
Semiconductor devices - Mechanical and climatic test methods - Part 2: Low air pressure (IEC 60749-2:2002)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60749-2:2004](https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004)
<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60749-2:2004

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>

EUROPEAN STANDARD

EN 60749-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2002

ICS 31.080.01

Partly supersedes EN 60749:1999 + A1:2000 + A2:2001

English version

**Semiconductor devices -
Mechanical and climatic test methods
Part 2: Low air pressure
(IEC 60749-2:2002)**

Dispositifs à semiconducteurs -
Méthodes d'essais mécaniques
et climatiques
Partie 2: Basse pression atmosphérique
(CEI 60749-2:2002)

Halbleiterbauelemente -
Mechanische und klimatische
Prüfverfahren
Teil 2: Niedriger Luftdruck
(IEC 60749-2:2002)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60749-2:2004](https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-214518281079-2104)

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-214518281079-2104>
This European Standard was approved by CENELEC on 2002-07-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 47/1601/FDIS, future edition 1 of IEC 60749-2, prepared by IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60749-2 on 2002-07-02.

This mechanical and climatic test method, as it relates to low air pressure, is a complete rewrite of the test contained in clause 3, chapter 3 of EN 60749:1999.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-07-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60749-2:2002 was approved by CENELEC as a European Standard without any modification.

(standards.iteh.ai)

SIST EN 60749-2:2004

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>

Annex ZA
(normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-13	1983	Environmental testing Part 2: Tests - Test M: Low air pressure	EN 60068-2-13	1999

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60749-2:2004](https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004)

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60749-2:2004

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60749-2

Première édition
First edition
2002-04

**Dispositifs à semiconducteurs –
Méthodes d'essais mécaniques et climatiques –**

**Partie 2:
Basse pression atmosphérique**

iTeh STANDARD PREVIEW

**Semiconductor devices –
Mechanical and climatic test methods –**

SIST EN 60749-2:2004

[https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-](https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004)

**Part 2:
Low air pressure**

© IEC 2002 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

F

Pour prix, voir catalogue en vigueur
For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SEMICONDUCTOR DEVICES –
MECHANICAL AND CLIMATIC TEST METHODS –**

Part 2: Low air pressure

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60749-2 has been prepared by IEC technical committee 47: Semiconductor devices.

The text of this standard is based on the following documents:

FDIS	Report on voting
47/1601/FDIS	47/1617/RVD

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

This mechanical and climatic test method, as it relates to low air pressure, is a complete rewrite of the test contained in clause 3, chapter 3 of IEC 60749.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

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

The contents of the corrigendum of August 2003 have been included in this copy.

INTRODUCTION

The barometric-pressure test is performed under conditions simulating the low atmospheric pressure encountered in the non-pressurized portions of aircraft and other vehicles in high-altitude flight. Even when low pressures do not produce complete electrical breakdown, corona and its undesirable effects, including losses and ionization, are intensified. The simulated high-altitude conditions of this test can also be employed to investigate the influence on component operating characteristics, of other effects of reduced pressure, including changes in dielectric constants of materials, and decreased ability of thinner air to transfer heat away from heat-producing components.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

SIST EN 60749-2:2004

<https://standards.iteh.ai/catalog/standards/sist/85a1c036-5440-4f8a-a57a-cb294d8478f8/sist-en-60749-2-2004>