

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Flanges for waveguides –  
Part 4: Relevant specifications for flanges for circular waveguides**

**Brides pour guides d'ondes –  
Partie 4: Spécifications particulières applicables aux brides pour guides  
d'ondes circulaires**



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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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International Standard IEC 60154-4 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee TC 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

This second edition cancels and replaces the first edition published in 1969. This edition constitutes a technical revision.

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

- a) revise the estimation for return loss at connection interface of waveguides;
- b) add two type of waveguide flange for high frequency application, i.e. over 50 GHz;
- c) expand the operation frequency range up to 3,3 THz;
- d) rename the frequency band over R1200, i.e. R1.2K.

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

CDV	Report on voting
46F/346A/CDV	46F/358/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60154 series, published under the general title *Flanges for waveguides*, can be found on the IEC website.

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

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## FLANGES FOR WAVEGUIDES –

### Part 4: Relevant specifications for flanges for circular waveguides

#### 1 Scope

This part of IEC 60154-4 specifies the dimensions of flanges for circular waveguides for use in electronic equipment.

It covers requirements for flanges drilled before or after mounting on waveguides.

The aim of this document is to specify for waveguide flanges the mechanical requirements necessary to ensure compatibility and, as far as practicable, interchangeability as well as to ensure adequate electrical performance.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60154-1:2016, *Flanges for waveguides – General requirements*

#### 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 4 General

##### 4.1 Standardized types

The series of flanges for circular waveguides covered by this document is shown in Figures B.1 to B.4.

Dimensions of flanges for preferred waveguide sizes are given in Table A.1.

Dimensions of flanges for both intermediate and preferred waveguide sizes are given in Table B.1.

##### 4.2 Type designation

For the standardized types of flanges, the type designation comprises:

- the code: 60154 IEC;