ICS 31.080.01 SLOVENSKÁ TECHNICKÁ NORMA Január 2021

STN	**Polovodičové súčiastky Mechanické a klimatické skúšobné metódy Časť 15: Odolnosť súčiastok na montáž priechodnými otvormi proti spájkovacej teplote**	**STN EN IEC 60749-15 35 8799**

Semiconductor devices - Mechanical and climatic test methods - Part 15: Resistance to soldering temperature for through-hole mounted devices

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. 12/20

Obsahuje: EN IEC 60749-15:2020, IEC 60749-15:2020

Oznámením tejto normy sa od 18.08.2023 ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60749-15

September 2020

ICS 31.080.01

Supersedes EN 60749-15:2010 and all of its amendments and corrigenda (if any)

English Version

Semiconductor devices - Mechanical and climatic test methods - Part 15: Resistance to soldering temperature for through-hole mounted devices (IEC 60749-15:2020)

Dispositifs à semiconducteurs - Méthodes d'essais mécaniques et climatiques - Partie 15: Résistance à la température de brasage pour dispositifs par trous traversants (IEC 60749-15:2020)

Halbleiterbauelemente - Mechanische und klimatische Prüfverfahren - Teil 15: Beständigkeit gegen Löttemperatur bei Bauelementen zur Durchsteckmontage (IEC 60749-15:2020)

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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 60749-15:2020 (E)

European foreword

The text of document 47/2630/FDIS, future edition 3 of IEC 60749-15, prepared by IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60749-15:2020.

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)	2021-05-18
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2023-08-18

This document supersedes EN 60749-15:2010 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60749-15:2020 was approved by CENELEC as a European Standard without any modification.

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.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-20	-	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	-	-
IEC 60749-3	-	Semiconductor devices - Mechanical and climatic test methods - Part 3: External visual examination	EN 60749-3	-
IEC 60749-8	-	Semiconductor devices - Mechanical and climatic test methods - Part 8: Sealing	EN 60749-8	-

IEC 60749-15

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Semiconductor devices – Mechanical and climatic test methods – Part 15: Resistance to soldering temperature for through-hole mounted devices

Dispositifs à semiconducteurs – Méthodes d'essais mécaniques et climatiques – Partie 15: Résistance à la température de brasage pour dispositifs par trous traversants

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SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

Part 15: Resistance to soldering temperature for through-hole mounted devices

FOREWORD

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International Standard IEC 60749-15 has been prepared by IEC technical committee 47: Semiconductor devices.

This third edition cancels and replaces the second edition published in 2010. This edition constitutes a technical revision.

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

a) inclusion of new Clause 3, Terms and definitions;
b) clarification of the use of a soldering iron for producing the heating effect;
c) inclusion an option to use accelerated ageing.

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

FDIS	Report on voting
47/2630/FDIS	47/2639/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.

SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

Part 15: Resistance to soldering temperature for through-hole mounted devices

1 Scope

This part of IEC 60749 describes a test used to determine whether encapsulated solid state devices used for through-hole mounting can withstand the effects of the temperature to which they are subjected during soldering of their leads by using wave soldering.

In order to establish a standard test procedure for the most reproducible methods, the solder dip method is used because of its more controllable conditions. This procedure determines whether devices are capable of withstanding the soldering temperature encountered in printed wiring board assembly operations, without degrading their electrical characteristics or internal connections.

This test is destructive and may be used for qualification, lot acceptance and as a product monitor.

The heat is conducted through the leads into the device package from solder heat at the reverse side of the board. This procedure does not simulate wave soldering or reflow heat exposure on the same side of the board as the package body.

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 60068-2-20, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60749-3, *Semiconductor devices – Mechanical and climatic test methods – Part 3: External visual examination*

IEC 60749-8, *Semiconductor devices – Mechanical and climatic test methods – Part 8: Sealing*