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Fixed capacitors for use in electronic equipment – Part 3: Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte

Fixed capacitors for use in electronic equipment – Part 3: Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte



# EESTI STANDARDI EESSÕNA

# NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60384-	This Estonian standard EVS-EN 60384-
3:2007 sisaldab Euroopa standardi EN	3:2007 consists of the English text of the
60384-3:2006 ingliskeelset teksti.	European standard EN 60384-3:2006.
Käesolev dokument on jõustatud	This document is endorsed on 17.01.2007
17.01.2007 ja selle kohta on avaldatud	with the notification being published in the
teade Eesti standardiorganisatsiooni	official publication of the Estonian national
ametlikus väljaandes.	standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

· · · ·	
Käsitlusala: This specification applies to surface mount tantalum solid electrolyte capacitors. These capacitors are primarily intended to be mounted directly onto substrates for hybrid circuits or onto printed boards. The following two styles are considered: - Style 1: protected capacitors; – Style 2: unprotected capacitors.	Scope: This specification applies to surface mount tantalum solid electrolyte capacitors. These capacitors are primarily intended to be mounted directly onto substrates for hybrid circuits or onto printed boards. The following two styles are considered: - Style 1: protected capacitors; – Style 2: unprotected capacitors.
ICS 31.060.30	
Võtmesõnad:	

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

# EN 60384-3

December 2006

ICS 31.060.40

English version

# Fixed capacitors for use in electronic equipment Part 3: Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte (IEC 60384-3:2006)

Condensateurs fixes utilisés dans les équipements électroniques Partie 3: Spécification intermédiaire: Condensateurs fixes électrolytiques au tantale pour montage en surface à électrolyte solide en bioxyde de manganèse (CEI 60384-3:2006) Festkondensatoren zur Verwendung in Geräten der Elektronik Teil 3: Rahmenspezifikation: Oberflächenmontierbare Tantal-Kondensatoren mit festem Mangandioxid-Elektrolyt (IEC 60384-3:2006)

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European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

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# Foreword

The text of document 40/1771/FDIS, future edition 3 of IEC 60384-3, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60384-3 on 2006-11-01.

The following dates were fixed:

-	latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2007-08-01
-	latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-11-01

Annex ZA has been added by CENELEC.

# **Endorsement notice**

n 384-3:2L The text of the International Standard IEC 60384-3:2006 was approved by CENELEC as a European Standard without any modification.

# Annex ZA

# (normative)

# Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	<u>EN/HD</u>	<u>Year</u>
IEC 60062 (mod)	_1)	—— Marking codes for resistors and capacitors	EN 60062	2005 <sup>2)</sup>
IEC 60063	_1)	Preferred number series for resistors and capacitors	-	-
IEC 60068-1	_1)	Environmental testing Part 1: General and guidance	EN 60068-1	1994 <sup>2)</sup>
IEC 60384-1 (mod)	_1)	Fixed capacitors for use in electronic equipment Part 1: Generic specification	EN 60384-1 + corr. October	2001 <sup>2)</sup> 2001
IEC 60410	_1)	Sampling plans and procedures for inspection by attributes	n -	-
ISO 3	_1)	Preferred numbers - Series of preferred numbers		Ś
<ol> <li><sup>1)</sup> Undated reference.</li> <li><sup>2)</sup> Valid edition at date of</li> </ol>	issue.			

<sup>&</sup>lt;sup>1)</sup> Undated reference.

<sup>&</sup>lt;sup>2)</sup> Valid edition at date of issue.

# INTERNATIONAL STANDARD



Third edition 2006-10

Fixed capacitors for use in electronic equipment -

Part 3:

Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte



Reference number IEC 60384-3:2006(E)

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IEC 60384-3 QC 300800

> Third edition 2006-10

Fixed capacitors for use in electronic equipment -

Part 3:

Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

# FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT -

# Part 3: Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte

# FOREWORD

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International Standard IEC 60384-3 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 1989 and constitutes a minor revision related to tables, figures and references.

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

FDIS	Report on voting
40/1771/FDIS	40/1789/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.

The QC numbers that appear on the front cover of this publication are the specification numbers in the IEC Quality Assessment System for Electronic Components (IECQ).

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all the 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.

# FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT -

# Part 3: Sectional specification: Surface mount fixed tantalum electrolytic capacitors with manganese dioxide solid electrolyte

# 1 General

# 1.1 Scope

This specification applies to surface mount tantalum solid electrolyte capacitors. These capacitors are primarily intended to be mounted directly onto substrates for hybrid circuits or onto printed boards.

The following two styles are considered:

- Style 1: protected capacitors;
- Style 2: unprotected capacitors.

## 1.2 Object

The object of this standard is to prescribe preferred ratings and characteristics and to select from IEC 60384-1:1999, the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor.

## 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 60062, Marking codes for resistors and capacitors

IEC 60063, Preferred number series for resistors and capacitors

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

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

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.

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.