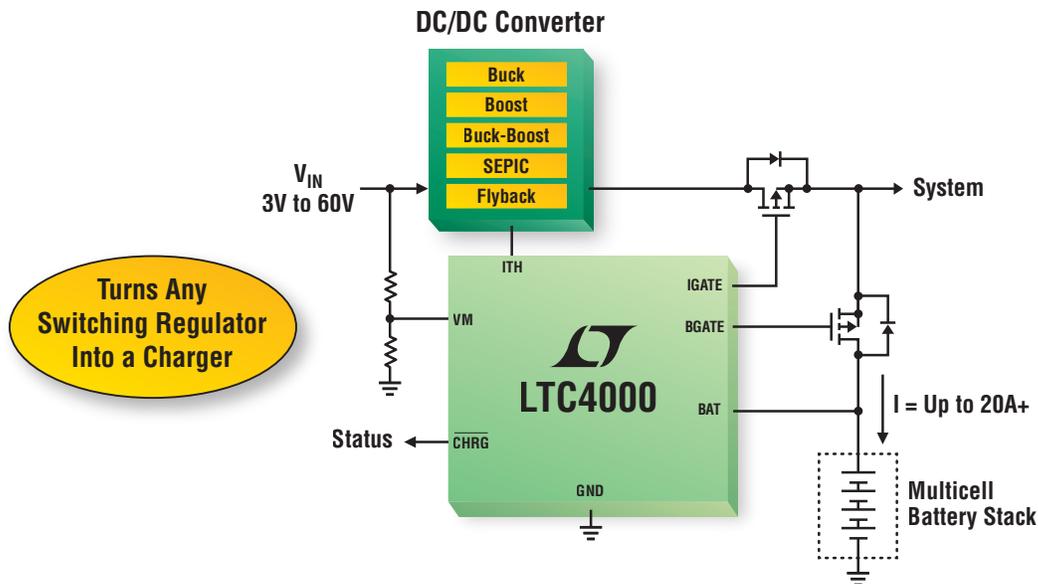


60V, 20A+ Battery Charging Controller



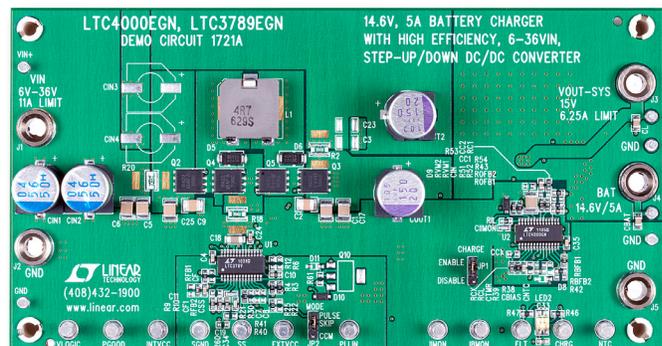
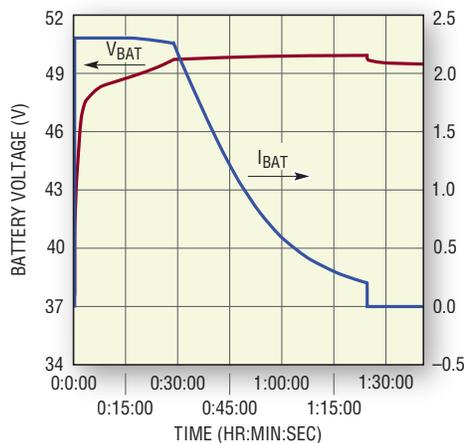
Complete Solution: PowerPath™ Control & Termination, No Software

Features

- Input/Output Voltage: 3V to 60V
- Charge Currents up to 20A+
- Input Ideal Diode for Low Loss Reverse Blocking and Load Sharing
- Programmable Input and Charge Current: ±1% Accuracy
- ±0.2% Accurate Programmable Float Voltage
- Programmable C/X or Timer-Based Charge Termination
- NTC Input for Temperature-Qualified Charging

The LTC®4000 is a high voltage controller and power manager which, when paired with a DC/DC converter, becomes a full-featured battery charger solution. The LTC4000 is capable of driving virtually any topology, including buck, boost, buck-boost, SEPIC and flyback converters. Its intelligent PowerPath manager provides power to the system load when input power is available, enabling instant-on operation even with a deeply discharged battery. A full-featured controller, the LTC4000 can charge a variety of battery types including lithium, nickel and lead acid-based chemistries. Highly accurate charge current and float voltage, as well as onboard termination, ensure safe and accurate charging.

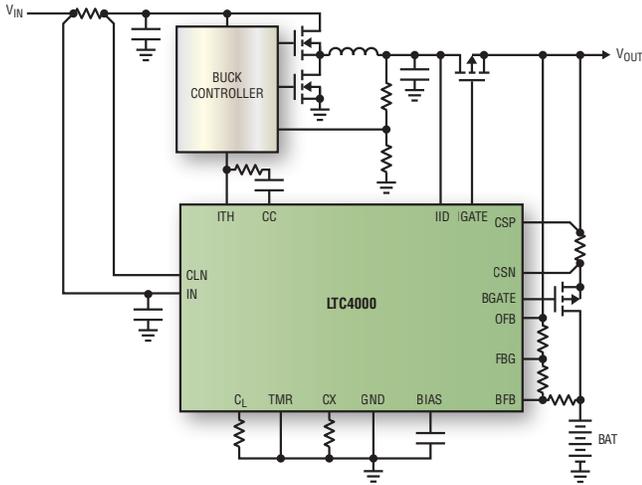
12S 2.2Ah Li-Ion Charge Curves



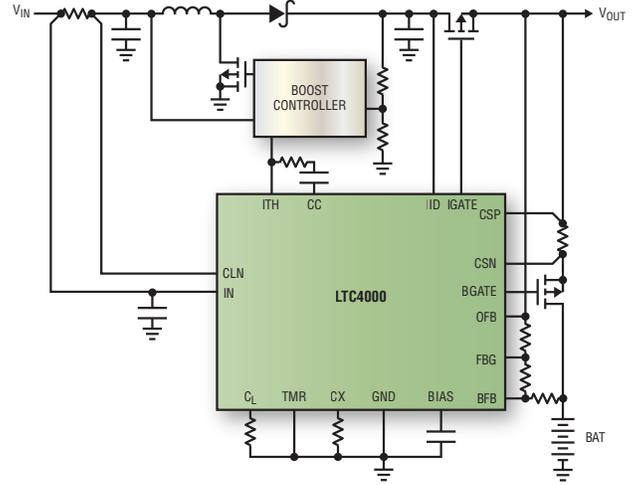
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LTC4000 – Compatible with Virtually Any Linear Technology Switching Regulator

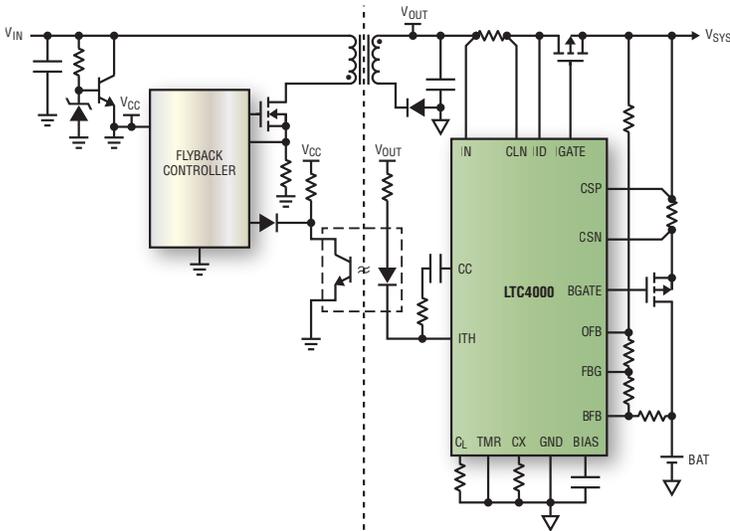
15V to 60V Buck 10A Charger for 3-Cell LiFePO₄



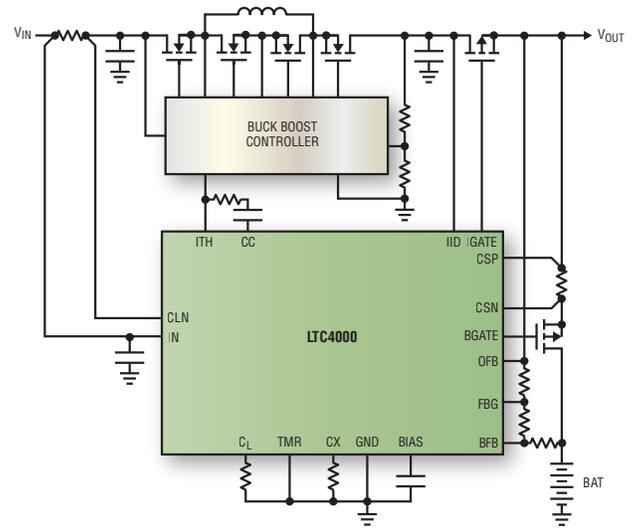
12V to 21V Boost 10A Charger for 24V Lead Acid



18V to 72V Flyback 2A Charger for 1-Cell Li-Ion



6V to 36V Buck-Boost 5A Charger for 4-Cell LiFePO₄



LTC4000 Pairings Verified in Linear Technology's Lab

IC	Topology	Input Voltage Range	Output Voltage/Current	Battery
LTC3789	Buck-Boost	5 – 36V	14.4V/10A	4S LiFePO ₄
LTC3789	Buck-Boost	9 – 30V	16.8V/5A	4S Li-Ion
LTC3851A	Buck	5 – 38V	-4V/12A	4V Lead Acid
LT3845A	Buck	15 – 60V	10.8V/10A	3S LiFePO ₄
LT3845A	Buck	36 – 48V	29.4V/2A	7S Li-Ion
LT3845A	Buck	5 – 38V	-4V/12A	4V Lead Acid
LTC3787	Boost	12 – 21V	-30V/10A	24V Lead Acid
LTC3862	Boost	10 – 20V	-55V/4A	48V Lead Acid
LTC3862	Boost	19 – 24V	42.5V/53.5V/5A	11/13S Li-Ion
LT1952-1	Forward	36 – 72V	53.5V/2A	48V Lead Acid
LTC3805	Flyback	18 – 72V	4.2V/2A	1S Li-Ion
NCP1230A	Flyback	110 – 220Vac	14.4V/0.3A	4S LiFePO ₄