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**Identification cards — Test methods —**

Part 6:

**Proximity cards**

AMENDMENT 5: Bit rates of *fc/64*, *fc/32* and *fc/16*

*Cartes d'identification — Méthodes d'essai —*

*Partie 6: Cartes de proximité*

*AMENDEMENT 5: Débits binaires de *fc/64*, *fc/32* et *fc/16**



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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 5 to ISO/IEC 10373-6:2001 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.



## Identification cards — Test methods —

### Part 6: Proximity cards

#### AMENDMENT 5: Bit rates of $fc/64$ , $fc/32$ and $fc/16$

Page 2, 7.1.1 of ISO/IEC 10373-6:2001/Amd.2:2003

Add the following note at the end of the subclause:

"NOTE No load modulation test is required for bit rates of  $fc/64$ ,  $fc/32$  and  $fc/16$ ."

Page 4, 7.2.2 of ISO/IEC 10373-6:2001/Amd.2:2003

Replace the existing text with the following:

"Tables 1 to 4 define additional test conditions to be applied for type A PICCs for different bit rates.

NOTE The definitions for timing parameters related to the amplitude are different between  $fc/128$  and higher bit rates, see the future Amendment 2 to ISO/IEC 14443-2:2001."

Page 4, 7.2.2 of ISO/IEC 10373-6:2001/Amd.2:2003

Replace the title of Table 1 with the following: "Table 1 – Additional test conditions for a bit rate of  $fc/128$ "

Page 4, 7.2.2 of ISO/IEC 10373-6:2001/Amd.2:2003

Insert the following table and note after Table 1:

**Table 2 — Additional test conditions for a bit rate of  $fc/64$**

| Condition | $H$<br>(A/m) | $t_1$   | $t_2$   | $t_3$  | $a$         |
|-----------|--------------|---------|---------|--------|-------------|
| 1         | 1,5          | $20/fc$ | $14/fc$ | $6/fc$ | 0,2         |
| 2         | 1,5          | $20/fc$ | $16/fc$ | $7/fc$ | $\leq 0,05$ |
| 3         | 4,5          | $20/fc$ | $14/fc$ | $6/fc$ | 0,2         |
| 4         | 4,5          | $20/fc$ | $16/fc$ | $7/fc$ | $\leq 0,05$ |
| 5         | 7,5          | $20/fc$ | $14/fc$ | $6/fc$ | 0,2         |
| 6         | 7,5          | $20/fc$ | $16/fc$ | $7/fc$ | $\leq 0,05$ |

NOTE The timing  $t_3$  for all higher bit rates is defined in 8.1.2.2.

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Insert the following table after the new Table 2:

Table 3 — Additional test conditions for a bit rate of  $fc/32$ 

| Condition | $H$<br>(A/m) | $t_1$   | $t_2$  | $t_3$  | $a$         |
|-----------|--------------|---------|--------|--------|-------------|
| 1         | 1,5          | $10/fc$ | $6/fc$ | $6/fc$ | 0,35        |
| 2         | 1,5          | $10/fc$ | $7/fc$ | $7/fc$ | $\leq 0,15$ |
| 3         | 4,5          | $10/fc$ | $6/fc$ | $6/fc$ | 0,35        |
| 4         | 4,5          | $10/fc$ | $7/fc$ | $7/fc$ | $\leq 0,15$ |
| 5         | 7,5          | $10/fc$ | $6/fc$ | $6/fc$ | 0,35        |
| 6         | 7,5          | $10/fc$ | $7/fc$ | $7/fc$ | $\leq 0,15$ |

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Insert the following table after Table 3:

Table 4 — Additional test conditions for a bit rate of  $fc/16$ 

| Condition | $H$<br>(A/m) | $t_1$  | $t_2$  | $t_3$  | $a$        |
|-----------|--------------|--------|--------|--------|------------|
| 1         | 1,5          | $5/fc$ | $3/fc$ | $6/fc$ | 0,6        |
| 2         | 1,5          | $5/fc$ | $3/fc$ | $7/fc$ | $\leq 0,3$ |
| 3         | 4,5          | $5/fc$ | $3/fc$ | $6/fc$ | 0,6        |
| 4         | 4,5          | $5/fc$ | $3/fc$ | $7/fc$ | $\leq 0,3$ |
| 5         | 7,5          | $5/fc$ | $3/fc$ | $6/fc$ | 0,6        |
| 6         | 7,5          | $5/fc$ | $3/fc$ | $7/fc$ | $\leq 0,3$ |

Page 4, 7.2.2.1 of ISO/IEC 10373-6:2001/Amd.2:2003

Replace the existing text with the following:

"Under the conditions defined in Table 1 the PICC shall answer to a REQA with ATQA.

A PICC supporting the optional  $fc/64$  bit rate shall operate under the conditions defined in Table 2 after selection of a bit rate of  $fc/64$ . This PICC shall respond correctly to an I-block transmitted at a bit rate of  $fc/64$ .

A PICC supporting the optional  $fc/32$  bit rate shall operate under the conditions defined in Table 3 after selection of a bit rate of  $fc/32$ . The PICC shall respond correctly to an I-block transmitted at a bit rate of  $fc/32$ .

A PICC supporting the optional  $fc/16$  bit rate shall operate under the conditions defined in Table 4 after selection of a bit rate of  $fc/16$ . The PICC shall respond correctly to an I-block transmitted at a bit rate of  $fc/16$ ."

Page 4, 7.2.2.2 of ISO/IEC 10373-6:2001/Amd.2:2003

Replace the existing text with the following:

"The test report shall confirm the intended operation at the mandatory  $fc/128$  bit rate under the conditions defined in Table 1. For PICCs supporting one or more of the optional high bit rates the test report shall confirm the intended operation at the supported bit rates under the conditions defined in 7.2.2.1."