Specification

File Number: 202107290002

Type: CHIPBOND Q7（D248）

Name: Multi-Protocol Issuer

Specification: 99.5mm*99.5mm*19.8mm (± 3mm) line length 1000mm

CHIPBONDQ7(D248) Desktop card issuer

Ⅰ Basic features and application areas

1.Basic features:

CHIPBOND Q7 (D248) is a desktop card issuer supporting ISO14443A, 15693,14443B reading and writing function, it is designed with high-performance RF card reading circuit designed by chipbond company; with high integration, strong interference resistance, small volume, stable performance, cost performance and convenient use, can provide USB communication interface.

2.Application area:

Suitable for access control, attendance, fees, anti-theft, patrol and other radio frequency identification application fields.

Ⅱ.Technical parameter

1.Basic technical parameters:

Dimension	99.5*99.5*19.8mm (error ± 3mm) line length 1000mm (± 10mm)
Support cards	MF-S50, MF-S70,1208-CPU + MF composite card, MF3-Desfire Ev1 card, Ntag213 Card, 15693,14443B, id
International standard	ISO/IEC14443A/B，ISO/IEC15693
Electric parameters	Operating voltage: DC 5V (± 0.5V) Current: standby current is less than 80mA; credit card current is less than 200mA
Environmental requirements	Operating temperature: -10℃ ~ 50℃ Storage temperature: -20℃ ~ 65℃
Interface	USB
Work pattern	Active mode / Passive mode
Frequency	13.56MHz，125KHz
The firmware version	CHIPBOND_Q7_20210708_V1.02.bin
Hardware version	CHIPBOND_Q7_V1.00 20210621
Software version	CHIPBOND_Q7_20210706_V1.01.hex

2.Reading Distance

Item No.	Card type	Distance standard	remarks
1	MF-S50	0~L (L≥6cm)	Note: 0~L (L L c m) (card center and card reader center location)
2	MF-S70	0~L (L≥6cm)	
3	1208-CPU + MF composite card	0~L (L≥7cm)	
4	MF3-Desfire Ev1 card	0~L (L≥3cm)	
5	The Ntag213 card	0~L (L≥5cm)	
6	15693	0~L (L≥8cm)	
7	14443B	0~L (L≥3cm)	
8	certificate of identification	0~L (L≥2cm)	
9	S50, key ring	0~L (L≥2cm)	
10	MF-S50	0~L (L≥6cm)	
11	MF-S70	0~L (L≥6cm)	

3.Test parameter

Work Current Test	standby current	Connect the product to be tested (card issuer) to the computer, open and connect to the test Demo, select the model D148 series, in the standby state, use the USB safe charging protection monitor and check the current value	The conventional current maximum of 120mA is qualified
	Work current	Connect the product to be tested (card issuer) to the computer, open and connect the test Demo respectively set the active mode / passive mode, put the card into the area to be tested card, use the USB safe charging protection monitor and check the current value	The current value meets the conventional maximum of 200mA is qualified

Work status test	Power on	Connect the product to be tested (card issuer) with the computer, and then check the working status of the product to be tested	After the power is about 5S, start the blue light to flash, and the buzzer rings Enter the standby state and meet the above phenomenon
	stand by	Connect the product to be tested (card issuer) with the computer, and then check the working status of the product to be tested	1. Power supply indicator lamp blue light is often qualified
	Working (Active mode)	When test (issuer) is on standby, open the text document / excel / word, or the mouse cursor in the test Demo display box, put the card in the card area, and then check the working status of the product to be tested	The output card number is consistent with the configured mode; Brush the card blue light to flash and the buzzer rings, which is qualified

Equipment Operation	Set up & get the device serial number	Connect the product to be tested (card issuer) to the computer, open and test DEMO. In the device parameter acquisition-2 / function setting part, input device serial number: for example: 1122334455667788 (8 bytes), click "Set Device Serial Number" and "Get Device Serial Number"	The device serial number set is consistent with the obtained device serial number Tip below the test Demo: Set & obtain the equipment serial number as qualified
	Get the firmware version number	Connect the product to be tested (card issuer) to the computer, open and connect to the test Demo to select D149, the equipment operation part, click "Get the firmware version number"	Gets the firmware version number: CHIPBOND_Q7 (D248) _V1.02
	Get the hardware version number	Connect the product to be tested (card issuer) to the computer, open and connect to the test Demo Select D149, the equipment operation part, click "Get the hardware version number"	Get the hardware version number: CHIPBOND_Q7_V1.00
	Set up & get the device communication address	Connect the product to be tested (card issuer) with the computer, open and connect to test DEMO. In the device operation, device parameter acquisition-2 / function setting part, enter the device communication address: 0-255 (decimal), click " Settings Prepare Communication Address "," Get Equipment Communication Address"	The device communication address set is consistent with the obtained device communication address Tip below the test Demo: Set up & get the equipment communication address successfully!For qualified
	Get the card number	Connect the product to be tested (card issuer) with the computer, open and connect the test DEMO. In the equipment operation and information acquisition part, put the test card into the card area and click "Get card number"	Correct card number, and show what type of card it is (there is no repeat card prevention function here) Tip below the test Demo: Get the equipment support card UID into Work!For qualified
	The buzzer test	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO, in the equipment operation, function test part, fill in the response time and Cycle, click the "buzzer test" button	Response time filling 1 is 100mS, and cycle 1 is sounded once

UL- > Ntag function test	Read & Write the content operation	Connect the product to be tested (card issuer) with the computer, open and connect the test ，DEMO, place the card in the card reading area, select the test card type to be set: NTAG213 / NTAG215 / NTAG216, place the card reading area, set the corresponding parameters, click "Write the card" to read the card " and view the prompt information	Successful prompt writing; Click "read card" to get the data is consistent with OK Tip below the test Demo: Read / write the card successfully!
	Read the card continuously	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO, place the card in the card reading area, select the corresponding parameters, click "Continuous card reading" and view the prompt information	It is suggested that Ntag has continuously read Page successfully, The white long box above shows the data of the corresponding block, designated as OK
	Get the relevant information operations	Connect the product to be tested (card issuer) t the computer, open and connect to the tes DEMO, place the card in the card reading area click "Get version information", "Get EC signature", "Read NFC counter value", and vie ，the prompt information	1. Prompt for success 2. Display the corresponding value ~ is qualified

CPU Operation	Format operations	Connect the product to be tested (card issuer) to the computer, open and connect the test DEMO, place the card, click "1. reset", "2. Select the master file", "3. Get the random number", "4. External Certification", "5. Formatted Card" and check the prompt information	1. The successful prompt operation is qualified
	Read and write content operation	Connect the product to be tested (card issuer) to the computer, open and connect the test DEMO, place the card reading card, set the parameters, click "1. reset", "2. Select Main File" · · · "12. Read Bin File" and view the prompt information	The prompt operation is successful The written data is qualified
	Card reset / send the APDU	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO, place the card to read the card, click the "card reset" "to send the APDU: 00A40000023F00 (default)"	1. Tip below the test Demo: The xx operation is successful
Mifare Card Read & Write	Mifare Card Read & Write	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO, In the S50 / S70 test card area, swipe the S 50 / S 70 test card to be tested, Select the corresponding mode in the operation ("Key A / Key B" two modes), select the sector and the number of blocks; Fill in the MF: S50 / S70 Fill key (PS: General default key: FFFFFFFFFFFF) Fill in on block 0, block 1, block 2 (block 3 is not writable) Sixteen bytes of data, click "to write the card" "to read the card"	When reading the card, the obtained data is consistent with the set data Tip below test Demo: read / write card successfully!'To be qualified

ISO1 5693 Card Operation	Multi-label disk the UID	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO. In the 15693 Read & Write unit, put multiple 15693 test card on the card issuer, and click "Get 15693 / ICode Card UID"	Get multiple 15693 card UID to show the correct card number of the test card Tips below the test Demo: successfully obtaining each type of card number is qualified
	Obtain 15,693 / ICode UID	Connect the product to be tested (card issuer) to the computer, open and connect the test DEMO. In the 15693 read & write unit, put the 15693 test card on the card issuer, click "Get 15693 / ICoode card UID" Note: there is anti-repeat card function	Get the 15693 card UID to display the correct card number of the test card Tips below the test Demo: successfully obtaining each type of card number is qualified
	reading data	Connect the product to be tested (card issuer) the computer, open and connect to the test DEMO, in the 15693 read & write unit, put the test card on the product to be tested, select "Star block", "block number" and click "Read Data" the IS0 15693 read & write unit	Can read the UID data content correctly Tip below the test Demo: Read the data successfully!For qualified
	Write Data	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO. In the 15693 read & write unit, select "Start block", "Block Number" and "Data" and click "Write Data" Parameters such as: 1. Start block 0 quantity 3 writes data as: 1111 11111 1111 1111 1111 1111 2. Note: Length of data = Number of blocks * 4bytes	1. Read the data shows the data in blocks 0-2 as the data written in the above column 2. Tip below the test Demo: Write the data successfully!
ISO1 4443 B ope rate	Card operation	Connect the product to be tested (card issuer) to the computer, open and connect to the tes DEMO, put the TYPE B test card on the product to be tested, then click "1, card reset", "2, select the main file" and "3, to get the random number"	Card reset has reset reply, select the main file with card return value, and obtain the random number has random number display and card return value Every step of the operation indicates the success
	Type-B apdu channel	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO, put the TYPE B test card on the product to be tested, and then click "1, card reset" and "2, send APDU"	Card reset has a reset response Sending the APDU command has a card return value Success of every step of the operation
Active mode output		Connect the DUT (card issuer) to the computer, open and connect the test Demo, select CB Q7, and set it to active mode	4UID：4,3,2,1 7UID：7,6,5,4 8UID：8,7,6,5
Active mode Specification Setting	Set up the active & passive working mode	Connect the product to be tested (card issuer) to the computer, open and connect to the test DEMO. In the setting mode unit, click "Set Active / passive working mode"	Tip below the test Demo: Set the active / passive mode successfully! Carry out card reading and card swiping test, qualified as qualified

Environmental Compliance Statement

The Company makes the following solemn statement on the products provided:

This product meets GB / T 26572-2011 Limited Material Limited Requirements in Electronic and Electrical Products and the restricted material exceptions stipulated by the state.
This product meets GB / T 26125-2011 Detection Method of Six Electronic and Electrical Products.

This product complies with SJ / T 11364-2014 Identification Requirements for Restricted Use of Hazardous Substances of Electronic and Electrical Products.

product description:

Item No.	Material code	product model	remark
1		CHIPBOND Q7（D248）	