1.5A Linear Li-Ion/Polymer Charger IC with Integrated FET and Charger Timer

DESCRIPTION

The EUP8095 series are highly integrated single cell Li-Ion/Polymer battery charger IC designed for handheld devices. This charger is designed to work with various types of AC adapters or a USB port and capable of operating with an input voltage as low as 2.65V.

The EUP8095 operates as a linear charger and charges the battery in three phases: trickle current, constant current, and constant voltage. When AC-adapter is applied, an external resistor sets the magnitude of the charge current, which may be programmed up to 1.5A with TDFN10 package and a current-limited adapter for lowest power dissipation.

The EUP8095 features thermal regulation loop to control charge current to keep safe operation when PCB lacked of enough heat-sinking. A programmable charge timer provides a backup safety for termination. The EUP8095 automatically re-starts the charge if the battery voltage falls below an internal threshold and automatically enters sleep mode when DC supplies are removed. No external sense resistor or blocking diode is required for charging. A NTC thermistor interface is used for charging the battery in a safe temperature range.

FEATURES

- Very Low Power Dissipation
- Accepts Multiple Types of Adapters or USB BUS Power
- Integrated Power FET and Current Sensor for Up to 1.5A Charge Applications
- Guaranteed to Operate at 2.65V After Start-Up
- Charge Termination by Minimum Current and Time
- Precharge Conditioning With Safety Timer
- Reverse Leakage Protection Prevents Battery Drainage
- Charge Current Thermal Regulation
- Status Outputs for LED or System Interface Indicates Charge and Fault Conditions
- Optional Battery Temperature Monitoring Before and During Charge
- Automatic Sleep Mode for Low-Power Consumption
- Available in 3mm × 3mm TDFN-10 Package
- RoHS Compliant and 100% Lead (Pb)-Free

APPLICATIONS

- PDAs, Cell Phones and Smart Phones
- Portable Instruments.
- Stand-Alone Charger.
- USB Bus Powered Charger.

Typical Application Circuit

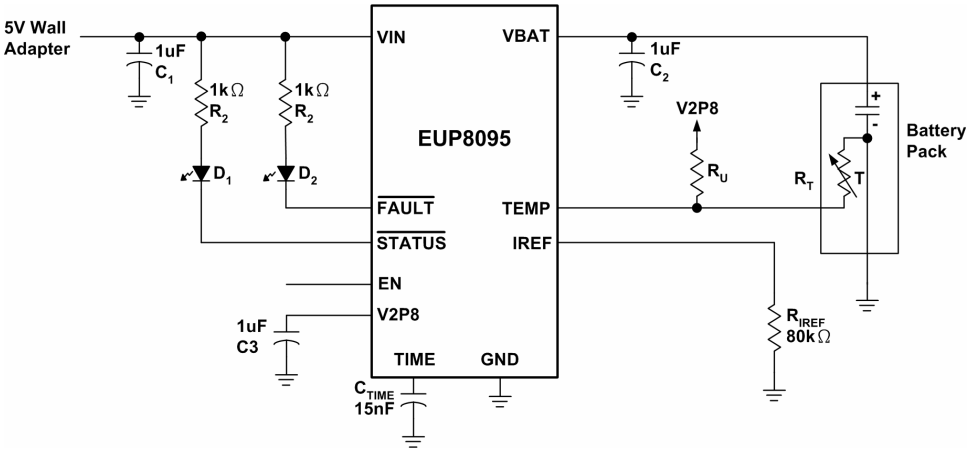

Figure 1.