

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)**

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.

The following are represented on Committee EL-026:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Energy 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 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)*.

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.
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- (d) 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 where 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).

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STANDARDS AUSTRALIA

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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 60249-2-4:1987, *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.