

**Semiconductor devices - Micro-electromechanical
devices -- Part 18: Bend testing methods of thin film
materials**

EESTI STANDARDI EESSÕNA

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**Semiconductor devices -
Micro-electromechanical devices -
Part 18: Bend testing methods of thin film materials
(IEC 62047-18:2013)**

Dispositifs à semiconducteurs -
Dispositif microélectromécaniques -
Partie 18: Méthodes d'essai de flexion des
matériaux en couche mince
(CEI 62047-18:2013)

Halbleiterbauelemente -
Bauelemente der Mikrosystemtechnik -
Teil 18: Biegeprüfverfahren für
Dünnschichtwerkstoffe
(IEC 62047-18:2013)

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

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Foreword

The text of document 47F/155/FDIS, future edition 1 of IEC 62047-18, prepared by SC 47F "Microelectromechanical systems" of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62047-18:2013.

The following dates are fixed:

- latest date by which the document has to be (dop) 2014-05-21
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publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2016-08-21
standards conflicting with the
document have to be withdrawn

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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 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 62047-6	2009	Semiconductor devices - Micro-electromechanical devices - Part 6: Axial fatigue testing methods of thin film materials	EN 62047-6	2010

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SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 18: Bend testing methods of thin film materials

1 Scope

This part of IEC 62047 specifies the method for bend testing of thin film materials with a length and width under 1 mm and a thickness in the range between 0,1 μm and 10 μm . Thin films are used as main structural materials for Micro-electromechanical Systems (abbreviated as MEMS in this document) and micromachines.

The main structural materials for MEMS, micromachines, etc., have special features, such as a few micron meter size, material fabrication by deposition, photolithography, and/ or non-mechanical machining test piece. This International Standard specifies the bend testing and test piece shape for micro-sized smooth cantilever type test pieces, which enables a guarantee of accuracy corresponding to the special features.

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 62047-6:2009, *Semiconductor devices – Micro-electromechanical devices – Part 6: Axial fatigue testing methods of thin film materials*