

TECHNICAL SPECIFICATION

IEC TS 61994-4-4

First edition
2005-05

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

**Part 4-4:
Materials – Materials for Surface
Acoustic Wave (SAW) devices**

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IEC TS 61994-4-4:2005

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

Part 4-4: Materials – Materials for Surface Acoustic Wave (SAW) devices

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 61994-4-4, 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
49/691/DTS	49/700/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the 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 materials – Synthetic quartz crystal
- Part 4-2: Piezoelectric and dielectric materials – Piezoelectric ceramics
- Part 4-4: Materials – Materials for Surface Acoustic Wave (SAW) devices

The committee has decided that the contents of this 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

- transformed into an International standard,
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- replaced by a revised edition, or
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A bilingual version of this publication may be issued at a later date.

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

Part 4-4: Materials – Materials for Surface Acoustic Wave (SAW) devices

1 Scope

This part of IEC 61994 specifies the terms and definitions for single crystal wafers applied for surface acoustic wave (SAW) devices 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*
Amendment 1 (1995)
Amendment 2 (1997)

IEC 60758:2004, *Synthetic quartz crystal – Specifications and guide to the use*

IEC 61994-4-1:2001, *Piezoelectric and dielectric devices for frequency control and selection – Glossary – Part 4-1: Piezoelectric materials – Synthetic quartz crystal*

IEC 62276:2005, *Single crystal wafers for surface acoustic wave (SAW) device applications – Specifications and measuring methods*

ISO 4287, *Geometrical Product Specifications (GPS) – Surface texture: Profile method – Terms, definitions and surface texture parameters*

3 Terms and definitions

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

3.1 Single crystals for SAW wafer

3.1.1

as-grown synthetic quartz crystal

single-crystal quartz grown hydrothermally. “As-grown” refers to the state of processing and indicates a state prior to mechanical fabrication

[IEC 61994-4-1, 3.4]