

Quartz crystal units of assessed quality - Part 3: Standard outlines and lead connections (IEC 60122-3:2001)

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EUROPEAN STANDARD

EN 60122-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2001

ICS 31.140

English version

Quartz crystal units of assessed quality
Part 3: Standard outlines and lead connections
(IEC 60122-3:2001)

Résonateurs à quartz sous assurance de la qualité
Partie 3: Encombrements normalisés et connexions des sorties
(CEI 60122-3:2001)

Schwingquarze mit bewerteter Qualität
Teil 3: Norm-Gehäusemaße und Anschlussdrähte
(IEC 60122-3:2001)

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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 49/493/FDIS, future edition 3 of IEC 60122-3, 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 EN 60122-3 on 2001-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-01-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2004-10-01

Endorsement notice

The text of the International Standard IEC 60122-3:2001 was approved by CENELEC as a European Standard without any modification.

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NORME
INTERNATIONALE
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STANDARD

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60122-3

Troisième édition
Third edition
2001-07

Résonateurs à quartz sous assurance
de la qualité –

Partie 3:
Encombrements normalisés et connexions
des sorties

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Quartz crystal units of assessed quality –

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Part 3:

Standard outlines and lead connections

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

QUARTZ CRYSTAL UNITS OF ASSESSED QUALITY –

Part 3: Standard outlines and lead connections

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60122-3 has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

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

FDIS	Report on voting
49/493/FDIS	49/508/RVD

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

This third edition cancels and replaces the second edition published in 1977, amendment 1 (1984), amendment 2 (1991), amendment 3 (1992) and amendment 4 (1993). This third edition constitutes a technical revision.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

IEC 60122 will consist, after revision, of the following parts under the general title: Quartz crystal units of assessed quality:

- Part 1: Generic specification (IEC 61178-1 at present)
- Part 2: Guide to the use of quartz crystal units for frequency control and selection
- Part 3: Standard outlines and lead connections

- Part 4: Sectional specification – Capability approval (IEC 61178-2 at present)
- Part 4-1: Sectional specification – Capability approval – Section 1: Blank detail specification (IEC 61178-2-1 at present)
- Part 5: Sectional specification – Qualification approval (IEC 61178-3 at present)
- Part 5-1: Sectional specification – Qualification approval – Section 1: Blank detail specification (IEC 61178-3-1 at present).

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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

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INTRODUCTION

The second edition of IEC 60122-3 (1977) and its amendments 1 to 4 contained 51 enclosure types showing the dimensional and geometrical characteristics of these enclosures. Since its release, due to progress in technology, many of the enclosures given in the standard have become obsolete.

Bearing this in mind, technical committee 49 has issued a questionnaire on all outlines contained in IEC 60122-3. Based on the replies received, technical committee 49 made a decision at the meeting held in Rotterdam in June 1996 to retain only enclosures which remained in “wide usage”. These enclosures are specified in the present standard.

The following 24 enclosure types have been deleted from the second edition of IEC 60122-3 (1977) and its amendments 1 to 4.

BG,	BG/1,	BH,	BH/1,	BH/2,	BJ,	BJ/1,
BJ/2,	CL,	DB,	DD,	DE,	DF,	DG,
DH,	EF,	EG,	CU 03 A.,	CU 03 B.,	CU 03 C.,	
CU 03 .1,	CU 03 .2,	CU 04 .2,	CU 05 D.			

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QUARTZ CRYSTAL UNITS OF ASSESSED QUALITY –

Part 3: Standard outlines and lead connections

1 Scope

This part of IEC 60122 specifies the outline dimensions and lead connections of quartz crystal units with lead enclosures.

2 Guidance for the standardization of outline drawings for frequency control and selection devices

In order to achieve a uniform presentation of all outline drawings for frequency control and selection devices, the following shall be considered.

2.1 An outline drawing shall show all dimensional and geometrical characteristics of an enclosure necessary to ensure mechanical interchangeability with all other enclosures of the same outline. Enlarged detail view may be used, if necessary.

2.2 The outline drawing shall consist of three parts:

2.2.1 A drawing with dimensional symbols (capital letter) as shown in figure 1 with applicable notes, if necessary.

2.2.2 A tabular listing relating the drawing symbols to the actual dimensions. Where possible, this shall be shown on the same page as the drawing.

2.2.3 An “actual-size” sketch (scale 1:1).

2.3 The outline drawing shall be executed in the third-angle projection.

2.4 The function and identification of the lead connections (termination) shall be determined by agreement between the supplier and user. They shall not be defined on the outline drawing.

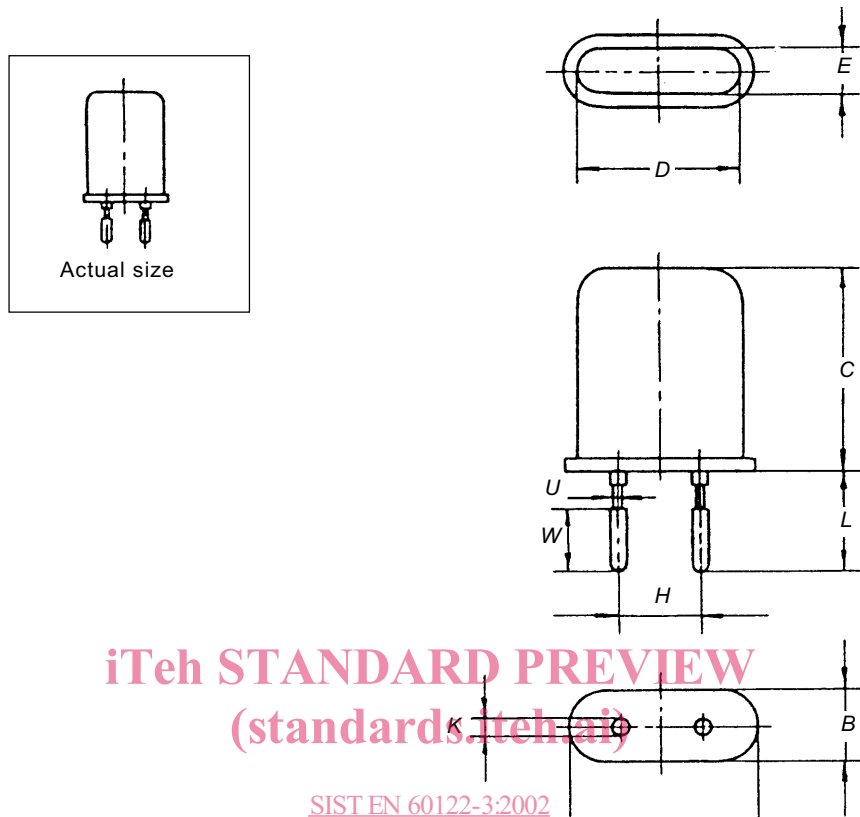
2.5 Descriptive notes may be used at the bottom of, or adjacent to, the drawing with proper reference to the body of the drawing.

2.6 All dimensions shall be in millimetres.

2.7 Outline dimensions *A*, *B*, *C*, *D* and *E* shall be listed with maximum values only.

2.8 Lead (termination) cross-sectional dimensions shall be listed with minimum and maximum values. If applicable, nominal dimensions may be added.

2.9 The spacing of the leads (termination) – symbol *H* – shall be listed with minimum, nominal and maximum dimensions.



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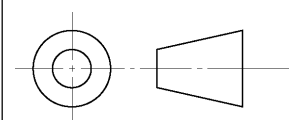
IEC 842/01

Ref.	Dimensions (mm)			Notes Types
	Min.	Nom.	Max.	
A	-	-	x	
B	-	-	x	
C	-	-	x	
D	-	-	x	
E	-	-	x	
H	x	x	x	
K	x	-	x	1
L	x	-	x	
U	x	-	-	2
W	x	-	-	2

NOTE 1
 NOTE 2

Figure 1 – Guidance for outline drawings

Scale
2:1



Sheet ...

Date:

2.10 Leads (terminations) for soldering application shall be specified with the minimum length dimensions (symbol L) only.

Leads (terminations) for plug-in application shall be specified with minimum and maximum length dimensions.

2.11 If leads (terminations) are provided with an undercut, dimensions U and W shall be listed with minimum dimensions only.

3 Dimensions of quartz crystal unit enclosures

The dimensions in this standard apply to the completed quartz crystal units.

Only those dimensions which meet the requirements of the guidance for standardization of outline drawings are given (see clause 2).

4 Designation of quartz crystal unit enclosures

Table 1 – Designation of quartz crystal unit enclosures

No.	Type	Sheet No.	Description
1	AA AB	Sheet 1	Metal, solder-sealed, two-lead crystal unit outline
2	BC BC/1	Sheet 2	Metal, solder-sealed, two-lead crystal unit outline
3	BF BF/1	Sheet 3	Metal, solder-sealed, two-lead crystal unit outline
4	CK, CM CN, CP	Sheet 4	Metal, welded, three-lead crystal unit outline
5	CX	Sheet 5	Metal, solder-sealed, two-lead crystal unit outline
6	CY, CY/1 CZ	Sheet 6	Glass, two-lead crystal unit outline
7	DA DC	Sheet 7	Glass, two-lead crystal unit outline
8	DK	Sheet 8	Metal, welded, three-lead crystal unit outline
9	DL	Sheet 9	Metal, welded, five-lead crystal unit outline
10	DN	Sheet 10	Metal, welded, two-lead crystal unit outline
11	DP EH	Sheet 11	Metal, welded, two-lead crystal unit outline
12	DQ	Sheet 12	Metal, welded, two-lead crystal unit outline
13	DR	Sheet 13	Metal, welded, four-lead crystal unit outline
14	DZ	Sheet 14	Metal, welded, two-lead crystal unit outline
15	DV	Sheet 15	Metal, solder-diffusion-sealed, two-lead cylindrical crystal unit outline