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

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MECHANICAL STANDARDIZATION OF SEMICONDUCTOR DEVICES –

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

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This Consolidated version of IEC 60191-4 bears the edition number 3.1. It consists of the third edition (2013-10) [documents 47D/837/FDIS and 47D/848/RVD] and its amendment 1 (2018-03) [documents 47D/897/CDV and 47D/904/RVC]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

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International Standard IEC 60191-4 has been prepared by subcommittee 47D: Semiconductor devices packaging, of IEC technical committee 47: Semiconductor devices.

This third edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Material code "S" is added to indicate a silicon based package.
b) Description of "WL" is added to be used for general use.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 60191 series, published under the general title *Mechanical standardization of semiconductor devices*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment 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- withdrawn,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.

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MECHANICAL STANDARDIZATION OF SEMICONDUCTOR DEVICES –

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

1 Scope

This part of IEC 60191 specifies a method for the designation of package outlines and for the classification of forms of package outlines for semiconductor devices and a systematic method for generating universal descriptive designators for semiconductor device packages.

The descriptive designator provides a useful communication tool but has no implied control for assuring package interchangeability.

2 Coding system of package outlines for semiconductor devices

The following coding system will be used in the publications concerning mechanical standardization:

- first: a three-digit serial number (000 to 999);
- second: a single reference letter indicating the form as shown in Table 1;
- third: a two-digit serial number (00 to 99) to indicate a variant of an outline drawing. The use of prefix P to indicate a provisional drawing remains unchanged.

Examples

- 101A00
- 050G13
- P 101F01

3 Classification into forms of package outlines for semiconductor devices

The package outline drawings for semiconductor devices are classified into forms according to the following scheme:

- form A: single-ended
- form B: heat-sink-mounted
- form C: stud-mounted
- form D: axial-leaded
- form E: surface-mounted
- form F: single-ended, heat-sink-mounted
- form G: dual and quad in-line
- form H: axial lead-less.

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