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Technical Report

Electrostatics

Part 5.1: Protection of electronic devices from electrostatic phenomena—General requirements

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PREFACE

This Technical Report was published by agreement of the Standards Australia Electrotechnology Standards Sector Board, and was initially published as AS 61340.5.1(Int)—2001 by committee EL-025, Control of Undesirable Static Charges. Upon expiry of the period of currency of the Interim Standard, and with committee EL-025 being currently inactive, the Electrotechnology Standards Sector Board decided that the document should be reissued as a Technical Report. It is otherwise unchanged from AS 61340.5.1(Int)—2001. It is identical in technical content to and has been reproduced from IEC/TS 61340-5-1, Ed.1.0 (1998), *Electrostatics—Part 5-1: Protection of electronic devices from electrostatic phenomena—General requirements* and includes its Corrigendum:1999-02.

The objective of this Technical Report is to provide a more comprehensive coverage of the control of electrostatic discharge than is available in AS/NZS 1020:1995, *The control of undesirable static electricity*, in the area of the effects and prevention of electrostatic discharge to electronic devices.

Some of the effects of static electricity have been known for several thousands of years. In more recent times, their properties have been understood and have been used to advantage in many applications. Unfortunately some properties of static electricity cause problems, particularly in the electronics industry. This Technical Report gives guidance that will minimize the unwanted effects of electrostatic discharge. Additional information is contained in TR 61340.5.2 (User guide).

When the guidance given in this report is applied, it will provide a low risk of damage to the vast majority of components and assemblies used in the electronics industry, particularly for devices which have a damage threshold of greater than 100 V (human body model). Where ultra-sensitive devices are used, additional specialist precautions will need to be applied.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (**example**). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

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- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) A full point should be substituted for a comma when referring to a decimal marker.

The terms ‘normative’ and ‘informative’ have been used in this Report to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Report, whereas an ‘informative’ annex is only for information and guidance.

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