

GX30H05

High-Temperature 1-Wire Digital Thermometer

1.Features

- 1-Wire Interface Requires Only One Port Pin for Communication
- Each chip has an independent 64-bit serial number
- Multidrop Capability Simplifies Distributed Temperature-Sensing Applications
- Requires No External Components
- Can be powered by the data line.
the supply voltage range is: 2.5V~5.5V
- Measuring Range: -80°C to +200°C
- $\pm 0.5^{\circ}\text{C}$ Accuracy from -10°C to +85°
- Thermometer Resolution is User Selectable from 9 to 12 Bits
- Converts Temperature to 12-Bit Digital Word in 750ms (Max)
- User-Definable Nonvolatile (NV) Alarm Settings
- Alarm Search Command Identifies and Addresses Devices Whose Temperature is Outside Programmed Limits
- Superb electrostatic protection capability: HBM 8000V, MM 800V
- Available in TO-92, TO92S Packages

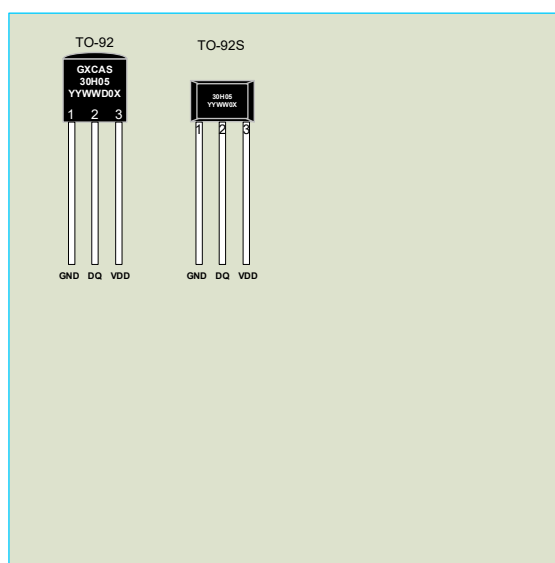
2.Application Scenario

- Temperature Control
- Industrial System
- Consumer Goods
- Grain Temperature Measurement
- Thermometer
- Any Thermal System

3.Description

The GX30H05 digital thermometer provides 9-bit to 12-bit Celsius temperature measurements and has an alarm function with nonvolatile user- programmable upper and lower trigger points. The GX30H05 communicates over a 1-Wire bus that by definition requires only one data line (and ground) for communication with a central microprocessor. It has an operating temperature range of -55° C to +125° C and is accurate to $\pm 0.4^{\circ}\text{C}$ over the range of -10° C to +85° C. In addition, the GX30H05 can derive power directly from the data line (“parasite power”), eliminating the need for an external power supply. Each GX30H05 has a unique 64-bit serial code, which allows multiple GX30H05s to function on the same 1-Wire bus. Thus, it is simple to use one microprocessor to control many GX30H05s distributed over a large area. Applications that can benefit from this feature include HVAC environmental controls, temperature monitoring systems inside buildings, equipment, or machinery, and process monitoring and control systems.

Pin Configurations



17 Ordering Information

Purchase Number	Device	Package	SPQ	Remarks
GX30H05-Bu	GX30H05	TO92 (3)	2000	Bulk
GX30H05S-Bu	GX30H05S	TO92S (3)	2000	Bulk