Over-Voltage Protection IC with ±100V Surge & ESD Protection

Features

- Over-Voltage Protection up to 29V DC
- A Very low R_{DS_ON} 25mΩ (typ.) n-Channel MOSFET
- Surge Protection under IEC 61000-4-5
  . VBUS ±100V
- Adjustable OVP Threshold from 4V to 20V
- Default 6.8V fixed OVP Threshold
- VBUS Input Voltage Range
  . VBUS: 3.7V ~ 28V
- 4.5A Max Continuous Current Capability
- Active-low Switch Status Indicator Output
- Active-low Control for VBUS Path
- OTG Functionality on VBUS Path
- 0.4mm pitch, 12-Bump WLCSP

Applications

- Mobile Handsets and Tablets
- Wearable Devices

Description

The SM5328B Over-Voltage Protection device features a very low R_{DS_ON} resistance, typical 25mΩ, internal nFET for USB VBUS line. The nFET switch ensures safe and right current flow in both charging and host mode such as OTG while protecting the internal system circuits from any over voltage condition at VBUSIN pin. An internal clamp block also protects the device from surges up to ±100V.

The device also features an adjustable over-voltage threshold with a resistor divided network.

When the VBUS voltage exceeds the over-voltage protection threshold, the internal nFET is turned off to prevent any damage for downstream components and enhancing overall system robustness.

The device operates over a -40°C to +85°C ambient temperature range.

The SM5328B is available in a 12-bump, 1.554mm × 1.154mm, WLCSP package.

Device Information

Part	Package	Size
SM5328B	12 WLCSP 0.4 mm pitch	1.554mm × 1.154mm