

Packaging of components for automatic handling —

Part 2: Tape packaging of components with unidirectional leads on continuous tapes

The European Standard EN 60286-2:1998, with the incorporation of amendment A1:2003, has the status of a British Standard

ICS 31.020; 31.240

National foreword

This British Standard is the English language version of EN 60286-2:1998, including amendment A1:2003. It is identical with IEC 60286-2:1997, including amendment A1:2002. It supersedes BS 6062-2:1988 which will be withdrawn on 1998-10-01.

The UK participation in its preparation was entrusted to Technical Committee EPL/40, Capacitors and resistors for electronic equipment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Summary of pages

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Packaging of components for automatic handling — Part 2: Tape packaging of components with unidirectional leads on continuous tapes

(includes amendment A1:2003)

(IEC 60286-2:1997 + A1:2002)

Emballage de composants pour
opérations automatisées —
Partie 2: Emballage en bandes des
composants à sorties unilatérales
(inclut l'amendement A1:2003)
(CEI 60286-2:1997 + A1:2002)

Gurtung und Magazinierung von
Bauelementen für automatische
Verarbeitung —
Teil 2: Gurtung von Bauelementen mit
einseitig herausgeführten Anschlüssen
(enthält Änderung A1:2003)
(IEC 60286-2:1997 + A1:2002)

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

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Foreword

The text of document 40/918/FDIS, future edition 2 of IEC 60286-2, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60286-2 on 1998-01-01.

This European Standard supersedes HD 143.2 S1:1987.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1998-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-10-01

Annexes designated “normative” are part of the body of the standard.

In this standard, Annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60286-2:1997 was approved by CENELEC as a European Standard without any modification.

Foreword to amendment A1

The text of document 40/1244/FDIS, future amendment 1 to IEC 60286-2:1997, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60286-2:1998 on 2003-02-01.

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- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2006-02-01

Endorsement notice

The text of amendment 1:2002 to the International Standard IEC 60286-2:1997 was approved by CENELEC as an amendment without any modification.

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1 General

1.1 Scope

This Standard applies to the tape packaging of components with two or more unidirectional leads for use in electronic equipment. In general, the tape is applied to the component leads.

It covers requirements for taping techniques used with equipment for automatic handling, preforming of leads, insertion and other operations and includes only those dimensions which are essential to the taping of components intended for the above-mentioned purposes.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60286. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60286 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60097:1991, *Grid systems for printed circuits*.

IEC 60294:1969, *Measurement of the dimensions of a cylindrical component having two axial terminations*.

IEC 60301:1971, *Preferred diameters of wire terminations of capacitors and resistors*.

IEC 60717:1981, *Method for determination of the space required by capacitors and resistors with unidirectional terminations*.

ISO 11469:1993, *Plastics — Generic identification and marking of plastic products*.

2 Dimensions

NOTE For the symbols and dimensions given below, reference is made to Figure 2, Figure 3 and Figure 4, pages 5, 6 and 8.

2.1 Dimensions common to tapes and taped components with unidirectional leads

The coordinate system as shown in Figure 1 shall be used

- the abscissa is a straight line through the centres of the sprocket holes in the direction of unreeling;
- the ordinate is a straight line perpendicular to the abscissa through the centre of the sprocket hole that follows the component to be checked.

2.1.1 Tape width

2.1.1.1 Carrier tape width W

$$W = 18^{+1}_{-0,5} \text{ mm}$$

2.1.1.2 Hold-down tape width W_0

This dimension is governed by the retention of the components in the tape. The hold-down tape shall not protrude beyond the carrier tape.

2.1.1.3 Distance W_2

Between the upper edges of the carrier tape and the hold-down tape.

$$W_2 = 3 \text{ mm max.}$$

2.1.2 Position W_1 of sprocket holes

$$W_1 = 9^{+0,75}_{-0,5} \text{ mm}$$

2.1.3 Diameter D_0 of sprocket holes

$$D_0 = 4 \text{ mm} \pm 0,2 \text{ mm}$$