	2	/		
33~52	/	0.91		
52~500	5	/		

**5.5 Acceptance Criteria:** After the test, the appearance of the sample is normal and the function is normal.

**5.6 Test Result:**

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Sample No.	Inspection after test	Conclusion
5#	The appearance of the sample is not visible damage, the startup function is normal, and the internal structure is not damaged.	Pass

## 6 Test Item: Drop Test

### 6.1 Test Equipment:

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Drop Tester	LX-DL-315	ORT-DL-01	2025.06.18

**6.2 Test Environment:** Temperature: 23.5°C; Relative Humidity: 60%RH.

**6.3 Test Method/Specification:** According to MIL-STD-810H:2019, Method 516.8.

### 6.4 Test Conditions:

Height of drop: 122 cm

Orientation of drop: 6 faces, 8 corners, 12 edges.

Number of drop: 1 times/orientation, totally 26 times.

Note: Testing with a total mass  $M < 45$  Kg is allowed on both test samples.

5# sample for the drop of corners and faces (14 times in total); 6# sample for the drop of edge (12 times in total).

**6.5 Acceptance Criteria:** After testing, the sample is inspected for appearance and function.

### 6.6 Test Result:

Sample No.	Inspection after test	Conclusion
5#、6#	The appearance of the sample is not visible damage, the startup function is normal, and the internal structure is not damaged.	Pass

## 7 Test Item: Combined Temperature and Shock Test

### 7.1 Test Equipment:

No.	Name	Model No.	Equipment No.	Calibration Validity
1	Rapid Temperature Chang Test Chamber	TH15-1000DHVB	ORTKWB1000-01	2025.06.19
2	Vibration Tester	MPA406/M232A	ORTZD2000-01	2025.06.18

**7.2 Test Environment:** Temperature: 23.5°C; Relative Humidity: 60%RH.

**7.3 Test Method/Specification:** According to client's requirements.

### 7.4 Test Conditions:

Shock Test Parameter		Temperature Test Parameter
Pulse Shape:	Half Sine	-55°C, 70°C.
Peak Acceleration:	30 g	
Pulse Duration:	6 ms	
Test Orientation:	±X, ±Y, ±Z axis	
Test Time:	2 times/axis, 12 times in total.	

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Note: the sample should stay in the test chamber for 30 min after the shock test, then take out and check.

**7.5 Acceptance Criteria:**After testing, the sample is inspected for appearance and function.

**7.6 Test Result:**

Sample No.	Inspection after test	Conclusion
6#	The appearance of the sample is not visible damage, the startup function is normal, and the internal structure is not damaged.	Pass

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III Test photo and test curve:

Test Item 1: IPX9K test (1#)



Fig.1 Power on inspection before test



Fig.2 Appearance inspection before test



Fig.3 Test setup



Fig.4 Test setup



Fig.5 Power on inspection after test



Fig.6 Appearance inspection after test

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Fig.7 Appearance inspection after test

**Test Item 2: IP6KX Test (2#)**



Fig.8 Power on inspection before test

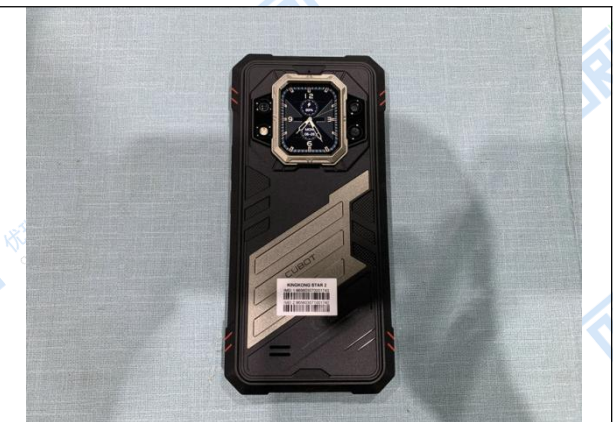


Fig.9 Appearance inspection before test



Fig.10 Test setup



Fig.11 Test setup

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Fig.12 Power on inspection after test



Fig.13 Appearance inspection after test



Fig.14 Appearance inspection after test

**Test Item 3: IP6X Test (3#)**



Fig.15 Power on inspection before test



Fig.16 Appearance inspection before test

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Fig.17 Test setup

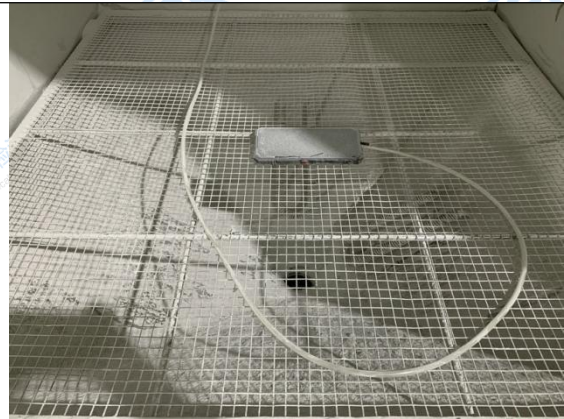


Fig.18 Test setup



Fig.19 Power on inspection after test



Fig.20 Appearance inspection after test



Fig.21 Appearance inspection after test

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**Test Item 4: IPX8 Test (4#)**

	
<p>Fig.22 Power on inspection before test</p>	<p>Fig.23 Appearance inspection before test</p>
	
<p>Fig.24 Test setup</p>	<p>Fig.25 Power on inspection after test</p>
	
<p>Fig.26 Appearance inspection after test</p>	<p>Fig.27 Appearance inspection after test</p>

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Test Item 5: Vibration Test (5#)

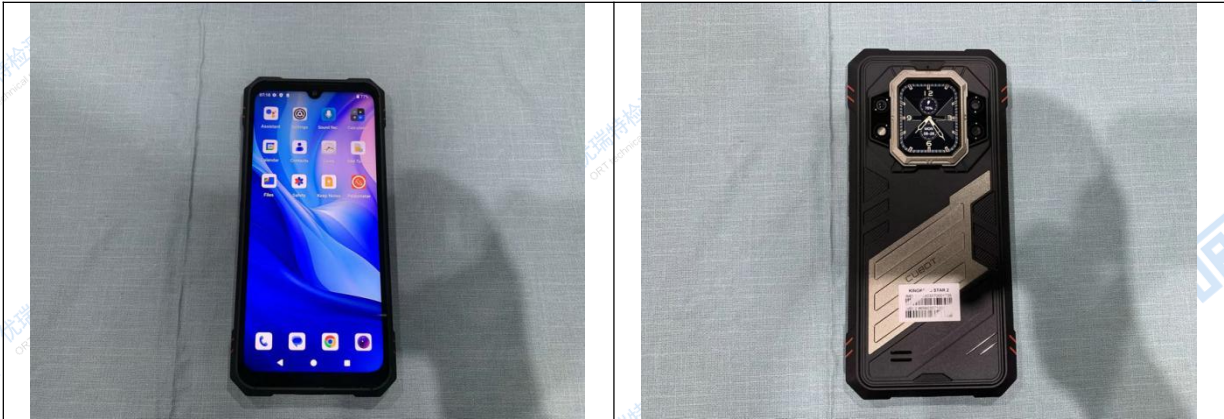


Fig.28 Power on inspection before test

Fig.29 Appearance inspection before test

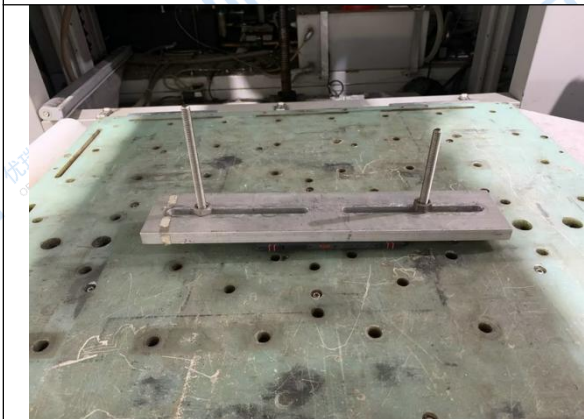


Fig.30 Test setup (X axis)



Fig.31 Test setup (Y axis)



Fig.32 Test setup (Z axis)

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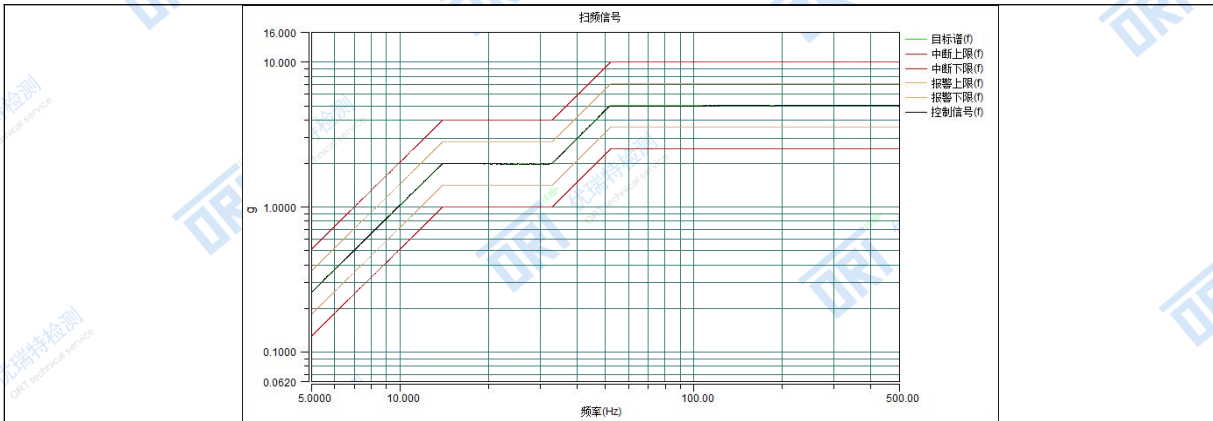


Fig.33 Test Spectrum



Fig.34 Power on inspection after test



Fig.35 Appearance inspection after test



Fig.36 Appearance inspection after test

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Test Item 6: Drop Test (5#, 6#)



Fig.37 Power on inspection before test



Fig.38 Appearance inspection before test

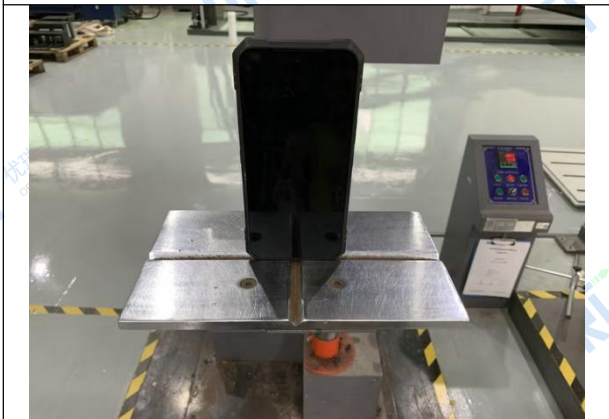


Fig.39 Test setup- Face (1) - 5#

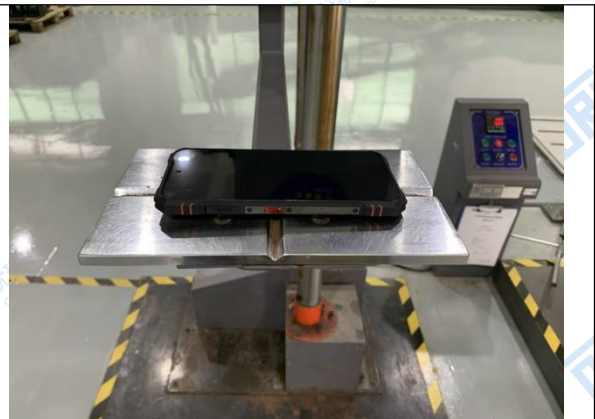


Fig.40 Test setup- Face (2) - 5#

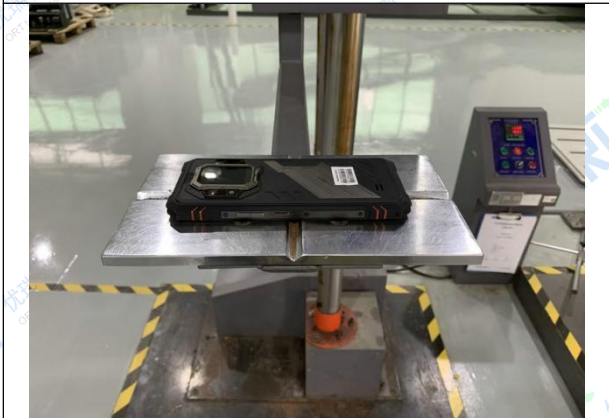


Fig.41 Test setup- Face (3) - 5#

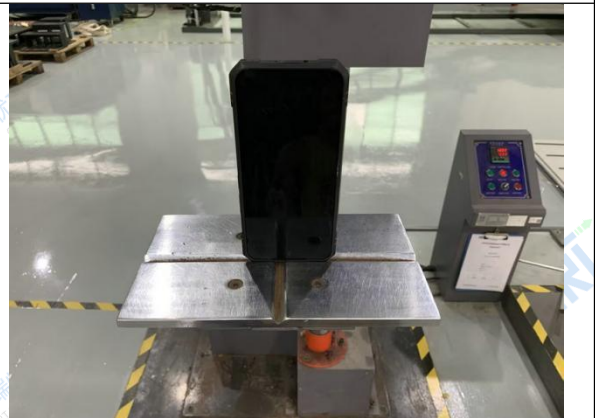


Fig.42 Test setup- Face (4) - 5#

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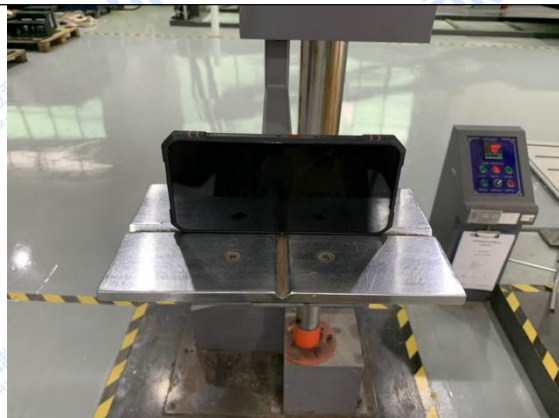


Fig.43 Test setup- Face (5) - 5#

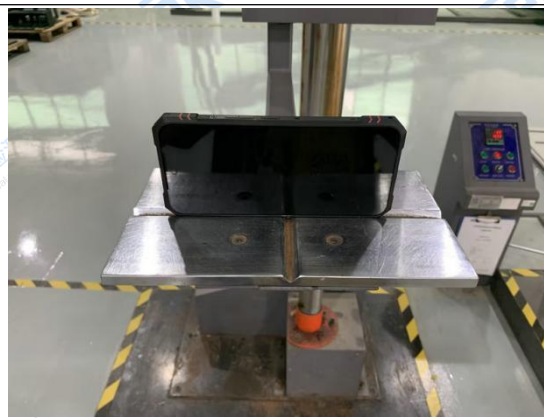


Fig.44 Test setup- Face (6) - 5#

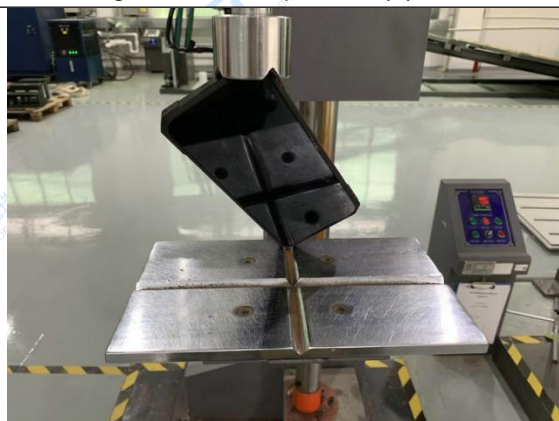


Fig.45 Test setup- Corner (1) - 5#

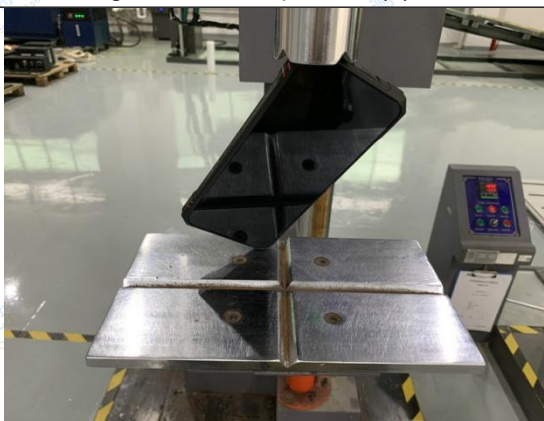


Fig.46 Test setup- Corner (2) - 5#

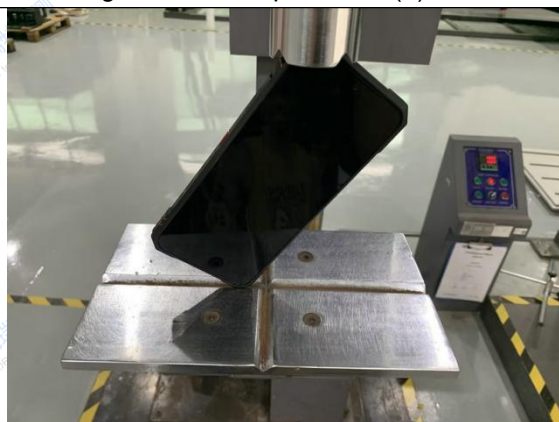


Fig.47 Test setup- Corner (3) - 5#

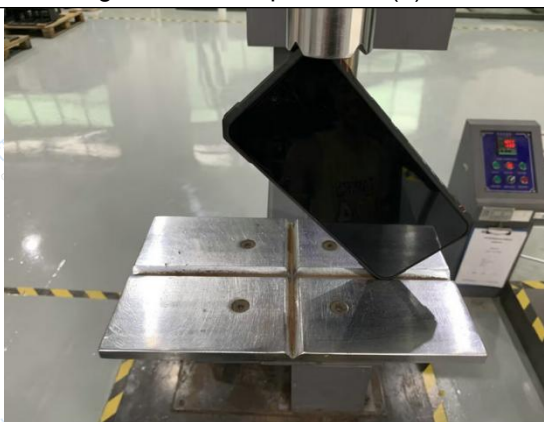


Fig.48 Test setup- Corner (4) - 5#

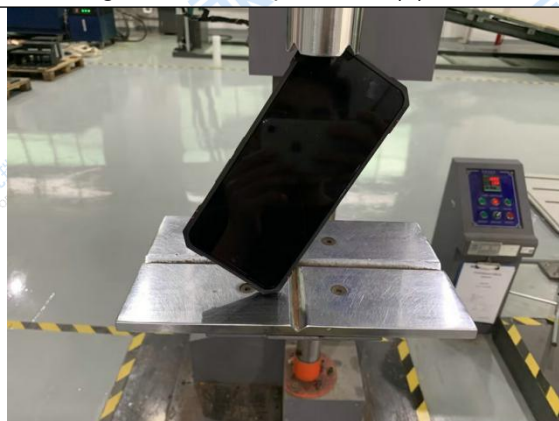


Fig.49 Test setup- Corner (5) - 5#



Fig.50 Test setup- Corner (6) - 5#

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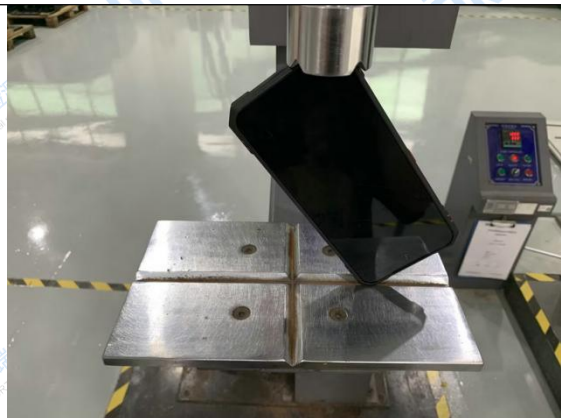


Fig.51 Test setup- Corner (7) - 5#

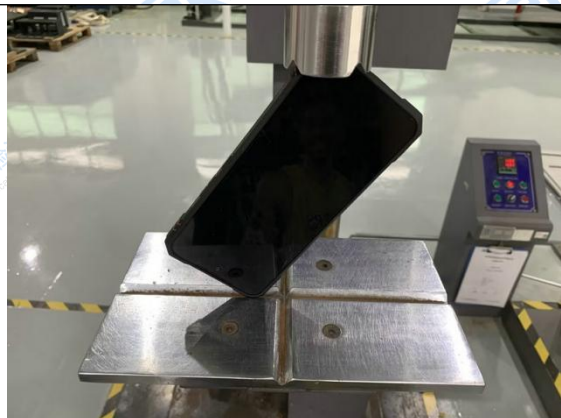


Fig.52 Test setup- Corner (8) - 5#

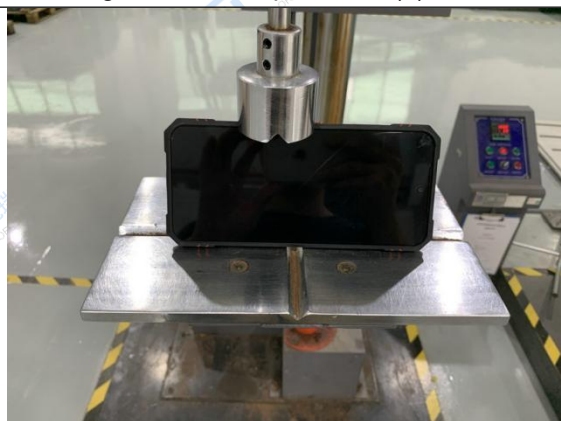


Fig.53 Test setup- Edge (1) - 6#

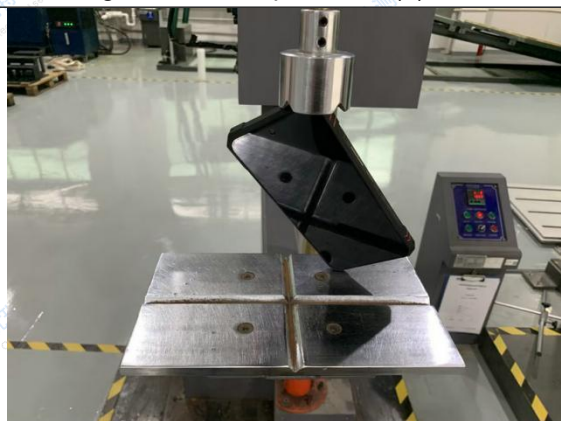


Fig.54 Test setup- Edge (2) - 6#

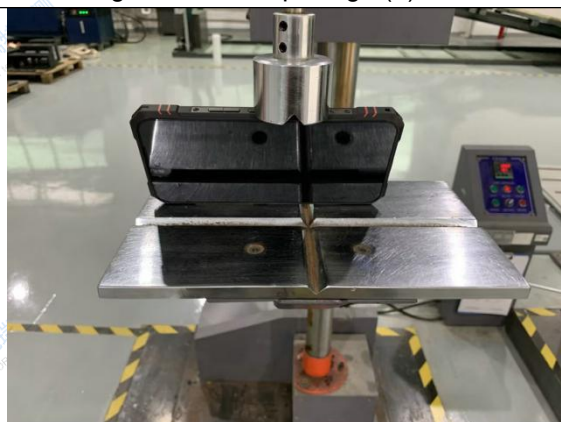


Fig.55 Test setup- Edge (3) - 6#



Fig.56 Test setup- Edge (4) - 6#

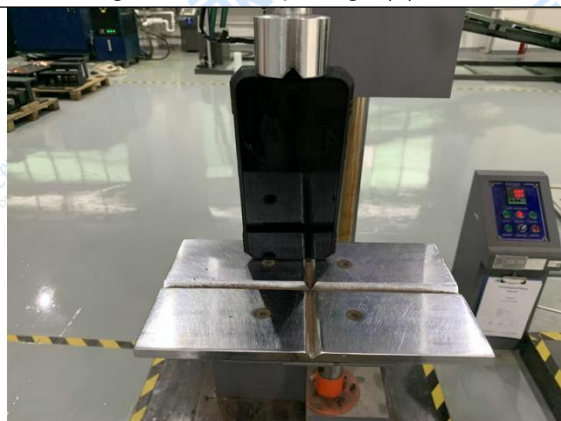


Fig.57 Test setup- Edge (5) - 6#

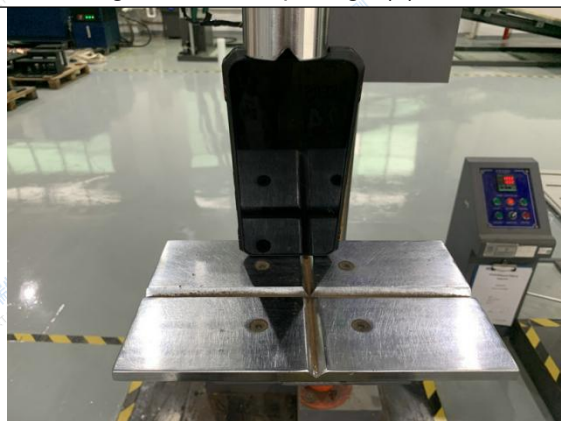


Fig.58 Test setup- Edge (6) - 6#

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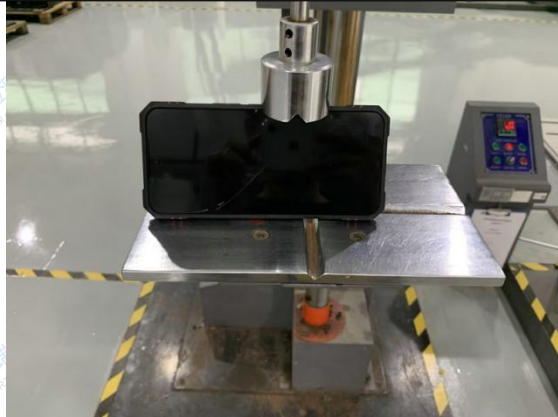


Fig.59 Test setup- Edge (7) - 6#

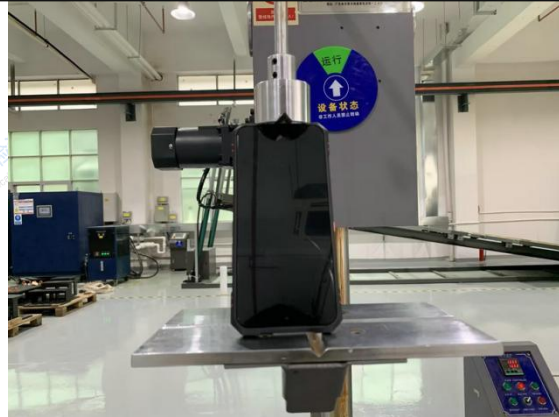


Fig.60 Test setup- Edge (8) - 6#

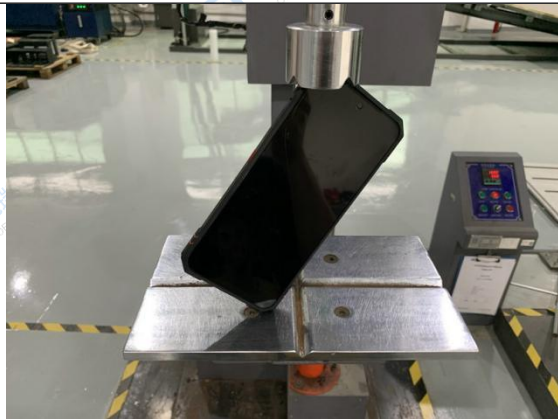


Fig.61 Test setup- Edge (9) - 6#

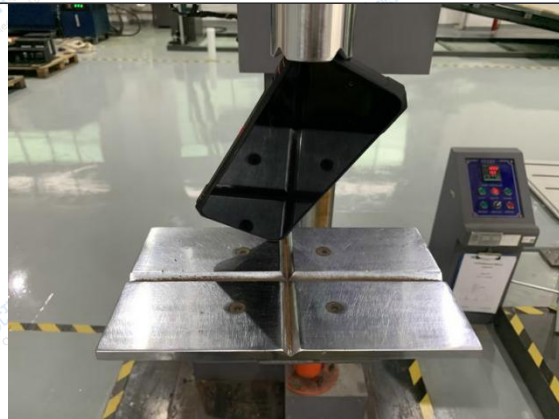


Fig.62 Test setup- Edge (10) - 6#

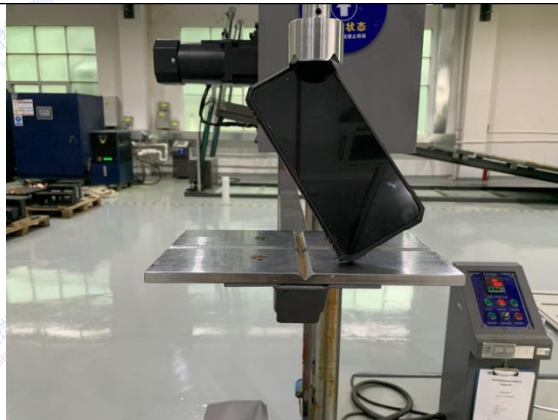


Fig.63 Test setup- Edge (11) - 6#

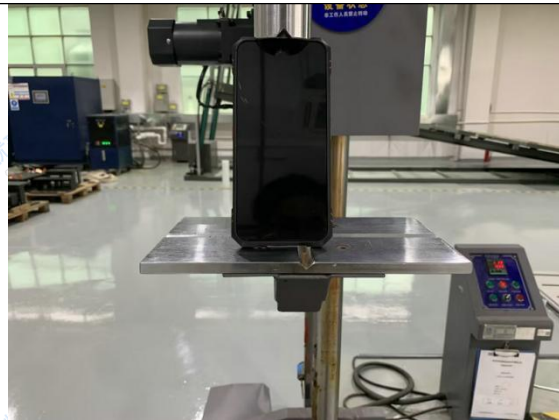


Fig.64 Test setup- Edge (12) - 6#



Fig.65 Drop height

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Fig.66 Power on inspection after test

Fig.67 Appearance inspection after test



Fig.68 Appearance inspection after test

**Test Item 7: Combined Temperature and Shock Test (6#)**



Fig.69 Power on inspection before test

Fig.70 Appearance inspection before test

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Fig.71 Temperature: 70°C



Fig.72 Temperature: -55°C



Fig.73 Test setup (X axis)



Fig.74 Test setup (Y axis)



Fig.75 Test setup (Z axis)

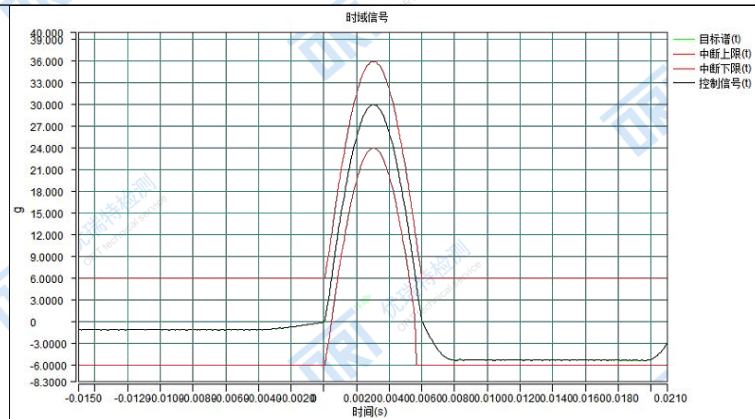


Fig.76 Test Curve (+)

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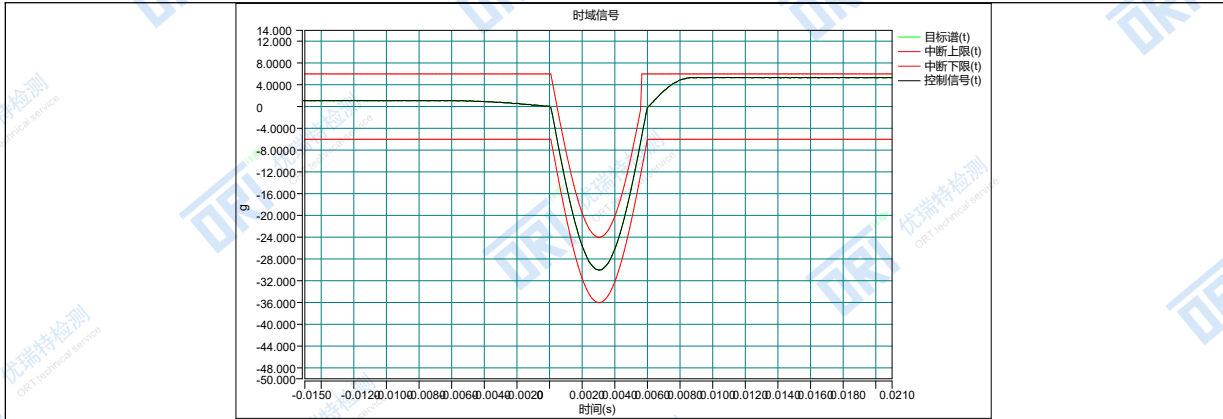


Fig.77 Test Curve (-)



Fig.78 Power on inspection after test



Fig.79 Appearance inspection after test

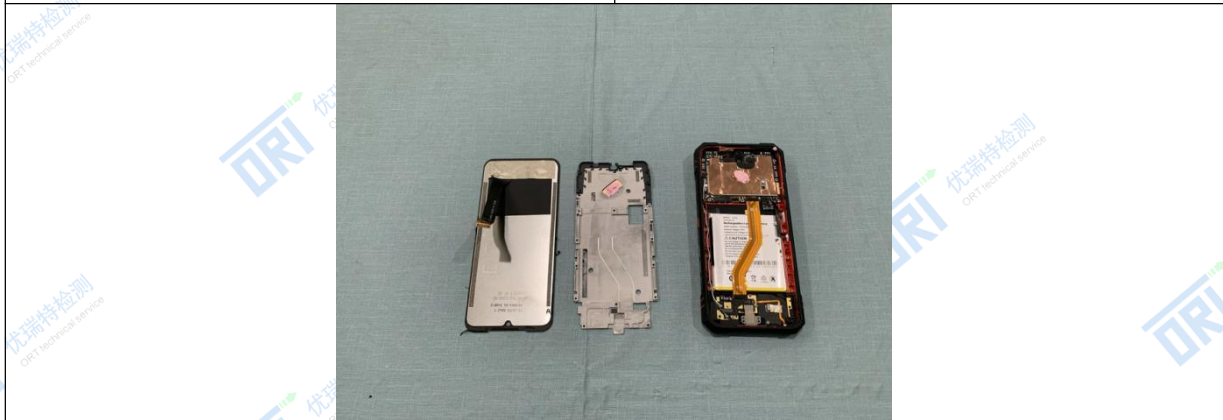


Fig.80 Appearance inspection after test

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

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