

Irish Standard I.S. EN 60749-32:2003

Semiconductor devices - Mechanical and climatic test methods -- Part 32: Flammability of plastic-encapsulated devices (externally induced) (IEC 60749 -32:2002 (EQV))

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Údarás um Chaighdeáin Náisiúnta na hÉireann

**EUROPEAN STANDARD** 

EN 60749-32/A1

NORME EUROPÉENNE EUROPÄISCHE NORM

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English version

# Semiconductor devices Mechanical and climatic test methods Part 32: Flammability of plastic-encapsulated devices (externally induced) (IEC 60749-32:2002/A1:2010)

Dispositifs à semiconducteurs - Méthodes d'essais mécaniques et climatiques - Partie 32: Inflammabilité des dispositifs à encapsulation plastique (cas d'une cause extérieure d'inflammation) (CEI 60749-32:2002/A1:2010)

Halbleiterbauelemente Mechanische und klimatische
Prüfverfahren Teil 32: Entflammbarkeit
von Bauelementen in Kunststoffgehäusen
(Fremdentzündung)
(IEC 60749-32:2002/A1:2010)

This amendment A1 modifies the European Standard EN 60749-32:2003; it was approved by CENELEC on 2010-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### **CENELEC**

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

EN 60749-32:2003/A1:2010

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### **Foreword**

The text of document 47/2018/CDV, future amendment 1 to IEC 60749-32:2002, prepared by IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60749-32:2003 on 2010-09-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

 latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement

(dop) 2011-06-01

 latest date by which the national standards conflicting with the amendment have to be withdrawn

(dow) 2013-09-01

Annex ZA has been added by CENELEC.

### **Endorsement notice**

The text of amendment 1:2010 to the International Standard IEC 60749-2:2002 was approved by CENELEC as an amendment to the European Standard without any modification.

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### INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

## Part 32: Flammability of plastic-encapsulated devices (externally induced)

### **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.
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International Standard IEC 60749-32 has been prepared by IEC technical committee 47: Semiconductor devices.

The text of this test method is reproduced from IEC 60749 Ed.2, chapter 4, clause 1.2 without change. It has therefore not been submitted to vote a second time and is still based on the following documents:

FDIS	Report on voting
47/1394/FDIS	47/1402/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 publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Each test method governed by IEC 60749-1 and which is part of the series is a stand-alone document, numbered IEC 60749-2, IEC 60749-3, etc. The numbering of these test methods is sequential, and there is no relationship between the number and the test method (i.e. no grouping of test methods). The list of these tests will be available in the IEC Internet site and in the catalogue.

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La mise à jour de toute méthode d'essais individuelle est indépendante de toute autre partie.

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant 2007. A cette date, la publication sera

- reconduite;
- annulée;
- remplacée par une édition révisée, ou encore
- modifiée.

Le contenu du corrigendum d'août 2003 a été pris en considération dans cet exemplaire.

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Updating of any of the individual test methods is independent of any other part.

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.

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### INTRODUCTION

Les activités du groupe de travail 2 du comité d'études 47 de la CEI comprennent l'élaboration, la coordination et la révision des essais climatiques, électriques (pour lesquels seules les conditions électriques, de verrouillage et d'ESD sont prises en compte), mécaniques et les techniques d'inspection associées, requises pour assurer la qualité et la fiabilité pour la conception et la fabrication des semiconducteurs.

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### INTRODUCTION

Activity within IEC technical committee 47, working group 2, includes the generation, coordination and review of climatic, electrical (of which only ESD, latch-up and electrical conditions for life tests are considered), mechanical test methods, and associated inspection techniques needed to assess the quality and reliability of the design and manufacture of semiconductor products and processes.



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