

INTERNATIONAL STANDARD

Soft ferrite material classification





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IEC 61332

Edition 3.0 2016-11

INTERNATIONAL STANDARD

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.100.10

ISBN 978-2-8322-3748-9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SOFT FERRITE MATERIAL CLASSIFICATION

FOREWORD

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International Standard IEC 61332 has been prepared IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

This third edition cancels and replaces the second edition published in 2005. This edition constitutes a technical revision.

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

- a) deleted "c" rank from subclass from Table 3, because of too large power loss density;
- b) added "a-wide" rank in subclasses PW3, PW4 and PW5 in Table 3;
- c) changed "B" of PW3 class from 100 mT to 200 mT; " $B \times f$ " and "power loss density" have also been changed;
- d) changed "B" of PW4 class from 50 mT to 100 mT; " $B \times f$ " and "power loss density" have also been changed.

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

FDIS	Report on voting
51/1146/FDIS	51/1155/RVD

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.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

SOFT FERRITE MATERIAL CLASSIFICATION

1 Scope

This document specifies classification rules for soft ferrite materials used in inductive components (inductors and transformers) fulfilling the requirements of the electronic industries.

This document addresses the following issues for ferrite suppliers and users:

- cross-reference between materials from multiple suppliers;
- assistance to customers in understanding the published technical data in catalogues when comparing multiple suppliers;
- guidance to customers in selecting the most applicable material for each application;
- setting of nomenclature for IEC standards relating to ferrite;
- establishing uniform benchmarks for suppliers for performance in new development of materials.

The numerical values given in this document are typical values of the parameters (properties) of the related materials. Direct translation from the material specification into the core specification is not always easy or possible.

Every detailed material and core specification should be agreed upon between the user and the manufacturer.

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 60050-221, *International Electrotechnical Vocabulary – Chapter 221: Magnetic materials and components*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-221 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Classification

4.1 Material classification

Soft ferrite materials may be classified according to the following basic parameters: