



January 2008

FSA2457 — Dual DPDT, 5Ω Analog Data Switch

Features

Low On Capacitance for Data Path: 12pF Typical

Low On Resistance for Data Path: 5Ω Typical

■ Low Power Quiescent Consumption: 1µA Maximum

Wide -3db Bandwidth: > 160MHz

Packaged in:

Pb-free 16-Lead UMLP (1.8 x 2.6mm)

4kV JEDEC: JESD22-A114 HBM

2kV JEDEC: JESD22-C101 CDM

Applications

Cell Phone, PDA, Digital Camera, Portable GPS

LCD Monitor, TV, Set-Top Box

IMPORTANT NOTE:

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

Description

The FSA2457 is a bi-directional, low-power, dual double-pole double-throw (4PDT) analog switch targeted at dual 1-bit SIM/SD/MMC card and/or GPS signal multiplexing. It is optimized for switching the WLAN-SIM data and control signals at 52Mbps.

The FSA2457 is compatible with the requirements of 1-bit SIM/SD/MMC cards and is ideal for interfacing to GPS baseband processors. The FSA2457 features a low on capacitance (C_{ON}) of 12pF to ensure high-speed data transfer.

The FSA2457 contains special circuitry that minimizes current consumption even when the control voltage applied to the SEL pin is lower than the supply voltage (V_{CC}). This feature is especially valuable in ultraportable 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, PDAs, digital cameras, printers, and portable GPS systems.

Ordering Information

Part Number	Top Mark	Operating Temperature Range	Package
FSA2457UMX	GD	-40 to +85°C	16-Lead, Quad, Ultrathin Molded Leadless Package (UMLP), 1.8 x 2.6mm

All packages are lead free per JEDEC: J-STD-020B standard.

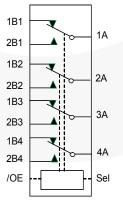


Figure 1. Analog Symbol





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.

ACEx® Build it Now™ CorePLUS™ CROSSVOLT™ CTL TM

Current Transfer Logic™ EcoSPARK® EZSWITCH™*

=7° ™ Fairchild®

Fairchild Semiconductor® FACT Quiet Series™

FACT FAST® FastvCore™ FlashWriter®*

FPS™ FRFET®

Global Power Resources

Green FPS™

Green FPS™ e-Series™ **GTOTM**

i- Lo^{TM} IntelliMAX™ ISOPLANAR™ MegaBuck™ MICROCOUPLER™ MicroFET™ MicroPak™

MillerDrive™ Motion-SPM™ OPTOLOGIC® OPTOPLANAR® PDP-SPM™ Power220® POWEREDGE® Power-SPM™ PowerTrench®

Programmable Active Droop™

OFFT[®] QSTM

QT Optoelectronics™ Quiet Series™ RapidConfigure™ SMART START™ SPM® STEALTH M SuperFET™

SuperSOT™-3 SuperSOT™6 SuperSOT™-8 SupreMOS™ SyncFET™ SYSTEM ® The Power Franchise®

wer franchise TinyBoost™ TinyBuck™ TinyLogic[®] TINYOPTO™ TinyPower™ TinyPWM™ TinyWire™

μSerDes™ UHC[®] Ultra FRFET™ UniFET™ **VCXTM**

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 THE WARRANTY 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.

- 1. Life support devices or systems are devices or systems 2. A critical component in any component of a life support, 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.
- 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.

PRODUCT STATUS DEFINITIONS

Definition of Terms

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

Rev. 133

^{*} EZSWITCH™ and FlashWriter® are trademarks of System General Corporation, used under license by Fairchild Semiconductor.