

Australian Standard™

Environmental testing

Part 2.58: Tests—Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)



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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 5 July 2004. This Standard was published on 10 August 2004.

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**Part 2.58: Tests—Test 1d: Test methods
for solderability, resistance to
dissolution of metalization and to
soldering heat of surface mounting
devices (SMD)**

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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 2.58 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-58:1999, *Environmental testing – Part 2-58: Tests—Test Td - Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*.

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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.

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CONTENTS

	<i>Page</i>
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Preconditioning	2
5 Solder bath method	2
5.1 Test apparatus and materials for the solder bath method	2
6 Procedure	2
6.1 Number of specimens	2
6.2 Clamping	2
6.3 Fluxing	2
6.4 Solder immersion	2
7 Solder reflow methods	4
7.1 Test apparatus and materials	4
8 Test procedure	4
8.1 Number of specimens	4
8.2 Application of solder paste	4
8.3 Placement of specimens	5
8.4 Preheating	5
8.5 Solder reflow	5
9 Flux removal	7
9.1 Recovery	7
9.2 Evaluation	7
10 Information to be given in the relevant specification	9
Annex A (normative) Criteria for visual examination	10
Annex B (informative) Guidance	12

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1 Scope

This part of IEC 60068 outlines test Td, applicable to surface mounting devices (SMD). Soldering tests applicable to SMD in IEC 60068-2-69 and to other electrotechnical products are in IEC 60068-2-20 and IEC 60068-2-54, for which guidance is given in IEC 60068-2-44.

This standard provides standard procedures for determining the solderability, resistance to dissolution of metallization and resistance to soldering heat of surface mounting devices (SMD) (hereinafter referred to as specimens).

The procedures use either a solder bath or reflow method and are applicable only to specimens or products designed to withstand short term immersion in molten solder or limited exposure to reflow systems.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60068. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60068 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests – Test T: Soldering*

IEC 60068-2-44:1995, *Environmental testing – Part 2: Tests – Guidance on test T: Soldering*

IEC 60068-2-54:1985, *Environmental testing – Part 2: Tests – Test Ta: Soldering – Solderability testing by the wetting balance method*

IEC 60068-2-69:1995, *Environmental testing – Part 2: Tests – Test Te: Solderability testing of electronic components for surface mount technology by the wetting balance method*

IEC 60245-2-4:1987, *Base materials for printed circuits – Part 2: Specifications – Specification No. 4: Epoxide woven, glass fabric, copper-clad laminated sheet, general purpose grade*

IEC 60749:1996, *Semiconductor devices – Mechanical and climatic test methods*

3 Terms and definitions

For the purpose of this part of IEC 60068, the terms and definitions as defined in IEC 60068-1 and IEC 60068-2-20 apply.