



SLOVENSKI STANDARD
SIST EN 60286-5:2005/A1:2009
01-maj-2009

Pakiranje komponent za avtomatsko obdelavo - 5. del: Ploščati vlagalniki (IEC 60286-5:2003/A1:2009)

Packaging of components for automatic handling - Part 5: Matrix trays (IEC 60286-5:2003/A1:2009)

Gurtung und Magazinierung von Bauelementen für automatische Verarbeitung - Teil 5: Flachmagazine (IEC 60286-5:2003/A1:2009)

Emballage de composants pour opérations automatisées - Partie 5: Supports matriciels (CEI 60286-5:2003/A1:2009)

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Ta slovenski standard je istoveten z: EN 60286-5:2004/A1:2009

ICS:

31.020	Elektronske komponente na splošno	Electronic components in general
55.160	Zaboji. Škatle. Plastični zaboji	Cases. Boxes. Crates

SIST EN 60286-5:2005/A1:2009 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60286-5/A1

March 2009

ICS 31.020

English version

**Packaging of components for automatic handling -
Part 5: Matrix trays**
(IEC 60286-5:2003/A1:2009)

Emballage de composants
pour opérations automatisées -
Partie 5: Supports matriciels
(CEI 60286-5:2003/A1:2009)

Gurtung und Magazinierung
von Bauelementen
für automatische Verarbeitung -
Teil 5: Flachmagazine
(IEC 60286-5:2003/A1:2009)

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This amendment A1 modifies the European Standard EN 60286-5:2004; it was approved by CENELEC on 2009-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 40/1942/FDIS, future amendment 1 to IEC 60286-5:2003, 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 60286-5:2004 on 2009-03-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2012-03-01

Endorsement notice

The text of amendment 1:2009 to the International Standard IEC 60286-5:2003 was approved by CENELEC as an amendment to the European Standard without any modification.

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IEC 60286-5

Edition 2.0 2009-02

INTERNATIONAL STANDARD

AMENDMENT 1

**Packaging of components for automatic handling –
Part 5: Matrix trays**

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ICS 31.020

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FOREWORD

This amendment has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

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

FDIS	Report on voting
40/1942/FDIS	40/1971/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result 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.

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2.1 Electrostatic dissipative requirements

Replace the existing text by the following text:

Trays shall be moulded from material that meets the ESD dissipative requirements with surface resistance equal to or greater than $1,0 \times 10^5$ ohms/square but less than $1,0 \times 10^{11}$ ohms/square.

4.1.3.1 Formulas

Replace the existing text by the following text:

DT is D_{\max} + strengthening pocket rib width W

ET is E_{\max} + strengthening pocket rib width W

M is $(135,9 \text{ mm} - M3(N1 - 1))/2$

$M1$ is $(315,0 \text{ mm} - M2(N2 - 1))/2$

$M2$ is $[(315,0 \text{ mm} - 2P \text{ mm}) - W(N2 - 1)]/N2 + W$

$M3$ is $[(135,9 \text{ mm} - 2P \text{ mm}) - W(N1 - 1)]/N1 + W$

$N1$ is $(135,9 \text{ mm} - 2P \text{ mm})/ET$ (rounded down to a whole number)

$N2$ is $(315,0 \text{ mm} - 2P \text{ mm})/DT$ (rounded down to a whole number)

Add, after the NOTE, the following new text and Table 1:

The dimensions P and W are given in Table 1.

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Table 1 – P and W dimension

Dimension	Thin tray		Thick tray mm
	Normal stacking tray mm	Low stacking tray mm	
P	3,2	5,0	5,0
W	2,0	2,5	2,0

4.1.3.2 Constituents of the design rules, formulas and drawings

Add, on page 8, the following line to the list:

P is the edge of the tray to the edge of the pocket

4.1.3.2 Constituents of the design rules, formulas and drawings

Replace the last paragraph by the following new text:

W should not exceed the target value of Table 1 in order to achieve the maximum tray density unless required by application.

4.2 Overall tray dimensions

Replace, in the first paragraph, "Table 1" by "Table 2".

Replace Table 1 by new Table 2:

Table 2 – Height dimensions

Dimension	Thin tray		Thick tray mm
	Normal stacking tray mm	Low stacking tray mm	
<i>A</i>	7,62	7,62	12,19
<i>A1</i>	6,35	5,62	10,16
<i>A2</i>	1,27 typically	2,00 typically	2,03 typically

Add, below Table 2, the following new paragraph:

Measurement methodology of the tray outline dimensions, height, stacking feature dimensions and warpage are described in Annex B.

4.5 Detail features

Replace the existing paragraph by the following new text:

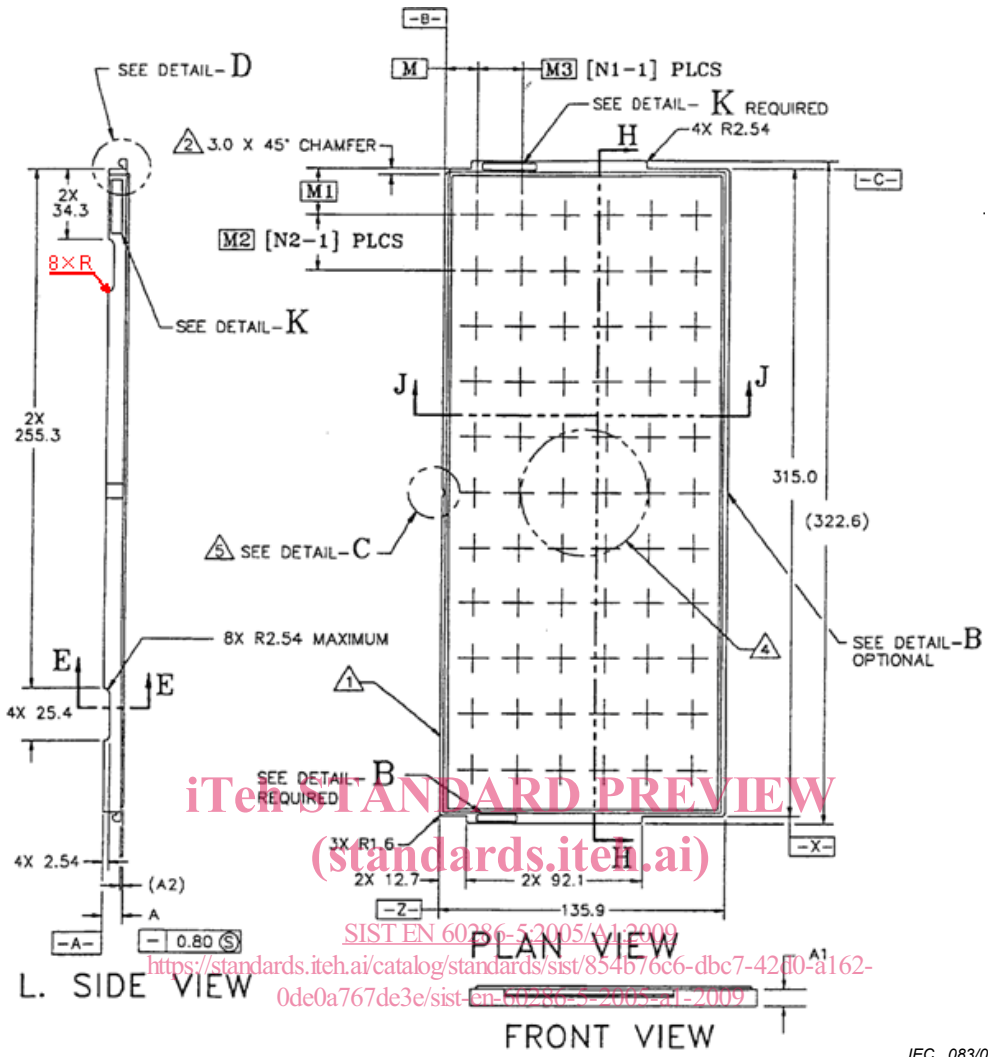
All cavity detail features must begin at a minimum distance of $P = 3,2$ mm [Thin tray(normal tray)] or $P = 5,0$ mm [Thin tray(Low stack tray) and Thick tray].

Add the following new subclause:

4.8 Dimensional information

Figures 3 and 4 state dimensions for the tray main view and for the tray stacking details.

Replace Figures 3 and 4 by new Figures 3 and 4:



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IEC 083/09

Figure 3 – Tray main view