

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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USB 2.0 High-Speed (480 Mbps) Signal Switch with Vbus Short Protection

Features

→ USB 2.0 compliant (high speed and full speed)

 \rightarrow R_{ON} is 3.0 Ω typical @ V_{DD} = 3.0V

→ Low bit-to-bit skew

→ Low Crosstalk: -33dB @ 480 Mbps

→ Off Isolation: -30dB @ 480 Mbps

→ Near-Zero propagation delay: 250ps

→ Channel On Capacitance: 6.0pF (typ)

 \rightarrow V_{DD} Operating Range: 2.7V to 4.4V

→ Data pin I/O ESD (pins 1, 2, 4, 5, 6, and 7): ±4kV contact per IEC61000-4-2 spec

→ -0.5dB BW of 400MHz

→ I/O pins have over-voltage protection and can tolerate a short to Vbus

→ Packaging (Pb-free and Green):

10-contact UQFN, 1.4mm x 1.8mm x 0.5mm (ZM10)

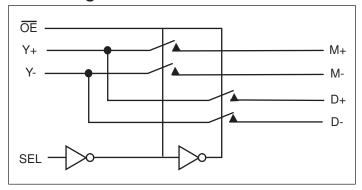
10-contact TQFN, 1.3mm x 1.6mm x 0.75mm (ZL10)

Description

The PI3USB103 is a single differential channel 2:1 multiplexer/demultiplexer USB 2.0 Switch. Industry leading advantages include a propagation delay of less than 250ps, resulting from its low channel resistance and I/O capacitance. The device multiplexes differential outputs from a USB Host device to one of two corresponding outputs. The switch is bidirectional and offers little or no attenuation of the high-speed signals at the outputs. It is designed for low bit-to-bit skew, high channel-to-channel noise isolation and is compatible with various standards, such as High Speed USB 2.0 (480 Mb/s).

The PI3USB103 offers over voltage protection per the USB 2.0 specification. With the chip powered on or off, all I/O pins can withstand a short to Vbus. If $V_{\rm DD} = 0V$, the I/Os can still have signals present, and the signal will NOT leak through to $V_{\rm DD}$.

Block Diagram



Ordering Information

Ordering Code	Package Code	Package Type
PI3USB103ZLE	ZL	Pb-free & Green, 10-contact TQFN
PI3USB103ZME	ZM	Pb-free & Green, 10-contact UQFN

1. Thermal characteristics can be found on the company web site at www.pericom.com/packaging/

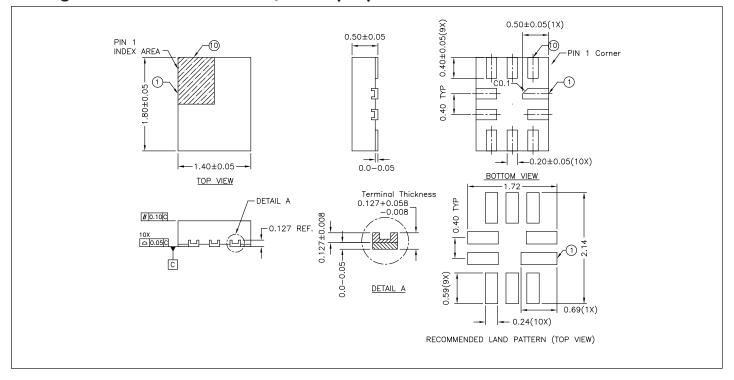
2. E = Pb-free and Green

3. Adding an X Suffix = Tape/Reel



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Package Mechanical: 10-Contact, TQFN (ZM)



Package Mechanical: 10-Contact, TQFN (ZL)

