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Fixed resistors for use in electronic equipment - Part 2: Sectional specification: Leaded fixed low power film resistors

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/15

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English Version

**Fixed resistors for use in electronic equipment - Part 2:
Sectional specification: Leaded fixed low power film resistors
(IEC 60115-2:2014 , modified)**

Résistances fixes utilisées dans les équipements
électroniques - Partie 2: Spécification intermédiaire:
Résistances fixes à broches à couches, à faible dissipation
(IEC 60115-2:2014 , modifiée)

Festwiderstände zur Verwendung in Geräten der Elektronik
- Teil 2: Rahmenspezifikation - Verbleite niedrig belastbare
Schichtwiderstände
(IEC 60115-2:2014 , modifiziert)

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Comité Européen de Normalisation Electrotechnique
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Foreword

This document (EN 60115-2:2015) has been prepared by CLC/TC 40XB “Resistors”.

The following dates are fixed:

- latest date by which this document has to be implemented at (dop) 2015-12-15
national level by publication of an identical national standard or
by endorsement
- latest date by which the national standards conflicting with this (dow) 2017-12-15
document have to be withdrawn

This document supersedes EN 140100:2008.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60115-2:2014 are prefixed “Z”.



INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fixed resistors for use in electronic equipment –
Part 2: Sectional specification: Leaded fixed low power film resistors**

**Résistances fixes utilisées dans les équipements électroniques –
Partie 2: Spécification intermédiaire: Résistances fixes à broches à couches, à
faible dissipation**



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IEC Central Office
 3, rue de Varembe
 CH-1211 Geneva 20
 Switzerland

Tel.: +41 22 919 02 11
 Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fixed resistors for use in electronic equipment –
Part 2: Sectional specification: Leded fixed low power film resistors**

**Résistances fixes utilisées dans les équipements électroniques –
Partie 2: Spécification intermédiaire: Résistances fixes à broches à couches, à
faible dissipation**

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FIXED RESISTORS FOR USE IN ELECTRONIC EQUIPMENT –**Part 2: Sectional specification:
Leaded fixed low power film resistors**

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International Standard IEC 60115-2 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 1982, and it constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- it includes test conditions and requirements for lead-free soldering and assessment procedures meeting the requirements of a "zero defect" approach;
- it introduces a product classification based on application requirements;
- it includes an extension of the list of styles and dimensions;
- it includes the use of an extended scope of stability class definitions;
- it includes the extension of the lists of preferred values of ratings;

- it includes test conditions and requirements for lead-free soldering, for periodic overload and for resistance to electrostatic discharge (ESD);
- it includes a new set of severities for a shear test;
- it includes definitions for a test board;
- it includes the replacement of assessment level E and possible others by the sole assessment level EZ, meeting the requirements of a “zero defect” approach;
- it includes an extended endurance test, a flammability test, a temperature rise test, vibration tests, an extended rapid change of temperature test, and a single pulse high-voltage overload test;
- it includes requirements applicable to 0 Ω resistors (jumpers);
- it includes recommendations for the denomination, description, packaging and quality assessment of radial formed styles;
- it includes prescriptions for endurance testing at room temperature, supplementary to the rulings of IEC 60115-1.

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

FDIS	Report on voting
40/2282/FDIS	40/2289/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.

A list of all parts in the IEC 60115 series, published under the general title *Fixed resistors for use in electronic equipment*, can be found on the IEC website.

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

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

FIXED RESISTORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 2: Sectional specification: Leaded fixed low power film resistors

1 Scope

This part of IEC 60115 is applicable to leaded fixed low-power film resistors for use in electronic equipment.

These resistors are typically described according to types (different geometric shapes) and styles (different dimensions) and product technology. The resistive element of these resistors is typically protected by a conformal lacquer coating. These resistors have wire terminations and are primarily intended to be mounted on a circuit board in through-hole technique.

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

2 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.

IEC 60062:2004, *Marking codes for resistors and capacitors*

IEC 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 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 60115-1:2008, *Fixed resistors for use in electronic equipment – Part 1: Generic specification*

IEC 60286-1, *Packaging of components for automatic handling – Part 1: Tape packaging of components with axial leads on continuous tapes*

IEC 60294:2012, *Measurement of the dimensions of a cylindrical component with axial terminations*

IEC 60301, *Preferred diameters of wire terminations of capacitors and resistors*

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

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

3 Terms, definitions, product technologies and product classification

koniec náhľadu – text ďalej pokračuje v platenej verzii STN