Current-Limit Switches

Features

- 700mΩ On-Resistance
- 2 Versions of Current Limits, 85mA (G551B1/ B2 & G552B1/B2) and 170mA (G551A1/A2 & G552A1/ A2)
- 2V to 5.5V Supply Range
- Undervoltage Lockout
- 85µA Supply Current
- 1µA Maximum Shutdown Current
- Auto-Restart Function (G551A1/B1 & G552A1/B1) or Latch-off Function (G551A2/B2 & G552A2/B2)
- Active High Enable (G551) or Active Low Enable (G552)
- Thermal-Shutdown Protection
- Reverse-Current Limit Protection
- 40ms Blanking Time
- 280ms Auto-Restart Time (G551A1/B1 & G552A1/B1)
- Fault $\overline{\text{FLAG}}$ Function
- Fast Current-Limit Response Time
- SC-70-5(SOT-353) Package

Applications

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

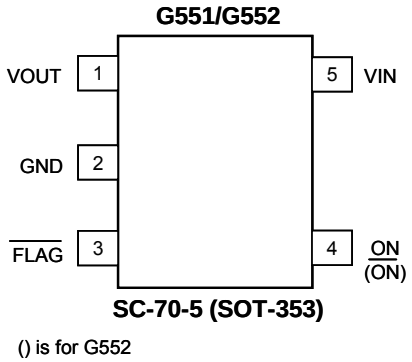
General Description

The G551/G552 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 0.7Ω on-resistance and operate from a 2.0V to 5.5V input voltage range. They are available with guaranteed 50mA 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 G551A2/B2 & G552A2/B2 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 G551A1/B1 & G552A1/B1 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 ON pin of G551 series are active high, while G552 series are active low.

Pin Configuration



() is for G552

Typical Application Circuit

