

AS 2374.6—1994  
IEC 551:1987  
(Incorporating Amendment No. 1)

AS 2374.6

Australian Standard™

**Power transformers**

**Part 6: Determination of transformer  
and reactor sound levels**



**Standards Australia**

This Australian Standard was prepared by Committee EL/8, Power Transformers. It was approved on behalf of the Council of Standards Australia on 16 May 1994 and published on 11 July 1994.

---

The following interests are represented on Committee EL/8:

Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Australian Institute of Petroleum  
Electricity Supply Association of Australia  
Electricity Supply Engineers Association of New South Wales  
Institution of Engineers, Australia  
Railways of Australia Committee  
Testing and Certification Australia  
University of South Australia

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.com.au](mailto:mail@standards.com.au), or write to the Chief Executive, Standards Australia International Ltd, PO Box 1055, Strathfield, NSW 2135.

---

**AS 2374.6—1994**  
(Incorporating Amendment No. 1)

**Australian Standard™**

**Power transformers**

**Part 6: Determination of transformer  
and reactor sound levels**

First published as part of AS C61—1931.  
Second edition 1946 (endorsement of BS 171 — 1936 with  
amendments).  
Third edition 1963.  
Fourth edition 1970.  
Revised and redesignated in part as AS 2374.6—1982.  
Second edition 1994.  
Reissued incorporating Amendment No. 1 (June 2000).

**COPYRIGHT**

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia International Ltd  
PO Box 1055, Strathfield, NSW 2135, Australia  
ISBN 0 7262 8995 7

## PREFACE

This Standard was prepared by the Standards Australia Committee EL/8 on Power Transformers to supersede AS 2374.6—1982, *Power transformers*, Part 6: *Sound levels*.

*This Standard incorporates Amendment No. 1 (June 2000). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.*

It is identical with and has been reproduced from IEC 551—1987, *Determination of transformer and reactor sound levels*, with the exception that Appendix AA has been added.

This Standard is Part 6 of a series, including:

## AS

2374	Power transformers
2374.1	Part 1: General requirements
2374.2	Part 2: Temperature rise
2374.3	Part 3: Insulation levels and dielectric tests
2374.3.0	Part 3.0: General requirements
2374.3.1	Part 3.1: External clearances in air
2374.4	Part 4: Tappings and connections
2374.5	Part 5: Ability to withstand short-circuit

The principal difference between this Standard and the previous edition is that sound levels will now be expressed as sound power, not sound pressure. This is in line with current practice.

It is emphasized that care should be taken when comparing sound power levels determined from this Standard with sound pressure levels determined from the previous edition. The user is reminded that, for a given sound level, the numerical value of sound power will be significantly higher than the sound pressure reading, and that both quantities are represented in decibels (dB).

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

As this Standard is reproduced from an international Standard, the following applies:

- Its number does not appear on each page of text and its identity is shown only on the cover and title pages.
- In the source text, ‘this International Standard’ should read ‘this Australian Standard’.
- A full point substitutes for a comma when referring to a decimal marker.

References to international Standards should be replaced by equivalent Australian Standards, as follows:

<i>Reference to International Standards</i>		<i>Australian Standard</i>	
IEC		AS	
76	Power transformers	2374	Power transformers
76-1	Part 1: General	2374.1	Part 1: General requirements
289	Reactors	1028	Power reactors and earthing transformers
651	Sound level meters	1259	Acoustics—Sound level meters
		1259.1	Part 1: Non-integrating
726	Dry-type power transformers	2735	Dry-type power transformers
A1   1043	Electroacoustics—Instruments for the measurement of sound intensity—Measurements with pairs of pressure sensing microphones	A1   4241	Acoustics—Instruments for the measurement of sound intensity—Measurement with pairs of pressure sensing microphones
ISO		—	
3746	Acoustics—Determination of sound power levels of noise sources—Survey method		
A1   9614-1	Acoustics—Determination of sound power levels of noise sources using sound intensity—Part 1: Measurement at discrete points		
A1	Appendices A, B and C form an integral part of this standard.		

# CONTENTS

Clause		Page
1. Scope		1
2. Definitions		1
3. Instruments		2
4. Conditions for measurement		2
5. Measurement of sound pressure levels		3
6. Calculation of surface sound pressure level and sound power level		7
7. Presentation of results		9
FIGURES		12
APPENDIX A – Test environment qualification procedure		18
APPENDIX AA – Specified sound levels for transformers		22
A1   APPENDIX B - Derivation of sound power level from sound intensity measurements		24
APPENDIX C - Determination of sound power level due to load currents		29

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-