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## **USB Power Manager & Li-Ion/Polymer Charger with 13V Overvoltage Protection**

MILPITAS, CA – May 21, 2007 – Linear Technology Corporation introduces the LTC4067, a monolithic linear power manager, ideal diode controller and standalone battery charger for portable devices and battery backup systems. The device can receive power from a USB source, wall adapter or a battery. It features PowerPath™ control that provides power to the peripheral device and also charges a single-cell Li-Ion/Polymer battery from the USB bus or a wall adapter power supply. Internal overvoltage control circuitry is onboard and provides 13V protection on the input when used in conjunction with an external P-Channel MOSFET. The LTC4067 automatically reduces battery charge current as the system load current increases, ensuring that the programmed input current is not exceeded. To maintain full battery charge when the bus is connected, the IC directs power to the load rather than extracting power from the battery. Once the power source is removed, current flows from the battery to the load through an internal 200mOhm low loss ideal diode, minimizing voltage drop and power dissipation.

The LTC4067 can charge the battery at a high 1.5A rate for fast charging when powered from a wall adapter, or can be limited to 20% or 100% of the full-scale resistor-programmed value via external pin selection, to comply with USB input current limit specifications. The battery float voltage is preset at 4.2V with guaranteed 0.8% accuracy over the full industrial temperature range. Additional charger functions include thermal regulation, automatic recharge, NTC thermistor input, trickle charge and bad battery cell detection.

The LTC4067 is housed in a tiny, low profile (0.75mm) 12-pin 4mm x 3mm DFN package. It is guaranteed for operation from -40°C to 85°C. 1,000-piece pricing starts at \$1.70 each.

## **Photo Caption: Linear USB Power Manager with OVP**

### **Summary of Features: LTC4067**

#### **Battery Charger/PowerPath Manager:**


- 13V Overvoltage Protection Controller
- Full Featured Battery Charger with 4.2V Float Voltage
- Up to 1.5A Programmable Charge Current
- Thermal Regulation Maximizes Charge Current Without Risk of Overheating
- Internal 2-Hour Termination Timer from Onset of Voltage Mode Charging
- Automatic Load Switchover to Battery Power with Internal Ideal Diode & Drive Output for Optional External MOSFET
- NTC Thermistor Input
- Bad Battery Time-Out Detection

#### **Programmable Input Current Limit:**

- Single Resistor at CLPROG Pin to Set & Monitor Input Current
- Low-Profile (0.75mm) 4mm X 3mm 12-Lead DFN Package

### **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, 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. For more information, visit [www.linear.com](http://www.linear.com)

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#### **Press Contacts:**

John Hamburger, Director Marketing Communications

[jhamburger@linear.com](mailto:jhamburger@linear.com)

Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager

[ddickinson@linear.com](mailto:ddickinson@linear.com)

Tel: 408-432-1900 ext 2233