

STN	Polovodičové súčiastky Mechanické a klimatické skúšobné metódy Časť 24: Zvýšená odolnosť proti vlhkosti HAST bez elektrického namáhania	STN EN IEC 60749-24 35 8799
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Semiconductor devices - Mechanical and climatic test methods - Part 24: Accelerated moisture resistance - Unbiased HAST

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

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EUROPEAN STANDARD

EN IEC 60749-24

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English Version

**Semiconductor devices - Mechanical and climatic test methods -
Part 24: Accelerated moisture resistance - Unbiased HAST
(IEC 60749-24:2025)**

Dispositifs à semiconducteurs - Méthodes d'essais
mécaniques et climatiques - Partie 24: Résistance à
l'humidité accélérée - HAST sans polarisation
(IEC 60749-24:2025)

Halbleiterbauelemente - Mechanische und klimatische
Prüfverfahren - Teil 24: Beschleunigte
Feuchtigkeitsbeständigkeit - Unvoreingenommene Hast
(IEC 60749-24:2025)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60749-24:2026 (E)**European foreword**

The text of document 47/2957/FDIS, future edition 2 of IEC 60749-24, prepared by TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60749-24:2026.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2027-01-31 level by publication of an identical national standard or by endorsement
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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60749-5	-	Semiconductor devices - Mechanical and climatic test methods - Part 5: Steady-state temperature humidity bias life test	EN IEC 60749-5	-
IEC 60749-33	-	Semiconductor devices - Mechanical and climatic test methods - Part 33: Accelerated moisture resistance - Unbiased autoclave	EN 60749-33	-



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INTERNATIONAL STANDARD

**Semiconductor devices - Mechanical and climatic test methods -
Part 24: Accelerated moisture resistance - Unbiased HAST**

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**Semiconductor devices - Mechanical and climatic test methods -
Part 24: Accelerated moisture resistance - Unbiased HAST**

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IEC 60749-24 has been prepared by IEC technical committee 47: Semiconductor devices. It is an International Standard.

This second edition, cancels and replaces the first edition published in 2004. It is based on JEDEC document JESD22-A118B.01. It is used with permission of the copyright holder, JEDEC Solid State Technology Association. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) rearrangement of clauses to reposition requirements;
- b) addition of two notes to the post-test electrical procedures.

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The text of this International Standard is based on the following documents:

Draft	Report on voting
47/2957/FDIS	47/2974/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts of the IEC 60749 series, under the general title *Semiconductor devices – Mechanical and climatic test methods*, can be found in the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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1 Scope

This part of IEC 60749 specifies unbiased highly accelerated stress testing (HAST). HAST is performed for the purpose of evaluating the reliability of non-hermetically packaged solid-state devices in humid environments.

It is a highly accelerated test which employs temperature and humidity under non-condensing conditions to accelerate the penetration of moisture through the external protective material (encapsulant or seal) or along the interface between the external protective material and the metallic conductors which pass through it. Bias is not applied in this test to ensure that the failure mechanisms potentially overshadowed by bias can be uncovered (e.g. galvanic corrosion).

This test is used to identify failure mechanisms internal to the package and is destructive.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN