

*Parameters Subject to Change Without Notice*

### DESCRIPTION

JW<sup>®</sup>3317 is a multi-cell battery protection IC that includes high-accuracy voltage detection circuits and delay circuits. It is possible for users to monitor the status of 5~7 series cell lithium-ion rechargeable battery pack.

JW3317 provides multiple protect functions including over-charge, over-discharge, over-current, over-temperature and open wire detection. More JW3317s can operate in cascade to protect long string battery.

### FEATURES

- Wide range of operation voltage 6V to 60V
- Monitor 5~7 series cell battery and support cascaded operation
- High-accuracy voltage detection for each cell  
Overcharge detection voltage  $V_{OC}$ :  
3.6~4.4V (50mV step)  
Accuracy  $\pm 25mV$   
Overcharge release hysteresis  $V_{OCH}$ :  
0.1~0.4V (100mV step)  
Over discharge detection voltage  $V_{OD}$ :  
2.3~3.0V (100mV step) Accuracy  $\pm 80mV$   
Over discharge release hysteresis  $V_{ODH}$ :  
0.2~0.5V (100mV step)
- Charge over current detection voltage:  $V_{COI}$   
10 mV, 30 mV, 50 mV, none
- D Discharge over current detection in 3-step  
1<sup>st</sup> detection voltage  $V_{DOI1}$ :  
0.05~0.2V (50mV step) Accuracy  $\pm 10mV$   
2<sup>nd</sup> detection voltage  $V_{DOI2}$ :  
2 $V_{DOI1}$  (100mV step) Accuracy  $\pm 20mV$   
Short circuit detection voltage  $V_{SHT}$ :  
0.4~0.7V (100mV step) Accuracy  $\pm 80mV$

- High-accuracy battery temperature detection  
Charging over-temperature protection threshold:  
0.85V (50°C) Accuracy  $\pm 30mV$  ( $\pm 4^\circ C$ )  
Charging under-temperature protection threshold:  
0.23V (-10°C) Accuracy  $\pm 30mV$  ( $\pm 4^\circ C$ )  
Discharging over-temperature protection threshold:  
0.98V (70°C) Accuracy  $\pm 25mV$  ( $\pm 4^\circ C$ )
- Overcharge protection and release delay time, Over discharge protection and release delay time, Load short circuit protection and release delay time is fixed
- Programmable by external capacitor:  
Discharge over current detection delay time,  
1st: 0.1~10s 2nd: (0.1~10s) $\times 1\%$
- Discharge disable mode selectable
- Open wire detection
- Charging Permission (CP) condition check
- Wide range of operation temperature  
-40°C to +85°C
- Low current consumption  
Full power mode 20uA max. (T=25°C)  
Sleep mode 12uA max. (T=25°C)  
Shutdown mode 350nA max. (T=25°C)
- Package: 24-Pin TSSOP

### APPLICATIONS

- Rechargeable lithium-ion battery pack
- Electric Bicycles, Motorcycles
- Backup Battery Systems
- Hybrid Electric Vehicles

*Company's Logo is Protected, "JW" and "JOULWATT" are Registered Trademarks of JoulWatt technology Inc.*