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

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NATIONAL FOREWORD

See Eesti standard EVS-EN 62047-18:2013 sisaldab Euroopa standardi EN 62047-18:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 62047-18:2013 consists of the English text of the European standard EN 62047-18:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.09.2013.	Date of Availability of the European standard is 27.09.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English version

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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CENELEC

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• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-08-21

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Endorsement notice

The text of the International Standard IEC 62047-18:2013 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 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.

Publication	Year	Title	EN/HD	Year
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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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*