

High Accuracy Digital Temperature Sensor and Thermal Watchdog with Two-Wire Interface

Features

- SMBus interface
- Programmable Trip Point (Tos) and Hysteresis (THYST)
- Separate open-drain output pin operates as interrupt or comparator at output
- Register readback capability
- Power up defaults permit stand-alone operation as thermostat
- Shutdown mode to minimize power consumption
- Up to 8 G752s can be connected to a single bus

Key Specifications

■ Supply Voltage 3.0V to 5.5V
■ Supply Current operating 280µA (typ) 500µA (max) shutdown 10µA(typ)

■ Temperature Accuracy

-10°C to 80°C ±1°C (max) -55°C to 125°C ±3°C (max)

Applications

- System Thermal Management
- Personal Computers
- **■** Office Electronics
- **■** Electronic Test Equipment

General Description

The G752 is a temperature sensor, Delta-Sigma analog-to-digital converter, and digital over- temperature detector with SMBus interface. The host can query the G752 at any time to read temperature. The open-drain Over temperature Shutdown (O.S.) output becomes active when the temperature exceeds a programmable limit. This pin can operate in either "Comparator" or "Interrupt" mode.

The host can program both the temperature alarm threshold ($T_{\rm OS}$) and the temperature at which the alarm condition goes away ($T_{\rm HYST}$). In addition, the host can read back the contents of the G752's $T_{\rm OS}$ and $T_{\rm HYST}$ registers. The sensor powers up in Comparator mode with default thresholds of 50°C $T_{\rm OS}$ 45°C $T_{\rm HYST}$ for G752-1 and 80°C $T_{\rm OS}$, 75°C $T_{\rm HYST}$ for G752-2.

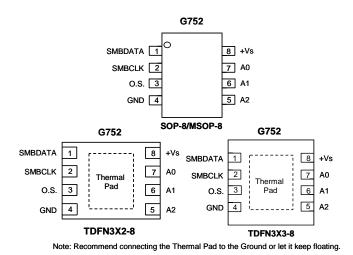
Ordering Information

ORDER NUMBER	MARKING	Tos Thyst	PACKAGE (Green)
G752P11U	G752-1	50°C/45°C	SOP-8
G752P12U	G752-2	80°C/75°C	SOP-8
G752P82U	G752-2	80°C/75°C	MSOP-8
G752KC2G	752-2	80°C/75°C	TDFN3X2-8
G752RD2U	752-2	80°C/75°C	TDFN3X3-8

Note: P1: SOP-8 P8: MSOP-8 RD: TDFN3X3-8

KC:TDFN3X2-8 1 & 2: Bonding Code U & G: Tape & Reel

Pin Configuration



Typical Application

