INTERNATIONAL STANDARD

IEC 60384-17-1

QC 301301

Second edition
2005-11

Fixed capacitors for use in electronic equipment –

Part 17-1:
Blank detail specification:
Fixed metallized polypropylene film dielectric a.c. and pulse capacitors – Assessment levels E and EZ

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE P

For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 17-1: Blank detail specification: Fixed metallized polypropylene film dielectric a.c. and pulse capacitors – Assessment levels E and EZ

FOREWORD

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International Standard IEC 60384-17-1 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 1987 and constitutes minor revisions related to tables, figures and references.

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

FDIS	Report on voting
40/1598/FDIS	40/1631/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 (new) 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 3000 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: Sectional specification: Fixed polyethylene-terephthalate film dielectric metal foil d.c. capacitors

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

Part 23: Sectional specification: Fixed surface mount metallized polyethylene naphthalate film dielectric d.c. capacitors

Part 24: Sectional specification – Surface mount fixed tantalum electrolytic capacitors with conductive polymer solid electrolyte (under consideration)

Part 25: Sectional specification – Surface mount fixed aluminium electrolytic capacitors with conductive polymer solid electrolyte (under consideration)

All sectional specifications mentioned above do have one or more blank detail specifications being a supplementary document, containing requirements for style, layout and minimum content of detail specifications.

The QC 301301 number that appears on the front cover of this publication is the specification number in the IECQ Quality Assessment System for Electronic Components.

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.

FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 17-1: Blank detail specification: Fixed metallized polypropylene film dielectric a.c. and pulse capacitors – Assessment levels E and EZ

INTRODUCTION

Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for style and layout and minimum content of detail specifications. Detail specifications not complying with these requirements may not be considered as being in accordance with IEC specifications nor shall they be so described.

In the preparation of detail specifications the content of 1.4 of the sectional specification shall be taken into account.

The numbers between brackets on the first page correspond to the following information which shall be inserted in the position indicated:

Identification of the detail specification

[1] The "International Electrotechnical Commission" or the National Standards Organization under whose authority the detail specification is drafted.

[2] The IEC or National Standards number of the detail specification, date of issue and any further information required by the national system.

[3] The number and issue number of the IEC or national generic specification.

[4] The IEC number of the blank detail specification.

Identification of the capacitor

[5] A short description of the type of capacitor.

[6] Information on typical construction (when applicable).

NOTE When the capacitor is not designed for use in printed board applications, this must be clearly stated in the detail specification in this position.

[7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the national or international documents for outlines. Alternatively, this drawing may be given in an appendix to the detail specification.

[8] Application or group of applications covered and/or assessment level.

NOTE The assessment level(s) to be used in a detail specification must be selected from the sectional specification, 3.5.4. This implies that one blank detail specification may be used in combination with several assessment levels provided the grouping of the tests does not change.

[9] Reference data on the most important properties, to allow comparison between the various capacitor types.

[1]	IEC 60384-17-1-XXX QC XXXXXXXXXXX [2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH: [3]	IEC 60384-17-1 QC XXXXXX [4]
	FIXED METALLIZED POLYPROPYLENE FILM DIELECTRIC AC AND PULSE CAPACITORS [5]
Outline drawing (see Table 1) (first angle projection) [7]	[6]
(Other shapes are permitted within the dimensions given)	Assessment levels E and EZ [8] Performance grade: Stability grade:
NOTE For [1] to [9]: see previous page.	

Information on the availability of components qualified to this detail specification is given in IEC QC 001005 [9]

1 General data

1.1 Recommended method(s) of mounting (to be inserted)

See IEC 60384-17, 1.4.2.

1.2 Dimensions

Table 1 – Case size reference and dimensions

Case size reference	Dimensions						
	∅	*L*	*H*	*d*	. . . . .		

When there is no case size reference, Table 1 may be omitted and the dimensions shall be given in Table 2, which then becomes Table 1.

The dimensions shall be given as maximum dimensions or as nominal dimensions with a tolerance.

1.3 Ratings and characteristics

Capacitance range (see Table 2)

Tolerance on rated capacitance

Rated voltage (see Table 2)
– rated d.c. voltage (if applicable)
– rated a.c. voltage (and frequency if different from 50/60 Hz)

Category voltage (if applicable) (see Table 2)

Climatic category

AC rated temperature

Tangent of loss angle (frequency ...) (see Table 2)

Insulation resistance (see Table 2)

Rated peak current or rated voltage pulse slope $\frac{(\mathrm{d}U)}{(\mathrm{d}t)_{\mathrm{R}}}$ (if applicable)

Sinusoidal rated a.c. current (at reference frequency ...) and derating curve versus temperature (if applicable)

Reference frequency (if applicable)

Table 2 – Values of capacitance, a.c. voltage and peak current (or voltage pulse slope), related to case sizes

Rated a.c. voltage ($U_{\mathrm{R\sim}}$)				
Category voltage[1)] ($U_{\mathrm{C\sim}}$)				
	Rated capacitance (in nF or µF)	Peak current or dU/dt	Rated capacitance (in nF or µF)	Peak current or dU/dt
Case size reference				
[1)] If different from the rated voltage.				

Table 2a (if applicable) – Rated a.c. current related to rated a.c. voltage and rated capacitance and case sizes

Rated a.c. voltage ($U_{\mathrm{R\sim}}$)				
Rated a.c. current	Rated capacitance (in nF and/or µF)	Case size	Rated capacitance (in nF and/or µF)	Case size
NOTE Other presentations are possible.				

Permitted effective current characteristics (if applicable)



Table 3 – Particular characteristics

1.4 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 60384-1, *Fixed capacitors for use in electronic equipment – Part 1: Generic specification*

IEC 60384-17, *Fixed capacitors for use in electronic equipment – Part 17: Sectional specification: Fixed metallized polypropylene film dielectric a.c. and pulse capacitors*