

Australian Standard<sup>®</sup>

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**Electromechanical components  
for electronic equipment—  
Basic testing procedures and  
measuring methods**

**Part 6: Climatic tests and  
soldering tests**

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This Australian Standard was prepared by Committee ET/5, Environmental Testing Procedures. It was approved on behalf of the Council of Standards Australia on 5 June 1989 and published on 6 November 1989.

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The following interests are represented on Committee ET/5:

Aerospace Technologies of Australia  
Confederation of Australian Industry  
Department of Administrative Services  
Department of Defence  
Electricity Supply Association of Australia  
Institution of Engineers, Australia  
National Association of Testing Authorities  
Society of Automotive Engineers, Australasia  
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*This Standard was issued in draft form for comment as DR 83107.*

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First published as AS 3726.6—1989.

## PREFACE

This Standard was prepared by the Standards Australia Committee on Environmental Testing Procedures. It is identical with and reproduced from IEC 512-6(1984) as issued by the IEC.

The purpose of Part 6 is to specify the tests that shall be used, when required by detail specifications, for electromechanical components, having a connecting or switching function, for telecommunications equipment and similar electronic devices. Part 6 in particular, includes a climatic sequence to be applied to certain components prior to being assessed by specific electrical and mechanical tests, a series of climatic tests as required by detail specifications for components, solderability testing of terminations of certain components plus the resistance to soldering heat of specific components.

The page numbers of the IEC English text are given on the bottom left hand corner of each page of the Standard.

For the purpose of this Australian Standard the text of the IEC Publication used herein should be modified as follows:

- (a) *Terminology*: The words 'Australian Standard' should replace the words 'IEC Publication' wherever they appear.
- (b) *References*: The references to international Standards should be replaced by references to Australian Standards as follows:

<i>Reference to international Standard</i>		<i>Appropriate Australian Standard</i>	
IEC		AS	
68	Basic environmental testing procedures	1099	Basic environmental testing procedures for electro-technology
68-2	Part 2: Tests	1099.2	Tests
68-2-1	Test A: Cold	1099.2A	Cold
68-2-2	Test B: Dry heat	1099.2B	Dry heat
68-2-3	Test Ca: Damp heat, steady state	1099.2Ca	Damp heat, steady state
68-2-13	Test M: Low air pressure	1099.2M	Low air pressure
68-2-14	Test N: Change of temperature	1099.2N	Change of temperature
68-2-20	Test T: Soldering	1099.2T	Soldering
68-2-30	Test Db: Damp heat, cyclic (12 + 12-hour cycle)	1099.2Db	Damp heat, cyclic (12 + 12-hour cycle)
68-2-39	Test Z/AMD: Combined sequential cold, low air pressure and damp heat test	1099.2Z/AMD	Combined sequential cold, low air pressure and damp heat test
352	Solderless connections,	2948	Solderless connections
352-1	Part 1: Solderless wrapped connections —General requirements, test methods and practical guidance	2948.1	Part 1: Solderless wrapped connections —General requirements, test methods and practical guidance
512	Electromechanical components for electronic equipment; basic testing procedure and measuring methods	3726	Electromechanical components for electronic equipment—Basic testing procedures and measuring methods
512-2	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests	3726.6	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests
512-5	Part 5: Impact tests (free components), static load tests (fixed components) endurance tests and overload tests	3726.5	Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload tests

## CONTENTS

	<i>Page</i>
Scope .....	4

## SECTION ONE – CLIMATIC TESTS

## Clause

1. Test 11a: Climatic sequence .....	4
2. Test 11b: Combined/sequential cold, low air pressure and damp heat .....	6
3. Test 11c: Damp heat, steady state .....	8
4. Test 11d: Rapid change of temperature .....	9
5. Test 11e: Mould growth .....	11
6. Test 11f: Corrosion, salt mist .....	12
7. Test 11g: Corrosion, industrial atmosphere (under consideration) .....	12
8. Test 11h: Sand and dust (under consideration) .....	13
9. Test 11i: Dry heat .....	13
10. Test 11j: Cold .....	14
11. Test 11k: Low air pressure .....	16
12. Test 11m: Damp heat, cyclic .....	17
13. Test 11n: Gas tightness, solderless wrapped connections .....	18

## SECTION TWO – SOLDERING TESTS

14. Test 12a: Solderability, wetting, solder bath method .....	19
15. Test 12b: Solderability, wetting, iron method .....	21
16. Test 12c: Solderability, dewetting .....	22
17. Test 12d: Resistance to soldering heat, solder bath method .....	22
18. Test 12e: Resistance to soldering heat, iron method .....	23

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## STANDARDS AUSTRALIA

## Australian Standard

**Electromechanical components for electronic equipment—Basic  
testing procedures and measuring methods**

## Part 6: Climatic tests and soldering tests

**Scope**

The tests contained in this standard, when required by the detail specification, shall be used for electromechanical components within the scope of Technical Committee No.48\*.

They may also be used for similar devices when specified in a detail specification.

## SECTION ONE – CLIMATIC TESTS

**1. Test 11a: Climatic sequence****1.1 Object**

The object of this test is to define a standard test method to assess the ability of a component to function in a specified manner in a specified environment which might be encountered during normal use, including storage.

**1.2 Preparation of the specimen****1.2.1 Mechanical preparation**

The specimen, equipped with normal accessories, shall be mounted and wired in accordance with the detail specification.

When required by the detail specification, the specimen shall be operated the number of times specified prior to the test.

For each test carried out, the detail specification shall specify the condition of the component, for example operated or non-operated, mated or unmated.

**1.2.2 Preconditioning**

Preconditioning shall be carried out in accordance with the requirements of the detail specification.

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\* *Scope of Technical Committee No 48:* To prepare international standards regarding components having an inherent electromechanical connecting or switching function, intended for use in equipment for telecommunication and in electronic devices employing similar techniques.

*Notes 1.* – R.F. connectors will not be dealt with by this Technical Committee as they will be covered by Technical Committee No. 46 together with r.f. cables.

*2.* – Sockets for components such as crystals or electronic tubes shall be considered in co-operation with the relevant Technical Committee.