FAIRCHILD
SEMICONDUCTOR®

April 2007

FSA221 — USB2.0 High-Speed (480Mbps) and Audio Switches with Negative Signal Capability

Features

- HS-USB: 4Ω Typical On Resistance
- HS-USB: 4.5pF Typical On Capacitance
- Audio: 3Ω Typical On Resistance
- -3db Bandwidth: > 720MHz
- Low Power Consumption
- Power-off Protection on Common D+/R, D-/L Ports
- Automatically Detects V_{bus} for Switch Path Selection

Applications

- Cell Phone, PDA, Digital Camera, and Notebook
- LCD Monitor, TV, and Set-Top Box

Description

The FSA221 is a Double-Pole, Double Throw (DPDT) multiplexer that combines a low-distortion audio and a USB2.0 High-Speed (HS) switch path. This configuration enables audio and USB data to share a common connector port. The architecture is designed to allow audio signals to swing below ground. This means a common USB and headphone jack can be used for personal media players and portable peripheral devices.

Since USB2.0 is an industry standard for shared data-path in portable devices, the FSA221 also incorporates a V_{bus} detection capability. The FSA221 includes a power-off feature to minimize current consumption when V_{bus} is not present. This power-off circuitry is available for the common D+/R, D-/L ports only. Typical applications involve switching in portables and consumer applications, such as cell phones, digital cameras, and notebooks with hubs or controllers.

IMPORTANT NOTE:

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

Ordering Information

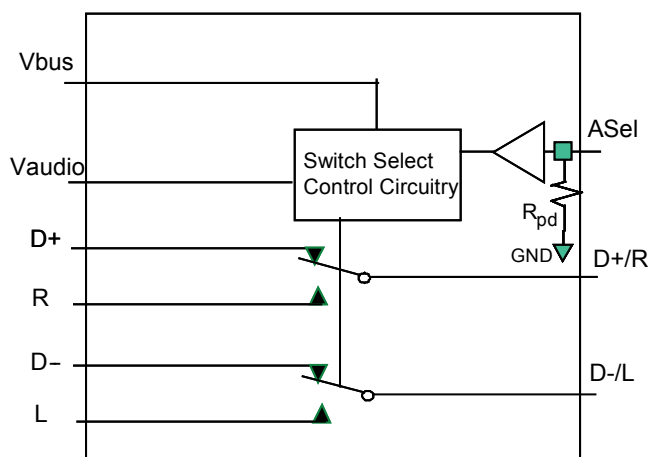| Part Number	Package Number	Top Mark	Pb-Free	Package Description
FSA221L10X	MAC010A	GK	Yes	10-Lead MicroPak, JEDEC MO-255, 1.6 x 2.1mm
FSA221MUX	MUA10A	FSA221	Yes	10-Lead MSOP JEDEC MO-187, 3.0 mm Wide
FSA221UMX	MLP010A	GL	Yes	10-Lead Quad, Ultrathin MLP, 1.4 x 1.8mm

Figure 1.   FSA221 Analog Symbol

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Datasheet Identification	Product Status	Definition
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Preliminary	First Production	This datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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Rev. I26