

STN	Zostavy dosiek s plošnými spojmi Časť 1: Všeobecná špecifikácia Požiadavky na spájkované elektrické a elektronické zostavy používajúce povrchové a podobné montážne technológie	STN EN IEC 61191-1 35 9041
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Printed board assemblies - Part 1: Generic specification - Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/19

Obsahuje: EN IEC 61191-1:2018, IEC 61191-1:2018

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EUROPEAN STANDARD

EN IEC 61191-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2018

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English Version

**Printed board assemblies - Part 1: Generic specification -
Requirements for soldered electrical and electronic assemblies
using surface mount and related assembly technologies
(IEC 61191-1:2018)**

Ensembles de cartes imprimées - Partie 1: Spécification
générique - Exigences relatives aux ensembles électriques
et électroniques brasés utilisant les techniques de montage
en surface et associées
(IEC 61191-1:2018)

Elektronikaufbauten auf Leiterplatten - Teil 1:
Fachgrundspezifikation - Anforderungen an gelötete
elektrische und elektronische Baugruppen unter
Verwendung der Oberflächenmontage und verwandter
Montagetechniken
(IEC 61191-1:2018)

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Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61191-1:2018 (E)**European foreword**

The text of document 91/1481/CDV, future edition 3 of IEC 61191-1, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61191-1:2018.

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) 2019-07-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-10-19

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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
IEC 61188-5-2	NOTE	Harmonized as EN 61188-5-2
IEC 61188-5-3	NOTE	Harmonized as EN 61188-5-3
IEC 61188-5-4	NOTE	Harmonized as EN 61188-5-4
IEC 61188-5-5	NOTE	Harmonized as EN 61188-5-5
IEC 61188-5-6	NOTE	Harmonized as EN 61188-5-6
IEC 61188-7	NOTE	Harmonized as EN 61188-7
IEC 61189-2	NOTE	Harmonized as EN 61189-2
IEC 61190-1-2	NOTE	Harmonized as EN 61190-1-2
IEC 61193-1	NOTE	Harmonized as EN 61193-1
IEC 61193-3	NOTE	Harmonized as EN 61193-3
IEC 62326-1	NOTE	Harmonized as EN 62326-1
IEC 62326-4	NOTE	Harmonized as EN 62326-4

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-20	-	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	-
IEC 60068-2-58	-	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	-
IEC 60194	-	Printed board design, manufacture and assembly - Terms and definitions	-	-
IEC 60721-3-1	-	Printed board design, manufacture and assembly - Terms and definitions	EN IEC 60721-3-1	-
IEC 61189-1	-	Test methods for electrical materials, interconnection structures and assemblies - Part 1: General test methods and methodology	EN 61189-1	-
IEC 61189-3	-	Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 3: Test methods for interconnection structures (printed boards)	EN 61189-3	-
IEC 61190-1-1	-	Attachment materials for electronic assembly - Part 1-1: Requirements for soldering fluxes for high-quality interconnections in electronics assembly	EN 61190-1-1	-
IEC 61190-1-3	-	Attachment materials for electronic assembly - Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solder for electronic soldering applications	EN IEC 61190-1-3	-
IEC 61191-2	-	Printed board assemblies - Part 2: Sectional specification - Requirements for surface mount soldered assemblies	EN 61191-2	-

EN IEC 61191-1:2018 (E)

IEC 61191-3	-	Printed board assemblies - Part 3: Sectional specification - Requirements for through-hole mount soldered assemblies	EN 61191-3	-
IEC 61191-4	-	Printed board assemblies - Part 4: Sectional specification - Requirements for terminal soldered assemblies	EN 61191-4	-
IEC 61249-8-8	-	Materials for interconnection structures - Part 8: Sectional specification set for non-conductive films and coatings - Section 8: Temporary polymer coatings	EN 61249-8-8	-
IEC 61340-5-1	-	Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	EN 61340-5-1	-
IEC/TR 61340-5-2	-	Electrostatics - Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	CLC/TR 61340-5-2	-
IEC 61760-2	-	Surface mounting technology - Part 2: Transportation and storage conditions of surface mounting devices (SMD) - Application guide	EN 61760-2	-
ISO 9001	2008	Quality management systems - Requirements	-	-
IPC-A-610	-	Acceptability of Electronics Assemblies	-	-



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Edition 3.0 2018-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Ensembles de cartes imprimées –
Partie 1: Spécification générique – Exigences relatives aux ensembles
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IEC 61191-1

Edition 3.0 2018-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Printed board assemblies –

Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies

Ensembles de cartes imprimées –

Partie 1: Spécification générique – Exigences relatives aux ensembles électriques et électroniques brasés utilisant les techniques de montage en surface et associées

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRINTED BOARD ASSEMBLIES –

Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies

FOREWORD

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International Standard IEC 61191-1 has been prepared by IEC technical committee 91: Electronics assembly technology.

This third edition cancels and replaces the second edition published in 2013. This edition constitutes a technical revision.

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

- a) the requirements have been updated to be compliant with the acceptance criteria in IPC-A-610F;
- b) the term "assembly drawing" has been changed to "assembly documentation" throughout;
- c) references to IEC standards have been corrected;
- d) Clause 9 was completely rewritten;

e) Annex B was removed because there are already procedures for circuit board assemblies.

The text of this International Standard is based on the following documents:

CDV	Report on voting
91/1481/CDV	91/1510/RVC

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

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

A list of all parts of IEC 61191 series, published under the general title *Printed board assemblies*, can be found in the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

PRINTED BOARD ASSEMBLIES –

Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies

1 Scope

This part of IEC 61191 prescribes requirements for materials, methods and verification criteria for producing quality soldered interconnections and assemblies using surface mount and related assembly technologies. This part of IEC 61191 also includes recommendations for good manufacturing processes.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-20, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60068-2-58, *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)*

IEC 60194, *Printed board design, manufacture and assembly – Terms and definitions*

IEC 60721-3-1, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Storage*

IEC 61189-1, *Test methods for electrical materials, interconnection structures and assemblies – Part 1: General test methods and methodology*

IEC 61189-3, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 3: Test methods for interconnection structures (printed boards)*

IEC 61190-1-1, *Attachment materials for electronic assembly – Part 1-1: Requirements for soldering fluxes for high-quality interconnections in electronics assembly*

IEC 61190-1-3, *Attachment materials for electronic assembly – Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solders for electronic soldering applications*

IEC 61191-2, *Printed board assemblies – Part 2: Sectional specification – Requirements for surface mount soldered assemblies*

IEC 61191-3, *Printed board assemblies – Part 3: Sectional specification – Requirements for through-hole mount soldered assemblies*

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IEC 61191-4, *Printed board assemblies – Part 4: Sectional specification – Requirements for terminal soldered assemblies*

IEC 61249-8-8, *Materials for interconnection structures – Part 8: Sectional specification set for non-conductive films and coatings – Section 8: Temporary polymer coatings*

IEC 61340-5-1, *Electrostatics – Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements*

IEC/TR 61340-5-2, *Electrostatics – Part 5-2: Protection of electronic devices from electrostatic phenomena – User guide*

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