ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change. 8/97

ON Inary Li-Ion Battery-Pack Supervisor

General Description

The MAX1665 Li-Ion battery-pack supervisor monitors the charge and discharge currents, as well as cell-tocell voltage mismatch for up to four series Li-Ion cells. This device drives two external low-side FETs to protect the series cells in the event of a fault condition. The three main features are overvoltage protection, overdischarge protection, and overcurrent protection. When any cell exceeds overvoltage (Vov), the CHG pin goes to GND, disabling charge flow into the pack. Charging is re-enabled only if the cell voltage has dropped 100mV below Vov.

When any cell voltage drops below undervoltage (V_{UV}), the discharge path is latched off by forcing CHG to GND and DSG to BAT4N. This prevents the cell from discharging below the V_{UV} threshold. Discharge is reenabled only when BAT4N is greater than GND and all cells are above V_{UV}.

In normal charge/discharge mode (CHG = DSG = high), the cell voltages are between Vov and Vuv.

Overcurrent protection senses the current during either charge or discharge. If overcurrent is detected, the system shuts off (CHG = GND and DSG = BAT4N).

The MAX1665 comes in versions for two, three, or four cells.

Applications

Li-Ion Battery-Pack Protection

Features

- Discharge Protection
- Shorted-Cell Protection
- Overcurrent Protection
- <20µA Supply Current</p>
- <1µA Standby Current</p>
- Available in 8-Pin SO

_Ordering Information

PART	TEMP. RANGE	CELLS	PIN-PACKAGE
MAX1665SESA	-40°C to +85°C	2	8 SO
MAX1665VESA	-40°C to +85°C	3	8 SO
MAX1655XESA	-40°C to +85°C	4	8 SO

_Typical Operating Circuit



Pin Configurations



_ Maxim Integrated Products 1

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