

This is a preview of "IEC 60062 Ed. 5.0 en...". Click here to purchase the full version from the ANSI store.

INTERNATIONAL STANDARD

IEC 60062

Fifth edition
2004-11

Marking codes for resistors and capacitors

© IEC 2004 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

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



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

P

For price, see current catalogue

CONTENTS

FOREWORD	3
1 Scope	5
2 Normative references	5
3 Colour code for fixed resistors	5
4 Letter and digit code for resistance and capacitance values	7
5 Letter code for tolerance and temperature coefficient on resistance and capacitance values	11
6 Date code system for capacitors and resistors	12
7 Code letter (index) for the dielectric material of plastic film and paper capacitors	15
Table 1 – Values corresponding to colours	6
Table 2a – Examples of code marking for resistance values – max. 3 significant digits	8
Table 2b – Examples of code marking for resistance values – 4 significant digits	8
Table 3 – Examples of code marking in the three-character code system	9
Table 4 – Examples of code marking in the four-character code system	9
Table 5a – Examples of code marking for capacitance values – max. 3 significant digits	10
Table 5b – Examples of code marking for capacitance values – 4 significant digits	10
Table 6 – Letter code for symmetrical tolerances (per cent)	11
Table 7 – Letter code for asymmetrical tolerances (per cent)	11
Table 8 – Letter code for symmetrical tolerances (fixed values)	11
Table 9 – Letter code for temperature coefficient of resistance (TCR)	12
Table 10a – ‘Year’ in the two-character code (20-year cycle)	13
Table 10b – ‘Month’ in the two-character code (20-year cycle)	13
Table 11a – ‘Year’ in the two-character code (10-year cycle)	13
Table 11b – ‘Month’ in the two-character code (10-year cycle)	14
Table 12 – One-character code – 4-year cycle	15
Table 13 – Letter corresponding to dielectric of plastic film material	15

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARKING CODES FOR RESISTORS AND CAPACITORS

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60062 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This fifth edition cancels and replaces the fourth edition published in 1992 and its amendment 1 (1995) and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) completion of the existing code systems for
 - resistors with a three-character code system and a four-character code system;
 - temperature coefficient of resistance with a letter code system;
 - data code system for capacitors and resistors with the 10-year cycle code (two-character code), the 20-year cycle code (four-digit code), the 10-year cycle code (four-digit code), and a one-character code – four-year cycle.
- b) extension with a code letter system for the dielectric material of plastic film and paper capacitors.

This is a preview of "IEC 60062 Ed. 5.0 en...". Click here to purchase the full version from the ANSI store.

The text of this standard is based on the following documents:

FDIS	Report on voting
40/1465/FDIS	40/1486/RVD

Full information on the voting for the approval of this standard 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.

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

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

MARKING CODES FOR RESISTORS AND CAPACITORS

1 Scope

This International Standard specifies marking codes for resistors and capacitors and indexes for the dielectric material and the electrodes of plastic film and paper capacitors.

The code specified in Clause 3 gives a colour coding for fixed resistors.

It is intended for use with the values of the E6 to E192 series as specified in IEC 60063.

The code specified in Clause 4 gives a system for marking resistance and capacitance values by means of letters and digits.

The code specified in Clause 5 gives a system for marking the tolerance on resistance and capacitance values by means of a letter.

The code specified in Clause 6 gives systems for marking the date codes on capacitors and resistors by means of letters and digits.

The code (index) specified in Clause 7 gives a coding system for the dielectric material.

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 60063:1963, *Preferred number series of resistors and capacitors*

ISO 1043-1:2001, *Plastics – Symbols and abbreviated terms – Part 1: Basic polymers and their special characteristics*

ISO 8601:2000, *Data elements and interchange formats – Information interchange – Representation of dates and times*

3 Colour code for fixed resistors

3.1 The colour code for indicating resistance values to two and three significant figures, tolerances and, if needed, the indication of the temperature coefficient of fixed resistors shall be as given in 3.2, 3.3 and 3.4.

3.2 The first band shall be the one nearest to the end of the resistor and the bands shall be so placed and spaced that there can be no confusion in reading the coding.

3.3 Any additional coding shall be so applied as not to confuse the coding for value and tolerance.