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36V_{IN}, 200mA DC/DC uModule Regulator Is as Simple as a Linear Regulator But with 98% Less Heat Dissipation and 90% Smaller Design

MILPITAS, CA – October 29, 2007 – Linear Technology Corporation introduces the LTM8020, the first in a new family of DC/DC uModule™ regulator systems that operate from higher voltage input supplies of up to 36V (40V_{max}). The LTM8020 is a 200mA complete DC/DC solution that includes a DC/DC controller IC, power switches, inductor, compensation circuitry and input and output bypass capacitors. This solution is extremely compact at only 6.25mm x 6.25mm and low profile at 2.3mm in height. Compared to a linear regulator circuit, the LTM8020's more efficient switch-mode topology provides cooler operation, dissipating 98% less heat and occupying 90% less volume (area x height) with its compact package and no-heatsink requirement (comparison conditions: 36V_{IN}, 1.5V_{OUT}, 200mA, T_A=25°C). Target applications are systems with 24V and 28V input supply rails such as medical, industrial, avionics and after-market automotive.

The LTM8020 is a complete 200mA, current mode, switching DC/DC point-of-load regulator system in a 6.25mm x 6.25mm x 2.3mm LGA (Land Grid Array) surface-mount package. The package can be mounted on the back side of a circuit board, allowing more room for digital ICs on the top side. Input voltage range is from 4V to 36V and output can be adjusted with only one resistor from 1.25V to 5V. Encapsulated packaging protects the circuit components against mechanical, chemical and ambient factors, thus improving the reliability of the design. The LTM8020 is rated for operation from -40°C to 85°C and is ROHS compliant. Its gold-plated pads allow both Pb- and Pb-free solder to be used during board assembly. 1,000-piece pricing starts at (PRICING TO COME) each.


Photo Caption: 98% Less Heat, 190% Smaller than Linear Regulator

Summary of Features: LTM8020

- Complete Switchmode DC/DC Regulator in a Surface-Mount Package
- Wide Input Voltage Range: 4V to 36V
- Wide Output Voltage Range: 1.25V to 5V
- Current Mode Operation for Fast Short-Circuit Protection
- 6.25mm x 6.25mm x 2.3mm LGA 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

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