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Interested committees:

Title: BS EN IEC 62047-4 Semiconductor devices - Micro-electromechanical devices

Part 4: Generic specification for MEMS

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

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Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



47F/451/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 62047-4 ED2

DATE OF CIRCULATION:

2023-10-13

CLOSING DATE FOR COMMENTS:

2024-01-05

SUPERSEDES DOCUMENTS:

47F/438/RR

IEC SC 47F : MICRO-ELECTROMECHANICAL SYSTEMS

SECRETARIAT:

Japan

SECRETARY:

Mr Takashi Mihara

OF INTEREST TO THE FOLLOWING COMMITTEES:

PROPOSED HORIZONTAL STANDARD:

☐

Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☐ ENVIRONMENT

☐ QUALITY ASSURANCE

☐ SAFETY

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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TITLE:

Semiconductor devices - Micro-electromechanical devices - Part 4: Generic specification for MEMS

NOTE FROM TC/SC OFFICERS:

This revision up of IEC 62047-4 was confirmed at SC47F plenary meeting on 2023-11-3 in San Francisco, and described on 47F/425A/RM. after that 47F/438/RR was circulated for this matter.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SEMICONDUCTOR DEVICES –
MICRO-ELECTROMECHANICAL DEVICES –****Part 4: Generic specification for MEMS****FOREWORD**

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International Standard IEC 62047-4 has been prepared by subcommittee 47F: Micro-electromechanical systems, of IEC technical committee 47: Semiconductor devices.

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

FDIS	Report on voting
47/1975/FDIS	47/1985/RVD

Full information on the voting for the approval on 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.

92 A list of all the parts in the IEC 62047 series, under the general title *Semiconductor devices – Micro-*
93 *electromechanical devices*, can be found on the IEC website.

94 The committee has decided that the contents of this publication will remain unchanged until the
95 maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related
96 to the specific publication. At this date, the publication will be

- 97 • reconfirmed,
98 • withdrawn,
99 • replaced by a revised edition, or
100 • amended.

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SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 4: Generic specification for MEMS

1 Scope

This part of IEC 62047 describes generic specifications for micro-electromechanical systems (MEMS) made by semiconductors, which are the basis for specifications given in other parts of this series for various types of MEMS applications such as sensors, RF MEMS, optical MEMS, bio MEMS, and power MEMS. This standard specifies general procedures for quality assessment to be used in IECQ systems and establishes general principles for describing and testing of electrical, optical, mechanical and environmental characteristics.

This part of IEC 62047 aids in the preparation of standards that define devices and systems made by micromachining technology, including but not limited to, material characterization and handling, assembly and testing, process control and measuring methods. MEMS described in this standard are basically made of semiconductor material. However, the statements made in this standard are also applicable to MEMS using materials other than semiconductor, for example, polymers, glass, metals and ceramic materials.

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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60068-2 (all parts), *Environmental testing – Part 2: Tests*

IEC 60617, *Graphical symbols for diagrams*

IEC 60747-1: 2010, *Semiconductor devices – Part 1: General*

IEC 60749 (all parts), *Semiconductor devices – Mechanical and climatic test methods*

IEC 61193-2, *Quality assessment systems – Part 2: Selection and use of sampling plans for inspection of electronic components and packages*

IEC 62047-1, *Semiconductor devices – Micro-electromechanical devices – Part 1: Terms and definitions*

IECQ 03-3:2013: *IEC Quality Assessment System for Electronic Components (IECQ System) - Rules of Procedure –Part 3: IECQ Approved Component Products, Related Materials & Assemblies Scheme*

ISO 1000, *SI units and recommendations for the use of their multiples and of certain other units*

ISO 2859-1:1999/Amd 1:2011 *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

3 Terms, definitions, units and symbols

For the purposes of this document, terms shall, wherever possible, be taken from IEC 62047-1; units, and graphical and letter symbols shall, wherever possible, be taken from IEC 60027, IEC 60617 and ISO 1000.