

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.  
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*This Standard was issued in draft form for comment as DR AS/NZS IEC 61000.4.3.*

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

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## 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
	AS/NZS
61000 Electromagnetic compatibility (EMC)	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.

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## INTRODUCTION

This standard is part of the IEC 61000 series, according to the following structure:

### **Part 1: General**

- General considerations (introduction, fundamental principles)
- Definitions, terminology

### **Part 2: Environment**

- Description of the environment
- Classification of the environment
- Compatibility levels

### **Part 3: Limits**

- Emission limits
- Immunity limits (in so far as they do not fall under the responsibility of the product committees)

### **Part 4: Testing and measurement techniques**

- Measurement techniques
- Testing techniques

### **Part 5: Installation and mitigation guidelines**

- Installation guidelines
- Mitigation methods and devices

### **Part 6: Generic standards**

### **Part 9: Miscellaneous**

Each part is further subdivided into several parts, published either as international standards or as technical specifications or technical reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example: 61000-6-1).

This part is an International Standard which gives immunity requirements and test procedures related to radiated, radio-frequency, electromagnetic fields.

## AUSTRALIAN/NEW ZEALAND STANDARD

**Electromagnetic compatibility (EMC)**

## Part 4.3:

**Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test****1 Scope and object**

This part of IEC 61000 is applicable to the immunity requirements of electrical and electronic equipment to radiated electromagnetic energy. It establishes test levels and the required test procedures.

The object of this standard is to establish a common reference for evaluating the immunity of electrical and electronic equipment when subjected to radiated, radio-frequency electromagnetic fields. The test method documented in this part of IEC 61000 describes a consistent method to assess the immunity of an equipment or system against a defined phenomenon.

NOTE 1 As described in IEC Guide 107, this is a basic EMC publication for use by product committees of the IEC. As also stated in Guide 107, the IEC product committees are responsible for determining whether this immunity test standard should be applied or not, and if applied, they are responsible for determining the appropriate test levels and performance criteria. TC 77 and its sub-committees are prepared to co-operate with product committees in the evaluation of the value of particular immunity tests for their products.

This part deals with immunity tests related to the protection against RF electromagnetic fields from any source.

Particular considerations are devoted to the protection against radio-frequency emissions from digital radiotelephones and other RF emitting devices.

NOTE 2 Test methods are defined in this part for evaluating the effect that electromagnetic radiation has on the equipment concerned. The simulation and measurement of electromagnetic radiation is not adequately exact for quantitative determination of effects. The test methods defined are structured for the primary objective of establishing adequate repeatability of results at various test facilities for qualitative analysis of effects.

This standard is an independent test method. Other test methods may not be used as substitutes for claiming compliance with this standard.

**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.

IEC 60050(161), *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*