

# Protection Circuit Module

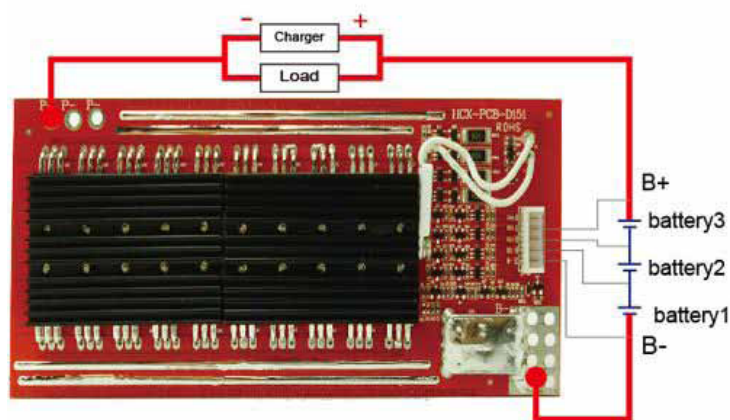
PCM / BMS / PCB

For 11.1V 3S Li-ion/Li-Polymer Battery Packs

Data Sheet

| Item | Contents                  |  | Criteria                         |
|------|---------------------------|--|----------------------------------|
| 1    | Model                     |  | 3S-60A working current           |
| 2    | Voltage                   | Charging voltage                       | 12.6V                            |
| 3    | Current                   | Maximal continuous charging current    | 60A                              |
|      |                           | Maximal continuous discharging current | 60A                              |
|      |                           | Current consumption                    | $\leq 20\mu\text{A}$             |
| 4    | Overcharge Protection     | Over charge detection voltage          | $4.28\text{V} \pm 0.025\text{V}$ |
|      |                           | Over charge detection delay time       | 0.5~2S                           |
|      |                           | Over charge release voltage            | $4.08\text{V} \pm 0.05\text{V}$  |
| 5    | Over Discharge Protection | Over discharge detection voltage       | $3.00\text{V} \pm 0.05\text{V}$  |
|      |                           | Over discharge detection delay time    | 50~200mS                         |
|      |                           | Over discharge release voltage         | $3.00\text{V} \pm 0.1\text{V}$   |
| 6    | Over Current Protection   | Over current detection voltage         | $0.1\text{V} \sim 0.2\text{V}$   |
|      |                           | Over current detection current         | $150 \pm 20\text{A}$             |
|      |                           | Detection delay time                   | 5~20mS                           |
|      |                           | Release condition                      | Cut load, automatically recover  |
| 7    | Short Circuit Protection  | Detection condition                    | Exterior shot circuit            |
|      |                           | Detection delay time                   | 200~500uS                        |
|      |                           | Release condition                      | Cut load, automatically recover  |
| 8    | Balance                   | Balance voltage for single cell        | $4.2\text{V} \pm 0.025\text{V}$  |
|      |                           | Balance current for single cell        | $84 \pm 10\text{mA}$             |
| 9    | Resistance                | Inner resistance                       | $\leq 20\text{m}\Omega$          |
| 10   | Temperature               | Operating temperature range            | $-40 \sim +85^{\circ}\text{C}$   |
|      |                           | Storage temperature range              | $-20 \sim +125^{\circ}\text{C}$  |
| 11   | Size (L*W*T)              | L155mm*W70mm*T13mm                     |                                  |

## Remarks:



Charge, Discharge at same Port

P+ = B+ / Charge+ / Discharge+

P- = Charge- / Discharge-

\*Note: Characteristics subject to change without notice.