



60V Input, 50 μ A Dual Synchronous Step-Down DC/DC Controller Features -55°C to 150°C Operating Junction Temperature Range

MILPITAS, CA – February 16, 2011 – Linear Technology Corporation announces the H- and MP-grade versions of the [LTC3890/-1](#). This high voltage dual output synchronous step-down DC/DC controller draws only 50 μ A when one output is active and 60 μ A when both outputs are enabled. The 4V to 60V input supply range is designed to protect against high voltage transients, continue operation during automotive cold crank and cover a broad range of input sources and battery chemistries. Each output can be set from 0.8V to 24V at output currents up to 20 amps with efficiencies as high as 95%, making the LTC3890/-1 well suited for 12V or 24V automotive, heavy equipment, industrial control, robotics and telecom applications. These H- and MP-grade versions are guaranteed over operating junction temperatures from -40°C to 150°C and -55°C to 150°C, respectively.

The LTC3890/-1 has powerful on-chip 1.1 Ω MOSFET gate drivers. The device operates with a selectable fixed frequency between 50kHz and 900kHz, and can be synchronized to an external clock from 75kHz to 850kHz with its phased-locked loop (PLL). The user can select from continuous operation, pulse skipping and low ripple Burst Mode[®] operation during light loads. The LTC3890/-1's 2-phase operation reduces input filtering and capacitance requirements. Its current mode architecture provides easy loop compensation, fast transient response and excellent line regulation. Output current sensing is accomplished by measuring the voltage drop across the output inductor (DCR) for the highest efficiency or by using an optional sense resistor.

This device is available in two versions. The LTC3890 is the fully featured part in a 32-lead 5mm x 5mm QFN package with functions including a clock out, clock phase modulation, two separate power good outputs and adjustable current limit. The LTC3890-1 is housed in a 28-pin SSOP package. The 1000-piece price starts at \$5.85 each for the H-grade

devices and \$15.80 each for the MP-grade parts. For more information, visit

www.linear.com/3890


Photo Caption: -55°C to 150°C Operating Temperature High Voltage Dual DC/DC Controller

Summary of Features: LTC3890/-1

- Wide Input Voltage Range: 4V to 60V
- 50µA Quiescent Current with One Output Active & 60µA with Both Outputs Active
- 14µA Shutdown Current
- Wide Output Voltage Range: 0.8V to 24V
- Synchronous Rectification for up to 95% Efficiency
- DCR or R_{SENSE} Current Sense
- Selectable Low Ripple Burst Mode[®] Operation, Pulse Skipping or Continuous Operation
- Selectable Fixed Operating Frequency from 50kHz to 900kHz
- Synchronizable Operating Frequency from 75kHz to 850kHz with PLL
- Current-Mode Control for Fast Transient Response & Easy Loop Compensation
- Adjustable Soft-Start & Output Voltage Tracking
- ±1% Voltage Reference Accuracy Over -40°C to 125°C
- Output Overvoltage & Overcurrent Foldback Protection

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, and µModule[®] subsystems.

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