



2.5A Switching Charger with USB OTG Operation and Power Path Management for Single Cell Li+ Battery

DESCRIPTION

The EUP8268 is a highly-integrated mode battery charger with power path management for single-cell Li-ion battery in a wide range of smart phone and other portable devices. It integrates a synchronous BUCK regulator to provide regulated voltage for powering the system output and at the same time charging the battery. This device supports both USB and AC adapter input. The EUP8268 also meets USB On-the-Go (OTG) operation power rating specification by supplying 5V (typical) on IN.

The smart power path management allows EUP8268 to regulate the system voltage for powering an external load and charging the battery independently and simultaneously. This allows immediate system operation even under missing or deeply discharged battery. Additionally, the smart power path control allows an internal connection from battery to the system in order to supplement additional power to the load in the event the system power demand increases over the input limited power or the input is removed.

The EUP8268 features high integration with all the power switches included inside. No external MOSFET, blocking diodes, or current sense resistor is required.

Status monitor output pins are provided to indicate the battery charge status. Other features include battery temperature monitoring and charging safe timer detector.

EUP8268 is available in 3mm × 3mm UQFN-16 Package.

FEATURES

- 18V Absolute Maximum Input Voltage without External High Voltage Protection Circuit
- 4.5V-5.5V Input Operating Range
- Smart Power Path Management
- 1A Synchronous Boost Converter in OTG Mode up to 90% efficiency
- Control Loops: Input Voltage Limit, Constant Charge Current, Terminal Battery Control.
- 1.6MHz Switching Frequency
- Up to 2.5A Programmable Charge Current without Expensive Milliohm Sense Resistor
- Preset 4.2V or 4.35V Charge Voltage
- Single Input for USB and AC adapter
- High Integration includes all MOSFETs
- Charging Operation Indicator
- Battery Temperature Monitor
- Small Size Package Features
- 3mm × 3mm UQFN-16 Package
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- Smart Phone
- Tablet PC
- GPS
- Portable Hand-held Devices

Typical Application Circuit

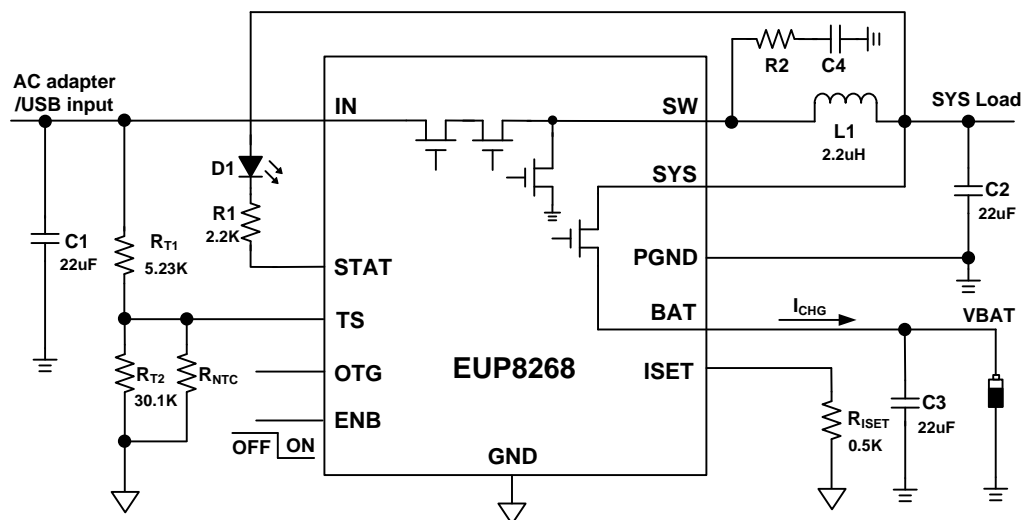


Figure 1.