The LTC®2945 is a wide range I²C system monitor that monitors the current, voltage and power of any 0V to 80V rail. The LTC2945 has flexible power supply options, deriving power from a 4V to 80V monitored supply, a 2.7V to 80V auxiliary supply, or from the onboard shunt regulator. These supply options eliminate the need for a separate buck regulator or shunt regulator, while monitoring high voltages. The shunt regulator allows monitoring of supplies >80V. The LTC2945 is a simple, single-IC solution that uses an internal ΔΣ ADC and multiplier to provide 12-bit current and voltage measurements and 24-bit power readings.

Features
- Rail-to-Rail Input Range: 0V to 80V
- Wide Input Supply Range: 2.7V to 80V
- Shunt Regulator for Supplies >80V
- ΔΣ ADC with Less Than ±0.75% TUE
- 12-Bit Resolution for Current and Voltages
- Internal Multiplier Calculates 24-Bit Power Value
- Stores Minimum and Maximum Values
- Additional ADC Input Monitors an External Voltage
- Continuous Scan and Snapshot Modes
- Alerts When Limits Are Exceeded
- Shutdown Mode with I,Q < 80µA
- Split SDA for Opto-Isolation
- Available in 12-Lead 3mm x 3mm QFN and 12-Lead MSOP Packages

ADC Total Unadjusted Error (ΔSENSE)
Flexible Power Supply Options

LTC2945 Derives Power from the Supply Being Monitored

LTC2945 Derives Power Through High Side Shunt Regulator

LTC2945 Derives Power from a Wide Range Secondary Supply

LTC2945 Derives Power Through Low Side Shunt Regulator in High Side Current Sense Topology

LTC2945 Derives Power from a Low Voltage Secondary Supply

LTC2945 Derives Power Through Low Side Shunt Regulator in Low Side Current Sense Topology