FAIRCHILD SEMICONDUCTOR®

**LIMITED DATASHEET**

*Email Analog.Switch@fairchildsemi.com to request the full datasheet.*

February 2013

# FSA880 / FSA881 – USB Port 2:1 Switch with Accessory and Charger Detection

## Features

| | |
|---|---|
| Switch Type | 2:1 USB |
| Switch Mechanism | Automatic switching with Available Interrupt |
| Accessory Detection | USB Data Cable<br>Chargers (CDP, DCP, Travel Adapter, Car Kit-CEA-936-A)<br>Factory-Mode Cables |
| USB | FS and HS 2.0 Compliant |
| USB Charging | Battery Charging 1.1 Compliant<br>Charger Detect, DCD, OVT (28V) |
| UART | RxD and TxD |
| VBAT | 3.0 to 4.4 V |
| Programmability | $I^2C$ |
| ESD | 15kV IEC 61000-4-2 Air Gap |
| Operating Temperature | -40°C to 85°C |
| Package | 16-Lead UMLP<br>1.8x2.6x0.55 mm, 0.4 mm Pitch |
| JIG Option | FSA880 – Active LOW<br>FSA881 – Active HIGH |
| Ordering Information | FSA880UMX<br>FSA881UMX |

## Description

The FSA88x is a high-performance switch featuring automatic switching and accessory detection for a USB port. The FSA88x allows sharing of a common USB port to pass USB data, as well as factory programmability. In addition, the FSA88x integrates accessory detection of devices such as USB chargers and factory data cables. The FSA88x can be programmed for manual switching or automatic switching of data paths. VBUS_IN has 28 V over-voltage tolerance.

The difference between the FSA880 and the FSA881 is that FSA880 JIG output is an open-drain, active-LOW output, while FSA881 JIG is an active-HIGH, CMOS output.

## Applications

- Cellular Phones, Smart Phones
- MP3 and PMP

## Related Resources

- *For samples and questions, please contact: Analog.Switch@fairchildsemi.com.*
- FSA880 / FSA881 Demonstration Board

## Typical Application

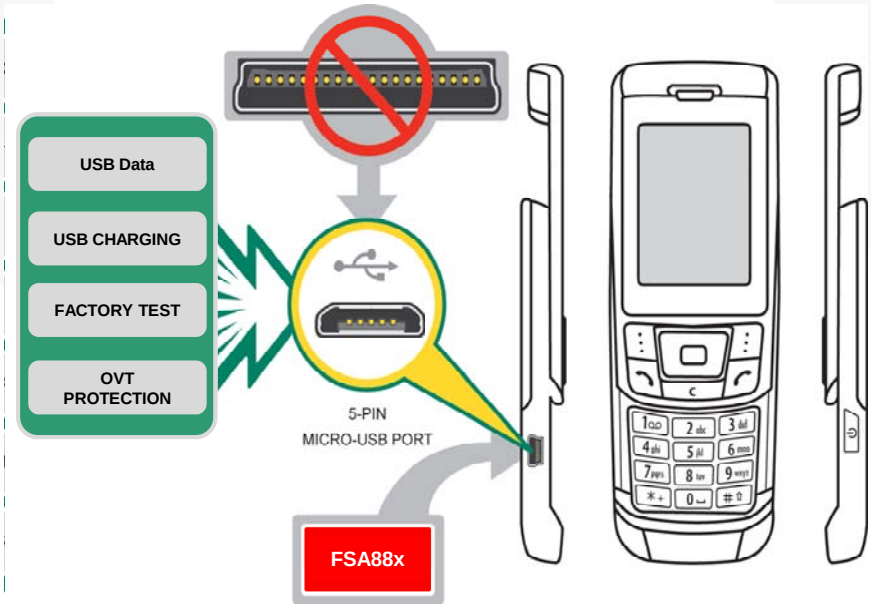



**Figure 1. Mobile Phone Example**

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## Block Diagram

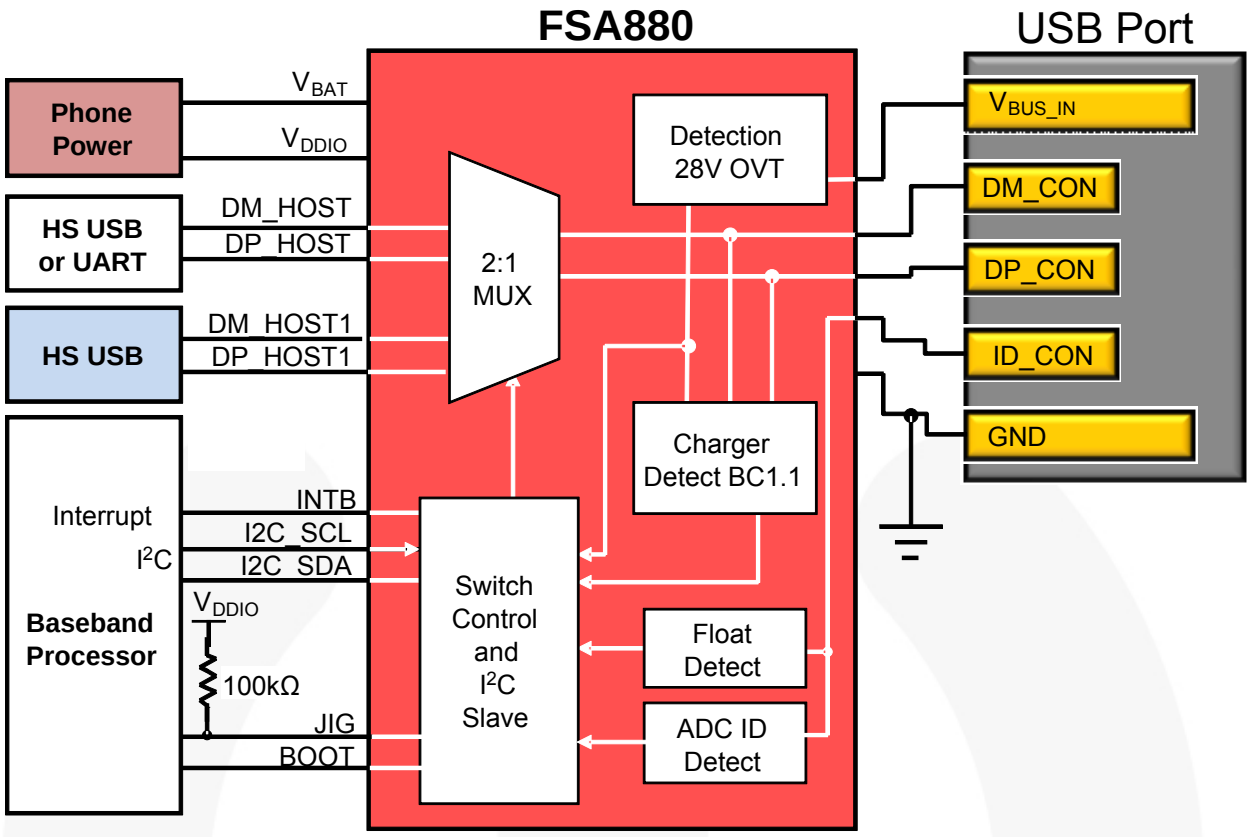



**Figure 2. Block Diagram**

## Pin Configuration

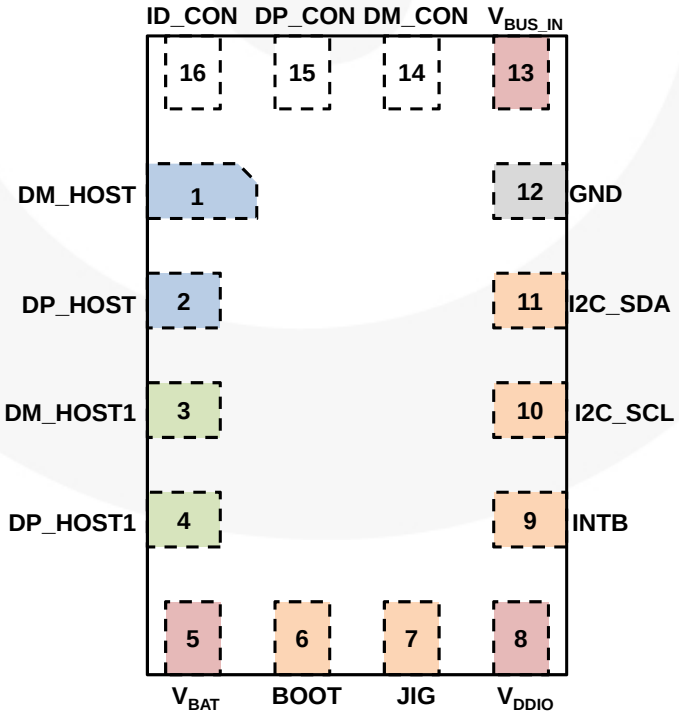
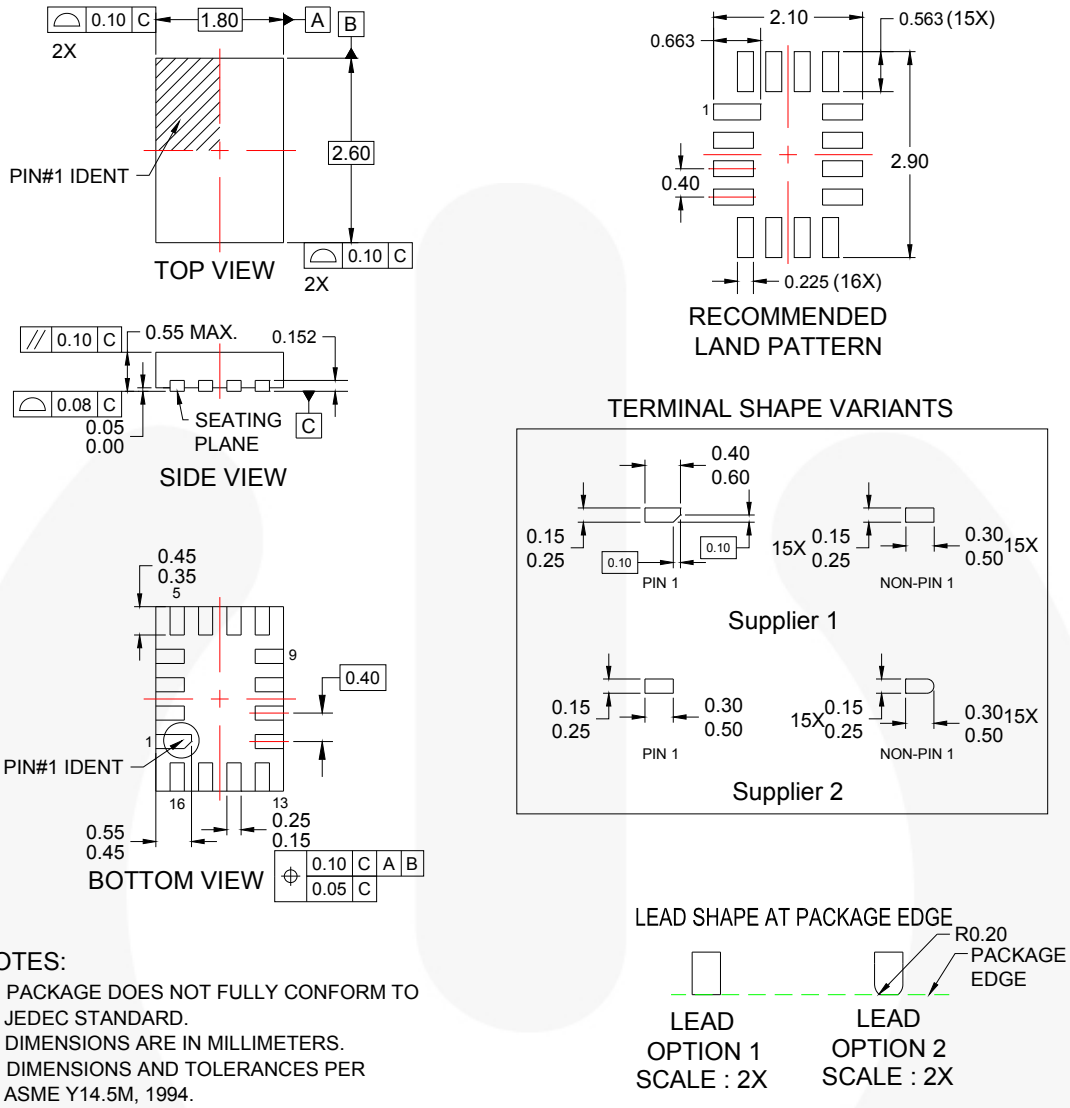



**Figure 3. Pin Assignment (Through View)**

## 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-UMLP16Arev4.
F. TERMINAL SHAPE MAY VARY ACCORDING TO PACKAGE SUPPLIER, SEE TERMINAL SHAPE VARIANTS.

**Figure 24. 16-Lead Ultrathin Molded Leadless Package (UMLP), 1.8 mm x 2.6 mm x 0.55 mm, 0.4 mm Pitch**

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| Part Number | Operating Temperature Range | Top Mark | Package |
|---|---|---|---|
| FSA880UMX | -40 to +85°C | KU | 16-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8 mm x 2.6 mm x 0.55 mm, 0.4 mm Pitch |
| FSA881UMX | -40 to +85°C | KX | 16-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8 mm x 2.6 mm x 0.55 mm, 0.4 mm Pitch |

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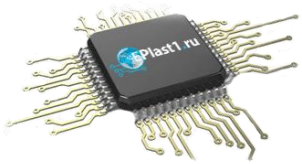
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