

■ 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

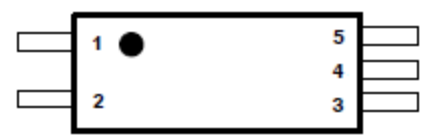
- ① Uses high withstand voltage CMOS process.
  - The charger section can be connected up to absolute maximum rating 28V.
- ② Detection voltage precision
  - Overcharge detection voltage  $\pm 25mV$  ( $T_a=25^\circ C$ ),  $\pm 45mV$  ( $T_a=-30\sim 70^\circ C$ )
  - Overdischarge detection voltage  $\pm 40mV$  ( $T_a=25^\circ C$ ),  $\pm 75mV$  ( $T_a=-30\sim 70^\circ C$ )
  - Discharge overcurrent detection voltage  $\pm 10mV$  ( $T_a=25^\circ C$ ),  $\pm 20mV$  ( $T_a=-30\sim 70^\circ C$ )
  - Charging overcurrent detection voltage  $\pm 20mV$  ( $T_a=25^\circ C$ ),  $\pm 40mV$  ( $T_a=-30\sim 70^\circ C$ )
- ③ Built-in detection delay times (timer circuit)
  - Overcharge detection delay time  $1.00 \pm 0.2s$  ( $T_a=25^\circ C$ ),  $1.00[+0.5, -0.4]s$  ( $T_a=-30\sim 70^\circ C$ )
  - Overdischarge detection delay time  $20.0 \pm 4ms$  ( $T_a=25^\circ C$ ),  $20.0[+10, -8]ms$  ( $T_a=-30\sim 70^\circ C$ )
  - Discharge overcurrent detection delay time  $6.0 \pm 1.2ms$  ( $T_a=25^\circ C$ ),  $6.0[+3.0, -2.4]ms$  ( $T_a=-30\sim 70^\circ C$ )
  - Charging overcurrent detection delay time  $8.0 \pm 1.6ms$  ( $T_a=25^\circ C$ ),  $8.0[+4ms, -3.2ms]$  ( $T_a=-30\sim 70^\circ C$ )
  - Short detection delay time  $400[+160\mu s, -120]\mu s$  ( $T_a=25^\circ C$ ),  $400[+400, -200]\mu s$  ( $T_a=-30\sim 70^\circ C$ )
- ④ 0V charge function is allowed
- ⑤ Auto Wake-up function is not allowed

4. Common Drain Dual-Nch MOSFET

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

■ Pin Assignment

TEP-5L  
<TOP VIEW>



1	TP (NC)
2	Source 1
3	Source 2
4	V <sub>DD</sub>
5	V <sub>-</sub>

■ Block Diagram

