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Irish Standard I.S. EN 62211:2017

Inductive components - Reliability management

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I.S. EN 62211:2017

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National Foreword

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EUROPEAN STANDARD

EN 62211

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2017

ICS 29.100.10

Supersedes EN 62211:2004

English Version

Inductive components - Reliability management (IEC 62211:2017)

Composants inductifs - Gestion de la fiabilité (IEC 62211:2017) Induktive Bauelemente - Zuverlässigkeitsmanagement (IEC 62211:2017)

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EN 62211:2017

European foreword

The text of document 51/1150/FDIS, future edition 2 of IEC 62211, prepared by IEC/TC 51 "Magnetic components, ferrite and magnetic powder materials" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62211:2017.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2017-11-10
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-02-10

This document supersedes EN 62211:2004.

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The text of the International Standard IEC 62211:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-2-20	NOTE	Harmonized as EN 60068-2-20.
IEC 60068-2-21	NOTE	Harmonized as EN 60068-2-21.
IEC 60068-2-54	NOTE	Harmonized as EN 60068-2-54.
IEC 60068-3-13	NOTE	Harmonized as EN 60068-3-13.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-1	-	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60068-2-30	-	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	-
IEC 60068-2-58	-	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58	-
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	-
IEC 60424	Series	Ferrite cores - Guidelines on the limits of surface irregularities	EN 60424	Series
IEC 61007 (mod)	1994	Transformers and inductors for use in electronic and telecommunication equipment - Measuring methods and test procedures	EN 61007	1997
IEC 61248	Series	Transformers and inductors for use in electronic and telecommunication equipment	EN 61248	Series

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IEC 62211:2017-01(en)



Edition 2.0 2017-01

INTERNATIONAL STANDARD

Inductive components – Reliability management





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INTERNATIONAL STANDARD

Inductive components – Reliability management

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUCTIVE COMPONENTS – RELIABILITY MANAGEMENT

FOREWORD

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International Standard IEC 62211 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

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

- a) continuous shock and mechanical shock are integrated in the test conditions;
- b) the normative references in Table 3 are changed.

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

FDIS	Report on voting
51/1150/FDIS	51/1158/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.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

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

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INDUCTIVE COMPONENTS – RELIABILITY MANAGEMENT

1 Scope

This document is applicable to inductive components (chokes and transformers) based on magnetically soft materials. These are components based especially on laminated iron sheets, iron powder materials (including alloys), as well as ferrites and amorphous or crystalline metal band cores.

Winding assemblies mean wire winding assemblies as well as multilayer and stacking technologies of planar technology including coils based on non-magnetic materials. Discrete type components and the different types of surface mount inductive components (SMD) are also considered in this document.

The reliability of assemblies of inductive components based on several technologies such as glued types, types with clamps (clips), impregnated (varnished) types as well as (vacuum) potted types can also be checked with this document.

The subsequent determinations can be applied either for the primary qualification of inductive components or for all manners of requalification examinations (design, process, change of production facility). They can also be applied for the monitoring of products out of actual manufacturing processes.

This document sets up a broad basis of electric and mechanical criteria of failure test procedures.

If manufacturers advertise compliance with this standard in their data sheets, customers can request data to demonstrate compliance with this standard. The customers can also request the product to be in compliance with this standard by a recognised body.

Customers and manufacturers can elect to perform additional testing and acceptance criteria different than those defined in this standard.

2 Normative references

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IEC 60068-2-1, Environmental testing – Part 2-1: Tests – Test A: Cold

IEC 60068-2-2, Environmental testing – Part 2-2: Tests – Test B: Dry heat

IEC 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)

IEC 60068-2-14, Environmental testing – Part 2-14: Tests – Test N: Change of temperature

IEC 60068-2-27, Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock

IEC 60068-2-30, Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)



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