
Specification

Product Name: Charging Wallet

Model Name: Standard Design

Series Model: Standard-01

Brand Name: Charging Wallet

1、Product information and features

Product wireless charging standard:	Qi standard
battery capacity:	5000Ma
Cable charging voltage/current:	DC 5V/100MA-2A
Single USB discharge voltage/current:	DC 5V/2100mA Max
Wireless charging receives voltage and current:	5V1A
Power conversion efficiency:	>70%
Wireless charging efficiency:	>70%
Battery to wireless discharge efficiency:	>50%
Charging frequency:	110.5-205KHZ
Wireless charging distance:	2~6mm

2、basic parameter

2.1 basic performance of electrical appliances

2.1.1 charging characteristics

Test definition: various indicators under test charging state

Test equipment: 5V/1A dc power supply

Test conditions: standard conditions, input 5V/ 1.5A

The charging time of the pre-charge flow 1A constant current 1.5A is <4.5h

2.1.2 discharge time:

Test definition: test the actual discharge time of the battery in the process of constant current and constant pressure

Test equipment: resistance multimeter

Test conditions: standard conditions, full battery and maximum current discharge at the output port of the product (according to the relevant product design parameters)

2.1.3 test data

Discharge time voltage 4.8-5.2v, current $2 \pm 0.1A$ 100 min

2.1.4 no-load output voltage

Test definition: the output voltage without load is 5.2v

Test equipment: multimeter

Test data no-load voltage: $5.2 \pm 0.1V$

2.2 defensive function

Battery input/output protection

Test definition: test the battery input and output protection function

Test equipment: dc current, load resistance

Test conditions: standard conditions

Conformity criteria: in accordance with the standards, the protective circuit shall operate within the specified range without damaging any component

Technical indicators:

Output overcurrent protection limit power, as the current increases, the output voltage drops until there is no output

The output short-circuit protection closes the output. After the short circuit condition is removed, the battery pack can remove the protection state by itself. It can be input to the reverse connection to protect the battery from burning the plate.

2.3 battery protection

Test definition: test protection IC overcurrent, overcharge, overdischarge protection point

Test equipment: dc power supply, dc load meter, analog battery

Test conditions: standard conditions

Conformity criteria: in accordance with the standards, the protective circuit shall operate within the specified range without damaging any component

Test data: overcharge protection voltage: 4200mV

Overcurrent protection voltage (2000mA discharge)

3030mV overcurrent protection current.2400mA

3. transfer efficiency

3.1 conversion efficiency formula of mobile power source:

Conversion efficiency = (actual discharge capacity * average discharge voltage)/(battery capacity *3000mv)

The "nominal battery energy" calculation method is the nominal core capacity * lithium battery 3V voltage, and the

unit is watt-hour

The capacity of "nominal discharge energy" is the actual output capacity under the nominal discharge, and the voltage is the average value of the actual discharge voltage recorded every 30S.

Nominal battery energy nominal discharge energy conversion efficiency $18.5\text{wh} \ 2000\text{MA} \times 3.7 \times 100 \text{ minutes} = 72\%$

4. Wireless charging function

This product is the main chip of wireless charging transmitter (TX) module circuit: AK1850 is independently developed and customized by Shenzhen Royalplay Technology Ltd., compatible with QI standard, stable performance, ultra-high cost performance and other advantages. The principle of wireless charging is that the TX coil of the wireless charging transmitter and the RX coil of the wireless charging receiver are coupled to each other, so the energy output can be achieved in normal communication.

5. Overview

A wireless system consists of a charging pad (transmitter, TX or primary) and the secondary-side equipment (receiver, RX or secondary). There is a coil in the charging pad and in the secondary equipment which are magnetically coupled to each other when the secondary is placed on the primary. Power is then transferred from the transmitter to the receiver through coupled inductors (effectively an air-core transformer). Controlling the amount of power transferred is achieved by sending feedback (error signal) communication to the primary (to increase or decrease power). The receiver communicates with the transmitter by changing the load seen by the transmitter. This load variation results in a change in the transmitter coil current, which is measured and interpreted by a processor in the charging pad. The communication is digital; packets are transferred from the receiver to the transmitter. Differential bi-phase encoding is used for the packets. The bit rate is 2-kbps. Various types of communication packets have been defined. These include identification and authentication packets, error packets, control packets, end power packets, and power usage packets. The transmitter coil stays powered off most of the time. It occasionally wakes up to see if a receiver is present. When a receiver authenticates itself to the transmitter, the transmitter will remain powered on. The receiver maintains full control over the power transfer using communication packets.

6. stockpile

Long-term preservation (more than 3 months), stored in a dry, cool place, temperature range in $-10\text{ }^{\circ}\text{C} \sim 40\text{ }^{\circ}\text{C}$, and avoid contact with corrosive substances, away from fire and heat source.

7. Product warranty and liability

The warranty period is 6 months from the date of delivery. Shenzhen Royalplay Technology Ltd. shall not be responsible for any accidents caused by the failure to operate in accordance with the specifications and product use manual.

8. Warning and caution when using

-
- 9.1 when using, if the data cable or power cord other than the standard one used on the device may be unchargeable or unstable, with low current, please use the Micro_USB special power cord which is the default configuration of the device.
- 9.2 when using this product, please use a quality-assured adapter with output voltage of DC 5v-5.5v,2A or with quick charging function.
- 9.3 this product has overcurrent protection function.If improper use of the product will shut down or reduce the output power, please check whether there is abnormal equipment or other improper use.
- 9.4 please do not put product in the water, fire, high temperature ($> 45^{\circ}\text{C}$) and low temperature ($< -20^{\circ}\text{C}$) environment, do not give children to play, do not let children especially contact parts.
- 9.5 please do not disassemble or refit the product, so as not to damage the protective device of the product, resulting in battery heating, fire or explosion.
- 9.6 do not throw, hit or rub the product violently, which may lead to sag, perforation, cracking, deformity, corrosion and other abnormal phenomena. Please stop using the product immediately and contact the seller or manufacturer.
- 9.7 please use a dry soft cloth to clean the surface. Do not use chemicals, soap or detergent to clean the surface.
- 9.8 users' incorrect use or incorrect placement of this product may lead to the reduction or damage of the product's life. Therefore, the responsibility arising therefrom is not the responsibility of warranty or manufacturer, please understand.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which

can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.