

5V/1A Synchronous Boost with 1A Linear Charger for Power Bank

DESCRIPTION

The ETA9640 is a fully integrated power management unit specifically designed for Power Bank, Mobile Charger, Backup Battery Charger applications. It consists of a high efficiency synchronous step-up boost converter and a linear battery charger. The boost can provide up to 1A output current at 5V of from a Li-Ion battery input voltage, while the charger can charge up to 1A of current from an AC adapter input. The boost incorporates circuits that disconnect the input from output, during shutdown, short-circuit, output current overloading, or other events when output is higher than the input. This not only eliminates the need for an external MOSFET and its control circuitry to disconnect the input from output, also provides robust output overload protection. Using a patent pending technique to drive the charger LED indicator, it eliminates the need for a micro-controller normally needed in mobile chargers. While saving the cost of a micro-controller, since the whole units only consumes less than 100uA of quiescent current during no load, when considering standby time for one charge, it is a much superior solution comparing to the traditional solution that needs a micro-controller which normally consumes up to 1mA current.

ETA9640 is available in ESDP8 package.

FEATURES

- ◆ 2in 1: A Synchronous boost plus A Charger
- ◆ Short-circuit Protection
- ◆ 5W Output Power for the Boost
- ◆ Boost Output to Input Reversed Current Protection
- ◆ Up to 1A Charging
- ◆ Up to 96% Efficiency during Boosting
- ◆ 100uA No load I_q
- ◆ Programmable Charging Current

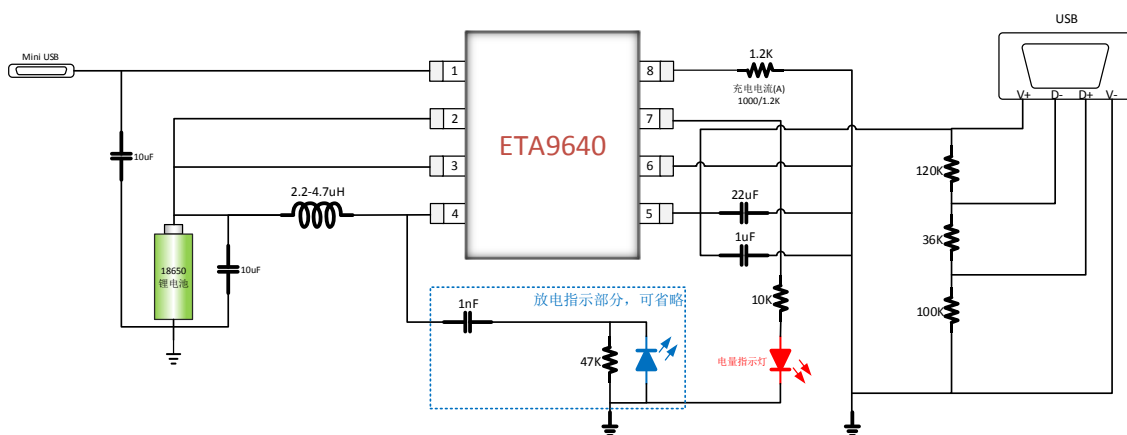
APPLICATIONS

- ◆ Portable Power Bank
- ◆ Portable 3G/4G WiFi Hotspot
- ◆ Tablet PC
- ◆ Portable Device power with Li-ion battery and USB output

ORDERING INFORMATION

PART	PACKAGE PIN	TOP MARK
ETA9640E8A	ESDP-8	ETA9640 YWWPL (Date Code)

TYPICAL APPLICATION



Typical Application Circuit