



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 μ 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.

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 |

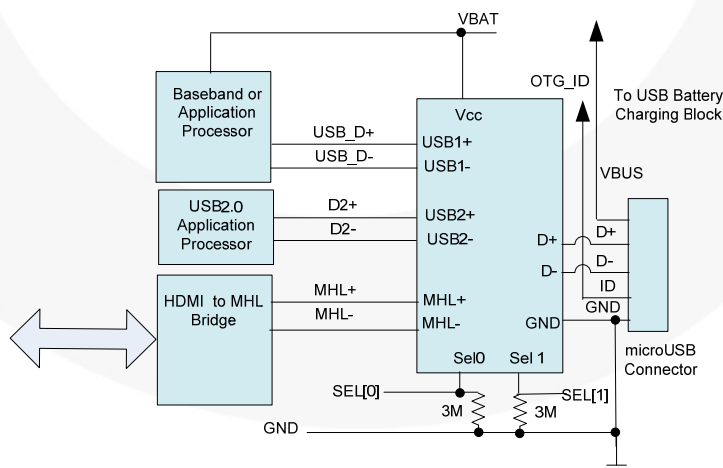
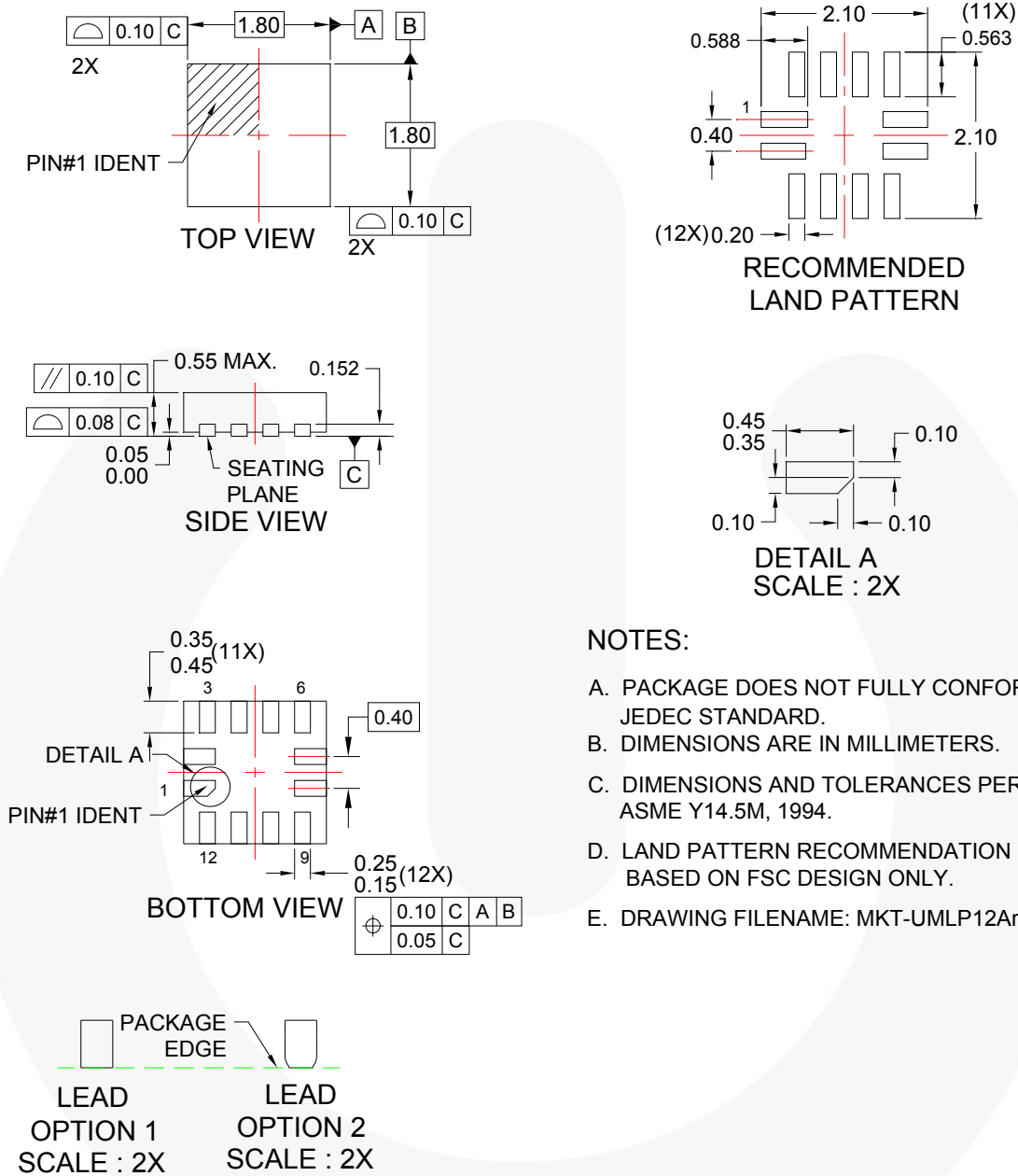


Figure 1. Typical Application

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Physical Dimensions



NOTES:

- PACKAGE DOES NOT FULLY CONFORM TO JEDEC STANDARD.
- DIMENSIONS ARE IN MILLIMETERS.
- DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.
- LAND PATTERN RECOMMENDATION IS BASED ON FSC DESIGN ONLY.
- DRAWING FILENAME: MKT-UMLP12Arev4.

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

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|--------------------------|-----------------------|---|
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