
PRODUCT SPECIFICATION FOR APPROVAL

Product	Wireless charging power bank PCB			
Product Model	SR001MQ-4. 1			
Product Number				
Customer confirmation:				
Version	Date	Tabulation	Review	Approve
V1	2025. 10. 16			

Contents

1	Overview.....	2
2	Introduction to product performance parameters.....	3. 4
3	Product Operation and Function Introduction.....	4. 5
4	Product process and appearance.....	6. 7

1 Overview

This specification describes the scope of application, process standards, electrical performance parameters, main materials, dimensional specifications, testing standards and other related content of the power bank board produced by Shenzhen Tianjiulong Technology Co., Ltd. This specification can be used as the quality inspection standard and basis for this product.

2、 Introduction to product performance parameters

2.1、 Basic parameters

parameters	Symbol	Test conditions	MIN	Typical	MAX	Unit
Applicable battery voltage	Vbat	3.7V rechargeable battery	3.0	3.8	4.2	V
Input valtage (Type-C)	Vchr	The charger output current is above 1A	4.5	5/9	12	V
Input current (Type-C)	Ichr	VBUS=5V, Input current	0.1	2.2	3	A
		VBUS=9V, Input current	0.1	2	2.1	A
		VBUS=12V Input current	0.1	1.5	1.6	A
Overvoltage protection for charging (Type-C)	OVP	Slowly adjust the DC power supply to turn off the output	13.5	13.8	14	V
Static no-load power consumption	Static power loss	Disconnect the load (after the LED light is off)	140	160	180	uA
No-load output voltage (Type-C)	Voo	Iout=0A	5	5.05	5.25	V
Input current (Type-C)	Ichr	5.0V< Vchr <5.3V	0.1	2	3	A
Input voltage (Type-C)	Vout	VOUT=5V@3A	4.8	5	5.25	V
	QC2.0 VOUT	VOUT=9V@2A	8.7	9	9.2	V
	QC3.0 VOUT	VOUT=12V@1.5A	11.5	12	12.2	V
Charging conversion efficiency (Type-C)	η	Vbat=3.7V, Vin=5V	89	90	91	%
Discharge conversion efficiency (Type-C)	η	Vbat=3.7V, Iout=5V/3A	87	89	90	%
Discharge conversion efficiency (Type-C)	η	Vbat=3.7V, Iout=9V/2A	84	86	88	%
Discharge conversion efficiency (Type-C)	η	Vbat=3.7V, Iout=12V/1.5A	83	85	87	%
Wireless charging pad end conversion efficiency	η	Vbat=3.7V, Pout=15W	60	65	70	%

Output power (Type-C)	DHP	Vbat=3.0-4.2V, Vout=12V	0	-	22.5	W
Output power (Wireless charging)	DHP	Vbat=3.0-4.2V	5	-	15	W

2.2、Product PCBA input port configuration, the total current of all input ports is 2A。 (**Leave blank for none**)

Charging port type	Configuration and quantity	Charging current	Input voltage
TYPE-C	1 PCS	0.1A< Ichr <3.0A	5.0V<9V <12V
-	-	-	-

2.3、Product PCBA output port configuration, total output current of wireless charging coil 1A。 (**Leave blank for none**)

Charging port type	Configuration and quantity	Charging current	Input voltage/Power
TYPE-C	1 ↑	0.1A< Iout <3.0A	4.5V< Vout <12V
wireless charging	1 ↑		5/7.5/10/15W

3、Product operation and feature introduction

3.1、Touch button function

The new version has removed the touch feature, and wireless charging is detected via Q value on RX

3.2、Low power mode

After 45 seconds without load (with wireless charging off), if there is no activity, the system enters a low power state.

3.3、Wireless charging instructions

A. Place the QI wireless receiving product near the centre of the

transmitter module coil. At this point, the wireless charging indicator LED will light up. Under continuous normal charging, the wireless charging indicator LED will turn off and foreign body detection will be activated. When a metal foreign object approaches the centre of the transmitter module coil, wireless charging will not function. B. The single-coil wireless receiver is compatible with BPP/EPP protocols.

3.6、Charge and discharge status

Standard version:

Battery voltage above 3.3V, wireless charging works normally. Green light for battery voltage above 4.1V, orange light for battery below 4.1V. LED lights up for 5 seconds during charging and then goes out. LED lights up for 5 seconds during discharging and then goes out.

3.6、Battery level display configuration type (Mass shipment type, leave blank for none)

Battery level display type	quantity	Colour	Dimensions (Length*Width)	Current configuration
LED	1 PCS	Orange	0603D	√
LED	1 PCS	Green	0603D	√
—	—	—	—	—

4. Product Craftsmanship and Appearance

4.1 Product appearance and craftsmanship

NO.	Project		Testing method	Inspection Standards/Processes
3.1	Product appearance		Visual	The product's appearance should meet the following requirements: reasonable wiring, neatly arranged components, pads and solder joints free of oxidation, no abnormal colouring, overall cleanliness without stains, and without affecting its commercial value
3.2	Product process	Welding requirements	By sight, or with the aid of a magnifying glass	The solder joints are smooth and full, the welding is firm and reliable, with no cold joints, weak joints, burrs or other welding defects
		Panel material		☒ Fiberglass 4 layer ☐ Fiberglass Single layer ☐ Single ordinary layer ☐ Other
		PCB plating process		☐ Thick gold gloss ☒ Tin-plated and environmentally friendly ☐ Other ☐ Thick gold matte ☐ Cobalt Matte ☐ tinned
		Welding process		☒ Environmentally friendly welding ☐ Non-Environmentally friendly welding

4. 2 Product PCBA diagram

