

LINEAR TECHNOLOGY LTC2983CLX#PBF Temperature Sensor IC, Digital, $\pm 0.1^{\circ}\text{C}$, -265 $^{\circ}\text{C}$, 1800 $^{\circ}\text{C}$, LQFP, 48Pins

Manufacturers	Analog Devices, Inc
Package/Case	48-LQFP
Product Type	Power Monitors
RoHS	Green
Lifecycle	



Images are for reference only

Please submit RFQ for LTC2983CLX#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC2983 measures a wide variety of temperature sensors and digitally outputs the result, in $^{\circ}\text{C}$ or $^{\circ}\text{F}$, with 0.1°C accuracy and 0.001°C resolution. The LTC2983 can measure the temperature of virtually all standard (type B, E, J, K, N, S, R, T) or custom thermocouples, automatically compensate for cold junction temperatures and linearize the results. The device can also measure temperature with standard 2-, 3- or 4-wire RTDs, thermistors and diodes. It has 20 reconfigurable analog inputs enabling many sensor connections and configuration options. The LTC2983 includes excitation current sources and fault detection circuitry appropriate for each type of temperature sensor.

The LTC2983 allows direct interfacing to ground referenced sensors without the need for level shifters, negative supply voltages, or external amplifiers. All signals are buffered and simultaneously digitized with three high accuracy, 24-bit $\Delta\Sigma$ ADCs, driven by an internal $10\text{ppm}/^{\circ}\text{C}$ (maximum) reference.

Features

Directly Digitize RTDs, Thermocouples, Thermistors, and Diodes

Single 2.85V to 5.25V Supply

Results Reported in °C or °F

20 Flexible Inputs Allow Interchanging Sensors

Automatic Thermocouple Cold Junction Compensation

Built-In Standard and User-Programmable Coefficients for Thermocouples, RTDs and Thermistors

Configurable 2-, 3- or 4-Wire RTD Configurations

Measures Negative Thermocouple Voltages

Automatic Burn Out, Short-Circuit and Fault Detection

Buffered Inputs Allow External Protection

Simultaneous 50Hz/60Hz Rejection

Includes 10ppm/°C (max) Reference (I-Grade)

Application

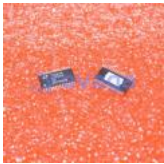
Direct Thermocouple Measurements

Direct RTD Measurements

Direct Thermistor Measurements

Custom Sensor Applications

Related Products



[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LTC4417IUF](#)

Analog Devices, Inc
QFN-24



[LTC1966CMS8#PBF](#)

Analog Devices, Inc
MSOP-8P



[LTM8045EY#PBF](#)

Analog Devices, Inc
BGA40



[LT1038CK](#)

Analog Devices, Inc
TO-3



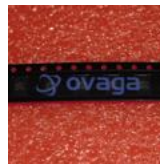
[LTC3440EMS](#)

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[LTC2990IMS#PBF](#)

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