

LTC News for Immediate Release

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No R_{SENSE} Electronic Circuit Breaker Reduces Power Loss

MILPITAS, CA – April 26, 2005 – Linear Technology Corporation introduces the LTC4213, an electronic circuit breaker that senses load currents with the $R_{\text{DS(ON)}}$ of an external MOSFET, eliminating the need for a sense resistor. This new method not only reduces voltage and power loss in the switch path, but also lowers the cost and simplifies design. This is especially beneficial to low voltage systems since the sense resistor voltage drop constitutes a significant portion of the supply voltage. For ultra low voltage applications, the LTC4213 operates over a bias supply range of 2.3V to 6V and monitors voltages from ground up to 6V.

The electronic circuit breaker offers three pin-selectable V_{DS} thresholds of 25mV, 50mV and 100mV. The select pin can be stepped dynamically, allowing a higher circuit breaker threshold at startup and a lower threshold after the supply current has settled. The circuit breaker also provides dual level and dual response time functions for overcurrent protection by integrating a slow and a fast comparator. This further enhances the circuit breaker performance by differentiating between slight overcurrent faults or catastrophic short circuit conditions.

The precise performance of the LTC4213 makes it ideal for systems requiring continual protection of low voltage supplies. Offered in 12-lead DFN package and specified over the commercial and industrial temperature ranges, pricing for the LTC4213 starts at \$1.50 each in 1,000 piece quantities.

(more...)

Summary of Features: LTC4213

- No Sense Resistor Required
- Controls Load Voltages from 0V to 6V
- Fast 1 μ s Response Circuit Breaker
- 3 Selectable Circuit Breaker Thresholds
- Dual Level Overcurrent Protection
- High Side Drive for External N-channel FET
- Undervoltage Lockout
- READY Pin Signals when Circuit Breaker is Armed
- Small Plastic (3mm x 2 mm) DFN Package

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. 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.

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READER SERVICE: Call toll-free 1-800-4-LINEAR (for literature only), or go to the company's web site: **<http://www.linear.com>**

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