AS 60068.3.7—2003
IEC 60068-3-7:2001

Australian Standard™

Environmental testing

Part 3.7: Supporting documentation and guidance—Measurements in temperature chambers for tests A and B (with load)

Standards Australia

This Australian Standard was prepared by Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 28 February 2003 and published on 8 May 2003.

The following are represented on Committee EL-026:

Australian Chamber of Commerce and Industry

Australian Electrical and Electronic Manufacturers Association

Electrical Compliance Testing Authorities

Electrical Regulatory Authorities Council

Electricity Supply Association of Australia

Testing Interests (Australia)

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PREFACE

This Standard was prepared by the Standards Australia Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment.

The objective of this Standard is to provide the electrotechnology industry with a complete set of environmental test procedures published as a series under AS 60068 *Environmental testing*. This Standard is Part 3.7 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-3-7:2001, *Environmental testing– Part 3-7: Supporting documentation and guidance – Measurements in temperature chambers for tests A and B (with load)*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this international standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

(d) Any French text on figures should be ignored.

In this Standard, the following print types are used:

– requirements proper: in arial type;

– *test specifications: in italic type;*

– explanatory matter: in smaller arial type.

Any international Standard referenced should be replaced by an equivalent Australian Standard when one is available. The availability of equivalent Australian Standards can be determined either from the Standards Australia catalogue or from the Standards Australia website (www.standards.com.au).

CONTENTS

INTRODUCTION

IEC 60068 contains fundamental information on environmental testing procedures and severities.

The expression "environmental conditioning" or "environmental testing" covers the natural and artificial environments to which components or equipment may be exposed so that an assessment can be made of their performance under conditions of use, transport and storage to which they may be exposed in practice.

Temperature chambers used for "environmental conditioning" or "environmental testing" are not described in any publication, although the method of maintaining and measuring temperature and/or humidity has great influence on test results. The physical characteristics of temperature chambers can also influence test results.

STANDARDS AUSTRALIA

Australian Standard

Environmental testing
Part 3.7: Supporting documentation and guidance—Measurements in temperature chambers for tests A and B (with load)

1 Scope

This part of IEC 60068 provides a uniform and reproducible method of confirming that temperature test chambers conform to the requirements specified in climatic test procedures of IEC 60068-2-1 and IEC 60068-2-2, when loaded with either heat-dissipating or non heat-dissipating specimens under conditions which take into account air circulation inside the working space of the chamber. This standard is destined primarily for users when conducting regular chamber performance monitoring.

2 Normative references

The following referenced documents are indispensable for the application 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 60068-2-1, *Environmental testing – Part 2: Tests – Test A: Cold*

IEC 60068-2-2, *Basic environmental testing procedures – Part 2: Tests. Test B: Dry heat*

IEC 60068-3-1, *Basic environmental testing procedures – Part 3: Background information – Section one: Cold and dry heat tests*

IEC 60068-3-5, *Environmental testing – Part 3-5: Supporting documentation and guidance – Confirmation of the performance of temperature chambers*

IEC 60068-3-6, *Environmental testing – Part 3-6: Supporting documentation and guidance – Confirmation of the performance of temperature/humidity chambers*

IEC 60584-1, *Thermocouples – Part 1: Reference tables*

IEC 60751, *Industrial platinum resistance thermometer sensors*

3 Definitions

For the purpose of this part of IEC 60068, the following definitions apply.

3.1
test specification
procedure applied to test chambers with or without forced air circulation; suitable for a wide range of chamber sizes

NOTE A summary of test conditions in IEC 60068-2-1 and IEC 60068-2-2 is given in the following table: