INTERNATIONAL STANDARD

IEC 61338-4-1

First edition
2005-03

Waveguide type dielectric resonators –

Part 4-1:
Blank detail specification

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WAVEGUIDE TYPE DIELECTRIC RESONATORS –

Part 4-1: Blank detail specification

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61338-4-1 has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

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

FDIS	Report on voting
49/703/FDIS	49/717/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.

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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 (this publication)

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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INTRODUCTION

Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for the minimum content of detail specifications.

The front page layout shown on the next page is applicable to detail specifications for standard catalogue items only.

For custom-built waveguide type dielectric resonators where the detail specification is not intended for publication, a suggested layout for the front page is given in Annex A. This is not mandatory, but it is recommended that the layout should be followed whenever possible.

Identification of the detail specification and of the component

The numbers between square brackets on the front page of the detail specification correspond to the following information which should be given in the appropriate boxes.

(1) The name of the National Standards Organization under whose authority the detail specification is published and, if applicable, the organization from whom the detail specification is available.

(2) The IEC and National Standards number allotted to the detail specification, date of issue and any further information required by the national system.

(3) The number and issue number of the IEC generic or sectional specification as relevant; also national reference if different.

(4) If different from the IEC number, the national number of the detail specification, date of issue and any further information required by the national system, together with any amendment numbers.

(5) A brief description of the waveguide type dielectric resonator or range of resonators (For example, nominal frequency and type of resonator).

For (5) the text to be given in the detail specification should be suitable for any entry in IEC QC 001005 and IEC QC 001004.

(6) An outline drawing with main dimensions which are of importance for interchangeability and/or reference to the appropriate national or international document for outlines. Alternatively, this drawing may be given in an annex to the detail specification.

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Specification available from: (1)	Detail specification (2) Page 1 of …
ELECTRONIC COMPONENTS OF ASSESSED QUALITY BY CAPABILITY APPROVAL IN ACCORDANCE WITH: Generic specification: IEC 61338-1 Sectional specification: IEC 61338-4 (3)	(4)
Outline and dimensions – (first angle projection): (6) Dimensions in mm	. (5)

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1 Ratings (see 2.3 of IEC 61338-1 for preferred ratings)

- Rating temperature range
- Climatic category
- Mechanical test severities

Information about manufacturers who have components qualified to this detail specification is available in the current QC 001005.

2 Characteristics (see 2.3 of IEC 61338-1)

- Nominal frequency
- Reference temperature
- Frequency tolerance (s) (if applicable)
- Insertion attenuation

In addition other characteristics may be stated.

3 Related documents

IEC 61338-1, *Waveguide type dielectric resonators – Part 1: Generic specification*

IEC 61338-4, *Waveguide type dielectric resonators – Part 4: Sectional specification*

4 Marking

The marking of the resonator and the primary package shall be in accordance with the requirements of 2.4 of IEC 61338-1. Full details shall be given in the detail specification.

5 Ordering information

The following ordering information shall be specified:

1) quantity;
2) IECQ or customer detail specification number, issue number and date;
3) nominal frequency expressed in MHz or GHz;
4) product code;
5) full description of any additional requirements.

6 Certified test records

The detail specification shall state whether certified test records are required/not required in accordance with 3.12 of IEC 61338-1.

7 Additional information (not for inspection purposes)

The detail specification may include information (which is not normally required to be verified by the inspection procedure) such as circuit diagrams, curves, drawings and notes for the clarification of the detail specification.

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8 Inspection requirements

Clause numbers of tests and performance refer to IEC 61338-1 and are given in Table 1.

In this table

D = destructive

ND = non-destructive

The manufacturer and their customers shall ensure that any quality aspects of the resonators to be supplied that are not covered by the maintenance of the capability approval programme are included in the detail specification.

The blank detail specification does not include any periodic tests as these are controlled by the CQC testing under the maintenance of the capability approval as defined in 3.6.2 and 3.6.2.1 of IEC 61338-1.

Table 1

Clause number and test	D or ND	Test conditions	Performance requirements
100 % inspection	ND		
4.3 Visual test		4.3	3.3
4.5.2 Insertion or 4.5.3 attenuation		4.5.2 or 4.5.3	Specified values
Group B inspection To be conducted on a sampling basis			
Sub-Group B1	ND		Specified values
Dimensions		4.4	

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Annex A
(informative)

Example front page layout for customer detail specifications not for publication

Customer:	Specification reference Issue number Date Page 1 of .....
Manufacturer:	
ELECTRONIC COMPONENTS OF ASSESSED QUALITY BY CAPABILITY APPROVAL IN ACCORDANCE WITH: (3)	Manufacturer's type number
Outline and dimensions - (first angle projection): (6) Dimensions in mm	(5)

A.1 Ratings (see 2.3 of IEC 61338-1 for preferred ratings)

- Operating temperature range
- Climatic category
- Mechanical test severities

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1211 Genève 20
Switzerland

or

Fax to: **IEC**/CSC at +41 22 919 03 00

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Nicht frankieren
Ne pas affranchir

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A Prioritaire

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Q1 Please report on **ONE STANDARD** and **ONE STANDARD ONLY**. Enter the exact number of the standard: *(e.g. 60601-1-1)*

.....

Q2 Please tell us in what capacity(ies) you bought the standard *(tick all that apply).* I am the/a:

purchasing agent ❑
librarian ❑
researcher ❑
design engineer ❑
safety engineer ❑
testing engineer ❑
marketing specialist ❑
other.....

Q3 I work for/in/as a: *(tick all that apply)*

manufacturing ❑
consultant ❑
government ❑
test/certification facility ❑
public utility ❑
education ❑
military ❑
other.....

Q4 This standard will be used for: *(tick all that apply)*

general reference ❑
product research ❑
product design/development ❑
specifications ❑
tenders ❑
quality assessment ❑
certification ❑
technical documentation ❑
thesis ❑
manufacturing ❑
other.....

Q5 This standard meets my needs: *(tick one)*

not at all ❑
nearly ❑
fairly well ❑
exactly ❑

Q6 If you ticked NOT AT ALL in Question 5 the reason is: *(tick all that apply)*

standard is out of date ❑
standard is incomplete ❑
standard is too academic ❑
standard is too superficial ❑
title is misleading ❑
I made the wrong choice ❑
other .....

Q7 Please assess the standard in the following categories, using the numbers:
(1) unacceptable,
(2) below average,
(3) average,
(4) above average,
(5) exceptional,
(6) not applicable

timeliness.....
quality of writing.....
technical contents.....
logic of arrangement of contents .....
tables, charts, graphs, figures.....
other .....

Q8 I read/use the: *(tick one)*

French text only ❑
English text only ❑
both English and French texts ❑

Q9 Please share any comment on any aspect of the IEC that you would like us to know:

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