

**Fixed resistors for use in electronic equipment - Part 8:
Sectional specification - Fixed surface mount resistors**

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**Fixed resistors for use in electronic equipment -
Part 8: Sectional specification -
Fixed surface mount resistors
(IEC 60115-8:2009, modified)**

Résistances fixes utilisées dans les
équipements électroniques -
Partie 8 : Spécification intermédiaire -
Résistances fixes pour montage en
surface
(CEI 60115-8:2009, modifiée)

Festwiderstände zur Verwendung in
Geräten der Elektronik -
Teil 8: Rahmenspezifikation -
Oberflächenmontierbare (SMD)
Festwiderstände
(IEC 60115-8:2009, modifiziert)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

This document EN 60115-8:2012 consists of the text of IEC 60115-8:2009, prepared by IEC/TC 40 "Capacitors and resistors for electronic equipment", together with the common modifications prepared by the Technical Committee CLC/TC 40XB "Resistors".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2013-08-13
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-08-13

This document supersedes EN 140400:2003.

Preceding documents on the subject covered by this specification have been:

- EN 140400:1996-11
- CECC 40 400:1989-00,

EN 60115-8:2012 includes the following significant technical changes with respect to EN 140400:2003:

- introduction of a product classification based on application requirements;
- extension of the list of styles and dimensions;
- introduction of the code letters for temperature coefficient as given in EN 60062;
- introduction of description and test methods for lead-free soldering;
- introduction of a new system of test severities for the shear test;
- introduction of new test severities for the single-pulse high-voltage overload test;
- introduction of a test on the resistance to electrostatic discharge;
- amendment of the prescriptions for mounting of components;
- adoption of the IECQ rules of procedure, QC 001002-3:2005;
- separation of the test schedule into separate tables for qualification approval and for quality conformance inspection;
- consolidation of the prescription for 0 Ω resistors in a new annex;
- editorial revision.

In this document, the common modifications to IEC 60115-8:2009 are indicated by a vertical line in the left margin of the text.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

1 General

1.1 Scope

This part of EN 60115 is applicable to fixed surface mount resistors for use in electronic equipment.

These resistors are typically described according to types (different geometric shapes) and styles (different dimensions). They have metallized terminations and are primarily intended to be mounted directly on to a circuit board.

1.2 Object

The object of this standard is to prescribe preferred ratings and characteristics and to select from EN 60115-1, the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of resistor.

Test severities and requirements prescribed in detail specifications referring to this sectional specification shall be of equal or higher performance level, because lower performance levels are not permitted.

1.3 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60062:2005 + corrigendum 2007, *Marking codes for resistors and capacitors* (IEC 60062:2004)

EN 60068-1:1994, *Environmental testing – Part 1: General and guidance* (IEC 60068-1:1988 + A1:1992 + corrigendum Oct. 1988)

EN 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads* (IEC 60068-2-20:2008)

EN 60068-2-58:2004 + corrigendum 2004, *Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)* (IEC 60068-2-58:2004)

EN 60115-1:2011, *Fixed resistors for use in electronic equipment – Part 1: Generic specification* (IEC 60115-1:2008, modified)

EN 61193-2:2007, *Quality assessment systems – Part 2: Selection and use of sampling plans for inspection of electronic components and packages* (IEC 61193-2:2007)

EN 61340-3-1, *Electrostatics – Part 3-1: Methods for simulation of electrostatic effects – Human body model (HBM) electrostatic discharge test waveforms* (IEC 61340-3-1)

EN 61760-1:2006, *Surface mounting technology – Part 1: Standard method for the specification of surface mounting components (SMDs)* (IEC 61760-1:2006)

1.4 Information to be specified in a detail specification

Detail specifications shall be derived from the relevant blank detail specification.