I²C Controlled 4-Output Synchronous Step-Down DC/DC Converter Fits 2 x 600mA & 2 x 400mA Independent Converter in 3mm x 3mm QFN

MILPITAS, CA – November 19, 2007 – Linear Technology announces the LTC3562, a quad channel, high efficiency, 2.25 MHz, synchronous buck converter that can deliver dual 600mA and dual 400mA continuous outputs from a 3mm x 3mm QFN package. Using a constant frequency current mode architecture, the LTC3562 operates from an input voltage range of 2.7V to 5.5V, making it ideal for single cell Li-Ion/polymer, or multicell alkaline/NiCad/NiMH applications. The LTC3562 has two channels (600mA and 400mA) that allow the output voltage to be adjusted by programming the feedback voltages between 425mV and 800mV in 25mV increments. The other two channels (600mA and 400mA) feature fixed outputs that can be programmed between 600mV and 3.775V in 25mV steps programming is done an I²C interface. This level of independent output voltage control makes the LTC3562 ideal for managing multiple supply rails. Its 2.25MHz switching frequency enables the utilization of tiny, low cost ceramic capacitors and inductors less than a 1mm in height. This, combined with a 3mm x 3mm QFN package, provides a very compact quad output solution for handheld and other dense board applications.

The LTC3562 delivers up to 96% efficiency and its LDO mode operation minimizes quiescent current to only 100uA in no load conditions while minimizing noise. The LTC3562 can also be programmed to use Burst Mode®, pulse skipping or continuous mode operation in lieu of the LDO mode. The LTC3562 also utilizes low dropout 100% duty cycle operation to allow output voltages up to V_{IN}, further extending battery run-time. Each channel has internal soft-start and independent enable and mode control, enhancing design flexibility. Other features include short-circuit protection and over-temperature protection.

The LTC3562EUD is available from stock in a 20-lead 3mm x 3mm QFN package. Pricing starts at $3.50 each in 1,000-piece quantities.

Photo Caption: Quad Synchronous Buck with I²C

Summary of Features: LTC3562

- Four Independent I²C Controllable Step-Down Regulators (2 × 600mA, 2 × 400mA)
- Two I²C Programmable Feedback Voltage Regulators (R600A, R400A): VFB 425mV to 800mV
- Two I²C Programmable Output Voltage Regulators (R600B, R400B): V_{OUT} 600mV to 3.775V
- Programmable Modes: Pulse Skip, LDO, Burst Mode®, Forced Burst Mode Operation
- Quiescent Current < 100uA (All Regulators Enabled in LDO Mode)
- Fixed 2.25MHz Switching Frequency (Pulse Skip Mode)
- Slew Limiting Reduces Switching Noise
- Power-On Reset Output for Regulator R600A
- Small, Thermally Enhanced, 20-Lead 3mm × 3mm QFN 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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