

Over Voltage and Over Current Protect IC

1 Description

The SY5325 is an over voltage and over current protection IC with low on-resistance $125\text{ m}\Omega$. The SY5325 can monitor the input voltage value in real time, and when the input voltage exceeds the over voltage protection threshold, it can quickly turn off the internal MOSFET within 50 nS to protect the back end low-voltage system from abnormally high input voltage.

The MOSFET will be turn off in $20\mu\text{S}$, if the load current exceeds the limit threshold. The SY5325 enters hiccup mode, until the over current 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: $3.0\text{ V}\sim 30\text{ V}$
- Low output on resister: $R_{ON}=125\text{ m}\Omega$ (Typ.)
- Input under voltage lockout protection: 2.85 V
- Over voltage protection: 6.1 V , $\pm 4\%$ accuracy
- Ultra fast OVP response time: 50 nS (Typ.)
- Over current protection: 1 A , $\pm 10\%$ accuracy
- Over temperature protection
- Soft-start to restrain inrush current
- Available in DFN-1x1-4L package.

3 Applications

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

4 Typical Application Circuit

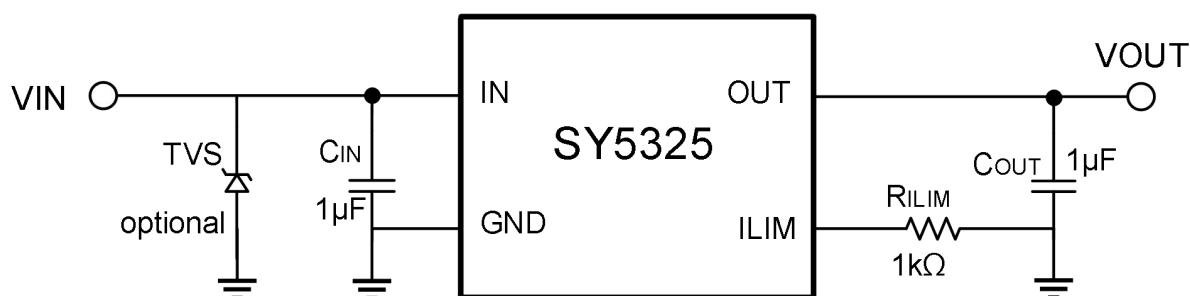


Figure 4- 1. Typical Application Circuit