Lithium elements

Product specification

2.2 Environmental request

☑ RoHS 2.0 ☐ HF 无卤素 ☐ REACH ☐ 其它

2.3 Functional descriptio

1） Over-charge voltage protection

2） Over-discharge voltage protection

3） Over current protection

4） Short circuit protection

2.4 Mechanical characteristics

1） PCM size：L 53.57(±0.2mm)×W 16.07(±0.15mm)×T 4.5mm(MAX)

2） PCB MATERIA/PCB：FR-4, 1 oz,1.0±0.10mm

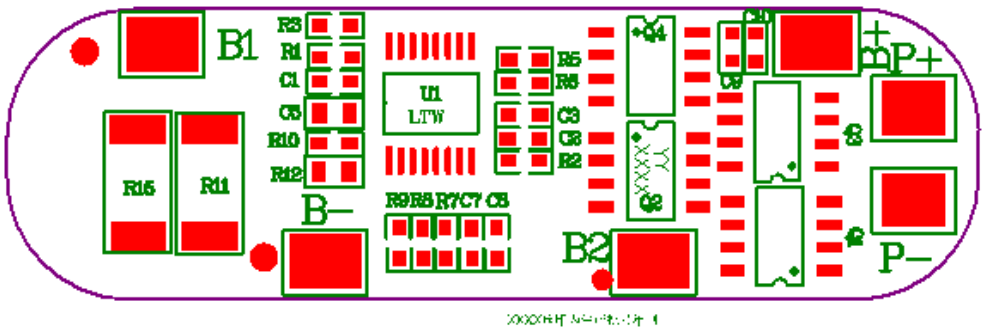
3） LAYER：2Layers

4） Plating Method：HASL LF

5） PSR INK：GREEN

6) SILK INK：White

2.5 Connecting description

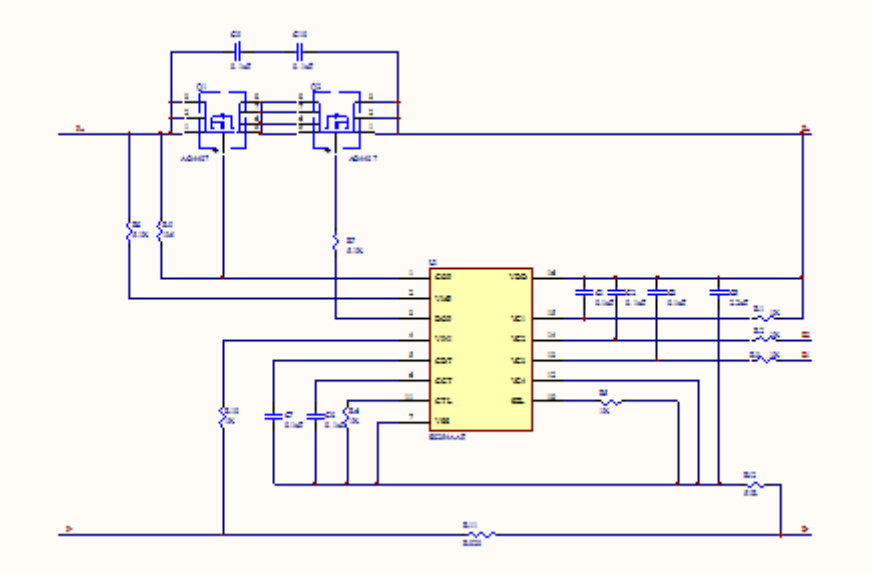


Symbol	Description	Symbol	Description
P+	Battery output/charging positive pole	B+	3Cell positive pole
P-	Battery output/charging negative pole	B2	2Cell positive pole
B1	1Cell positive pole	B-	1Cell negative pole

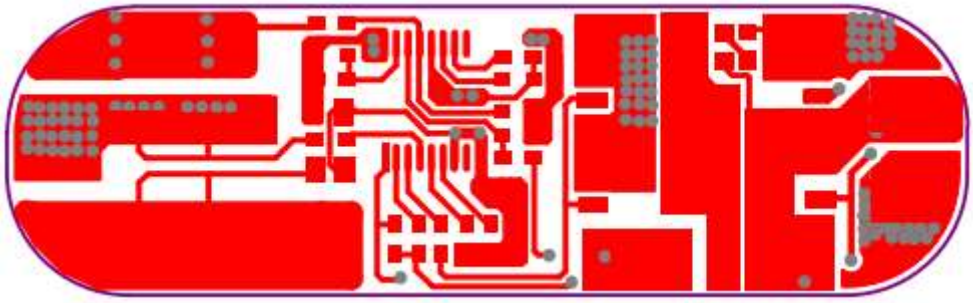
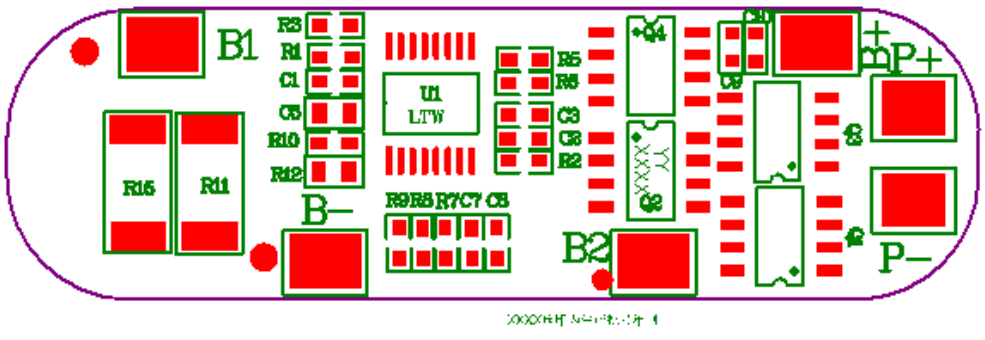
2.6 Electrical characteristic (Ta=25℃)

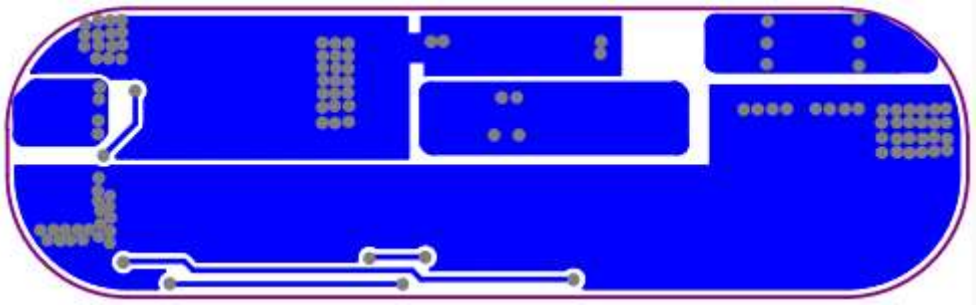
Contents	Min.	Type	Max.	Tolerance	Unit
Absolute Maximum Rating					
Input Charging Voltage		10.95			V
Input Charging Current		4	6		A
Output Discharging Voltage	7.5		11.1		V
Continuous Output Discharging Current		4	6		A
Ambient Condition					
Operating Temperature	-40		+85		℃
Humidity (No Water-Drop)	0%		80%		RH
PCM Storage Condition					
PCM Storage Temperature	-55		+125		℃
Humidity (No Water-Drop)	45%		85%		RH
Protection Parameters					
Over-Charge Voltage Protection (OVP)	3600	3650	3700		mV
Over-Charge Voltage Protection Release	3450	3550	3650		mV
Over-Charge Voltage Protection Delay Time	500	1500	2000		mS
Over-Discharge Voltage Protection (UVP)	2400	2500	2600		mV
Over-Discharge Voltage Protection Release	2700	2800	2900		mV
Over-Discharge Voltage Protection Delay Time	50	100	200		mS
Over-Current Charge Protection Detection Voltage	125	150	175		mV
Over-Current Charge Protection (OCC)	15	20	25		A
Over-Current Charge Protection Delay Time	5	10	15		mS
Over-Current Discharge Protection Detection Voltage	125	150	175		mV
Over-Current Discharge Protection (OCD)	12	15	18		A
Over-Current Discharge Protection Delay Time	5	10	15		ms
Short Circuit Protection Detection Voltage (SCP)	400	450	500		mV
Short Circuit Protection Delay Time	100	300	600		uS
Short Circuit Protection Release	Remove Load Or Connect Charger				
Current Consumption					
Normal Mode		20	40		uA
Other Parameters					
Impedance		40	65		mΩ
0V Battery Charge Function 0V	/				
ESD Protection Function ESD	/				

4. Diagram

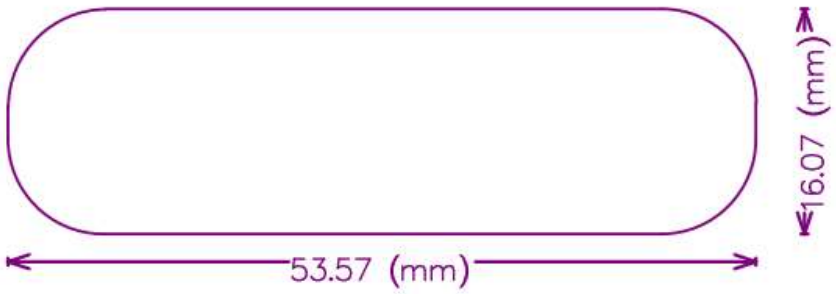


5.PCB Layout / PCB

Top layer	
Top over layer	

Bottom layer	
Bottom over layer	

7.PCB diagram / PCB



9.2 Storage

9.2.1 Storage Temperatur：23±5℃

9.2.2 Storage Humidity：45±15% RH

9.2.3 Should pay attention to ESD

9.3 Transportation

9.3.1 Delivery to your storhouse by express or our deliveryman.

9.3.2 Should pay attention to moisture, moisture, avoid extrusion, impact, etc., to prevent damage to the PCM during transportation.

10. Attachment

10.1 Sample test data

NO.	Test Project	Test standard	Testing Value					Judgment
			1	2	3	4	5	
1	Overcharge protection voltage	3.65±0.05V	3.649	3.648	3.645	3.647	3.650	OK
2	Over discharge protection voltage	2.50±0.1V	2.510	2.511	2.508	2.505	2.508	OK
3	Discharge over current protection current	12-18A	14.5	14.7	14.4	14.5	14.5	OK
4	Static current	≤40.0 uA	26.5	25.4	25.2	25.4	26.4	OK
5	Impedance（B-&P-）	≤65mΩ	30	32	30	29	31	OK

10.2 Environmental Requirements/环境物质要求

The specification subjects to the EU Directive about RoHS 2.0, and the hazardous substance conforms to the following standard.

Hazardous substance	Standard（mg/KG）	Remarks
(Cd)	<100	
(Pb)	<1000	
(Hg)	<1000	
(Cr6+)	<1000	
(PBBs)	<1000	
(PBDEs)	<1000	
(DBP)	<1000	
（BBP）	<1000	
(DIBP)	<1000	
(DEHP)	<1000	

Declaration: the above standard is the requirements of EU RoHS 2.0 Directive, we will base on the customer’s requirements when it is stricter than the EU standard.