
Dielektrični resonatorji valovodnega tipa – 1. del: Generična specifikacija (IEC 61338-1:2004)

Waveguide type dielectric resonators – Part 1: Generic specification (IEC 61338-1:2004)

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EUROPEAN STANDARD

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Waveguide type dielectric resonators
Part 1: Generic specification
(IEC 61338-1:2004)

Résonateurs diélectriques
à modes guidés
Partie 1: Spécification générique
(CEI 61338-1:2004)

Dielektrische Resonatoren
vom Wellenleitertyp
Teil 1: Fachgrundspezifikation
(IEC 61338-1:2004)

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This European Standard was approved by CENELEC on 2004-12-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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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 48/690/FDIS, future edition 1 of IEC 61338-1, prepared by IEC TC 49, Piezoelectric and dielectric devices for frequency control and selection, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61338-1 on 2004-12-01.

This European Standard supersedes EN 170000:1999.

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) 2005-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-12-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61338-1:2004 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 60027	Series	Letter symbols to be used in electrical technology	HD 245 HD 60027	Series Series
IEC 60050-561	1991	International Electrotechnical Vocabulary (IEV) Chapter 561: Piezoelectric devices for frequency control and selection	-	-
IEC 60068-1	1988	Environmental testing Part 1: General and guidance	EN 60068-1 ¹⁾	1994
IEC 60068-2-1	1990	Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 60068-2-2	1974	Part 2: Tests - Tests B: Dry heat	EN 60068-2-2 ²⁾	1993
IEC 60068-2-6 + corr. March	1995 1995	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60068-2-7	1983	Part 2: Tests - Test Ga: Acceleration, steady state	EN 60068-2-7 ³⁾	1993
IEC 60068-2-13	1983	Part 2: Tests - Test M: Low air pressure	EN 60068-2-13	1999
IEC 60068-2-14	1984	Part 2: Tests - Test N: Change of temperature	EN 60068-2-14 ⁴⁾	1999
IEC 60068-2-20	1979	Part 2: Tests - Test T: Soldering	HD 323.2.20 S3 ⁵⁾	1988
IEC 60068-2-21	1999	Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices	EN 60068-2-21	1999
IEC 60068-2-27	1987	Part 2: Tests - Test Ea and guidance: Shock	EN 60068-2-27	1993

¹⁾ EN 60068-1 includes corrigendum October 1988 + A1:1992 to IEC 60068-1.

²⁾ EN 60068-2-2 includes supplement A:1976 to IEC 60068-2-2.

³⁾ EN 60068-2-7 includes A1:1986 to IEC 60068-2-7.

⁴⁾ EN 60068-2-14 includes A1:1986 to IEC 60068-2-14.

⁵⁾ HD 323.2.20 S3 includes A2:1987 to IEC 60068-2-20.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-29 + corr.	1987	Part 2: Tests - Test Eb and guidance: Bump	EN 60068-2-29	1993
IEC 60068-2-30	1980	Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)	EN 60068-2-30 ⁶⁾	1999
IEC 60068-2-58	2004	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 + corr. December	2004 2004
IEC 60068-2-78	- ⁷⁾	Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001 ⁸⁾
IEC 60617	database	Graphical symbols for diagrams	-	-
IEC 61338-1-3	1999	Waveguide type dielectric resonators Part 1-3: General information and test conditions - Measurement method of complex relative permittivity for dielectric resonator materials at microwave frequency	EN 61338-1-3	2000
IEC 61338-4	- ⁹⁾	Part 4: Sectional specification	-	-
ISO 1000	1992	SI units and recommendations for the use of their multiples and of certain other units	-	-
IEC QC 001001	2000	IEC Quality Assessment System for Electronic Components (IECQ)- Basic rules	-	-
IEC QC 001002-1	1998	IEC quality assessment system for electronic components (IECQ) - Rules of procedure Part 1: Administration	-	-
IEC QC 001002-2	1998	Part 2: Documentation	-	-
IEC QC 001002-3	1998	Part 3: Approval procedures	-	-
IEC QC 001005	2000	Register of firms, products and services approved under the IECQ system, including ISO 9000	-	-

⁶⁾ EN 60068-2-30 includes A1:1985 to IEC 60068-2-30.

⁷⁾ Undated reference.

⁸⁾ Valid edition at date of issue.

⁹⁾ At draft stage.

INTERNATIONAL STANDARD

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First edition
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Waveguide type dielectric resonators –

Part 1: Generic specification

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WAVEGUIDE TYPE DIELECTRIC RESONATORS –

Part 1: Generic specification

FOREWORD

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This International Standard IEC 61338-1 has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

IEC 61338-1 cancels and replaces the first edition of IEC 61338-1-1 published in 1996 and the first edition of IEC 61338-1-2 published in 1998.

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

FDIS	Report on voting
49/690/FDIS	49/699/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 61338 consists of the following parts, under the general title *Waveguide type dielectric resonators*:

- Part 1: Generic specification
- Part 1-3: General information and test conditions – Measurement method of complex relative permittivity for dielectric resonator materials at microwave frequency
- Part 2: Guidelines for oscillator and filter applications
- Part 4: Sectional specification
- Part 4-1: Blank detail specification

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.

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

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WAVEGUIDE TYPE DIELECTRIC RESONATORS –

Part 1: Generic specification

1 General

1.1 Scope

This part of IEC 61338 applies to waveguide type dielectric resonators of assessed quality using either capability approval or qualification approval procedures. It also lists the test and measurement procedures which may be selected for use in detail specifications for such resonators.

1.2 Normative references

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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050(561):1991, *International Electrotechnical Vocabulary (IEV) – Chapter 561: Piezo-electric devices for frequency control and selection*

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-1:1990, *Environmental testing – Part 2: Tests – Tests A: Cold*

IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests – Tests B: Dry Heat*

IEC 60068-2-6:1995, *Environmental testing – Part 2: Tests – Tests Fc: Vibration (sinusoidal)*

IEC 60068-2-7:1983, *Environmental testing – Part 2: Tests – Tests Ga and guidance: Acceleration, steady state*

IEC 60068-2-13:1983, *Environmental testing – Part 2: Tests – Tests M: Low air pressure*

IEC 60068-2-14:1984, *Environmental testing – Part 2: Tests – Tests N: Change of temperature*

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests – Tests T: Soldering*

IEC 60068-2-21:1999, *Environmental testing – Part 2: Tests – Tests U: Robustness of terminations and integral mounting devices*

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests – Tests Ea and guidance: Shock*

IEC 60068-2-29:1987, *Environmental testing – Part 2: Tests – Tests Eb and guidance: Bump*

IEC 60068-2-30:1980, *Environmental testing – Part 2: Tests – Tests Db and guidance: Damp heat, cyclic (12 +12 hour cycle)*