

PI3USB9281A

USB 2.0 Port Protection with Charger Detection

Description

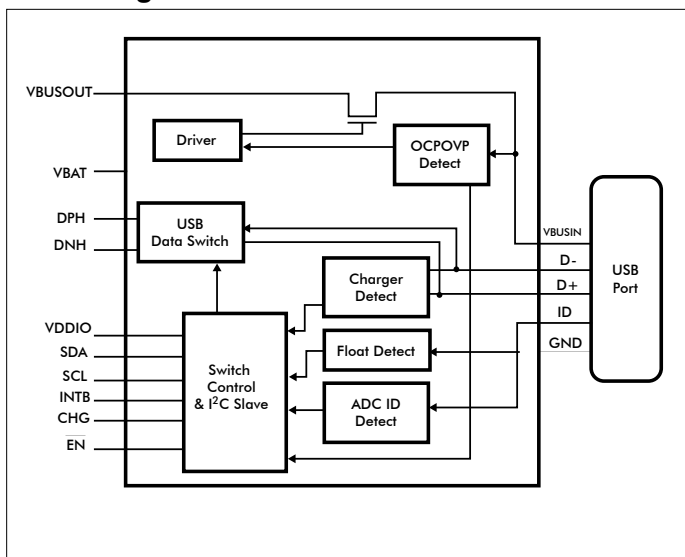
PI3USB9281A provides external detection for any USB-device. The part can detect various chargers available in the market, MHL accessories, OTG accessories, and car-chargers per the CEA936 spec. It also integrates a power switch with over-voltage and over-current protections. The VBUSIN input pin can 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

