

JW3313S

3 Series Battery Protector

DESCRIPTION

JW3313S is a low-power battery protection IC for the 3 series rechargeable lithium-ion battery pack.

JW3313S integrates high-accuracy voltage detection, which realizes multiple protect functions including over-charge, over-discharge, over-current, and open wire detection.

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FEATURES

- Input Voltage up to 30V
- High-accuracy Voltage Detection for Each Cell
 - Over-charge Detection Voltage V_{OC}: 3.65V, 3.85V, 4.2~4.375V (25mV step) ±25mV (25℃)
 - Over-charge Release Hysteresis V_{OCRH}: 0.1~0.4V (100mV step)
 - Over-discharge Detection Voltage V_{OD}: 2.0V, 2.3V, 2.5V, 2.7V ±80mV (25℃)
 - Over-discharge Release Hysteresis V_{ODRH}: 0.3~0.7V (200mV step)
- Discharge Over-current Detection in 3-step:

- 1stDetection Voltage V_{DOI1}:
 50~150mV (25mV step) ±10mV
- 2ndDetection Voltage V_{DOI2}: 2V_{DOI1} ±20mV
- Short Circuit Detection Voltage V_{SHT}: 0.4V ±50mV
- Charge Over-current Detection Voltage V_{COI}:
 - -20mV ±5mV
 - -30mV ±10mV, -50mV ±10mV,
 - Disable
- 3-step Discharge Over-current Protection
 - For 1st, t_{DOI1} : 0.2s, 0.5s, 1s, 2s
 - For 2nd, t_{DOI2} : t_{DOI1} ×10%
 - For 3rd, t_{SHT} : 300µs
- Open Wire Detection
- Wide Range of Operation Temperature -40°C to +85°C
- Low Current Consumption (T=25°C)
 Full Power Mode 10μA typ.
 Sleep Mode 1.5μA typ.
 Shutdown Mode 350nA typ.
- Package: SOP8

APPLICATIONS

- Rechargeable Lithium-ion Battery Pack
- Power Tools, Garden Tool

TYPICAL APPLICATION

