



# SLOVENSKI STANDARD SIST EN 61188-5-4:2008

01-junij-2008

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Printed boards and printed board assemblies - Design and use - Part 5-4: Sectional requirements - Attachment (land/joint) consideration - Components with J leads on two sides

**iTeh STANDARD PREVIEW**

Leiterplatten und Flachbaugruppen - Konstruktion und Anwendung - Teil 5-4: Betrachtungen zur Montage (Anschlussfläche/Verbindung) - Bauelemente mit J-förmigen Anschlüssen auf zwei Seiten

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Cartes imprimées et cartes imprimées équipées - Conception et utilisation - Partie 5-4: Considérations sur les liaisons pistes-soudures - Composants a sorties en J sur deux côtés

**Ta slovenski standard je istoveten z: EN 61188-5-4:2007**

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**Printed boards and printed board assemblies -  
Design and use -  
Part 5-4: Attachment (land/joint) considerations -  
Components with J leads on two sides  
(IEC 61188-5-4:2007)**

Cartes imprimées et  
cartes imprimées équipées -  
Conception et utilisation -  
Partie 5-4: Considérations  
sur les liaisons pistes-soudures -  
Composants à sorties en J  
sur deux côtés  
(CEI 61188-5-4:2007)

Leiterplatten und Flachbaugruppen -  
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This European Standard was approved by CENELEC on 2007-11-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 European Standard 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: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 91/703/FDIS, future edition 1 of IEC 61188-5-4, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61188-5-4 on 2007-11-01.

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) 2008-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-11-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61188-5-4:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61188-5-1 NOTE Harmonized as EN 61188-5-1:2002 (not modified).

IEC 61191-1 NOTE Harmonized as EN 61191-1:1998 (not modified).

IEC 61191-2 NOTE Harmonized as EN 61191-2:1998 (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-58	- <sup>1)</sup>	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58 + corr. December	2004 <sup>2)</sup> 2004
IEC 60286-3	- <sup>1)</sup>	Packaging of components for automatic handling - Part 3: Packaging of surface mount components on continuous tapes	EN 60286-3	2007 <sup>2)</sup>
IEC 60286-4	- <sup>1)</sup>	Packaging of components for automatic handling - Part 4: Stick magazines for electronic components encapsulated in packages of form E and G	EN 60286-4	1998 <sup>2)</sup>
IEC 60286-5	- <sup>1)</sup>	Packaging of components for automatic handling - Part 5: Matrix trays	EN 60286-5	2004 <sup>2)</sup>
IEC 61760-1	- <sup>1)</sup>	Surface mounting technology - Part 1: Standard method for the specification of surface mounting components (SMDs)	EN 61760-1	2006 <sup>2)</sup>

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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# INTERNATIONAL STANDARD

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**Printed boards and printed board assemblies – Design and use –  
Part 5-4: Attachment (land/joint) considerations – Components with J leads on  
two sides**

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INTERNATIONAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PRINTED BOARDS AND PRINTED BOARD ASSEMBLIES –  
DESIGN AND USE –****Part 5-4: Attachment (land/joint) considerations –  
Components with J leads on two sides**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61188-5-4 has been prepared by IEC technical committee 91: Electronics assembly technology

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

FDIS	Report on voting
91/703/FDIS	91/735/RVD

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

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

A list of all parts of the IEC 61188 series, under the general title *Printed boards and printed board assemblies – Design and use*, can be found on the IEC website.

The committee has decided that the contents of this 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.

A bilingual version of this standard may be issued at a later date.

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## INTRODUCTION

This part of IEC 61188 covers land pattern for components with J leads on two sides.

The proposed land pattern dimensions in this standard are based upon the fundamental tolerance calculation combined with the given land protrusions and courtyard excesses (see IEC 61188-5-1, Generic requirements). The courtyard includes all issues of the normal manufacturing necessities.

The unaltered land pattern dimensions of this part are generally applicable for the solder paste application plus reflow soldering process. For application of the wave soldering process (though uncommon for SOJ components) the land pattern and courtyard dimensions may have to be modified. An orientation parallel to the wave direction is strongly recommended and suitably dimensioned solder thieves should be added.

This standard offers a threefold land pattern dimensioning (levels 1, 2, 3) on the basis of a threefold set of land protrusions and courtyard excesses: maximum (max.); medium (mdn); and minimum (min.). Nevertheless the user may develop deviating land pattern dimensions based upon the methodology of IEC 61188-5-1, introducing his own special material and assembling process conditions C, F, P and perhaps his own special land protrusions and courtyard excesses dimensions, as required.

If a user has good reasons to use a concept different from that of IEC 61188-5-1 or if the user prefers unusual land protrusions, this standard should be used for checking the resulting solder fillets.

It is the responsibility of the user to verify his used SMD land patterns for achieving an undisturbed mounting process including testing and an ensured reliability for the product stress conditions in use.

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