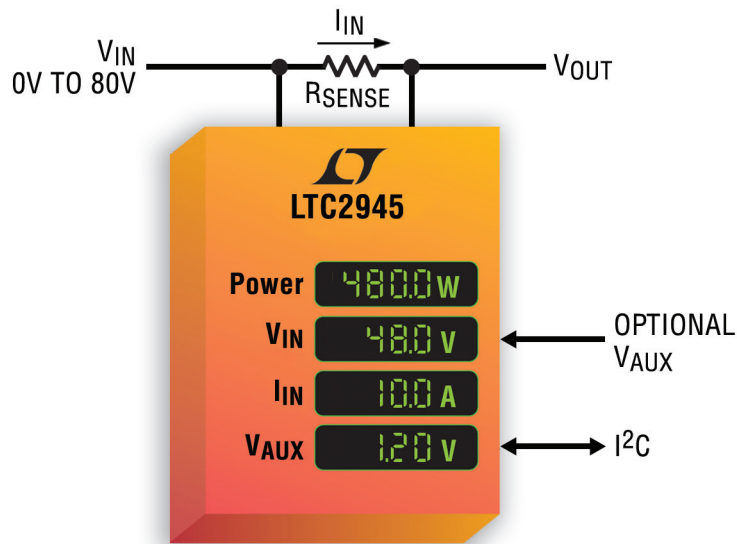


# Wide Range I<sup>2</sup>C Power Monitor



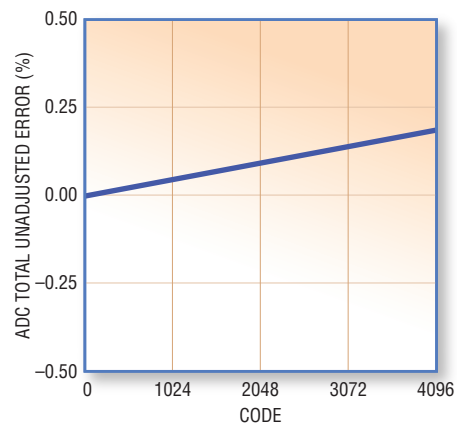
## Rail-to-Rail 80V Power Monitor Measures Current and Voltage with $\pm 0.75\%$ Accuracy

The LTC<sup>®</sup>2945 is a wide range I<sup>2</sup>C 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  $\Delta\Sigma$  ADC and multiplier to provide 12-bit current and voltage measurements and 24-bit power readings.

### Features

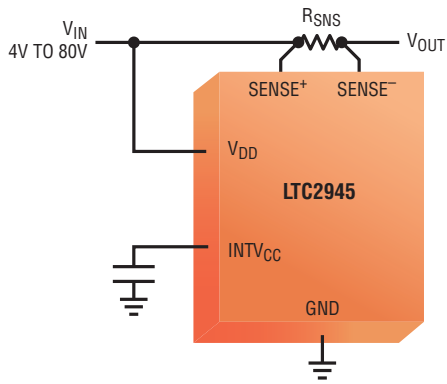
- Rail-to-Rail Input Range: 0V to 80V
- Wide Input Supply Range: 2.7V to 80V
- Shunt Regulator for Supplies >80V
- $\Delta\Sigma$  ADC with Less Than  $\pm 0.75\%$  TUE
- 12-Bit Resolution for Current and Voltages
- Internal Multiplier Calculates 24-Bit Power Value
- Stores Minimum and Maximum Values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

ADC Total Unadjusted Error ( $\Delta SENSE$ )

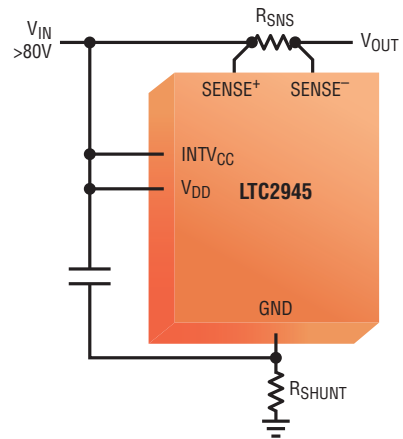


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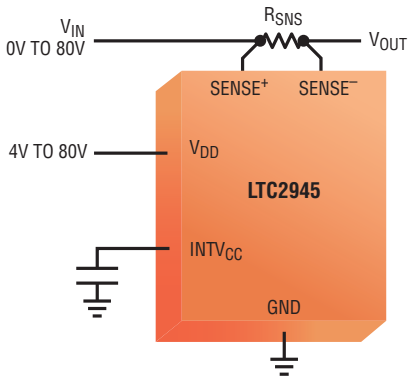
# Flexible Power Supply Options



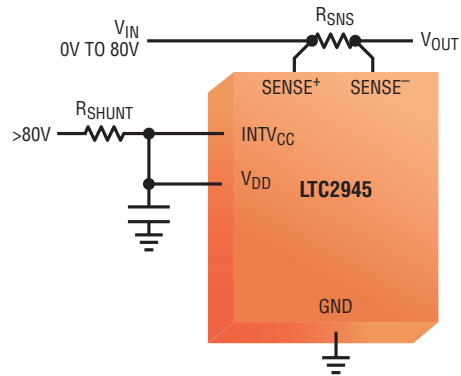
LTC2945 Derives Power from the Supply Being Monitored



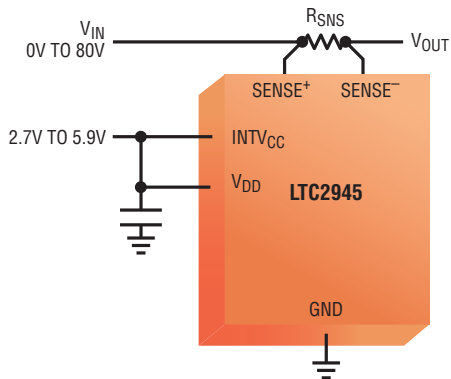
LTC2945 Derives Power Through High Side Shunt Regulator



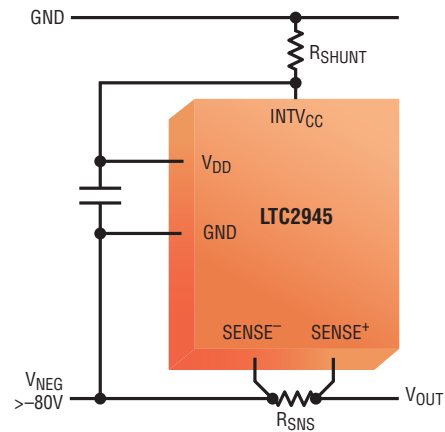
LTC2945 Derives Power from a Wide Range Secondary Supply



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