FAIRCHILD SEMICONDUCTOR®

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

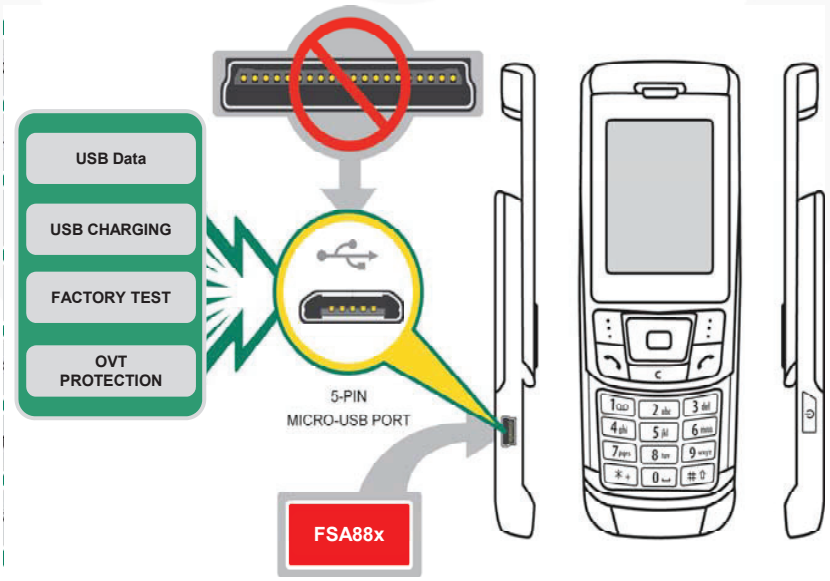

Figure 1. Mobile Phone Example

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Block Diagram

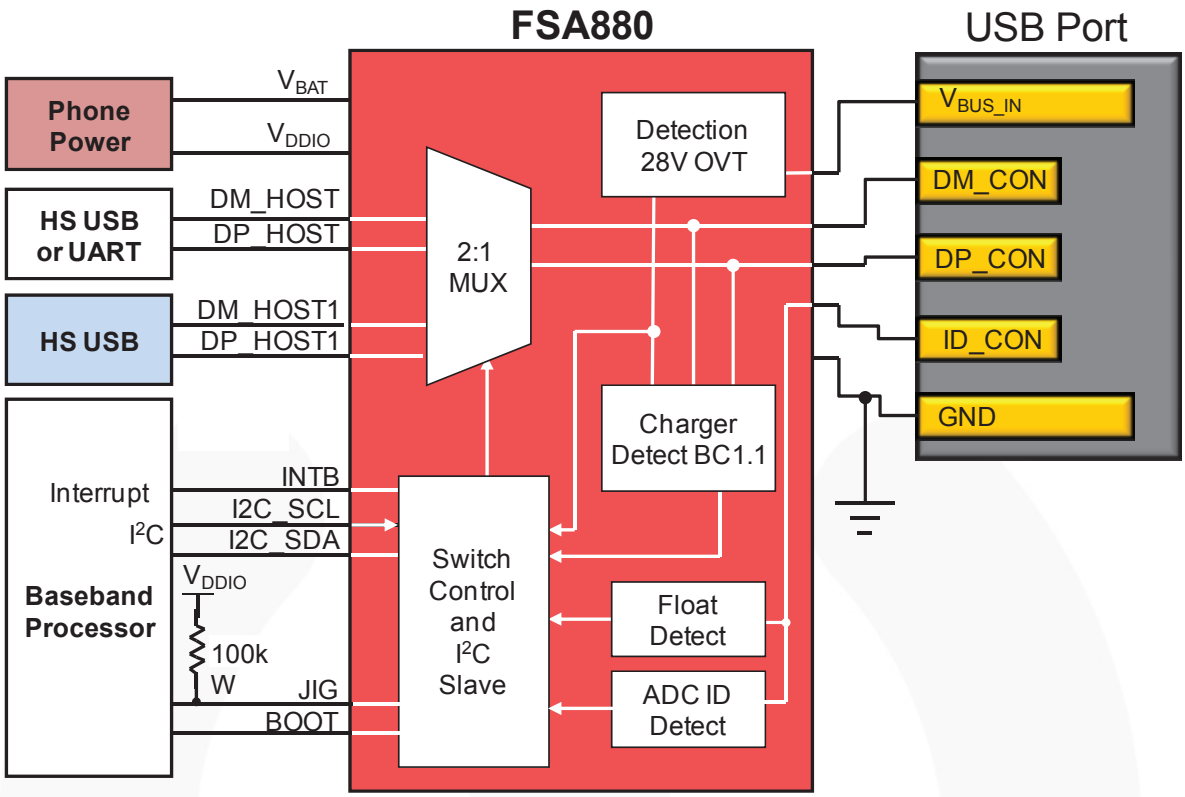

Figure 2. Block Diagram

Pin Configuration

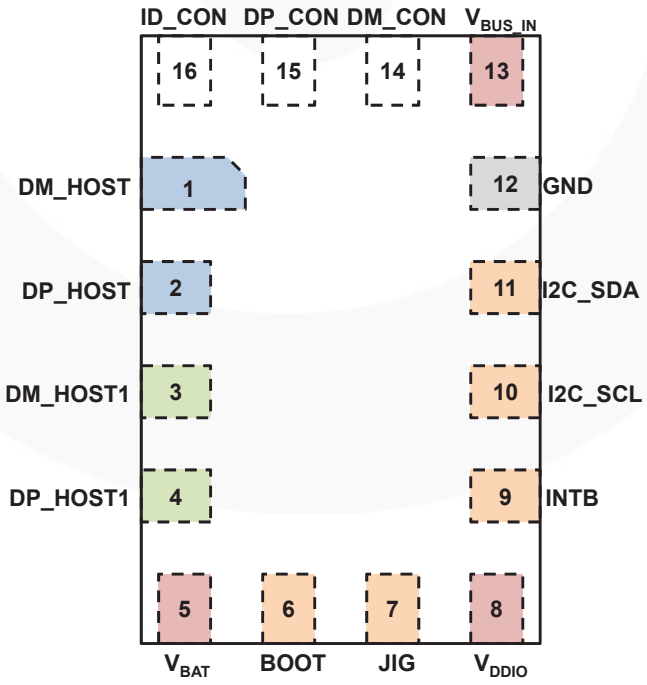

Figure 3. Pin Assignment (Through View)

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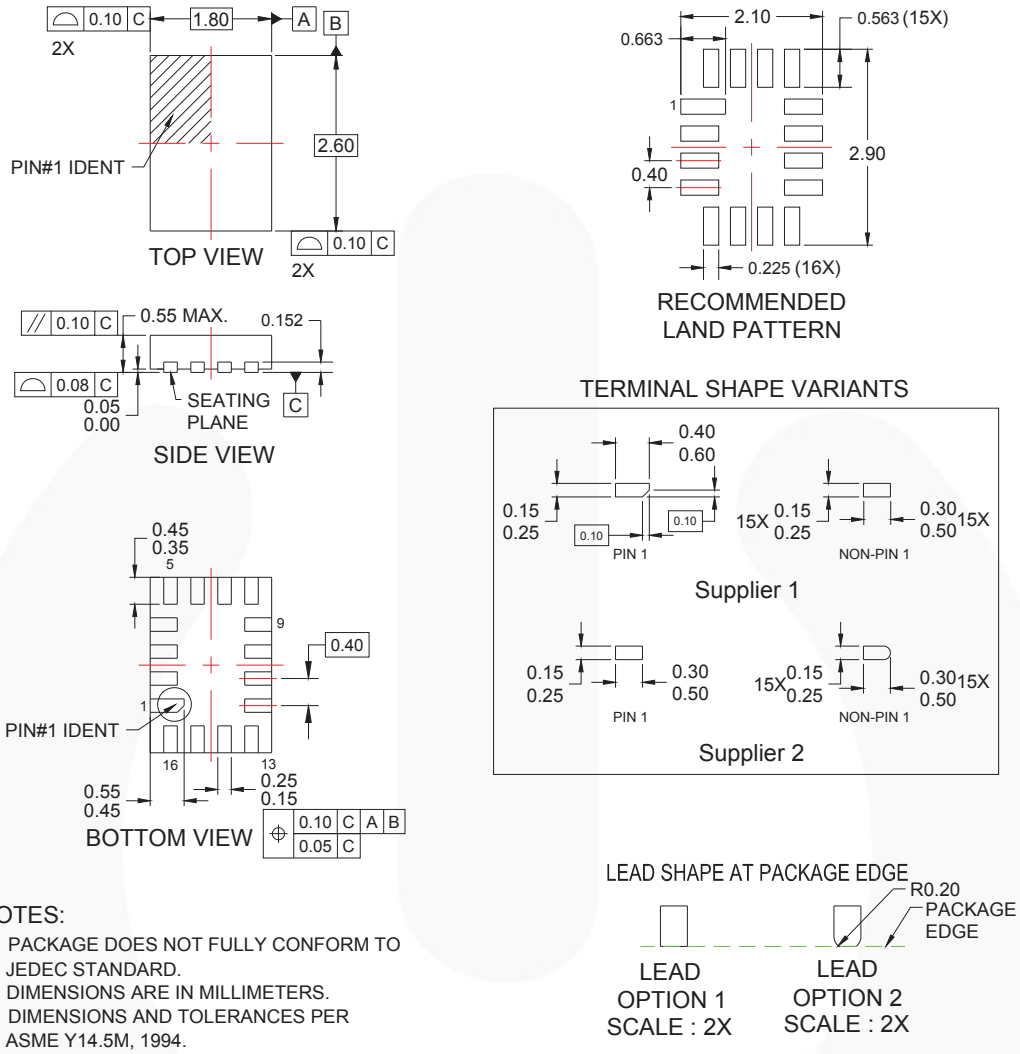
Physical Dimensions



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

Figure 24. 16-Lead Ultrathin Molded Leadless Package (UMLP), 1.8mm x 2.6mm x 0.55mm, 0.4mm 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), 1.8mm x 2.6mm x 0.55mm, 0.4mm Pitch
FSA881UMX	-40 to +85°C	KX	16-Lead, Ultrathin Molded Leadless Package (UMLP), 1.8mm x 2.6mm x 0.55mm, 0.4mm Pitch

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