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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 2424.1-2015

Replacing GB/T 2424.1-2005

**Environmental testing -- Part 3: Supporting documentation and
guidance -- Cold and dry heat tests**

环境试验 第3部分：支持文件及导则 低温和高温试验

(English Translation)

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Foreword

GB/T 2424.1 is GB/T 2424 Part 1, part of the GB/T 2424 standard, see informative Annex NA.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 2424.1-2005 "electric and electronic products environmental

testing of high and low temperature tests." And GB/T 2424.1-2005 Compared to the content and structure has a significant change.

--- Increased in Chapter 1, Chapter 2, Section 3;

--- GB/T 2424.1-2005 all text content and Figure B.1, B.2 and B.3 Figure in Part 4 of this chapter has been re Organization and presentation;

--- Remove the GB/T 2424.1-2005 in "to IEC 60068-3-1. 1974" Basic environmental testing procedures Part 3. Background Materials Section 1. Cold and dry heat test "in the first supplementary document" of the contents;

--- Deleted Appendix A, Appendix C, Appendix D, Appendix E, Appendix F, Appendix G, Appendix H, Appendix I, Appendix J.

This section uses the translation method identical with IEC 60068-3-1:2011 "Environmental testing - Part 3-1. Supporting documentation and guidance hypothermia and high temperature test. " Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- GB/T 2421.1-2008 Environmental testing for electric and electronic products overview and guidance (IEC 60068-1. 1988, IDT)

--- GB/T 2423.1-2008 Environmental testing for electric and electronic products Part 2. Test methods Test A. Cold (IEC 60068-2-1:2007, IDT)

--- GB/T 2423.2-2008 Environmental testing for electric and electronic products Part 2. Test methods Test B. Dry heat (IEC 60068-2-2:2007, IDT) this part of IEC 60068-3-1:2011 compared to, mainly to do the following editorial changes.

--- This part of the name to read. "Environmental testing - Part 3. Supporting documentation and guidance low and high temperature test";

--- Corrected Fig. 3 "unit surface area of the cooling units" by " $\text{kW} \cdot \text{m}^{-1}$ " to " $\text{kW} \cdot \text{m}^{-2}$ ";

--- Added "part of the GB/T 2424 standard" informative annex (see Appendix NA).

This part of the National Electrical and Electronic Products Environmental Technology Standardization Committee (SAC/TC8) and focal points.

This section drafted by. China Electric Apparatus Research Institute Co., Weikai Detection Technology Co., Ltd. of Guangdong Power Grid Co., Ltd.

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1 Scope

This section GB/T 2424 regulations regarding low and high temperature test implementation guide.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

IEC 60068-1 Environmental testing - Part 1. Overview and Guide
(Environmentaltesting-Part 1. Generaland guidance) IEC 60068-2-1 Environmental testing - Part 2-1. Tests - Test A. Cold (Environmentaltesting-Part 2-1. Tests-TestA. Cold) IEC 60068-2-2 Environmental testing - Part 2-2. Tests - Test B. Dry heat
(Environmentaltesting-Part 2-2. Tests-TestB. Dryheat)

3 Terms and Definitions

The following terms and definitions apply to this document.

Heat test sample heat-dissipatingspecimen Under free air conditions specified in IEC 60068-1 and the atmospheric pressure, when the heat reaches a steady state, measured obtaining the upper surface of the hottest Temperature is higher than the ambient air temperature 5K above the test sample.

Non-heat test sample nonheat-dissipatingspecimen Heat generated is insufficient to affect the temperature of the test sample and the ambient air temperature near the test sample.

Free air conditions Infinite space conditions, the movement of air space is affected only by the heat of the test sample.

4.1.1 General

Performance of the test sample may be subjected to its operating temperature influences or constraints. The degree of influence depends on the test system (climatic or environmental test chamber