

Lithium elements

Product specification

2.2 Environmental request

RoHS 2.0

HF 无卤素

REACH

其它

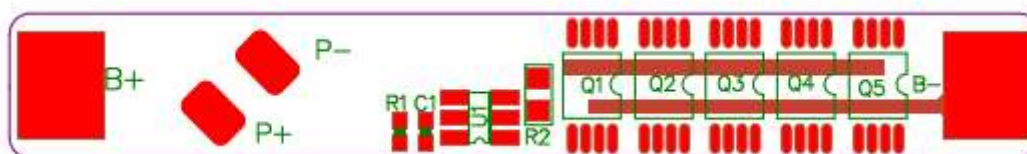
2.3 Functional description

- 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 50(±0.15mm)×W 7(±0.1mm)×T 3.5 mm(MAX)
- 2) PCB MATERIA/PCB: FR-4, 1.5 oz, 1.0±0.1mm
- 3) LAYER: 2Layers
- 4) Plating Method: HASL-LF
- 5) PSR INK/: Green,
- 6) SILK INK/: White

2.5 Connecting description



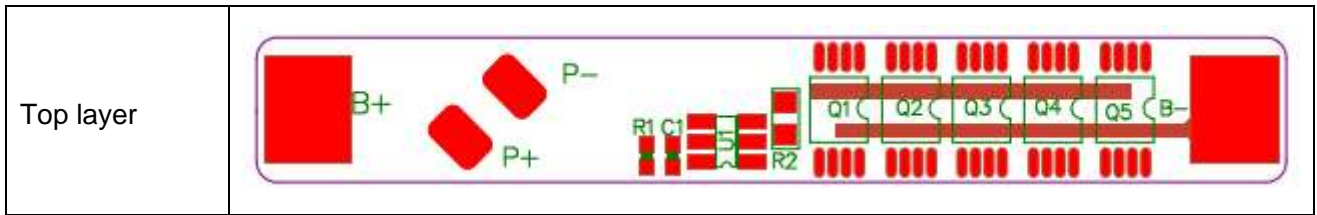
Symbol	Description	Symbol	Description
P+	Battery output/charging positive pole	B+	Cell positive pole
P-	Battery output/charging negative pole	B-	Cell negative pole

2.6 Electrical characteristic

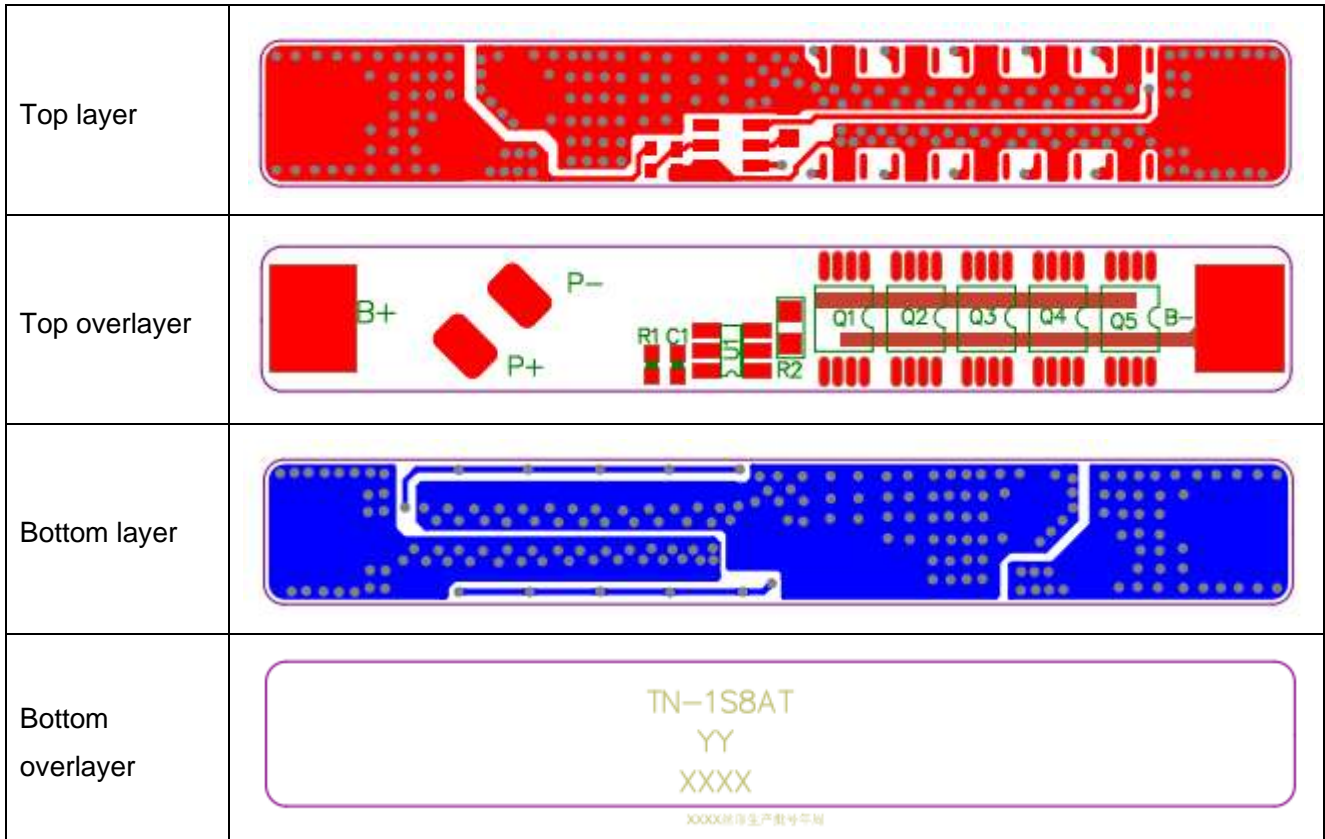
(Ta=25°C)

Contents	Min.	Type	Max.	Tolerance	Unit
Absolute Maximum Rating					
Input Charging Voltage		3.65			V
Input Charging Current			2		A
Output Discharging Voltage	2.10	3.20	3.75		V
Continuous Output Discharging Current			2		A
Ambient Condition					
Operating Temperature	-20		+65		°C
Humidity (No Water-Drop)	0%		80%		RH
PCM Storage Condition/PCM					
PCM Storage Temperature PCM	-55		+125		°C
Humidity (No Water-Drop)	45%		85%		RH
Protection Parameters					
Over-Charge Voltage Protection (OVP)	3725	3750	3775	±25	mV
Over-Charge Voltage Protection Release	3550	3600	3650	±50	mV
Over-Charge Voltage Protection Delay Time	1000	1300	1600		mS
Over-Discharge Voltage Protection (UVP)	2050	2100	2150	±50	mV
Over-Discharge Voltage Protection Release	2250	2300	2350	±50	mV
Over-Discharge Voltage Protection Delay Time	115	145	175		mS
Over-Current Charge Protection Detection Voltage	-240	-200	-160		mV
Over-Current Charge Protection (OCC)	3	5	7		A
Over-Current Charge Protection Delay Time	6	8	20		mS
Over-Current Discharge Protection Detection Voltage	185	200	215		mV
Over-Current Discharge Protection (OCD)	3	5	7		A
Over-Current Discharge Protection Delay Time	9	12	20		ms
Short Circuit Protection Detection voltage (SCP)	550	850	1150		mV
Short Circuit Protection Delay Time	200	300	500		uS
Short Circuit Protection Release	Remove Load Or Connect Charger				
Current Consumption					
Normal Mode		3.0	6.0		uA
Other Parameters					
Impedance (B-&P-)	5	25	50		mΩ
Impedance (B+&P+)			5		mΩ
ID Resistor ID		/			KΩ
NTC Resistor NTC		/			KΩ
0V Battery Charge Function 0V	允许				
ESD Protection Function ESD	无				

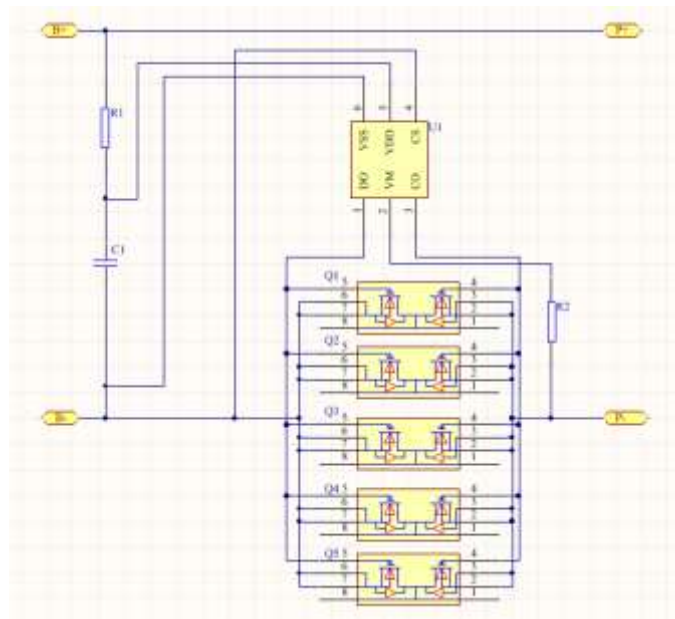
4. SMT Diagram



5.PCB Layout / PCB



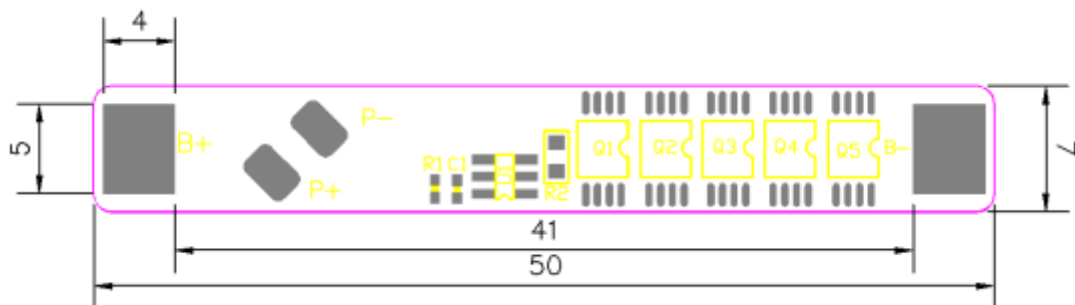
6.Electrical Schematic



7.Special Requirements

NO.		
1		
2		
3		

8.PCB diagram / PCB



10. Attachment

10.1 Sample test data

NO.	Test Project	Test standard	Testing Value					Judgment
			1	2	3	4	5	
1	Overcharge protection voltage	3.75±0.25V	3.745	3.748	3.745	3.745	3.747	OK
2	Overcharge protection delay time	MAX 1600ms	1024	1028	1024	1035	1046	OK
3	Over discharge protection voltage	2.10±0.08V	2.099	2.098	2.098	2.099	2.100	OK
4	Over discharge protection delay time	MAX175ms	152	148	154	151	154	OK
5	Discharge over current protection current	3-7A	4.5	4.7	4.6	4.6	4.7	OK
6	Over discharge current protection delay time	MAX20ms	12.5	13.4	12.8	12.6	12.5	OK
7	Static current	≤6.0 uA	3.5	3.6	3.5	3.6	3.5	OK
8	Impedance (B-&P-)	≤50mΩ	41	40	41	42	42	OK

10.2 Environmental Requirements

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

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.