



NSAI
Standards

Irish Standard
I.S. EN IEC 60286-3:2019

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

I.S. EN IEC 60286-3:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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This document is based on:

EN IEC 60286-3:2019

Published:

2019-03-08

*This document was published
under the authority of the NSAI
and comes into effect on:*

2019-03-26

ICS number:

31.020

31.240

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

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EUROPEAN STANDARD

EN IEC 60286-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

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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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-02-20

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60191-2	-	Mechanical standardization of semiconductor devices -- Part 2: Dimensions	of- 2:	-

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IEC 60286-3

Edition 6.0 2019-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**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**



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IEC 60286-3

Edition 6.0 2019-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**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**

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ICS 31.020; 31.240

ISBN 978-2-8322-6387-7

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

Part 3: Packaging of surface mount components on continuous tapes

FOREWORD

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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,
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- 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*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply. Definitions apply to all tape types, unless specifically mentioned.

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>

3.1.1

components

electronic part of a product that cannot be physically divided into smaller parts without losing its particular function

Note 1 to entry: This includes singulated die product.

Note 2 to entry: This is applied to all packaging-types for bare die products unless specifically mentioned otherwise.

3.1.2

component sizes

size of component that are identified with their metric size code

Note 1 to entry: This size code is followed by a capital M.

Note 2 to entry: To avoid possible confusion with inch-based size codes, an equivalency table is shown in Table 1.

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