



Ultrafast 7ns Response Time 15GHz RF Detector with Fast Comparator Withstands 125°C Operating Environments

MILPITAS, CA – February 25, 2015 – Linear Technology introduces the [LTC5564H](#), a high temperature grade RF Schottky peak power detector that operates from 600MHz to 15GHz, and has ultrafast detection response time of 7ns from a pulsed RF signal. Moreover, the device has an on-chip fast latchable comparator with a total detection and propagation delay of 9ns.

The LTC5564H's fast response times enable many new RF and microwave applications that other slower devices are not capable of supporting. For example, the device can detect desired signals such as a fast radar pulse, accurately regulate RF power amplifier power levels, and support envelope tracking and spectrum analysis. Also, the device can detect undesired signals such as RF PA overdrive, fault conditions and radio signals used to activate jammers. The device's high temperature capability extends its usability and survivability in applications required for operation in harsh environments such as in high power PA amplifiers that typically run inefficiently and hot in cellular towers, automobile engines, aircraft and wireless infrastructure equipment exposed to extreme temperatures.

The LTC5564H accurately measures RF input signal levels from –24dBm to 16dBm. The device has a programmable gain output amplifier with four gain settings that are digitally controlled with two binary-weighted logic input pins. This ensures improved sensitivity when measuring low level signals. Also, the output amplifier has bandwidth capable of demodulating the envelope of an RF modulated signal up to 75MHz.

The LTC5564H's fast on-chip comparator threshold voltage is user-settable, enabling a flexible trip point to detect specific RF power levels. Its output can be latched by asserting a latch-enable input, permitting fast capture of a short-duration, single-event signal or a fault condition. Best-in-class performance enables unprecedented speed in timing measurements, rapid response to fault detection and RF power measurements in RF/PA and microwave systems in harsh operating environments.

The LTC5564H can be powered from a single 3.3V or 5V supply. Normal operation draws a current of 44mA. The H-grade device is rated for case operating temperature from -40°C to 125°C and is 100% tested over temperature. The LTC5564H, priced starting at \$3.44 each in 1,000-pieces quantities, is available immediately in production quantities. An industrial grade is also available that is rated for operation from -40°C to 105°C . The LTC5564H comes in a small 3mm x 3mm 16-pin QFN package. For more information, visit

www.linear.com/product/LTC5564

Photo Caption: Ultrafast 15GHz RF Power Detector Supports 125°C Operation


Summary of Features: LTC5564H

- | | |
|------------------------------------|--|
| • Operating Frequency Range | 600MHz to 15GHz |
| • Operating Temperature (Case) | -40°C to 125°C |
| • Ultrafast Detector Response Time | 7ns |
| • On-Chip Fast Comparator | 9ns |
| • Dynamic Range | 40dB |
| • RF Input Power Range | -24dBm to 16dBm |
| • Small Package | 3mm x 3mm QFN |

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

 , LT, LTC, LTM, Linear Technology, the Linear logo and μ 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
Tel: 408-432-1900 ext 2419

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

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937