



Temperature-to-Voltage Converter Measures Remote Diodes with 1°C Accuracy

MILPITAS, CA – July 11, 2011 – Linear Technology Corporation introduces the [LTC2997](#), a high accuracy temperature-to-voltage converter with built-in series resistance cancellation for 2.5V to 5.5V systems. Many low voltage systems today rely on temperature to assess overall system health and reliability. Traditional implementations require a series of filters, a precise reference and a current source, resulting in a complex conversion scheme prone to inaccuracies if not carefully designed. The LTC2997 is a simple temperature monitoring solution that measures a remote diode's temperature with $\pm 1^{\circ}\text{C}$ accuracy or local temperature with $\pm 1.5^{\circ}\text{C}$ accuracy, and outputs a voltage proportional to absolute temperature. The LTC2997 provides a precise, space-saving, micropower temperature monitoring solution.

The LTC2997's simplicity, accuracy and micropower consumption caters to a wide variety of applications, including system thermal control, energy harvesting, desktop and notebook computers, network servers and environmental monitoring. Two current sense inputs can be configured to measure either local or remote temperature. A built-in algorithm cancels the errors due to sensor series resistance when measuring a diode or transistor voltages. A 1.8V voltage reference output is also available to share with an external ADC or for generating temperature threshold voltages to compare against the V_{PTAT} output.

The LTC2997 is offered in commercial, industrial and automotive versions, supporting operating temperature ranges from 0°C to 70°C , -40°C to 85°C and -40°C to 125°C , respectively. The LTC2997 is available today in a small RoHS compliant, 6-pin, 2mm x 3mm DFN package. Pricing starts at \$1.45 each in 1,000 piece quantities. Please visit www.linear.com/product/LTC2997 for more product selection information.


Photo Caption: High Accuracy Temperature-to-Voltage Converter

Summary of Features: LTC2997

- Converts Remote or Internal Diode Temperature-to-Analog Voltage
- $\pm 1^\circ\text{C}$ Remote Temperature Accuracy
- $\pm 1.5^\circ\text{C}$ Internal Temperature Accuracy
- Built-In Series Resistance Cancellation
- 2.5V to 5.5V Supply Voltage
- 1.8V Reference Voltage Output
- 3.5ms VPTAT Update Time
- 4mV/ $^\circ\text{C}$ Output Gain
- 170 μA Quiescent Current
- 6-Pin 2mm \times 3mm DFN Package

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 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, and $\mu\text{Module}^{\text{®}}$ subsystems.

LT, LTC, LTM, μModule and  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