

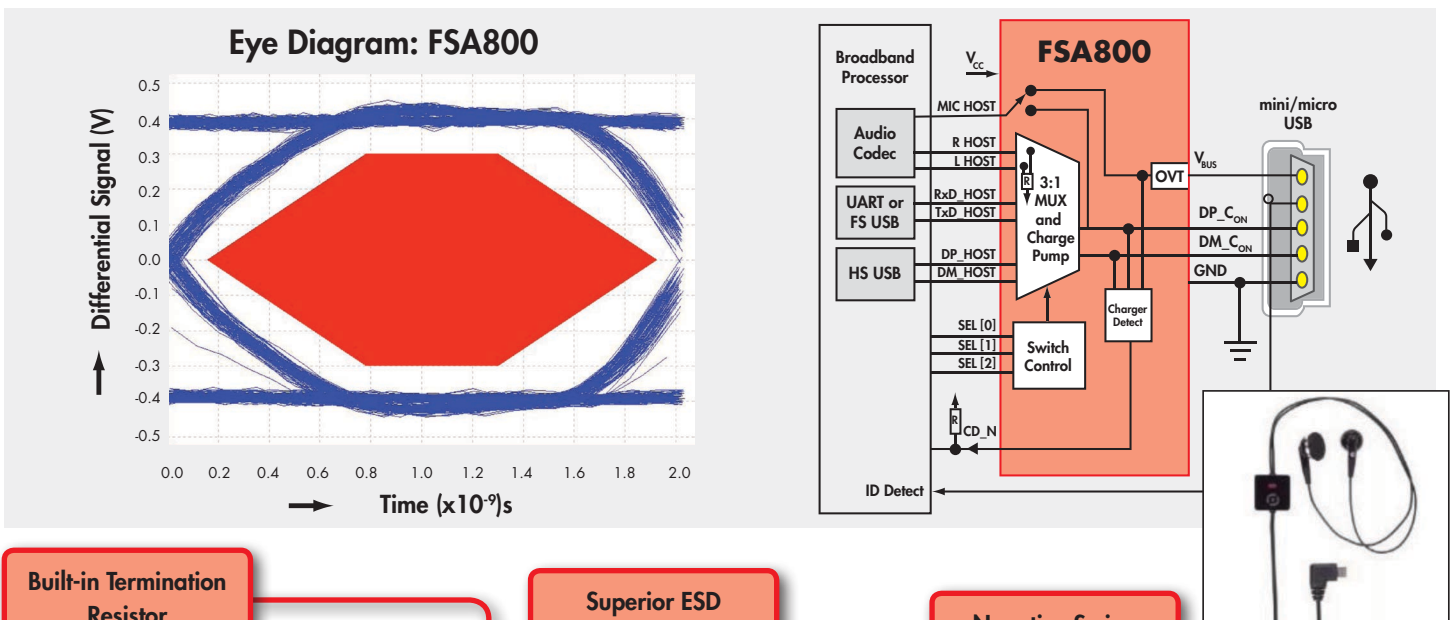
# USB MULTIMEDIA SWITCHES

## USB AND AUDIO SWITCHING FOR MOBILE APPLICATIONS

### Fairchild's Offering

Fairchild's multimedia switches are ideal for sharing a single USB port or connector with audio, data and video applications. They can also be used for isolation and multiplexing of USB and audio signals.

The switches are designed to be compliant with USB2.0 full-speed (FS) and high-speed (HS) standards with bandwidths in excess of 720Mhz.



#### Built-in Termination Resistor

The built-in termination resistors allow for switching between multiple outputs by terminating unselected ports to ground. This method effectively removes any charge present from parasitic sources before switching to the selected output and thus prevents audio "pop."

#### Power-Off Protection

Fairchild's power-off protection ensures power down off-isolation. This feature is advantageous when signals have a voltage present before the switch is powered up, or after the switch is powered down. This feature prevents unwanted current leakage during power down and guarantees off-isolation.

#### Low I<sub>CC1</sub> For Low Power Consumption

#### Superior ESD Protection

### Fairchild's USB Multimedia Switches

#### Over-Voltage Tolerance (OVT)

Over-voltage tolerance protection is needed to allow the switch to fully meet USB2.0 V<sub>BUS</sub> short requirements without adding external components.

#### Negative Swing Audio

When used with negative swing capable amplifiers, AC coupling capacitors can be removed, significantly reducing audio "pop" and improving space savings. All Fairchild multimedia switches have negative swing capability.

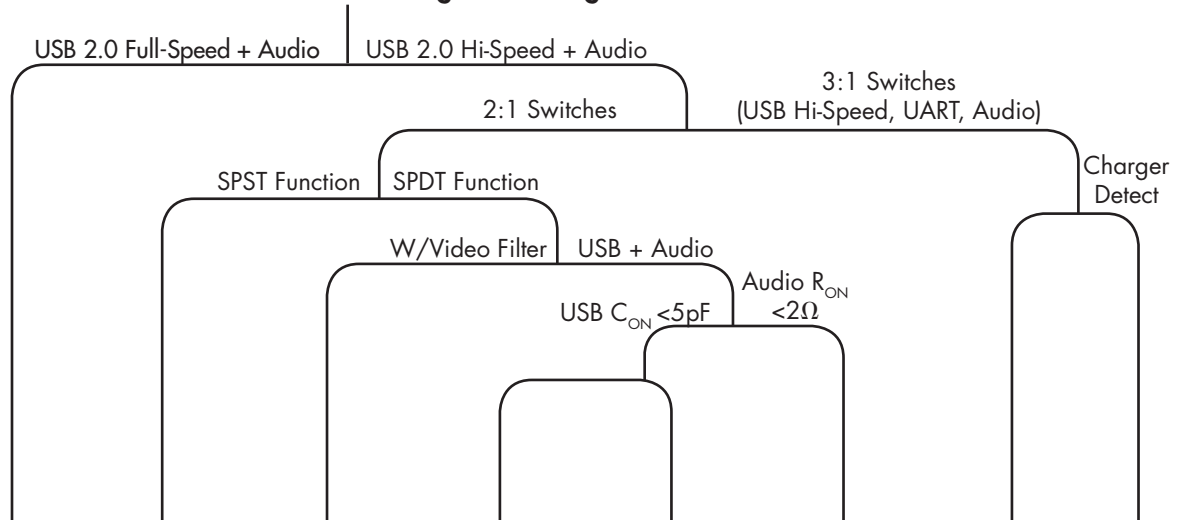
#### Superior High Speed USB and Audio Performance

- Fairchild multimedia switches support both high-speed USB (480Mbps) and full-speed USB (12Mbps).
- Low C<sub>ON</sub> for USB is critical for achieving USB eye compliance as it limits the amount of edge roll-off and signal distortion.
- Low R<sub>ON</sub> is key to optimal audio performance.

For data sheets, application notes, samples and more, please visit: [www.fairchildsemi.com](http://www.fairchildsemi.com)

## Choosing Fairchild USB Multimedia Switch Solutions For Your Design

### USB Multimedia Switches With Negative Swing Audio



Feature	FSA201	FSA110	FSA203	FSA221	FSA223	FSA321	FSA800	FSA805
Bandwidth (MHz)	250	720	USB : 745 Video filter: 8(SD)	720	720	720	720	720
C <sub>ON</sub> for USB (pF)	25	6	7.6	4.5	4.5	5	7	7
R <sub>ON</sub> for USB (Ω)	3	–	3	4	4	8	6	6
R <sub>ON</sub> for Audio	0.5	2.5	3.5	3	3	1.8	3	3
ESD (kV)	10	12	12	12	12	12	4.5	4.5
Termination Resistor	–	✓	–	–	–	✓	✓	✓
Dedicated Charger Detect*	–	–	–	–	–	✓	✓	–
Over Voltage Tolerance	–	–	–	–	–	✓	✓	–
Auto Switch Configure**	✓	✓	–	✓	✓	✓	–	–
Packaging Options	MicroPak™-10, MSOP-10	US8, UMLP-10	DQFN-20, TSSOP-20	MicroPak-10, UMLP-10, MSOP-10	MicroPak-10, UMLP-10, MSOP-10	UMLP-10	UMLP-16	UMLP-12

\* Dedicated charger detection: a separate output reports when a dedicated charger is attached to the USB port

\*\* Auto switch configuration: switch path automatically configures based on the accessory type

For additional information, please visit:  
[www.fairchildsemi.com/products/switches/multimediaswitch.html](http://www.fairchildsemi.com/products/switches/multimediaswitch.html)