



## Specification Approval Sheet

Name: Protection Circuit Module (PCB)

Model: 32005

SPEC: for 7.4V Li-PO&Li-ion Packs (11A Limit)

Approved By	Checkup	Make

Customer Confirmation	Signature	Date
	Company Name :	
	Stamp :	

436 Kato Terrace, Fremont, CA 94539 U.S.A.

Tel: 510.687.0388 Fax: 510.687.0328

[www.TenenergyBattery.com](http://www.TenenergyBattery.com)



**Electronic performance Testing Report**

**Testing Content:**

**I. Appearance checking:** Good

**II. Thickness 0.8mm** Ordinary Gold-plating . Green oil

**III. Components**

1.Control IC

R5460N208AF

2.MOS

IRF7832\*2PCS

**IV. Parameter**

No.	Testing content	Testing criterion	Tested value					Result
			1	2	3	4	5	
1	Overcharge protection voltage	4.25±0.025V	4.243	4.241	4.241	4.243	4.241	PASS
2	Overcharge release voltage	4.05±0.05V	4.032	4.030	4.032	4.030	4.032	PASS
3	Overcharge protection delay time	1200ms-300ms	1008	1100	1088	1010	998	PASS
4	Over discharge protection voltage	2.40±0.025V	2.42	2.395	2.410	2.386	2.375	PASS
5	Over discharge release voltage	3.0±0.08V	3.012	2.988	3.013	2.984	3.010	PASS
6	Over discharge protecting delay time	128ms-39ms	110	87	108	89	99	PASS



**Tenergy Corporation**

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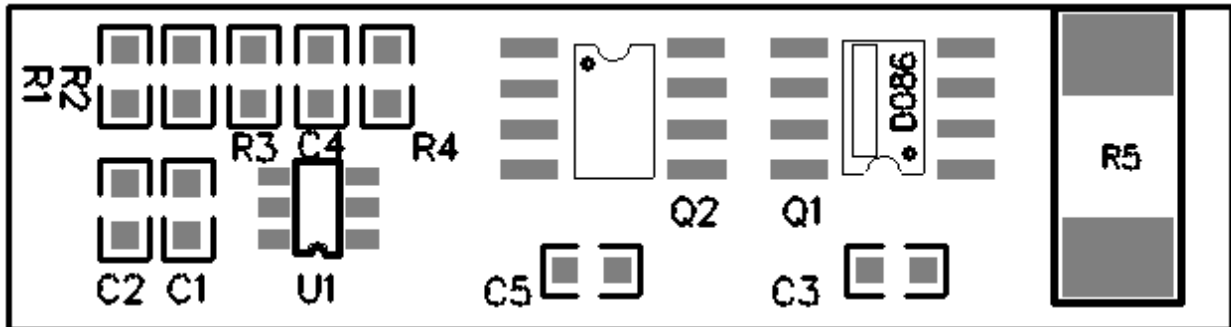
[www.TenergyBattery.com](http://www.TenergyBattery.com) email: sales@tenergybattery.com

7	Over current protection current	9.0-13.0A	11	11	11	11	11	PASS
8	Short circuit protection delay time	500us-150us	380	401	380	380	390	PASS
9	Self-consume current in idel	≤ 20.0uA	8.1	8.4	8.3	8.3	8.2	PASS
10	PCB Inner resistance	≤30 mΩ	21	23	22	25	22	PASS

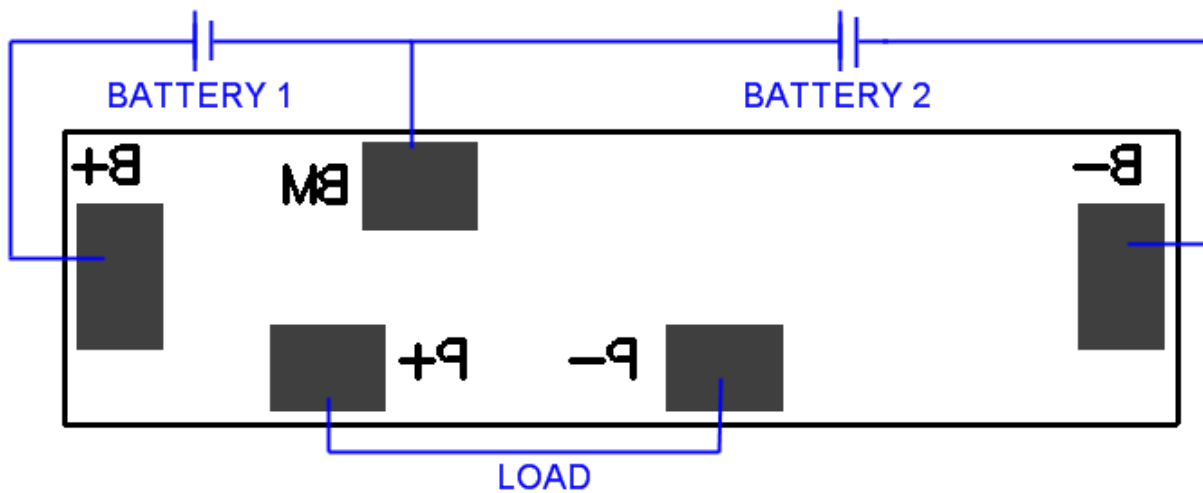
**PCB BOM**

No.	Material code	Material name	Material model				Unit	Qty	Remark
1	U1	Control IC	R5460N208AF		SOT-23-6		Pc	1	Ricoh
2	Q1/Q2	MOS	F7832		TSSOP-8		Pc	2	IR
3	R1 R2	SMD Resistor	331	5%	1/16W	0603	Pc	2	Yageo
4	R4	SMD Resistor	102	5%	1/16W	0603	Pc	1	Yageo
5	R5	SMD Resistor	0.010Ω/2W/±5%			2512	Pc	1	Yageo
6	C1 C2 C3	SMD Capacitor	104	20%	25V	0603	Pc	3	Yageo
7	C4	SMD Capacitor	103	20%	25V	0603	Pc	1	Yageo
8	R3/C5								
9									
10									
11									

**PCB SMT Chart**

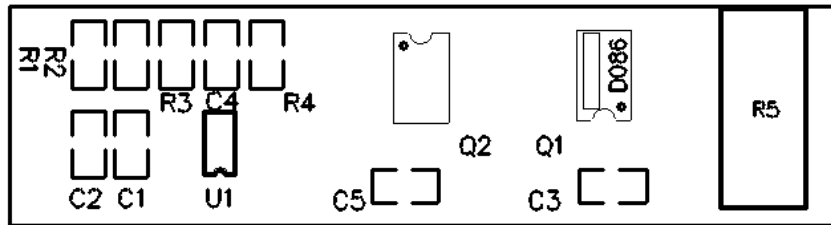
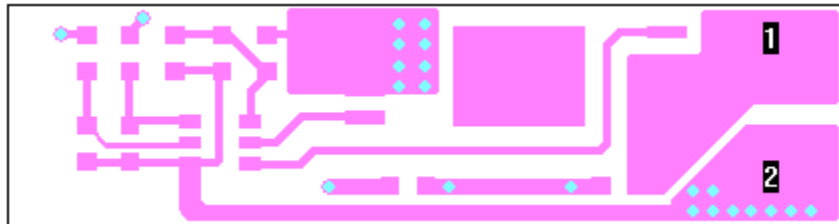


**PCB Connection Chart**

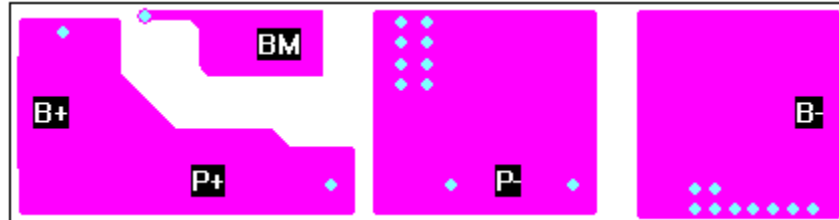


Straight view

**PCB Silk printing chart**

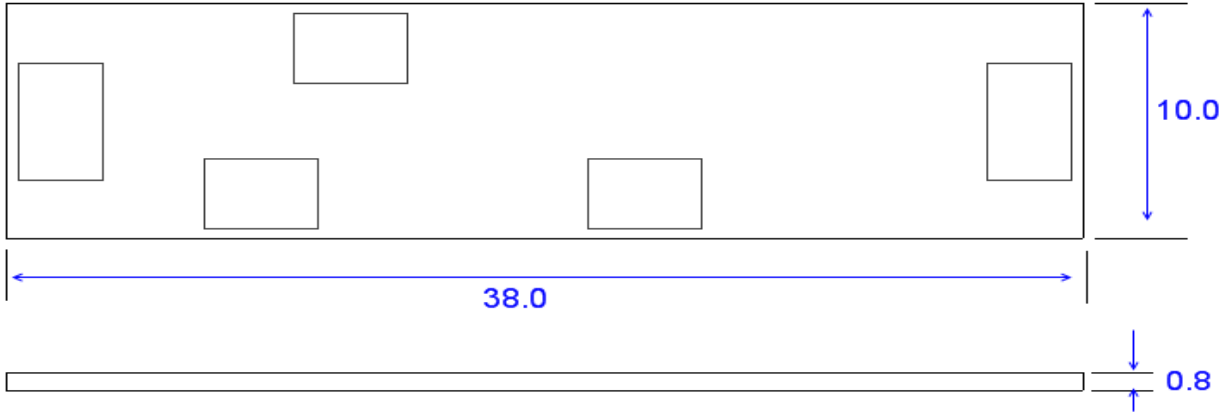


Top



Bottom

**PCB Size**



Remark: Tolerance of length and width  $\pm 0.25\text{mm}$ , Tolerance of Thickness  $\pm 0.15\text{mm}$ ,  
Unit used above (mm)

**PCB Schematic Diagram**

