

## ■ Features

1. The protection IC and The Dual-Nch MOSFET to use common Drain are integrated into One-packaging IC.
2. Reduced Pin-Count by fully connecting internally.
3. Application Part

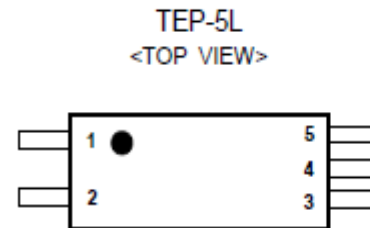
### 1) Protection IC

- ① Uses high withstand voltage CMOS process.
  - The charger section can be connected up to absolute maximum rating 28V.
- ② Detection voltage precision
  - Overcharge detection voltage  $\pm 25\text{mV}$  ( $T_a=25^\circ\text{C}$ ),  $\pm 41\text{mV}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Overdischarge detection voltage  $\pm 58\text{mV}$  ( $T_a=25^\circ\text{C}$ ),  $\pm 68\text{mV}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Discharge overcurrent detection voltage  $\pm 20\text{mV}$  ( $T_a=25^\circ\text{C}$ ),  $\pm 22\text{mV}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Charge overcurrent detection voltage  $\pm 30\text{mV}$  ( $T_a=25^\circ\text{C}$ ),  $\pm 33\text{mV}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
- ③ Built-in detection delay times (timer circuit)
  - Overcharge detection delay time  $1.00 \pm 0.30\text{s}$  ( $T_a=25^\circ\text{C}$ ),  $1.00\text{s}$  [ $+0.04$ ,  $-0.42$ ] $\text{s}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Overdischarge detection delay time  $20.0 \pm 6.0\text{ms}$  ( $T_a=25^\circ\text{C}$ ),  $20\text{ms}$  [ $+20.01$ ,  $-8.58$ ] $\text{ms}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Discharge overcurrent detection delay time  $6.0 \pm 2.0\text{ms}$  ( $T_a=25^\circ\text{C}$ ),  $6\text{ms}$  [ $+10.4$ ,  $-3.6$ ] $\text{ms}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Charge overcurrent detection delay time  $8.0 \pm 3.0\text{ms}$  ( $T_a=25^\circ\text{C}$ ),  $8\text{ms}$  [ $+13.38$ ,  $-5$ ] $\text{ms}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
  - Short detection delay time  $400[+200, -150]\mu\text{s}$  ( $T_a=25^\circ\text{C}$ ),  $400\mu\text{s}$  [ $+799$ ,  $-198$ ] $\mu\text{s}$  ( $T_a=-20\sim 85^\circ\text{C}$ )
- ④ 0V charge function is allowed
- ⑤ Auto Wake-up function is not allowed

### 4. Common Drain Dual-Nch MOSFET (AOS $\ddot{\text{z}}$ AOSN851)

- ① Using advanced trench technology to provide excellent  $R_{\text{DS(on)}}$ , low gate charge and operation with gate voltage as low as 2.5V while retaining a 12V  $V_{\text{GS(MAX)}}$ .
- ② The protection for ESD
- ③ Common drain configuration
- ④ General characteristics
  - $V_{\text{GS}}$  (V) = 24V
  - $I_{\text{D}}$  (A) = 7A
  - $R_{\text{DS(on)}} < 47\text{m}\Omega$  ( $V_{\text{GS}} = 3.9\text{V}$ ,  $I_{\text{D}} = 5\text{A}$ )
  - ESD Rating : 2000V HBM

## ■ Pin Assignment



1	$T_P$ (NC)
2	Source 1
3	Source 2
4	$V_{\text{DD}}$
5	$V_{-}$

## ■ Block Diagram

