



Sub 1 μ A I_Q Battery Charger Also Provides Pack Protection

MILPITAS, CA – October 21, 2010 – Linear Technology Corporation introduces the [LTC4071](#), an easy-to-use, tiny shunt battery system for Li-Ion/Polymer batteries that integrates a charger and battery pack protection in one IC. The LTC4071, with its 550nA operating current, charges and protects batteries from previously unusable very low current, intermittent or continuous charging sources. The LTC4071 can charge at currents up to 50mA. A near zero current (<0.1nA) low battery latching disconnect function protects even low capacity batteries from deep discharge and potentially irreparable damage. Housed in a low profile (0.75mm) 8-lead 2mm x 3mm DFN package, the LTC4071 provides the only complete and ultra-compact battery charger and protection solution operating with low level power sources. The device's feature set is well suited for high impedance, lower power charging source applications, such as energy scavenging/harvesting, resistive isolation or solar-powered systems. It can charge Li-Ion/Polymer, coin cell and thin film batteries.

With pin-selectable settings of 4.0V, 4.1V, or 4.2V, the LTC4071's 1% accurate battery float voltage allows the user to optimize the balance between battery capacity and lifetime. An independent high battery supervisory status output indicates a near-fully charged battery. The internal thermal battery conditioner reduces the float voltage to protect Li-Ion/Polymer cells at elevated battery temperatures. Multiple-cell battery stacks can be charged and balanced by configuring several LTC4071 ICs in series.


In addition to its compact 2mm x 3mm 8-lead DFN package, the LTC4071 is offered in an 8-lead MSOP package. The devices are rated for operation from -40°C to 125°C. 1,000 piece quantity pricing is \$2.20 and \$2.30 for the E grade in the DFN & MSOP packages respectively, and \$2.53 and \$2.65 for the I grade in DFN & MSOP respectively. For more information, visit www.linear.com/4071.

Photo Caption: Shunt Battery Charger System with Low Battery Disconnect**Summary of Features: LTC4071**

- Charger Plus Pack Protection in One IC
- Low Operating Current: 550nA
- Near-Zero Current (<0.1nA) Low Battery Disconnect Function Protects Batteries from Over-Discharge
- Pin Selectable Low Battery Disconnect Level: 2.7V or 3.2V
- 1% Float Voltage Accuracy Over Full Temperature & Shunt Current Range
- 50mA Maximum Internal Shunt Current
- Pin-Selectable Float Voltage Options: 4.0V, 4.1V, 4.2V
- Ultralow Power NTC Float Voltage Conditioning for Li-Ion/Polymer Protection
- Suitable for Intermittent, Continuous & Very Low Power Charging Sources
- High Battery Status Output
- Thermally Enhanced, Low Profile 8-Lead DFN (2mm x 3mm x 0.75mm) & MSOP Packages

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, uModule[®] products, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems.

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