

INTERNATIONAL  
STANDARD

IEC  
60384-21-1

First edition  
2004-06

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

**Part 21-1:**

**Blank detail specification:**

**Fixed surface mount multilayer capacitors**

**of ceramic dielectric, Class 1 –**

**Assessment level EZ**

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Reference number  
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*For price, see current catalogue*

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 21-1: Blank detail specification:  
Fixed surface mount multilayer capacitors  
of ceramic dielectric, Class 1 –  
Assessment level EZ**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60384-21-1 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This standard and its related publications (CEI 60384-21, IEC 60384-22 and IEC 60384-22-1) cancel and replace IEC 60384-10 (1989) and its Amendments 1 (1993) and 2 (2000) as well as IEC 60384-10-1 (1989) and its Amendment 1 (1993).

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

FDIS	Report on voting
40/1421/FDIS	40/1452/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.

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.

The contents of the corrigendum of September 2004 have been included in this copy.

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## INTRODUCTION

### Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for style, 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 square brackets on the first page of the detail specification 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. <https://standards.iteh.ai/catalog/standards/sist/5e9fe72f-340e-4826-8edc-081571678028/iec-60384-21-1-2004>
- (6) Information on typical construction (when applicable).
- (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.
- (9) Reference data on the most important properties, to allow comparison between the various capacitor types.

	(1)	IEC 60384-21-1-ZZZ QC 30XXXX-ZZZ	(2)
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH :	(3)	IEC 60384-21-1 QC 30 XXXX	(4)
Outline drawing : (see Table 1) (...angle projection)  (Other shapes are permitted within the dimensions given)	(7)	FIXED SURFACE MOUNT MULTILAYER CAPACITORS OF CERAMIC DIELECTRIC, CLASS 1	(5)
			(6)
		Assessment level: EZ	(8)

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Information on the availability of components qualified to this detail specification is given in the IEC QC 001005.  
<https://standards.iteh.ai/catalog/standards/iec/60384-21-1-2004>  
<https://standards.iteh.ai/catalog/standards/iec/60384-21-1-2004>



## FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

### Part 21-1: Blank detail specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1 – Assessment level EZ

#### 1 General data

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

(See 1.4.2 of IEC 60384-21).

##### 1.2 Dimensions

**Table 1 – Case size reference and dimensions**

Case size reference	Dimension (mm)						
	$L_1$	$W$	$H$	$L_2$	$L_3$	$L_4$	---

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

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

##### 1.3 Ratings and characteristics

Rated 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	
Category temperature (if applicable)	
Tangent of loss angle	
Insulation resistance	
Temperature coefficient $\alpha$ :	...10 <sup>-6</sup> /K

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

Rated voltage				
Category voltage <sup>1)</sup>				
Rated capacitance (in pF and/or nF)	Case size	Case size	Case size	Case size

<sup>1)</sup> If different from the rated voltage.