
Jedra iz mehkomagnetnih materialov – Merilne metode – 2. del: Magnetne lastnosti pri šibkem vzburjanju (IEC 62044-2:2005)

Cores made of soft magnetic materials – Measuring methods – Part 2: Magnetic properties at low excitation level (IEC 62044-2:2005)

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EUROPEAN STANDARD

EN 62044-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2005

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English version

**Cores made of soft magnetic materials –
Measuring methods
Part 2: Magnetic properties at low excitation level
(IEC 62044-2:2005)**

Noyaux en matériaux magnétiques doux -
Méthodes de mesure
Partie 2: Propriétés magnétiques à niveau
d'excitation faible
(CEI 62044-2:2005)

Kerne aus weichmagnetischen Materialien -
Messverfahren
Teil 2: Messungen der magnetischen
Eigenschaften im Signalapplikationsbereich
(IEC 62044-2:2005)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 51/804/FDIS, future edition 1 of IEC 62044-2, prepared by IEC TC 51, Magnetic components and ferrite materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62044-2 on 2005-04-01.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2006-01-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2008-04-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62044-2:2005 was approved by CENELEC as a European Standard without any modification.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60205	- 1)	Calculation of the effective parameters of magnetic piece parts	EN 60205	2001 2)
IEC 60401-3	2003	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	EN 60401-3	2003
IEC 62044-1	2002	Cores made of soft magnetic materials - Measuring methods Part 1: Generic specification	EN 62044-1	2002

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1) Undated reference.

2) Valid edition at date of issue.

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Première édition
First edition
2005-03

**Noyaux en matériaux magnétiques doux –
Méthodes de mesure –**

**Partie 2:
Propriétés magnétiques à niveau
d'excitation faible**

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**Cores made of soft magnetic materials –
Measuring methods –**

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**Part 2:
Magnetic properties at low excitation level**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CORES MADE OF SOFT MAGNETIC MATERIALS –
MEASURING METHODS –**

Part 2: Magnetic properties at low excitation level

FOREWORD

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International Standard IEC 62044-2 has been prepared by IEC technical committee 51: Magnetic components and ferrite materials.

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

FDIS	Report on voting
51/804/FDIS	51/816/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.

IEC 62044 consists of the following parts, under the general title *Cores made of soft magnetic materials – Measuring methods*:

Part 1: Generic specification

Part 2: Magnetic properties at low excitation level

Part 3: Magnetic properties at high excitation level

This standard, together with IEC 62044-1 (2002) and IEC 62044-3 (2000), cancels and replaces IEC 60367-1 (1982), its amendment 1 (1984), its amendment 2 (1992), IEC 60367-2 (1974), its amendment 1 (1983) and IEC 60367-2A (1976).

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;
- replaced by a revised edition, or
- amended.

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CORES MADE OF SOFT MAGNETIC MATERIALS – MEASURING METHODS –

Part 2: Magnetic properties at low excitation level

1 Scope and object

This part of IEC 62044 applies to magnetic cores, mainly made of magnetic oxides or metallic powders, used at low excitation level in inductors and transformers for telecommunication equipment and electronic devices employing similar techniques.

Some of the methods described in this part of IEC 62044 may also be suitable for magnetic cores used in other components.

This part of IEC 62044 gives guidance for the drafting of those parts of specifications for magnetic cores that are concerned with measuring methods for magnetic and electric core properties. This part of IEC 62044 is limited to the general principles to be followed for various possible test methods and sets out the factors to be taken into account when deciding on the description of the test method to be included in the specification.

NOTE All the formulae in this part of IEC 62044 use basic SI units. When multiples or submultiples are used, the appropriate power of 10 should be introduced. The conversion factor for inductances and inductance factors is as follows: $1 \text{ H} = 10^9 \text{ nH}$.

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2 Normative references

SIST EN 62044-2:2005

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 60205, *Calculation of the effective parameters of magnetic piece parts*

IEC 60401-3:2003, *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*

IEC 62044-1:2002, *Cores made of soft magnetic materials – Measuring methods – Part 1: Generic specification*

3 Terms and definitions

For the purposes of this part of IEC 62044, the following terms and definitions apply.