G558/G559

Current-Limit Switches

Features

- **200mΩ On-Resistance**
- **Current Limit : 275mA (G558A/G559A), 175mA (G558B/G559B), 250mA(G558C/G559C), 150mA (G558D/G559D)**
- **2.3V to 5.5V Supply Range**
- **Undervoltage Lockout**
- **85µA Supply Current**
- **30µA Latch-OFF Current**
- **1µA Maximum Shutdown Current**
- **Latch-off Function(G558X) and Auto-Restart Function(G559X)**
- **Active High Enable**
- **Thermal-Shutdown Protection**
- **Reverse-Current Limit Protection**
- **40ms Blanking Time**
- **280ms Auto-Restart Time(G559X)**
- **$\overline{\text{FLAG}}$ Function**
- **Fast Current-Limit Response Time**
- **TSOT-23-5 Package**

Applications

- **PDAs**
- **Cell Phones**
- **GPS Systems**
- **Hand-Held Devices**

General Description

The G558/G559 family of switches feature internal current limiting to prevent host devices from being damaged due to faulty load conditions. These analog switches have a low 0.2Ω on-resistance and operate from a 2.3V to 5.5V input voltage range. They are available with guaranteed 200mA and 100mA current limits, making them ideal for load-switching applications.

When the switch is on and a load is connected to the port, a typical blanking time of 40ms ensures that the transient voltages settle down. If after this blanking time the load current is greater than the current limit, the G558 enter a latch-off state where the switch is turned off and $\overline{\text{FLAG}}$ is issued to the microprocessor. The switch can be turned on again by cycling the power or the ON pin. The ON pin of G558 is active high.

The G559 have an auto-restart feature where the switch turns off after the blanking time and then continuously checks to see if the overload condition is present. The switch remains on after the overload condition disappears.

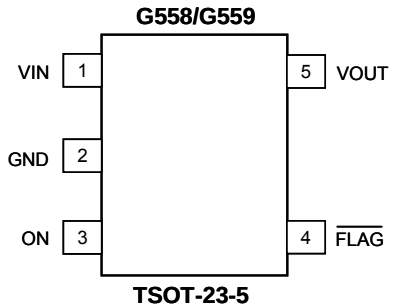
The G558/G559 is available in TSOT-23-5 package.

Ordering Information

ORDER NUMBER	MARKING	FUNCTION OPTIONS	CURRENT LIMIT	TEMP. RANGE	PACKAGE (Green)
G558ATO1U	558Ax	Latch-off	275mA	-40°C~+105°C	TSOT-23-5
G558BTO1U	558Bx	Latch-off	175mA	-40°C~+105°C	TSOT-23-5
G559ATO1U	559Ax	Auto-Restart	275mA	-40°C~+105°C	TSOT-23-5
G559BTO1U	559Bx	Auto-Restart	175mA	-40°C~+105°C	TSOT-23-5
G558CTO1D	558Cx	Latch-off	250mA	-40°C~+105°C	TSOT-23-5
G558DTO1D	558Dx	Latch-off	150mA	-40°C~+105°C	TSOT-23-5
G559CTO1D	559Cx	Auto-Restart	250mA	-40°C~+105°C	TSOT-23-5
G559DTO1D	559Dx	Auto-Restart	150mA	-40°C~+105°C	TSOT-23-5

Note: TO: TSOT-23-5
1: Bonding Code
D: Tape & Reel

Pin Configuration



Typical Application Circuit

