

<b>STN</b>	<b>Polovodičové súčiastky</b> <b>Mechanické a klimatické skúšobné metódy</b> <b>Časť 5: Skúška životnosti pod vplyvom stáleho</b> <b>vlhkého tepla</b>	<b>STN</b> <b>EN 60749-5</b>  35 8799
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Semiconductor devices - Mechanical and climatic test methods - Part 5: Steady-state temperature humidity bias life test

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. 12/17

Obsahuje: EN 60749-5:2017, IEC 60749-5:2017

Oznámením tejto normy sa od 15.05.2020 ruší  
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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

**EN 60749-5**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2017

ICS 31.080.01

Supersedes EN 60749-5:2003

English Version

**Semiconductor devices - Mechanical and climatic test methods -  
Part 5: Steady-state temperature humidity bias life test  
(IEC 60749-5:2017)**

Dispositifs à semiconducteurs - Méthodes d'essais  
mécaniques et climatiques - Partie 5: Essai continu de  
durée de vie sous température et humidité avec polarisation  
(IEC 60749-5:2017)

Halbleiterbauelemente - Mechanische und klimatische  
Prüfverfahren - Teil 5: Lebensdauerprüfung bei konstanter  
Temperatur und Feuchte unter elektrischer Beanspruchung  
(IEC 60749-5:2017)

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 60749-5:2017****European foreword**

The text of document 47/2367/FDIS, future edition 2 of IEC 60749-5, prepared by IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60749-5:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-02-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-05-15

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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.cenelec.eu](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60749-4	-	Semiconductor devices - Mechanical and climatic test methods - Part 4: Damp heat, steady state, highly accelerated stress test (HAST)	EN 60749-4	-



# INTERNATIONAL STANDARD

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**Semiconductor devices – Mechanical and climatic test methods –  
Part 5: Steady-state temperature humidity bias life test**



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# INTERNATIONAL STANDARD

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## Semiconductor devices – Mechanical and climatic test methods – Part 5: Steady-state temperature humidity bias life test

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SEMICONDUCTOR DEVICES –  
MECHANICAL AND CLIMATIC TEST METHODS –****Part 5: Steady-state temperature humidity bias life test**

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International Standard IEC 60749-5 has been prepared by IEC technical committee 47: Semiconductor devices.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

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

- a) correction of an error in an equation;
- b) inclusion of notes for guidance;
- c) clarification of the applicability of test conditions.

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

FDIS	Report on voting
47/2367/FDIS	47/2383/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60749 series, published under the general title *Semiconductor devices – Mechanical and climatic test methods*, can be found on 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

## SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

### Part 5: Steady-state temperature humidity bias life test

#### 1 Scope

This part of IEC 60749 provides a steady-state temperature and humidity bias life test for the purpose of evaluating the reliability of non-hermetic packaged solid-state devices in humid environments.

This test method is considered destructive.

#### 2 Normative references

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.

IEC 60749-4, *Semiconductor devices – Mechanical and climatic test methods – Part 4: Damp heat, steady-state, highly accelerated stress test (HAST)*

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