

NCP1855

Battery Charger, Switching, 2.5 A, with External Power Path Control, USB-OTG Boost Regulator and High-Voltage Input Capability

Product Overview

For complete documentation, see the data sheet.

The NCP1855 is a fully programmable single cell Lithium-ion switching battery charger optimized for charging from a USB compliant input supply and AC adaptor power source. The device integrates a synchronous PWM controller, power MOSFETs, and the entire charge cycle monitoring including safety features under software supervision. An optional battery FET can be placed between the system and the battery in order to isolate and supply the system. The NCP1855 junction temperature is monitored during charge cycle and both current and voltage can be modified accordingly through I²C setting. The charger activity and status are reported through a dedicated pin to the system. The input pin is protected against overvoltages. The NCP1855 also provides USB OTG support by boosting the battery voltage as well as providing overvoltage protected power supply for USB transceiver.

Features

- 2.5 A Buck Converter with Integrated Pass Devices
- Input Current Limiting to Comply to USB Standard
- Automatic Charge Current for AC Adaptor Charging
- High Accuracy Voltage and Current Regulation
- Input Overvoltage Protection up to +28 V
- Factory Mode
- 1000 mA Boosted Supply for USB OTG Peripherals
- Reverse Leakage Protection Prevents Battery Discharge
- Protected USB Transceiver Supply Switch
- Dynamic Power Path with Optional Battery FET

For more features, see the data sheet

Applications

- Single Cell Li-Ion Battery Charger
- High Efficiency Charging
- High USB Input Voltage Charging (5V, 9V, 12V standards)

End Products

- Smart Phone
- Handled device
- Tablet
- PDA