

Australian Standard™

**Identification cards—Contactless  
integrated circuit(s) cards—Vicinity  
cards**

**Part 1: Physical characteristics**

This Australian Standard was prepared by Committee IT-012, Information Systems, Security and Identification Technology. It was approved on behalf of the Council of Standards Australia on 4 March 2003 and published on 31 March 2003.

---

The following are represented on Committee IT-012:

Attorney General's Department  
Australian Association of Permanent Building Societies  
Australian Bankers Association  
Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Australian Information Industry Association  
Certification Forum of Australia  
Department of Defence (Australia)  
Department of Social Welfare New Zealand  
Government Communications Security Bureau, New Zealand  
Internet Industry Association  
NSW Police Service  
New Zealand Defence Force  
Reserve Bank of 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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Australia website at [www.standards.com.au](http://www.standards.com.au) and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.com.au](mailto:mail@standards.com.au), or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

---

*This Standard was issued in draft form for comment as DR 02511.*

Australian Standard™

**Identification cards—Contactless  
integrated circuit(s) cards—Vicinity  
cards**

**Part 1: Physical characteristics**

First published as AS 15693.1—2003.

**COPYRIGHT**

© Standards Australia International

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.

Published by Standards Australia International Ltd  
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5119 9

## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee IT-012, Information Systems, Security and Identification Technology. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

It is identical with, and has been reproduced from ISO/IEC 15693-1:2000, *Identification cards—Contactless integrated circuit(s) cards—Vicinity cards, Part 1: Physical characteristics*.

The objective of this Standard is to describe the physical characteristics of vicinity cards.

This Standard is Part 1 of AS 15693, *Identification cards—Contactless integrated circuit(s) cards—Vicinity cards*, which is published in parts as follows:

Part 1: Physical characteristics (this Standard)

Part 2: Air interface and initialization

Part 3: Anticollision and transmission protocol

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:

- Its number appears on the cover and title page while the International Standard number appears only on the cover.
- In the source text ‘this part of ISO/IEC 15693’ should read ‘this Australian Standard’.
- 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 or Australian/New Zealand Standard</i>	
ISO/IEC		AS	
7810	Identification cards—Physical characteristics	3521	Identification cards—Physical characteristics
IEC		AS/NZS	
61000	Electromagnetic compatibility (EMC)	61000	Electromagnetic compatibility (EMC)
61000-4-2	Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test	61000.4.2	Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test

## CONTENTS

	<i>Page</i>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>2</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Physical characteristics</b> .....	<b>2</b>
<b>4.1 General</b> .....	<b>2</b>
<b>4.2 Dimensions</b> .....	<b>2</b>
<b>4.3 Additional characteristics</b> .....	<b>2</b>
<b>4.3.1 Ultra-violet light</b> .....	<b>2</b>
<b>4.3.2 X-rays</b> .....	<b>2</b>
<b>4.3.3 Dynamic bending stress</b> .....	<b>2</b>
<b>4.3.4 Dynamic torsional stress</b> .....	<b>2</b>
<b>4.3.5 Alternating magnetic fields</b> .....	<b>2</b>
<b>4.3.6 Alternating electric field</b> .....	<b>3</b>
<b>4.3.7 Static electricity</b> .....	<b>3</b>
<b>4.3.8 Static magnetic field</b> .....	<b>3</b>
<b>4.3.9 Operating temperature</b> .....	<b>3</b>
<b>Annex A (informative) Standard compatibility</b> .....	<b>4</b>
<b>Annex B (informative) Surface quality for printing</b> .....	<b>5</b>
<b>Annex C (informative) Hold spot</b> .....	<b>6</b>

Currently in preview, click buy full version

## AUSTRALIAN STANDARD

**Identification cards — Contactless integrated circuit(s) cards — Vicinity cards — Part 1: Physical characteristics****1 Scope**

This part of ISO/IEC 15693 specifies the physical characteristics of vicinity cards (VICC). It applies to identification cards of the card type ID-1 operating in vicinity of a coupling device.

This part of ISO/IEC 15693 shall be used in conjunction with later parts of ISO/IEC 15693.

**2 Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 15693. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 15693 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 7810, *Identification cards - Physical characteristics*

ISO/IEC 10373, *Identification cards - Test methods*.

IEC 61000-4-2, *Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test*.

**3 Terms and definitions**

For the purposes of this part of ISO/IEC 15693, the following terms and definitions apply.

**3.1****integrated circuit(s) (IC)**

Electronic component(s) designed to perform processing and/or memory functions.

**3.2****contactless**

Pertaining to the achievement of signal exchange with and supplying power to the card without the use of galvanic elements (i.e. the absence of an ohmic path from the external interfacing equipment to the integrated circuit(s) contained within the card).

**3.3****contactless integrated circuit(s) card**

A card of the card type ID-1 (as specified in ISO/IEC 7810) into which integrated circuit(s) have been placed and in which communication to such integrated circuit(s) is done in a contactless manner.