

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

**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 European Standard EN 60444-4:1997 has the status of a
British Standard

ICS 31.140

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Electronic Components Standards Policy Committee (ECL/-) to Technical Committee ECL/11, upon which the following bodies were represented:

- EEA (the Association of Electronics, Telecommunications and Business Equipment Industries)
- Electronic Components Industry Federation
- Institute of Physics
- Institution of Electrical Engineers
- Ministry of Defence
- National Supervising Inspectorate

This British Standard, having been prepared under the direction of the Electronic Components Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 August 1993

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National foreword

This Part of BS EN 60444 has been prepared by Technical Committee EPL/49 (formerly ECL/11), and is the English language version of EN 60444-4:1997, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 444-4:1988, *Measurement of quartz crystal unit parameters by zero phase technique in a π -network — 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*, published by the International Electrotechnical Commission (IEC).

Cross references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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English version

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

(IEC 444-4:1988)

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

Partie 4: Méthode pour la mesure de la
fréquence de résonance à la charge f_L et de
la résistance de résonance à la charge R_L et
pour le calcul des autres valeurs dérivées des
quartz piézoélectriques, jusqu' à 30 MHz
(CEI 444-4:1988)

Messung von Schwingquarz-Parametern nach
dem Null-Phasenverfahren in einem
Pi-Netzwerk

Teil 4: Verfahren zur Messung der
Lastresonanzfrequenz f_L , des
Lastresonanzwiderstandes R_L und Berechnung
anderer hergeleiteter Werte von
Schwingquarzen bis 30 MHz
(IEC 444-4:1988)

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Comité Européen de Normalisation Electrotechnique
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Foreword

The text of the International Standard IEC 444-4:1988, 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 60444-4 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 Appendix A is informative. Annex ZA has been added by CENELEC.