

<b>STN</b>	<b>Metóda merania prúdového šumu vytváraného v nepremenných rezistoroch.</b>	<b>STN EN 60195</b>  35 8054
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Method of measurement of current noise generated in fixed 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. 12/16

Obsahuje: EN 60195:2016, IEC 60195:2016

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

**EN 60195**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2016

ICS 31.040.10

English Version

Method of measurement of current noise generated in fixed  
resistors  
(IEC 60195:2016)

Méthode pour la mesure du bruit produit en charge par les  
résistances fixes  
(IEC 60195:2016)

Messverfahren für das Stromrauschen in Festwiderständen  
(IEC 60195:2016)

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

The text of document 40/2431/FDIS, future edition 2 of IEC 60195, prepared by IEC/TC 40 "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60195:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-02-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-05-12

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60027 (series)

NOTE Harmonized as EN 60027 (series).

**Annex ZA**  
(normative)

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with their corresponding European publications**

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NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	2013	Environmental testing -- Part 1: General and guidance	EN 60068-1	2014



IEC 60195

Edition 2.0 2016-04

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Method of measurement of current noise generated in fixed resistors**

**Méthode pour la mesure du bruit produit en charge par les résistances fixes**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Method of measurement of current noise generated in fixed resistors**

**Méthode pour la mesure du bruit produit en charge par les résistances fixes**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**METHOD OF MEASUREMENT OF CURRENT  
NOISE GENERATED IN FIXED RESISTORS****FOREWORD**

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International Standard IEC 60195 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This second edition cancels and replaces the first edition published in 1965 and constitutes a technical revision.

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

- harmonization of the allocation of isolation resistors  $R_M$  in the recommended operating conditions given in Table 2;
- correction of erroneous numeric values of the contribution of system noise,  $f(T - S)$  in Table 3;
- addition of advice on the prescription of requirements in a relevant component specification;
- addition of a set of recommended measuring conditions for specimens with a rated dissipation of less than 100 mW;

- complete editorial revision.

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

FDIS	Report on voting
40/2431/FDIS	40/2458/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.

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 website 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.

## METHOD OF MEASUREMENT OF CURRENT NOISE GENERATED IN FIXED RESISTORS

### 1 Scope

This International Standard specifies a method of measurement and associated test conditions to assess the "noisiness", or magnitude of current noise, generated in fixed resistors of any given type. The method applies to all classes of fixed resistors. The aim is to provide comparable results for the determination of the suitability of resistors for use in electronic circuits having critical noise requirements.

The current noise in resistive materials reflects the granular structure of the resistive material. For some resistor technologies utilizing homogenous layers it is regarded as providing an indication of defects, which are considered as a root cause for abnormal ageing of the component under the influence of temperature and time.

The method described in this International Standard is not a general specification requirement and therefore is applied if prescribed by a relevant component specification, or, if agreed between a customer and a manufacturer.

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

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