
Blank detail specification: Fixed low power non-wire wound surface mounting (SMD) resistors

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Vordruck für Bauartspezifikation: Oberflächenmontierbare nichtdrahtgewickelte Festwiderstände (SMD) niedriger Belastbarkeit

Specification particulière cadre: Résistances fixes non bobinées à faible dissipation pour montage en surface (CMS)

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Ta slovenski standard je istoveten z: EN 140401:1996

ICS:

31.040.10 Fiksni upor Fixed resistors

SIST EN 140401:2002 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 140401

November 1996

ICS 31.040.10

Supersedes CECC 40 401:1989

Descriptors: Fixed resistors, non-wire wound, blank detail specification, low power, surface mounting

English version

**Blank Detail Specification:
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Specification particulière cadre:
Résistances fixes non bobinées à
faible dissipation pour montage en
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nichtdrahtgewickelte Festwiderstände
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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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC/CECC SC40XB, Resistors.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 140401 on 1996-07-02.

This European Standard supersedes CECC 40 401:1989.

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) 1997-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-06-01



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Identification of the Detail Specification and the component

The first page of the DS 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 National Standards Organisation under whose authority the DS is published and, if applicable, the organisation from whom the DS is available.
- [2] The CECC symbol and the number allocated to the DS by the CECC General Secretariat.
- [3] The number and issue number of the CECC generic and sectional specification as relevant; also national reference if different.
- [4] If different from the CECC number, the national number of the DS, date of issue and any further information required by the national system, together with any amendment numbers.
- [5] A brief description of the component or range of components.
- [6] Information on typical construction (where applicable).

For [5] and [6] the text to be given in the DS should be suitable for an entry in CECC 00 200 (register of approvals) and CECC 00 300 (Library list).

- [7] An outline drawing with 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 DS.
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- [8] The level(s) of quality assessment covered by the DS.
- [9] Reference data giving information on the most important properties of the component which allow comparison between the various component types intended for the same, or for similar, applications.

Specification available from: [1]	CECC 40 401-XXX [2] Page 1 of ..
ELECTRONIC COMPONENTS OF ASSESSED QUALITY [3] IN ACCORDANCE WITH:	[4]
Outline and dimensions: (see table 1) [7] (First angle projection)	FIXED LOW POWER [5] NON-WIRE WOUND SURFACE MOUNTING RESISTORS
All dimensions in millimetres	Ceramic body with a [6] resistive layer End terminations for mounting on (a) printed boards or (b) alumina substrates
	ASSESSMENT LEVEL "S" [8]
NOTE 1: Other shapes are permitted within the dimensions given.	

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Mounting

The detail specification shall give full information in this section regarding the recommended method of mounting the resistors by it. It shall state:

[9]

- the preferred substrate to be used;
- any glues, together with their curing temperatures and times;
- soldering methods, temperatures and times;
- cleaning solvents.

The detail specification shall also give in this section a warning of any precautions which should be taken in the assembly of the resistors.

Table 1: Dimensions

Style	Rated dissipation (W at 70 °C)	Limiting element voltage (V d.c. or a.c. r.m.s.)	Insulating voltage	Dimensions (mm)						
				<i>L</i>		<i>W</i>		<i>H</i>		
				min	max	min	max	max	min	

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200 : Register of Approvals.

1 Ratings and characteristics

Resistance range	... Ω to ... Ω
Standard tolerances on rated resistance	\pm ... %
Climatic category	.../.../...
Limit of resistance change after 1 000 h endurance test	\pm (... % R + ... Ω)
Temperature characteristic of resistance (20 °C to 70 °C)	$\Delta R : \leq \pm$... % R ($\Delta R/R\Delta$: $\leq \pm$... $10^{-6}/^{\circ}\text{C}$)

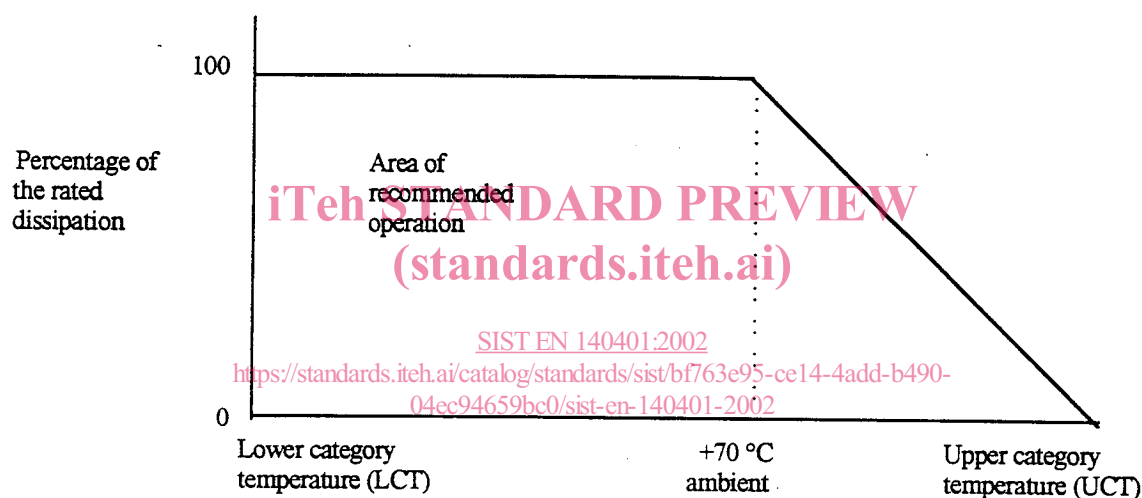
Should, for any reason, it be necessary for further parameters to be controlled, then a more detailed specification should be used.

The additional test method(s) shall be fully described, and appropriate limits, AQLs and Inspection Levels specified.

NOTE. The preferred values are those of the E series of IEC 63. Where the use of intermediate values is essential, they should, wherever possible, be chosen from a series in that document.

1.1 Derating

When mounted as described, for example, in annex A of this detail specification, resistors covered by this specification are derated according to the following curve:



A larger area of operation may be given in the detail specification provided it includes all the area given above.

The detail specification shall state the maximum dissipation at temperatures other than 70 °C. All break points on the curve shall be verified by test.

NOTE: Various parameters have been precisely specified for this component. It should not be assumed that any parameter not specified will remain unchanged from one component to another.