



Polymer Li-ion battery

Product Specification

Model: PL552248

NO . OF SAMPLES:

Cap . 500mAh

DATE OF SENDING SAMPLE:

REV: A/0

CUSTOMER CODE:

Approved by	Checked by	Prepared by

CUSTOMER APPROVAL	STAMP

Sonikcell

Rechargeable Battery

Revision No.	Description.	Modify.	Approval.	Date.
A/0	First Issue			190314



Revision History

Content

1. Scope	3
2. Performance	3
3. Parameter	3
4. Characteristic Curves	3
5. Operating Temperature	4
6. Battery Characteristics	4
6.1 Electrochemical performance characteristics	4
6.2 Environment Characteristics	5
6.3 Safety Performance	5
7. PCM Specification and Characteristic	6
7.1 PCM Diagram	6
7.2 PCM Electrical Characteristics	6
7.3 PCM Schematic diagram	7
7.4 PCM BOM	7
8. Assembly configuration	8
9. Packing Instruction	9
10. Cautions	9



1 . Scope

This specification shall be applied to Li-ion polymer battery manufactured by Sonikcell Co.,Ltd

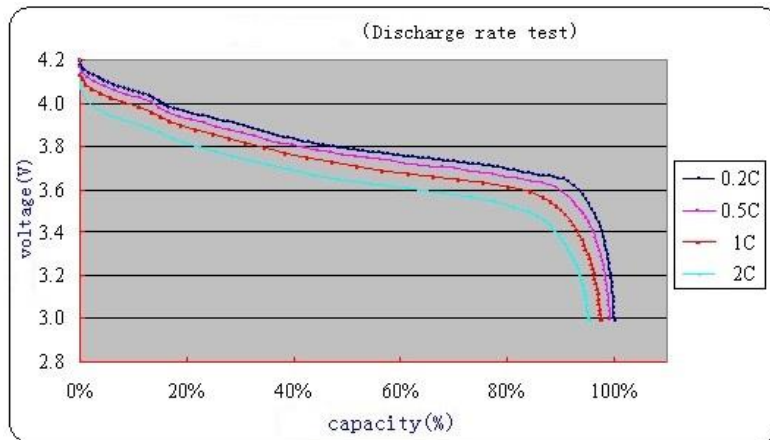
2 . Performance

Issued by 'GB/T18287-2000' national standard of the People's Republic of China 《Li-ion battery general principle》

3. Parameter

NO.	Description.	Specification	Remark
1	Battery Model	PL502248	
2	Minimal Capacity	500mAh	0.2C
3	Rated Capacity	500mAh	0.2C
4	Nominal Voltage	3.7V	
5	Overcharge protect voltage	4.28±0.025V	
6	Overdischarge protect voltage	3.0±0.05V	
7	Overcurrent protection	1.2-2.5A	
8	Short circuit protection	Yes	
9	SCP Release condition	Instantly after the short circuit is cut off	
10	Storage Temperature	-5~35°C	one year
11	Inner Impedance	≤ 330mΩ	
12	pack weight		
13	Max continue discharge current	1C	
14	Max charge current	0.5C	

4 . Cell discharge curves



5. Operating Temperature

NO.	Unit	Min	Type	Max	Remark
Charge	°C	0	25	45	
Discharge	°C	-20	25	45	
Storage	°C	-20	25	45	1 month
	°C	-20	25	35	6 months

Remark : Before storage, should charge the battery to 40%~65% of its full capacity.

6. PCM Specification and Characteristic

6.1 PCM Diagram



6.2 PCM Electrical Characteristics

	V_{DET1}		$4.28 \pm 0.025V$
	tV_{DET1}		1s (MAX)
	V_{REL1}		$4.08 \pm 0.05V$
	V_{DET2}		$3.0V \pm 0.05V$
	tV_{DET2}		128ms (MAX)
	V_{REL2}		$3.0V \pm 0.1V$
	V_{DET3}		$80mV \pm 30mV$
	V_{DET3}		$100mV \pm 30mV$
			8ms (MAX)
	I_{DP}		1.2-2.5A
	tV_{DET3}		8ms (MAX)
	T_{SHORT}		280 μ S
	R_{DS}		$R_{DS} \leq 60m\Omega$
	I_{DD}		MIN: 2 μ A MAX: 7 μ A

6.3 PCM Schematic diagram

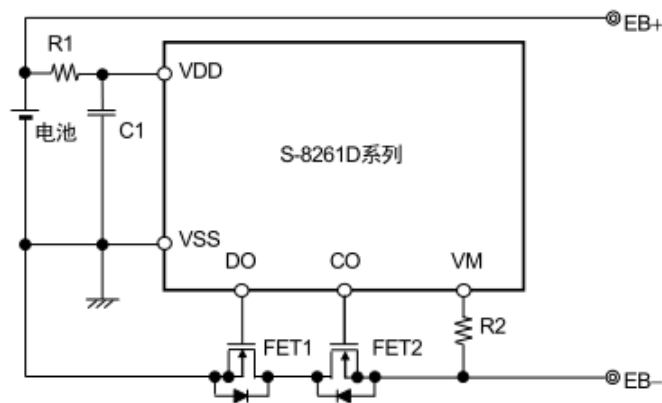


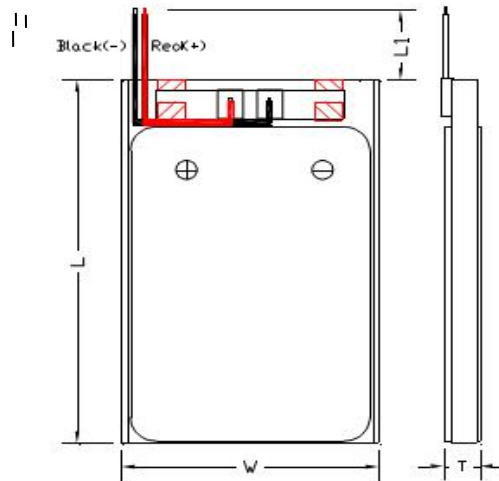
图13

6.4 PCM BOM

1	U1	IC	DAA	SOT-23-6	1	
2	U2	MOSFET	8205S	TSSOP-6	1	DP
3	R1		SMD 330Ω ±5%	0603	1	
4	R2		SMD 1KΩ ±5%	0603	1	
5	C1		SMD 0.1μ F-20%/80%	0603	1	
6	PCB		16mm*3.5mm*0.6mm		1	FR4

7. Assembly configuration

7.1 Battery Dimension Drawing



Item	Description	Dimension and specification
T	thickness	5.2mm(max)
W	width	22.5mm(max)
H	length	50.0mm(max)
L1	Cable length	150mm±5mm



7.2 Battery BOM

NO.	Title	Specifications	Qty	Unit	Remark		
1	Polymerbattery	PL552248	1	PCS	Polymer battery		
2	Cable	AWG UL1571 26#	2	PCS	black, red		
3	PCM	DAA+8205S	1	PCS			
4	connector	/	/	PCS			

8、 Packing Instruction

The photo, size and color of the mark are all comply with the requirement of GP/T 191-2000 .

9. Cautions

9.1 Danger Warning

To prevent the battery from leaking, heating or explosion, please observe the following precautions

9.1.1 Do not immerse the battery in water or seawater, and keep the battery in a cool and dry environment if it stands by.

9.1.2 Do not use or leave the battery near a heat source as fire or heater.

9.1.3 Use the Lithium-ion battery charger specifically for that purpose when recharging.

9.1.4 (+)(-) Do not reverse the position and negative terminals.

9.1.5 Do not connect battery to the plug socket or car-cigarette-plug

9.1.6 Do not use or leave battery nearby fire, stove or heated place .

9.1.7 (+)(-) Do not short-circuit the battery by directly connecting the positive and negative terminals with metal objects.



9.1.8 Do not strike, trample or throw the battery .

10.1.9 Do not drive a nail into the battery. Strike it by hammer, or tread it .

9.1.10 Do not make the direct soldering on battery .

9.1.11 Do not disassemble or reconstruct battery.

9.1.12 Do not charge battery nearby the fire or under the blazing sun .

9.1.13 Do not transport or store the battery together with metal objects such as hairpins, necklaces, etc .

9.1.14 Do not use or leave the battery under the blazing sun (or heated car by sunshine). The battery may smoke, heat or flame. And also, it might cause the deterioration of battery's characteristics or cycle life.

9.1.15 Do not use the battery in a location where static electricity and magnetic field is great, otherwise, the safety devices may be damaged, causing hidden trouble of safety

9.1.16 If the battery leaks, and the electrolyte get into the eyes, do not rub the eyes, instead, rinse the eyes with clean water, and immediately seek medical attention. Otherwise, it may injure eyes.

9.1.17 If the battery gives off an odor, generates heat, becomes discolored or deformed, or in any way appear abnormal during use, recharging or storage, immediately remove it from the device or battery charger and stop using it.

9.1.18 In case the battery terminals are dirty, clean the terminals with a dry cloth before using.

9.1.19 Be aware discarded batteries may cause fire or explosion, tape the battery terminals to insulate them

9.2 warning

9.2.1 In order to ensure the safe, battery should be installed safety device, in static than manufacturing request when electrostatic when do not use, otherwise, safety device would



failure, battery overheat, rupture, explosion and fire.

9.2.2 In the normal use of the following conditions, otherwise they will overheat and catch fire, performance and shorten the life

Ambient condition: (T temperature)

charging: 0~+65°C

discharging: -20~+65°C

storage within 30 days: -20~+60°C

storage within 180 days: -20~+45°C

9.2.3 If children use the battery, you should specify them by using the instructions for use, and ensure the battery at any time must be in normal use ;

9.2.4 If the battery leaks, electrolytes stick to the skin or clothing, wash off with water or fluid washing clothes or skin corrosion will die.

9.2.5 In order to not install error or loss of the battery, please carefully read the operating instructions, and follow the instructions for installation and removal (from device)

9.2.6 If the battery is not used, please take the battery out and placed in a dry place or electrical appliances will be corrosion of battery performance and reduce life.

9.2.7 If it is polluted battery terminal, please before you use it with a dry cloth to wipe clean, otherwise will result in poor contact with the device, power shortage or charge failure.

9.2.8 warranty period

Warranty period of this product is 12 months from manufacturing code

9.2.9 Product responsibility

You must strictly adhere to our specifications and documentation comment later, due to the misuse of batteries can cause the battery to overheat, fire or explosion. For the specification for



any accidental, I Secretary does not bear any responsibility.

If the specification, raw materials, production processes or production control system is changed, the change of information will vary depending on the quality and reliability data to inform consumers in writing.

9.2.10 Storage

Battery if long-term storage , should be charge the battery to 50% of its full capacity .

Batteries should be saved in low temperature dry environment .

Battery storage should be added every three months, the electric charge to a 50% charge status .

9.2.11 Packaging label on the battery .

9.2.12 The following warnings should be indicated on the packaging of battery .

Use a specified charger .

Do not place the battery into a fire or heating .

Do not short-circuit the battery at both ends .

Do not disassemble the battery .