

Over Voltage and Over Current Protect IC

1 Description

The SY5323 is an overvoltage and overcurrent protection IC with low on-resistance 220 mΩ. The SY5323 can monitor the input voltage value in real time, and when the input voltage exceeds the overvoltage protection threshold, it can quickly turn off the internal MOSFET within 50nS to protect the backend low-voltage system from abnormally high input voltage. The IC supports input anti-reverse protection and the input voltage can support -30V.

The MOSFET will be turn off in 20uS, if the load current exceeds the limit threshold. The SY5323 enters hiccup mode, until the overcurrent condition removed. The over current threshold is set by R_{ILIM} . When detecting that the temperature exceeds the over temperature threshold, the IC will turn off the internal MOSFET.

2 Features

- Input voltage range: 3.0V~30V
- Support input anti-reverse protection
- Low output on resister: $R_{ON}=220m\Omega$ (Typ.)
- Input undervoltage lockout protection: 2.85V
- Overvoltage protection: 6.1V, $\pm 4\%$ accuracy
- Ultra fast OVP response time: 50nS (Typ.)
- Overcurrent protection: 1A, $\pm 10\%$ accuracy
- Over temperature protection
- Soft-start to restrain inrush current
- Available in DFN-2x2-8L package.

3 Applications

Low-power handheld devices
Smart IOT, Smart Band/Watch
TWS, AR/VR Device

4 Typical Application Circuit

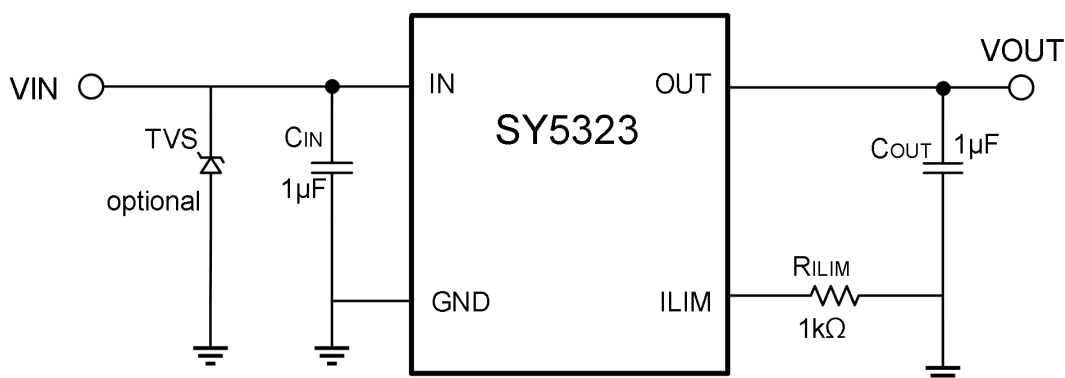


Figure 4- 1. Typical Application Circuit