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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Semiconductor devices – Micro-electromechanical devices – Part 1: Terms and definitions

Dispositifs à semiconducteurs – Dispositifs microélectromécaniques – Partie 1: Termes et définitions

IEC 62047-1:2016-01

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 1: Terms and definitions

FOREWORD

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International Standard IEC 62047-1 has been prepared by subcommittee 47F: Micro-electromechanical systems, of IEC technical committee 47: Semiconductor devices.

This second edition cancels and replaces the first edition published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) removal of ten terms;
b) revision of twelve terms;
c) addition of sixteen new terms.

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

FDIS	Report on voting
47F/232/FDIS	47F/238/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 62047 series, published under the general title *Semiconductor devices – Micro-electromechanical devices*, 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 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- withdrawn,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.

SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 1: Terms and definitions

1 Scope

This part of IEC 62047 defines terms for micro-electromechanical devices including the process of production of such devices.

2 Terms and definitions

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

2.1 General terms and definitions

2.1.1
micro-electromechanical device
microsized device, in which sensors, actuators, transducers, resonators, oscillators, mechanical components and/or electric circuits are integrated

Note 1 to entry: Related technologies are extremely diverse from fundamental technologies such as design, material, processing, functional element, system control, energy supply, bonding and assembly, electric circuit, and evaluation to basic science such as micro-science and engineering as well as thermodynamics and tribology in a micro-scale. If the devices constitute a system, it is sometimes called as MEMS which is an acronym standing for "micro-electromechanical systems"

2.1.2
MST
microsystem technology
technology to realize microelectrical, optical and machinery systems and even their components by using micromachining

Note 1 to entry: The term MST is mostly used in Europe.

Note 2 to entry: This note applies to the French language only.

2.1.3
micromachine

2.1.3.1
micromachine, <device>
miniaturized device, the components of which are several millimetres or smaller in size

Note 1 to entry: Various functional device (such as a sensor that utilizes the micromachine technology) is included.

2.1.3.2
micromachine, <system>
microsystem that consists of an integration of micromachine devices

Note 1 to entry: A molecular machine called a nanomachine is included.