

# FSA1208

## Low-Power, Eight-Port, High-Speed Isolation Switch

### Features

- Low On Capacitance: 6pF Typical
- Low On Resistance: 15Ω Typical
- Low Power Consumption: 1μA Maximum
- 10μA Maximum I<sub>CC</sub>T over an Expanded Voltage Range (V<sub>IN</sub>=2.3V, V<sub>CC</sub>=4.3V)
- Wide -3db Bandwidth: > 400MHz
- Packaged in Space-Saving 20-Lead MLP (2.5x4.5mm)
- 8kV ESD Rating; >16kV Power/GND ESD Rating
- Low C<sub>OFF</sub> Capacitance: 2.5pF Typical

### Description

The FSA1208 is a low-power, eight-port, high-speed switch. This part is configured as a single-pole, single-throw switch and is optimized for isolating a high-speed source, such as a DDR memory bus. The FSA1208 features an extremely low on capacitance (C<sub>ON</sub>) of 6pF. Superior channel-to-channel crosstalk minimizes interference.

The FSA1208 contains special circuitry on the A & B pins that allows the device to withstand an over-voltage condition. This device is also designed to minimize current consumption even when the control voltage applied to the /OE pin is lower than the supply voltage (V<sub>CC</sub>). Applications include port isolation and switching in DDR memory modules, portable cell phones, PDAs, digital cameras, printers, and notebook computers.


### Applications

- DIMM DDR Memory

### IMPORTANT NOTE:

For additional performance information, please contact [analogswitch@fairchildsemi.com](mailto:analogswitch@fairchildsemi.com).

### Ordering Information

Part Number	Top Mark	Operating Temperature Range	Package	 Eco Status
FSA1208BQX	F1208	-40 to +85°C	20-Lead, Quad, Molded Leadless Package (MLP), 2.5x4.5mm	Green

 For Fairchild's definition of "green" Eco Status, please visit: [http://www.fairchildsemi.com/company/green/rohs\\_green.html](http://www.fairchildsemi.com/company/green/rohs_green.html).

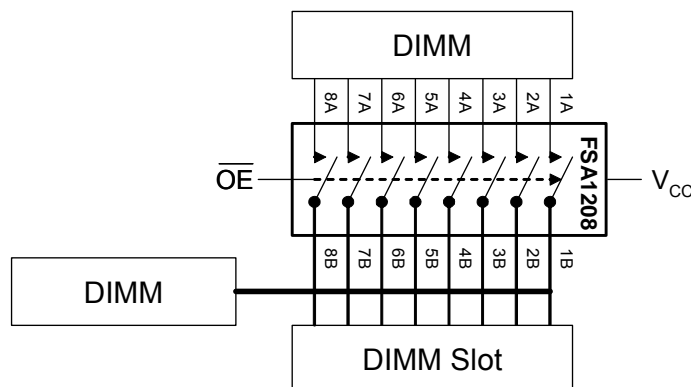


Figure 1. Analog Symbol


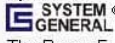


**TRADEMARKS**

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.

Build it Now™  
 CorePLUS™  
 CorePOWER™  
 CROSSVOLT™  
 CTL™  
 Current Transfer Logic™  
 EcoSPARK®  
 EfficientMax™  
 EZSWITCH™ \*  
™  
®  
 Fairchild®  
 Fairchild Semiconductor®  
 FACT Quiet Series™  
 FACT®  
 FAST®  
 FastvCore™  
 FlashWriter®\*  
 FPST™  
 F-PFST™

FRFET®  
 Global Power Resource™  
 Green FPST™  
 Green FPST™ e-Series™  
 GTO™  
 IntelliMAX™  
 ISOPLANAR™  
 MegaBuck™  
 MICROCOUPLER™  
 MicroFET™  
 MicroPak™  
 MillerDrive™  
 MotionMax™  
 Motion-SPM™  
 OPTOLOGIC®  
 OPTOPLANAR®  
  
 PDP SPM™  
 Power-SPM™  
 PowerTrench®  
 PowerXS™

Programmable Active Droop™  
 QFET®  
 QST™  
 Quiet Series™  
 RapidConfigure™  
™  
 Saving our world, 1mW/VW/kW at a time™  
 SmartMax™  
 SMART START™  
 SPM®  
 STEALTH™  
 SuperFET™  
 SuperSOT™.3  
 SuperSOT™.6  
 SuperSOT™.8  
 SupreMOS™  
 SyncFET™  
 SYSTEM GENERAL®  
 The Power Franchise®

the power franchise  
 TinyBoost™  
 TinyBuck™  
 TinyLogic®  
 TINYOPTO™  
 TinyPower™  
 TinyPWM™  
 TinyWire™  
 μSerDes™  
 SerDes™  
 UHC®  
 Ultra FRFET™  
 UniFET™  
 VCX™  
 VisualMax™  
 XS™

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

**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.

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](http://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 in any manner without notice.
Preliminary	First Production	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	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	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

Rev. I37