

Hollow metallic waveguides - Part 1: General requirements and measuring methods

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Hollow metallic waveguides
Part 1: General requirements and measuring methods

Guides d'ondes métalliques creux
Première partie: Prescriptions
générales et méthodes de mesure

Metallische Hohlleiter
Teil 1: Allgemeine Anforderungen und
Meßverfahren

RD: IEC 153-1 (1964) ed 1; IEC/SC 46B (not appended)

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- Title Page

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**Première partie:
Prescriptions générales et méthodes de mesure**

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Hollow metallic waveguides
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**Part 1:
General requirements and measuring methods**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOLLOW METALLIC WAVEGUIDES

Part 1: General requirements and measuring methods

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote this international unification, the IEC expresses the wish that all National Committees having as yet no national rules, when preparing such rules, should use the IEC recommendations as the fundamental basis for these rules in so far as national conditions will permit.
- 4) The desirability is recognized of extending international agreement on these matters through an endeavour to harmonize national standardization rules with these recommendations in so far as national conditions will permit. The National Committees pledge their influence towards that end.
- 5) The IEC has not laid down any procedure concerning marking as an indication of approval and has no responsibility when an item of equipment is declared to comply with one of its recommendations.

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PREFACE

This Recommendation has been prepared by Sub-Committee 46B: Waveguides and their accessories, of Technical Committee No. 46, Cables, wires and waveguides for telecommunications equipment.

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The recommendation is issued in four parts, viz.

- Part 1: General requirements and measuring methods.
- Part 2: Relevant specifications for ordinary rectangular waveguides.
- Part 3: Relevant specifications for flat rectangular waveguides.
- Part 4: Relevant specifications for circular waveguides.

The present booklet contains Part 1: General requirements and measuring methods.

Part 2, 3 and 4: Relevant specifications for waveguides are issued as IEC Publications 153-2, 153-3 and 153-4 respectively.

The general outline of the recommendation was first discussed during the meeting of a former Working Group in Paris in November 1956. A draft was prepared which was given full consideration in Stockholm in May 1957. Successive revised drafts were then prepared and discussed during the meetings held in London in May 1958, in Ulm in October 1959, and in Copenhagen in October 1960.

During the latter meeting the draft was accepted for submission to National Committees for approval under the Six Month's Rule.

Four unfavourable votes were received and several countries submitted comments which were considered during the meeting at Interlaken in June 1961.

Amendments adopted during the latter meeting were circulated to all National Committees under the Two Months' Procedure and no negative votes were received.

Some editorial comments were discussed and accepted at the meeting in Bucharest in June 1962.

The following countries voted explicitly in favour of publication:

Belgium	Norway
Czechoslovakia	Poland
Denmark	Romania
France	Sweden
Germany	Switzerland
Finland	United Kingdom
Italy	United States of America
Japan	Yugoslavia
Netherlands	

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HOLLOW METALLIC WAVEGUIDES

Part 1: General requirements and measuring methods

This recommendation takes into account when necessary IEC Publication 68, Basic Climatic and Mechanical Robustness Testing Procedures for Components for Electronic Equipment and shall be used in conjunction with IEC Publication 154, Flanges for Waveguides.

When there is a difference between the general requirements and the relevant specification sheet, the latter shall prevail.

SCOPE

This recommendation relates to straight hollow metallic tubing for use as waveguides in electronic equipment.

OBJECT

The aim of this recommendation 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 must be agreed between customer and manufacturer.