NSAI
Standards

Irish Standard
I.S. EN 60286-3:2013

Packaging of components for automatic handling -- Part 3: Packaging of surface mount components on continuous tapes (IEC 60286-3:2013 (EQV))

I.S. EN 60286-3:2013

Incorporating amendments/corrigenda issued since publication:

EN 60286-3:2013/AC:2013

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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EN 60286-3:2013/AC:2013

Corrigendum to EN 60286-3:2013

English version

Title page

In the header of the title page, **replace** "Supersedes EN 60286-3:2007" by "Supersedes EN 60286-3:2007, EN 60286-3-1:2009, EN 60286-3-2:2009".

Foreword

In the foreword, **replace** the sentence "This document supersedes EN 60286-3:2007." by "This document supersedes EN 60286-3:2007, EN 60286-3-1:2009 and EN 60286-3-2:2009."

October 2013

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60286-3

August 2013

ICS 31.020; 31.240

Supersedes EN 60286-3:2007

English version

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

(IEC 60286-3:2013)

Emballage de composants pour opérations automatisées -
Partie 3: Emballage des composants pour montage en surface en bandes continues
(CEI 60286-3:2013)

Gurtung und Magazinierung von Bauelementen für die automatische Verarbeitung -
Teil 3: Gurtung von oberflächenmontierbaren Bauelementen auf Endlosgurten
(IEC 60286-3:2013)

This European Standard was approved by CENELEC on 2013-06-21. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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

Ref. No. EN 60286-3:2013 E

Foreword

The text of document 40/2200/FDIS, future edition 5 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 60286-3:2013.

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)	2014-03-21
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-06-21

This document supersedes EN 60286-3:2007.

EN 60286-3:2013 includes the following significant technical changes with respect to EN 60286-3:2007:

a) integration of EN 60286-3-1:2009 as type 1b (Packaging of surface mount components on continuous pressed carrier tapes);

b) integration of EN 60286-3-2:2009 as type 2b (Packaging of surface mount components on blister carrier tapes 4 mm in width).

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

Endorsement notice

The text of the International Standard IEC 60286-3:2013 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 60286-3-1:2009	NOTE	Harmonised as EN 60286-3-1:2009 (not modified).
IEC 60286-3-2:2009	NOTE	Harmonised as EN 60286-3-2:2009 (not modified).
IEC/TR 62258-3	NOTE	Harmonised as CLC/TR 62258-3.
ISO 11469	NOTE	Harmonised as EN ISO 11469.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

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

Publication	Year	Title	EN/HD	Year
IEC 60191-2	-	Mechanical standardization of semiconductor devices - Part 2: Dimensions	-	-
IEC 61340-5-1	-	Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	EN 61340-5-1	-
IEC/TR 61340-5-2	-	Electrostatics - Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	CLC/TR 61340-5-2	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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 fifth edition cancels and replaces the fourth edition, published in 2007, as well as IEC 60286-3-1, published in 2009 and IEC 60286-3-2, published in 2009. It constitutes a full layout revision. In addition, this edition includes the following significant technical changes with respect to the previous edition:

a) integration of IEC 60286-3-1:2009 as type 1b (Packaging of surface mount components on continuous pressed carrier tapes);

b) integration of IEC 60286-3-2:2009 as type 2b (Packaging of surface mount components on blister carrier tapes 4 mm in width).

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

FDIS	Report on voting
40/2200/FDIS	40/2233/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.

The list of all the parts of the IEC 60286 series, 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 publication will remain unchanged until the stability date indicated on the IEC web site 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.

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 General

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

1.2 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 60191-2, *Mechanical standardization of semiconductor devices – Part 2: Dimensions*

IEC 61340-5-1, *Electrostatics – Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements*

IEC/TR 61340-5-2, *Electrostatics – Part 5-2: Protection of electronic devices from electrostatic phenomena – User guide*

2 Terms and definitions

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

2.1
components
unless specifically mentioned otherwise, for all packaging types for bare die products, the term components refers to components as well as singulated die products

2.2
component sizes
all component sizes are identified with their metric size code (size code, followed by a capital M)

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