

8:1 Analog Multiplexer IC, Single, 300 ohm, 10.8V to 16.5V, SOIC-16

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOP-16
Product Type	Interface - Switches, Multiplexers, Demultiplexers
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for ADG508FBRNZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ADG508F and ADG509F are CMOS analog multiplexers, with the ADG508F comprising eight single channels and the ADG509F comprising four differential channels. These multiplexer provides fault protection. Using a series n-channel, p-channel, n-channel MOSFET structure, both device and signal source protection is provided in the event of an overvoltage or power loss. The multiplexer can withstand continuous overvoltage inputs from -40 V to +55 V. During fault conditions with power supplies off, the multiplexer input (or output) appears as an open circuit and only a few nanoamperes of leakage current will flow. This protects not only the multiplexer and the circuitry driven by the multiplexer, but also protects the sensors or signal sources that drive the multiplexer.

The ADG508F switches one of eight inputs to a common output as determined by the 3-bit binary address lines A0, A1 and A2. The ADG509F switches one of four differential inputs to a common differential output as determined by the 2-bit binary address lines A0 and A1. An EN input on each device is used to enable or disable the device. When disabled, all channels are switched OFF.

### Product Highlights

**Fault protection.** The ADG508F/ADG509F can withstand continuous voltage inputs from -40 V to +55 V. When a fault occurs due to the power supplies being turned off, all the channels are turned off and only a leakage current of a few nanoamperes flows.

On channel saturates while fault exists.

Low RON.

Fast switching times.

Break-before-make switching. Switches are guaranteed break-before-make so that input signals are protected against momentary shorting.

Trench isolation eliminates latch-up. A dielectric trench separates the p and n-channel MOSFETs thereby preventing latch-up.

### Applications

Existing multiplexer applications (both fault-protected and nonfault-protected)

New designs requiring multiplexer functions

## Features

All switches off with power supply off

Analog output of on channel clamped within power supplies if an overvoltage occurs

Latch-up proof construction

Low On Resistance (270  $\Omega$  typical)

Fast Switching Time 230 ns maximum toff 130 ns maximum

Low power dissipation (3.3 mW maximum)

Fault and overvoltage protection (-40 V to +55 V)

Break-before-make construction

TTL and CMOS compatible inputs

## Application

Existing multiplexer applications (both fault-protected and nonfault-protected)

New designs requiring multiplexer functions

## Related Products



### [ADV7181CBSTZ](#)

Analog Devices, Inc  
LQFP-64



### [AD724JR](#)

Analog Devices, Inc  
SOIC-16



### [ADV7391WBCPZ](#)

Analog Devices, Inc  
LFSCP-3



### [ADV7341BSTZ](#)

Analog Devices, Inc  
LQFP-64



### [AD8170AR](#)

Analog Devices, Inc  
SOP8



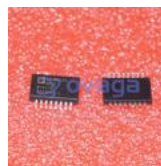
### [ADV7393BCPZ](#)

Analog Devices, Inc  
LFCSP-VQ-40



### [ADV7390BCPZ](#)

Analog Devices, Inc  
QFN32



### [ADUM4160BRIZ](#)

Analog Devices, Inc  
SOIC-16