

This is a preview - click here to buy the full publication



IEC 61196-1-209

Edition 1.0 2016-03

INTERNATIONAL STANDARD

**Coaxial communication cables –
Part 1-209: Environmental test methods – Thermal cycling**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.120.10

ISBN 978-2-8322-3250-7

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

CONTENTS

| | |
|---|---|
| FOREWORD..... | 3 |
| 1 Scope..... | 5 |
| 2 Normative references..... | 5 |
| 3 Terms and definitions | 5 |
| 4 Symbols | 5 |
| 5 Method..... | 6 |
| 5.1 Thermal cycle profile method..... | 6 |
| 5.2 Adjustment factors | 6 |
| 5.2.1 General | 6 |
| 5.2.2 Transition rate adjustment factor | 7 |
| 5.2.3 Upper and lower temperature exposure test adjustment factor | 7 |
| 5.3 Sample | 7 |
| 5.4 Requirements..... | 7 |
| 6 Test report..... | 8 |
| Annex A (informative) Reliability acceleration factor | 9 |
| Table 1 – Mass and exposure times | 6 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COAXIAL COMMUNICATION CABLES –

Part 1-209: Environmental test methods – Thermal cycling

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.
- 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 61196-1-209 has been prepared by subcommittee 46A: Coaxial cables, of IEC 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 |
|---------------|------------------|
| 46A/1298/FDIS | 46A/1301/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 61196 series published under the general title *Coaxial communication cables* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

COAXIAL COMMUNICATION CABLES –

Part 1-209: Environmental test methods – Thermal cycling

1 Scope

This part of IEC 61196 specifies a test method to determine the ability of a coaxial cable to withstand the effects of temperature cycling on its transmission performance.

The purpose of this procedure is to accelerate the effects of temperature cycling on a cable.

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 61196-1, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 62506, *Methods for product accelerated testing*