



# FSA3031 — Dual High-Speed USB2.0 with Mobile High-Definition Link (MHL™)

## Features

- Low On Capacitance: 4.6 pF/6.75 pF MHL/USB (Typical)
- Low Power Consumption: 30  $\mu$ A Maximum
- Supports MHL Rev. 2.0
- Passes 1080 p/60 fps (3 Gbps) MHL Data Eye Diagram Mask Compliance
- MHL Data Rate:  $\geq$ 4.7Gbps with Ideal Input Source
- Packaged in 12-Lead UMLP (1.8 x 1.8 mm)
- Over-Voltage Tolerance (OVT) on all USB Ports Up to 5.25 V without External Components

## Applications

- Cell Phones and Digital Cameras

## IMPORTANT NOTE:

For additional performance information, please contact [interface@fairchildsemi.com](mailto:interface@fairchildsemi.com).

## Description

The FSA3031 is a bi-directional, low-power, high-speed, 3:1, dual USB2.0 and MHL switch. Configured as a double-pole, triple-throw (DP3T) switch; it is optimized for switching between dual high- or full-speed USB and Mobile High-Definition Link sources (MHL™ Rev. 2.0 specification).

The FSA3031 contains special circuitry on the switch I/O pins, for applications where the  $V_{CC}$  supply is powered off ( $V_{CC}=0$ ), that allows the device to withstand an over-voltage condition. This switch is designed to minimize current consumption even when the control voltage applied to the control pins is lower than the supply voltage ( $V_{CC}$ ). This feature is especially valuable to mobile applications, such as cell phones; allowing direct interface with the general-purpose I/Os of the baseband processor. Other applications include switching and connector sharing in portable cell phones, digital cameras, and notebook computers.

## Ordering Information

Part Number	Top Mark	Operating Temperature Range	Package
FSA3031UMX	LX	-40 to +85°C	12-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8 mm x 1.8 mm

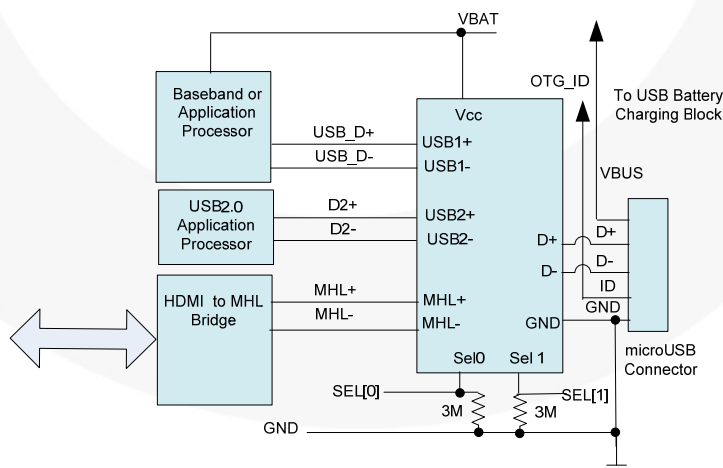
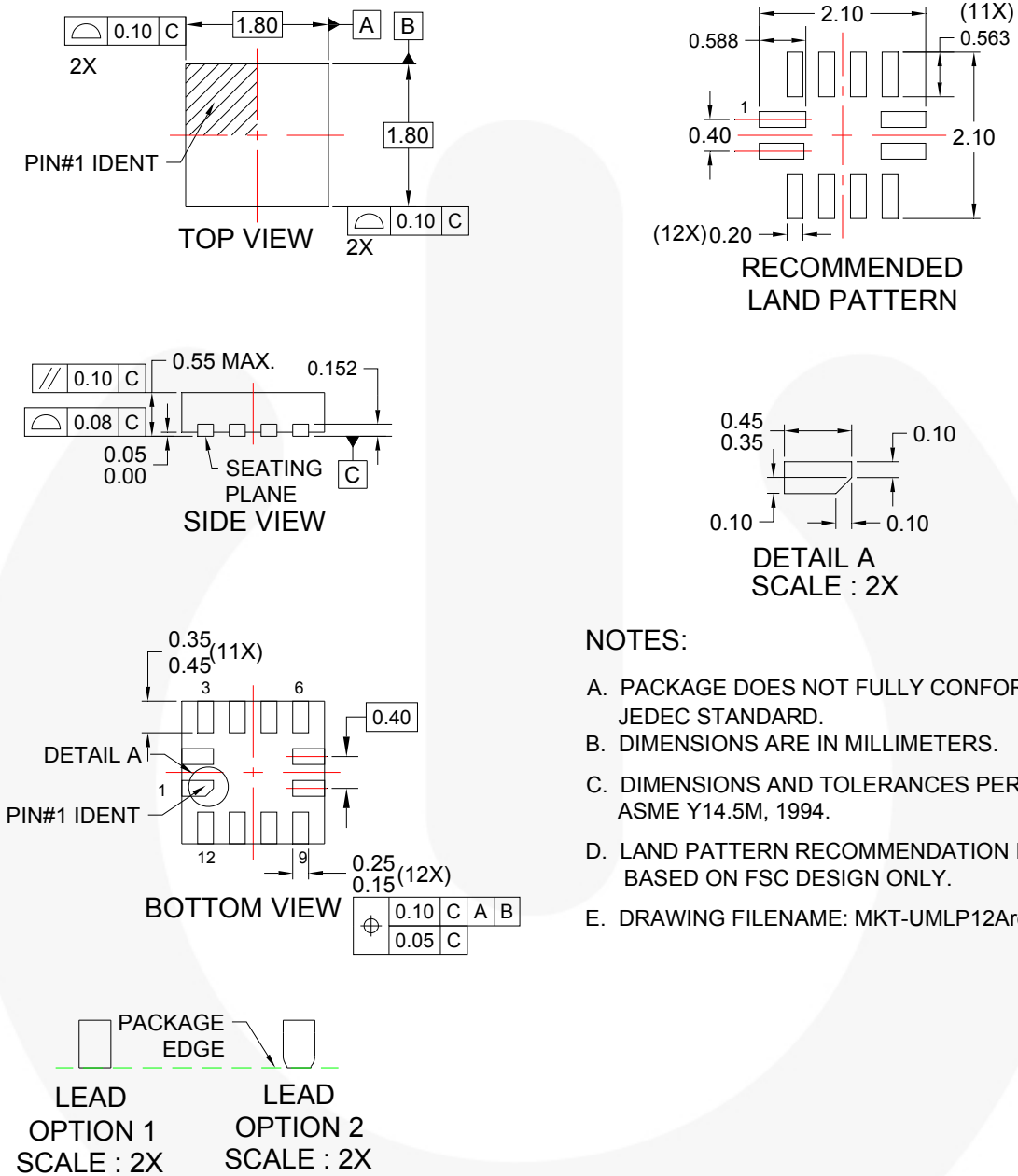


Figure 1. Typical Application

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## Physical Dimensions



**Figure 20. 12-Lead, Ultrathin Molded Leadless Package (UMLP)**






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Rev. I62