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**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2164-2013

**Household and similar purposes fan type PTCR heater
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces QB/T 2164-1995 "Household and similar purposes fan type PTCR heater". Compared with QB/T 2164-1995, the main differences are as follows.

- Modify the standard number of normative reference, terms and model naming methods, inspection rules;
- Rewrite Chapter 5. delete the contents of test methods in the fifth chapter of QB/T 2164-1995, add the electrical strength and insulation resistance requirements of the insulated heater, and modify the durability index of the heater;
- Add content in Chapter 6. modify the test methods in Chapter 5 of QB/T 2164-

1995 as the content of this chapter, and add the test methods of electrical strength

and insulation resistance of the insulated heater;

- Add demonstration of measurement and test methods in Appendix A (Informative).

This standard was proposed by the China Light Industry Federation.

This standard shall be under the jurisdiction of the National Household Electrical

Standardization Technical Committee (SAC/TC46).

Main drafting organizations of this standard. Ningbo Sunny Electronics Co. Ltd., Shenzhen Jinke special materials Co. Ltd., Shanghai Ziyu Electronic Ceramics Co. Ltd., Weihai Haiwang Electronic Co. Ltd., Electronics Research Institute of Chinese Academy of Sciences, Huazhong University of Science and Technology, Nanjing University of Technology, Changshou Linzhi Electronics Co., Ltd., Wuhan Huagong new Gaoli electronic Co. Ltd., Foshan Nanhai Fengwo Electronic Products Ltd, China institute of electrical appliances.

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The previously issued edition of this standard is.

- QB/T 2164-1995.

Household and similar purposes fan type PTCR heater

1 Scope

This standard specifies the terms and definition, product classification and model naming, requirements, test methods, inspection rules, as well as marking, packaging, transportation, storage of household and similar purposes fan type PTCR heaters.

This part is applicable to household and similar purposes fan type PTCR heaters.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 191-2008 Packaging. Pictorial marking for handling of goods (ISO 780.1997, MOD)

GB/T 1019 General requirements for the package of household and similar electrical appliances

GB/T 2421.1-2008 Environmental testing for electric and electronic products.

General and guidance(IEC 60068-1.1988, IDT)

GB/T 2423.4 Environmental testing for electric and electronic products. Part 2. Test method. Test Db. Damp heat, cyclic (12h+12h cycle) (GB/T 2423.4-2008, IEC 60068-2-30.2005, IDT)

GB/T 2423.10 Environmental testing for electric and electronic products. Part 2. Tests methods. Test Fc. Vibration (sinusoidal) (GB/T 2423.10-2008, IEC 60068-2-6.1995, IDT)

GB/T 2423.17 Environmental testing for electric and electronic products. Part 2. Test method. Test Ka. Salt mist (GB/T 2423.17-2008, IEC 60068-2-11.1981, IDT)

GB/T 2423.22 Environmental testing. Part 2. Test methods. Test N. Change of temperature (GB/T 2423.22-2012, IEC 60068-2-14.2009, IDT)

GB/T 2423.60-2008 Environmental testing. Part 2. Tests methods. Test U. Robustness of terminations and integral mounting devices (GB/T 2423.60-2008, IEC60068-2-21.2006, IDT)

GB/T 2828.1-1012 Sampling procedures for inspection by attributes. Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1.1999, IDT)

GB/T 2829 Sampling procedures and tables for periodic inspection by attributes (apply to inspection of process stability)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Positive temperature coefficient resistance (PTCR)

The thermistor at its functional part, the resistance value increases with the increase of temperature.

3.2 Fan type PTCR heater

A heater composed of one or more parallel PTCR elements and a metal radiator that uses a mechanical method to circulate the air and heat it.

3.3 Zero-power resistance

The resistance of the heater at 25°C environmental temperature. It is measured under the condition that the variation of resistance is caused by its internal heating and can be ignored in the total deviation of measurement.

3.4 Maximum initial surge current

The valid value of the maximum current when the rated voltage is applied to a heater.

3.5 Withstanding voltage

The maximum voltage to which the heater can withstand during the specified time, provided that the heater is not destroyed in the standard atmosphere and in the stationary air.

3.6 Insulation heater

A heater that meets the requirements of specified insulation resistance and electrical strength test.

After 6.4.2 test, the heater should have no obvious damage. The power change rate should not be greater than 10%, and the change rate of zero-power resistance should not be greater than 30%. The insulation heater should not breakdown during electrical strength test.

5.5.1 Temperature-humidity alternation

After test as per 6.5.1, the heater power change rate should not be greater than 10%, the change rate of zero-power resistance should not be greater than 30%, and the insulation heater should not breakdown during electrical strength test.

5.5.2 Salt mist

After test as per 6.5.2, the appearance of the heater should not be corroded, the power change rate should not be greater than 10%, the change rate of zero-power resistance should not be greater than 30%, and the insulation heater should not breakdown during electrical strength test.