

GX36

Low Voltage Analog Temperature Sensors

1 Features

- Scale factor: 10 mV/°C
- Operation range: -40°C ~ +125°C, up to +150°C
- Temperature accuracy: $\pm 2^{\circ}\text{C}$ (typical)
- Temperature linearity: $\pm 0.5^{\circ}\text{C}$ (typical)
- Supply range: 2.7V ~ 5.5V
- Low quiescent current:
 - Normal operation: less than 40 μA
 - Shutdown mode: less than 0.5 μA
- Stable with large capacitive loads
- Output: analog voltage

2 Applications

- Power system monitors
- Temperature control

3 Description

The GX36 is a low voltage, precision centigrade temperature sensors, which provides an analog voltage output that is linearly proportional to the Celsius (Centigrade) temperature. Every GX36 chip is factory calibrated, so no external calibration is required, and the typical accuracy is $\pm 1^{\circ}\text{C}$ at +25°C and $\pm 2^{\circ}\text{C}$ over the -40°C to +125°C temperature range.

The low output impedance of the GX36 and its linear output and precise calibration simplify interfacing to temperature control circuitry and ADC. The sensing devices can be powered from a single-supply of 2.7 V

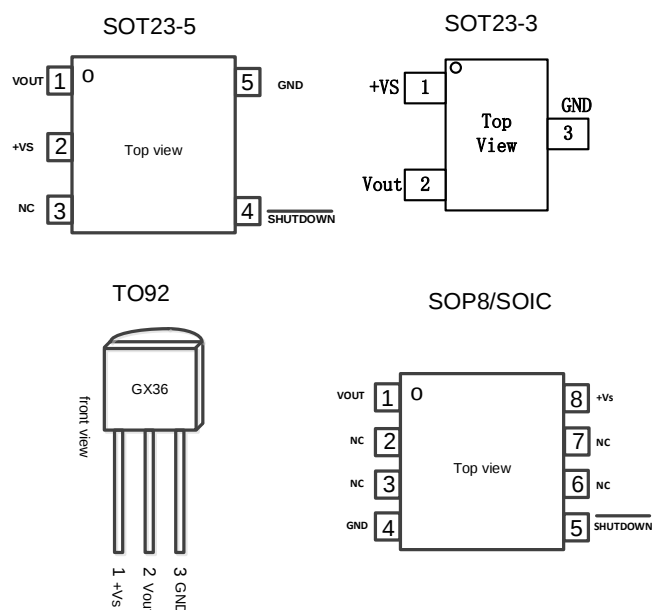
to 5.5 V. The supply current is less than 50 μA , providing very low self-heating effect, less than 0.1°C in still air. In addition, a shutdown function is provided to reduce supply current to less than 0.5 μA .

The GX36 is specified from -40°C to +125°C, provides a 750 mV output at 25°C, and operates up to 125°C from a single 2.7 V supply. The output scale factor of the GX36 is 10 mV/°C.

The GX36 is available in low-cost SOT23-5, SOT23-3, SOP8 and TO92 packages.

Device Package Information

PRODUCT	PACKAGE	AREA (NOM)
GX36G	SOT23-5	1.6mm*2.9mm
GX36S	SOT23-3	1.3mm*2.9mm
GX36Z	SOP8/SOIC	3.9mm*4.9mm
GX36	TO-92	4.6 mm *4.6 mm



9 Ordering Information

Order PN	Chip Model	Packaging Information	Standard Quantity	Note
GX36G-T&R	GX36G	SOT23-5	3000	Tape & Reel
GX36S-T&R	GX36S	SOT23-3	3000	Tape & Reel
GX36Z-T&R	GX36Z	SOP8/SOIC	4000	Tape & Reel
GX36-Bu	GX36	TO92	2000	bulk