

Product Overview

FSUSB42: Low Power, Two-Port, Hi-Speed USB2.0 (480Mbps) Switch

For complete documentation, see the data sheet.

The FSUSB42 is a bi-directional, low-power, two-port, Hi-Speed, USB2.0 switch. Configured as a double-pole, double-throw switch (DPDT) switch, it is optimized for switching between two Hi-Speed (480Mbps) sources or a Hi-Speed and Full-Speed (12Mbps) source. The FSUSB42 is compatible with the requirements of USB2.0 and features an extremely low on capacitance (CON) of 5.5pF. The wide bandwidth of this device (720MHz) exceeds the bandwidth needed to pass the third harmonic, resulting in signals with minimum edge and phase distortion. Superior channel-to-channel crosstalk also minimizes interference. The FSUSB42 contains special circuitry on the switch I/O pins for applications where the VCC supply is powered-off (VCC=0), which allows the device to withstand an over-voltage condition. This device is designed to minimize current consumption even when the control voltage applied to the SEL pin is lower than the supply voltage (VCC). This feature is especially valuable to ultra-portable applications, such as cell phones, allowing for direct interface with the generalpurpose I/Os of the baseband processor. Other applications include switching and connector sharing in portable cell phones, PDAs, digital cameras, printers, and notebook computers.

Features

- Low On Capacitance: 3.7pF Typical
- Low On Resistance: 3.9Ω Typical
- Low Power Consumption: 1μA Maximum
- 15μA Maximum ICCT over and Expanded Control Voltage Range (VIN= 1.8V, VCC= 4.3V)
- Wide -3dB Bandwidth: > 720MHz
- Packaged in:
- 10-Lead UMLP (1.4 x 1.8mm)
- 10-Lead MSOP
- 8kV ESD Rating, >16kV Power/GND ESD Rating
- Over-Voltage Tolerance (OVT) on all USB Ports Up to 5.25V without External Components

For more features, see the data sheet

Applications

- Media Tablets
- Storage & Peripherals
- Mobile Handsets
- Wireless LAN Card & Broadband Access
- PMP/MP3 Players

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Channels	Number of Switches	Configuration	I _{cc} Max (μA)	r _{on} Max (Ω)	V _{CC} Min (V)	V _{CC} Max (V)	Package Type
FSUSB42MUX	0.198	Pb-free Halide free non AEC-Q and PPAP	Active	2	2	DPDT	1	6.5	2.4	4.4	MSOP-10
FSUSB42UMX	0.1506	Pb-free Halide free non AEC-Q and PPAP	Active	2	2	DPDT	1	6.5	2.4	4.4	UQFN-10

For more information please contact your local sales support at www.onsemi.com.

Created on: 10/25/2021