
Measurement of quartz crystal unit parameters by zero phase technique in a pi-network - Part 2: Phase offset method for measurement of motional capacitance of quartz crystal units (IEC 60444-2:1980)

Measurement of quartz crystal unit parameters by zero phase technique in a pi-network - Part 2: Phase offset method for measurement of motional capacitance of quartz crystal units

Messung von Schwingquarz-Parametern nach dem Null-Phasenverfahren in einem Pi-Netzwerk -- Teil 2: Messung der dynamischen Kapazität von Schwingquarzen nach dem Phasenoffsetverfahren

Mesure des paramètres des quartz piézoélectriques par la technique de phase nulle dans le circuit en pi -- Partie 2: Méthode de décalage de phase pour la mesure de la capacité dynamique des quartz

Ta slovenski standard je istoveten z: EN 60444-2:1997

ICS:

31.140

Piezoelektrični in
dielektrični napravePiezoelectric and dielectric
devices**SIST EN 60444-2:2002****en**

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EN 60444-2

April 1997

ICS 31.140

Descriptors: Quartz crystal units, measurement of parameters, zero phase technique in a pi-network, phase offset method, principle and circuit, motional capacitance

English version

**Measurement of quartz crystal unit parameters by
zero phase technique in a pi-network
Part 2: Phase offset method for measurement of
motional capacitance of quartz crystal units
(IEC 444-2:1980)**

Mesure des paramètres des quartz
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Partie 2: Méthode de décalage de
phase pour la mesure de la capacité
dynamique des quartz
(CEI 444-2:1980)

Messung von Schwingquarz-Parametern
nach dem Null-Phasenverfahren in
einem Pi-Netzwerk
Teil 2: Messung der dynamischen
Kapazität von Schwingquarzen nach
dem Phasenoffsetverfahren
(IEC 444-2:1980)

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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 the International Standard IEC 444-2:1980, prepared by IEC TC 49, Piezoelectric and dielectric devices for frequency control and selection, was submitted to the formal vote and was approved by CENELEC as EN 60444-2 on 1997-03-11 without any modification.

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) 1997-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1997-12-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annex A is informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 444-2:1980 was approved by CENELEC as a European Standard without any modification.

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Annex ZA (normative)**Normative references to international publications
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 302	1969	Standard definitions and methods of measurement for piezoelectric vibrators operating over the frequency range up to 30 MHz	-	-

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**NORME
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**CEI
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60444-2

Première édition
First edition
1980-01

**Mesure des paramètres des quartz
piézoélectriques par la technique
de phase nulle dans le circuit en π**

Partie 2:

**Méthode de décalage de phase pour la mesure
de la capacité dynamique des quartz**

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**Measurement of quartz crystal unit parameters
by zero phase technique in a π -network**

Part 2:

**Phase offset method for measurement of
motional capacitance of quartz crystal units**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEASUREMENT OF QUARTZ CRYSTAL UNIT PARAMETERS BY ZERO PHASE TECHNIQUE IN A π -NETWORK

Part 2: Phase offset method for measurement of motional capacitance of quartz crystal units

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
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PREFACE

This standard has been prepared by IEC Technical Committee No. 49: Piezoelectric Devices for Frequency Control and Selection.

It forms Part 2 of the series of IEC publications on phase measuring methods.
SIST EN 60444-2:2002
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Publication 444 contains the basic method for the measurement of resonance frequency and resonance resistance of quartz crystal units by zero phase technique in a π -network.

Publication 444, when revised, will be issued as a second edition of IEC Publication 444-1.

A draft of Part 2 was discussed at the meeting held in Baden-Baden in March 1977. As a result of this meeting, the draft, Document 49(Central Office)111, was submitted to the National Committees for approval under the Six Months' Rule in June 1978.

The National Committees of the following countries voted explicitly in favour of publication:

Belgium	South Africa (Republic of)
Canada	Spain
Egypt	Sweden
France	Switzerland
Germany	Turkey
Japan	United Kingdom
Poland	United States of America

Other IEC publication quoted in this standard:

Publication No. 302: Standard Definitions and Methods of Measurement for Piezoelectric Vibrators Operating over the Frequency Range up to 30 MHz.