IEC 60115-4

Edition 3.0 2022-11

INTERNATIONAL STANDARD

colour inside

Fixed resistors for use in electronic equipment – Part 4: Sectional specification: Power resistors for through hole assembly on circuit boards (THT) or for assembly on chassis

IEC 60115-4:2022-11(en)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 31.040.10

ISBN 978-2-8322-6088-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIXED RESISTORS FOR USE IN ELECTRONIC EQUIPMENT –

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FOREWORD

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IEC 60115-4 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is an International Standard.

This third edition cancels and replaces the second edition published in 1982 and Amendment 1:1993. This edition constitutes a technical revision and includes test conditions and requirements for lead-free soldering and assessment procedures meeting the requirements of a "zero defect" approach.

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

a) the definitions of product technologies and product classification levels of the generic specification, IEC 60115-1:2020, have been adopted;
b) a basis for the optional specification of the lead eccentricity of axial leaded resistors has been amended in 4.2;

c) the 'period-pulse high-voltage overload test' of IEC 60115-1:2020, 8.3 has been adopted as default test method in 5.3.9, thereby replacing the legacy test 'periodic-pulse overload test of IEC 60115-1:2020, 8.4;

d) the revised solderability test of IEC 60115-1:2020, 11.1 has been adopted in 5.3.22 and 5.3.23;

e) the combined solvent resistance test of IEC 60115-1:2020, 11.3 has been adopted in 5.3.25;

f) the 'endurance at room temperature test' of IEC 60115-1:2020, 7.2 has been reworked and adopted in 5.3.5;

g) the 'single-pulse high-voltage overload test' of IEC 60115-1:2020, 8.2, applied with the pulse shape 10/700 in 5.3.8, is complemented with the optional alternative provided by the pulse shape 1,2/50 in 5.4.1.

h) climatic tests for 'operation at low temperature' of IEC 60115 1:2020, 10.2, and for 'damp heat, steady state, accelerated' of IEC 60115-1:2020, 10.5, have been adopted as optional tests in 5.4.5. and 5.4.6, respectively;

i) inclusion of an optional flammability test as 5.4.8;

j) new guidance is provided in 6.2 on the presentation of stability requirements with their permissible absolute and relative deviations;

k) acceptance criteria for the visual inspection have been added in 6.5 and in Annex B;

l) visual inspection for the primary and proximity packaging has been added in 6.5.3 and in 7.2;

m) the periodical evaluation of termination platings has been added as a new topic of quality assessment in 9.8;

n) the revised test clause numbering of IEC 60115-1:2020 has been applied;

o) a new Annex C has been added to summarize workmanship requirements for the assembly of leaded power resistors, e.g. as given in the prior IEC 61192 series of standards;

p) the informative Annex F on radial formed styles has been amended with details on a formed Z-bend style for surface-mount assembly;

q) furthermore, the informative Annex X has been added to show the cross-references to the prior edition of this document.

The text of this International Standard is based on the following documents:

Draft	Report on voting
40/2920/CDV	40/2963/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

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 document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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