

INTERNATIONAL STANDARD

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**Varistors for use in electronic equipment –
Part 2: Sectional specification for surge suppression varistors**

**Varistances utilisées dans les équipements électroniques –
Partie 2: Spécification intermédiaire pour varistances pour limitations de
surtensions transitoires**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

VARISTORS FOR USE IN ELECTRONIC EQUIPMENT –**Part 2: Sectional specification for surge suppression varistors**

FOREWORD

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IEC 61051-2 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is an International Standard.

This second edition cancels and replaces the first edition published in 1991 and Amendment 1:2009. This edition constitutes a technical revision.

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

- a) revision for the structure in accordance with ISO/IEC Directives, Part 2) to the extent practicable, and for harmonizing with IEC 61051-1:2018;
- b) Annex X has been added for comparison with the previous edition;
- c) two lists of preferred voltage ratings for disk type and SMD type varistors have been added;
- d) permissible numbers of non-conforming items have been set to zero (zero fault) in the test schedule in 8.4.3.

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

Draft	Report on voting
40/2877/FDIS	40/2895/RVD

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.

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/standardsdev/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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VARISTORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 2: Sectional specification for surge suppression varistors

1 Scope

This part of IEC 61051 is a sectional specification and is applicable to metal oxide varistors with symmetrical voltage-current characteristics for use in electronic equipment connected to any AC or DC supply system.

These varistors are designed to protect electronic and other sensitive equipment from high transient surges. Varistors under the scope of this sectional specification are not intended to give primary protection against lightning surges.

These varistors have metallic connections and are intended to be mounted as through hole component or directly on to printed boards.

The object of this document is to prescribe preferred ratings and characteristics and to select from IEC 61051-1 the appropriate quality assessment procedures, tests and measuring methods, and to give general performance requirements for the type of varistors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60062, *Marking codes for resistors and capacitors*

IEC 60068-1, *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, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-20, *Environmental testing – Part 2-20: Tests – Test Ta and Tb: Test methods for solderability and resistance to soldering heat of devices with leads*

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

IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-45, *Basic environmental testing procedures – Part 2-45: Tests – Test XA and guidance: Immersion in cleaning solvents*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*