
Piezoelektrični filtri ocenjene kakovosti – 1. del: Generična specifikacija (IEC 60368-1:2000/A1:2004)

Piezoelectric filters of assessed quality – Part 1: Generic specification (IEC 60368-1:2000/A1:2004)

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Piezoelectric filters of assessed quality
Part 1: Generic specification
(IEC 60368-1:2000/A1:2004)

Filtres piézoélectriques
sous assurance de la qualité
Partie 1: Spécification générique
(CEI 60368-1:2000/A1:2004)

Piezoelektrische Filter
mit bewerteter Qualität
Teil 1: Fachgrundspezifikation
(IEC 60368-1:2000/A1:2004)

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This amendment A1 modifies the European Standard EN 60368-1:2000; it was approved by CENELEC on 2004-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 49/682/FDIS, future amendment 1 to IEC 60368-1:2000, prepared by IEC TC 49, Piezoelectric and dielectric devices for frequency control and selection, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60368-1:2000 on 2004-09-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2005-06-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2007-09-01

Endorsement notice

The text of amendment 1:2004 to the International Standard IEC 60368-1:2000 was approved by CENELEC as an amendment to the European Standard without any modification.

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INTERNATIONAL STANDARD

IEC
60368-1

2000

AMENDMENT 1
2004-08

Amendment 1

Piezoelectric filters of assessed quality –

Part 1:
Generic specification

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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FOREWORD

This amendment has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

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

FDIS	Report on voting
49/682/FDIS	49/688/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result 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.

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Delete the following two items in the list of parts:

- Part 5: Sectional specification – Qualification approval (IEC 60368-5, under consideration)
- Part 5-1: Blank detail specification – Qualification approval (IEC 60368-5-1, under consideration)

Replace Figures 1, 2 and 3 by the following Figures 1, 2 and 3:

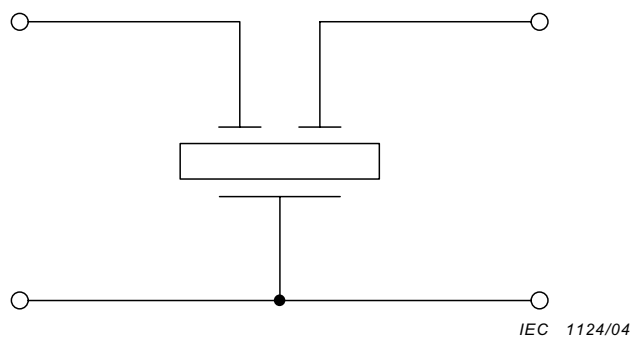


Figure 1 – Symbol of monolithic filter

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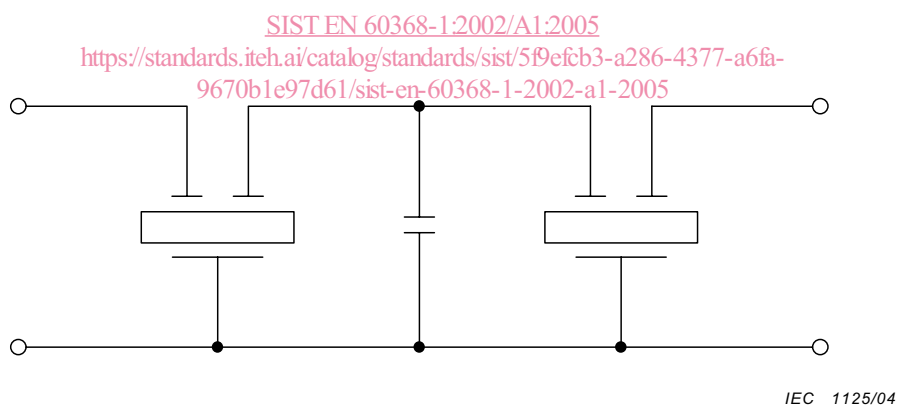
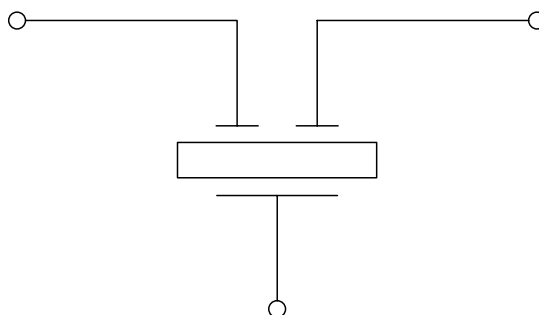


Figure 2 – Symbol of tandem monolithic filter



IEC 1126/04

Figure 3 – Symbol of monolithic multiple pole resonator

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Add, after definition 2.2.27, the following new definition:

2.2.28

group delay

the time equal to the first derivative of the phase shift, in radians, with respect to the angular frequency

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Renumber existing definitions 2.2.28 to 2.2.40 as 2.2.29 to 2.2.41.

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Add, after definition 2.2.40 (old), the following new definitions and renumber the existing definitions 2.2.41 to 2.2.45 as 2.2.44 to 2.2.48:

2.2.41 intermodulation product(s)

undesired signals resulting from the combination of independent input signals within the filter. For two signals of frequencies f_1 and f_2 , the intermodulation product(s) have frequencies of the form

$$(Mf_1 \pm Nf_2) \text{ or } (Mf_2 \pm Nf_1)$$

where $M, N = 1, 2, 3, \dots$

Intermodulation product(s) of signals f_1, f_2 outside the pass-band are called out-of-band intermodulation, intermodulation product(s) of signals f_1, f_2 inside the pass-band are called in-band intermodulation.

2.2.42 intermodulation ratio

the difference, expressed in decibels, between the signal output of reference in the pass-band and the level of the intermodulation product(s)

2.2.43 intercept point

the (virtual) output level (in dBm), where the signal output of reference in the pass-band and the intermodulation product(s) would become the same, on the assumption that the level of the input signals increase

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3.6.3 Qualification approval

Replace the text as follows:

Qualification approval is appropriate for components manufactured to a standard design and established production process and conforming to a published detail specification.

The programme of tests defined in the detail specification for the appropriate assessment and severity level applies directly to the piezoelectric filter to be qualified, as prescribed in 3.8.

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4.5.5 Envelope delay time

Replace the title and text of this subclause by the following:

4.5.5 Group delay

The filter shall be connected to the test circuit as shown in Figure 8 and with the specified terminating impedance as given in the detail specification except that the measuring equipment shall set the group delay mode to measure the group delay directly.

The group delay may be determined by calculation by measuring the phase shift, using the procedure given in 4.5.3, at two different frequencies expressed as:

$$\omega \pm \Delta\omega / 2$$

where $\omega = 2\pi f$

The group delay can then be calculated from the following formula:

$$t_g = \Delta\Phi / \Delta\omega$$

where

t_g is group delay;

$\Delta\Phi$ is the difference between the two phase shift measurements;

$\Delta\omega$ is the frequency difference in radians per second.

The group delay shall be within the limits as stated in the detail specification.