AS/NZS 5813.1:2012

Australian/New Zealand Standard™

Information technology equipment—Energy performance of computers

Part 1: Methods of measurement of energy performance

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-001, Safety of Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 21 June 2012 and on behalf of the Council of Standards New Zealand on 26 June 2012.
This Standard was published on 17 July 2012.

The following are represented on Committee TE-001:

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Australian Information Industry Association
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This Standard was issued in draft form for comment as DR AS/NZS 5813.1.

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Part 1: Methods of measurement of energy performance

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-001, Safety of Electronic Equipment.

The objective of this Standard is to provide designers, manufacturers, importers, test laboratories, regulators and users of computers with a test method to assess the energy efficiency of this equipment.

This Standard was prepared in response to the publication of a plan for the regulation of computers under the Equipment Energy Efficiency Program (E3) in 2004. This Standard draws upon the test method specified in the International Electrotechnical Commission draft standard 62623-post CD Rev Nov 2 and ENERGY STAR® Program Requirements for Computers: Version 5.2 (ENERGY STAR® V5.2 Computer Specification) published by the United States' Environmental Protection Agency (EPA) in 2010. This Standard is based on but not equivalent to the test method specified in the draft standard 62623-post CD Rev Nov 2.

This series consists of two parts. These are:

AS/NZS	
5813	Information technology equipment—Energy performance of computers
5813.1	Part 1: Methods of measurement of energy performance (this Standard)
5813.2	Part 2: Minimum energy performance standards (MEPS) for computers

Part 1 contains the test method for assessing the energy performance of computers.

Part 2 specifies minimum energy performance standards (MEPS) requirements. The MEPS requirements include typical energy consumption (TEC) calculations or maximum power allowances by operational mode for applicable computer types as defined in the ENERGY STAR® V5.2 Computer Specification. The MEPS requirements also include power management, power supply efficiency requirements and additional TEC allowances for additional components. Regulatory authorities have advised that it is intended to mandate Part 2 in regulations in Australia and New Zealand no earlier than 1 October 2012.

The term 'informative' is used to define the application of the appendix to which it applies. An informative appendix is only for information and guidance.

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Part 1: Methods of measurement of energy performance

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies a standardized test method to measure the energy performance of computers for defined operational modes when connected to the mains electricity supply (nominally 230 V, 50 Hz a.c.).

Computers include both stationary and portable units, including desktop computers, integrated computers, notebook computers, tablet computers, thin clients and small-scale servers.

This Standard also specifies the following:

(a) Computer types and associated components.

(b) Operational modes which are relevant for measuring power consumption.

(c) Terminology used in the test method.

(d) Information required for test reports.

The scope includes computers supplied with operating systems that do not include the ability to activate computer and computer monitor sleep modes.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
2706 Numerical values—Rounding and interpretation of limiting values

AS/NZS
5813 Information technology equipment—Energy performance of computers
5813.2 Part 2: Minimum energy performance standards (MEPS) for computers

62301 Household electrical appliances—Measurement of standby power (IEC 62301, Ed.1.0 (2005) MOD)

IEC
60050 International Electrotechnical Vocabulary
60050-300 Part 300: Electrical and electronic measurements and measuring instruments

IEEE
802 Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements
802.3 Part 3: Carrier sense multiple access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications