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## **Rail-to-Rail 80V Power Monitor Measures Current & Voltage with +/-0.75% Accuracy**

MILPITAS, CA – November 7, 2012 – Linear Technology Corporation introduces the [LTC2945](#), a wide range I<sup>2</sup>C system monitor that monitors the current, voltage and power of any 0V to 80V rail. In many cases, prior power monitoring solutions are limited to 3V to 5V supplies and monitor voltages less than 36V, requiring additional circuitry to monitor higher voltages. The LTC2945 has flexible power supply options, deriving power from a 4V to 80V monitored supply, a 2.7V to 80V secondary supply, or from the onboard shunt regulator. These supply options eliminate the need for a separate buck regulator, shunt regulator or inefficient resistive divider while monitoring any 0V to 80V rail. The LTC2945 is a simple, single-IC solution that uses an internal Delta Sigma ADC and multiplier to provide 12-bit current and voltage measurements and 24-bit power readings.

The LTC2945's wide operating range is ideal for many applications, especially for 48V telecom equipment, advanced mezzanine cards (AMC) and blade servers. The onboard shunt regulator provides support for supplies greater than 80V and negative supply monitoring. The LTC2945 measures current and voltage either continuously or on-demand, calculates power and stores all of this information along with minimum and maximum values in I<sup>2</sup>C accessible registers. Measurements are made with only  $\pm 0.75\%$  of total unadjusted error (TUE) over the entire temperature range. If any parameter exceeds the user-programmable limits, the LTC2945 flags an alert register and pin per the SMBus alert response protocol. The 400kHz I<sup>2</sup>C interface features nine device addresses, a stuck bus reset timer and a split SDA pin that simplifies I<sup>2</sup>C opto-isolation. The LTC2945-1 version offers an inverted data output I<sup>2</sup>C pin for use with inverting opto-isolator configurations.

The LTC2945 and LTC2945-1 are offered in commercial and industrial versions, supporting operating temperature ranges from 0°C to 70°C and -40°C to 85°C, respectively. Both versions are available today in RoHS compliant, 12-pin 3mm x 3mm QFN and 12-lead MSOP packages. Pricing starts at \$3.57 each in 1,000 piece quantities. Please visit [www.linear.com/products/power\\_monitors](http://www.linear.com/products/power_monitors) for more product selection and information.

## **Photo Caption:** Wide Range Power Monitor with Onboard ADC, I<sup>2</sup>C & Shunt Regulator

### **Summary of Features: LTC2945**

- Rail-to-Rail Input Range: 0V to 80V
- Wide Input Supply Range: 2.7V to 80V
- Shunt Regulator for Supplies >80V
- I<sup>2</sup>C Interface
- $\Delta\Sigma$  ADC with Less than  $\pm 0.75\%$  TUE
- 12-Bit Resolution for Current & Voltages
- Internal Multiplier Calculates 24-Bit Power Value
- Additional ADC Input Monitors an External Voltage
- Minimum & Maximum Values Stored
- Continuous Scan & Snapshot Modes
- Shutdown Mode with  $I_Q < 80\mu A$
- Split SDA for Opto-Isolation
- Available in 12-pin 3mm x 3mm QFN & 12-Lead MSOP Packages

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

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