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REDLINE VERSION

Passiva radiofrekvens- och mikrovågskomponenter – Mätning av intermodulationsnivån – Del 3: Mätning av passiv intermodulation i koaxialdon

*Passive RF and microwave devices, intermodulation level measurement –
Part 3: Measurement of passive intermodulation in coaxial connectors*

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IEC 62037-3

Edition 3.0 2025-03
REDLINE VERSION

INTERNATIONAL STANDARD

**Passive RF and microwave devices, intermodulation level measurement –
Part 3: Measurement of passive intermodulation in coaxial connectors**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.040.20

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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references.....	5
3 Terms, definitions and abbreviated terms	5
3.1 Terms and definitions.....	5
3.2 Abbreviated terms.....	5
4 Test method	6
4.1 Samples for testing	6
4.2 Connection of unit.....	6
4.3 Set-up 1 – Fixed frequency reverse (reflected) mode test considerations.....	6
4.4 Set-up 2 – forward (transmitted) mode test considerations	6
4.5 Impacts.....	7
5 Report	8
Annex A (normative) Calculating equivalent impact energy	9
Annex B (normative) Calculating impact energy for different connector types.....	10
Figure 1 – Impact test illustration	8
Table 1 – Impact information for some popular connectors.....	7
Table A.1 – Estimated mass of various diameter steel balls	9
Table B.1 – Impact energy calculation for RF connector type	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PASSIVE RF AND MICROWAVE DEVICES,
INTERMODULATION LEVEL MEASUREMENT –****Part 3: Measurement of passive intermodulation in coaxial connectors****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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62037-3:2021. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62037-3 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 third edition cancels and replaces the second edition published in 2021. This edition constitutes a technical revision.

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

- a) impact test requirements for multi-channel connectors added;
- b) method for calculating impact energy added for connector shapes other than round;
- c) revised test considerations for achieving maximum PIM in reverse (reflected) PIM measurements;
- d) added clarification that PIM tests reports shall include the maximum PIM value measured.

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

Draft	Report on voting
46/1040/FDIS	46/1044/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 the 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.

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.

PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT –

Part 3: Measurement of passive intermodulation in coaxial connectors

1 Scope

This part of IEC 62037 defines the impact test on coaxial connectors to evaluate their robustness against weak connections and particles inside the connector, as independently as possible from the effects of cable passive intermodulation (PIM).

For other connectors (e.g. panel mounted connectors), the cable can be replaced by an adequate transmission line (e.g. airline, stripline). In order to evaluate the effects of mechanical stresses on the connectors, a series of impacts is applied to the connectors while measuring the PIM.

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 62037-1:2021, *Passive RF and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

IEC 62037-4, *Passive RF and microwave devices, intermodulation level measurement – Part 4: Measurement of passive intermodulation in coaxial cables*

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Passiva radiofrekvens- och mikrovågskomponenter – Mätning av intermodulationsnivån – Del 3: Mätning av passiv intermodulation i koaxialdon

*Passive RF and microwave devices, intermodulation level measurement –
Part 3: Measurement of passive intermodulation in coaxial connectors*

Som svensk standard gäller europastandarden EN IEC 62037-3:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62037-3:2025.

Nationellt förord

Europastandarden EN IEC 62037-3:2025

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62037-3, Third edition, 2025 - Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN IEC 62037-3, utg 2:2022 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2028-05-31.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1042
172 21 Sundbyberg
Tel 08-444 14 00
elstandard.se

English Version

**Passive RF and microwave devices, intermodulation level
measurement - Part 3: Measurement of passive intermodulation
in coaxial connectors
(IEC 62037-3:2025)**

Dispositifs RF et à micro-ondes passifs, mesure du niveau
d'intermodulation - Partie 3: Mesure de l'intermodulation
passive dans les connecteurs coaxiaux
(IEC 62037-3:2025)

Passive HF- und Mikrowellenbauteile, Messung des
Intermodulationspegels - Teil 3: Messung der passiven
Intermodulation in koaxialen Steckverbindern
(IEC 62037-3:2025)

This European Standard was approved by CENELEC on 2025-04-24. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 46/1040/FDIS, future edition 3 of IEC 62037-3, prepared by 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 62037-3:2025.

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) 2026-05-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-05-31

This document supersedes EN IEC 62037-3:2021 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of the International Standard IEC 62037-3:2025 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62037-1	2021	Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods	EN IEC 62037-1	2021
IEC 62037-4	-	Passive RF and microwave devices, intermodulation level measurement - Part 4: Measurement of passive intermodulation in coaxial cables	EN 62037-4	-

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Passive RF and microwave devices, intermodulation level measurement –
Part 3: Measurement of passive intermodulation in coaxial connectors**

**Dispositifs RF et à micro-ondes passifs, mesure du niveau d'intermodulation –
Partie 3: Mesure de l'intermodulation passive dans les connecteurs coaxiaux**

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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references.....	5
3 Terms, definitions and abbreviated terms	5
3.1 Terms and definitions.....	5
3.2 Abbreviated terms.....	5
4 Test method	6
4.1 Samples for testing	6
4.2 Connection of unit.....	6
4.3 Set-up 1 – reverse (reflected) mode test considerations	6
4.4 Set-up 2 – forward (transmitted) mode test considerations	6
4.5 Impacts.....	7
5 Report	8
Annex A (normative) Calculating equivalent impact energy	9
Annex B (normative) Calculating impact energy for different connector types.....	10
Figure 1 – Impact test illustration	7
Table 1 – Impact information for some popular connectors.....	7
Table A.1 – Estimated mass of various diameter steel balls	9
Table B.1 – Impact energy calculation for RF connector type	10

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