

TEST REPORT

Product: Rugged feature phone

Model No.: H3, H2, H5

Applicant: Shenzhen Hao Mai Tongda Technology Co., LTD

Address: Room302, Building F, Qihang R&D
Industrial Park, No.1008, Songbai Road,
Sunshine Community, Xili Street, Nanshan
District, Shenzhen, China

Test Sort: Consignment Test

TEST REPORT

Reference No...... : DGH240425003Y

Applicant..... : Shenzhen Hao Mai Tongda Technology Co., LTD

Address..... : Room302, Building F, Qihang R&D Industrial Park, No.1008, Songbai Road, Sunshine Community, Xili Street, Nanshan District, Shenzhen, China

Manufacturer..... : Shenzhen Hao Mai Tongda Technology Co., LTD

Address..... : Room302, Building F, Qihang R&D Industrial Park, No.1008, Songbai Road, Sunshine Community, Xili Street, Nanshan District, Shenzhen, China

Product Name..... : Rugged feature phone

Model No..... : H3, H2, H5

Brand..... : HAMTOD

Total pages..... : 11 pages

Standards..... : IEC60529:1989+A1:1999+A2:2013
Degrees of protection provided by enclosures (IP code)

Test items..... : IP68

Date of Receipt sample..... : 2024-05-27

Date of Test..... : 2024-05-28 to 2024-05-30

Date of Issue..... : 2024-06-05

Test Result..... : Pass

***Remarks:**

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory. The report would be invalid without specific stamp of test institute and the signatures of tester and approver.

Prepared By:

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Testing location: The same as above

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Approved by:



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List of test items:

No.	Test Items	Requirement + Test	Result
1	IP68	IEC60529:1989+A1:1999+A2:2013	Pass
☒ The product fulfils the requirements of EN 60529:1991+ A1:2000+A2:2013			
Test case verdicts: Test case does not apply to the test object: N (N/A) Test item does meet the requirement: P (Pass) Test item does not meet the requirement: F (Fail)			
Remark: Whether parts of tests for the product have been subcontracted to other labs: ☐ Yes ☒ No If Yes, list the related test items and lab information: Test items: Lab information:			
Note: --			

Test Item:

Tests for protection against dust-proof: IP6X

Test Method:

The tests should be carried out under the standard atmospheric condition.

The atmospheric conditions during tests are as follows:

Temperature range: 15°C to 35°C. Relative humidity: 25% to 75%.

The test is made using a dust chamber incorporating the basic principles shown in figure 2 where by the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber. The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50µm and the nominal width of gap between wires 75 µm. The amount of talcum powder to be used is 2 kg per cubic meter of the test chamber volume. It shall not have been used for more than 20 tests.

Enclosures are of necessity in one of two categories:

Category 1: Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air, for example, due to thermal cycling effects.

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. In no event shall the depression exceed 2 KPa(20mbar) on the manometer shown in figure 2. If an extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2h. The extraction rate is less than 40 volumes per hour, the test is continued until 80 volumes have been drawn through, or a period of 8h has elapsed.

Category 2: Enclosures where no pressure difference relative to the surrounding air is present.

The enclosure under test is supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump. Any drain-hole normally open shall be left open for the duration of the test. The test shall be continued for a period of 8h.

The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not.

The test wire of 1.0 mmφ insert into any openings of the enclosure with a force of 1N±10%.

Acceptance Conditions:

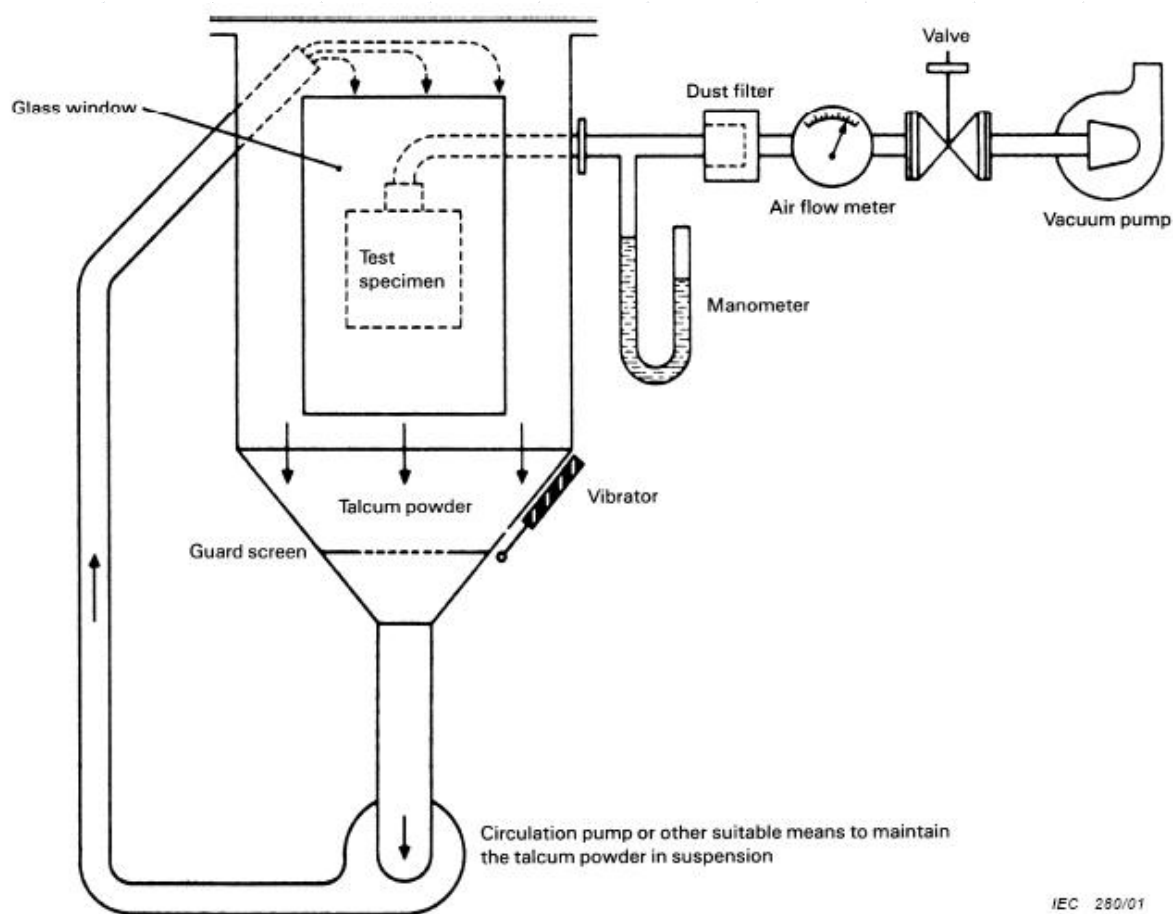
The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.

The protection is satisfactory if the access probe 1.0 mm diameter shall not pass through the any opening.

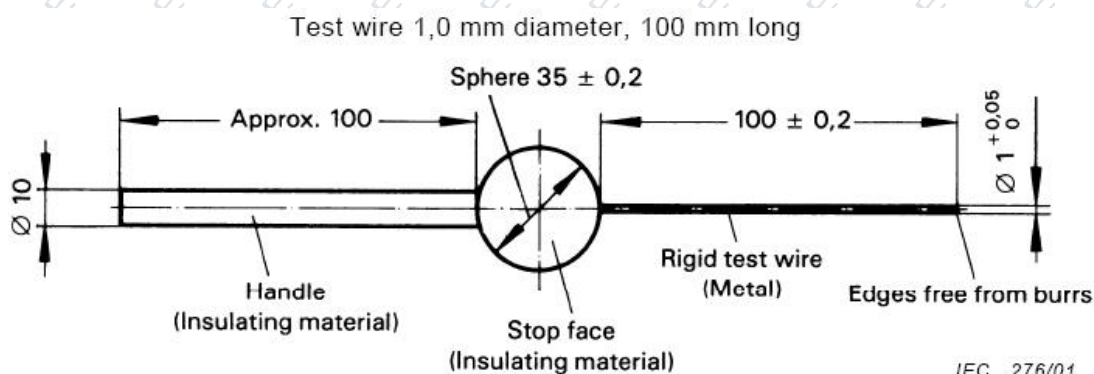
Test Result:

☒ Pass ☐ Fail



NOTE See IEC 60068-2-68, figure 2 valid for La2 only.

Figure 2 – Test device to verify protection against dust (dust chamber)



Test Item:

Tests for protection against ingress moisture: IPX8

Test Method:

The tests should be carried out under the standard atmospheric condition. The atmospheric conditions during tests are as follows:

Temperature range: 15°C to 35°C; Relative humidity: 25% to 75%.

The tests are conducted with fresh water.

Unless there is a relevant product standard, the test conditions are subject to agreement between manufacturer and user, but they shall be more severe than those prescribed in 14.2.7 and they shall take account of the condition that the enclosure will be continuously immersed in actual use.

The test is made by completely immersing the enclosure in water in its service position as specified by the manufacturer so that the following conditions are satisfied:

—the lowest point of enclosures is located 2000 mm (According to the entrust) below the surface of the water;

—the highest point of enclosures is located 1980 mm (According to the entrust) below the surface of the water;

—the duration of the test is 30 min (According to the entrust);

—the water temperature does not differ from that of the equipment by more than 5 K. However, a modified requirement may be specified in the relevant product standard if the tests are to be made when the equipment is energized and/or its parts in motion.

Acceptance Conditions:

After testing in accordance with the appropriate requirements, the enclosure shall be inspected for ingress of water.

It is the responsibility of the relevant Technical Committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any.

In general, if any water has entered, it shall not:

- be sufficient to interfere with the correct operation of the equipment or impair safety;
- deposit on insulation parts where it could lead to tracking along the creepage distances;
- reach live parts or windings not designed to operate when wet;
- accumulate near the cable end or enter the cable if any.

If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.

For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.

Test Result:

☒ Pass ☐ Fail

Photo Documentation :



Photo 1 -- Sample



Photo 2 -- Before dust-proof test

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Photo 3 -- Dust-proof testing



Photo 4 -- After test

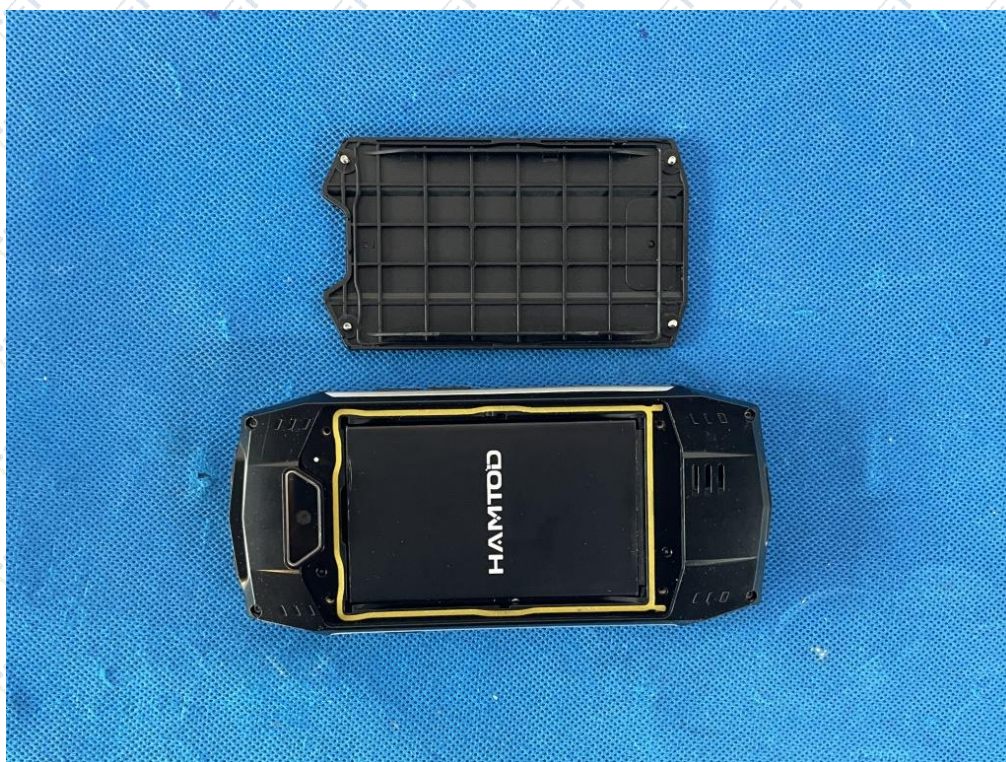


Photo 5 -- After test



Photo 6 -- After test



Photo 7 -- After test

Equipment Used during Test :

Equipment	Model/Type	Cal. Date	Due Date
Hygrothermograph	TA218D	2023-11-09	2024-11-08
Finger ($\phi 1.0\text{mm}$)	FZ-1107C	2023-11-09	2024-11-08
Push & Pull Scales	SN-200	2023-11-14	2024-11-13
Dustproof chamber	QI-H-042B	2023-11-07	2024-11-06
Pressure Gauge	HY88646	2024-04-26	2024-10-25
Clock	ZSD-009	2023-11-09	2024-11-08
Tapeline	dele	2023-11-09	2024-11-08

===== End of Test Report =====

STATEMENT

1. Any objections must be raised to NTEK within 15 days since the date when the report is received.
2. The test results in the report only apply to the tested sample.
3. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver.
4. This inspection report is invalid without "special seal for testing".
5. It should not be reproduced except in full, without the written approval of our laboratory. The copy approved for reproduction shall be sealed and confirmed.
6. The "*" in the inspection item is the subcontract inspection item.
7. The remaining samples must be retrieve within three months after receiving the inspection report. If they are not retrieved after the deadline, our company will handle them by itself.

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