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**Reflectivity of electromagnetic wave absorbers in millimetre wave frequency –
Measurement methods**

**Réflectivité des absorbeurs d'ondes électromagnétiques dans la plage des
fréquences des ondes millimétriques – Méthodes de mesure**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

REFLECTIVITY OF ELECTROMAGNETIC WAVE ABSORBERS IN MILLIMETRE WAVE FREQUENCY – MEASUREMENT METHODS

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International Standard IEC 62431 has been prepared by subcommittee SC46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

IEC 62431 replaces and cancels IEC/PAS 62431 with corrections of obvious errors as noted in 46F/29A/RVN.

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

CDV	Report on voting
46F/65/CDV	46F/72/RVC

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

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

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- withdrawn,
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REFLECTIVITY OF ELECTROMAGNETIC WAVE ABSORBERS IN MILLIMETRE WAVE FREQUENCY – MEASUREMENT METHODS

1 Scope

This International Standard specifies the measurement methods for the reflectivity of electromagnetic wave absorbers (EMA) for the normal incident, oblique incident and each polarized wave in the millimetre-wave range. In addition, these methods are also equally effective for the reflectivity measurement of other materials:

- measurement frequency range: 30 GHz to 300 GHz;
- reflectivity: 0 dB to –50 dB;
- incident angle: 0° to 80°.

NOTE This standard is applicable not only to those EMA which are widely used as counter-measures against communication faults, radio interference etc. , but also to those used in an anechoic chamber in some cases. EMAs may be any kind of material, and may have any arbitrary shape, configuration, or layered structure as pointed out below.

Material: Conductive material, dielectric material, magnetic material.

Shape: planar-, pyramidal-, wedge-type, or other specific shapes.

Layer structure: single layer, multi layers, or graded-index material.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

3 Terms, definitions and acronyms

For the purposes of this document, the following terms and definitions apply.

3.1 Terms and definitions

3.1.1

ambient level

the value of radiation power or noise which exists when no measurement is being carried out at the experiment site

3.1.2

associated equipment

an apparatus or product connected for convenience or operation of the equipment

3.1.3

beam diameter

the diameter where the electric field strength decreases by 3 dB from the centre of the focused beam