

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields



AS/NZS IEC 61000.4.6:2013

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 22 May 2013 and on behalf of the Council of Standards New Zealand on 23 April 2013.
This Standard was published on 20 June 2013.

The following are represented on Committee TE-003:

Australian Broadcasting Corporation
Australian Communications and Media Authority
Australian Industry Group
Australian Information Industry Association
Consumer Electronics Suppliers Association
Consumers Federation of Australia
Curtin University of Technology
Department of Defence, Australia
Electrical Compliance Testing Association
Energy Networks Association
Engineers Australia
Lighting Council New Zealand
Lighting Council of Australia
Ministry of Economic Development, New Zealand
National Measurement Institute
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 Standards may also be withdrawn.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.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

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.

AS/NZS IEC 61000.4.6:2013

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields

Originated as AS/NZS 61000.4.6:1999.

Second edition 2006.

Jointly revised and designated AS/NZS IEC 61000.4.6:2013.

COPYRIGHT

© Standards Australia Limited/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, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 1 74342 479 7

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Interference, to supersede AS/NZS 61000.4.6:2006.

The objective of this Standard is to establish a common reference for evaluating the functional immunity of electrical and electronic equipment when subjected to conducted disturbances induced by radio-frequency fields. The test method documented in this Standard describes a consistent method to assess the immunity of equipment or a system against a defined phenomenon.

This Standard is identical with, and has been reproduced from IEC 61000-4-6, Ed. 3.0 (2008), *Electromagnetic compatibility (EMC), Part 4-6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields*.

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' should read 'this Australian/New Zealand Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

The terms 'normative' and 'informative' have been used in this Standard 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.

CONTENTS

| | | |
|-------|--|----|
| 1 | Scope and object | 8 |
| 2 | Normative references | 8 |
| 3 | Terms and definitions | 8 |
| 4 | General | 10 |
| 5 | Test levels | 10 |
| 6 | Test equipment | 11 |
| 6.1 | Test generator | 11 |
| 6.2 | Coupling and decoupling devices | 12 |
| 6.2.1 | Coupling/decoupling networks (CDNs) | 12 |
| 6.2.2 | Clamp injection devices | 13 |
| 6.2.3 | Direct injection devices | 14 |
| 6.2.4 | Decoupling networks | 14 |
| 6.3 | Verification of the common mode impedance at the EUT port of coupling and decoupling devices | 14 |
| 6.3.1 | Insertion loss of the 150 Ω to 50 Ω adapters | 15 |
| 6.4 | Setting of the test generator | 15 |
| 6.4.1 | Setting of the output level at the EUT port of the coupling device | 15 |
| 7 | Test set-up for table-top and floor-standing equipment | 16 |
| 7.1 | Rules for selecting injection methods and test points | 16 |
| 7.1.1 | Injection method | 16 |
| 7.1.2 | Ports to be tested | 17 |
| 7.2 | Procedure for CDN injection application | 18 |
| 7.3 | Procedure for clamp injection when the common-mode impedance requirements can be met | 18 |
| 7.4 | Procedure for clamp injection when the common-mode impedance requirements cannot be met | 19 |
| 7.5 | Procedure for direct injection | 19 |
| 7.6 | EUT comprising a single unit | 19 |
| 7.7 | EUT comprising several units | 20 |
| 8 | Test procedure | 20 |
| 9 | Evaluation of the test results | 21 |
| 10 | Test report | 21 |
| | Annex A (normative) Additional information regarding clamp injection | 33 |
| | Annex B (informative) Selection criteria for the frequency range of application | 38 |
| | Annex C (informative) Guide for selecting test levels | 40 |
| | Annex D (informative) Information on coupling and decoupling networks | 41 |
| | Annex E (informative) Information for the test generator specification | 45 |
| | Annex F (informative) Test set-up for large EUTs | 46 |
| | Annex G (informative) Measurement uncertainty of test instrumentation | 49 |
| | Bibliography | 56 |
| | Figure 1 – Rules for selecting the injection method | 17 |

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

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-