AW32001A Single Cell Li-ion Battery Charger with Power Path Management and Full USB Compliance

Features

- Charge Voltage Regulation Accuracy: ±0.5% (0℃ to 50℃)
- Charge Current Accuracy: ±5%
- Maximum 28V Input Voltage Rating with Over-Voltage Protection
- Minimum -5V Input Voltage Protection
- Complete Charge Process with Pre-Charge, Fast Charge and Constant Voltage Regulation
- Programmable Charge Parameters Through I²C Compatible Interface
- Programmable Charge Termination and Autonomous Recharge
- Wide Range of Fast Charge Current: 2mA~500mA
- Strong and Robust Protection: V_{IN} OVP, Battery OVP, OCP, Reverse Leakage Protection, Short Protection, Thermal Protection, PCB Over Temperature Protection
- BATFET Control to Support Shipping Mode
- System Reset Function
- Fully Integrated Power Path Management
- Ultra-low Battery Leakage Current to Support Shipping Mode
- WLCSP 1.68mm×1.68mm×0.63mm-9B, 0.5mm Pitch Package
- 7-bit slave address (A7~A1) is 1001001 binary(0x49H)
- IEC62368-1 Approved-File No.BE-37454

Applications

- Smart Handheld Devices
- Wearable Devices
- Smart Watches
- Fitness Accessories

General Description

The AW32001A is a highly-integrated Li-Ion/Li-Polymer battery linear charger with system power path management. The charge process of AW32001A includes: Pre-Charge, Fast Charge and Constant Voltage Regulation. The charge parameters and operating modes are programmable through I²C interface. The charge process runs automatically and recharging occurs when the battery voltage drops below V_{BAT_REG}-V_{RCH} after the charge done status.

The AW32001A is targeted at space limited portable applications. The chip can take input power from either an AC adaptor or a USB port to supply the system load and charge the battery. Meanwhile, the chip provides system short circuit protection function by limiting the current from the input to the system and the battery to the system. These features are effective to protect the battery or chip from damage. The parameters of input current limit, the discharge current limit and safety timer can be programmed by the I²C interface. Additionally, input over voltage protection, input under voltage lockout and input headroom voltage are integrated for good input source detection.

AW32001A separates the charging route from the system power supply to fulfill the power management function. The system power supply is at first priority with no dependency on battery existence. Once a bad power-limited adapter appears at the input, AW32001A would reduce the charging current firstly. If the system load is still too heavy for input source, AW32001A will reduce the input-system current to prevent the input source from being pulled down. Under this circumstance, if the system voltage drops 30mV below the battery voltage, the battery to system supply route will be fully turned on to power the system load, which is supplement mode.

单击下面可查看定价，库存，交付和生命周期等信息

>>AWINIC(艾为)