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

GB/T 2423.23-2013

**Environmental testing - Part 2: Test methods - Test Q: Sealing
(English Translation)**

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Foreword

This part is part 23 of GB/T 2423. The compositions of the GB/T 2423 standard are shown in the informative appendix NA.

This part was drafted in accordance with GB/T 1.1-2009.

This part replaces GB/T 2423.23-1995 "Environmental testing for electric and electronic products - Test Q. sealing".

Compared with GB/T 2423.23-1995, the main changes in this Part are as follows.

- In accordance with the provisions of GB/T 1.1-2009, MODIFY the format;
- CHANGE term "this standard" in the original standard into "this Part";
- In keeping consistency with IEC 60068-2-17.1994, CHANGE the "4 Overview" of the original standard into "Introduction"; MAKE textual editing

and amendments;

- DELETE the "additional description" in the original standard. ADD the "Foreword" of this Part;
- In keeping consistency with IEC 60068-2-17.1994, ADD the branch test Qy of the sealing test series, which mainly includes the test Qy branch in Figure

1 of this Part, the "Test Qy. Pressurized seal test" in Chapter 11, Appendix

H (Informative) -- Test Qy -- Guidelines";

- MODIFY the chapter names, from the "Subject content and scope of application" in the original standard into the "Scope", from the "Normative standards" in the original standard into "Normative references", from the "Terms" in the original standard into "Terms and definitions";
- ADD introduction for "Normative references" and "Terms and definitions";
- MODIFY the editorial errors in "Terms and definitions"; CHANGE the "leakge" into "leakage";
- ADD the title of Figure 1, as well as the title of Table 3 and Table 4;
- CHANGE the "anti-repeated immersion" in Table 2 into "anti-continuous immersion";
- In 3.5, CHANGE "For this test" into "For this Part";
- To be consistent with IEC 60068-2-17.1994, ADD the "Note. Used for testing Qm" to 3.9 ~ 3.12 of the "Terms and definitions";
- CHANGE the "Pressurized" in "5.3 Description" of the original standard into "Had been pressurized" in 4.3 of this Part;
- CHANGE the contents of the suspension paragraph of 6.3 and 6.6 of the original standard, into the clause of "Experiment summary"; the original subordinate label of each section is postponed in turn;
- In keeping consistency with IEC 60068-2-17.1994, DELETE the content of the suspended paragraphs 6.4 and 6.5 of the original standard;

- In keeping consistency with IEC 60068-2-17.1994, CHANGE the Table 3 "immersion time" into "minimum immersion time";
- MODIFY the "dehumidifying water" in 8.5.1 of the original standard into "water with low surface tension" in 7.5.1 of this Part;
- MODIFY the "Initial inspection" and "De-wetting agent" in 8.8 of the original standard into "Initial inspection of electrical and mechanical properties" and "Wetting agent" in 7.8 of this Part;
- MODIFY the "Unacceptable interfering signals" in 9.4.6 of the original standard into "Unacceptable interfering signals" in 8.4.6 of this Part;
- In the A2 of the original standard, CHANGE the "Compress the air in the test chamber to" into "...pressurized to"; CHANGE "The result can use cubic centimeters per hour" into "... cubic centimeters per hour";
- In Note 1 to the D1 of the original standard, CHANGE "...approximately equal to 10-5 Pa" into "...approximately equal to 105 Pa";
- In the Appendix A ~ Appendix H, CHANGE from the original "Supplements" into "Informative appendixes".

This Part, through the translation method, identically adopts the IEC 60068-2-

17.1994 "Basic environmental testing procedures - Part 2.Tests - Test Q.

Sealing". The technical content is the same as that of IEC 60068-2-17.1994.

The editing format is modified as follows.

- CHANGE the name of this Part into. "Environmental testing - Part 2.Test methods - Text Q. Sealing";
- In accordance with the provisions of GB/T 1.1-2009, MODIFY part of the writing format, for example, removing the suspension paragraph of IEC 60068-2-17.1994; changing the descriptions in the title bracket in 1.9 ~ 1.12 IEC 60068-2-17.1994 into the note to this Part;
- ADD Chapter 1 and Chapter 2 of this Part; ADD the introduction of the list of normative references, with reference to the national standards that have

a corresponding relationship with international standards;

- MODIFY the chapter number, the "Chapter 1, Chapter 2, Chapter 3, Chapter 4, Chapter 5, Chapter 6, Chapter 7, Chapter 8, Chapter 9" of IEC 60068-2-17.1994 correspond to "Chapter 3, Chapter 4, Chapter 5, Chapter 6, Chapter 7, Chapter 8, Chapter 9, Chapter 10, Chapter 11" in this Part, respectively;
- ADD the title and number of the Table in 3.6 in IEC 60068-2-17.1994; the number of Table 3 and Table 4 will be postponed to Table 4 and Table 5 in turn;
- ADD the text description of "Figure 4 shows the pressure characteristics of the test chamber under restricted conditions" in 11.3 of this Part.
- ADD an informative appendix "Compositions of GB/T 2423 standard" (see appendix NA).

This part was proposed by AND shall be under the jurisdiction of the National Standardization Technical Committee on Environmental Conditions and Environmental Tests for Electrical and Electronic Products (SAC/TC 8). Drafting organizations of this Part. The Fifth Institute of Electronics of the Ministry of Industry and Information Technology, Beijing University of Aeronautics and Astronautics, Guangzhou University, China Electrical Equipment Research Institute Co., Ltd.

1 Scope

This part of GB/T 2423 specifies various sealing performance test methods. Test Qa and Qc are rough inspections, to observe the bubbles emerging from the leak. Test Qd is to observe the leakage of liquid, under heating conditions.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including