



90V Boost DC/DC Converter with APD Current Monitor

MILPITAS, CA – February 8, 2007 – Linear Technology announces the LT3482, a fixed frequency, current mode step-up DC/DC converter with a built-in voltage doubler designed to bias avalanche photodiodes (APDs) in optical receivers. The device can deliver an output of up to 90V from inputs ranging from 2.5V to 16V. The LT3482 features high side APD current monitoring, which offers better than 10% relative accuracy over a -40°C to 85°C temperature range. The integrated power switch, Schottky diodes, and APD current monitor are all on a single die, packaged in a tiny 3mm x 3mm QFN, providing a tiny solution footprint.

The LT3482's internal 48V, 280mA switch uses a voltage doubler to deliver voltages as high as 90V. A constant frequency architecture is used to minimize switching noise and is user selectable at either 625kHz or 1.1MHz. Low output ripple, critical in APD applications, is maintained under 80uV_{PK-PK} without any additional filtering. The integrated high side current monitor produces a current proportional to APD current with better than 10% relative accuracy over four decades of dynamic range in the APD input current range of 250nA to 2.5mA. Additionally, the LT3482 is equipped with both a 1.235V internal reference and an auxiliary reference input (via the CTRL pin), enabling the output voltage to be adjusted while the chip is operating. Other features include soft-start, internal compensation and thermal shutdown.

The LT3482EUD operates from a 0°C to 85°C temperature range whereas the LT3482IUD operates from a -40°C to 85°C temperature range. Both parts are available from

stock. Pricing starts at \$3.45 each for the LT3482EUD and \$4.14 each for the LT3482IUD in 1,000-piece quantities.

Photo Caption: 90V Boost DC/DC Converter with APD Current Monitor

Summary of Features: LT3482

- High Output Voltage: Up to 90V
- Integrated Schottky Diodes
- 48V, 280mA Internal Switch
- High Side APD Current Monitor
- Adjustable Switching Frequency: 650kHz or 1.1MHz
- Wide V_{IN} Range: 2.5V to 16V
- Low Shutdown Current: <1uA
- Soft-Start
- Internal Compensation
- CTRL Pin Allows Output Adjustment with No Polarity Inversion
- 3mm x 3mm 16-Lead 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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