



Edition 1.0 2025-11

## INTERNATIONAL STANDARD

Leaky waveguides -

Part 1: Generic specification - General requirements and test methods



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IEC Secretariat Tel.: +41 22 919 02 11

3, rue de Varembé info@iec.ch CH-1211 Geneva 20 www.iec.ch

Switzerland

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## CONTENTS

REWO	RD	4
Scop	e	6
Norm	native references	6
Term	s and definitions	7
Desid	an and structure	8
`		
	3	
	3	
	5 ,	
4.3		
4.3.1		
4.3.2	· · · · · · · · · · · · · · · · · · ·	
4.3.3		
4.3.4		
Туре	designation	.11
5.1	Type name	.11
5.2	<b>71</b>	
5.3	Leaky waveguide marking	
Ratin	igs and characteristics	.12
6.2		
Ident		
	-	
•		
	•	
_	·	
8.3	·	
8.3.1		
8.3.2		
8.3.3	Coupling loss	.14
8.3.4	Return loss	.14
8.4	Mechanical tests	.14
8.4.1	Eccentricity of sheath (for elliptical leaky waveguides)	.14
8.4.2	Mechanical dimensions	.14
8.4.3	Eccentricity (for rigid rectangular leaky waveguides)	.15
8.4.4	Bow (for rigid rectangular leaky waveguides)	.15
8.4.5	Twist	.16
8.4.6	Surface roughness	.16
8.4.7	Internal stress (for rigid rectangular leaky waveguides)	.16
	Scop Norm Term Desig 4.1 4.2 4.2.3 4.2.4 4.3 4.3.3 4.3.4 Type 5.1 5.2 5.3 Ratin 6.1 6.2 Ident 7.1 7.2 7.3 Requ 8.1 8.2.1 8.2.2 8.3 8.3.1 8.3.3 8.3.4 8.4.3 8.4.4 8.4.3 8.4.4 8.4.5 8.4.6	Scope Normative references Terms and definitions Design and structure 4.1 General 4.2 Rigid rectangular leaky waveguides 4.2.1 Waveguide tube 4.2.2 The slots in waveguide tube 4.2.3 Sealing layer 4.2.4 Sheath 4.3 Elliptical leaky waveguides 4.3.1 Waveguide tube 4.3.2 The slots in waveguide tube 4.3.3 Sealing layer (when applicable) 4.3.4 Sheath Type designation 5.1 Type name 5.2 Variant 5.3 Leaky waveguide marking Ratings and characteristics 6.1 Rated temperature range 6.2 Operating frequency Identification, marking and labelling 7.1 Identification, marking and labelling 7.2 Marking 7.3 Labelling Requirements and test methods 8.1 General 8.2 Visual inspection 8.2.1 Requirements 8.2.2 Inspection procedure 8.3 Electrical tests 8.3.1 Withstand voltage or spark test of sheath (for elliptical leaky waveguides) 8.3 Attenuation constant. 8.3.3 Coupling loss 8.3.4 Return loss 8.4 Mechanical tests 8.4.1 Eccentricity of sheath (for elliptical leaky waveguides) 8.4.2 Mechanical dimensions 8.4.3 Eccentricity (for rigid rectangular leaky waveguides) 8.4.4 Bow (for rigid rectangular leaky waveguides) 8.4.5 Twist 8.4.5 Twist 8.4.5 Twist 8.4.5 Twist 8.4.6 Surface roughness

	8.4.8	Bending (for elliptical leaky waveguides)	16
	8.4.9	Crush resistance test (for elliptical leaky waveguides)	17
	8.4.1	0 Tensile strength of waveguide (for elliptical leaky waveguides)	17
	8.5	Environmental tests	17
	8.5.1	Cold bend (for elliptical leaky waveguides)	17
	8.5.2	Climatic sequence	18
	8.5.3	UV test	18
	8.5.4	Aging test	18
	8.6	Combustion performance	19
	8.6.1	Requirements	19
	8.6.2	Past procedure	19
	8.7	Sealing test	19
	8.7.1	Requirements	19
	8.7.2	Past procedure	19
9	Quali	ity assessment	19
10	Deliv	very and storage	19
Anı	nex A (	(normative) Test methods of attenuation constant	20
	A.1 `	Test equipment	
	A.2	Test sample (TS)	
	A.3	Test arrangement	
	A.4	Test frequency	
	A.5	Method A (using VNA)	
	A.5.1	, -	
	A.5.2		
	A.6	Method B (using power meters)	
•	A.6.1	,	
	A.6.2		
	A.7	Report	
		(normative) Test methods of coupling loss	
	•	Test equipment	
		Test sample (TS)	
	B.3	Test arrangement	
	B.3.1	-	
	B.3.2		
	B.3.3	·	
	B.4	Test frequency	
	B.5	Test procedure	
	B.6	Precautions	
	B.7	Report	31
Anı	nex C (	(normative) Test methods of return loss	32
	C.1 `	Test equipment	
	C.2	Test sample (TS)	
	C.3	Test arrangement	
	C.4	Test frequency	
	C.5	Procedure	
	C.6	Report	

Annex D (normative) Test methods of bending for elliptical leaky waveguides	34
D.1 Test equipment	34
D.2 Test sample	34
D.3 Procedure	34
D.4 Test report	35
Annex E (normative) Test method for crush resistance of elliptical leaky waveguides	36
E.1 Equipment	36
E.2 Test sample	36
E.3 Procedure	36
E.4 Test report	37
Bibliography	38
Figure 1 – Typical structure of rigid rectangular leaky waveguides	9
Figure 2 – Typical structure of elliptical leaky waveguides	9
Figure A.1 – Method A: Free-space arrangement for attenuation constant test	
by using VNA	21
Figure A.2 – Method B: Free space arrangement for attenuation constant test by using power meters	21
•	∠ ۱
Figure A.3 – Method A: Ground-level arrangement for attenuation constant test by using VNA	22
Figure A.4 – Method B: Ground-level arrangement for attenuation constant test	
by using power meters	22
Figure B.1 – Test arrangement for free-space method	28
Figure B.2 – Antenna orientations with free-space method	28
Figure B.3 – Test arrangement for ground-level method	29
Figure B.4 – Antenna orientations with ground-level method	29
Figure C.1 – Free space arrangement for return loss test	32
Figure C.2 – Ground-level arrangement for return loss test	33
Figure D.1 – Schematic diagram of bending test	35
Figure E.1 – Crush resistance test	37

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# Leaky waveguides Part 1: Generic specification General requirements and test methods

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IEC 63466-1 has been prepared by IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
46/1065/FDIS	46/1072/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members\_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63466 series, published under the general title *Leaky 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## 1 Scope

This part of IEC 63466 specifies the general requirements and test methods for leaky waveguides, including terms and definitions, design and structure, type designation, ratings and characteristics, identification, marking and labelling, requirements and test methods, etc.

This document is applicable to leaky waveguides, including rigid rectangular leaky waveguides and elliptic leaky waveguides. These leaky waveguides are intended for use in tunnels, railways, highways, subways, elevators and other installations in which conventional antenna transmission is not satisfactory or even impossible.

## 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 60068-1:2013, Environmental testing - Part 1: General and guidance

IEC 60153-1, Hollow metallic waveguides - Part 1: General requirements and measuring methods

IEC 60261, Sealing test for pressurized waveguide tubing and assemblies

IEC 60332-1-2, Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame

IEC 60754-1, Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content

IEC 61034-2, Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements

IEC 61196-1:2005, Coaxial communication cables - Part 1: Generic specification - General, definitions and requirements

IEC 61196-1-106, Coaxial communication cables - Part 1-106: Electrical test methods - Test for withstand voltage of cable sheath

IEC 61196-1-212, Coaxial communication cables - Part 1-212: Environmental test methods - UV stability

IEC 61196-1-215, Coaxial communication cables - Part 1-215: Environmental test methods - High temperature cable ageing

IEC 61196-1-302, Coaxial communication cables - Part 1-302: Mechanical test methods - Test for eccentricity

IEC 61196-1-316, Coaxial communication cables - Part 1-316: Mechanical test methods - Test of maximum pulling force of cable

IEC 62230, Electric cables - Spark-test method

 ${\tt ISO~3274,~Geometrical~Product~Specifications~(GPS)-Surface~texture:~Profile~method-Nominal~characteristics~of~contact~(stylus)~instruments}$ 

ISO 21920-3, Geometrical product specifications (GPS) - Surface texture: Profile - Part 3: Specification operators