The ML5238 is an analog front-end IC intended for 16-cell lithium-ion secondary battery pack protection systems. With the cell-by-cell voltage monitoring function, and the charge/discharge current monitoring function, it can protect each cell against over-charge, over-discharge and over-current, using the external microcontroller. In addition, it is equipped with the short current detection function to automatically protect battery packs without control from the external microcontroller.

- **16-cell support**
- **Charge/discharge NMOS-FET is connected high-side**
  No required additional external driver IC by directly driving the gate terminal for charge/discharge control.
- **High accuracy voltage / current measurement**
  Battery voltage and current is measured with high accuracy. Voltage measurement accuracy is so high as ±20mV (Typ.)

**Equipped with Cell balancing function**
Cell-Balancing switch for each cell is equipped and its balancing switch ON-resistance is 6Ω.

- **Low Current consumption**
  Current consumption in the power-down mode is minimized to around zero to reduce especially the load on the battery during long-term storage.
  - At normal Mode : 50μA (typ.)
  - At power-save Mode : 25μA (typ.)
  - At power-down Mode : 0.1μA (typ.)

**Short-current detection and protection function**
Built-in short-circuit detection and protection function. If short-circuit is detected, ML5238 automatically cut-off charge/discharge FET for system safety.