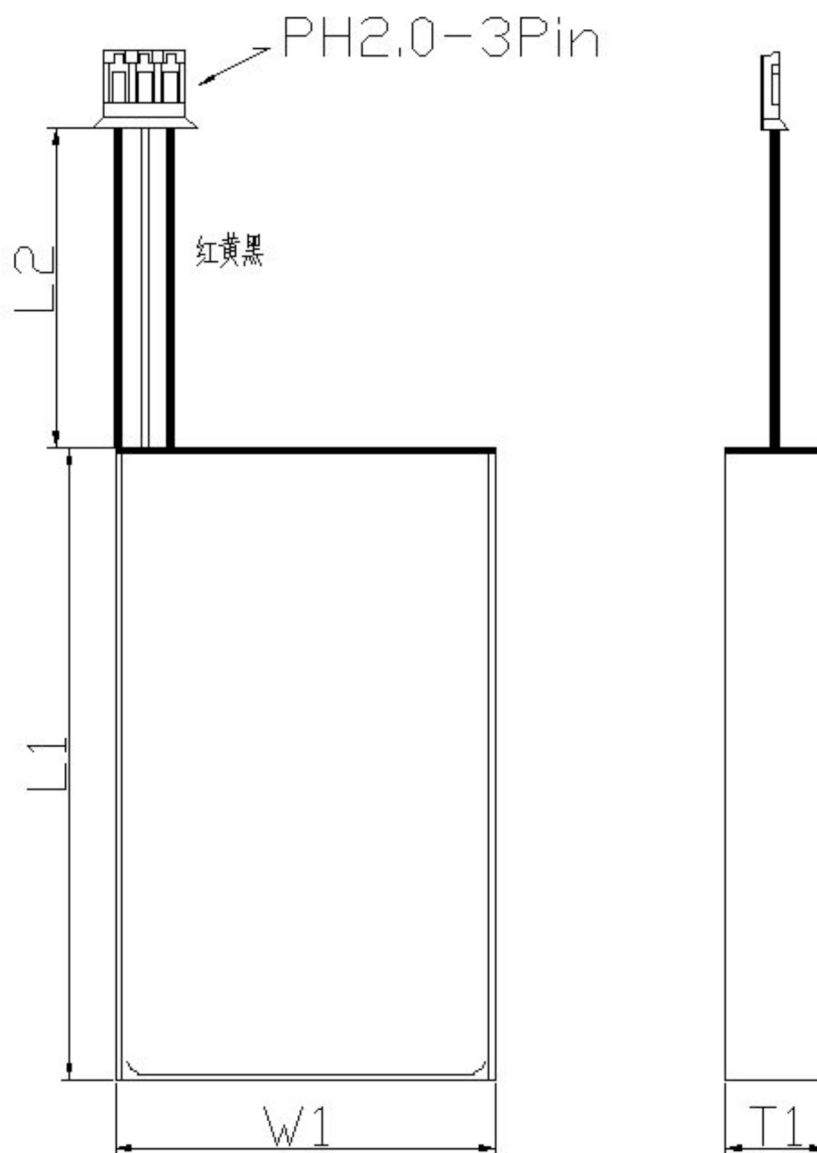


1. Scope

This specification describes the basic performance, technical requirement ,testing method ,warning and caution of the lithium ion Polymer rechargeable battery .The specification only applies to ADF

2. Initial Dimension



Item	T1 (mm)	W1 (mm)	L1 (mm)	L2 (mm)
Dimensions	9.80 Max.	34.50 Max.	57.00 Max.	60.00 ± 5.0
Wire	PH2.0 0-3P 1007-26#			

3.Specification

NO.	Item	Specifications
3.1	Nominal capacity	2000mAh 0.5C Discharge (0.5C)
	Minimum Capacity	2000mAh 0.5C Discharge (0.5C)
3.2	Nominal voltage	3.7V
3.3	Charge current	Standard Charge : 0.5C Rapid charge : 1.0C
3.4	Standard Charging method	0.5C CC (constant current) charge to 4.2V,then CV(constant voltage 4.2V)charge till charge current decline to $\leq 0.01C$ 0.5C CC 4.2V, CV (4.2V) $\leq 0.01C$
3.5	Charging time	Standard Charging () Approx 5 hours 5 Rapid charge () Approx 2.5hours 2.5
3.6	Max. charge current	Constant Current 1C Constant Voltage 4.2V 0.01 Cut-off (: 1C : 4.2V : 0.01C)
3.7	Max discharge current	Continuous discharge current: 2.0A : 2.0A Maximum discharge current: 3.0A (10 seconds) : 3.0A (10)
3.8	Standard Discharge Current	Constant current 0.2C end voltage 3.0V (: 0.2C : 3.0V)
3.9	Discharge cut-off voltage	3.0V
3.10	Charge cut-off Voltage	4.2V
3.11	Initial Impedance	$\leq 150m\Omega$
3.12	Weight	Max: g
3.13	Operating temperature	Charging : 0°C~45°C Discharging : -20°C~60°C
3.14	Storage temperature	1 year -20°C ~ 25 °C 3 month -20°C ~ 45 °C 1 month -20°C ~ 60 °C
3.15	Storage Humidity	$\leq 75\% RH$
3.16	Appearance	Without scratch,distortion,contamination and leakage
3.17	Standard environmental condition	Temperature : 23±5°C Humidity : 45-75%RH Atmospheric Pressure : 86-106 Kpa

4. General Performance

No.	Item	Test Methods and Condition	Criteria
4.1	0.2C Capacity 0.2C	After standard charging, rest battery for 10min, then discharging at 0.2C to voltage 3.0V, recording the discharging time. 10 0.2C 3.0V,	≥300min
4.2	1C Capacity 1C	After standard charging, rest battery for 10min, then discharging at 1C to voltage 3.0V, recording the discharging Capacity 10 1C 3.0V,记	≥2000mAh
4.3	Cycle Life	Constant current 0.5C charge to 4.2V, then constant voltage charge to current declines to 0.01C, rest 10min , constant current 0.5C discharge to 3.0V , rest 10min. Repeat above steps till continuously discharging capacity Higher than 80% of the Initial Capacities of the Cells 0.5 C 4.2V, 4.2V ≤0.01C, 10 , 0.5C 3.0V; 又 10 , , 80%	≥300times
4.4	Capability of keeping electricity	20±5°C, After standard charging, rest the battery 28days, discharging at 0.2C to voltage 3.0V, recording the discharging time. 20±5°C , , 28 天, 0.2C 放电至 3.0V, .	≥240min
4.3	Short-circuit testing /NO PCM	At 23 ± 5 °C , After standard charging, connect cells anode and cathode by wire which impedance less than 50m Ω , keep 6h. 23±5°C , , , 50m Ω , 6 .	No smoke or fire

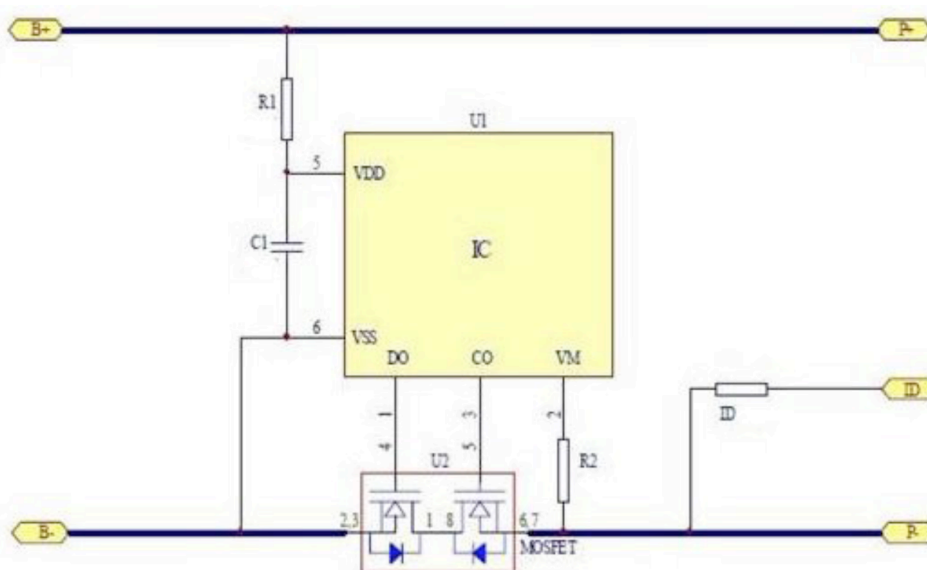
5. Protection circuit

5.1 PCM Standard

Symbol	Name	MIN.	TYP.	MAX.	Unit
VDET1	Over-Charge detect voltage	4.300	4.325	4.350	V
VHVS1	Over-Charge reset voltage	4.05	4.075	4.10	V
VDET2	Over-discharge detect voltage	2.45	2.50	2.55	V

5.2 Schematic diagram

IEC	Excess Current threshold	2.0		5.5	A
IDD	Supply current	--	--	7	μ A
ISTANDBY	Stand-by	--	--	1	μ A
RD	Internal resistance in normal operation	--	--	65	m Ω



5.3 PARTS LIST

NO.	Description/vendor	Symbol	Spec./Model	unit	Q'ty
1	IC/ Fujitsu	U1	DW01 SOT-23-6	PCS	1
2	MOS /Fujitsu	U2	8205A TSSOP8	PCS	1
3		R1	0603/100 Ω / \pm 5%/1/10W	PCS	1
4		R2	0603/1.0K Ω / \pm 5%/1/10W	PCS	1
5	PCB		ADF-26-A/ , FR_4,	PCS	1
6		C1	0603/0.1 μ F/ \pm 10%/16V/X7R	PCS	1
7		ID	0603/10K Ω NTC B=3435/ \pm 5%	PCS	1

9. Warnings

To prevent the possibility of the battery from leaking, heating, fire please observe the following precautions. The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles. Do not strike battery with any sharp edge parts.

- + Do not immerse the battery in water and seawater
- + Do not use and leave the battery near a heat source as fire or heater
- + When recharging, use the battery charger specifically for that purpose
- + Do not reverse the position and negative terminals
- + Do not connect the battery to an electrical outlet
- + Do not discard the battery in fire or heat it
- + The battery tabs are not so stubborn especially for aluminum tab. Do not bend tab.
- + Do not short-circuit the battery by directly connecting the positive and negative terminal with metal object such as wire
- + Do not transport and store the battery together with metal objects such as necklaces, hairpins etc.
- + Do not strike or throw the battery.
- + Do not directly solder the battery and pierce the battery with a nail or other sharp object.

10. Cautions

- + Do not use or leave the battery at very high temperature (for example, at strong direct sunlight or a vehicle in extremely hot conditions). Otherwise, it can overheat or fire or its performance will be degenerate and its service life will be decreased.
- + Do not use it in a location where static electricity is great, otherwise, the safety devices may be damaged, causing hidden trouble of safety.
- + If the battery leaks, and the electrolyte get into the eyes. Do not rub eyes, instead, rinse the eyes, with clean running water, and immediately seek medical attention. Otherwise, eye injury can result.
- + 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 charge and stop using it.
- + In case the battery terminals are dirt, clean the terminals with a dry cloth before use. Otherwise power failure or charge failure may occur due to the poor connection with the instrument.
- + Be aware discharged battery may cause fire or smoke, tape the terminals to insulate them.
- + If the battery is stored for a long time, the battery storage should be 3.75V and the battery is to be stored in a condition, Temperature $23 \pm 5^{\circ}\text{C}$, Humidity 45-75% RH

11. Period of Warranty

- + The period of warranty is year from the date of shipment. ADF guarantees to give a replacement in case of battery with defects proven due to manufacturing process instead of the customer's abuse and misuse.

12. Others

12.1. The customer is requested to contact ADF in advance, if and when the customer needs other applications or operating conditions than those described in this document. Additional experimentation may be required to verify performance and safety under such conditions.

12.2. Westpower/ADF will take no responsibility for any accident when the battery is used under other conditions than those described in this Document.

12.3. ADF will inform, in a written form, the customer of improvement(s) regarding proper use and handling of the battery, if it is deemed necessary.

12.4. Any matters that this specification does not cover should be conferred between the customer and ADF