

# INTERNATIONAL STANDARD

# IEC 60384-18

QC 302300

Second edition  
2007-03

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**Fixed capacitors for use in electronic equipment –**

**Part 18:**

**Sectional specification –  
Fixed aluminium electrolytic surface  
mount capacitors with solid (MnO<sub>2</sub>)  
and non-solid electrolyte**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –**

**Part 18: Sectional specification –  
Fixed aluminium electrolytic surface mount capacitors  
with solid (MnO<sub>2</sub>) and non-solid electrolyte**

FOREWORD

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International Standard IEC 60384-18 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This second edition cancels and replaces the first edition published in 1993 and its amendment 1 (1998). This edition constitutes a minor revision related to tables, figures and references.

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

CDV	Report on voting
40/1764/CDV	40/1822/RVC

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 QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

The list of all parts of the IEC 60384 series, under the general title *Fixed capacitors for use in electronic equipment*, can be found on the IEC website.

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- withdrawn,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.

A bilingual version of this publication may be issued at a later date.

Withdrawn

## FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

### Part 18: Sectional specification – Fixed aluminium electrolytic surface mount capacitors with solid (MnO<sub>2</sub>) and non-solid electrolyte

#### 1 General

##### 1.1 Scope

This part of IEC 60384 applies to fixed aluminium electrolytic surface mount capacitors with solid (MnO<sub>2</sub>) and non-solid electrolyte primarily intended for d.c. applications for use in electronic equipment.

##### 1.2 Object

The object of this standard is to prescribe preferred ratings and characteristics and to select from IEC 60384-1 the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor. Test severities and requirements prescribed in detail specifications referring to this sectional specification should be of equal or higher performance level, because lower performance levels are not permitted.

##### 1.3 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, *Preferred number series for resistors and capacitors*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-58:2004, *Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*

IEC 60384-1:1999, *Fixed capacitors for use in electronic equipment – Part 1: Generic specification*

IEC 60384-18-1, *Fixed capacitors for use in electronic equipment – Part 18-1: Blank detail specification – Fixed aluminium electrolytic chip capacitors with solid (MnO<sub>2</sub>) electrolyte - Assessment level EZ*

IEC 60384-18-2, *Fixed capacitors for use in electronic equipment – Part 18-2: Blank detail specification – Fixed aluminium electrolytic chip capacitors with non-solid electrolyte - Assessment level EZ*

IEC 60410, *Sampling plans and procedures for inspection by attributes*

ISO 3, *Preferred numbers – Series of preferred numbers*

## 1.4 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 1.4.1 may, for convenience, be presented in tabular form.

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.

### 1.4.1 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 preferably be stated in millimetres; however, when the original dimensions are given in inches, the converted metric dimensions in millimetres shall be added.

Normally, the numerical values shall be given for the length of the body, the 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 number of items (capacitance values/voltage ranges) are covered by a detail specification, 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.

### 1.4.2 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.

### 1.4.3 Ratings and characteristics

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

#### 1.4.3.1 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 values available in each voltage range is given in IEC QC 001005."

#### 1.4.3.2 Particular characteristics

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