



# FSA831 — USB2.0 High-Speed (480Mbps) Charger Detection with Isolation Switch

## Features

USB Detection	USB Battery Charging Rev. 1.2 Supports Data Contact Detect (DCD) Dead Battery Provision (DBP) with 30-Minute Timer
Switch Type	Isolation Switch Closes for Charging Downstream Port (CDP) Standard Downstream Port (SDP)
V <sub>BUS</sub>	28V Over-Voltage Tolerance -2V Under-Voltage Tolerance
Package	10-Lead MicroPak™ 1.6 x 2.1mm, 0.5mm Pitch
Ordering Information	FSA831L10X

## Description

The FSA831 is a charger-detection IC with an integrated isolation switch for use with a micro/mini USB port. The FSA831 detects battery chargers and is compliant with USB Battery Charging Specification, Rev 1.2 (BC1.2). The algorithm incorporates Data Contact Detection (DCD), which ensures that the shorter, inner pins of the USB connector are making contact prior to continuing with battery charger detection. The device determines if a Dedicated Charging Port (DCP), Charging Downstream Port (CDP), or a typical PC host, called a Standard Downstream Port (SDP), is connected. If a charger is detected, the FSA831 determines whether the charger is a DCP or CDP. For SDP and CDP detection, an internal isolation switch is closed to connect the D+/D- lines of the USB cable to the resident USB transceiver within the portable device. The FSA831 conforms to all the constraints for the Dead Battery Provision (DBP) within the BC1.2 specification, including a 30-minute timer that cannot exceed 45 minutes, per BC1.2.

## Applications

- MP3, Mobile Internet Device (MID), Cell Phone, PDA, Digital Camera, Notebook and Netbook

## Related Resources

- For samples and questions, please contact: [analogswitch@fairchildsemi.com](mailto:analogswitch@fairchildsemi.com).

## Typical Application

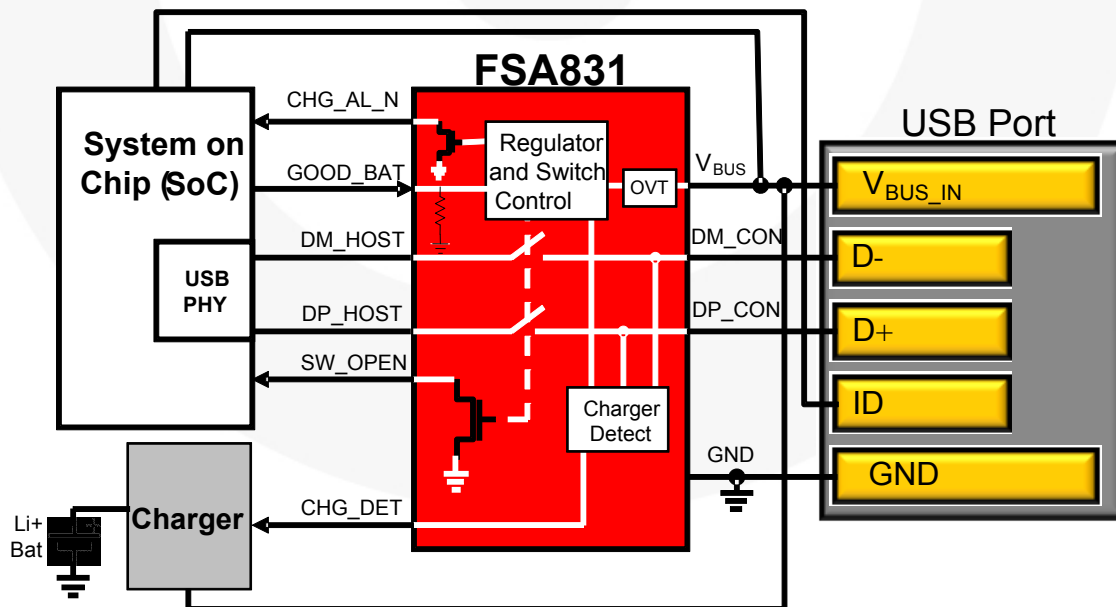


Figure 1. Mobile Phone Example

## Physical Dimensions

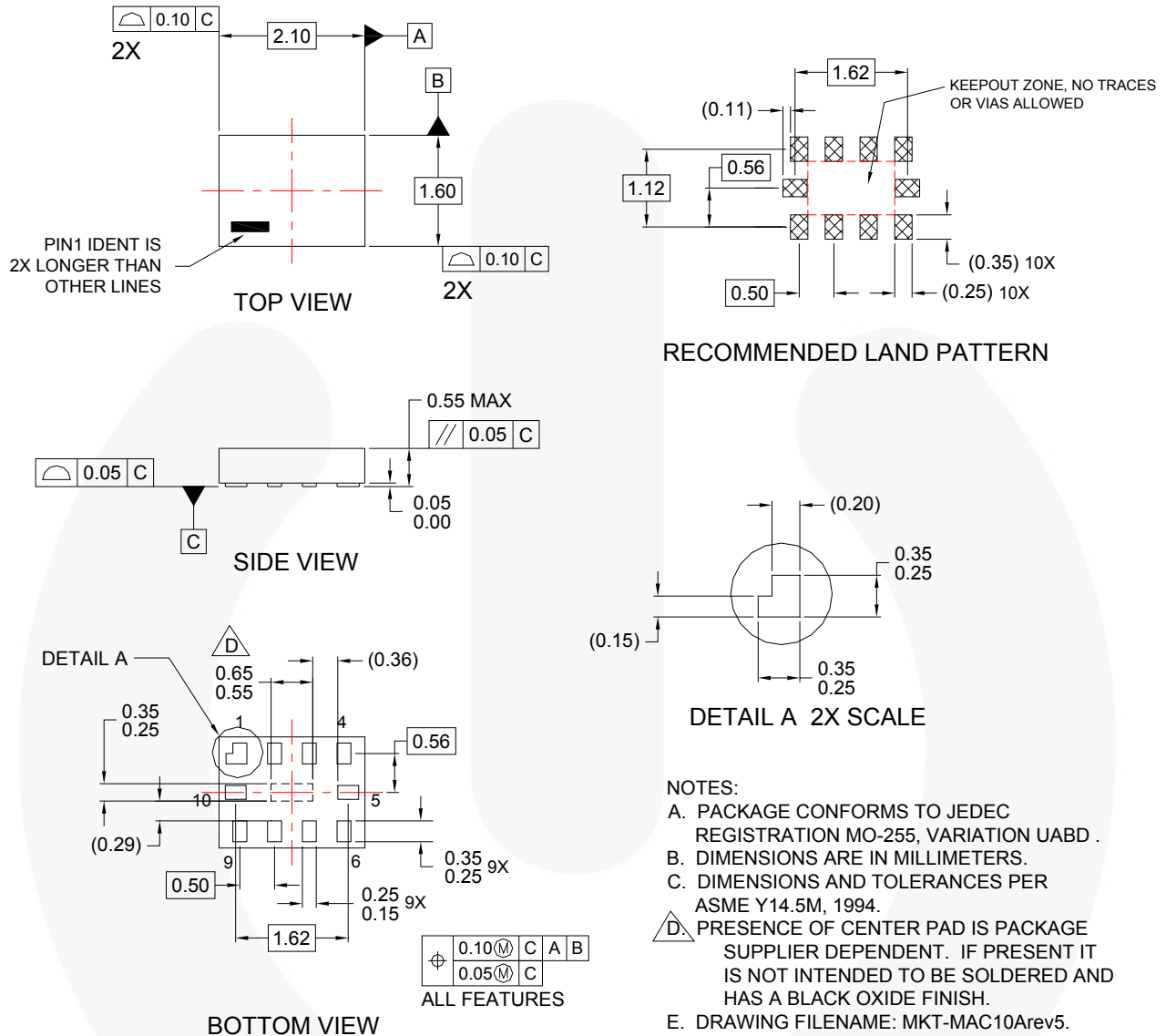


Figure 10. 10-Lead, MicroPak™

Part Number	Operating Temperature Range	Package Description	Packing Method
FSA831L10X	-40 to 85°C	10-Lead, MicroPak™ 1.6 x 2.1mm, 0.5mm Pitch	Tape & Reel

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| Fairchild®  | MillerDrive™                                   | SuperFET®   | UHC®  |
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| FAST®   | OptoHiT™                                       | SupreMOS®   | VisualMax™  |
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