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

GB/T 2423.34-2024

**Environmental testing - Part 2: Test methods - Test Z/AD:
Composite temperature/humidity cyclic test
(English Translation)**

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This Document is Part 34 of GB/T 2423.The published parts of GB/T 2423 can refer to Annex

NA.

This Document replaced GB/T 2423.34-2012 Environmental Testing - Part 2. Test Methods - Test Z/AD. Composite Temperature/Humidity Cyclic Test. Compared with GB/T 2423.34-2012,

the major technical changes of this Document are as follows besides the structural adjustments

and editorial modifications.

- a) Add description of inapplicable scope in "Scope" (see Clause 1 of this Edition);
- b) Change the content of "Test overview" (see 4.1 of this Edition, 3.1 of the 2012 Edition);
- c) Change the requirements for humidification water in the "Wet heat test chamber" (see 5.2 of this Edition; 4.1 of the 2012 Edition);
- d) Change the content of "Preconditioning" (see 7.1 of this Edition; 6.1 of the 2012 Edition);
- e) Change the steps and humidity values in "Description of temperature/humidity sub-cycle",

"Description of low temperature sub-cycle" and "Description of 24 h cycle without low temperature exposure" (see 7.4.1, 7.4.2, 7.4.3 of this Edition; 6.4.1, 6.4.2, 6.4.3 of the

2012 Edition);

- f) Add the content of "Intermediate testing" (see 7.4.5 of this Edition);
- g) Change the content of "Information to be given in the test report" (see Clause 9 of this Edition; Clause 8 of the 2012 Edition).

This Document equivalently adopted IEC 60068-2-38.2021 Environmental Testing - Part 2-38.

Tests - Test Z/AD. Composite Temperature/Humidity Cyclic Test.

This Document made the minimum editorial modifications as follows.

--- To coordinate with the existing standard, change the standard name into Environmental Testing - Part 2. Test Methods - Test Z/AD. Composite Temperature/Humidity Cyclic Test;

--- Add Annex NA (Informative) "Parts of GB/T 2423".

Please note some contents of this Document many involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Document was proposed by and under the jurisdiction of National Technical Committee

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This Document was first-time published in 1986; first-time revised in 2005; second-time revised in 2012; and it is third-time revised hereby.

1 Scope

This Document specifies a composite test procedure, primarily intended for component type specimens, to determine, in an accelerated manner, the resistance of specimens to the deteriorative effects of high temperature/humidity and cold conditions.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in 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 all the amendments) is applicable to this Document.

IEC 60068-1 Environmental testing - Part 1.General and guidance

NOTE: GB/T 2421-2020 Environmental testing - General and guidance (IEC 60068-1.2013, IDT)

3 Terms and Definitions

No terms and definitions are listed in this Document.

4 General

For solid type specimens, for example plastic encapsulated, where there may be small hairline

cracks or porous material, the absorption or diffusion mechanisms will predominate and a steady damp heat such as test C of IEC 60068-2-78 is preferred for investigating these effects.

From the above, this test should not be considered to be interchangeable with, or an alternative

to, either steady-state or other cyclic damp heat tests, but the choice of test procedure should be

made with due regard for the physical and thermal characteristics of the test specimens and the

types of failure mechanisms which are significant for each particular case.

5 Description of Test Chamber

The air in the chamber shall therefore be continuously moving.

Care should be taken that the thermal capacity of the specimen under test does not appreciably

influence conditions within the chamber.