

IEC 62037-4

Edition 1.0 2012-07

INTERNATIONAL STANDARD

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

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE



ICS 33.040.20

ISBN 978-2-83220-287-6

Warning! Make sure that you obtained this publication from an authorized distributor.

– 2 –

62037-4 © IEC:2012(E)

CONTENTS

FO	FOREWORD				
1	Scope				
2	Normative references				
3	Abbreviations				
4	Test fixtures		.5		
5	Procedure		.7		
	5.1	General	.7		
	5.2	Dynamic test procedure – Clamped cable loop	.8		
	5.3	Dynamic test – Flexing tool	.8		
	5.4	Static test	.9		
Ann	Annex A (informative) General test considerations10				
Figure 1 – Dynamic test using clamped "U" bend in cable					
Figu	Figure 2 – Dynamic test using flexing tool6				
Tab	le 1 –	Dimensions of the flexing tool	.7		
Tab	Table 2 – Groove diameter7				

62037-4 © IEC:2012(E)

- 3 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT -

Part 4: Measurement of passive intermodulation in coaxial cables

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.
- 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.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62037-4 has been prepared by technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

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

FDIS	Report on voting
46/418/FDIS	46/434/RVD

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.

A list of all the parts in the IEC 62037 series, published under the general title *Passive r.f. and microwave devices, intermodulation level measurement* can be found on the IEC website.

- 4 -

62037-4 © IEC:2012(E)

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

62037-4 © IEC:2012(E)

- 5 -

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 or passive intermodulation in coaxial connectors