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Standards

Irish Standard  
I.S. EN 140401:2009

# Blank Detail Specification: Fixed low power film surface mount (SMD) resistors

## I.S. EN 140401:2009

*Incorporating amendments/corrigenda issued since publication:*

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EUROPEAN STANDARD

**EN 140401**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2009

ICS 31.040.10

Supersedes EN 140401:2002

English version

**Blank Detail Specification:  
Fixed low power film surface mount (SMD) resistors**

Spécification particulière cadre:  
Résistances fixes à couches  
et à faible dissipation  
pour montage en surface (CMS)

Vordruck für Bauartspezifikation:  
Oberflächenmontierbare (SMD)  
Schicht-Festwiderstände  
niedriger Belastbarkeit

This European Standard was approved by CENELEC on 2009-03-01. 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 three official versions (English, French, 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: avenue Marnix 17, B - 1000 Brussels**

## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 40XB, Resistors.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 140401 on 2009-03-01.

This European Standard supersedes EN 140401:2002.

Preceding documents on the subject covered by this specification have been

- EN 140401:1996,
- CECC 40 401:1989.

Compared to the superseded standard, the following changes have been implemented:

- modification of the title;
- introduction of a test on the resistance to electrostatic discharge (ESD) in 1.6 and Annex A;
- introduction of description and test methods for lead-free soldering in 1.8, 1.10.3 and Annex A;
- introduction of code letters for the temperature coefficient (TCR) as in EN 60062:2005;
- revision of ordering information in 1.9.4;
- adoption of the IECQ rules of procedure, IEC QC 001002-3;
- revision of the sample quantities and the sequence of tests in Annex A;
- editorial revision.

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) 2010-03-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2012-03-01

This specification supports the building of a series of documents describing fixed low power film resistors as follows:

- EN 60115-1 Fixed resistors for use in electronic equipment – Part 1: Generic specification (IEC 60115-1, mod.)
- EN 140400 Sectional specification: Fixed low power surface mount (SMD) resistors
- EN 140401-xxx Relevant detail specification(s) written on the basis of this blank detail specification

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## Contents

<b>Introduction.....</b>	<b>4</b>
<b>1 Characteristics and ratings .....</b>	<b>5</b>
1.1 Dimensions and ratings.....	5
1.2 Derating curve .....	6
1.3 Resistance range and tolerance on rated resistance .....	7
1.3.1 Version A.....	7
1.3.2 Version E.....	7
1.4 Variation of resistance with temperature and temperature rise .....	8
1.5 Climatic categories.....	8
1.6 Limits for change of resistance at tests.....	9
1.7 Non-linearity .....	9
1.8 Tests related to soldering.....	10
1.8.1 Severities for solderability testing.....	10
1.8.2 Severities for testing resistance to soldering heat .....	11
1.9 Marking, packaging and ordering designation .....	11
1.9.1 Marking of the component.....	12
1.9.2 Packaging.....	12
1.9.3 Marking of the packaging .....	12
1.9.4 Ordering information.....	12
1.10 Additional information (not for inspection purpose) .....	13
1.10.1 Storage .....	13
1.10.2 Mounting.....	13
1.10.3 Soldering process.....	13
1.10.4 Use of cleaning solvents .....	13
<b>2 Quality assessment procedures .....</b>	<b>13</b>
2.1 General.....	13
2.1.1 Zero defect approach .....	13
2.1.2 100 % Test .....	14
2.1.3 0 $\Omega$ Resistors.....	14
2.1.4 Certificate of Conformity (CoC) .....	14
2.1.5 Certified test records .....	14
2.1.6 Failure rate level.....	15
2.2 Qualification approval.....	15
2.2.1 Version A.....	15
2.2.2 Version E.....	15
2.3 Quality conformance inspection.....	15
2.3.1 Qualification approval according to IEC QC 001002-3:2005, Clause 3.....	15
2.3.2 Technology approval according to IEC QC 001002-3:2005, Clause 6 .....	15
2.3.3 Non-conforming items .....	16
<b>Annex A (normative) Fixed sample size Qualification Approval and Quality Conformance .....</b>	<b>17</b>
<b>Inspection test schedule for fixed low power film resistors.....</b>	<b>17</b>
<b>Annex B (informative) Letter symbols and abbreviations .....</b>	<b>27</b>
<b>Bibliography.....</b>	<b>29</b>

## 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 shall not be considered as being in accordance with European standards nor shall they be so described.

In the preparation of the detail specification the content of EN 140400:2003, 1.2 shall be taken into account.

The detail specification should be written by using the preferred values given in EN 140400.

The detail specification should contain a table of contents prior the first page of the actual specification. For the use of SI units refer to ISO 1000, for the use of letter symbols to be used in electrical technology, refer to EN 60027-1.

Notes in this document shall be considered as guidance and are not part of the detail specification itself.


### Identification of the detail specification and the component

The first page of the detail specification should have the layout recommended on page 5.

The numbers in square brackets correspond to the indications to be completed thereunder:

- [1] the name of the Standardisation Organisation under whose authority the detail specification is published and if applicable, the organisation from whom the detail specification is available;
- [2] the CECC symbol and the number allocated to the detail specification by the CENELEC General Secretariat;
- [3] the number and issue number of the EN generic and sectional specification as relevant; also national reference if different;
- [4] the national number of the detail specification, date of issue and any further information required by the national system, together with any amendment numbers, if different from the EN number;
- [5] a brief description of the component or range of components;
- [6] information on typical construction (where applicable);
- [7] an outline drawing with the main dimensions which are of importance for interchangeability and/or reference to the appropriate national or international document for outlines. Alternatively, this drawing may be given in an annex to the detail specification;
- [8] the level of quality assessment covered by the detail specification.

For [5] and [6] the text to be given in the detail specification should be suitable for an entry in a register of approvals and the “CENELEC Catalogue of European Standards”.

Specification available from:	[1]	<b>EN 140401-...</b> (Specification number)	 [2]
Electronic components of assessed quality in accordance with: EN 60115-1:2001 + A1:2001 + A11:2007 EN 140400:2003	[3]	<b>Issue ...</b> (Month) (Year)	[4]
Other shapes are permitted within the given dimensions. <b>Figure 1 – Outline and dimensions (see Table 1)</b>	[7]	Fixed low power film surface mount (SMD) resistors, Style ...	[5]
		(Description of the component)	[6]
		Assessment level EZ <sup>a</sup> Version A: with 100 %-test Version E: with failure rate level and 100 %-test Stability classes ...	[8]
<sup>a</sup> For explanation on assessment level EZ see 2.1.1			

NOTE Version E is optional.

## 1 Characteristics and ratings

Various parameters of this component are precisely defined in this specification. Unspecified parameters may vary from one component to another.

### 1.1 Dimensions and ratings

**Table 1 – Style and dimensions**

Style		Length <i>L</i> mm		mm		mm		mm		Mass <sup>a</sup> mg
metric	x	min.	max.	min.	max.	min.	max.	min.	max.	max.
<sup>a</sup> For information only.										

<sup>x</sup> Optional column for additional information (e.g. size code).

NOTE See EN 140400:2003, 1.2 a).

Information about manufacturers who have components qualified to this detail specification is available in the approvals section of the website <http://www.iecq.org>.

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