| STN | Balenie súčiastok na automatizovanú manipuláciu<br>Časť 3: Balenie súčiastok na povrchovú montáž v nepretržitých páskach | STN<br>EN IEC 60286-3<br>35 8292 |
|---|---|---|

Packaging of components for automatic handling - Part 3: Packaging of surface mount components on continuous tapes

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. 07/19

Obsahuje: EN IEC 60286-3:2019, IEC 60286-3:2019

Oznámením tejto normy sa od 20.02.2022 ruší
STN EN 60286-3 (35 8292) z decembra 2013

**129145**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

# EN IEC 60286-3

March 2019

ICS 31.020; 31.240

Supersedes EN 60286-3:2013

English Version

# Packaging of components for automatic handling - Part 3: Packaging of surface mount components on continuous tapes (IEC 60286-3:2019)

Emballage de composants pour opérations automatisées - Partie 3: Emballage des composants pour montage en surface en bandes continues
(IEC 60286-3:2019)

Gurtung und Magazinierung von Bauelementen für automatische Verarbeitung - Teil 3: Gurtung von oberflächenmontierbaren Bauelementen auf Endlosgurten
(IEC 60286-3:2019)

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CENELEC

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**

Ref. No. EN IEC 60286-3:2019 E

## European foreword

The text of document 40/2643/FDIS, future edition 6 of IEC 60286-3, prepared by IEC/TC 40 "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60286-3:2019.

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) | 2019-11-20 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2022-02-20 |

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The text of the International Standard IEC 60286-3:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

|  |  |
|---|---|
| IEC 61340-5-1 | NOTE Harmonized as EN 61340-5-1 |
| IEC/TR 61340-5-2 | NOTE Harmonized as CLC/TR 61340-5-2 |
| IEC/TR 62258-3 | NOTE Harmonized as CLC/TR 62258-3 |
| ISO 11469 | NOTE Harmonized as EN ISO 11469 |

# 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 60191-2 | - | Mechanical standardization of- semiconductor devices -- Part 2: Dimensions | | - |

# IEC 60286-3

Edition 6.0 2019-01

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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## Packaging of components for automatic handling –
## Part 3: Packaging of surface mount components on continuous tapes

## Emballage de composants pour opérations automatisées –
## Partie 3: Emballage des composants pour montage en surface en bandes continues

IEC 60286-3:2019-01(en-fr)

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# IEC 60286-3

Edition 6.0 2019-01

# INTERNATIONAL STANDARD

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## Packaging of components for automatic handling – Part 3: Packaging of surface mount components on continuous tapes

## Emballage de composants pour opérations automatisées – Partie 3: Emballage des composants pour montage en surface en bandes continues

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

## Part 3: Packaging of surface mount components on continuous tapes

## FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 60286-3 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This sixth edition cancels and replaces the fifth edition published in 2013. This edition constitutes a technical revision.

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

a) addition of a table of the classification to symbols concerning tape, reel and common symbols;
b) additions of a figure of example of polarity and orientation and a figure of example of dot seal;
c) revision of requirements for camber;

d) addition of a definition of design value with regard to tilt.

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

| FDIS | Report on voting |
|---|---|
| 40/2643/FDIS | 40/2649/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 60286 series, published under the general title *Packaging of components for automatic handling*, 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.

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# INTRODUCTION

Tape packaging meets the requirements of automatic component placement machines and also covers the use of tape packaging for components and singulated dies for test purposes and other operations.

# PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

# Part 3: Packaging of surface mount components on continuous tapes

## 1 Scope

This part of IEC 60286 is applicable to the tape packaging of electronic components without leads or with lead stumps, intended to be connected to electronic circuits. It includes only those dimensions that are essential for the taping of components intended for the above-mentioned purposes.

This document also includes requirements related to the packaging of singulated die products including bare die and bumped die (flip chips).

## 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 60191-2, *Mechanical standardization of semiconductor devices – Part 2: Dimensions*