



## **Small Boost DC/DC Converter with Avalanche Photodiode Current Monitor**

MILPITAS, CA – November 26, 2013 – The [LT3905](#) is a fixed frequency, current-mode step-up DC/DC converter designed to bias avalanche photodiodes (APD) in optical receivers. The LT3905 features high side APD current monitoring with over five decades of dynamic range and better than 2% relative accuracy over the 3 $\mu$ A to 3mA range. The maximum APD current is programmed with a single resistor and a fast current limiter with indicator protects the APD during overload conditions. Adjustable output voltage provides dynamic bias control and a programmable loss-of-signal indicator flags low APD current. The power switch, Schottky diode, APD current monitor, current limit and loss-of-signal indicator are integrated into a single IC that is packaged in a 3mm x 3mm QFN. Operating at 1MHz or 2MHz switching frequency, the LT3905 offers a tiny solution footprint for APD biasing applications.

The LT3905's internal 65V, 350mA high efficiency switch offers output voltages as high as 60V while its 2.7V to 12V input voltage range accommodates a wide range of input sources. Its switching frequency is user selectable at 1MHz or 2MHz, enabling the designer to optimize efficiency while minimizing the size of the external components. Constant frequency architecture is used to minimize output noise. Other features include soft-start, internal compensation and programmable  $V_{IN}$  undervoltage lockout.

The LT3905EUD is available in a 3mm x 3mm QFN-16 and is priced starting at \$2.55 each in 1,000-piece quantities. An industrial grade version, the LT3905IUD, is tested and guaranteed to operate from a -40°C to 125°C operating junction temperature and is priced starting at \$2.81 each in 1,000-piece quantities. Both versions are available from stock. For more information, visit [www.linear.com/product/LT3905](http://www.linear.com/product/LT3905)


**Photo Caption:** 60V Boost Converter with APD Current Monitor

### Summary of Features: LT3905

- 65V, 350mA Internal DMOS Switch
- Integrated Schottky Diode
- 2% Accurate APD Current Monitoring over the 3 $\mu$ A to 3mA Range
- Single Resistor Programs Maximum APD Current
- Fast APD Current Limiter with Indicator
- Programmable Loss-of-Signal Indicator
- 2.7V to 16V V<sub>IN</sub> Range
- CTRL Pin Adjusts Output Voltage
- Programmable V<sub>IN</sub> Undervoltage Lockout
- High Efficiency Step-Up Converter
- Selectable 1MHz/2MHz Switching Frequency
- Internally Compensated
- Internal Soft-Start
- Low Shutdown Current: <1 $\mu$ A

### 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 over 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,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

 , LT, LTC, LTM, Linear Technology, the Linear logo and  $\mu$ Module are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

#### Press Contacts:

##### North America / Worldwide

John Hamburger, Director Marketing  
Communications  
[jhamburger@linear.com](mailto:jhamburger@linear.com)  
Tel: 408-432-1900 ext 2419

##### UK & Nordic

Alan Timmins  
[alan@ezwire.com](mailto:alan@ezwire.com)  
Tel: +44-1-252-629937

Doug Dickinson, Media Relations Manager  
[ddickinson@linear.com](mailto:ddickinson@linear.com)

Tel: 408-432-1900 ext 2233