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Irish Standard
I.S. EN 60153-2:2016&AC:2017-02

Hollow metallic waveguides - Part 2: Relevant specifications for ordinary rectangular waveguides

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This document is based on:	*Published:*
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English version

On the title page, add the following indication:

"Supersedes HD 123.2 S1:1977."

In the Foreword, between the 2nd and the 3rd paragraphs, add the following paragraph:

"This document supersedes HD 123.2 S1:1977."

February 2017

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60153-2

September 2016

ICS 33.120.10

English Version

Hollow metallic waveguides - Part 2: Relevant specifications for ordinary rectangular waveguides (IEC 60153-2:2016)

Guides d'ondes métalliques creux - Partie 2: Spécifications applicables relatives aux guides d'ondes rectangulaires normaux (IEC 60153-2:2016)

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European foreword

The text of document 46F/303/CDV, future edition 3 of IEC 60153-2, prepared by SC 46F "RF and microwave passive components", of IEC/TC 46 "Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60153-2:2016.

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) 2017-03-22
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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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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	Year	Title	EN/HD	Year
IEC 60050	series	International Electrotechnical Vocabulary (IEV)	-	-
IEC 60153-1	2016	Hollow metallic waveguides - Part 1: General requirements and measuring methods	EN 60153-1	2016
IEC 60261	-	Sealing test for pressurized waveguide tubing and assemblies	HD 138 S2	-

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IEC 60153-2

Edition 3.0 2016-05

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NORME INTERNATIONALE

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Hollow metallic waveguides –
Part 2: Relevant specifications for ordinary rectangular waveguides

Guides d'ondes métalliques creux –
Partie 2: Spécifications applicables relatives aux guides d'ondes rectangulaires normaux

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IEC 60153-2

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Hollow metallic waveguides –
Part 2: Relevant specifications for ordinary rectangular waveguides

Guides d'ondes métalliques creux –
Partie 2: Spécifications applicables relatives aux guides d'ondes rectangulaires normaux

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOLLOW METALLIC WAVEGUIDES –

Part 2: Relevant specifications for ordinary rectangular waveguides

FOREWORD

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International Standard IEC 60153-2 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

This third edition cancels and replaces the second edition published in 1974. This edition constitutes a technical revision.

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

a) expand and revise the operation frequency range for waveguides;
b) revise the allowance of aperture dimensions;
c) revise the test method for aperture dimensions;
d) revise the equation of attenuation.

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

CDV	Report on voting
46F/303/CDV	46F/317/RVC

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.

A list of all parts in the IEC 60153 series, published under the general title *Hollow metallic waveguides*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,
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INTRODUCTION

This International Standard relates to straight hollow metallic tubing for use as waveguides in electronic equipment. In recent year the operation frequency of waveguide components and system has been extended to 1 THz and above. However, the first edition of the IEC 60153 series of standards only specified the aperture dimensions for ordinary rectangular waveguide for frequencies up to 325 GHz. In addition, the first edition of the IEC 60153 series of standards, dating from the 1960's, does not cover current applications. This new edition of IEC 60153-2 addresses these two issues by extending the frequency coverage to 3 300 GHz and by addressing current applications for this type of waveguide.

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HOLLOW METALLIC WAVEGUIDES –

Part 2: Relevant specifications for ordinary rectangular waveguides

1 Scope

This part of IEC 60153 specifies straight hollow metallic tubing of ordinary rectangular waveguide for use as waveguides in electronic equipment.

The aim of this standard is to specify for hollow metallic waveguides:

a) the details necessary to ensure compatibility and, as far as essential, interchangeability;

b) test methods;

c) uniform requirements for the electrical and mechanical properties.

It should be noted that no recommendations are made for the materials to be used for waveguides. The choice of material is agreed between customer and manufacturer.

This document should be read in conjunction with IEC 60153-1, which gives general requirements and test methods.

2 Normative references

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.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org/)

IEC 60153-1:2016, *Hollow metallic waveguides – General requirements and measuring methods*

IEC 60261, *Sealing test for pressurized waveguide tubing and assemblies*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-726 apply.

4 General

4.1 Standardized types

The series of ordinary rectangular waveguides covered by this publication are shown in Table 1.

4.2 Type designation

For these waveguides, the type designation comprises:

a) the code: 60153 IEC-R

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