

**Harmonized system of quality
assessment for electronic components**

Sectional specification: Variable capacitors (Qualification approval)

The European Standard EN 134100:1995 has the status of a
British Standard

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Committees responsible for this British Standard

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- Federation of the Electronics Industry
- Ministry of Defence
- National Supervising Inspectorate (BSI-PC)
- Society of British Aerospace Companies Ltd.

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National foreword

This British Standard has been prepared by Subcommittee EPL/40/1 and is the English language version of EN 134100:1995 *Sectional specification: Variable capacitors (Qualification approval)*, published by the Electronic Components Committee (CECC) of the European Committee for Electrotechnical Standardization (CENELEC).

Cross-references

Publication referred to	Corresponding British Standard
EN 134000:1994	BS EN 134000:1995 <i>Harmonized system of quality assessment for electronic components. Generic specification: Variable capacitors (Qualification approval and capability approval)</i>
EN 60062:1993 (IEC 62:1992) ^a	BS EN 60062:1994 <i>Marking codes for resistors and capacitors</i>
IEC 68	BS EN 60068 <i>Environmental testing</i>
IEC 68-1:1988	BS EN 60068-1:1995 <i>General and guidance</i>
IEC 418	BS 5786 <i>Variable capacitors</i> Part 1:1979 <i>Methods of test</i>

^a IEC 62:1974 referred to in the text has been superseded by IEC 62:1992.

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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 20, 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.

Descriptors: Quality, electronic components, capacitors

English version

**Sectional Specification:
Variable capacitors
(Qualification approval)**

Spécification intermédiaire:
Condensateurs variables
(Homologation)

Rahmenspezifikation:
Einstellbare Kondensatoren
(Bauartanerkennung)

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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

This European Standard was prepared by Working Group CLC/TC CECC/WG 3 “Capacitors”.

It is based wherever possible on the Publications of the International Electrotechnical Commission, and in particular on IEC 418, Variable capacitors.

The text of the draft based on document CECC(Secretariat)3096 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3377, and the editorially revised document CECC WG3(Hayward)3E, it was approved as EN 134100 on 1993-07-29.

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) 1996-05-31
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-11-30

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1 General

1.1 Scope

This specification applies to variable capacitors for use in electronic equipment. It covers capacitors for variable tuning, trimming and preset for general purpose applications. Capacitors for special purpose applications may require additional assessments.

The object of this specification is to prescribe preferred ratings and characteristics and to select from the generic specification EN 134000 the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor.

1.2 Related documents

ISO 3:1973	<i>Preferred numbers — series of preferred numbers</i>
IEC 62:1974	<i>Marking codes for resistors and capacitors</i>
IEC 63:1963	<i>Preferred number series for resistors and capacitors</i>
Amendment 1 (1967)	
Amendment 2 (1977)	
IEC 68	<i>Basic environmental testing procedures</i>
IEC 410:1973	<i>Sampling plans and procedures for inspection by attributes</i>
EN 134000	<i>Generic specification: Variable Capacitors</i>

NOTE The above references apply to the current editions, except for IEC 68 for which the referenced edition shall be used.

1.3 Information to be given in a detail specification

Detail specifications shall be derived from the relevant blank detail specification.

Detail specifications shall not specify requirements inferior to those of the generic, sectional or blank detail specification. When more severe requirements are included, they shall be listed in **1.9** of the detail specification and indicated in the test schedules, for example by an asterisk.

The following information shall be given in each detail specification and the values quoted shall preferably be selected from those given in the appropriate clause of this sectional specification.

1.3.1 Outline drawing and dimensions

There shall be an illustration of the capacitor as an aid to easy recognition and for comparison of the capacitor with others. Dimensions and their associated tolerances, which affect interchangeability and mounting, shall be given in the detail specification. All dimensions shall be stated in mm.

NOTE The information may be presented in tabular form.

Normally the numerical values shall be given for the length, the width and the height of the body and the wire spacing, or for cylindrical types, the body diameter and the length of the terminations. When necessary, for example when a number of items (capacitance values/voltage ranges), are covered by a detail specification, the dimensions and their associated tolerances should be placed in a table below the drawing.

When the configuration is other than described above, the detail specification shall state such dimensional information as will adequately describe the capacitor. When the capacitor is not designed for use on printed boards, this shall be clearly stated in the detail specification.

1.3.2 Mounting

The detail specification shall specify the method of mounting to be applied for the application of the vibration and the bump or shock tests. The design of the capacitor may be such that special mounting features are required in its use. In this case, the detail specification shall describe the mounting fixtures and they shall be used in the application of the vibration and bump or shock tests.

NOTE If recommendations for mounting for “normal” use are made, they shall be included in the detail specification under “1.8 Additional information (not for inspection purposes)”. If they are included, a warning can be given that the full vibration, bump and shock performance may not be available if mounting methods other than those specified in **1.1** of the detail specification are used.

1.3.3 Ratings and characteristics

The ratings and characteristics shall be in accordance with the relevant clauses of this specification, together with the following:

- 1) Rated capacitance range

See **2.2.1**.

NOTE When products approved to the detail specification have different ranges, the following statement should be added: "The range of capacitance values available in each voltage range is given in the Register of Approvals".

- 2) Particular characteristics

Additional characteristics may be listed when they are considered necessary adequately to specify the component for design and application purposes.

- 3) Soldering

The detail specification shall prescribe the test methods, severities and requirements applicable for the solderability test and the resistance to soldering heat test.

1.3.4 Marking

The detail specification shall specify the content of the marking on the capacitor and on the package. Deviations from **1.5** of this sectional specification shall be specifically stated.

1.4 Terminology

For terms and definitions see **2.4** of EN 134000.

1.5 Marking

See **2.5** of EN 134000 with the following details:

1.5.1 The information given in the marking is normally selected from the following list; the relative importance of each item is indicated by its position in the list:

- 1) Range of capacitance
- 2) Rated voltage
- 3) Category voltage and category temperatures
- 4) Tolerance on capacitance range
- 5) Year and month (or week) of manufacture
- 6) Manufacturer's name and trade mark
- 7) Climatic category
- 8) Manufacturer's type designation
- 9) Reference to the detail specification
- 10) CECC mark.

1.5.2 The capacitor shall be clearly marked with 1) to 5) above and with as many possible of the remaining items as is considered necessary. Any duplication of information in the marking on the capacitor should be avoided.

1.5.3 The package containing the capacitor(s) shall be clearly marked with all the information listed in **1.5.1**.

1.5.4 Any additional marking shall be so applied that no confusion can arise.