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INTERNATIONAL STANDARD

Piezoelectric devices – Preparation of outline drawings of surface-mounted devices (SMD) for frequency control and selection – General rules

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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PIEZOELECTRIC DEVICES – PREPARATION OF OUTLINE DRAWINGS OF SURFACE-MOUNTED DEVICES (SMD) FOR FREQUENCY CONTROL AND SELECTION – GENERAL RULES

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International Standard IEC 61240 has been prepared by IEC technical committee 49: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection.

This third edition cancels and replaces the second edition published in 2012. It constitutes a technical revision.

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

- outline drawings have been changed from three views (top, front and bottom) to that based on ISO layout in the third-angle projection, in which the view from the right has been added to the top, front and bottom views;
- reference line and geometrical dimensions of the package for enclosures have been changed for practical use;
- information on miniaturized leadless ceramic enclosures of piezoelectric devices (SMD) for frequency control and selection has been included in an annex.

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

CDV	Report on voting
49/1172/CDV	49/1188/RVC

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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- withdrawn,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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

The enclosures of quartz crystal resonators and oscillators are unified in this third edition of IEC 61240.

Regarding the current situation of many quartz crystal device suppliers, many of them use their own enclosure layouts in their catalogues. For the convenience of consumers, general rules of enclosure layout and definition of size need to be unified.

The reasons prompting the revision of IEC 61240:2012 are as follows:

a) The height of packages should not be included in a drawing. Only the total height of enclosures should be expressed.
b) In small enclosure types, the size tolerance in smaller enclosures will not meet the conditions defined in Table A.3 (Annex A).

In newly proposed general rules of outline drawings, only the total height of enclosures should be expressed and the size tolerance in smaller enclosures is revised.

PIEZOELECTRIC DEVICES – PREPARATION OF OUTLINE DRAWINGS OF SURFACE-MOUNTED DEVICES (SMD) FOR FREQUENCY CONTROL AND SELECTION – GENERAL RULES

1 Scope

This International Standard sets out general rules for drawing all dimensional and geometrical characteristics of a surface-mounted piezoelectric device package (referred to in this document as SMD) in order to ensure mechanical inter-changeability of all outline drawings of the SMDs for frequency control and selection.

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 60191-6, *Mechanical standardization of semiconductor devices – Part 6: General rules for the preparation of outline drawings of surface mounted semiconductor device packages*