

TECHNICAL SPECIFICATION

IEC TS 61994-3

First edition
2004-03

Piezoelectric and dielectric devices for frequency control and selection – Glossary –

Part 3: Piezoelectric and dielectric oscillators

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PIEZOELECTRIC AND DIELECTRIC DEVICES
FOR FREQUENCY CONTROL AND SELECTION –
GLOSSARY –****Part 3: Piezoelectric and dielectric oscillators**

FOREWORD

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- The subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

IEC 61994-3, which is a technical specification, has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

The text of this technical specification is based on the following documents

Enquiry draft	Report on voting
49/573/DTS	49/635/RVC

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

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

IEC 61994 consists of the following parts under the general title *Piezoelectric and dielectric devices for frequency control and selection – Glossary*:

- Part 1: Piezoelectric and dielectric resonators;
- Part 2: Piezoelectric and dielectric filters;
- Part 3: Piezoelectric and dielectric oscillators;
- Part 4-1: Piezoelectric and dielectric materials – Synthetic quartz crystal;
- Part 4-2: Piezoelectric and dielectric materials – Piezoelectric ceramics;
- Part 4-4: Piezoelectric and dielectric materials – Materials for SAW devices¹.

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

- transformed into International Standard,
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

¹ Under consideration.

PIEZOELECTRIC AND DIELECTRIC DEVICES FOR FREQUENCY CONTROL AND SELECTION – GLOSSARY –

Part 3: Piezoelectric and dielectric oscillators

1 Scope

This part of IEC 61994 specifies the terms and definitions for piezoelectric oscillators representing the state-of-the-art, which are intended for use in the standards and documents of IEC TC 49.

2 Normative references

The following referenced documents are indispensable for the application 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 60050(561):1991, *International Electrotechnical Vocabulary (IEV) – Chapter 561: Piezoelectric devices for frequency control and selection*

IEC 60679-1:1997, *Quartz crystal controlled oscillators of assessed quality – Part 1: Generic specification*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

adjustment frequency

the frequency to which an oscillator must be adjusted, under a particular combination of operating conditions, in order to meet the frequency tolerance specification over the specified range of operating conditions, i.e. adjustment frequency = nominal frequency + frequency offset

[IEV 561-04-09]

3.2

Allan variance of fractional frequency fluctuation

an unbiased estimate of the preferred definition in the time domain of the short-term stability characteristic of the oscillator output frequency

[IEC 60679-1, definition 2.2.23]

3.3

amplitude distortion, amplitude modulation distortion, amplitude/frequency distortion

the non-linear distortion in which the relative magnitudes of the spectral components of the modulating signal waveform are modified

[IEC 60679-1, definition 2.2.28]