



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

GB/T 2423.27-2020

**Environmental testing - Part 2: Test methods - Test method and
guidance: Combined temperature or temperature and humidity
with low air pressure tests**

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Preface

GB/T 2423 "Environmental Testing Part 2.Test Methods" is divided into several parts according to the test methods.

Refer to Appendix NA for the components of GB/T 2423.

This part is part 27 of GB/T 2423.

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

This part replaces GB/T 2423.25-2008 "Environmental Testing of Electrical and Electronic Products Part 2.Test Method Test Z/AM. Low

Temperature/low pressure comprehensive test", GB/T 2423.26-2008 "Environmental test of electrical and electronic products Part 2.Test method test Z/

BM. High temperature/low air pressure comprehensive test and GB/T 2423.27-2005 "Environmental testing of electrical and electronic products Part 2.Test methods

Test Z/AMD. Low temperature/low air pressure/humid heat continuous comprehensive test".

Compared with GB/T 2423.25-2008, GB/T 2423.26-2008 and GB/T 2423.27-2005, the main technical changes in this part are as follows.

---Combined the main technical aspects of GB/T 2423.25-2008, GB/T 2423.26-2008 and GB/T 2423.27-2005

Content and rearrange the structure of this part;

--- Deleted the "general description of the test", "description of the test equipment" and other aspects;

--- Deleted the distinction between heat dissipation test samples and non-heat dissipation test samples in the test;

---Added Appendix A "Temperature/Low Pressure or Temperature/Humidity/Low Pressure Comprehensive Test Guide".

The translation method used in this part is equivalent to the use of IEC 60068-2-39.2015 Environmental Testing Part 2-39.Test Test Methods and Guidance

Then. temperature/low pressure or temperature/humidity/low pressure comprehensive test".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 2421-2020 Environmental Test Overview and Guidelines (IEC 60068-1.2013, IDT)

---GB/T 2423.3-2016 Environmental Test Part 2.Test Method Test Cab. Constant Humidity Test (IEC 60068-2-78.2012, IDT)

Compared with IEC 60068-2-39.2015, this part mainly makes the following editorial changes.

---The name of this part is changed to "Environmental Testing Part 2.Test Methods, Test Methods and Guidelines. Temperature/Low Pressure or Temperature/Humidity Degree/low air pressure comprehensive test";

---Informative appendix NA "Components of GB/T 2423" has been added.

This part is proposed and managed by the National Standardization Technical Committee on Environmental Conditions and Environmental Tests for Electrical and Electronic Products (SAC/TC8).

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introduction

When exposed to different natural environmental conditions, the performance of equipment and components should not cause serious deterioration. For example, temperature, humidity, low

Air pressure synthesis may only have a certain effect on components and gaskets.

The types and severity of environmental parameters depend on the operating, transportation, and storage environments exposed to equipment and components. Environmental impact on equipment performance

It is very different in the tropics and humid tropics and the Arctic. Different environmental parameters will cause various or overlapping effects on equipment and components.

Added effect.

Manufacturers try to ensure that, at the same time, users also hope that equipment and components can withstand the impact of the environment during the service life. Can be passed

The test samples are exposed to a laboratory that simulates a series of environmental parameters to test whether the equipment meets this expectation. Usually by raising the ring

The severity of the environmental parameters can achieve meaningful results in a relatively short period of time. This can be used to evaluate similar actual environmental conditions.

Environmental testing Part 2. Test methods

Test methods and guidelines. temperature/low pressure or

Temperature/humidity/low air pressure comprehensive test

1 Scope

This part of GB/T 2423 gives the test methods for the temperature/low pressure or temperature/humidity/low pressure comprehensive test of equipment or components.

Law and its guidelines.

The purpose of the comprehensive test is to study the influence of temperature/low pressure or temperature/humidity/low pressure comprehensive test on equipment or components.

Comprehensive test methods are used to evaluate electrical properties, mechanical properties or other physical properties.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

IEC 60068-1 Environmental Testing Part 1.Overview and Guidelines

IEC 60068-2-78 Environmental Test Part 2-78.Test Test Cab. Constant Damp Heat

3 Terms and definitions

no.

4.1 Overview

All values of test parameters, such as low temperature, high temperature, low air pressure, humidity, test time and running status of test samples, etc., should be from

Selected from IEC 60068-2 and related specifications.

The duration of the test shall be calculated from the time the test sample reaches a stable temperature under low pressure conditions. Temperature stability according to IEC 60068-1 Regulations.

The test should preferably be carried out under low wind speed conditions.

4.2 Recommended comprehensive test

Temperature, low pressure and test time can be selected from Table 1.

Table 1 Test severity level

4.3 Initial measurement and function check

The test sample shall be inspected for appearance, size and function according to relevant specifications.

4.4.1 Pretreatment

Carry out the pretreatment of the test sample according to relevant specifications.