

Australian Standard[®]

**INTERNATIONAL ELECTROTECHNICAL
VOCABULARY**

**Chapter 551—POWER
ELECTRONICS**

This Australian standard was prepared by Committee TE/13, Symbols, Units and Quantities for Electrotechnology. It was approved on behalf of the Council of the Standards Association of Australia on 16 June 1983 and published on 2 December 1983.

The following interests are represented on Committee TE/13:

Australian Electrical and Electronic Manufacturers Association Limited
Confederation of Australian Industry
Department of Aviation
Department of Defence
Department of Housing and Construction
Department of Technical and Further Education, N.S.W. and Victoria
Electricity Supply Association of Australia
Institute of Draftsmen, Australia
Institute of Radio and Electronics Engineers, Australia
Melbourne & Metropolitan Board of Works
Queensland Chamber of Mines
Railways of Australia Committee
The Technical press
Telecom Australia

Review of Australian Standards. *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

AS 1852(551)—1983

Australian Standard[®]

**INTERNATIONAL ELECTROTECHNICAL
VOCABULARY**

**Chapter 551—POWER
ELECTRONICS**

First published 1983

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 3923 2

PREFACE

This Standard was prepared by the Association's Committee on Symbols, Units and Quantities for Electrotechnology, under the authority of both the Telecommunications and Electronics Standards Board and the Electrical Standards Board. This standard supersedes AS 1852(11)—1970, International Electrotechnical Vocabulary, Static Convertors, which is now withdrawn.

This standard is identical with and has been reproduced from IEC 50(551)—1982. Acknowledgement is accordingly made to the International Electrotechnical Commission for this assistance.

This standard is one of the AS 1852 series of standards. In the past, this series has consisted of direct endorsements of the IEC 50 series of the International Electrotechnical Vocabulary. In future, newly issued parts of IEC 50, where appropriate, will be issued as Australian standards, i.e. not endorsements. The full text of the definitions in English, French and Russian has been included as some definitions are considered to be incomplete when produced in one language.

The purpose of the AS 1852 series is to provide a glossary of terms used in electrical engineering. The series lists terms in English, French and Russian, and in some cases Spanish. It is intended that other Australian Standards will refer to AS 1852 and not repeat any definitions.

CONTENTS

<i>Section</i>	<i>Page</i>
551-01 General terms	3
551-02 Electronic power convertors and electron power switches	5
551-03 Essential components	11
551-04 Circuits	15
551-05 Operations	22
551-06 Characteristics	36
551-07 Characteristic curves (of convertors)	42
Index	45

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

INTERNATIONAL ELECTROTECHNICAL VOCABULARY

CHAPTER 551—POWER ELECTRONICS

SECTION 551-01 — GENERAL TERMS

551-01-01

électronique de puissance

Partie de l'électronique qui traite de la technique de puissance.

power electronics

That part of electronics which deals with power technology.

силовая электроника

Направление электроники, которое связано с силовой техникой.

551-01-02

**conversion (électronique)
(de puissance)**

Changement d'une ou de plusieurs caractéristiques d'un système électrique de puissance, essentiellement sans perte de puissance notable, au moyen d'éléments de valve électronique. Ces caractéristiques sont, par exemple, la tension, le nombre de phases et la fréquence, y compris la fréquence zéro.

(electronic) (power) conversion

Change of one or more of the characteristics of an electric power system essentially without appreciable loss of power by means of electronic valve devices. Characteristics are for example, voltage, number of phases and frequency (including zero frequency).

**(электронное) (силовое)
преобразование**

Изменение одного или нескольких параметров электрической энергии с помощью электронных вентиляльных приборов, осуществляемое без значительной потери энергии. В параметры электрической энергии входят, например, частота (включая нулевую частоту), напряжение, число фаз.

551-01-03

**ouverture et fermeture
(électronique) d'un circuit
(de puissance)**

Ouverture et fermeture d'un circuit électrique de puissance au moyen d'éléments de valve électronique.

(electronic) (power) switching

Switching an electric power circuit by means of electronic valve devices.

**(электронное) переключение
в силовой цепи**

Переключение (включение, выключение) электрической силовой цепи, осуществляемое посредством электронных вентиляльных приборов.