SLOVENSKI STANDARD
SIST EN 60191-6-13:2008

01-februar-2008

Mehanska standardizacija polprevodniških elementov - 6-13. del: Smernica za načrtovanje zgoraj odprtih podstavkov za fini raster mreže krogličnih priključkov in fini raster mreže priključkov v ravnini (FBGA/FLGA) (IEC 60191-6-13:2007)

Mechanical standardization of semiconductor devices -- Part 6-13: Design guideline of open-top-type sockets for Fine-pitch Ball Grid Array and Fine-pitch Land Grid Array (FBGA/FLGA)

Mechanische Normung von Halbleiterbauelementen - -Teil 6-13: Konstruktionsleitfaden für Open-top-Fassungen für Feinraster-Ball-Grid-Array und Feinraster-Land-Grid-Array (FBGA/FLGA)

Normalisation mécanique des dispositifs à semi-conducteurs. - Partie 6-13 : Guide de conception pour les supports sans couvercle pour les boîtiers FBGA et FLGA

Ta slovenski standard je istoveten z: **EN 60191-6-13:2007**

ICS:

01.100.25	Risbe s področja elektrotehnike in elektronike	Electrical and electronics engineering drawings
31.080.01	Polprevodniški elementi (naprave) na splošno	Semiconductor devices in general
31.240	Mehanske konstrukcije za elektronsko opremo	Mechanical structures for electronic equipment

SIST EN 60191-6-13:2008 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60191-1

June 2007

ICS 31.080.01

English version

Mechanical standardization of semiconductor devices - Part 1: General rules for the preparation of outline drawings of discrete devices
(IEC 60191-1:2007)

Normalisation mécanique des dispositifs
à semi-conducteurs -
Partie 1: Règles générales
pour la préparation du dessin
des boîtiers des dispositifs
à semi-conducteurs
(CEI 60191-1:2007)

Mechanische Normung
von Halbleiterbauelementen -
Teil 1: Allgemeine Regeln
für die Erstellung
von Gehäusezeichnungen
von Einzelhalbleiterbauelementen
(IEC 60191-1:2007)

This European Standard was approved by CENELEC on 2007-05-01. 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.

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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

Ref. No. EN 60191-1:2007 E

Foreword

The text of document 47D/678/FDIS, future edition 2 of IEC 60191-1, prepared by SC 47D, Mechanical standardization for semiconductor devices, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60191-1 on 2007-05-01.

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)	2008-02-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-05-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60191-1:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60191-6	NOTE Harmonized as EN 60191-6:2004 (not modified).

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.

Publication	Year	Title	EN/HD	Year
IEC 60191-2 + supplements + amendments	1966	Mechanical standardization of semiconductor devices - Part 2: Dimensions	-	-
IEC 60191-4	-[1]	Mechanical standardization of semiconductor devices - Part 4: Coding system and classification into forms of package outlines for semiconductor device packages	EN 60191-4	1999[2]
ISO 370[3]	-[1]	Toleranced dimensions - Conversion from inches into millimetres and vice versa	-	-

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[1] Undated reference.

[2] Valid edition at date of issue.

[3] ISO 370 has been withdrawn on 2000-05-18.

INTERNATIONAL STANDARD

IEC 60191-6-13

First edition
2007-06

Mechanical standardization of semiconductor devices –

Part 6-13: Design guideline of open-top-type sockets for Fine-pitch Ball Grid Array and Fine-pitch Land Grid Array (FBGA/FLGA)

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE P

For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MECHANICAL STANDARDIZATION OF SEMICONDUCTOR DEVICES –

Part 6-13: Design guideline of open-top-type sockets for Fine-pitch Ball Grid Array and Fine-pitch Land Grid Array (FBGA/FLGA)

FOREWORD

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International Standard IEC 60191-6-13 has been prepared by subcommittee 47D: Mechanical standardization for semiconductor devices, of IEC technical committee 47: Semiconductor devices.

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

FDIS	Report on voting
47D/681/FDIS	47D/692/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 the parts in the IEC 60191 series, under the general title *Mechanical standardization of semiconductor devices*, 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 publication may be issued at a later date.

MECHANICAL STANDARDIZATION OF SEMICONDUCTOR DEVICES –

Part 6-13: Design guideline of open-top-type sockets for Fine-pitch Ball Grid Array and Fine-pitch Land Grid Array (FBGA/FLGA)

1 Scope

This part of IEC 60191 gives a design guideline of open-top-type semiconductor sockets for Fine-pitch Ball Grid Array (“FBGA” hereafter) and Fine-pitch Land Grid Array (“FLGA” hereafter). This standard is intended to establish the outline drawings and dimensions of the open-top-type socket out of the test and burn-in sockets applied to FBGA and FLGA.

2 Normative references

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.

IEC 60191-2, *Mechanical standardization of semiconductor devices – Part 2: Dimensions*

IEC 60191-6:2004, *Mechanical standardization of semiconductor devices – Part 6: General rules for the preparation of outline drawings of surface mounted semiconductor device packages*

3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 60191-6 apply.

4 Socket code

4.1 Construction of socket code

A socket code is constructed as follows.

	Symbol of socket	Symbol of socket type	Symbol of nominal dimension	Number of terminal arrays	Terminal pitch
	4.2 a)	4.2 b)	4.2 c)	4.2 d)	4.2 e)
Example	**SFB**	**TX**	**2120AB**	**1616**	**080**