SVENSK STANDARD SS-EN 62878-1-1

Fastställd	Utgåva	Sida	Ansvarig kommitté
2016-03-16	1	1 (1+57)	SEK Elektro- tekniska rådet

Substrat med inbäddade komponenter – Del 1-1: Artspecifikation – Provning

Device embedded substrate –
Part 1-1: Generic specification –
Test methods

Som svensk standard gäller europastandarden EN 62878-1-1:2015. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62878-1-1:2015.

Nationellt förord

Europastandarden EN 62878-1-1:2015

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 62878-1-1, First edition, 2015 - Device embedded substrate - Part 1-1: Generic specification - Test methods**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 31.180.00; 31.190.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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Stora delar av arbetet sker internationellt

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Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62878-1-1

July 2015

ICS 31.180; 31.190

English Version

Device embedded substrate - Part 1-1: Generic specification - Test methods (IEC 62878-1-1:2015)

Substrat avec appareil(s) intégré(s) -
Partie 1-1: Spécification générique - Méthodes d'essai
(IEC 62878-1-1:2015)

Trägermaterial mit eingebetteten Bauteilen -
Teil 1-1: Fachgrundspezifikation - Prüfverfahren
(IEC 62878-1-1:2015)

This European Standard was approved by CENELEC on 2015-06-24. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 62878-1-1:2015 E

European foreword

The text of document 91/1248/FDIS, future edition 1 of IEC 62878-1-1, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62878-1-1:2015.

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)	2016-03-24
- latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-06-24

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 62878-1-1:2015 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 60068-1	NOTE	Harmonized as EN 60068-1.
IEC 60068-2-6	NOTE	Harmonized as EN 60068-2-6.
IEC 60068-2-14	NOTE	Harmonized as EN 60068-2-14.
IEC 60068-2-20	NOTE	Harmonized as EN 60068-2-20.
IEC 60068-2-21	NOTE	Harmonized as EN 60068-2-21.
IEC 60068-2-30	NOTE	Harmonized as EN 60068-2-30.
IEC 60068-2-38	NOTE	Harmonized as EN 60068-2-38.
IEC 60068-2-53	NOTE	Harmonized as EN 60068-2-53.
IEC 60068-2-58	NOTE	Harmonized as EN 60068-2-58.
IEC 60068-2-64	NOTE	Harmonized as EN 60068-2-64.
IEC 60068-2-66	NOTE	Harmonized as EN 60068-2-66.
IEC 60068-2-78	NOTE	Harmonized as EN 60068-2-78.
IEC 60068-2-80	NOTE	Harmonized as EN 60068-2-80.
IEC 61189-1	NOTE	Harmonized as EN 61189-1.
IEC 61189-2	NOTE	Harmonized as EN 61189-2.
IEC 61189-11	NOTE	Harmonized as EN 61189-11.
IEC 61190-1-2	NOTE	Harmonized as EN 61190-1-2.
IEC 61190-1-3	NOTE	Harmonized as EN 61190-1-3.
IEC 62137-1-2	NOTE	Harmonized as EN 62137-1-2.
IEC 62137-1-3	NOTE	Harmonized as EN 62137-1-3.
IEC 62421	NOTE	Harmonized as EN 62421.
ISO 291	NOTE	Harmonized as EN ISO 291.

ISO 2409	NOTE	Harmonized as EN ISO 2409.
ISO 3611	NOTE	Harmonized as EN ISO 3611.
ISO 4957	NOTE	Harmonized as EN ISO 4957.
ISO 9445-1	NOTE	Harmonized as EN ISO 9445-1.
ISO 9453	NOTE	Harmonized as EN ISO 9453.
ISO 9455 Series	NOTE	Harmonized as EN ISO 9455 Series.
ISO 15184	NOTE	Harmonized as EN ISO 15184.

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 1 When 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

Publication	Year	Title	EN/HD	Year
IEC 60068-2-1	-	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
IEC 60194	-	Printed board design, manufacture and assembly - Terms and definitions	EN 60194	-
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/TS 62878-2-4	2015	Device embedded substrate - Part 2-4: Guidelines - Test element groups (TEG)	-	-

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DEVICE EMBEDDED SUBSTRATE –

Part 1-1: Generic specification – Test methods

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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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62878-1-1 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
91/1248/FDIS	91/1260/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.

A list of all parts in the IEC 62878, published under the general title *Device embedded substrate,* can be found on the IEC website.

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

The committee has decided that the contents of this publication 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

DEVICE EMBEDDED SUBSTRATE –

Part 1-1: Generic specification – Test methods

1 Scope

This part of IEC 62878 specifies the test methods of passive and active device embedded substrates. The basic test methods of printed wiring substrate materials and substrates themselves are specified in IEC 61189-3.

This part of IEC 62878 is applicable to device embedded substrates fabricated by use of organic base material, which include for example active or passive devices, discrete components formed in the fabrication process of electronic wiring board, and sheet formed components.

The IEC 62878 series neither applies to the re-distribution layer (RDL) nor to the electronic modules defined as an M-type business model in IEC 62421.

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 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

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

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 TS 62878-2-4:2015, *Device embedded substrate – Part 2-4 – Guidelines – Test element groups (TEG)*