
**Standardizacija mehanskih lastnosti polprevodniških elementov – 6-4. del:
Kodirni sistem in klasifikacija oblik okrovov polprevodniških elementov -
Dopolnilo A2 (IEC 60191- 4:1999/A2:2002)**

Mechanical standardization of semiconductor devices - Part 4: Coding system and
classification into forms of package outlines for semiconductor device packages -
Amendment A2 (IEC 60191- 4:1999/A2:2002)

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EUROPEAN STANDARD

EN 60191-4/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2002

ICS 31.080

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/A2:2002)

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/A2:2002)

Mechanische Normung
von Halbleiterbauelementen
Teil 4: Codierungssystem für Gehäuse
und Eingruppierung der Gehäuse
nach der Gehäuseform
für Halbleiterbauelemente
(IEC 60191-4:1999/A2:2002)

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This amendment A2 modifies the European Standard EN 60191-4:1999; it was approved by CENELEC on 2002-10-01. 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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/505/FDIS, future amendment 2 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 A2 to EN 60191-4:1999 on 2002-10-01.

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) 2003-07-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2005-10-01

Annexes designated "informative" are given for information only. In this standard, annex B is informative.

Endorsement notice

The text of amendment 2:2002 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 2
AMENDMENT 2
2002-07

Amendement 2

**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/A2:2005

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Amendment 2

**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/505/FDIS	47D/509/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 2005. At this date, the publication will be

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- withdrawn;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

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Add, after annex A, the following new annex B:

SIST EN 60191-4:2002/A2:2005
<https://standards.iteh.ai/catalog/standards/sist/c48bac77-2eff-46d9-bd57-4c70c89ad167/sist-en-60191-4-2002-a2-2005>
Annex B
 (informative)

Derivation and application of the descriptive coding system – Common package names

Common package names or abbreviations are often used to directly indicate the form of package in marketing or advertising fields. The descriptive coding for them is to be simplified and modified from the formal coding system for easier usage.

The structure of a common package code consists of a package-body-material code and derived package code being set off by a dash (-) between them.

The package-body-material code is referred to in 4.3.3.

The derived package code is derived from the package outline style code (4.3.1) by the addition of a terminal-position code (4.3.2) or lead-form code (4.3.5) and optionally the package-specific feature code (4.3.4).

To prevent confusion due to minor differences between the common-package code and the formal code, it is required to list them in IEC 60191-4.

Figure B.1 shows the descriptive coding structure for common package names.

Table B.1 gives a list of some examples of common package names and descriptive codes.

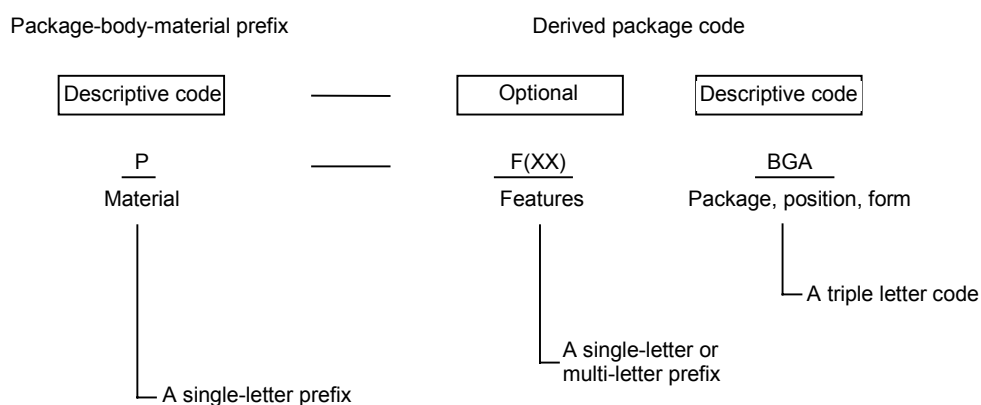


Figure B.1 – Descriptive coding system for common name of semiconductor-device package

Table B.1 – Common package name and descriptive code examples

Deviated package code	Common package code	Common package name
LQFP	P-LQFP C-LQFP G-LQFP	Plastic low profile QFP Ceramic low profile QFP Glass sealed ceramic low profile QFP
TQFP	P-TQFP C-TQFP	Plastic thin QFP Ceramic thin QFP
FQFP	P-FQFP C-FQFP	Plastic fine pitch QFP Ceramic fine pitch QFP
TSOP	P-TSOP	Plastic TSOP
SSOP	P-SSOP	Plastic SSOP
TSSOP	P-TSSOP	Plastic TSSOP
SOJ	P-SOJ	Plastic SOJ
VQFN	P-VQFN	Plastic very thin QFN
DIP	P-DIP C-DIP G-DIP	Plastic DIP Ceramic DIP Glass sealed ceramic DIP
PGA	P-PGA C-PGA	Plastic PGA Ceramic PGA
BGA	P-BGA T-BGA C-BGA	Plastic BGA Tape BGA Ceramic BGA
LBGA	P-LBGA	Plastic LBGA
FBGA	P-FBGA T-FBGA C-FBGA	Plastic fine pitch BGA Tape fine pitch BGA Ceramic fine pitch BGA