



Push-Button Controller Monitors DC/DC Switching Regulator's Input & Output Voltages

MILPITAS, CA – July 2, 2007 – Linear Technology Corporation introduces the LTC2953-1, a high-reliability push-button controller that integrates supervisory voltage monitors and timers for tracking a switching regulator's input and output voltages. The LTC2953-1 uses a power-fail input (PFI) comparator and undervoltage lockout (UVLO) comparator to trigger software and hardware control outputs when the input supply drops below two separate threshold voltages. An enable output forces the switching regulator's shutdown pin high when the input voltage drops below the UVLO threshold longer than an adjustable time period. The LTC2953-1 also monitors the regulator's output and triggers a reset signal when the output voltage dips below an adjustable threshold due to excessive loading. In addition to the input and output voltage comparators, this controller also includes a push-button input and software interrupt output. The LTC2953-1 combines these dual input, output and push-button functions in a tiny 3mm x 3mm DFN-12 package and is targeted for power path control, portable supervisors, PDAs and notebook computers.

Drawing only 14uA of supply current, the LTC2953-1 operates over a wide 2.7V to 27V input supply range, serving single- or multi-battery applications as well as industrial supply lines that operate from 24V (+/-10% tolerance). The rugged push-button input is designed to operate in noisy environments and can withstand ESD strikes up to +/-10kV, per the human body model. A UVLO comparator gracefully latches power off, and the reset output remains low until the supply monitor input has been in compliance for 200ms. The internal UVLO, PFI and voltage monitor comparators are accurate to 1.5% over the full temperature range. A single capacitor controls the adjustable power-down timer in order to allow the system time to perform all of the necessary housekeeping procedures before shutting down.

The LTC2953-2 is a pin-compatible push-button controller with an active-low enable output. Both the LTC2953-1 and LTC2953-2 are available in commercial and industrial temperature grades today, with pricing beginning at \$2.30 each, in 1,000-piece quantities.


Photo Caption: Push-Button Controller Includes Supervisor Functionality

Summary of Features: LTC2953-1/LTC2953-2

- Wide Operating Voltage Range: 2.7V to 27V
- Push Button Control of System Power
- Low Supply Current: 14uA
- Power Fail Comparator Generates Warning
- UVLO Comparator Gracefully Latches Power Off
- Adjustable Supply Monitor with 200ms Reset
- Adjustable Power Down Timer
- Active-High EN Output (LTC2953-1) Allows DC/DC Converter Control
- Active-Low EN Output (LTC2953-2)
- Simple Interface Allows Orderly System Power Up & Power Down
- $\pm 1.5\%$ Threshold Tolerances
- $\pm 10\text{kV}$ ESD Human Body Model on Push-Button Pin
- 12-Pin 3mm x 3mm DFN

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

LT, LTC, LTM and  are registered trademarks of Linear Technology Corp.

Press Contacts:

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
Tel: 408-432-1900 ext 2233