# FSA9285－MCPC－Compliant，USB－Port，Multimedia Switch with Auto－Detection 

Features

| Switch Type | Audio，FS／HS－USB，Charging |
| :---: | :---: |
| Switch Mechanism | Programmable Switching with Available Interrupt |
| Accessory Detection | Headsets with MIC and Send／End USB Data Cable USB Chargers（Car，CDP，DCP） USB On－The－Go（OTG） MCPC Specification Compliant Programmable Modes |
| USB | FS and HS 2．0 Compliant |
| USB Charging | Battery Charging 1．2 Compliant Integrated FET，Charger Detect， OCP（1．45A），OVP（6．5V－28．0V） |
| Audio | Left，Right，MIC（Negative Swing） Built－in Termination Resistors for Audio Pop Reduction |
| $\mathrm{V}_{\text {BAT }}$ | 2.7 to 4．4V |
| Programmability | $\mathrm{I}^{2} \mathrm{C}$ |
| ESD | 15kV IEC 61000－4－2 Air Gap |
| Package | 20－Lead，WLCSP $(2.010 \times 1.672 \times$ $0.625 \mathrm{~mm}, 0.4 \mathrm{~mm}$ Pitch $)$ |
| Ordering Information | FSA9285UCX |

## Description

The FSA9285 is a high－performance multimedia switch featuring automatic switching and accessory detection for a USB port．The FSA9285 allows sharing of a common USB port to pass audio and USB data while simultaneously charging．

In addition，the FSA9285 integrates detection of accessories such as headphones，headsets Mobile Computing Promotion Consortium（MCPC）with MIC and Send／End，car chargers， USB chargers，USB On－The－Go（OTG），and Accessory Charging Adapters（ACA）to use a common USB connector． The FSA9285 can be programmed for manual or automatic switching of USB data paths based on the accessory detected． With an integrated 28 V over－voltage and 1.45 A over－current protected FET，the FSA9285 integrates common USB protection functions for $V_{\text {Bus }}$ ．

## Applications

－Mobile Phones，Portable Media Players

For additional performance information，please contact analogswitch＠fairchildsemi．com．


Figure 1．Typical Application

## Physical Dimensions



Figure 14. 20-Lead, Wafer-Level Chip-Scale Package (WLCSP)

## Product-Specific Dimensions

| Product | $\mathbf{D}$ | $\mathbf{E}$ | $\mathbf{X}$ | $\mathbf{Y}$ |
| :---: | :---: | :---: | :---: | :---: |
| FSA9285UCX | 2.010 mm | 1.672 mm | 0.236 mm | 0.205 mm |

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.

Always visit Fairchild Semiconductor's online packaging area for the most recent package drawings: http://www.fairchildsemi.com/packaging/.

| Part Number | Operating Temperature Range | Top Mark | Package |
| :---: | :---: | :---: | :---: |
| FSA9285UCX | -40 to $+85^{\circ} \mathrm{C}$ | TBD | 20-Lead, WLCSP $(2.010 \times 1.672 \times 0.625 \mathrm{~mm}, 0.4 \mathrm{~mm}$ Pitch $)$ |

## TRADEMARKS

The following includes registered and unregistered trademarks and service marks, owned by Fairchild Semiconductor and/or its global subsidiaries, and is not intended to be an exhaustive list of all such trademarks.

| 2Coolt ${ }^{\text {TM }}$ | F-PFS ${ }^{\text {™ }}$ | PowerTrench ${ }^{\text {® }}$ | The Power Franchise ${ }^{\text {ded }}$ |
| :---: | :---: | :---: | :---: |
| AccuPower ${ }^{\text {TM }}$ | FRFET ${ }^{\text {® }}$ | PowerXS ${ }^{\text {TM }}$ | the wer. |
| AX-CAP ${ }^{\text {* }}$ | Global Power Resource ${ }^{\text {SM }}$ | Programmable Active Droop ${ }^{\text {™ }}$ | ranchise |
| BitSiC ${ }^{\text {M }}$ | GreenBridge ${ }^{\text {TM }}$ | QFET ${ }^{\text {(1) }}$ | TinyBoost ${ }^{\text {TM }}$ |
| Build it $\mathrm{Now}^{\text {M }}$ | Green FPS ${ }^{\text {ru}}$ | QS ${ }^{\text {Tu }}$ | TinyBuck ${ }^{\text {Tu }}$ |
| CorePLUS ${ }^{\text {™ }}$ | Green FPPS ${ }^{\text {™ }} \mathrm{e}$-Series ${ }^{\text {™ }}$ | Quiet Series ${ }^{\text {Tu }}$ | TinyCalc ${ }^{\text {Tu }}$ |
| CorePOWER ${ }^{\text {m }}$ | Gmax ${ }^{\text {TM }}$ | RapidConfigure ${ }^{\text {Tu }}$ | TinyLogic ${ }^{\text {® }}$ |
| CROSSVOLT ${ }^{\text {T}}$ | GTO ${ }^{\text {™ }}$ | $\bigcirc^{\text {TM }}$ | TINYOPTO ${ }^{\text {u }}$ |
| CTL'M | IntelliMAX ${ }^{\text {TM }}$ | Saving our world, 1 mW W/kW at a time ${ }^{\text {TM }}$ | TinyPower ${ }^{\text {Tu }}$ |
| Current Transfer Logic ${ }^{\text {TM }}$ |  | SignalWise ${ }^{\text {TM }}$ | TinyPWM ${ }^{\text {Tu }}$ |
| DEUXPEED ${ }^{\text {Dual }}$ Cool ${ }^{\text {TM }}$ | Making Small Speakers Sound Louder and Better ${ }^{\text {TM }}$ | SmartMax ${ }^{\text {™ }}$ | TinyWire ${ }^{\text {Tu }}$ |
| Ecospark ${ }^{\text {® }}$ | MegaBuck ${ }^{\text {Tu }}$ | SMART START ${ }^{\text {m }}$ | Transic ${ }^{\text {Tu }}$ |
| EfficientMax ${ }^{\text {™ }}$ | MICROCOUPLER ${ }^{\text {™ }}$ | Solutions for Your Success ${ }^{\text {TM }}$ | TriFault Detect ${ }^{\text {Tu }}$ * ${ }_{\text {TRUECURRENT }}{ }^{\text {® }}$ |
| ESBC ${ }^{\text {™ }}$ | MicroFET ${ }^{\text {TM }}$ | STEALTH ${ }^{\text {™ }}$ | TRUECURRENT** $\mu$ SerDes ${ }^{\text {™ }}$ |
| 7 | MicroPak ${ }^{\text {™ }}$ | SuperFET ${ }^{\text {® }}$ | $\boldsymbol{M}$ |
| Fairchild ${ }^{\text {® }}$ | MicroPak2 ${ }^{\text {Tu }}$ | SuperSOTm-3 | SerDes* |
| Fairchild Semiconductor ${ }^{\text {® }}$ | MotionMax ${ }^{\text {™ }}$ | SuperSOT ${ }^{\text {m }}$ - 6 | UHC ${ }^{\text {® }}$ |
| FACT Quiet Series ${ }^{\text {™ }}$ |  | SuperSOT ${ }^{\text {m }}$ - 8 | Ultra FRFET ${ }^{\text {m }}$ |
| FACT ${ }^{\text {® }}$ | Motion-SPM ${ }^{\text {mW }}$ | SupreMOS ${ }^{\text {® }}$ | UniFET ${ }^{\text {m }}$ |
| FAST ${ }^{\text {® }}$ | mWSaver ${ }^{\text {Tu }}$ | SyncFET ${ }^{\text {m }}$ | $\mathrm{VCX}^{\text {™ }}$ |
| FastvCore ${ }^{\text {TM }}$ | OPTOLOGIC ${ }^{\text {© }}$ | Sync-Lock ${ }^{\text {™ }}$ | VisualMax ${ }^{\text {TM }}$ |
| FETBench ${ }^{\text {TM }}$ | OPTOPLANAR ${ }^{\text {® }}$ | $\square_{\text {GENERAL }}{ }^{\text {S }}$ | VoltagePlus ${ }^{\text {TM }}$ |
| FlashWriter ${ }^{\text {® }}$ | optoplanar |  | $X^{T M}$ |
| FPS ${ }^{\text {™ }}$ | - |  |  |

## DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION, OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THEWARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

## LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

## As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support, device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

## ANTI-COUNTERFEITING POLICY

Fairchild Semiconductor Corporation's Anti-Counterfeiting Policy. Fairchild's Anti-Counterfeiting Policy is also stated on our external website, www.fairchildsemi.com, under Sales Support.
Counterfeiting of semiconductor parts is a growing problem in the industry. All manufacturers of semiconductor products are experiencing counterfeiting of their parts. Customers who inadvertently purchase counterfeit parts experience many problems such as loss of brand reputation, substandard performance, failed applications, and increased cost of production and manufacturing delays. Fairchild is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. Fairchild strongly encourages customers to purchase Fairchild parts either directly from Fairchild or from Authorized Fairchild Distributors who are listed by country on our web page cited above. Products customers buy either from Fairchild directly or from Authorized Fairchild Distributors are genuine parts, have full traceability, meet Fairchild's quality standards for handling and storage and provide access to Fairchild's full range of up-to-date technical and product information. Fairchild and our Authorized Distributors will stand behind all warranties and will appropriately address any warranty issues that may arise. Fairchild will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. Fairchild is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.
PRODUCT STATUS DEFINITIONS
Definition of Terms

| Datasheet Identification | Product Status | Definition |
| :---: | :---: | :--- |
| Advance Information | Formative / In Design | Datasheet contains the design specifications for product development. Specifications may change <br> in any manner without notice. |
| Preliminary | First Production | Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild <br> Semiconductor reserves the right to make changes at any time without notice to improve design. |
| No Identification Needed | Full Production | Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make <br> changes at any time without notice to improve the design. |
| Obsolete | Not In Production | Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. <br> The datasheet is for reference information only. |

