

# Harmonized system of quality assessment for electronic components — Sectional specification: fixed metallized polycarbonate film dielectric capacitors for direct current

UDC 006.83:621.38:621.319.4.024:(083.75)

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# 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/4 upon which the following bodies were represented:

- British Telecommunications plc
- Electronic Components Industry Federation
- Electronic Engineering Association
- Ministry of Defence
- National Supervising Inspectorate
- Society of British Aerospace Companies Ltd.
- Telecommunication Engineering and Manufacturing Association

This British Standard, having been prepared under the direction of the Electronic Components Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 30 June 1989

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First published February 1978  
First revision June 1989

The following BSI references relate to the work on this standard:  
Committee reference ECL/4  
Draft announced *BSI News* March 1988

ISBN 0 580 169456

## Amendments issued since publication

| Amd. No. | Date of issue | Comments |
|----------|---------------|----------|
|          |               |          |
|          |               |          |
|          |               |          |
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# National foreword

This revision of this British Standard has been prepared under the direction of the Electronic Components Standards Policy Committee. It is identical with CENELEC Electronic Components Committee (CECC) 30500:1987 *“Harmonized system of quality assessment for electronic components: Sectional specification: Fixed metallized polycarbonate film dielectric capacitors for direct current”*.

This standard is a harmonized specification within the CECC system.

It supersedes BS CECC 30500:1978, which is withdrawn. It should be noted that the withdrawal of BS CECC 30500:1978 does not affect the validity of approvals which make reference to that standard.

**Terminology and conventions.** The text of the CECC specification has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

**Cross-references.** The British Standard which implements CECC 00100 is BS 9000: *“General requirements for a system for electronic components of assessed quality”*. Part 2:1983 *“Specification for national implementation of CECC basic rules and rules of procedure”*.

| International Standard | Corresponding British Standard                                                                                                                                                                                           |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISO 3:1973             | BS 2045:1965 <i>Preferred numbers</i><br>(Technically equivalent)                                                                                                                                                        |
| IEC 62:1974            | BS 1852:1975 <i>Specification for marking codes for resistors and capacitors</i><br>(Identical)                                                                                                                          |
| IEC 63:1963            | BS 2488:1966 <i>Schedule of preferred numbers for the resistance of resistors and the capacitance of capacitors for telecommunications equipment</i><br>(Technically equivalent)                                         |
| IEC 68-1:1982          | BS 2011 <i>Basic environmental testing procedures</i><br>Part 1.1:1983 <i>General and guidance</i><br>(Identical)                                                                                                        |
| IEC 384-6:1987         | <sup>a</sup> BS QC 300500 (IEC 384-6) <i>Sectional specification: Fixed metallized polycarbonate film dielectric d.c. capacitors</i><br>(Identical)                                                                      |
| IEC 410:1973           | BS 6001: <i>Sampling procedures for inspection by attributes</i><br>Part 1:1972: <i>Specification for sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection</i><br>(Technically equivalent) |
| CECC 30000:1983        | BS CECC 30000:1984 <i>Harmonized system of quality assessment for electronic components: Generic specification: Fixed capacitors</i><br>(Identical)                                                                      |

<sup>a</sup> In preparation.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

### Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the CECC title page, pages ii to iv, pages 1 to 22, 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.



English version

Harmonized System of Quality Assessment for  
Electronic Components

SECTIONAL SPECIFICATION:

**FIXED METALLIZED  
POLYCARBONATE FILM  
DIELECTRIC CAPACITORS  
FOR DIRECT CURRENT**

Système Harmonisé d'Assurance de la Qualité  
des Composants Electroniques

SPECIFICATION INTERMEDIAIRE:

**CONDENSATEURS FIXES A  
DIELECTRIQUE EN FILM DE  
POLYCARBONATE METALLISE  
POUR COURANT CONTINU**

Harmonisiertes Gütebestätigungssystem für  
Bauelemente der Elektronik

RAHMENSPEZIFIKATION:

**GLEICHSPANNUNGS-  
FESTKONDENSATOREN  
MIT METALLISIERTEN  
POLYCARBONATFOLIEN  
ALS DIELEKTRIKUM  
(MKC)**



# 2

Edition  
Issue  
Ausgabe

## CECC 30 500

1987

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## Foreword

The CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby accepted by all member countries without further testing.

This specification has been formally approved by the CECC, and has been prepared for those countries taking part in the System who wish to issue national harmonized specifications for FIXED METALLIZED POLYCARBONATE FILM DIELECTRIC CAPACITORS FOR DIRECT CURRENT. It should be read in conjunction with the current regulations for the CECC System.

At the date of printing of this specification the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Preface

This sectional specification was prepared by CECC Working Group 3: "Capacitors", and is an editorially revised version of CECC 30500 Issue 1.

It is based, wherever possible, on the Publications of the International Electrotechnical Commission and in particular on IEC 384-6: *Sectional specification: Fixed metallized polycarbonate film dielectric d.c. capacitors. Selection of methods of test and general requirements.*

The text of this sectional specification was circulated to the CECC for voting in the document listed below and was ratified by the President of the CECC for printing as a CECC Specification.

| Document              | Voting Date   | Report on the Voting  |
|-----------------------|---------------|-----------------------|
| CECC(Secretariat)1861 | December 1985 | CECC(Secretariat)1957 |

This second issue of CECC 30500 shall become effective for all new qualification approvals on 15 March 1987. Issue 1 will continue to remain effective to cover all past approvals.



# Section 1. General

## 1.1 Scope

This specification applies to fixed capacitors for direct current, with metallized electrodes and polycarbonate dielectric for use in electronic equipment. These capacitors may have “self-healing properties” depending on conditions of use. They are primarily intended for applications where the a.c. component is small with respect to the rated voltage. Two performance grades of capacitors are covered, Grade 1 for long-life application and Grade 2 for general application.

It prescribes preferred ratings and characteristics and selects from the specification CECC 30000 the appropriate quality assessment procedures, tests and measuring methods and gives general performance requirements for this type of capacitor.

Capacitors for radio interference suppression are not included, but are covered by IEC 384-14.

## 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 No. 1 | (1967) |                                                                   |
| Amendment No. 2 | (1977) |                                                                   |
| IEC 68          |        | <i>Basic environmental testing procedures</i>                     |
| CECC 30000      | (1983) | <i>Generic specification:</i>                                     |
| Issue 3         |        | <i>Fixed capacitors</i>                                           |
| IEC 410         | (1973) | <i>Sampling plans and procedures for inspection by attributes</i> |

NOTE The above references apply to the current editions except for IEC 68.

## 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.

NOTE The information given in 1.3.1 may for convenience, be presented in tabular form.

The following information shall be given in each detail specification and the values specified 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 are preferably to be stated in mm.

Normally the numerical values shall be given for the length, width and height of the body and the wire spacing, or for cylindrical types, the body diameter, and the length and diameter of the terminations. When necessary, for example when a detail specification covers several items (capacitance values/voltage ranges), the dimensions and their associated tolerances shall 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 normal use and for the application of the vibration and the bump or shock tests. The capacitors shall be mounted by their normal means. The design of the capacitor may be such that special mounting fixtures 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.