TEST REPORT

IEC 60529:1989+A1:1999+A2:2013

Degrees of protection provided by enclosures (IP Code)

Report reference No. ..... :	PRE-SZGMA240112-02868E-SF-A1
Compiled by (+ signature) ..... :	Project Engineer: Ivan Cai
Approved by (+ signature) ..... :	Safety Engineer: Janis Ou
Date of issue ..... :	2024-01-19
Testing laboratory ..... :	Bay Area Compliance Laboratories Corp. (Shenzhen)
Address ..... :	5/F. (B-West), 6&7/F., The 3rd Phase of Wanli Industrial Building D, Shihua Road, Fubao Community, Fubao Subdistrict, Futian District, Shenzhen, Guangdong, China
Testing location ..... :	Same as above
Applicant ..... :	MEFERI TECHNOLOGIES CO., LTD.
Address ..... :	4501, 45th Floor,Building A, No. 530, Middle Tianfu Avenue, High-tech Zone, Chengdu, China
Standard ..... :	IEC 60529:1989+A1:1999+A2:2013
Test sample(s) received..... :	2024-01-11
Test in period..... :	2024-01-12
IP code ..... :	IP67
Non-standard test method ..... :	N/A

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the specific product described herein. It must not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Shenzhen).

Type of test object ..... :	5G Mobile Computer
Trademark ..... :	N/A
Model/type reference ..... :	ME65
Multiple typle..... :	N/A
Manufacturer..... ..... :	Same as applicant
Factory..... ..... :	Not provided
Rating ..... :	N/A

TABLE OF CONTENTS

1-General information

1.1 Product Description for Equipment under Test (EUT)

"EUT" as referred in this report are 5G Mobile Computer; the model is ME65.

The test samples were in good condition and received: 2024-01-11.

1.2 Objective

Currently, IEC 60529:1989+A1:1999+A2:2013 tests to be performed. They are as follows:

-Test for protection against object probe and for protection against solid foreign objects (IP6X) (CLAUSE 12.2+12.3 and CLAUSE 13.4+13.6);

- Test for protection against temporary immersion between 0.15 m and 1 m (IPX7) (CLAUSE 14.2.7).

1.3 Related Submittal(s)/Grant(s)

No Related Submittals

1.4 Test Methodology

All measurements contained in this report were conducted with IEC 60529:1989+A1:1999+A2:2013, Degrees of protection provided by enclosures (IP code).

All measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen)

Remark:

1. This report substituted for the report PRE-SZGMA240112-02868E-SF

   Compared with original report, this report is updated as the followings and all test data comes from original report and no further tests needed.

   a) Change CNAS LOGO from " CNAS 中国认可 检测 TESTING CNAS L2408 " to " ilac-MRA CNAS 中国认可 国际互认 检测 TESTING CNAS L2408 ".

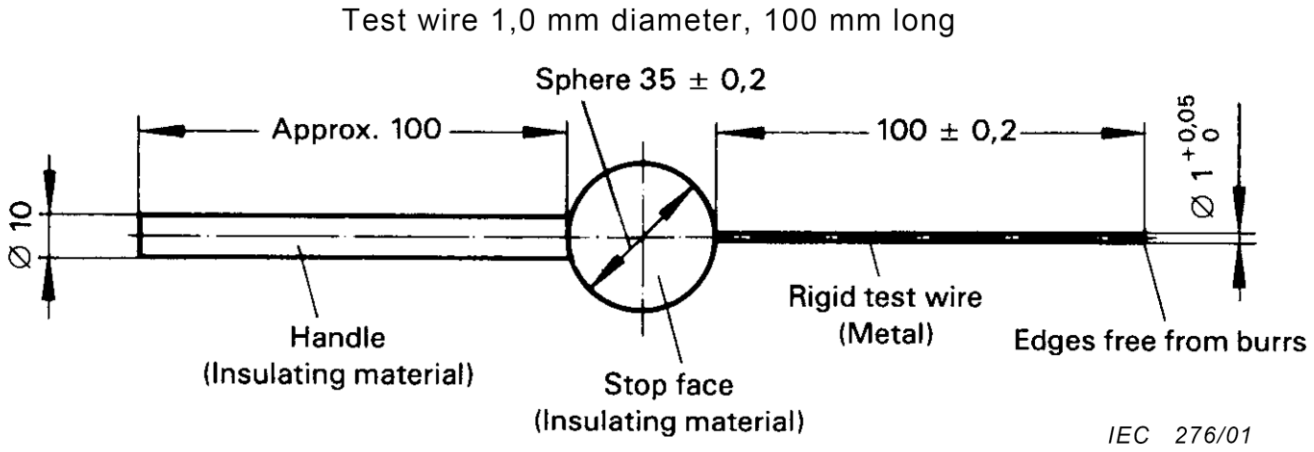
2-Test for protection against access to hazardous parts and against solid foreign objects indicated by the first characteristic numeral 6 (IP6X) (CLAUSE 12.2+12.3 and CLAUSE 13.4+13.6)

2.1 Tests for protection against access to hazardous parts indicated by the first characteristic numeral 6 (CLAUSE 12.2+12.3)

2.1.1 Method

Access probes to test the protection of persons against access to hazardous parts are given in follow figure.

1) The test is made using a test wire of 1,0 mm inserted through any openings of the enclosure;
2) The test with the force 1±0.1N;
3) For tests on low-voltage equipment, a low-voltage supply (of not less than 40 V and not more than 50 V) in series with a suitable lamp should be connected between the probe and the hazardous parts inside the enclosure. Hazardous live parts covered only with varnish or paint, or protected by oxidation or by a similar process, are covered by a metal foil electrically connected to those parts which are normally live in operation. The signal-circuit method should also be applied to the hazardous moving parts of high-voltage equipment;
4) Internal moving parts may be operated slowly, where this is possible.



2.1.2 Results

(x) The access probe can't touch hazardous live parts (IP6X) (CLAUSE 12.2+12.3).

Pass

2.2 Tests for protection against solid foreign objects indicated by the first characteristic numeral 6 (CLAUSE 13.4+13.6)

2.2.1 Method

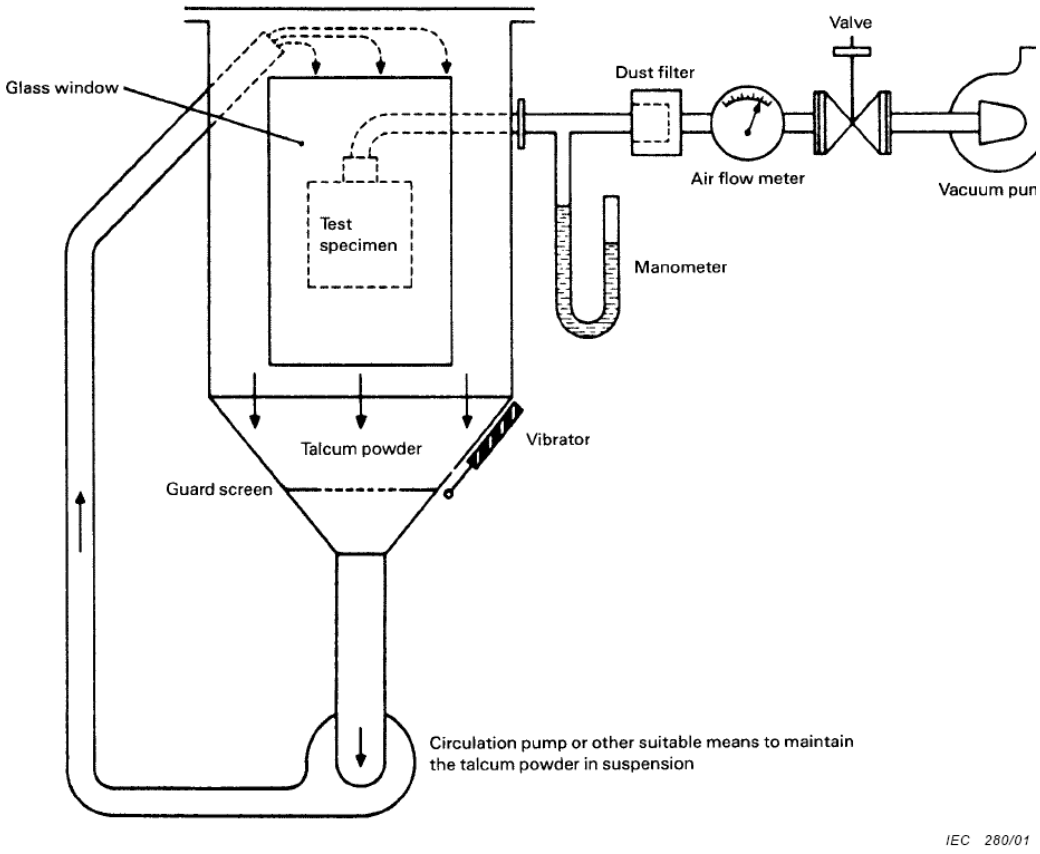
Test device to verify protection against solid foreign objects like the follow figure.

1) The test is made using a dust chamber incorporating the basic principle shown in the following figure;

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. The suction connection shall be made to a hole specially provided for this test. See the EUT photograph 4.3;

3) The extraction rate is 40 to 60 times volumes of the sample enclosure and the depression of the manometer is less than 2kPa;

4) The test duration is 2 hours.



2.2.2 Results

(x) No deposit of dust was observable inside the enclosure at the end of the test. (IP6X) (CLAUSE 13.4+13.6).

Pass

3- Test for protection against ingress of water indicated by the second characteristic numeral 7 (IPX7) (CLAUSE 14.2.7)

3.1 Method

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:

1) ☒ a) The lowest point of enclosures with a height less than 850mm is located 1000mm below the surface of the water;

☐ b) The highest point of enclosures with a height equal to or greater than 850mm is located 150mm below the surface of the water;

2) Test duration is 30 minutes;

3) The water temperature does not differ from that of the equipment by more than 5K.

3.2 Results

(x) No water accumulated inside the enclosure.

(x) The EUT complies with the requirement for protection against water characteristic numeral 7 (IPX7) (CLAUSE14.2.7)

Pass

4-EUT PHOTOGRAPHS

4.1 EUT- View before test

4.1.1 EUT- Front view

4.1.2 EUT- Bottom view

4.2 EUT- Inside view: no deposit of dust was observable inside the enclosure after IP6X test

4.2.1 EUT- Inside view

4.2.2 EUT- Inside view

4.3 EUT- Inside view: no water entered the enclosure after IPX7 test

4.3.1 EUT- Inside view

4.3.2 EUT- Inside view

Directions

1. The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
3. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of the Company.
6. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

*****End of report *****