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Passive RF and microwave devices, intermodulation level measurement – Part 8: Measurement of passive intermodulation generated by objects exposed to RF radiation

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT –

Part 8: Measurement of passive intermodulation generated by objects exposed to RF radiation

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IEC 62037-8 has been prepared by technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 2022. This edition constitutes a technical revision.

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

a) added safety warning to verify that transmitters are switched off before connecting or disconnecting any component;
b) corrected formula for calculating directivity;
c) corrected antenna orientation labels in Figure 6;
d) added clarification that PIM tests reports shall include maximum PIM and VSWR values.

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

Draft	Report on voting
46/1039/FDIS	46/1045/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 62037 series, published under the general title *Passive RF and microwave devices, intermodulation level measurement*, can be found on the IEC website.

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PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT –

Part 8: Measurement of passive intermodulation generated by objects exposed to RF radiation

1 Scope

This part of IEC 62037 defines a radiated passive intermodulation (PIM) test to determine PIM levels generated by a device or object when it is exposed to RF radiation. This test can be conducted on any material or object and is not limited to devices designed to propagate RF signals. This test can be conducted as either a near field or far field test as defined by the test specification in an outdoor test site or in an anechoic test 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 62037-1, *Passive RF and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

~~IEC 62037-6:2021, *Passive RF and microwave devices, intermodulation level measurement – Part 6: Measurement of passive intermodulation in antennas*~~

IEC 62037-8

Edition 2.0 2025-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Passive RF and microwave devices, intermodulation level measurement – Part 8: Measurement of passive intermodulation generated by objects exposed to RF radiation

Dispositifs RF et à micro-ondes passifs, mesure du niveau d'intermodulation – Partie 8: Mesure de l'intermodulation passive générée par des objets exposés au rayonnement RF



IEC 62037-8:2025-03(en-fr)

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IEC 62037-1, *Passive RF and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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DISPOSITIFS RF ET À MICRO-ONDES PASSIFS, MESURE DU NIVEAU D'INTERMODULATION –

Partie 8: Mesure de l'intermodulation passive générée par des objets exposés au rayonnement RF

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Cette deuxième édition annule et remplace la première édition parue en 2021. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) ajout d'un avertissement de sécurité pour vérifier que les émetteurs sont hors tension avant de connecter ou de déconnecter un composant;
b) correction de la formule pour le calcul de la directivité;
c) correction des indications pour l'orientation de l'antenne à la Figure 6;
d) ajout d'une clarification indiquant que les rapports d'essai de PIM doivent inclure les valeurs PIM et ROS maximales.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
46/1039/FDIS	46/1045/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

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DISPOSITIFS RF ET À MICRO-ONDES PASSIFS, MESURE DU NIVEAU D'INTERMODULATION –

Partie 8: Mesure de l'intermodulation passive générée par des objets exposés au rayonnement RF

1 Domaine d'application

La présente partie de l'IEC 62037 définit un essai d'intermodulation passive (PIM) rayonnée destiné à déterminer les niveaux d'intermodulation passive générés par un dispositif ou un objet lorsqu'il est exposé à un rayonnement RF. Cet essai peut être effectué sur tout matériau ou objet et n'est pas limité aux dispositifs conçus pour propager des signaux RF. Cet essai peut être effectué en champ proche ou en champ lointain, comme cela est défini dans la spécification d'essai sur un site d'essai extérieur ou à l'intérieur d'une chambre d'essai anéchoïque.

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IEC 62037-1, *Dispositifs RF et à micro-ondes passifs, mesure du niveau d'intermodulation – Partie 1: Exigences générales et méthodes de mesure*