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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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

IEC 61726:2022-07 (en-fr)

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

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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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61196-1, IEC 61000-4-21 and the following apply.

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- IEC Electropedia: available at https://www.electropedia.org/
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