



# FSA3230 — High-Speed USB2.0 / Mobile High-Definition Link (MHL™) with Negative Swing Audio

## Features

- Low On Capacitance: 6 pF / 6 pF MHL / USB (Typical)
- Low Power Consumption: 30  $\mu$ A Maximum
- Supports MHL Rev. 2.0
- MHL Data Rate: 4.0 Gbps
- Audio Swing: -1.5 V to +1.5 V (Typical)
- $V_{BUS}$  Powers Device with No  $V_{CC}$
- Packaged in 16-Lead UMLP (1.8 x 2.6 mm)
- Over-Voltage Tolerance (OVT) on all USB Ports, Up to 5.25 V without External Components

## Applications

- Cell Phones and Digital Cameras

## Description

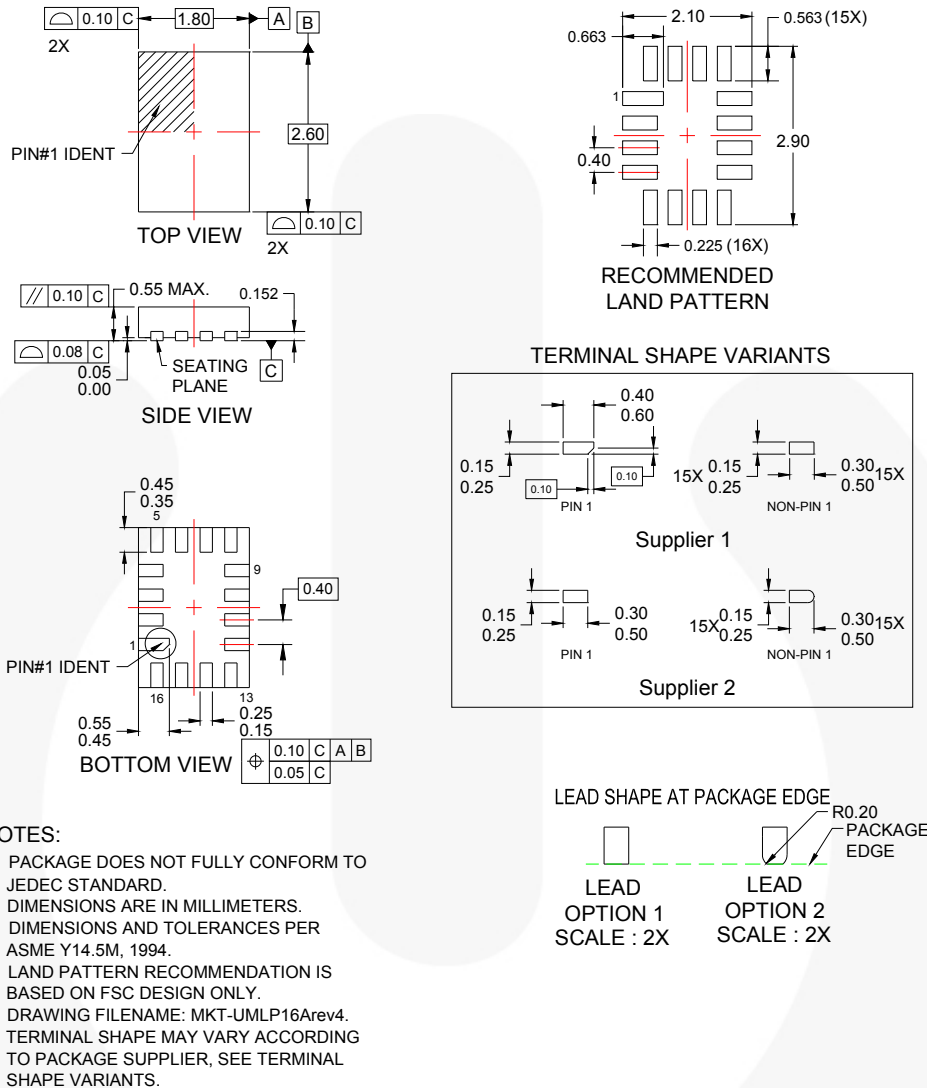
The FSA3230 is a bi-directional, low-power, high-speed, 3:1, USB2.0, MHL™ and audio switch. Configured as a double-pole, triple-throw (DP3T) switch, it is optimized for switching between high- or full-speed USB, Mobile High-Definition Link sources (per MHL Rev. 2.0 specification) and negative swing capable audio. A Single-Pole, Double-Throw (SPDT) switch is provided for ID. This ID switch provides path to support On-The-Go (OTG) communication for the USB Path OR CBUS for the MHL Path.

The FSA3230 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
FSA3230UMX	LK	-40 to +85°C	16-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8 x 2.6 mm

## Physical Dimensions



**Figure 20. 16-Lead, Ultrathin Molded Leadless Package (UMLP)**

Description	Nominal Values for MKT-UMLP16A Rev4 (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 (Y)	Min: 2.50, Nom: 2.60, Max: 2.70
Body Width (X)	Min: 1.70, Nom: 1.80, Max: 1.90

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