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Soft ferrite material classification

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61332:2016. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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

This fourth edition cancels and replaces the third edition published in 2016. This edition constitutes a technical revision.

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

a) added PW2c and PW3c in subclasses PW2 and PW3 respectively in Table 3;

b) added the column of B_S in Table 3;

c) added a smaller size of the test core (Ø 12,7 mm × Ø 7,5 mm × 7 mm) for higher measuring frequency (≥ 500 kHz) in Table 3.

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

Draft	Report on voting
51/1582/FDIS	51/1591/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/publications.

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

– reconfirmed,

– withdrawn, or

– revised.

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~~ users in understanding the published technical data in catalogues when comparing multiple suppliers;
– guidance to ~~customers~~ users in selecting the most applicable material for each application;
– setting of nomenclature for IEC standards relating to ferrite;
– establishing uniformed 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~~ suppliers and ~~the manufacturer~~ users.

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 (IEV) - Part 221: Magnetic materials and components*

Bibliography

IEC 60401-3:2015, *Terms and nomenclature for cores made of magnetically soft ferrites - Part 3: Guidelines on the format of data appearing in manufacturers' catalogues of transformer and inductor cores*

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