

# Lithium-ion battery monitoring LSI

## Analog Front End type **ML5248**



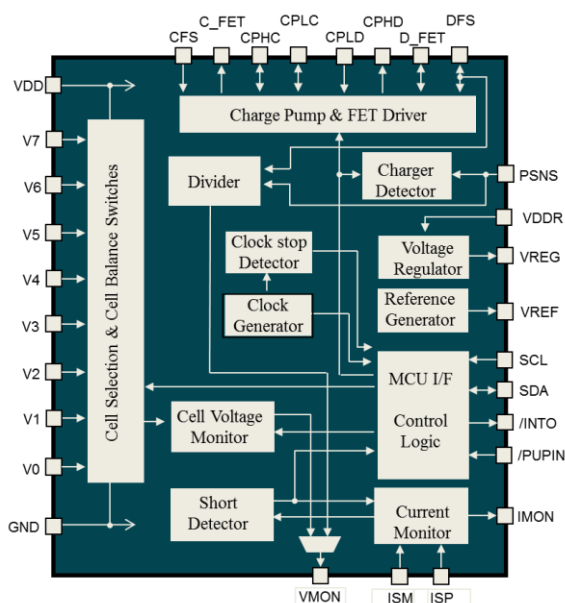
The ML5248 is an analog front-end IC intended for 7-cell lithium-ion secondary battery pack protection systems.

With the cell-by-cell voltage and charge/discharge current monitoring function, the cell balancing function, the over current detection function, and the cell balancing function, the ML5248 can build high performance battery pack systems.

### Features

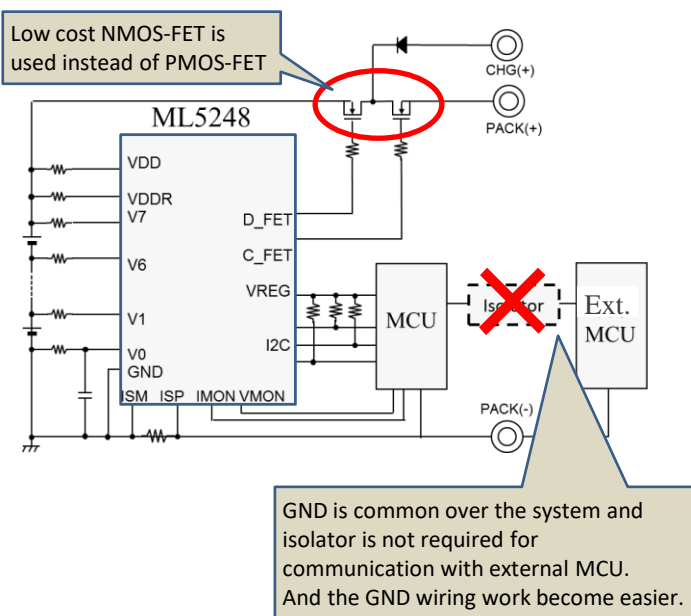
- 3 to 7 cell voltage output accuracy :  $\pm 20\text{mV}$  ( $V_{\text{cell}}=4.2\text{V}$ )
- High side NMOS-FET driver
- Cell balance function: 100mA/cell
- Short current protection
- I2C interface
- 3.3V-10mA LDO
- Low power consumption
  - operating :  $32\text{ }\mu\text{A}$  (typ.)
  - power down :  $0.1\text{ }\mu\text{A}$  (typ.)
- Supply voltage : +5V to +31.5V
- Operating temp. :  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Package : 30pin SSOP

### Block Diagram



### Supporting High side NMOS-FET

- NMOS-FET is located in high-side, and the ground level over the system is common., not disconnected System design become very easy.
- NMOS-FET is used instead of PMOS-FET. NMOS-FET cost much lower than the PMOS-FET and system total cost decrease.
- By using the High side NMOS-FET, isolator for MCU communication is not used and system cost still more decrease.



### Applications

- Cordless cleaner
- Power tool, Garden tool
- Drone

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