



FSA203 — Multimedia High-Speed USB, Video, and Negative Swing Audio Switch with Video Amp/Filter

Features

- USB: 3.5Ω Typical On Resistance
- Video/Mic: 3Ω Typical On Resistance
- Audio: 3.5Ω Typical On Resistance
- USB: -3db Bandwidth at 0pF > 745MHz
- Video: -3db Bandwidth > 615MHz
- Video: 1.0db Flatness > 6MHz
- Low-Power Shutdown Mode: 1μA Maximum
- Power-Off Protection on Common D+/R, D-/L, Video/Microphone Ports
- Packaged in Pb-free 20-Lead DQFN and 2.5 x 4.5mm 20-Pin TSSOP

Description

The FSA203 is a multimedia device that includes a Double-Pole, Double Throw (DPDT) USB / audio multiplexer, a video/microphone switch, and a video amplifier / filter path. The DPDT path combines a low-distortion audio and a USB2.0 switch path.

This configuration enables audio and USB data to share a common connector port. The architecture is designed such that audio signals are allowed to swing below ground, enabling the use of a common USB and headphone connector for personal media players and similar portable peripheral devices.

The FSA203 includes a power-off feature to minimize current consumption when V_{av} or 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.

Applications

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

IMPORTANT NOTE:

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

Ordering Information

Part Number	Top Mark	Pb-Free	Packing Description
FSA203BQX	203	Yes	20-Lead Depopulated very thin Quad Flat-pack No leads (DQFN) JEDEC MO-241, 2.5 x 4.5mm
FSA203MTCX	FSA203	Yes	20-Lead Thin Shrink Small Outline Package (TSSOP) JEDEC MO-153, 4.4mm wide

Diagrams

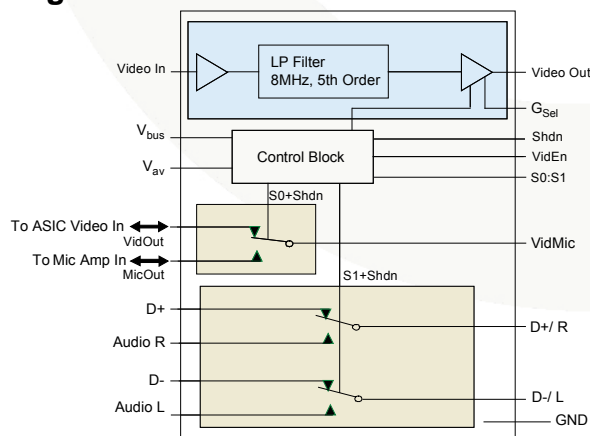


Figure 1. Functional Block Diagram

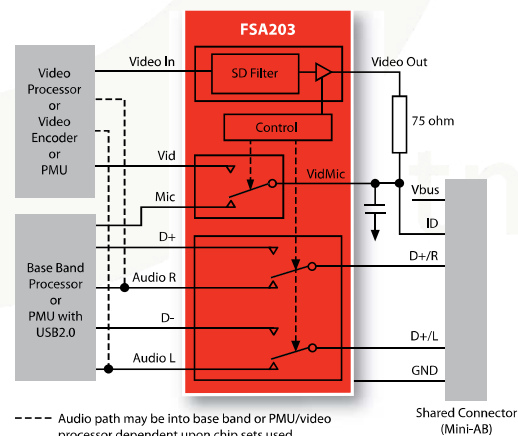



Figure 2. Typical Application Diagram



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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild Semiconductor. The datasheet is printed for reference information only.

Rev. 129

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FSA203

Multimedia High-Speed USB, Video, and Negative Swing Audio Switch with Video Amp/Filter

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General description

The FSA203 is a multimedia device that includes a Double-Pole, Double Throw (DPDT) USB / audio multiplexer, a video/microphone switch, and a video amplifier / filter path. The DPDT path combines a low-distortion audio and a USB2.0 switch path.

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Features

- USB: 3.5Ω Typical On Resistance

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- Video/Mic: 35Ω Typical On Resistance
- Audio: 3.5Ω Typical On Resistance
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- Low-Power Shutdown Mode: 1μA Maximum
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Applications

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

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Product status/pricing/packaging

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
FSA203BQX	Full Production	 Full Production	\$1.14	DQFN	20	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &2 (2-Digit Date Code) &T (Die Trace Code) Line 2: FSA203
FSA203MTCX	Full Production	 Full Production	\$1.14	TSSOP	20	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &2 (2-Digit Date Code) &T (Die Trace Code) Line 2: FSA203

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product FSA203 is available. [Click here for more information](#).

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Application notes

[AN-6044: AN-6044 Pop Suppression Techniques Using Analog Switches](#) (144 K) Jul 27, 2007

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Qualification Support

Click on a product for detailed qualification data

Product
FSA203BQX
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