

## GENERAL DESCRIPTION

TCS9043 Series is a protection IC for 2 serial-cell lithium-ion / lithium polymer rechargeable batteries and includes high accuracy voltage detection circuits and delay circuits.

TCS9043 Series is suitable for protecting 2 serial-cell rechargeable lithium-ion / lithium polymer battery packs from overcharge, over-discharge, overcurrent and short-circuiting.

## FEATURES

- Manufactured with High Voltage Tolerant Process Maximum Rating 30V
- Low supply current
- 2-Cell total voltage 7.2V Typ.  $7.0\mu\text{A}(I_{\text{OPE}})$
- 2-Cell total voltage 4.0V Typ.  $3.0\mu\text{A}(I_{\text{PD}})$
- CPC8 Package
- Variety of detector threshold
- Over-charge detector threshold  $V_{\text{cu}}:3.6\text{V}-4.5\text{V}$  step of 0.1V  $\pm 25\text{mV}$
- Over-charge Release Voltage  $V_{\text{cl}}=V_{\text{cu}}-0.2\text{V}$   $\pm 50\text{mV}$
- Over-discharge detector threshold  $V_{\text{DL}}:2.1\text{V}-3.0\text{V}$  step of 0.1V  $\pm 80\text{mV}$
- Over-discharge Release Voltage  $V_{\text{DR}}$   $\pm 100\text{mV}$
- Discharge-current threshold1 0.2V
- Short detector threshold 1.0V (Fixed)
- Charge-current threshold -0.2V
- Over-discharge self-recovery function
- Built-in Cell balance Function
- Over-charge detector Output Delay 1.1s
- Over-discharge detector Output Delay 100ms
- Discharge-current detector Output Delay 10ms
- Charge-current detector Output Delay 10ms
- Short Circuit detector Output Delay 150 $\mu\text{s}$
- 0V Battery Charging Function
- ESD HBM: 2KV
- RoHS Compliant and Lead Pb Free

## APPLICATIONS

- Power Tools
- Power Bank
- Power Amplifier
- 2 Cell Lithium-ion or Lithium polymer rechargeable battery pack