

USB Charging Controller and Power Switch with Load Detection

1. General Description

The FA3210 is a USB charging port controller and power switch with an integrated USB 2.0 high-speed data line (D+/D-) switch. FA3210 provides the electrical signatures on D+/D- to support charging schemes listed under Feature Description. FA tests charging of popular mobile phones, tablets, and media devices with the FA3210 to ensure compatibility with both BC1.2 compliant, and non-BC1.2 compliant devices. In addition to charging popular devices, the FA3210 also supports two distinct power management features, namely, power wake and port power management (PPM) through the /STATUS pin. Power wake allows for power supply control in S4/S5 charging and PPM the ability to manage port power in a multi-port application. Additionally, system wake up (from S3) with a mouse/keyboard (both low speed and full speed) is fully supported in the FA3210. The FA3210 78mΩ power-distribution switch is intended for applications where heavy capacitive loads and short-circuits are likely to be encountered. Two programmable current thresholds provide flexibility for setting current limits and load detect thresholds.

Features

- D+/D- CDP/DCP Modes per USB Battery Charging Specification 1.2
- D+/D- Shorted Mode per Chinese Telecommunication Industry Standard YD/T 1591-2009
- Supports Non-BC1.2 Charging Modes by Automatic Selection:
 - D+/D- Divider Modes 2.0V/2.7V and 2.7V/2.0V
 - D+/D- 1.2V Mode
- Supports Sleep-Mode Charging and Mouse/Keyboard Wakeup
- Load Detection for Power Supply Control in S4/S5 Charging and Port Power Management in All Charge Modes
- Compatible With USB 2.0 and 3.0 Power Switch Requirements
- Integrated 78mΩ (Typical) High-Side MOSFET
- Adjustable Current-Limit up to 3A (Typical)
- Operating Range: 4.5V to 5.5V
- Max Device Current:
 - 2μA When Device Disabled
 - 270μA When Device Enabled
- Available in 16 Pin QFN 3mm × 3mm Package
- 8kV ESD Rating on DM/DP Pins
- UL Listed File No. E501281 and CB certified

Ordering Information

FA3210



Packing Code
Package Type

Package Type
NT: QFN3x3mm²-16L
Packing Code
R: Tape & Reel

Marking Information



YY: Year 2018→18、2019→19

WW: Week 01~53

ZZ: Series Code