



2.7V-60V Input, 250mA Linear Battery Charger Features Multi-Chemistry Operation

MILPITAS, CA – October 13, 2014 – Linear Technology Corporation introduces the [LTC4079](#), a 60V, constant-current/constant-voltage 250mA multi-chemistry battery charger. The device's low quiescent current linear topology offers a simple inductorless design and accepts a wide 2.7V to 60V input voltage range. A resistor-programmable 1.2V to 60V battery charge voltage range with tight $\pm 0.5\%$ charge voltage accuracy and onboard charge termination makes the LTC4079 suitable for many battery chemistries, including Li-Ion, nickel and lead acid. The charge current is adjustable from 10mA to 250mA with an external resistor, and unlike competing chargers, the device maintains high accuracy at low charge currents. Typical applications include embedded automotive and industrial systems, backup battery charging, energy harvesting and thin film battery products.

The LTC4079's input voltage regulation function can regulate the IN pin to a constant voltage or to a constant differential voltage above the battery, when charging from a current-limited power source such as a weak battery or solar panel. These features can be used to prevent the input voltage from collapsing below the undervoltage lockout (UVLO) voltage, or to maintain the input source voltage at its peak power transfer point. The charge current is reduced as the input voltage falls below the programmed threshold. This regulation mechanism allows the charge current to be selected based on the battery requirement and the maximum available power from the charging input source, while letting the LTC4079 take care of situations when the input source cannot provide the full programmed charge current.

The LTC4079's thermal regulation feature ensures maximum charge current up to the specified limit without the risk of overheating. Charging can be terminated via C/10 or an onboard adjustable timer. Other features include NTC thermistor temperature-qualified charging, bad battery detection, automatic recharge with sampled feedback in standby for negligible battery drain and an open-drain CHRG pin status output.

The LTC4079 is housed in a low profile (0.75mm) 10-pin 3mm x 3mm DFN package with backside metal pad for excellent thermal performance. The device is guaranteed for operation from -40°C to 125°C , in both E-and I-grades. 1,000-piece pricing starts at \$2.35 each for the E-grade. For more information, visit www.linear.com/product/LTC4079

Photo Caption: 60V, 250mA Linear Battery Charger


Summary of Features: LTC4079

- Wide Input Voltage Range: 2.7V to 60V
- Adjustable Multi-Chemistry Battery Voltage: 1.2V to 60V
- Adjustable Charge Current: 10mA to 250mA
- Low Quiescent Current while Charging: $I_{IN} = 4\mu\text{A}$
- Low Battery Drain in Shutdown & Charged: $I_{BAT} < 0.01\mu\text{A}$
- Auto Recharge
- Input Voltage & Differential Voltage Regulation for High Impedance Inputs
- Thermal Regulation Maximizes Output Current without Overheating
- Constant Voltage Feedback with $\pm 0.5\%$ Accuracy
- NTC Thermistor Input for Temperature Qualified Charging
- Adjustable Safety Timer
- Charging Status Indication
- Thermally Enhanced 10-Lead 3mm x 3mm DFN Package

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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