SUPERSEDED BY AS 3250-1985

Amendment 1 - Mar 1983
" 2 - May 1984

AS 3250—1982
UDC 621.31:[621.396.62+621.397.62]:614.825

see also AS 3159-1980 - to run concurrently with AS 3250.
AS 3159 to be withdrawn on 8 Nov 1984
* Withdrawal has been postponed pending new edition of AS 3250 12/11/84

Australian Standard 3250—1982

APPROVAL AND TEST SPECIFICATION FOR

MAINS OPERATED ELECTRONIC AND RELATED EQUIPMENT FOR HOUSEHOLD AND SIMILAR GENERAL USE

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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This Australian standard was prepared by Committee TE/1, Safety of Electronic Equipment. It was approved on behalf of the Council of the Standards Association of Australia on 13 August 1982 and published on 8 November 1982.

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

Australian Broadcasting Commission
Australian Electrical and Electronic Manufacturers Association
Confederation of Australian Industry
Department of Administrative Services
Department of Communications
Department of Defence Support
Department of Industry and Commerce
Department of Transport and Construction
Electrical regulatory authorities
Electronics Importers Association
Federation of Australian Commercial Television Stations
Federation of Australian Radio Broadcasters
Institution of Radio and Electronics Engineers
Telecom Australia
Testing interests

This standard was issued in draft form for comment as DR 80202.

AS 3250/Amdt 1/1983-03-07

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No 1
to
AS 3250—1982
APPROVAL AND TEST SPECIFICATION FOR MAINS OPERATED ELECTRONIC AND RELATED EQUIPMENT FOR HOUSEHOLD AND SIMILAR GENERAL USE

CORRECTIONS

SUMMARY: This amendment applies to Clauses 16.1 and 20.1(a).

Published on 7 March 1983.

AS 3250/AMDT 2/1984-05-11

STANDARDS ASSOCIATION OF AUSTRALIA

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AMENDMENT No 2
to
AS 3250—1982
Approval and Test Specification
for
MAINS OPERATED ELECTRONIC AND RELATED EQUIPMENT FOR HOUSEHOLD AND SIMILAR GENERAL USE

REVISED TEXT

The 1982 edition of AS 3250 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: The following clauses of the standard are covered by this amendment: Clause 3.101 and 10.

Published 1 May 1984.

AUSTRALIAN STANDARD

APPROVAL AND TEST SPECIFICATION FOR MAINS OPERATED ELECTRONIC AND RELATED EQUIPMENT FOR HOUSEHOLD AND SIMILAR GENERAL USE

AS 3250—1982

First published 1982

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

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PREFACE

This specification was prepared by the Association's Committee on Safety of Electronic Equipment as one of a series of approval and test specifications issued by the Association. Only safety matters and related conditions are covered.

This specification follows closely IEC 65 (Fourth Edition incorporating Amendment No 2), Safety Requirements for Mains Operated Electronic and Related Apparatus for Household and Similar General Use, and provides the basic requirements for the approval of electronic equipment of all kinds pending the publication of specific standards directed to the testing of particular kinds of equipment. This specification is intended to prevent injury to persons and damage to property by establishing essential requirements and minimum safety standards for the design and construction of mains operated electronic and related equipment.

This specification will exist concurrently with AS 3159—1980 (which refers to AS 3100), for a period of 2 years from the date of publication, before it replaces it. During this 2-year period, it is expected the regulatory authorities will approve equipment to either specification.

Some of the requirements of IEC 65 have been varied to take account of local conditions. Where this standard deviates technically from the IEC document by way of additional or different requirements, the deviation is indicated by a rule in the margin against the clause, or the part thereof, affected. An annex to this standard lists the variations from IEC 65.

Attention is drawn to the Note in Clauses 4.3 and 11.2 referring to the fact that a test, based on the flame propagation tests of AS 2420, is under consideration as an alternative to fault condition testing. The flame propagation tests of AS 2420 are also under consideration as a replacement for the fire testing of Clause 20.

In this specification the requirements proper appear in 'normal' type and the test requirements appear in 'italic' type. Explanatory matters are contained in notes to the clauses, in a smaller size 'normal' type.

This specification requires reference to the following Australian and IEC standards:

AS 1099 Basic Environmental Testing Procedures for Electrotechnology

AS 1368 Method for the Determination of the Vicat Softening Point of Thermoplastic Materials (Bending Test)

AS 1522 Metal-clad Base Materials for Printed Circuit Boards

AS 1660 Methods of Test for Electric Cables and Flexible Cords (Including Conductors, Insulation and Sheath)

AS 1939 Classification of Degrees of Protection Provided by Enclosures for Electrical Equipment

AS C73 Magnet Wire

AS C320 Classification of Insulating Materials for Electrical Machinery and Apparatus on the Basis of Thermal Stability in Service

IEC 127 Cartridge Fuse-links for Miniature Fuses

and to the following Australian standard approval and test specifications:

AS 3112 Plugs and Plug Sockets

AS 3191 Electric Flexible Cords

AS 3300 General Requirements for Household and Similar Electrical Appliances

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APPROVAL AND TEST SPECIFICATION
FOR
MAINS OPERATED ELECTRONIC AND RELATED EQUIPMENT FOR HOUSEHOLD AND SIMILAR GENERAL USE

1 SCOPE AND APPLICATION.

1.1 Scope. This standard applies to electronic equipment that is to be connected to the mains, either directly or indirectly, which is intended for domestic and similar general indoor use and not normally subjected to dripping or splashing such as that listed below:

(a) Radio receivers for sound or vision; radio transceivers.

(b) Amplifiers; tuners and tuner/amplifiers.

(c) Independent load or source transducers.

(d) Motor-driven equipment which comprises one or more of the abovementioned equipments or which is used only in combination with one or more of them, such as record players, tape recorders, tape decks, and other audio-visual equipment.

(e) Other apparatus provided to be used in combination with the abovementioned equipment such as aerial amplifiers, power supplies and cable-connected remote control devices.

(f) Musical equipment or domestic equipment operated out-of-doors or in public places.

NOTES:

1. Supplementary requirements for enclosures of electronic equipment intended to be used outdoors are given in AS 1939.
2. In the absence of an appropriate standard for professional equipment likely to be used by laymen, this standard will be used in so far as it is applicable.

1.2 Application. This standard applies to equipment for use at altitudes up to 2000 m.

NOTE: For equipment to be used in tropical climates, different requirements, as mentioned in the relevant clauses, are applicable.

This standard applies to equipment designed for a rated supply voltage not exceeding—

(a) 433 V r.m.s. between phases in the case of equipment for three-phase supply;

(b) 250 V r.m.s. in all other cases.

This standard is concerned with safety only and not with the other properties of the equipment (see Clause 3).

This standard applies to equipment constructed so as to ensure adequate protection against electric shock by the provision of either earthing or special insulation methods, e.g. double insulation.

2 DEFINITIONS.

For the purpose of this standard, the following definitions apply:

2.1 Type test (of a product)—the complete series of tests to be carried out on a number of specimens representative of the type, with the object of determining whether a particular manufacture can be considered to be able to produce products complying with the standard.

2.2 By hand—denotes that the operation does not require the use of a tool, coin or any other object.

2.3 Accessible part—a part which can be touched by the standard test finger (see Clause 9.1.1).

NOTE: Any accessible part of a non-conducting part is considered as being covered with a conductive layer (see Clause 4.3.1).

2.4 Live part—a part contact with which may cause a significant electric shock (see Clause 9.1.1).

2.5 Creepage distance in air—the shortest distance measured in air over the surface of insulation between conductive parts.

2.6 Clearance—the shortest distance measured in air between conductive parts.

2.7 Supply mains—any power source with an operating voltage of more than 34 V (peak) which is not used solely to supply the equipment specified.

2.8 Rated supply voltage—the mains voltage (for three-phase supply, the line-to-line voltage) for which the manufacturer has designed the equipment.

2.9 Part directly connected to the supply mains—a part of equipment which is electrically connected to the supply mains in such a way that connection between the part and either pole of the supply mains causes in that connection a current equal to or greater than 9 A.

NOTES:

1. A current of 9 A is chosen as the minimum rupturing current of a 6 A fuse.
2. In tests to determine which parts are directly connected to the supply mains, fuses in the equipment are not short-circuited.

2.10 Part conductively connected to the supply mains—a part of equipment which is electrically connected to the supply mains in such a way that a connection through a resistance of 2000 Ω between the part and either pole of the supply mains causes in that resistance a current greater than 0.7 mA (peak), the equipment not being connected to earth.

2.11 Supply equipment—equipment which takes energy from the mains and from which other equipment may be fed.

2.12 Battery eliminator—a supply equipment which may be used instead of the battery supply of electronic equipment.