Irish Standard
I.S. EN 61760-4:2015

Surface mounting technology - Part 4: Classification, packaging, labelling and handling of moisture sensitive devices

I.S. EN 61760-4:2015

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Surface mounting technology - Part 4: Classification, packaging, labelling and handling of moisture sensitive devices (IEC 61760-4:2015)

Technique du montage en surface (SMT) - Partie 4: Classification, emballage, étiquetage et manipulation des dispositifs sensibles à l'humidité (IEC 61760-4:2015)

Oberflächenmontagetechnik - Teil 4: Klassifikation, Verpackung, Kennzeichnung und Handhabung feuchteempfindlicher Bauteile (IEC 61760-4:2015)

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Foreword

The text of document 91/1244/FDIS, future edition 1 of IEC 61760-4, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61760-4:2015.

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)	2016-03-23
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-2-58:2004	NOTE	Harmonized as EN 60068-2-58:2004 [1)] (not modified).
IEC 60068-2-78	NOTE	Harmonized as EN 60068-2-78.
IEC 60749-20-1	NOTE	Harmonized as EN 60749-20-1.
ISO 62	NOTE	Harmonized as EN ISO 62.

[1)] Superseded by EN 60068-2-58:2015 (IEC 60068-2-58:2015): DOW = 2018-05-01.

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 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60749-20	-	Semiconductor devices - Mechanical and climatic test methods - Part 20: Resistance of plastic encapsulated SMDs to the combined effect of moisture and soldering heat	EN 60749-20	-
IEC 61340-5-1	-	Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	EN 61340-5-1	-
IEC 61760-2	-	Surface mounting technology - Part 2: Transportation and storage conditions of surface mounting devices (SMD) - Application guide	EN 61760-2	-

IPC/JEDEC J-STD-020D.1, March 2008, Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices

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Surface mounting technology – Part 4: Classification, packaging, labelling and handling of moisture sensitive devices

Technique du montage en surface (SMT) – Partie 4: Classification, emballage, étiquetage et manipulation des dispositifs sensibles à l'humidité

IEC 61760-4:2015-05(en-fr)

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IEC 61760-4

Edition 1.0 2015-05

INTERNATIONAL STANDARD

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Surface mounting technology – Part 4: Classification, packaging, labelling and handling of moisture sensitive devices

Technique du montage en surface (SMT) – Partie 4: Classification, emballage, étiquetage et manipulation des dispositifs sensibles à l'humidité

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 7
4 General information 9
4.1 Moisture sensitive devices 9
4.2 Moisture sensitivity level (MSL) 10
4.3 Relation to other environmental test methods (humidity tests) 10
5 Assessment of moisture sensitivity 10
5.1 Identification of non moisture sensitive devices 10
5.2 Classification 10
6 Test procedure 11
6.1 General 11
6.1.1 Structurally similar components 11
6.1.2 Verification and validation tests 11
6.1.3 Selection of applicable soak conditions and temperature profile 12
6.2 Drying 12
6.3 Moisture soak 12
6.4 Temperature load 13
6.4.1 Classification temperature profile 13
6.4.2 Classification temperature profile for special devices 14
6.5 Recovery 14
6.6 Final measurements 14
6.6.1 Requirements 14
6.6.2 Visual inspection 15
6.6.3 Electrical measurements 15
6.6.4 Non-destructive inspection (if required) 15
6.7 Classification 15
6.8 Information to be given in the relevant specification 15
7 Requirements to packaging and labelling 16
7.1 Packaging process 16
7.1.1 Drying of MSDs and carrier materials before being sealed in MBBs 16
7.1.2 Evacuation and sealing 17
7.2 Packaging material for dry pack 17
7.2.1 Moisture barrier bag (MBB) 17
7.2.2 Desiccant 17
7.2.3 Humidity indicator 19
7.3 Information to be given on labels 20
8 Handling of moisture sensitive devices 21
8.1 Storage 21
8.1.1 Recommended storage conditions 21
8.1.2 Shelf life 21
8.1.3 Floor life 21
8.2 ESD 22

8.3 Humidity indication 22
8.3.1 Humidity indicator card (HIC) 22
8.3.2 Moisture indicating desiccant 22
8.4 Unpacking and re-packing 22
9 Drying 23
9.1 Drying options 23
9.2 Methods 24
9.2.1 General considerations for baking 24
9.2.2 Bakeout times 24
9.2.3 ESD protection 25
9.2.4 Reuse of carriers 25
9.2.5 Solderability limitations 25
Annex A (informative) Moisture sensitivity of assemblies 26
Annex B (informative) Mass/gain loss analysis 27
Annex C (informative) Baking of devices 28
C.1 Baking time and conditions 28
C.2 Example of a baking process 28
Annex D (normative) Moisture sensitivity labels 30
D.1 Object 30
D.2 Graphical symbols and labels 30
D.2.1 Graphical symbol for moisture-sensitivity 30
D.2.2 Moisture-sensitivity identification label (MSID) 30
D.2.3 Moisture-sensitivity caution label (MSCL) 31
Bibliography 32

Figure 1 – Classification temperature profile 13
Figure 2 – Examples of humidity indicator cards 20
Figure C.1 – Baking process 29
Figure D.1 – Standardized graphical symbol for use on equipment 30
Figure D.2 – Alternative moisture sensitivity symbol (also in market use) 30
Figure D.3 – MSID labels (examples) 31

Table 1 – Moisture sensitivity levels 11
Table 2 – Moisture soak conditions 12
Table 3 – Parameters of the classification temperature profile 14
Table 4 – Classification temperatures T_C 14
Table 5 – MBB material properties 17
Table 6 – Conditions for re-bake – Example for one type of plastic encapsulated devices 23
Table 7 – Conditions for baking prior to dry pack – Example for one type of plastic encapsulated devices 24

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SURFACE MOUNTING TECHNOLOGY –

Part 4: Classification, packaging, labelling and handling of moisture sensitive devices

FOREWORD

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International Standard IEC 61760-4 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
91/1244FDIS	91/1259/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 parts in the IEC 61760, published 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 stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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INTRODUCTION

Due to the higher temperature profiles of reflow soldering processes using tin-silver-copper alloys or other lead-free solder alloys with higher melting temperatures than Sn-Pb eutectic solder, the sensitivity of components against soldering heat, when being exposed to moisture before soldering, becomes an increasingly important factor.

The currently existing standards describing the moisture sensitivity classification of devices are applicable for plastic encapsulated semiconductors and similar solid state packages (e.g. IEC 60749-20), but not for other types of components.

This part of IEC 61760 also extends the classification and packaging methods as described in J-STD-020 and J-STD-033. It is intended to be used for such type of components, where J-STD-020 and J-STD-033 are not required or not appropriate.

SURFACE MOUNTING TECHNOLOGY –

Part 4: Classification, packaging, labelling and handling of moisture sensitive devices

1 Scope

This part of IEC 61760 specifies the classification of moisture sensitive devices into moisture sensitivity levels related to soldering heat, and provisions for packaging, labelling and handling.

This part of IEC 61760 extends the classification and packaging methods to such components, where currently existing standards are not required or not appropriate. For such cases this standard introduces additional moisture sensitivity levels and an alternative method for packaging.

This standard applies to devices intended for reflow soldering, like surface mount devices, including specific through-hole devices (where the device supplier has specifically documented support for reflow soldering), but not to

- semiconductor devices,
- devices for flow (wave) soldering.

NOTE Background of this standard and its relation to currently existing standards, e.g. IEC 60749-20 or J-STD-020 and J-STD-033, are described in the INTRODUCTION.

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 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60749-20, *Semiconductor devices – Mechanical and climatic test methods – Part 20: Resistance of plastic encapsulated SMDs to the combined effect of moisture and soldering heat*

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

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

IPC/JEDEC J-STD-020D.1, *March 2008, Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.