SVENSK STANDARD SS-EN 60862-2

Fastställd	Utgåva	Sida	Ansvarig kommitté
2012-11-14	2	1 (1+60)	SEK Elektro-tekniska rådet

Akustiska ytvågsfilter (SAW) med fastställd kvalitet – Del 2: Vägledning vid användning

Surface acoustic wave (SAW) filters of assessed quality – Part 2: Guidelines for the use

Som svensk standard gäller europastandarden EN 60862-2:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60862-2:2012.

Nationellt förord

Europastandarden EN 60862-2:2012

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60862-2, Third edition, 2012 - Surface acoustic wave (SAW) filters of assessed quality - Part 2: Guidelines for the use**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60862-2, utgåva 1, 2003, gäller ej fr o m 2015-06-11.

ICS 31.140

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60862-2

August 2012

ICS 31.140

Supersedes EN 60862-2:2002

English version

Surface acoustic wave (SAW) filters of assessed quality - Part 2: Guidelines for the use

(IEC 60862-2:2012)

Filtres à ondes acoustiques de surface (OAS) sous assurance de la qualité - Partie 2: lignes directrices d'utilisation (CEI 60862-2:2012)

Oberflächenwellenfilter (OFW-Filter) mit bewerteter Qualität - Teil 2: Leitfaden für die Anwendung (IEC 60862-2:2012)

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60862-2:2012 E

SEK Svensk Elstandard

Foreword

The text of document 49/933/CDV, future edition 3 of IEC 60862-2, 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 60862-2:2012.

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)	2013-03-11
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-06-11

This document supersedes EN 60862-2:2002.

EN 60862-2:2012 includes the following significant technical changes with respect to EN 60862-2:2002:

- Clause 3 “Terms and definitions” has been deleted to be included in the next edition of EN 60862-1;
- the tapered IDT filter and the RSPUDT filter have been added to the clause of SAW transversal filters. Also DART, DWSF and EWC have been added as variations of SPUDT;
- the balanced connection has been added to the subclause of coupled resonator filters;
- recent substrate materials have been described;
- a subclause about packaging of SAW filters has been added.

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

Endorsement notice

The text of the International Standard IEC 60862-2:2012 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 Series	NOTE	Harmonised as EN 60862 Series (not modified).
IEC 60862-1:2003	NOTE	Harmonised as EN 60862-1:2003 (not modified).
IEC 61019-2:2005	NOTE	Harmonised as EN 61019-2:2005 (not modified).

CONTENTS

INTRODUCTION

This standard has been compiled in response to a generally expressed desire on the part of both users and manufacturers for guidance on the use of SAW filters, so that the filters may be used to their best advantage. To this end, general and fundamental characteristics have been explained here.

The features of these SAW filters are their small size, light weight, adjustment-free, high stability and high reliability. SAW filters add new features and applications to the field of crystal filters and ceramic filters. At the beginning, SAW filters meant transversal filters which have two interdigital transducers (IDT). Although SAW transversal filters have a relatively higher minimum insertion attenuation, they have excellent amplitude and phase characteristics. Extensive studies have been made to reduce minimum insertion attenuation, such as resonator filter configurations, unidirectional interdigital transducers (UDT), interdigitated interdigital transducers (IIDT). Nowadays, various kinds of SAW filters with low insertion attenuation are widely used in various applications and SAW filters are available in the gigahertz range.

SURFACE ACOUSTIC WAVE (SAW) FILTERS OF ASSESSED QUALITY –

Part 2: Guidelines for the use

1 Scope

This part of IEC 60862 gives practical guidance on the use of SAW filters which are used in telecommunications, measuring equipment, radar systems and consumer products. IEC 60862-1 should be referred to for general information, standard values and test conditions.

SAW filters are now widely used in a variety of applications such as TV, satellite communications, optical fibre communications, mobile communications and so on. While these SAW filters have various specifications, many of them can be classified within a few fundamental categories.

This part of IEC 60862 includes various kinds of filter configuration, of which the operating frequency range is from approximately 10 MHz to 3 GHz and the relative bandwidth is about 0,02 % to 50 % of the centre frequency.

It is not the aim of this standard to explain theory, nor to attempt to cover all the eventualities which may arise in practical circumstances. This standard draws attention to some of the more fundamental questions, which should be considered by the user before he places an order for a SAW filter for a new application. Such a procedure will be the user's insurance against unsatisfactory performance.

Standard specifications, given in IEC 60862 series, and national specifications or detail specifications issued by manufacturers, define the available combinations of nominal frequency, pass bandwidth, ripple, shape factor, terminating impedance, etc. These specifications are compiled to include a wide range of SAW filters with standardized performances. It cannot be over-emphasized that the user should, wherever possible, select his SAW filters from these specifications, when available, even if it may lead to making small modifications to his circuit to enable standard filters to be used. This applies particularly to the selection of the nominal frequency.

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.

None.