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# Australian Standard®
# 2547.2.3—1987

## SEMICONDUCTOR DEVICES—
## Part 2.3—INTEGRATED CIRCUITS—ANALOGUE

STANDARDS ASSOCIATION OF AUSTRALIA
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This Australian standard was prepared by Committee TE/12, Semiconductors and Devices. It was approved on behalf of the Council of the Standards Association of Australia on 23 March 1987 and published on 11 May 1987.

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The following interests are represented on Committee TE/12:

Department of Defence

Department of Industry, Technology and Commerce

Confederation of Australian Industry

Institution of Radio and Electronics Engineers, Australia

Telecom Australia

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AUSTRALIAN STANDARD

# SEMICONDUCTOR DEVICES—
# Part 2.3
# INTEGRATED CIRCUITS—
# ANALOGUE

## AS 2547.2.3—1987

First published .....1987
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# PREFACE

This standard was prepared by the Association's Committee on Semiconductors and Devices. It is reproduced from IEC 748.3-1986 and is one of the standards prepared by IEC/TC 47, Semiconductor Devices.

This standard is one of a series of standards published under the generic designation AS 2547. This standard supersedes

—the existing AS 2547 series (published in 1982 and 1983 and identical to equivalent parts of IEC 147 published between 1966 and 1981);

—AS C366, Part 4—1978 and Part 5—1978 (equivalent to IEC 147-4, IEC 147-5 and IEC 147-5A);

—AS C367 (endorsement of IEC 148-1969); and

—AS 1967 (identical to IEC 147-1D and 1E).

The purpose of IEC 747 is to reorganize the material originally presented in the IEC 147* and IEC 148† series on semiconductor devices and letter symbols representing them, into a device oriented publication. This is now republished as follows:

(a) Specific requirements for integrated circuits—now IEC 748.

(b) Mechanical and climatic test methods—now IEC 749.

It was in view of the above reorganization that Committee TE/12 agreed to integrate the entire series into one series of Australian standards using the generic designation AS 2547. The relationship with the three IEC standards is as follows:

(i) Part 1.1 onwards—identical with the IEC 747 series.

(ii) Part 2.1 onwards—identical with the IEC 748 series.

(iii) Part 3—identical with IEC 749.

For the purpose of this Australian standard and all other standards in this AS 2547 series, the text of the reproduced IEC Publications should be modified as follows:

A. *Terminology.* The words 'Australian Standard' should replace the words 'IEC Publication' wherever they appear.

B. *Cross-references.* The reference to IEC Publications should be replaced by references to the appropriate Australian Standards as follows:

| *References to IEC Publications* | | *Appropriate Australian Standard* | |
|---|---|---|---|
| IEC 27 | Letter symbols to be used in electrical technology | AS 1046 | Letter Symbols for Use in Electrotechnology |
| IEC 50 | International Electrotechnical Vocabulary | AS 1852 | International Electrotechnical Vocabulary |
| IEC 191 | Mechanical standardization of semiconductor devices | AS C379 | Mechanical Standardization of Semiconductor Devices |
| IEC 319 | Presentation of reliability data on electronic components | AS 2350 | Presentation of Reliability Data on Electronic and Similar Components |
| IEC 747 | Semiconductor devices. Discrete devices and integrated circuits | AS 2547 | Semiconductor Devices |
| 747.1 | Part 1—General | 1.1 | Discrete Devices—General |
| 747.2 | Part 2—Rectifier diodes | 1.2 | Discrete Devices—Rectifier Diodes |
| 747.3 | Signalling (including switching) and regulating diodes | 1.3 | Discrete Devices—Signalling (Including Switching) and Regulating Diodes |
| 747.4 | R.F. Diodes | 1.4 | Discrete Devices—R.F. Diodes |
| 747.5 | Optoelectronic devices | 1.5 | Discrete Devices—Optoelectronic Devices |

* IEC 147, Essential ratings and characteristics of semiconductor devices and general principles of measuring methods.

† IEC 148, Letter symbols for semiconductor devices and integrated microcircuits.

| | | | |
|---|---|---|---|
| 747.6 | Thyristors | 1.6 | Discrete Devices—Thyristors |
| 747.7 | Bipolar transistors | 1.7 | Discrete Devices—Bipolar Transistors |
| 747.8 | Field-effect transistors | 1.8 | Discrete Devices—Field-effect Transistors |
| 747.9 | Miscellaneous devices | 1.9 | Discrete Devices—Miscellaneous Devices |
| 747.10 | Generic specification for discrete devices and integrated circuits (QC 700 000) | 1.10 | Generic Specification for Discrete Devices and Integrated Circuits (QC 700 000) |
| 747.11 | Sectional specification for discrete devices (QC 750 000) | 1.11 | Sectional Specification for Discrete Devices (QC 750 000) |
| IEC 748 | Semiconductor Devices. Integrated circuits | AS 2547 | Semiconductor Devices. |
| IEC 748.1 | General | 2.1 | Integrated Circuits—General |
| IEC 748.2 | Digital integrated circuits | 2.2 | Integrated Circuits—Digital |
| IEC 748.3 | Analogue integrated circuits | 2.3 | Integrated Circuits—Analogue |
| IEC 748.4 | Interface integrated circuits | 2.4 | Integrated Circuits—Interface |
| IEC 749 | Semiconductor devices Mechanical and climatic test methods | 3.1 | Mechanical and Climatic Test Methods |

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# Australian Standard
# for
# SEMICONDUCTOR DEVICES

## PART 2.3—INTEGRATED CIRCUITS—ANALOGUE

### CHAPTER I: GENERAL

1. **Introductory note**

As a rule, it will be necessary to use Publications 747-1 and 748-1 together with the present publication. In Publications 747-1 and 748-1, the user will find all basic information on:

- terminology;
- letter symbols;
- essential ratings and characteristics;
- measuring methods;
- acceptance and reliability.

The sequence of the different chapters in the present publication is in accordance with Publication 747-1, Chapter III, Sub-clause 2.1.

2. **Purpose**

The present publication gives standards on the following sub-categories of analogue integrated circuits:

- operational amplifiers (having two inputs and one output);
- audioamplifiers, videoamplifiers and multichannel amplifiers for telecommunications;
- R.F. and I.F. amplifiers;
- voltage and current regulators;
- analogue signal switching circuits.

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