

LTC News for Immediate Release

For more information, tel. 408-432-1900
Doug Dickinson, Media Relations Mgr., ext. 2233
John Hamburger, Dir., Mktg Comm., ext. 2419
www.linear.com

**Single-Chip PolyPhase DC/DC Controller for
New SUN UltraSPARC[®] and SPARC[®] Processors**

MILPITAS, CA – December 5, 2005 – Linear Technology Corporation introduces the LTC3819, a PolyPhase[®] synchronous step-down controller with integrated MOSFET drivers and an on-board 5-bit digital interface designed to power Sun Microsystems' new generation of processors. The LTC3819 offers a 45A single-chip solution, integrating four MOSFET drivers with substantial gate drive capability. PolyPhase operation minimizes the requirement for input and output capacitors. The LTC3819 has two power sections that accurately balance the output power between the power components. This precision current sharing reduces thermal stress, increasing the reliability of MOSFETs, inductors and capacitors. Furthermore, it facilitates thermal management, eliminating hot spots and the need for heat sinks. A design using the LTC3819 is compact, cost-effective and highly efficient, ensuring higher system reliability than competing solutions. The IC is housed in a 36-lead SSOP package.

The LTC3819's 5-bit VID code corresponds to the core voltage range of Sun's new processors. Core voltage range is from 1.025V to 1.4125V in 12.5 mV steps and core current can range from 15A to 40A. The LTC3819 can deliver this power at up to 90% efficiency from an input voltage source ranging from 4.5V to 36V. The IC's accurate current sensing typically provides less than 2% I_{OUT} error between the two channels. The LTC3819 includes protection functions such as current foldback, short-circuit shutdown and an overvoltage soft latch.

The LTC3819 is guaranteed for operation from -40°C to 85°C temperature range. Pricing for the 1,000-piece quantity starts at \$4.35 each.

Linear Technology also offers the LTC1706-63, a 5-bit VID programmer IC that adjusts the output of any 0.6V referenced regulator to meet the 1.025V to 1.4125V range

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required by the new Sun processors. The LTC1706-63 is housed in a 10-pin MSOP and is priced at \$1.95 each for 1,000-piece quantities.

Summary of Features: LTC3819

- PolyPhase Operation Reduces Input & Output Capacitance Requirement
- Precision Load Sharing Eases Thermal Design & Increases System Reliability
- 5-Bit Sun CPU VID Code: 1.025V to 1.4125V Output Voltage Range in 12.5mV steps
- $\pm 1\%$ Output Voltage Accuracy
- True Remote Sensing

About Linear Technology Corporation

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 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

Contact:

Doug Dickinson, Media Relations Manager

Linear Technology Corporation


1630 McCarthy Boulevard

Milpitas, CA 95035-7417

ddickinson@linear.com

408-432-1900

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