



BSI Standards Publication

Inductive components - Reliability management

National foreword

This British Standard is the UK implementation of EN 62211:2017. It is identical to IEC 62211:2017. It supersedes BS EN 62211:2004, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/51, Transformers, inductors, magnetic components and ferrite materials.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017
Published by BSI Standards Limited 2017

ISBN 978 0 580 92156 8

ICS 29.100.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2017.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Inductive components - Reliability management (IEC 62211:2017)

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

Induktive Bauelemente - Zuverlässigkeitsmanagement
(IEC 62211:2017)

This European Standard was approved by CENELEC on 2017-02-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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

This document supersedes EN 62211:2004.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

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

<u>Publication</u>	<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

This page deliberately left blank

CONTENTS

FOREWORD.....	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Component families	6
5 Test samples	7
5.1 Classification by application	7
5.2 Numbering of samples and content of test report	7
5.3 Pre-treatment of test samples	8
5.3.1 Magnetic pre-treatment.....	8
5.3.2 Mechanical pre-treatment	8
5.3.3 Exposure to reflow temperature profile	8
6 Failure criteria	8
7 Test conditions and specification of the minimum requirements	11
8 Test sequence	14
9 Test evaluation	14
Bibliography.....	15
Table 1 – General mechanical failure criteria	9
Table 2 – Electrical failure criteria.....	10
Table 3 – Test conditions	12