

Surface mounting technology — Environmental and endurance test methods for surface mount solder joint —

Part 1-2: Shear strength test

The European Standard EN 62137-1-2:2007 has the status of a British Standard

ICS 31.190

National foreword

This British Standard is the UK implementation of EN 62137-1-2:2007. It is identical to IEC 62137-1-2:2007.

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

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

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Environmental and endurance test methods
for surface mount solder joint -
Part 1-2: Shear strength test
(IEC 62137-1-2:2007)**

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Verfahren zur Prüfung
auf Umgebungseinflüsse
und zur Prüfung der Haltbarkeit
von Oberflächen-Lötverbindungen -
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CENELEC

European Committee for Electrotechnical Standardization
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Foreword

The text of document 91/683/FDIS, future edition 1 of IEC 62137-1-2, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62137-1-2 on 2007-08-01.

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- latest date by which the EN has to be implemented
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- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62137-1-2:2007 was approved by CENELEC as a European Standard without any modification.

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SURFACE MOUNTING TECHNOLOGY – ENVIRONMENTAL AND ENDURANCE TEST METHODS FOR SURFACE MOUNT SOLDER JOINT –

Part 1-2: Shear strength test

1 Scope

The test method described in this part of IEC 62137 is applicable to leadless surface mounting components and surface mounting connectors to which pull test is not applicable. It is not applicable to multi-lead components and gull-wing leads.

The method is designed to test and evaluate the endurance of the solder joint between component terminals and lands on a substrate, by means of a shear type mechanical stress. This test is applicable to evaluate the effects of repeated temperature change on the strength of the solder joints between terminals and lands on a substrate.

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

IEC 60068-2-14, *Environmental testing – Part 2-14: Test N: Change of temperature*

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

IEC 61188-5-2, *Printed boards and printed board assemblies – Design and use – Part 5-2: Attachment (land/joint) considerations – Discrete components*

IEC 61760-1, *Surface mounting technology – Part 1: Standard method for the specification of surface mounting components (SMDs)*

IEC 61188-5-5, *Printed boards and printed board assemblies – Design and use – Part 5-5: Sectional requirements - Attachment (land/joint) considerations – Components with gull-wing leads on four sides¹*

IEC 61249-2-7, *Materials for printed boards and other interconnecting structures – Part 2-7: Reinforced base materials clad and unclad – Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test), copper-clad*

IEC 61190-1-2, *Attachment materials for electronic assembly – Part 1-2: Requirements for solder pastes 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*

3 Terms and definitions

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

¹ In preparation.