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Cable assemblies, cables, connectors and passive microwave components - Screening attenuation measurement by the reverberation chamber method

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/22

Obsahuje: EN IEC 61726:2022, IEC 61726:2022

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EUROPEAN STANDARD

EN IEC 61726

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2022

ICS 33.120.01

Supersedes EN 61726:2015

English Version

**Cable assemblies, cables, connectors and passive microwave components - Screening attenuation measurement by the reverberation chamber method
(IEC 61726:2022)**

Cordons, câbles, connecteurs et composants hyperfréquence passifs - Mesurage de l'affaiblissement d'écran par la méthode de la chambre réverbérante
(IEC 61726:2022)

Konfektionierte Kabel, Kabel, Steckverbinder und passive Mikrowellenbauteile - Messung der Schirmdämpfung mit dem Hallraum-Verfahren
(IEC 61726:2022)

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EN IEC 61726:2022 (E)**European foreword**

The text of document 46/847/CDV, future edition 4 of IEC 61726, prepared by 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 IEC 61726:2022.

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) 2023-05-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-08-22

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Annex ZA (normative)

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NOTE 1 Where 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.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|--|---------------|-------------|
| IEC 61000-4-21 | 2011 | Electromagnetic compatibility (EMC) - Part 4-21: Testing and measurement techniques - Reverberation chamber test methods | EN 61000-4-21 | 2011 |
| IEC 61196-1 | - | Coaxial communication cables - Part 1: Generic specification - General, definitions and requirements | - | - |
| IEC 62153-1 | series | Metallic communication cables test methods | EN 62153-1 | series |



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Edition 4.0 2022-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Cable assemblies, cables, connectors and passive microwave components –
Screening attenuation measurement by the reverberation chamber method**

**Cordons, câbles, connecteurs et composants hyperfréquence passifs –
Mesurage de l'affaiblissement d'écran par la méthode de la chambre
réverbérante**



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

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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IEC 61726

Edition 4.0 2022-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Cable assemblies, cables, connectors and passive microwave components –
Screening attenuation measurement by the reverberation chamber method**

**Cordons, câbles, connecteurs et composants hyperfréquence passifs –
Mesurage de l'affaiblissement d'écran par la méthode de la chambre
réverbérante**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CABLE ASSEMBLIES, CABLES, CONNECTORS AND PASSIVE
MICROWAVE COMPONENTS – SCREENING ATTENUATION
MEASUREMENT BY THE REVERBERATION CHAMBER METHOD**

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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IEC 61726 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.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

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

- a) reworded Clause 1 "Scope";
- b) replaced IEC TS 62153-4-1 by IEC 62153 (all parts) in Clause 2;
- c) added the definition of screening attenuation in 3.1;
- d) added Clause 4 "Principle of screening attenuation measurement";
- e) added the descriptions of some test set-ups, such as frequency synthesizer, spectrum analyser, stepper motor, linking devices and the sampling system, etc. in Clause 5;
- f) added Clause 6 "DUT";

- g) reworded Clause 7 "Measurement procedure";
- h) added Clause 8 "Caution notes";
- i) added Clause 9 "Acceptance criterion";
- j) added Clause 10 "Information to be given in the relevant specification".

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

| Draft | Report on voting |
|------------|------------------|
| 46/847/CDV | 46/877/RVC |

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.

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CABLE ASSEMBLIES, CABLES, CONNECTORS AND PASSIVE MICROWAVE COMPONENTS – SCREENING ATTENUATION MEASUREMENT BY THE REVERBERATION CHAMBER METHOD

1 Scope

This document describes the measurement of screening attenuation by the reverberation chamber measurement method, also called mode stirred chamber method.

This document is applicable to screening attenuation measurements of cable assemblies, cables, connectors, and passive microwave components, such as waveguides, phase shifters, diplexers/multiplexers, power dividers/combiners, etc.

Modern electronic equipment has shown a demand for methods for testing screening attenuation performance of microwave components over their whole frequency range. Convenient measurement methods have existed for lower frequencies and components of regular shape. These measurement methods are described in the IEC 62153 series. For much higher frequencies and for components of irregular shape, the reverberation chamber method can be used. Theoretically, the reverberation chamber method has no upper limit of the measurement frequency, but it is limited by the quality and sensitivity of the measurement system, and the lower limit of the measurement frequency is restricted by the size of the reverberation chamber.

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 61000-4-21:2011, *Electromagnetic compatibility (EMC) – Part 4-21: Testing and measurement techniques – Reverberation chamber test methods*

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

IEC 62153 (all parts), *Metallic communication cable test methods*

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