

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



BASIC SAFETY PUBLICATION

PUBLICATION FONDAMENTALE DE SÉCURITÉ

**Environmental testing –  
Part 2-67: Tests – Test Cy: Damp heat, steady state, accelerated test primarily  
intended for components**

**Essais d'environnement –  
Partie 2-67: Essais – Essai Cy: Essai continu de chaleur humide, essai accéléré  
applicable en premier lieu aux composants**



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## CONTENTS

FOREWORD .....	3
1 Scope .....	5
2 General description .....	5
3 Description of test apparatus .....	5
4 Severities .....	6
5 Preconditioning.....	6
6 Initial measurements .....	7
7 Testing .....	7
8 Intermediate measurements .....	7
9 Recovery .....	8
10 Final measurements .....	8
11 Information to be given in the relevant specification.....	8
Annex A (informative) Physical significance of the test .....	9
Annex B (Informative) Test apparatus and handling .....	10
Table 1 – Severities .....	6

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ENVIRONMENTAL TESTING –

#### **Part 2-67: Tests – Test Cy: Damp heat, steady state, accelerated test primarily intended for components**

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**IEC 60068-2-67 edition 1.1 contains the first edition (1995-12) [documents 50B/360/FDIS and 50B/373/RVD] and its amendment 1 (2019-07) [documents 104/831/FDIS and 104/838/RVD].**

**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

International Standard IEC 60068-2-67 has been prepared by subcommittee 50B: Climatic tests, of IEC technical committee 50: Environmental testing.

It has the status of a basic safety publication in accordance with IEC Guide 104.

IEC 60068 consists of the following parts, under the general title: Environmental testing.

- Part 1: General and guidance
- Part 2: Tests
- Part 3: Background information
- Part 4: Information for specification writers – Test summaries
- Part 5: Guide to drafting of test methods

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## ENVIRONMENTAL TESTING –

### Part 2-67: Tests – Test Cy: Damp heat, steady state, accelerated test primarily intended for components

#### 1 Scope

This International Standard provides a standard test procedure for the purpose of evaluating, in an accelerated manner, the resistance of small electrotechnical products, primarily non hermetically sealed components, to the deteriorative effect of damp heat.

The test is not intended to evaluate external effects such as corrosion and deformation.

#### 2 General description

In this test the specimen is subjected to very high levels of unsaturated damp heat for a relatively long period.

Electrical bias is usually applied.

The test provides a number of preferred durations at a relative humidity of 85 % and a temperature of 85 °C.

In the case of plastic encapsulated components degradation results from absorption of water-vapour by the plastic and penetration of moisture along terminals.

#### 3 Description of test apparatus

##### 3.1 The test chamber

The chamber shall be so constructed that:

- a) it can produce the temperature and relative humidity given in table 1 for a minimum period of 2 000 h without interruption;
- b) it is capable of providing controlled conditions of temperature and relative humidity during testing, and the ramp-up to and ramp-down from specified test conditions;
- c) the temperature and humidity of the chamber can be monitored by means of sensing devices located in the working space and/or other areas giving the same results;
- d) any water shall be continuously drained from the working space and not re-used;
- e) condensed water is not allowed to fall on the specimen;
- f) the materials used in the construction shall not cause any significant corrosion of the specimen, or degradation of the quality of the humidifying water (see clause B.1).

The temperature tolerance of  $\pm 2$  °C is intended to take account of absolute errors in the measurement, fluctuations of the chamber temperature at any point and variations between any two points within the working space.

However, in order to maintain the relative humidity within the specified tolerance of  $\pm 5$  %, it is necessary to keep the difference between any two points in the working space (at any instant) within narrower limits.