

Australian/New Zealand Standard™

**Information technology equipment—
Energy performance of computers**

**Part 1: Methods of measurement of
energy performance**



AS/NZS 5813.1:2012

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.

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Australian Industry Group
Australian Information Industry Association
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Certification Interests, New Zealand
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This Standard was issued in draft form for comment as DR AS/NZS 5813.1.

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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 standard (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.

CONTENTS

	Page
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 REFERENCED DOCUMENTS.....	4
1.3 DEFINITIONS—GENERAL.....	5
1.4 DEFINITIONS—COMPUTER TYPES.....	6
1.5 DEFINITIONS—COMPONENTS	7
1.6 DEFINITIONS—POWER MODES.....	8
1.7 DEFINITIONS—NETWORKING AND POWER MANAGEMENT.....	9
1.8 ABBREVIATIONS	10
SECTION 2 GENERAL CONDITIONS FOR MEASUREMENT	
2.1 GENERAL.....	11
2.2 POWER MEASUREMENTS.....	11
2.3 UNCERTAINTY, RESOLUTION AND ROUNDING.....	11
2.4 AMBIENT LIGHT METER SPECIFICATION.....	12
2.5 TEST ROOM.....	12
2.6 POWER SUPPLY.....	12
2.7 SUPPLY VOLTAGE WAVEFORM	12
SECTION 3 MEASUREMENT APPROACH	
3.1 EUT PREPARATION	13
3.2 TEST SETUP.....	14
3.3 TESTING PROCEDURE.....	15
SECTION 4 TEST REPORT	
4.1 GENERAL.....	17
4.2 MANDATORY INFORMATION	17
4.3 OPTIONAL INFORMATION	18
APPENDICES	
A ENERGY STAR SHORT AND LONG IDLE MODES	19

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Information technology equipment—Energy performance of computers****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