

AS/NZS IEC 61000.4.3:2013  
IEC 61000-4-3, Ed.3.2 (2010)

AS/NZS IEC 61000.4.3:2013

Australian/New Zealand Standard™

**Electromagnetic compatibility (EMC)**

**Part 4.3: Testing and measurement  
techniques—Radiated, radio-frequency,  
electromagnetic field immunity test**



### **AS/NZS IEC 61000.4.3:2013**

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 4 June 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 Standards may also be withdrawn.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](http://www.saiglobal.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://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 61000.4.3:2013

Australian/New Zealand Standard™

**Electromagnetic compatibility (EMC)**

**Part 4.3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test**

Originated as AS/NZS 61000.4.3:1999.

Previous edition 2006.

Jointly revised and designated AS/NZS IEC 61000.4.3:2013.

**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 512 1

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Interference, to supersede AS/NZS 61000.4.3:2006.

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.

This Standard is identical with, and has been reproduced from IEC 61000-4-3, Ed.3.2 (2010), *Electromagnetic compatibility (EMC), Part 4-3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test*. Edition 3.2 of IEC 61000-4-3 incorporates Amendment 1 (2007), Amendment 2 (2010) and interpretation sheet 1 of August 2008. The amendments are indicated by marginal bars.

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

- (a) In the source text ‘this part of IEC 61000’ should read ‘this Australian/New Zealand Standard’.
- (b) 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:

<i>Reference to International Standard</i>	<i>Australian Standard</i>
IEC	AS
60068 Environmental testing	60068 Environmental testing
60068-1 Part 1: General and guidance	60068.1 Part 1: General and guidance
61000 Electromagnetic compatibility (EMC)	AS/NZS 61000 Electromagnetic compatibility (EMC)
61000-4-6 Part 4-6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields	61000-4-6 Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields

Only international references that have been adopted as Australian or Australian/New Zealand standards have been listed.

## CONTENTS

1	Scope and object.....	7
2	Normative references .....	7
3	Terms and definitions .....	8
4	General .....	11
5	Test levels.....	11
5.1	Test levels related to general purposes .....	12
5.2	Test levels related to the protection against RF emissions from digital radio telephones and other RF emitting devices .....	12
6	Test equipment.....	13
6.1	Description of the test facility .....	13
6.2	Calibration of field .....	14
7	Test setup .....	19
7.1	Arrangement of table-top equipment.....	19
7.2	Arrangement of floor-standing equipment .....	19
7.3	Arrangement of wiring .....	20
7.4	Arrangement of human body-mounted equipment.....	20
8	Test procedure .....	20
8.1	Laboratory reference conditions .....	20
8.2	Execution of the test.....	21
9	Evaluation of test results .....	22
10	Test report.....	22
Annex A (informative) Rationale for the choice of modulation for tests related to the protection against RF emissions from digital radio telephones .....		31
Annex B (informative) Field generating antennas .....		36
Annex C (informative) Use of anechoic chambers .....		37
Annex D (informative) Amplifier non-linearity and example for the calibration procedure according to 6.2 .....		40
Annex E (informative) Guidance for product committees on the selection of test levels .....		45
Annex F (informative) Selection of test methods .....		48
Annex G (informative) Description of the environment.....		49
Annex H (normative) Alternative illumination method for frequencies above 1 GHz ("independent windows method") .....		54
Annex I (informative) Calibration method for E-field probes.....		57
Annex J (informative) Measurement uncertainty due to test instrumentation .....		72
Figure 1 – Definition of the test level and the waveshapes occurring at the output of the signal generator .....		24
Figure 2 – Example of suitable test facility .....		25
Figure 3 – Calibration of field .....		26
Figure 4 – Calibration of field, dimensions of the uniform field area .....		27
Figure 5 – Example of test setup for floor-standing equipment .....		28
Figure 6 – Example of test setup for table-top equipment.....		29

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
-