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**POWER TRANSFORMERS**  
**Part 5—ABILITY TO WITHSTAND**  
**SHORT-CIRCUIT**

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The following interests were represented on the committee responsible for the preparation of this standard:

Australian-British Trade Association  
Australian Electrical and Electronic Manufacturers Association  
Confederation of Australian Industry  
Defence Standardization Committee  
Electrical testing laboratories  
Electricity Supply Association of Australia  
Electricity Supply Engineers Association of N.S.W.  
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## PREFACE

This standard was prepared by the Association's Committee on Static Electrical Machinery. It is based closely on IEC 76—5 (including Amendment No 1), Power Transformers, Part 5: Ability to Withstand Short Circuits, and is Part 5 of a six-part standard to supersede AS C61—1970, Power Transformers.

The other Parts of the standard are:

- Part 1— General Requirements
- Part 2— Temperature Rise
- Part 3— Insulation Levels and Dielectric Tests
- Part 4— Tappings and Connections
- Part 6— Sound Levels

Where this standard differs from IEC 76—5 and changes have been made in compliance with Australian requirements, these changes are indicated by a rule in the margin. Only minor deviations from IEC 76—5 have been made but additional information and requirements have been introduced.

The main additions include:

- (a) Table 4 (b) which sets out maximum current densities for different classes of transformers.
- (b) Appendix A which gives guidance for a reduced schedule of short-circuit tests for category one transformers, that may be applied by agreement between the purchaser and the manufacturer.

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard  
for  
POWER TRANSFORMERS****PART 5—ABILITY TO WITHSTAND SHORT-CIRCUIT****SECTION 1. SCOPE AND DEFINITIONS**

**1.1 SCOPE.** This standard specifies the design of power transformers as defined in AS 2374, Part 1, and the requirements necessary both in regard to their ability to withstand short-circuit and the means of demonstrating that ability.

**NOTES:**

1. Pending the publication of a standard that applies to dry-type transformers\*, the requirements of this standard may be applied to dry-type transformers subject to agreement between the purchaser and the manufacturer and taking into account the principles established in Sections 2 and 3.
2. A reduced schedule of short-circuit tests may be applied to Category I transformers by agreement between purchaser, manufacturer and testing authority. Guidance on the reduced schedule is given in Appendix A.

**1.2 DEFINITIONS.** For the purpose of this standard the definitions given in AS 2374, Part 1 apply.

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\* In course of preparation.