



IEC 62024-2

Edition 2.0 2020-03
REDLINE VERSION

INTERNATIONAL STANDARD



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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.100.10

ISBN 978-2-8322-8136-9

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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**

FOREWORD

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International Standard IEC 62024-2 has been prepared IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

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

a) addition of Table 2 and Figure 2 b).

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

CDV	Report on voting
51/1303/CDV	51/1325/RVC

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

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

A list of all parts of IEC 62024 series, published under the general title *High frequency inductive components – Electrical characteristics and measuring methods* can be found on the IEC website.

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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 document 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 document (no larger than a 12 mm × 12 mm footprint approximately). These inductors are typically used in DC-to-DC converters built on PCBs, 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 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 60068-1:2013, *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*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

High frequency inductive components – Electrical characteristics and measuring methods –

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

Composants inductifs à haute fréquence – Caractéristiques électriques et méthodes de mesure –

Partie 2: Courant assigné des bobines d'induction pour des convertisseurs continu-continu

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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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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*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

COMPOSANTS INDUCTIFS À HAUTE FRÉQUENCE – CARACTÉRISTIQUES ÉLECTRIQUES ET MÉTHODES DE MESURE –

Partie 2: Courant assigné des bobines d'induction pour des convertisseurs continu-continu

AVANT-PROPOS

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La Norme internationale IEC 62024-2 a été établie par le comité d'études 51 de l'IEC: Composants magnétiques, ferrites et matériaux en poudre magnétique.

Cette deuxième édition annule et remplace la première édition parue en 2008. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) ajout du Tableau 2 et de la Figure 2 b).

Le texte de cette Norme internationale est issu des documents suivants:

CDV	Rapport de vote
51/1303/CDV	51/1325/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62024, publiées sous le titre général *Composants inductifs à haute fréquence – Caractéristiques électriques et méthodes de mesure*, peut être consultée sur le site web de l'IEC.

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COMPOSANTS INDUCTIFS À HAUTE FRÉQUENCE – CARACTÉRISTIQUES ÉLECTRIQUES ET MÉTHODES DE MESURE –

Partie 2: Courant assigné des bobines d'induction pour des convertisseurs continu-continu

1 Domaine d'application

La présente partie de l'IEC 62024 spécifie les méthodes de mesure des limites de courant continu assigné pour de petites bobines d'induction.

Les méthodes de mesure normalisées pour la détermination des caractéristiques assignées permettent aux utilisateurs de comparer avec précision les caractéristiques assignées courantes figurant dans les différents recueils de données fabricants.

Le présent document s'applique aux bobines d'induction à sorties et pour montage en surface dont les dimensions sont conformes à l'IEC 62025-1 et dont le courant assigné est généralement inférieur à 22 A, même si des bobines d'induction de courant assigné supérieur à 22 A sont disponibles et respectent les restrictions de dimensions de ce document (empreinte ne dépassant pas environ 12 mm × 12 mm). Ces bobines d'induction sont habituellement utilisées dans des convertisseurs continu-continu montés sur des cartes à circuit imprimé (CCI), pour des matériels électriques et de télécommunications, ainsi que pour des unités d'alimentation de puissance de commutation de petite taille.

Les méthodes de mesure sont définies par les limites de saturation et d'échauffement induites uniquement par le courant continu.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60068-1:2013, *Essai d'environnement – Partie 1: Généralités et lignes directrices*

IEC 62025-1, *Composants inductifs à haute fréquence – Caractéristiques non électriques et méthodes de mesure – Partie 1: Inductances fixes pour montage en surface utilisées dans les matériels électroniques et les équipements de télécommunications*