BS EN 61191-2:2013

BSI Standards Publication

# Printed board assemblies

## Part 2: Sectional specification — Requirements for surface mount soldered assemblies

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## National foreword

This British Standard is the UK implementation of EN 61191-2:2013. It is identical to IEC 61191-2:2013. It supersedes BS EN 61191-2:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/501, Electronic assembly technology & Printed Electronics.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2013.

### Amendments issued since publication

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EUROPEAN STANDARD
NORME EUROPÉENNE
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**EN 61191-2**

October 2013

ICS 31.190; 31.240

Supersedes EN 61191-2:1998

English version

# Printed board assemblies - Part 2: Sectional specification - Requirements for surface mount soldered assemblies (IEC 61191-2:2013)

Ensembles de cartes imprimées -
Partie 2: Spécification intermédiaire -
Exigences relatives à l'assemblage par brasage pour montage en surface
(CEI 61191-2:2013)

Elektronikaufbauten auf Leiterplatten -
Teil 2: Rahmenspezifikation -
Anforderungen an gelötete Baugruppen in Oberflächenmontage
(IEC 61191-2:2013)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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# Foreword

The text of document 91/1091/FDIS, future edition 2 of IEC 61191-2, prepared by IEC/TC 91 "Electronics assembly technology " was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61191-2:2013.

The following dates are fixed:

| | | |
|---|---|---|
| • latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2014-04-10 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2016-07-10 |

This document supersedes EN 61191-2:1998.

EN 61191-2:2013 includes the following significant technical changes with respect to EN 61191-2:1998:

– IPC-A-610 on workmanship has been included as a normative reference;

– some of the terminology used in the document has been updated;

– references to EN standards have been corrected;

– the use of lead-free solder paste and plating are addressed.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

# Endorsement notice

The text of the International Standard IEC 61191-2:2013 was approved by CENELEC as a European Standard without any modification.

# Annex ZA
(normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 61191-1 | 2013 | Printed board assemblies<br>Part 1: Generic specification - Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies | EN 61191-1 | 2013 |
| IPC-A-610E | 2010 | Acceptability of Electronic Assemblies | - | - |

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# PRINTED BOARD ASSEMBLIES –

# Part 2: Sectional specification – Requirements for surface mount soldered assemblies

## 1 Scope

This part of IEC 61191 gives the requirements for surface mount solder connections. The requirements pertain to those assemblies that are totally surface mounted or to the surface mounted portions of those assemblies that include other related technologies (e.g. through-hole, chip mounting, terminal mounting, etc.).

## 2 Normative references

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

IEC 61191-1:2013, *Printed board assemblies – Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies*

IPC-A-610E:2010, *Acceptability of Electronic Assemblies*

## 3 Conventions

Unless otherwise specified by the user, the word "shall" signifies that the requirement is mandatory. Deviations from any "shall" requirement requires written acceptance by the user, e.g. via assembly drawing, specification or contract provision.

The word “should” is used to indicate a recommendation or guidance statement. The word “may” indicates an optional situation. Both “should” and “may” express non-mandatory situations. “Will” is used to express a declaration of purpose.

## 4 General requirements

Clause 4 of IEC 61191-1:2013 is a mandatory part of this standard.

Workmanship of surface mount assemblies shall meet the requirements of IPC-A-610E in accordance with the classification requirements of this standard.

## 5 Classification

This standard recognizes that electrical and electronic assemblies are subject to classifications by intended end-item use. Three general end-product classes have been established to reflect differences in producibility, complexity, functional performance requirements, and verification (inspection/test) frequency. These are the following:

| | |
|---|---|
| Level A: | General electronic products |
| Level B: | Dedicated service electronic products |