

# INTERNATIONAL STANDARD

QC 300101

**Fixed capacitors for use in electronic equipment –  
Part 11-1: Blank detail specification – Fixed polyethylene-terephthalate film  
dielectric metal foil d.c. capacitors – Assessment level EZ**

[IEC 60384-11-1:2008](#)

<https://standards.iteh.ai/catalog/standards/sist/00d250aa-e112-4113-88cf-875e5c7e2256/iec-60384-11-1-2008>





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IEC 60384-11-1:2008  
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 11-1: Blank detail specification –  
Fixed polyethylene-terephthalate film  
dielectric metal foil d.c. capacitors –  
Assessment level EZ**

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International Standard IEC 60384-11-1 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 1988 and 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
40/1840/CDV	40/1865/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 IECQ Quality Assessment System for Electronic Components (IECQ).

The list of all parts of the IEC 60384 series, under the (new) 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- withdrawn,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.

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## FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

### Part 11-1: Blank detail specification – Fixed polyethylene-terephthalate film dielectric metal foil d.c. capacitors – Assessment level 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 so be 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 shall 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 annex 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 are selected from 3.5.4 of the sectional specification. 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.

	IEC 60384-11-1-XXX [2] QC 300101-XXX
[1]	
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH:	IEC 60384-11-1 [4] QC 300101
[3]	FIXED POLYETHYLENE-TEREPHTHALATE FILM DIELECTRIC METAL FOIL D.C. CAPACITORS [5]
Outline drawing: (see Table 1) [...angle projection]	[6]
[7]	Assessment level(s): EZ [8]
[Other shapes are permitted within the dimensions given.]	
For Notes [1] to [9] see preceding page.	

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Information on the availability of components qualified to this detail specification is given in the Qualified Products List.

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(9)

## 1 General data

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

See IEC 60384-11, 1.4.2.

### 1.2 Dimensions

Table 1 – Case size reference and dimensions

Case size reference	Dimensions						
	mm						
	$\varnothing$	<i>L</i>	<i>H</i>	<i>d</i>	.....		

NOTE 1 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.

NOTE 2 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)
- Category voltage (if applicable) (see Table 2)
- Climatic category
- Rated temperature
- Max. a.c. voltage (if applicable)
- Tangent of loss angle ( $\tan \delta$ )
- Insulation resistance

**Table 2 – Values of capacitance and of voltage related to case sizes**

Rated voltage				
Category voltage <sup>a</sup>				
Rated capacitance (in nF and/or $\mu$ F)	Case size	Case size	Case size	Case size
<sup>a</sup> If different from the rated voltage.				

### 1.4 Normative references

[IEC 60384-11-1:2008](https://standards.iteh.ai/catalog/standards/sist/00d250aa-e112-4113-88cf-875e5c7e2256/iec-60384-11-1-2008)

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[875e5c7e2256/iec-60384-11-1-2008](https://standards.iteh.ai/catalog/standards/sist/00d250aa-e112-4113-88cf-875e5c7e2256/iec-60384-11-1-2008)

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 60384-11, *Fixed capacitors for use in electronic equipment – Part 11: Sectional specification – Fixed polyethylene-terephthalate film dielectric metal foil d.c. capacitors*

### 1.5 Marking

The marking of the capacitor and the package shall be in accordance with the requirements of 1.6 of IEC 60384-11.

The details of the marking of the component and package shall be given in full in the detail specification.

### 1.6 Ordering information

Orders for capacitors covered by this specification shall contain, in clear or in coded form, the following minimum information:

- a) rated capacitance;
- b) tolerance on rated capacitance;
- c) rated d.c. voltage;
- d) number and issue reference of the detail specification and style reference;
- e) packaging instructions.

**1.7 Certified records of released lots**

Required/not required.

**1.8 Additional information** (not for inspection purposes)**1.9 Additional or increased severities or requirements to those specified in the generic and/or sectional specification**

NOTE Additions or increased requirements should be specified only when essential.

**Table 3 – Other characteristics**

This table is to be used for defining characteristics which are additional to, or more severe than, those given in the sectional specification.

**2 Inspection requirements****2.1 Procedures**

**2.1.1** For qualification approval, the procedures shall be in accordance with 3.4 of the sectional specification, IEC 60384-11.

**2.1.2** For quality conformance inspection, the test schedule (Table 4) includes sampling, periodicity, severities and requirements. The formation of inspection lots is covered by 3.5.1 of IEC 60384-11.

**Table 4 – Test schedule for quality conformance inspection**

Subclause number and test <sup>a</sup>	D or ND <sup>c</sup>	Conditions of test <sup>a</sup>	Number of specimens and number of non-conforming items <sup>c</sup>			Performance requirements <sup>a</sup>
			IL	n	c	
<b>Group A inspection (lot-by-lot)</b> <b>Sub-group A0</b> 4.2.2 Capacitance 4.2.3 Tangent of loss angle (tan $\delta$ ) 4.2.1 Voltage proof (Test A) 4.2.4 Insulation resistance (Test A)	ND	Frequency : 1 kHz for all capacitance values Method: ... Measuring point 1a Measuring point 1a	100% <sup>d</sup>			Within specified tolerance As in 4.2.3.2 No breakdown or flashover As in 4.2.4.2
<b>Group A inspection (lot-by-lot)</b> <b>Sub-group A1</b> 4.1 Visual examination	ND		S-3	b	0	As in 4.1 Legible marking and as specified in 1.5 of this specification
<b>Sub-group A2</b> 4.1 Dimensions (gauging) <sup>e</sup>	ND		S-3	b	0	As specified in Table 1 of this specification