FAIRCHILD SEMICONDUCTOR®

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FSA3030 — High-Speed USB2.0/Mobile High-Definition Link (MHL™) with Negative Swing Audio

Features

- Low On Capacitance: 4.2 pF/5 pF MHL/USB (Typical)
- Low Power Consumption: 30 µA Maximum
- Supports MHL Rev. 1.1
- MHL Data Rate: 4.0 Gbps
- Audio Swing: -1.5 V to +1.5 V (Typical)
- Packaged in 12-Lead UMLP (1.8 x 1.8 mm)
- IEC 610002-4 Level-4 ESD Tolerance
- Over-Voltage Tolerance (OVT) on all USB Ports Up to 5.25 V without External Components

Applications

- Cell Phones and Digital Cameras

Description

The FSA3030 is a bi-directional, low-power, high-speed, 3:1, USB2.0, MHL™ and audio switch. Configured as a double-pole, triple-throw (DP3T) switch, it is optimized for switching between high- or full-speed USB, Mobile High-Definition Link sources (per MHL Rev. 1.1 specification) and negative swing capable audio.

The FSA3030 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 is especially valuable in 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
FSA3030UMX	LU	-40 to +85°C	12-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8mm x 1.8mm

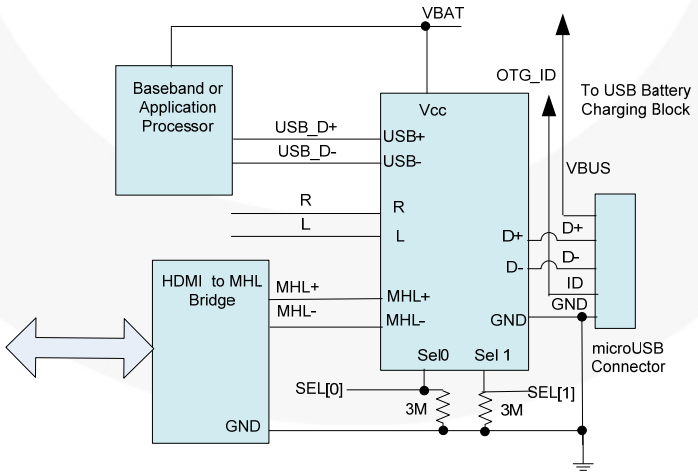

Figure 1. Typical Application

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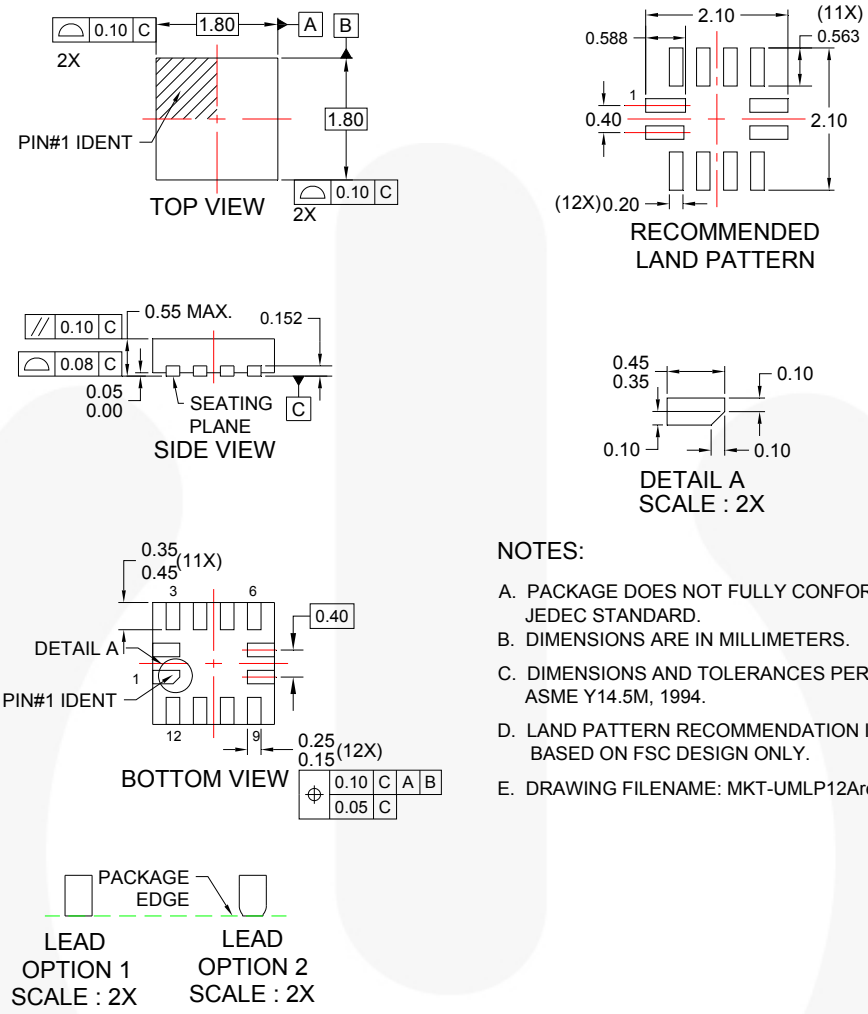
Physical Dimensions



NOTES:

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

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

Product-Specific Dimensions

Description	Nominal Values (mm)
Overall Height	0.50
Package Standoff	0.012
Lead Thickness	0.15
Lead Width	0.20
Lead Length	0.40
Lead Pitch	0.40
Body Length (X)	Min: 1.70, Nom: 1.80, Max: 1.90
Body Width (Y)	Min: 1.70, Nom: 1.80, Max: 1.90
Lead One Nominal Length	0.40
Lead One Nominal Width	0.20
Lead One Nominal Bevel Length	0.10
Lead One Nominal Bevel Depth	0.10
Lead One Nominal Tip Non-Bevel Width	0.10

Package drawings are provided as a service to customers considering Fairchild components. Drawings may change in any manner without notice. Please note the revision and/or date on the drawing and contact a Fairchild Semiconductor representative to verify or obtain the most recent revision. Package specifications do not expand the terms of Fairchild's worldwide terms and conditions, specifically the warranty therein, which covers Fairchild products.

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