

FSA9280A / FSA9288A

USB 2.0 Accessory Detection Switch with 28V FET

Features

- Automatically Detects USB Accessories:
 - Headsets with Microphone and/or Remote
 - Headphones with/without Remote
 - USB Port
 - USB CDP, DCP, or Car Kit Battery Chargers
 - Factory-Mode Cables
 - UART Serial Link
 - TTY Converter
- Automatically Configures Switch Connections with Independent Override Capability
- Low-Power Mode When No Accessory Attached
- Integrated 28V Over-Voltage and 1.5A Over-Current Protection FET on V_{BUS} for Fault Isolation
 - Higher Over-Voltage (8V Typical) Option: FSA9288A
- Negative-Swing-Capable Audio Channel
- Separate Logic/Power Controls for Enhanced Factory-Mode Operation
- 20-Lead Ultrathin Molded Leadless Package (3mm x 4mm x 0.55mm)

Applications

- Mobile Phones & Portable Media Players

Description

The FSA9280A/FSA9288A is a USB 2.0 port accessory detector and switch with integrated 28V over-voltage and 1.5A over-current protected FET. Fully controlled using I²C™, FSA9280A/FSA9288A enables USB ports, stereo and mono audio headphones/headsets with or without a microphone, TTY (teletype) converters, wired remote controller with either one button (send/end) or up to 12 buttons, USB Charging Downstream Port (CDP), Dedicated Charging Port (DCP) and ANSI/CEA-936-A USB Car Kit battery chargers, and UART (Universal Asynchronous Receiver/Transmitter) data cables to use a common connector, micro or mini USB 2.0 port. Factory-mode cables can be detected and switched to use either the UART or USB data path. The FSA9280A/FSA9288A can be programmed for manual switching or automatic switching of data paths based on accessory detected.

The architecture uses a simple standard resistor to ground on the ID pin of the accessory's micro-B or micro-A/B connector to detect the accessories. FSA9280A/FSA9288A has advanced modes for wired remote control sensing for audio accessories and streamlined detection for simple factory testing. These devices are designed to allow audio signals to swing below ground on the USB port data lines.

For additional performance information, please contact analogswitch@fairchildsemi.com.

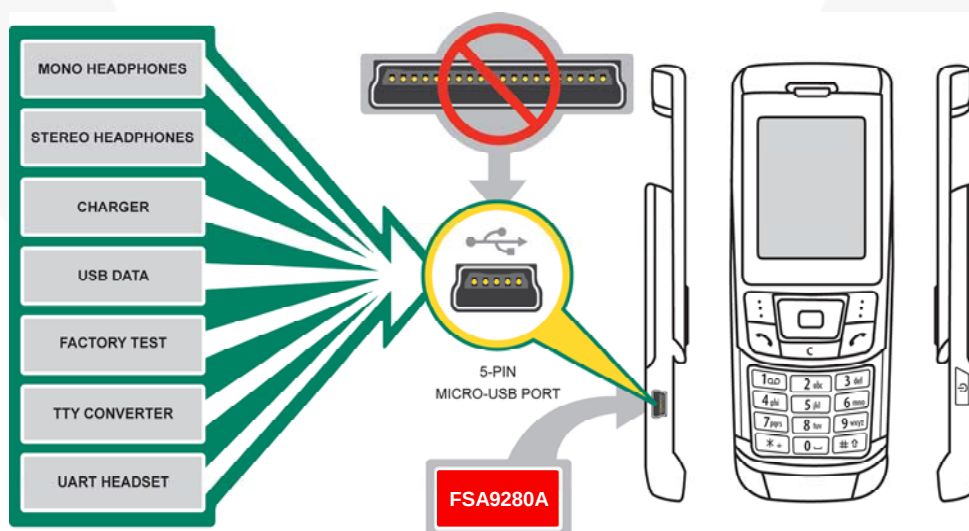


Figure 1. Typical Application

Block Diagram

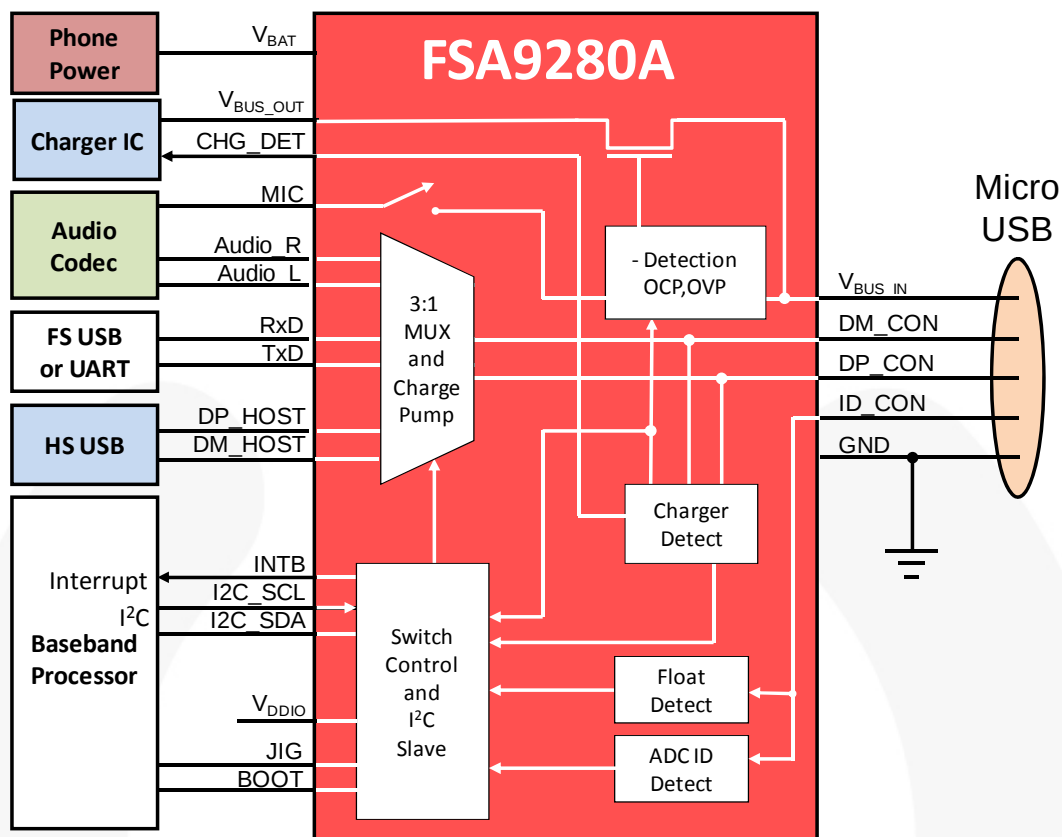


Figure 2. Block Diagram

Pin Configuration

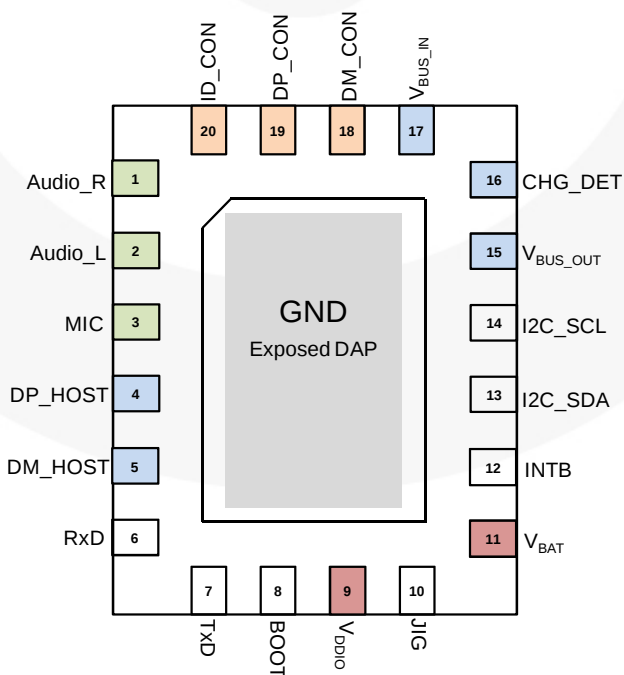


Figure 3. Pin Assignments (Top View)



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