

**Sectional specification: Fixed low power surface mount (SMD) resistors**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 140400:2004 sisaldab Euroopa standardi EN 140400:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.06.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 140400:2004 consists of the English text of the European standard EN 140400:2003.</p> <p>This document is endorsed on 22.06.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This sectional specification prescribes the preferred values for characteristics and ratings and also the inspection requirements for fixed surface mount resistors of assessed quality. These resistors generally have metallised connecting pads and are intended to be mounted directly on to substrates, for example hybrid integrated circuits or printed boards. It selects from the generic specification, EN 60115-1, the appropriate methods of test to be used in detail specifications derived from this specification.</p>	<p><b>Scope:</b> This sectional specification prescribes the preferred values for characteristics and ratings and also the inspection requirements for fixed surface mount resistors of assessed quality. These resistors generally have metallised connecting pads and are intended to be mounted directly on to substrates, for example hybrid integrated circuits or printed boards. It selects from the generic specification, EN 60115-1, the appropriate methods of test to be used in detail specifications derived from this specification.</p>
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**EN 140400**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 140400:1996 + A1:2001

English version

**Sectional specification:  
Fixed low power surface mount (SMD) resistors**

Spécification intermédiaire:  
Résistances fixes à faible dissipation  
pour montage en surface (CMS)

Rahmenspezifikation:  
Oberflächenmontierbare Festwiderstände  
(SMD) kleiner Belastbarkeit

This European Standard was approved by CENELEC on 2003-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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**CENELEC**

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

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

### Foreword

This European standard was prepared by the CENELEC Technical Committee CLC/TC 40XB, Resistors.

It is based, wherever possible, on the publications of the International Electrotechnical Commission and in particular on IEC 60115-8, Fixed resistors for use in electronic equipment.

This European Standard supersedes EN 140400:1996 + A1:2001.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 140400 on 2003-09-01.

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) 2004-09-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2006-09-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, Annexes A and C are normative and Annex B is informative.

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## 1 General

### 1.1 Scope

This sectional specification prescribes the preferred values for characteristics and ratings and also the inspection requirements for fixed surface mount resistors of assessed quality. These resistors generally have metallised connecting pads and are intended to be mounted directly on to substrates, for example hybrid integrated circuits or printed boards. It selects from the generic specification, EN 60115-1, the appropriate methods of test to be used in detail specifications derived from this specification.

Associated with this specification are one or more blank detail specifications each reference by an EN number. A blank detail specification which has been completed as specified in 1.2 of this specification forms a detail specification. Such detail specifications may be used for the grant of qualification approval to a resistor and for the performance of quality conformance inspection in accordance with the CECC system.

### 1.2 Information to be specified in the 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 a subclause of the detail specification and indicated in the test schedules, for example by an asterisk.

The following information shall be specified in each detail specification and the values quoted shall preferably be selected from those given in the appropriate clause of this document.

- a) Style and dimensions      See 2.1.1
- b) Climatic category        See 2.1.2
- c) Limits of resistance  
change after testing        See 2.1.4
- d) Resistance range         See 2.2.1

NOTE Where products approved to the detail specification may have different ranges, the following statement should be made:

The Register of Approval in each style is given in CECC 00 200.

- e) Tolerances on rated  
resistance                    See 2.2.2

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- f) Temperature  
characteristic of  
resistance                    See 2.1.3

The corresponding temperature coefficient of resistance may be quoted for information

For preferred combinations of temperature coefficient and tolerance on rated resistance see 2.2.7.