

# INTERNATIONAL STANDARD

High frequency inductive components – Electrical characteristics and measuring methods –  
Part 2: Rated current of inductors for DC to DC converters



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HIGH FREQUENCY INDUCTIVE COMPONENTS –  
ELECTRICAL CHARACTERISTICS AND MEASURING METHODS –****Part 2: Rated current of inductors for DC to DC converters**

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

| FDIS        | Report on voting |
|-------------|------------------|
| 51/937/FDIS | 51/941/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.

A list of all parts of IEC 62024 series, under the general title *High frequency inductive components – Electrical characteristics and measuring methods*, 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- withdrawn,
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## HIGH FREQUENCY INDUCTIVE COMPONENTS – ELECTRICAL CHARACTERISTICS AND MEASURING METHODS –

### Part 2: Rated current of inductors for DC to DC converters

#### 1 Scope

This part of IEC 62024 specifies the measuring methods of the rated direct current limits for small inductors.

Standardized measuring methods for the determination of ratings enable users to accurately compare the current ratings given in various manufacturers' data books.

This standard is applicable to leaded and surface mount inductors with dimensions according to IEC 62025-1 and generally with rated current less than 22 A, although inductors with rated current greater than 22 A are available that fall within the dimension restrictions of this standard (no larger than 12 mm × 12 mm footprint approximately). These inductors are typically used in DC to DC converters built on PCB, for electric and telecommunication equipment, and small size switching power supply units.

The measuring methods are defined by the saturation and temperature rise limitations induced solely by direct current.

#### 2 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 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 62025-1, *High frequency inductive components – Non-electrical characteristics and measuring methods – Part 1: Fixed, surface mounted inductors for use in electronic and telecommunication equipment*

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

##### 3.1

##### **DC saturation limited current**

allowable value of DC current for which the decrease of the inductance is within the specified value

##### 3.2

##### **temperature rise limited current**

allowable value of DC current for which the self-generation heat of the inductor results in temperature rise within the specified value