ICS 31.140 SLOVENSKÁ TECHNICKÁ NORMA December 2022

STN	**Duplexory povrchovej akustickej vlny (SAW) a objemovej akustickej vlny (BAW) so stanovenou kvalitou Časť 2: Návod na použitie**	**STN EN IEC 62604-2 35 8784**

Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of assessed quality - Part 2: Guidelines for the use

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/22

Obsahuje: EN IEC 62604-2:2022, IEC 62604-2:2022

Oznámením tejto normy sa od 06.10.2025 ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62604-2

October 2022

ICS 31.140

Supersedes EN IEC 62604-2:2018

English Version

Surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers of assessed quality - Part 2: Guidelines for the use (IEC 62604-2:2022)

Duplexeurs à ondes acoustiques de surface (OAS) et à ondes acoustiques de volume (OAV) sous assurance de la qualité - Partie 2: Lignes directrices d'utilisation (IEC 62604-2:2022)

Oberflächenwellen-(OFW-) und Volumenwellen-(BAW-)Duplexer mit bewerteter Qualität - Teil 2: Leitfaden für die Anwendung (IEC 62604-2:2022)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 62604-2:2022 E

European foreword

The text of document 49/1361/CDV, future edition 3 of IEC 62604-2, 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 62604-2:2022.

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) 2023-07-06
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-10-06

This document supersedes EN IEC 62604-2:2018 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62604-2:2022 was approved by CENELEC as a European Standard without any modification.

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

IEC 60862-2:2012	NOTE	Harmonized as EN 60862-2:2012 (not modified)
IEC 61019-1:2004	NOTE	Harmonized as EN 61019-1:2005 (not modified)
IEC 61019-2:2005	NOTE	Harmonized as EN 61019-2:2005 (not modified)
IEC 62047-7:2011	NOTE	Harmonized as EN 62047-7:2011 (not modified)
IEC 62575-2:2012	NOTE	Harmonized as EN 62575-2:2012 (not modified)
IEC 62604-1	NOTE	Harmonized as EN IEC 62604-1

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60862-1	-	Surface acoustic wave (SAW) filters of assessed quality - Part 1: Generic specification	EN 60862-1	-
IEC 62575-1	-	Radio frequency (RF) bulk acoustic wave (BAW) filters of assessed quality - Part 1: Generic specification	EN 62575-1	-

IEC 62604-2

Edition 3.0 2022-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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IEC 62604-2:2022-09(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2: Guidelines for the use

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 62604-2 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 third edition cancels and replaces the second edition published in 2017. This edition constitutes a technical revision.

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

a) the term "cross-isolation" has been added to Clause 3;

b) multiplexers are described.

NOTE In this document, SAW and BAW duplexers are treated simultaneously because both duplexers are used in the same manner, especially in mobile phone systems 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
49/1361/CDV	49/1376/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/standardsdev/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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

While in 2G systems mainly dielectric duplexers have been used, the ongoing miniaturization in 3G and 4G mobile communication systems promoted the development and application of acoustic wave duplexers due to their small size, light weight and good electrical performance. While standard surface acoustic wave (SAW) duplexers have been employed for applications with moderate requirements regarding the steepness of individual filters, applications with narrow duplex gap (e.g. Bands 2, 3, 8, 25), i.e., the frequency gap between receiving and transmitting bands, require the application of temperature-compensated (TC) SAW or bulk acoustic wave (BAW) technology, because of their better temperature characteristics and resonator Q-factors.

Standard specifications, such as those of IEC, of which these guidelines form a part, and national specifications or detail specifications issued by manufacturers will define the available combinations of centre frequency, pass bandwidth and insertion attenuation for each sort of transmitting and receiving filters and the isolation level between transmitter and receiver ports, etc. These specifications are compiled to include a wide range of SAW and BAW duplexers with standardized performances. It cannot be over-emphasized that the user should, wherever possible, select his duplexers from these specifications, when available, even if it can lead to making small modifications to his circuit to enable the use of standard duplexers. This applies particularly to the selection of the nominal frequency band.

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

Part 2: Guidelines for the use

1 Scope

This part of IEC 62604 applies to duplexers which can separate receiving signals from transmitting signals and are key components for two-way radio communications, and which are generally used in mobile phone systems compliant with CDMA systems such as N-CDMA in second generation mobile telecommunication systems (2G), W-CDMA / UMTS (3G) or LTE (4G).

These guidelines draw attention to some fundamental questions about the theory of SAW and BAW duplexers and how to use them, which will be considered by the user before he places an order for SAW and BAW duplexers for a new application. Such a procedure will be the user's insurance against unsatisfactory performance. Because SAW and BAW duplexers have very similar performance for the usage, it is useful and convenient for users that both duplexers are described in one standard.

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 60862-1, *Surface acoustic wave (SAW) filters of assessed quality – Part 1: Generic specification*

IEC 62575-1, *Radio frequency (RF) bulk acoustic wave (BAW) filters of assessed quality – Part 1: Generic specification*