SLOVENSKI STANDARD
SIST EN IEC 60749-13:2018

01-junij-2018

Nadomešča:
SIST EN 60749-13:2004

Polprevodniški elementi - Metode za mehansko in klimatsko preskušanje - 13. del: Solna atmosfera (IEC 60749-13:2018)

Semiconductor devices - Mechanical and climatic test methods - Part 13: Salt atmosphere (IEC 60749-13:2018)

Halbleiterbauelemente - Mechanische und klimatische Prüfverfahren - Teil 13: Salzatmosphäre (IEC 60749-13:2018)

Dispositifs à semiconducteurs - Méthodes d'essais mécaniques et climatiques - Partie 13: Atmosphère saline (IEC 60749-13:2018)

Ta slovenski standard je istoveten z: **EN IEC 60749-13:2018**

ICS:

19.060	Mehansko preskušanje	Mechanical testing
31.080.01	Polprevodniški elementi (naprave) na splošno	Semiconductor devices in general

SIST EN IEC 60749-13:2018 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60749-13

April 2018

ICS 31.080.01

Supersedes EN 60749-13:2002

English Version

Semiconductor devices - Mechanical and climatic test methods - Part 13: Salt atmosphere (IEC 60749-13:2018)

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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

European foreword

The text of document 47/2446/FDIS, future edition 2 of IEC 60749-13, prepared by IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60749-13:2018.

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)	2018-12-22
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-03-22

This document supersedes EN 60749-13:2002.

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Endorsement notice

The text of the International Standard IEC 60749-13:2018 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 60749-14	-	Semiconductor devices - Mechanical and climatic test methods -- Part 14: Robustness of terminations (lead integrity)	EN 60749-14	-

IEC 60749-13

Edition 2.0 2018-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Semiconductor devices – Mechanical and climatic test methods – Part 13: Salt atmosphere

Dispositifs à semiconducteurs – Méthodes d'essais mécaniques et climatiques – Partie 13: Atmosphère saline

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 31.080.01

ISBN 978-2-8322-5369-4

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

Part 13: Salt atmosphere

FOREWORD

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International Standard IEC 60749-13 has been prepared by IEC technical committee 47: Semiconductor devices.

This second edition cancels and replaces the first edition published in 2002. This edition constitutes a technical revision.

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

a) alignment with MIL-STD-883J Method 1009.8, Salt Atmosphere (Corrosion), including information on conditioning and maintenance of the test chamber and mounting of test specimens (including explanatory figures).

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

FDIS	Report on voting
47/2446/FDIS	47/2455/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 13: Salt atmosphere

1 Scope

This part of IEC 60749 describes a salt atmosphere test that determines the resistance of semiconductor devices to corrosion. It is an accelerated test that simulates the effects of severe sea-coast atmosphere on all exposed surfaces. It is only applicable to those devices specified for a marine environment.

The salt atmosphere test 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 60749-14, *Semiconductor devices – Mechanical and climatic test methods – Part 14: Robustness of terminations (lead integrity)*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

4 Test apparatus

The following items are required for performing the salt atmosphere test.

a) Temperature-controlled chamber with suitable non-corrodible rack for supporting devices. All parts within the test chamber which come in contact with test specimens shall be of materials that will not cause electrolytic corrosion. The chamber shall be properly vented to prevent pressure build-up and allow uniform distribution of salt fog.

b) Salt solution reservoir adequately protected from the surrounding ambient.

The salt concentration shall be 0,5 % to 3,0 % by weight in deionized or distilled water as required to achieve the deposition rates required by 5.4. The salt used shall be sodium chloride containing on the dry basis not more than 0,1 % by weight of sodium iodide and not more than 0,3 % by weight total impurities. The pH of the salt solution shall be maintained between 6,5 and 7,2 when measured at 35 °C ± 3 °C. Only CP grade (dilute solution) hydrochloric acid or sodium hydroxide shall be used to adjust the pH.