AS/NZS CISPR 16.4.4:2004
CISPR 16-4-4:2003

Australian/New Zealand Standard™

Specification for radio disturbance and immunity measuring apparatus and methods

Part 4.4: Uncertainties, statistics and limit modelling—Statistics of complaints and a model for the calculation of limits

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-003, Electromagnetic Interference. It was approved on behalf of the Council of Standards Australia on 24 March 2004 and on behalf of the Council of Standards New Zealand on 16 April 2004. It was published on 2 June 2004.

The following are represented on Committee TE-003:

Australian Broadcasting Authority
Australian Broadcasting Corporation
Australian Chamber of Commerce and Industry
Australian Communications Authority
Australian Electrical and Electronic Manufacturers Association
Australian Information Industry Association
CSIRO Telecommunications and Industrial Physics
Commercial Television Australia
Department of Defence (Australia)
Electrical Compliance Testing Association
Institution of Engineers Australia
Ministry of Economic Development (New Zealand)
SingTel Optus
Society of Automotive Engineers – Australasia
Telstra Corporation
University of Western Australia
Wireless Institute 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 Standards may also be withdrawn.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 joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 04096.

Australian/New Zealand Standard™

Specification for radio disturbance and immunity measuring apparatus and methods

Part 4.4: Uncertainties, statistics and limit modelling—Statistics of complaints and a model for the calculation of limits

First published as AS/NZS CISPR 16.4.4:2004.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5997 1

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Interference.

This Standard is identical with, and has been reproduced from, CISPR 16-4-4:2003, *Specification for radio disturbance and immunity measuring apparatus and methods,* Part 4.4: *Uncertainties, statistics and limit modelling—Statistics of complaints and a model for the calculation of limits*.

The objective of this Standard is to specify the calculation of limits for disturbance field strength and disturbance voltage for the measurement on the test site on the basis of models for the generation of disturbance for radiation coupling respectively for mains coupling.

This Standard is Part 4.4 of AS/NZS CISPR 16.4, *Specification for radio disturbance and immunity measuring apparatus and methods*, which consists of the following:

Part 4.1: Uncertainties, statistics and limit modelling—Uncertainties in standardized EMC tests
Part 4.2: Uncertainties, statistics and limit modelling—Uncertainty in EMC measurements
Part 4.3: Uncertainties, statistics and limit modelling—Statistical considerations in the determination of EMC compliance of mass-produced products
Part 4.4: Uncertainties, statistics and limit modelling—Statistics of complaints and a model for the calculation of limits (this Standard)

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

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

(a) Its number appears on the cover and title page while the international standard number appears only on the cover.

(b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
CISPR		AS/NZS CISPR	
11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic disturbance characteristics—Limits and methods of measurement	11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic disturbance characteristics—Limits and methods of measurement
16	Specification for radio disturbance and immunity measuring apparatus and methods	16	Specification for radio disturbance and immunity measuring apparatus and methods
16-1-1	Part 1-1: Radio disturbance and immunity measuring apparatus—Measuring apparatus	16.1.1	Part 1.1: Radio disturbance and immunity measuring apparatus—Measuring apparatus

16-1-2	Part 1-2: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Conducted disturbances	16.1.2	Part 1.2: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Conducted disturbances
16-1-3	Part 1-3: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Disturbance power	16.1.3	Part 1.3: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Disturbance power
16-1-4	Part 1-4: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Radiated disturbances	16.1.4	Part 1.4: Radio disturbance and immunity measuring apparatus—Ancillary equipment—Radiated disturbances
16-1-5	Part 1-5: Radio disturbance and immunity measuring apparatus—Antenna calibration test sites for 30 MHz to 1 000 MHz	16.1.5	Part 1.5: Radio disturbance and immunity measuring apparatus—Antenna calibration test sites for 30 MHz to 1 000 MHz
16-2-1	Part 2-1: Methods of measurement of immunity and disturbance—Conducted disturbance measurements	16.2.1	Part 2.1: Methods of measurement of immunity and disturbance—Conducted disturbance measurements
16-2-2	Part 2-2: Methods of measurement of immunity and disturbance—Measurement of disturbance power	16.2.2	Part 2.2: Methods of measurement of immunity and disturbance—Measurement of disturbance power
16-2-3	Part 2-3: Methods of measurement of immunity and disturbance—Radiated disturbance measurements	16.2.3	Part 2.3: Methods of measurement of immunity and disturbance—Radiated disturbance measurements
16-2-4	Part 2-4: Methods of measurement of immunity and disturbance—Immunity measurements	16.2.4	Part 2.4: Methods of measurement of immunity and disturbance—Immunity measurements
16-3	Part 3: CISPR technical reports	16.3	Part 3: CISPR technical reports
16-4-1	Part 4-1: Uncertainties, statistics and limit modelling—Uncertainties in standardized EMC tests	16.4.1	Part 4.1: Uncertainties, statistics and limit modelling—Uncertainties in standardized EMC tests
16-4-3	Part 4-3: Uncertainties, statistics and limit modelling—Statistical considerations in the determination of EMC compliance of mass-produced products	16.4.3	Part 4.3: Uncertainties, statistics and limit modelling—Statistical considerations in the determination of EMC compliance of mass-produced products

CONTENTS

Page

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Specification for radio disturbance and immunity measuring apparatus and methods
Part 4.4: Uncertainties, statistics and limit modelling—Statistics of complaints and a model for the calculation of limits

1 Scope

This part of CISPR 16-4 describes the calculation of limits for disturbance field strength and disturbance voltage for the measurement on the test site on the basis of models for the generation of disturbance for radiation coupling respectively for mains coupling.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CISPR 11, Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

CISPR 16-1 (all parts), Specification for radio disturbance and immunity measuring apparatus and methods – Radio disturbance and immunity measuring apparatus

CISPR 16-2 (all parts), Specification for radio disturbance and immunity measuring apparatus and methods – Methods of measurement of disturbances and immunity

CISPR 16-3, Specification for radio disturbance and immunity measuring apparatus and methods – Part 3: CISPR technical reports

CISPR 16-4-1:2003, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-1: Uncertainties, statistics and limit modelling – Uncertainties in standardized EMC tests

CISPR 16-4-3:2003, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-3: Uncertainties, statistics and limit modelling – Statistical considerations in the determination of EMC compliance of mass-produced products

3 Definitions

None of the definitions of CISPR 16-3:2000 apply to this part of CISPR 16. For further definitons see IEC 60050(161).