

# SHC1102

## Short Form Specifications

Revision 1.0

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### Product Short Form

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## 1 General Description

SHHIC has developed the SHC1102 to be used with Proximity Coupling Devices (PCD) according to ISO/IEC14443A. The RF Interface complies with parts 2 and 3 of the ISO/IEC14443A standard. The SHC1102 has 512 bits EEPROM, and it is primarily designed for contactless single trip ticket solutions in transport applications.

## 2 Features

### 2.1 RF Interface

- Complies with parts 2 and 3 of the ISO/IEC14443A standard
- Operating distance: Up to 100mm (depending on antenna geometry)
- Operating frequency: 13.56 MHz
- Data transfer: 106kbps
- High data integrity: 16 bits CRC, parity, bit coding, bit counting
- True anticollision with two cascade levels
- Typical ticketing transaction: < 100 ms (includes backup procedure)

### 2.2 EEPROM

- 512 bits, organised in 16 pages with 4 bytes each
- Data retention of 10 years
- Erase-Write endurance 100000 cycles

### 2.3 Security

- Unique 7 bytes serial number for each device
- User programmable EEPROM access controlling

### 2.4 Package

- Supports XOA2、COB and Flip-Chip

### 2.5 Operating Temperature

- -25°C~+70°C

### 2.6 Storage Temperature

- -55°C~+125°C

### 2.7 ESD Voltage

- ESD Immunity Voltage between antenna PADs > 4000V (HBM)

## 3 Command List

编码	指令	含义
26H	Reqa	Request PICC
52H	Reqall	Wake up / Request all PICC
93H 20H	AC1	Anticollision Cascade 1
93H NVB + part of cascade 1 UID	Bit-AC1	Bit-Anticollision Cascade 1
93H 70H + cascade 1 UID	Select1	Select Cascade 1
95H 20H	AC2	Anticollision Cascade 2
95H NVB + part of cascade 2 UID	Bit-AC2	Bit-Anticollision Cascade 2
95H 70H + cascade 2 UID	Select2	Select Cascade 2
30H	Read	Read 16 bytes data
A0H	Write	Write 16 bytes data
A2H	Write4	Write 4 bytes data
50H	Halt	Halt PICC

Table 3-1 Command List