

# IEC/PAS 62277

Edition 1.0  
2001-08

**Test-fixture of surface mounting  
quartz crystal units**

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**PUBLICLY AVAILABLE SPECIFICATION**



INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION



Reference number  
IEC/PAS 62277

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電子情報通信学会規格  
The Institute of Electronics, Information and Communication  
Engineers Standard

Test-fixture of Surface Mounting Quartz  
Crystal Units

表面実装水晶振動子の測定用具基準

IEICE/Std-0003

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2001年2月  
February 2001

(社)電子情報通信学会  
The Institute of Electronics, Information and  
Communication Engineers

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## TEST-FIXTURE OF SURFACE MOUNTING QUARTZ CRYSTAL UNITS

### FOREWORD

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public and established in an organization operating under given procedures.

IEC-PAS 62277 was submitted by the Japanese Institute of Electronics, Information and Communication Engineers and has been processed by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document.

Draft PAS	Report on voting
49/505/PAS	49/514/RVD

Following publication of this PAS, the technical committee or subcommittee concerned will investigate the possibility of transforming the PAS into an International Standard.

- 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.
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- 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 PAS may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

## FOREWORD

The role of the communication systems is becoming greater and greater in the recent information age. Mobile communication systems are bursting globally and small quartz crystal resonators with high frequency stability are playing very important roles as key components in such communication systems. This comes from the fact that the crystal resonators can reduce the size of oscillators and filters drastically. Recently, the leadless crystal resonators are widely used for further miniaturization.

International Electrotechnical Commission located in Geneva is actively working for the international standardization in the electrotechnical field. Among many Technical Committees (TCs) in IEC, TC 49 is working on the Piezoelectric and Dielectric Devices for Frequency Control and Selection. TC 49 has ten Working Groups (WGs), and the Working Group 6 (WG 6) is working for the preparation and deliberation of the IEC standard on the measurement method for crystal resonators.

This document is a standard for the test-fixture of surface mounting quartz crystal units and should be issued as IEC 60444-4 amendment 1: Standard for the Test-fixture with Load-capacitance of Surface Mounting Quartz Crystal Units, and IEC 60444-4: Standard for the Test-fixture of Surface Mounting Quartz Crystal Units, as amendments of IEC Publication 60444-4: Part 4: Method for the measurement of the load resonance frequency  $f_L$ , load resonance resistance,  $R_L$ , and the calculation of other derived values of quartz crystal units, up to 30 MHz. The Japanese National Committee for IEC/TC 49 proposed new work item proposals for these documents. These proposals, however, were not approved, because only two countries; Germany and Japan, nominated experts to participate in these projects. According to the IEC rule for the New Work Items Proposal, it is required that four P-member countries should nominate the name of experts and these proposals failed. But, the Japanese National Committee for IEC/TC 49 decided to continue the work to draft these standards, even though they were not approved, because these standards are very fundamental, useful and mandatory documents in the field of crystal resonators, and asked the Measurement Method Working Group of the Quartz Industry Association of Japan. The Working Group has completed a document "Standard for the Test-fixture of Surface Mounting Quartz Crystal Units" merging two documents into one. Now, this document is published as a standard of the Institute of Electronics, Information and Communication Engineers.

This standard is a product of collected wisdom in the field of advanced technology in Japan and it is open to the public as a standard of the Institute of Electronics, Information and Communication Engineers. And it is expected that this standard will contribute to the development of technology in this fast growing field. This standard will be submitted to the IEC in the track of IEC PAS (Publicly Available Specification) for international circulation.