# INTERNATIONAL STANDARD

# IEC 60384-14

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## Fixed capacitors for use in electronic equipment –

## Part 14:
## Sectional specification:
## Fixed capacitors for electromagnetic interference suppression and connection to the supply mains



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

## Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains

## FOREWORD

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International Standard IEC 60384-14 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This third edition cancels and replaces the second edition published in 1993 and amendment 1 (1995). It constitutes a technical revision. All changes that have been agreed upon can be categorized as minor revisions.

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

| FDIS | Report on voting |
|---|---|
| 40/1552/FDIS | 40/1586/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.

IEC 60384 consists of the following parts, under the general title *Fixed capacitors for use in electronic equipment:*

Part 1: Generic specification

Part 2: Sectional specification: Fixed metallized polyethylene-terephthalate film dielectric d.c. capacitors

Part 3: Sectional specification: Fixed tantalum chip capacitors

Part 4: Sectional specification: Aluminium electrolytic capacitors with solid and non-solid electrolyte

Part 5: Sectional specification: Fixed mica dielectric d.c. capacitors with a rated voltage not exceeding 3 000 V - Selection of methods of test and general requirements

Part 6: Sectional specification: Fixed metallized polycarbonate film dielectric d.c. capacitors

Part 7: Sectional specification: Fixed polystyrene film dielectric metal foil d.c. capacitors

Part 8: Sectional specification: Fixed capacitors of ceramic dielectric, Class 1

Part 9: Sectional specification: Fixed capacitors of ceramic dielectric, Class 2

Part 11: Blank detail specification: Fixed polyethylene-terephthalate film dielectric metal foil d.c. capacitors – Assessment level E

Part 12: Sectional specification: Fixed polycarbonate film dielectric metal foil d.c. capacitors

Part 13: Sectional specification: Fixed polypropylene film dielectric metal foil d.c. capacitors

Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains

Part 15: Sectional specification: Fixed tantalum capacitors with non-solid or solid electrolyte

Part 16: Sectional specification: Fixed metallized polypropylene film dielectric d.c. capacitors

Part 17: Sectional specification: Fixed metallized polypropylene film dielectric a.c. and pulse capacitors

Part 18: Sectional specification: Fixed aluminium electrolytic chip capacitors with solid and non-solid electrolyte

Part 19: Sectional specification: Fixed metallized polyethylene-terephthalate film dielectric chip d.c. capacitors

Part 20: Sectional specification: Fixed metallized polyphenylene sulfide film dielectric chip d.c. capacitors

Part 21: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1

Part 22: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 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 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 standard may be issued at a later date.

# FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

# Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains

## 1 General

### 1.1 Scope

This part of IEC 60384 applies to capacitors and resistor-capacitor combinations which will be connected to an a.c. mains or other supply with nominal voltage not exceeding 1 000 V a.c. (r.m.s.) or 1 000 V d.c. and with a nominal frequency not exceeding 100 Hz.

### 1.2 Object

The principal 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 shall be of equal or higher performance level, lower performance levels not being permitted.

A further object of this standard is to provide a schedule of safety tests to be used by national testing stations in countries where approval by such stations is required.

### 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 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60063, *Preferred number series for resistors and capacitors*

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

IEC 60068-2-17, *Environmental testing – Part 2: Tests – Test Q: Sealing*

IEC 60335-1, *Household and similar electrical appliances – Safety – Part 1: General requirements*

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

IEC 60384-14-4, *Fixed capacitors for use in electronic equipment – Part 14: Blank detail specification: Fixed capacitors for electromagnetic interference supply and connection to the supply mains – Assessment level D*

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60760, *Flat, quick-connect terminations*

IEC 60940, *Guidance information on the application of capacitors, resistors, inductors and complete filter units for radio interference suppression*

IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

CISPR 17, *Methods of measurement of the suppression characteristics of passive radio interference filters and suppression components*

IEC QC 001005, *IEC Quality Assessment System for Electronic Components (IECQ) – Register of Firms, Products and Services approved under the IECQ System, including ISO 9000*

ISO 7000-DB[1], *Graphical symbols for use on equipment – Index and synopsis*

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1 DB refers to the ISO on-line database.