IEC 60747-2

Edition 3.0 2016-04

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

## Semiconductor devices –
## Part 2: Discrete devices – Rectifier diodes

## Dispositifs à semiconducteurs –
## Partie 2: Dispositifs discrets – Diodes de redressement

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# SEMICONDUCTOR DEVICES –

## Part 2: Discrete devices – Rectifier diodes

## FOREWORD

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International Standard IEC 60747-2 has been prepared by subcommittee 47E: Discrete semiconductor devices, of IEC technical committee 47: Semiconductor devices.

This third edition cancels and replaces the second edition published in 2000. This edition constitutes a technical revision.

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

a) Schottky barrier diodes and its properties are added;
b) Clauses 3, 4, 5 and 7 were amended with some deletions of information no longer in use or already included in other parts of the IEC 60747 series, and with some necessary additions;
c) Clause 6 was moved and added to Clause 7 of this third edition;
d) some parts of Clause 7 were moved and added to Clause 7 of this third edition;

e) Annex A was deleted.

This standard is to be used in conjunction with IEC 60747-1:2006 and Amendment 1: 2010.

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

| FDIS | Report on voting |
|---|---|
| 47E/531/FDIS | 47E/537/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 2.

A list of all parts in the IEC 60747 series, published under the general title *Semiconductor devices*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,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

# SEMICONDUCTOR DEVICES –

# Part 2: Discrete devices – Rectifier diodes

## 1 Scope

This part of IEC 60747 provides standards for the following categories or sub-categories of rectifier diodes, including:

- line rectifier diodes;
- avalanche rectifier diodes;
- fast-switching rectifier diodes;
- Schottky barrier diodes.

## 2 Normative references

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.

IEC 60050-521, *International Electrotechnical Vocabulary – Part 521: Semiconductor devices and integrated circuits* (available at http://*www.electropedia.org)*

IEC 60747-1:2006, *Semiconductor devices – Part 1: General*
IEC 60747-1:2006/AMD1: 2010

IEC 60749-23, *Semiconductor devices – Mechanical and climatic test methods – Part 23: High temperature operating life*

IEC 60749-34, *Semiconductor devices – Mechanical and climatic test methods – Part 34: Power cycling*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60747-1, in IEC 60050-521 (except for definitions 521-05-18, 521-05-25, 521-05-26) and the following apply.

### 3.1 General terms and definitions

**3.1.1**
**forward direction**
direction of the flow of continuous (direct) current in which a semiconductor diode has the lower resistance

**3.1.2**
**reverse direction**
direction of the flow of continuous (direct) current in which a semiconductor diode has the higher resistance