Report No.: RDG200416002-SF

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

Measurement and Test Report

For

SHENZHEN TENDA TECHNOLOGY CO., LTD

6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

Test Model: OS3

This Report Concerns:	**Equipment Type:**
☒ Original Report	5GHz 11ac 867Mbps 12dBi Outdoor CPE

IP code:	IP65
Compiled by:	Jamie Li
Test Date:	2020-05-04
Date of issue:	2020-05-05
Reviewed by:	Andrew Luo
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1 - GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

SHENZHEN TENDA TECHNOLOGY CO., LTD product, "EUT" as referred to in this report is a 5GHz 11ac 867Mbps 12dBi Outdoor CPE and the model is OS3.

1.2 Objective

The following Declaration of Conformity of a device is prepared on behalf of SHENZHEN TENDA TECHNOLOGY CO., LTD in accordance with IEC 60529:1989+A1:1999+A2:2013, Degrees of protection provided by enclosures (IP code). The objective of the manufacturer is to demonstrate compliance with IEC 60529:1989+A1:1999+A2:2013. 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 spraying and splashing water (IPX5) (CLAUSE 14.2.5).

Data has been collected, reduced, and analyzed within this report in accordance with IEC 60529:1989+A1:1999+A2:2013. In order to demonstrate compliance, the manufacturer or a contracted laboratory makes measurements and takes the necessary steps to ensure that the equipment complies with the appropriate technical standards.

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. (Dongguan).

1.5 Test Equipment List

S/N	Manufacturer and Model	Instrument Type	Instrument I.D	Cal. Last Date	Cal. Due Date
1	FTR-3301B	Dust proof test chamber	T-08-SF063	2019-09-12	2022-09-11
2	BND-D	IP6X Test Probe	T-08-SF030	2020-02-28	2021-02-27
3	Feitianrui/FTR-E03	Water spray test device	T-08-SF061-6	2019-03-08	2024-03-07
4	PWS280	Hygrothermograph	T-08-QA026	2019-03-08	2022-03-07

1.6 Equipment Under Test (EUT)

Manufacturer	Description	Model	Brand Name
SHENZHEN TENDA TECHNOLOGY CO., LTD	5GHz 11ac 867Mbps 12dBi Outdoor CPE	OS3	Tenda
Manufacturer address	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052		

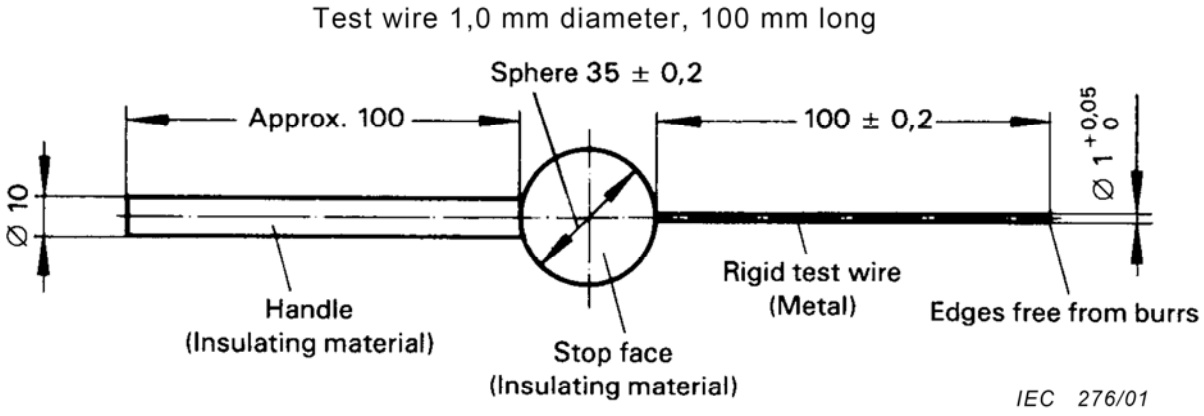
2 - Test for first characteristics numerals 6 (IP6X) (CLAUSE 12.2+12.3 and CLAUSE 13.4+13.6)

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±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 not touch hazardous live parts. (IP6X) (CLAUSE 12.2+12.3).

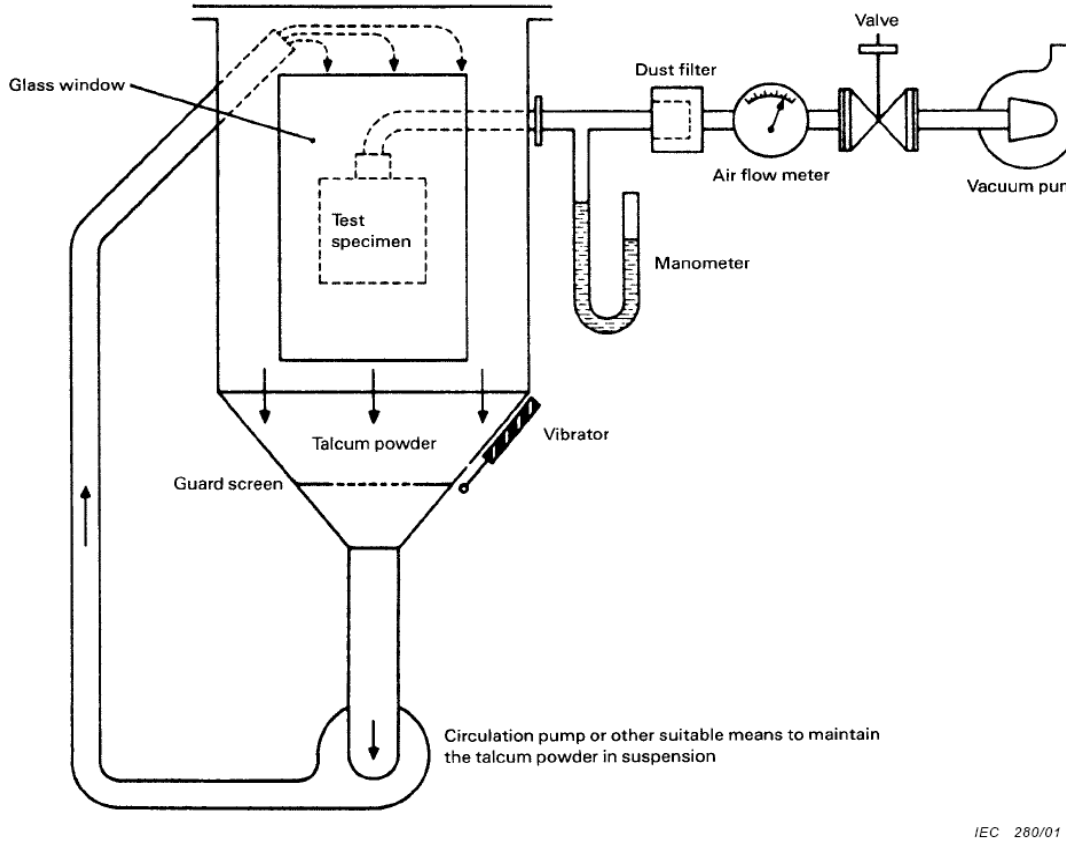
Pass

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;
3) The extraction rate is about 40 times volumes of the sample enclosure and the depression of the manometer is less than 2kPa;
4) The test duration is 8 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).

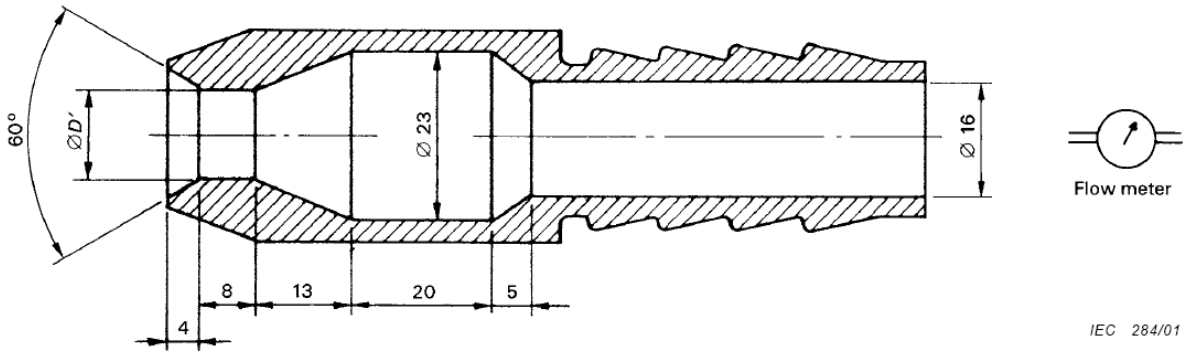
Pass

3 - Test for protection against water characteristics numerals 5(IPX5) (CLAUSE 14.2.5)

3.1 Method

Test device to verify protection against splashing water jets like the follow figure.

1) Internal diameter of the nozzle: 6.3mm;
2) Delivery rate: 12.5l/min ±5%
3) Distance from nozzle to enclosure surface between 2.5 m and 3 m.
4) Test duration is 3 min.



Dimensions in millimetres

D′ = 6,3 for the test of 14.2.5 (second characteristic numeral 5)

3.2 Results

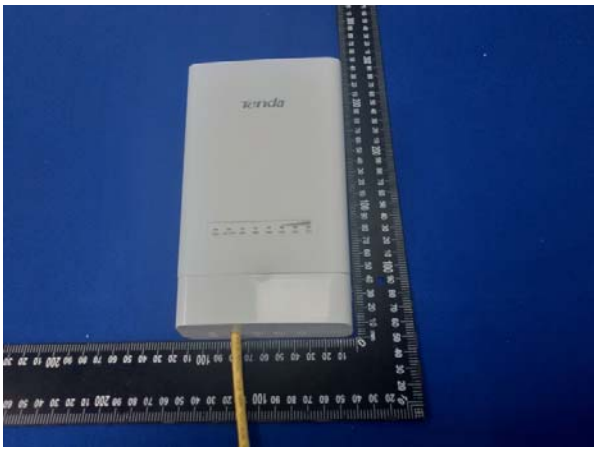
(x) After test, No water accumulated inside the enclosure.

(x) The EUT **complies with** the requirement for protection against water characteristics numerals 5 (IPX5) (CLAUSE14.2.5)

Pass

4 - EUT PHOTOGRAPHS

4.1 EUT- General view

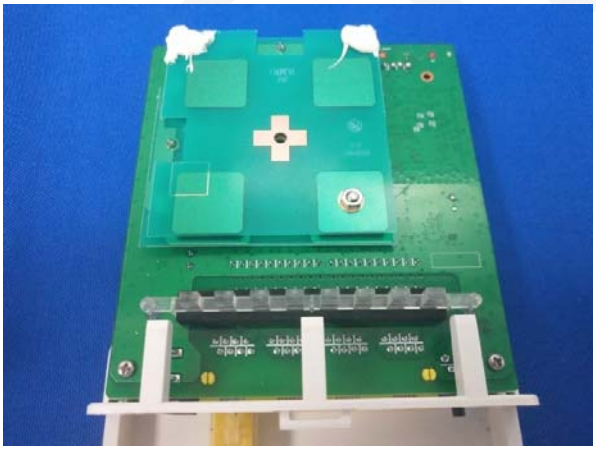


4.2 EUT-IP6X Testing photo

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

4.4 EUT-IPX5 Testing photo

4.5 EUT- Inside view: no water accumulated inside the enclosure after IPX5 test



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 and such sample(s) are retained for 30 days only.
3. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
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