Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.4: Testing and measurement techniques—Electrical fast transient/burst immunity test





AS/NZS 61000.4.4:2006

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-003, Electromagnetic Inteference. It was approved on behalf of the Council of Standards Australia on 19 April 2006 and on behalf of the Council of Standards New Zealand on 19 May 2006.

This Standard was published on 1 June 2006.

The following are represented on Committee TE-003:

Australian Broadcasting Corporation Australian Chamber of Commerce and Industry Australian Communications and Media Authority Australian Electrical and Electronic Manufacturers Association Australian Information Industry Association Consumer Electronics Supplier Association **Electrical Compliance Testing Association** Engineers Australia Free TV Australia Ministry of Economic Development, New Zealand National Measurement Institute 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 Standards may also be withdrawn.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 or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 06051.

AS/NZS 61000.4.4:2006

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.4: Testing and measurement techniques—Electrical fast transient/burst immunity test

First published as AS/NZS 61000.4.4:2006.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Inteference, as one of a series of Standards intended to facilitate control of electromagnetic interference and the compatibility of electrical and electronic equipment.

This Standard is identical with, and has been reproduced from IEC 61000-4-4:2004, Electromagnetic compatibility (EMC)—Part 4-4: Testing and measurement techniques— Electrical fast transient/burst immunity test.

The objective of this Standard is to provide designers, manufacturers, and testers of equipment incorporating electrical or electronic operation with methods of test for ascertaining immunity to electromagnetic disturbances.

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 part of IEC 61000-4' 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:

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

CONTENTS

		Page
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	General	4
5	Test levels	4
6	Test equipment	4
	6.1 Burst generator	5
	6.2 Coupling/decoupling network for a.c./d.c. mains supply port	6
	6.3 Capacitive coupling clamp	7
7	Test set-up	
	7.1 Test equipment	
	7.2 Test set-up for type tests performed in laboratories	
^	7.3 Test set-up for post-installation tests	
8	Test procedure	
	8.1 Laboratory reference conditions	
9	Evaluation of test results	
10		
Anı	nex A (informative) Information on the electrical fast transients	22
	nex B (informative) Selection of the test levels	
Bib	oliography	26
_	ure 1 – Simplified circuit diagram of a fast transient/burst generator	
Fig	ure 2 – General graph of a fast transient/burst	15
Fig	jure 3 – Waveshape of a single pulse into a 50 Ω load	16
	ure 4 – Coupling/decoupling network for a.c./d.c. power mains supply	16
Fig	jure 5 – Construction of the capacitive coupling clamp	17
Fig	ure 6 – Block diagram for electrical fast transient/burst immunity test	17
Fig	jure 7 – General test set-up for laboratory type tests	18
Fig	jure 8 – Example of a test set-up for rack mounted equipment	18
	jure 9 – Example of a test set-up for direct coupling of the test voltage to a a.c./d.c. wer supply ports/terminal for laboratory purposes	19
	jure 10 – Example of test set-up for application of the test voltage by the capacitive upling clamp for laboratory test purposes	19



	This is a free preview.	Purchase the e	entire publication	at the link below:
--	-------------------------	----------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation