

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

## EESTI STANDARDI EESSÕNA

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**Passive RF and microwave devices, intermodulation level measurement -  
Part 4: Measurement of passive intermodulation in coaxial cables  
(IEC 62037-4:2012)**

Dispositifs RF et à micro-ondes passifs,  
mesure du niveau d'intermodulation -  
Partie 4: Mesure de l'intermodulation  
passive dans les câbles coaxiaux  
(CEI 62037-4:2012)

Passive HF- und Mikrowellenbauteile,  
Messung des Intermodulationspegels -  
Teil 4: Messung der passiven  
Intermodulation in koaxialen Kabeln  
(IEC 62037-4:2012)

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

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## Foreword

The text of document 46/418/FDIS, future edition 1 of IEC 62037-4, prepared by IEC TC 46 "Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62037-4:2012.

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) 2013-05-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-08-28

This document supersedes EN 62037:1999 (PART).

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## **Annex ZA** (normative)

### **Normative references to international publications with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62037-1	-	Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods	EN 62037-1	-
IEC 62037-3	-	Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors	EN 62037-3	-

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## PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT –

### Part 4: Measurement of passive intermodulation in coaxial cables

#### 1 Scope

This part of IEC 62037 defines test fixtures and procedures recommended for measuring levels of passive intermodulation generated by coaxial cables. Two dynamic test methods and a static test method are defined.

All coaxial cables are subjected to the static and clamped cable loop dynamic test.

Cables classified as flexible or semi-flexible are additionally subjected to the flexing tool dynamic test.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 r.f. and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

IEC 62037-3, *Passive r.f. and microwave devices, intermodulation level measurement – Part 3: Measurement of passive intermodulation in coaxial connectors*

#### 3 Abbreviations

DUT Device under test

IM Intermodulation

#### 4 Test fixtures

For the dynamic tests, appropriate test fixtures are required. For the clamped cable loop test (see 5.2), a method shall be provided for laterally moving the cable and for clamping the cable each side of the region of movement, as shown schematically in Figure 1. Design of the clamps shall be such as to firmly support the cable at the required points without causing damage to the cable by crushing or kinking.

In the moving test using the flexing tool (see 5.3), the cable is flexed by a fixture through which the cable is threaded as shown in Figure 2. General design for the fixture is shown in Figure 2, and the detailed dimensions for different cable sizes (and different specified bend radii) are listed in Table 1 and Table 2.