



SLOVENSKI STANDARD

SIST EN 61051-1:2009

01-januar-2009

Varistorji za elektronsko opremo - 1. del: Rodovna specifikacija (IEC 61051-1:2007)

Varistors for use in electronic equipment - Part 1: Generic specification (IEC 61051-1:2007)

Varistoren zur Verwendung in Geräten der Elektronik - Teil 1: Fachgrundspezifikation (IEC 61051-1:2007)

Varistances utilisées dans les équipements électroniques - Partie 1: Spécification générique (CEI 61051-1:2007)

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Ta slovenski standard je istoveten z: EN 61051-1:2008

ICS:

31.040.99 Drugi upori Other resistors

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61051-1

November 2008

ICS 31.040.99

Supersedes CECC 42 000:1978

English version

**Varistors for use in electronic equipment -
Part 1: Generic specification
(IEC 61051-1:2007)**

Varistances utilisées
dans les équipements électroniques -
Partie 1: Spécification générique
(CEI 61051-1:2007)

Varistoren zur Verwendung
in Geräten der Elektronik -
Teil 1: Fachgrundspezifikation
(IEC 61051-1:2007)

This European Standard was approved by CENELEC on 2008-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

Foreword

The text of document 40/1775/CDV, future edition 2 of IEC 61051-1, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 61051-1 on 2008-10-01.

This European Standard supersedes CECC 42 000:1978.

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) 2009-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61051-1:2007 was approved by CENELEC as a European Standard without any modification.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60027	Series	Letter symbols to be used in electrical technology	EN 60027	Series
IEC 60050	Series	International Electrotechnical Vocabulary (IEV)	-	-
IEC 60060-2	1994	High-voltage test techniques - Part 2: Measuring systems	EN 60060-2	1994
IEC 60062	2004	Marking codes for resistors and capacitors	EN 60062 + corr. January	2005 2007
IEC 60068-1 + corr. October + A1	1988 1988 1992	Environmental testing - Part 1: General and guidance	EN 60068-1	1994
IEC 60068-2-1	2007	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	2007
IEC 60068-2-2 A1 A2	1974 1993 1994	Environmental testing - Part 2: Tests - Test B: Dry heat	EN 60068-2-2 ¹⁾ A1 A2	1993 1993 1994
IEC 60068-2-6	1995	Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6 ²⁾	1995
IEC 60068-2-13	1983	Environmental testing - Part 2: Tests - Test M: Low air pressure	EN 60068-2-13	1999
IEC 60068-2-14 + A1	1984 1986	Environmental testing - Part 2: Tests - Test N: Change of temperature	EN 60068-2-14	1999
IEC 60068-2-20 + A2	1979 1987	Environmental testing - Part 2: Tests - Test T: Soldering	HD 323.2.20 S3 ³⁾	1988
IEC 60068-2-21	2006	Environmental testing - Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices	EN 60068-2-21	2006
IEC 60068-2-27	1987	Environmental testing - Part 2: Tests - Test Ea and guidance: Shock	EN 60068-2-27	1993
IEC 60068-2-29	1987	Environmental testing - Part 2: Tests - Test Eb and guidance: Bump	EN 60068-2-29	1993
IEC 60068-2-30	2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	2005

¹⁾ EN 60068-2-2, which includes supplement A:1976 to IEC 60068-2-2, and its amendments are superseded by EN 60068-2-2:2007, which is based on IEC 60068-2-2:2007.

²⁾ EN 60068-2-6 is superseded by EN 60068-2-6:2008, which is based on IEC 60068-2-6:2007.

³⁾ HD 323.2.20 S3 is superseded by EN 60068-2-20:2008, which is based on IEC 60068-2-20:2008.

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-45	1980	Environmental testing - Part 2: Tests - Test XA and guidance: Immersion in cleaning solvents	EN 60068-2-45	1992
IEC 60068-2-54	2006	Environmental testing - Part 2-54: Tests - Test Ta: Solderability testing of electronic components by the wetting balance method	EN 60068-2-54	2006
IEC 60068-2-58	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)	EN 60068-2-58 + corr. December	2004 2004
IEC 60068-2-69	1995	Environmental testing - Part 2: Tests - Test Te: Solderability testing of electronic components for surface mount technology by the wetting balance method	EN 60068-2-69 ⁴⁾	1996
IEC 60068-2-78	2001	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001
IEC 60294	1969	Measurement of the dimensions of a cylindrical component having two axial terminations	-	-
IEC 60410	1973	Sampling plans and procedures for inspection - by attributes	-	-
IEC 60617	Data- base	Graphical symbols for diagrams	-	-
IEC 60695-11-5	2004	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005
IEC 60717	1981	Method for the determination of the space required by capacitors and resistors with unidirectional terminations	-	-
IEC 61249-2-7	2002	Materials for printed boards and other interconnecting structures - Part 2-7: Reinforced base materials, clad and unclad - Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test), copper-clad	EN 61249-2-7 + corr. September	2002 2005
IEC QC 001002-3	- ⁵⁾	IEC Quality Assessment System for Electronic- Components (IECQ) - Rules of Procedure - Part 3: Approval procedures	-	-
ISO 1000 A1	1992 1998	SI units and recommendations for the use of their multiples and of certain other units	-	-

⁴⁾ EN 60068-2-69 is superseded by EN 60068-2-69:2007, which is based on IEC 60068-2-69:2007.

⁵⁾ Undated reference.

INTERNATIONAL STANDARD

IEC
61051-1

QC 420000

Second edition
2007-04

Varistors for use in electronic equipment –

Part 1: Generic specification

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International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

VARISTORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 1: Generic specification

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61051-1 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 1991 and constitutes a minor revision related to tables, figures and references.

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

CDV	Report on voting
40/1775/CDV	40/1841/RVC

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

The QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

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

The list of all the parts of the IEC 61051 series, under the general title *Varistors for use in electronic equipment*, can be found on the IEC website.

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

A bilingual version of this publication may be issued at a later date.

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VARISTORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 1: Generic specification

1 General

1.1 Scope

This part of IEC 61051 is applicable to varistors with symmetrical voltage-current characteristics for use in electronic equipment.

1.2 Object

The object of this standard is to establish standard terms, inspection procedures and methods of test for use in sectional and detail specifications for Qualification Approval and for Quality Assessment Systems for electronic components.

1.3 Normative references

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

IEC 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)*

IEC 60060-2:1994, *High-voltage test techniques – Part 2: Measuring systems*

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

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

IEC 60068-2-1:2007, *Environmental testing – Part 2: Tests – Test A: Cold*

IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests – Tests B: Dry heat*
Amendment 1 (1993)
Amendment 2 (1994)

IEC 60068-2-6:1995, *Environmental testing – Part 2: Tests – Test Fc and guidance: Vibration (Sinusoidal)*

IEC 60068-2-13:1983, *Environmental testing – Part 2: Tests – Test M: Low air pressure*

IEC 60068-2-14:1984, *Environmental testing – Part 2: Tests – Test N: Change of temperature*
Amendment 1 (1986)

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests – Test T: Soldering*
Amendment 2 (1987)

IEC 60068-2-21:2006, *Environmental testing – Part 2-21: Tests – Test U: Robustness of terminations and integral mounting devices*

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*