
**Standardizacija mehanskih lastnosti polprevodniških elementov – 6-4. del:
Kodirni sistem in klasifikacija oblik okrovov polprevodniških elementov -
Dopolnilo A1 (IEC 60191- 4:1999/A1:2001)**

Mechanical standardization of semiconductor devices - Part 4: Coding system and
classification into forms of package outlines for semiconductor device packages -
Amendment A1 (IEC 60191- 4:1999/A1:2001)

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EUROPEAN STANDARD

EN 60191-4/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2002

ICS 31.080.01

English version

Mechanical standardization of semiconductor devices
Part 4: Coding system and classification into forms of package outlines
for semiconductor device packages
(IEC 60191-4:1999/A1:2001)

Normalisation mécanique des dispositifs
à semiconducteurs
Partie 4: Système de codification et
classification en formes des boîtiers
pour dispositifs à semiconducteurs
(CEI 60191-4:1999/A1:2001)

Mechanische Normung von
Halbleiterbauelementen
Teil 4: Kodierungssystem für Gehäuse
und Eingruppierung der Gehäuse nach
der Gehäuseform für
Halbleiterbauelemente
(IEC 60191-4:1999/A1:2001)

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This amendment A1 modifies the European Standard EN 60191-4:1999; it was approved by CENELEC on 2002-02-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 47D/461/FDIS, future amendment 1 to IEC 60191-4:1999, prepared by SC 47D, Mechanical standardization of semiconductor devices, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60191-4:1999 on 2002-02-01.

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) 2002-11-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2005-02-01

Endorsement notice

The text of amendment 1:2001 to the International Standard IEC 60191-4:1999 was approved by CENELEC as an amendment to the European Standard without any modification.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60191-4

1999

AMENDEMENT 1
AMENDMENT 1
2001-11

Amendement 1

**Normalisation mécanique des dispositifs à
semiconducteurs –**

**Partie 4:
Système de codification et classification en formes
des boîtiers pour dispositifs à semiconducteurs**

[SIST EN 60191-4:2002/A1:2005](https://standards.iteh.ai/catalog/standards/sist/a971c706-9c8c-4ef6-bb0a-29b027400516/sist-en-60191-4-2002-a1-2005)

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Amendment 1

**Mechanical standardization of semiconductor
devices –**

**Part 4:
Coding system and classification into forms
of package outlines for semiconductor device
packages**

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FOREWORD

This amendment has been prepared by subcommittee 47D: Mechanical standardization of semiconductor devices, of IEC technical committee 47: Semiconductor devices.

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

FDIS	Report on voting
47D/461/FDIS	47D/472/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 the base publication and its amendments will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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4.3.5 Lead-form and terminal-count suffixes

SIST EN 60191-4:2002/A1:2005

Replace, on page 19, table 4 and figure 2 by the following new table and figure:

29b027400516/sist-en-60191-4-2002-a1-2005

Table 4 – Prefixes for package-specific features

Order	Functional classification	Code	Package-specific feature
1	Outline addition	H	Integral heat slug
		W	Transparent window
2	Seating height	None	Standard profile (1,70 mm < none)
		L	Low profile (1,20 mm < L ≤ 1,70 mm)
		T	Thin profile (1,00 mm < T ≤ 1,20 mm)
		V	Very thin profile (0,80 mm < V ≤ 1,00 mm)
		W	Very, very thin profile (0,65 mm < W ≤ 0,80 mm)
		U	Ultra thin profile (0,50 mm < U ≤ 0,65 mm)
		X	Extremely thin profile (X ≤ 0,50 mm)
3	Terminal pitch and position	S	Shrink pitch (< basic pitch) (restricted to DIP, SIP, SOP families) SDIP (1,778 mm pitch) SZIP (1,778 mm and 1,27 mm pitch) SSOP (1,0 mm, 0,8 mm, 0,65 mm, 0,5 mm and 0,4 mm pitch)
		F	Fine pitch (QFP at ≤ 0,50 mm pitch and ≤ 0,80 mm pitch for BGA and LGA)
		I	Interstitial pitch (staggered leads)

$\boxed{X} \leq 0,50 \text{ mm} < \boxed{U} \leq 0,65 \text{ mm} < \boxed{W} \leq 0,80 \text{ mm} < \boxed{V} \leq 1,00 \text{ mm}$
 $< \boxed{T} \leq 1,20 \text{ mm} < \boxed{L} \leq 1,70 \text{ mm} < \boxed{\text{No code}}$

IEC 1359/01

Figure 2 – Relationship of codes to profile

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