

Surface mounting technology -- Part 2: Transportation and storage conditions of surface mounting devices (SMD) - Application guide

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Transportation and storage conditions of surface
mounting devices (SMD) - Application guide

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 61760-2:2007 sisaldab Euroopa standardi EN 61760-2:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.08.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 61760-2:2007 consists of the English text of the European standard EN 61760-2:2007.</p> <p>This document is endorsed on 27.08.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This International Standard describes the transportation and storage conditions for surface mounting devices (SMDs) that are fulfilled in order to enable trouble-free processing of surface mounting devices, both active and passive. (Conditions for printed boards are not taken into consideration.)</p>	<p>Scope:</p> <p>This International Standard describes the transportation and storage conditions for surface mounting devices (SMDs) that are fulfilled in order to enable trouble-free processing of surface mounting devices, both active and passive. (Conditions for printed boards are not taken into consideration.)</p>
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ICS 31.020

Võtmesõnad: applications, electronic engineering, electronic equ, electronic equipment and components, recommended application, smd, smd-diodes, storage, storage condition, surface mounting, transport

English version

**Surface mounting technology -
Part 2: Transportation and storage conditions
of surface mounting devices (SMD) -
Application guide
(IEC 61760-2:2007)**

Technique du montage en surface -
Partie 2: Transport et stockage
des composants pour montage
en surface (CSM) -
Guide d'application
(CEI 61760-2:2007)

Oberflächenmontagetechnik -
Teil 2: Transport- und
Lagerungsbedingungen
von oberflächenmontierbaren
Bauelementen (SMD) -
Anwendungsleitfaden
(IEC 61760-2:2007)

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.

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 91/569/CDV, future edition 2 of IEC 61760-2, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 61760-2 on 2007-05-01.

This European Standard supersedes EN 61760-2:1998.

The main changes with regard to EN 61760-2:1998 concern:

EN 61760-2:2007 was updated and editorially revised. Specific reference is made to:

- EN 61340-5-1: Electrostatics – Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements
- EN 61340-5-2: Electrostatics – Part 5-2: Protection of electronic devices from electrostatic phenomena – User guide

For convenience of the reader, an informative Annex A was added, which contains information about the climatic and mechanical conditions during transportation and storage (extracted from EN 60721-3-1 and EN 60721-3-2).

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 61760-2:2007 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 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 60286-3	- ¹⁾	Packaging of components for automatic handling - Part 3: Packaging of surface mount components on continuous tapes	EN 60286-3	200X ²⁾
IEC 60286-4	- ¹⁾	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 ³⁾
IEC 60286-5	- ¹⁾	Packaging of components for automatic handling - Part 5: Matrix trays	EN 60286-5	2004 ³⁾
IEC 60286-6	- ¹⁾	Packaging of components for automatic handling - Part 6: Bulk case packaging for surface mounting components	EN 60286-6	2004 ³⁾
IEC 60721-3-1	- ¹⁾	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 1: Storage	EN 60721-3-1	1997 ³⁾
IEC 60721-3-2	- ¹⁾	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 2: Transportation	EN 60721-3-2	1997 ³⁾
IEC 60749	Series	Semiconductor devices - Mechanical and climatic test methods	EN 60749	Series
IEC/TS 61340-5-1	- ¹⁾	Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	EN 61340-5-1 + corr. April	2001 ³⁾ 2001
IEC/TS 61340-5-2	- ¹⁾	Electrostatics - Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	EN 61340-5-2 + corr. August	2001 ³⁾ 2001

¹⁾ Undated reference.

²⁾ To be ratified.

³⁾ Valid edition at date of issue.

INTERNATIONAL STANDARD

IEC
61760-2

Second edition
2007-04

Surface mounting technology –

**Part 2:
Transportation and storage conditions
of surface mounting devices (SMD) –
Application guide**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SURFACE MOUNTING TECHNOLOGY –

Part 2: Transportation and storage conditions of surface mounting devices (SMD) – Application guide

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 61760-2 has been prepared by IEC technical committee 91: Electronics assembly technology.

This second edition cancels and replaces the first edition, published in 1998, and constitutes a technical revision.

The main changes with regard to the previous edition concern:

The standard was updated and editorially revised. Specific reference is made to:

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

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

For convenience of the reader, an informative Annex A was added, which contains information about the climatic and mechanical conditions during transportation and storage (extracted from IEC 60721-3-1 and IEC 60721-3-2).

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

CDV	Report on voting
91/569/CDV	91/634/RVC

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 61760 series, under the general title *Surface mounting technology*, 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.

SURFACE MOUNTING TECHNOLOGY –

Part 2: Transportation and storage conditions of surface mounting devices (SMD) – Application guide

1 Scope and object

This International Standard describes the transportation and storage conditions for surface mounting devices (SMDs) that are fulfilled in order to enable trouble-free processing of surface mounting devices, both active and passive. (Conditions for printed boards are not taken into consideration.)

The object of this standard is to ensure that users of SMDs receive and store products that can be further processed (e.g. positioned, soldered) without prejudice to quality and reliability. Improper transportation and storage of SMDs may cause deterioration and result in assembly problems such as poor solderability, delamination and "popcorning".

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 60286-3: *Packaging of components for automatic handling – Part 3: Packaging of leadless components on continuous tapes*

IEC 60286-4: *Packaging of components for automatic handling – Part 4: Stick magazines for electronic components encapsulated in packages of form E and G*

IEC 60286-5: *Packaging of components for automatic handling – Part 5: Matrix trays*

IEC 60286-6: *Packaging of components for automatic handling – Part 6: Bulk case packaging for surface mounting components*

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

IEC 60721-3-2: *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 2: Transportation*

IEC 60749 (all parts), *Semiconductor devices – Mechanical and climatic test methods*

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

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