High accuracy voltage detection

Battery Voltage Measurement IC AN84910UA

Overview
AN84910UA is an IC used to measure battery voltages. This IC can measure a maximum of 53V of common input voltage of 10 batteries connected in series and therefore ideal for applications that require high voltage measurement such as in car battery applications. Moreover, the IC has a built-in source necessary for the peripheral circuits. Booting and monitoring of the system can be achieved easily with the combination of microcomputer.

Features
- Supports up to 10 Cell Batteries 4.5 V to 53 V
- Voltage Detection Precision (Total of 10 Cell) Measurement accuracy: ±5 mV
- Cell • Balancing • Signal Output Control for Switch
- Temperature Measurement Pin : 2-ch
- Embedded with 14 bit delta sigma ADC
- Shutdown mechanism
- General purpose digital input/Output (GPIO) 2-ch
- Serial control by means of microcomputer I/F
- Possible to control serial I/F with AN84901(Monitoring IC) by means of GP SPI Pin.
- Possible to connect to daisy chain

Applications
- Voltage measurement for lithium-ion battery, etc (ex. HEV/EV)

Block Diagram
**2nd Protector for High Voltage Battery Pack**

Battery Voltage Monitoring IC  **AN84911UA**

### Overview
AN84911UA is an IC use to monitor battery voltage. The IC can monitor a maximum of 53 V of a common input voltage of 10 batteries connected in series and therefore ideal for applications that require high voltage monitoring such as in car battery applications. Moreover, threshold voltages for detection of over and under voltages can be changed using external pin and an ALARM signal will occur when abnormal voltage is detected.

### Features
- Supports up to 10 cells. 4.5 V to 53 V
- OVP voltage range 4.08 V to 4.43 V with variable step of 50mV  3-bits
- UVP voltage range 1.75 V to 1.90 V with variable step of 50mV  2-bits
- Shutdown function
- Possible to control the serial I/F through SPI I/F
- Can be connected to daisy chain.

### Applications
- Voltage measurement for lithium-ion battery, etc (ex. HEV / EV)

### Block Diagram

![Block Diagram](image-url)
High accuracy voltage detection
Multicell Battery Stack Monitor IC  AN49501A

Overview
AN49501A is a multicell battery stack monitor IC. This IC, capable of voltage measurement of up to 10 battery cells connected in series with maximum 45-V input common mode voltage, is optimized for applications such as batteries for electrical bicycles requiring high-voltage operation. With built-in power supplies required for peripheral circuits, this IC enables waking up and monitoring of system and battery charging/discharging easily in combination with a microcomputer.

Features
- Voltage measurement of up to 10 battery cells
- High accuracy voltage detection (total 10 cells)
  Measurement accuracy: ±10 mV
- Built-in 14-bit delta-sigma ADC
- High-side n-channel MOSFET control for charge and discharge
- Serial control with microcomputer interface

Applications
- Voltage measurement for lithium-ion battery, etc
  (For Pedelec / Scooter / Power Tool)

Block Diagram
Contact

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