

***LTC News for Immediate Release***

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**Fast DC/DC Controller with Margining, Tracking and PLL Capability**

MILPITAS, CA – January 13, 2005 – Linear Technology Corporation introduces the LTC3770, a synchronous step-down DC/DC controller with fast transient response, high output accuracy, integrated tracking and sequencing functions, and output margining capability. The LTC3770's constant on-time, valley current mode architecture, combined with a very low minimum on-time (50nsec typ), allows the control loop to respond instantly to load steps. The LTC3770 uses current mode control and can operate without a sense resistor by sensing the voltage drop across the synchronous power MOSFET. For systems where control of the maximum output current is important, a conventional sense resistor can be used in the source of the lower MOSFET. For either case the current limit is user-programmable, allowing optimum system efficiency and excellent control over the maximum output current.

The LTC3770 is capable of operating at very low duty cycles; outputs as low as 0.6V can be supplied from input voltages as high as 32V. The operating frequency is selected by a single external resistor. For applications that require constant-frequency operation, a phase lock loop allows the LTC3770 to be synchronized to an external clock.

The LTC3770 output voltage accuracy is specified at  $\pm 0.5\%$  at room temp and  $\pm 0.67\%$  from 0°C to 85°C. Tracking and sequencing functions allow the user to optimize the startup of multiple power supplies, and margining capability provides the user with the ability to stress the load circuitry with overvoltage and undervoltage conditions during production testing. An open-drain PGOOD output provides fault condition feedback.

The LTC3770 is offered in two packages of 5mm x 5mm QFN and 28-lead SSOP. It is rated for operation from -40°C to 85°C. 1,000-piece price starts at \$3.55.

(more...)

**Summary of Features: LTC3770**

- Wide Input Range from 4V to 32V
- $\pm 0.67\%$  0.6V Reference Voltage Accuracy
- Output Voltage Tracking Capability
- Programmable Margining
- Use of Sense Resistor is Optional
- True Current Mode Control
- Phase Lock Loop Frequency Synchronization

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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