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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Identification cards - Specification for dual-interface integrated
circuit card modules**

识别卡 双界面集成电路卡模块规范

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying these patents. This standard is proposed and managed by the National Information Technology Standardization Technical Committee

(SAC/TC28). This standard was drafted. China Electronics Technology Standardization Institute, Feitian Integrity Technology Co., Ltd., Beijing Zhixin Microelectronics Technology Co., Ltd., Guangdong Chutianlong Smart Card Co., Ltd., Beijing Tongfang Microelectronics Co., Ltd., Beijing Zhongdian Huada Electronic Design Co., Ltd. Division, Datang Microelectronics Technology Co., Ltd., China UnionPay Co., Ltd., China Light and Power Smart Card Co., Ltd., Shanghai Fudan Microelectronics Group Co., Ltd., Jinbangda Co., Ltd. The main drafters of this standard. Cao Guoshun, Wang Jiye, Yu Huazhang, Jiang Quming, Zhu Pengfei, Fu Qingqin, Li Bin, Bao Wu Ri Tu, Zhou Wei, Wang Dongshan, Sheng Jinggang, Liu Wenli, Shu Yi, Shao Xing, Xu Muping. Identification card dual interface integrated circuit card module specification

1 Scope

China's national specification for dual-interface integrated circuit card modules. It specifies the terms and definitions, the abbreviations and the module characteristics, covering the terminals, the electrical characteristics, the environmental adaptability and the limiting values. A dual-interface module is the small assembly - a chip on a carrier, with contact pads on one face and an antenna coil connection on the other - that is embedded in a bank card, a transit card or an identity card and works both ways: inserted into a reader, or held near one. It is the component that made contactless payment possible without giving up the contact interface that ATMs and older terminals need. The module is manufactured by one industry and embedded by another, so its dimensions, terminal layout, electrical behaviour and above all its mechanical robustness have to be specified independently: a card is flexed thousands of times in a wallet, and the module is the rigid piece in a flexible sheet.

This standard specifies the module characteristics and corresponding test methods of the dual interface integrated circuit card module, as well as the quality assessment procedures and signs, packages. Loading, transportation, storage, etc. This standard applies to the design, manufacture and testing of dual interface integrated circuit card modules.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 packaging storage and transportation icon

GB/T 2423.1 Environmental testing of electrical and electronic products - Part 2. Test methods Test A. Low temperature

GB/T 2423.2 Environmental testing of electric and electronic products - Part 2. Test method Test B. High temperature

GB/T 2423.3 Environmental testing of electric and electronic products - Part 2. Test method

test Cab. constant damp heat test

GB/T 2828.1. Sampling and sampling procedures - Part 1 . Batch-to-batch sampling plan searched by the acceptance quality limit (AQL)

GB/T 5271.14 Information technology vocabulary Part 14. Reliability, maintainability and availability

GB/T 14113-1993 Semiconductor integrated circuit package terminology

GB/T 16649.1-2006 Integrated circuit cards for the identification of tape contacts - Part 1. Physical characteristics

GB/T 17554.1-2006 Test methods for identification cards - Part 1

GB/T 17554.3-2006 - Test methods for identification cards - Part 3. Integrated circuit cards with contacts and their associated interface devices

GB/T 17626.2 Electromagnetic compatibility test and measurement technology
Electrostatic discharge immunity test

GB/T 26125 Determination of six restricted substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers)

GB/T 26572 Limit requirements for restricted substances in electrical and electronic products ISO /

3 Terms and definitions

GB/T 14113-1993, GB/T 16649.1-2006 and ISO /IEC 14443-1.2016 as defined by the following terms and definitions Applicable to this document. For ease of use, GB/T 14113-1993, GB/T 16649.1-2006 and Certain terms and definitions in ISO /IEC 14443-1.2016.

3.1 Terminal The external contacts that are electrically connected to the package, usually directing the wires or terminals.

6 Proximitycards) ISO /

IEC 14443-1.2016 Identification card, non-contact, integrated circuit card, proximity card, part 1. physical characteristics (Identificationcards-Contactlessintegratedcircuitcards-Proximitycards-Part