

PI3USB9281A

USB 2.0 Port Protection with Charger Detection

Description

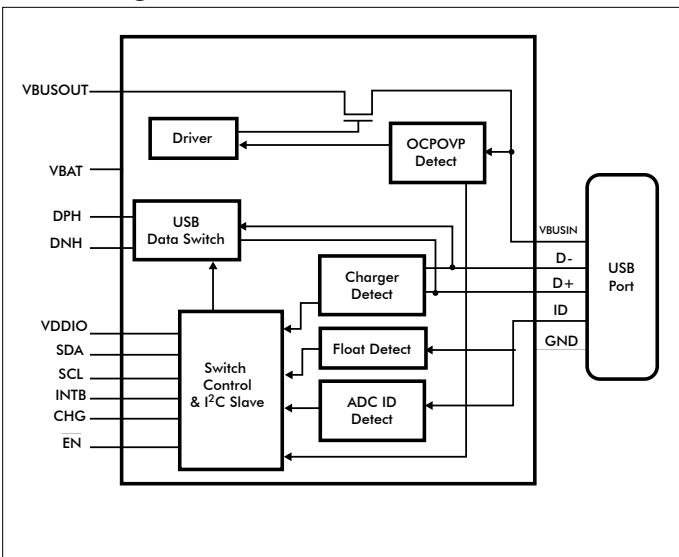
PI3USB9281A provides external detection for any USB-device. The part can detect various chargers available in the market, MHL accessories, OTG accessories, and car-chargers per the CEA936 spec. It also integrates a power switch with over-voltage and over-current protections. The VBUSIN input pin can tolerate voltages up to 28V, which is important for USB3.0-Power Delivery enabled ports. The new USB-3.0-Power Delivery specification supports voltages up to 20V.

The PI3USB9281A can operate over a temperature range of -40 to +85°C. Typical applications involve portable & consumer applications, such as tablet, smart phones, digital cameras, and notebooks with integrated Li-ion batteries that charge via USB connectors.

Applications

- Personal Media Players
- Mobile Phones
- Tablet

Block Diagram



Features

- USB-device charger detector
- Can tolerate USB3.0-PD with VBUS = 20V
- USB Charging-type detection
- Battery Charging 1.2 (BC1.2) – DCP
- Battery Charging 1.2 (BC1.2) – CDP
- Battery Charging 1.2 (BC1.2) – SDP
- Apple 1A, 2A, & 2.4A dedicated chargers
- Samsung-Fast chargers
- YD/T-1951 dedicated chargers
- CEA-936 Carkit#1 and #2 chargers
- Integrated Power FET
- VBUS Tolerance up to 28V
- 1.7A Over-Current Protection (OCP)
- VBUS Over-Voltage Protection (OVP)
- Non-charging Accessory Detection
- USB On-The-Go (OTG) detection
- Mobile HDMI Link (MHL) device detection
- Wide Supply Voltage Range 3V to 5.5V
- I²C Programmability
- Small Package: CSP 1.5x2.0-15L

Application Diagram

