

Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of assessed quality - Part 1: Generic specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Surface acoustic wave (SAW) and bulk acoustic wave (BAW)
duplexers of assessed quality - Part 1: Generic specification
(IEC 62604-1:2022)

Duplexeurs à ondes acoustiques de surface (OAS) et à
ondes acoustiques de volume (OAV) sous assurance de la
qualité - Partie 1: Spécification générique
(IEC 62604-1:2022)

Oberflächenwellen-(OFW-) und Volumenwellen-(BAW-
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European foreword

The text of document 49/1360/CDV, future edition 2 of IEC 62604-1, prepared by IEC/TC 49 "Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62604-1:2022.

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) 2023-05-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-08-15

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- | | |
|---------------------|---|
| IEC 62047-7:2011 | NOTE Harmonized as EN 62047-7:2011 (not modified) |
| IEC 60068-2-10:2005 | NOTE Harmonized as EN 60068-2-10:2005 (not modified) |
| IEC 62604-2:2017 | NOTE Harmonized as EN IEC 62604-2:2018 (not modified) |
| IEC 60862-1:2015 | NOTE Harmonized as EN 60862-1:2015 (not modified) |
| IEC 61019-1:2004 | NOTE Harmonized as EN 61019-1:2005 (not modified) |
| IEC 60862-2:2012 | NOTE Harmonized as EN 60862-2:2012 (not modified) |

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of
assessed quality –**

Part 1: Generic specification

**Duplexeurs à ondes acoustiques de surface (OAS) et à ondes acoustiques de
volume (OAV) sous assurance de la qualité –**

Partie 1: Spécification générique



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of
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Partie 1: Spécification générique**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SURFACE ACOUSTIC WAVE (SAW) AND
BULK ACOUSTIC WAVE (BAW) DUPLEXERS
OF ASSESSED QUALITY –****Part 1: Generic specification****FOREWORD**

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IEC 62604-1 has been prepared by IEC technical committee 49: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection. It is an International Standard.

This second edition cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

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

- the term "multiplexer" has been added to Clause 3.

NOTE In this document, SAW and BAW duplexers are treated simultaneously because both duplexers are used in the same manner especially in mobile phones and have the same requirements of characteristics, test method and so on.

The text of this International Standard is based on the following documents:

Draft	Report on voting
49/1360/CDV	49/1375/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62604 series, published under the general title *Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of assessed quality*, can be found on the IEC website.

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SURFACE ACOUSTIC WAVE (SAW) AND BULK ACOUSTIC WAVE (BAW) DUPLEXERS OF ASSESSED QUALITY –

Part 1: Generic specification

1 Scope

This part of IEC 62604 specifies the methods of test and general requirements for SAW and BAW duplexers of assessed quality using either capability approval or qualification approval procedures.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-561, *International electrotechnical vocabulary – Part 561: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection*

IEC 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-7, *Basic environmental testing procedures – Part 2-7: Tests – Test Ga and guidance: Acceleration, steady state*

IEC 60068-2-13, *Basic environmental testing procedures – Part 2-13: Tests – Test M: Low air pressure*

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

IEC 60068-2-17:1994, *Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing*

IEC 60068-2-27, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-31, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60068-2-45, *Basic environmental testing procedures – Part 2-45: Tests – Test XA and guidance: Immersion in cleaning solvents*

IEC 60068-2-52, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60068-2-58, *Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*

IEC 60068-2-64, *Environmental testing – Part 2-64: Tests – Test Fh: Vibration, broadband random and guidance*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60122-1, *Quartz crystal units of assessed quality – Part 1: Generic specification*

IEC 60617, *Graphical symbols for diagrams* (available at <http://std.iec.ch/iec60617>)

IEC 60642, *Piezoelectric ceramic resonators and resonator units for frequency control and selection – Chapter I: Standard values and conditions – Chapter II: Measuring and test conditions*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60749-28, *Semiconductor devices – Mechanical and climatic test methods – Part 28: Electrostatic discharge (ESD) sensitivity testing – Charged device model (CDM) – device level*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61340-3-1¹, *Electrostatics – Part 3-1: Methods for simulation of electrostatic effects – Human body model (HBM) electrostatic discharge test waveforms*

IEC 61340-3-2¹, *Electrostatics – Part 3-2: Methods for simulation of electrostatic effects – Machine model (MM) electrostatic discharge test waveforms*

IEC 62761, *Guidelines for the measurement method of nonlinearity for surface acoustic wave (SAW) and bulk acoustic wave (BAW) devices in radio frequency (RF)*

IEC 80000 (all parts), *Quantities and units*

ISO 80000 (all parts), *Quantities and units*

3 Terms, definitions, units and graphical symbols

3.1 Terms and definitions

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

¹ Withdrawn