

Australian Standard™

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

**Part 2: Radio frequency power and
signal interface**

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.

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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 14443-2:2001, *Identification cards—Contactless integrated circuit(s) cards—Proximity cards, Part 2: Radio frequency power and signal interface*.

The objective of this Standard is to describe the electrical characteristics of two types of contactless interface between a proximity card and a proximity coupling device.

This Standard is Part 2 of AS 14443, *Identification cards—Contactless integrated circuit(s) cards—Proximity cards*, which is published in parts as follows:

Part 1: Physical characteristics

Part 2: Radio frequency power and signal interface (this Standard)

Part 3: Initialization and anticollision

Part 4: 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:

- (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 ISO/IEC 14443’ should read ‘this Australian 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:

| <i>Reference to International Standard</i> | | <i>Australian Standard</i> | |
|--|--|----------------------------|--|
| ISO/IEC | | AS | |
| 14443 | Identification cards—Contactless integrated circuit(s) cards—Proximity cards | 14443 | Identification cards—Contactless integrated circuit(s) cards—Proximity cards |
| 14443-1 | Part 1: Physical characteristics | 14443.1 | Part 1: Physical characteristics |
| 14443-3 | Part 3: Initialization and anticollision | 14443.3 | Part 3: Initialization and anticollision |

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AUSTRALIAN STANDARD

Identification cards — Contactless integrated circuit(s) cards — Proximity cards —**Part 2:
Radio frequency power and signal interface****1 Scope**

This part of ISO/IEC 14443 specifies the characteristics of the fields to be provided for power and bi-directional communication between proximity coupling devices (PCDs) and proximity cards (PICCs).

This part of ISO/IEC 14443 is intended to be used in conjunction with other parts of ISO/IEC 14443.

This part of ISO/IEC 14443 does not specify the means of generating coupling fields, nor the means of compliance with electromagnetic radiation and human exposure regulations which can vary according to country.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 14443. 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 14443 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 apply. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 7816-2, *Information technology – Identification cards – Integrated circuit(s) cards with contacts – Part 2: Dimensions and location of the contacts*

ISO/IEC 10373-6, *Identification cards – Test methods – Proximity cards*

ISO/IEC 14443-1, *Identification cards – Contactless integrated circuit(s) cards – Proximity cards – Part 1: Physical characteristics*

ISO/IEC 14443-3, *Identification cards – Contactless integrated circuit(s) cards – Proximity cards – Part 3: Initialization and anticollision*

3 Terms and definitions

For the purposes of this part of ISO/IEC 14443, the following terms and definitions apply.

3.1**bit duration**

time during which a logic level is defined, at the end of which a new bit starts