

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

Features

- SMBus interface
- Programmable Trip Point (T_{OS}) and Hysteresis (T_{HYST})
- 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 280 μ A (typ)**
500 μ A (max)
shutdown 10 μ A(typ)
- Temperature Accuracy
-10 $^{\circ}$ C to 80 $^{\circ}$ C **$\pm 1^{\circ}$ C (max)**
-55 $^{\circ}$ C to 125 $^{\circ}$ C **$\pm 3^{\circ}$ 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_{OS}) and the temperature at which the alarm condition goes away (T_{HYST}). In addition, the host can read back the contents of the G752's T_{OS} and T_{HYST} registers. The sensor powers up in Comparator mode with default thresholds of 50 $^{\circ}$ C T_{OS} 45 $^{\circ}$ C T_{HYST} . for G752-1 and 80 $^{\circ}$ C T_{OS} , 75 $^{\circ}$ C T_{HYST} for G752-2.

Ordering Information

ORDER NUMBER	MARKING	T_{OS} T_{HYST}	PACKAGE (Green)
G752P11U	G752-1	50 $^{\circ}$ C/45 $^{\circ}$ C	SOP-8
G752P12U	G752-2	80 $^{\circ}$ C/75 $^{\circ}$ C	SOP-8
G752P82U	G752-2	80 $^{\circ}$ C/75 $^{\circ}$ C	MSOP-8
G752KC2G	752-2	80 $^{\circ}$ C/75 $^{\circ}$ C	TDFN3X2-8
G752RD2U	752-2	80 $^{\circ}$ C/75 $^{\circ}$ C	TDFN3X3-8

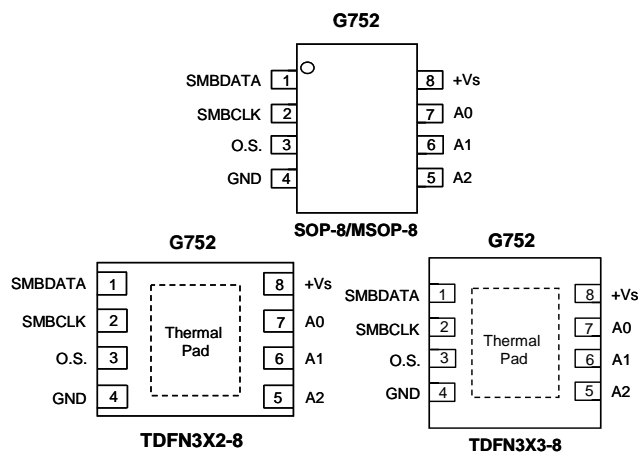
Note: P1: SOP-8 P8: MSOP-8 RD: TDFN3X3-8

KC:TDFN3X2-8

1 & 2: Bonding Code

U & G: Tape & Reel

Pin Configuration



Note: Recommend connecting the Thermal Pad to the Ground or let it keep floating.

Typical Application

