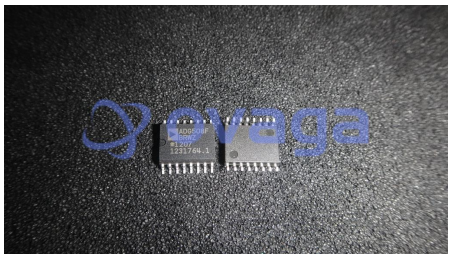
ADG508FBRWZ

Data Sheet

Analog Multiplexer Single 8:1 16-Pin SOIC W Tube



Images are for reference only

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-16
Product Type	Interface - Switches, Multiplexers, Demultiplexers
RoHS	Rohs
Lifecycle	

Please submit RFQ for ADG508FBRWZ or Email to us: 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 suppplies 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 Ω typical)

Fast Switching Timeston 230 ns maximumtoff 130 ns maximum

Low power dissipation (3.3 mW maximum)

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

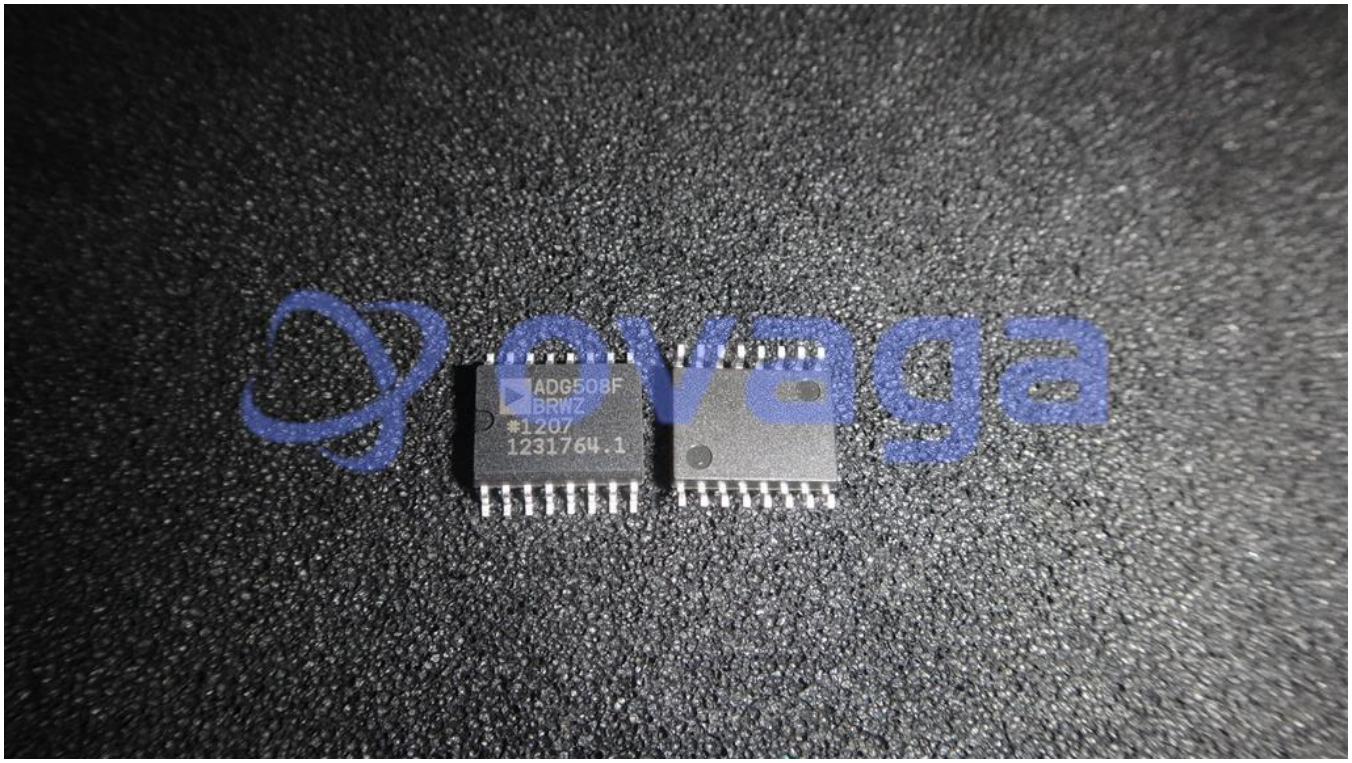
Break-before-make construction

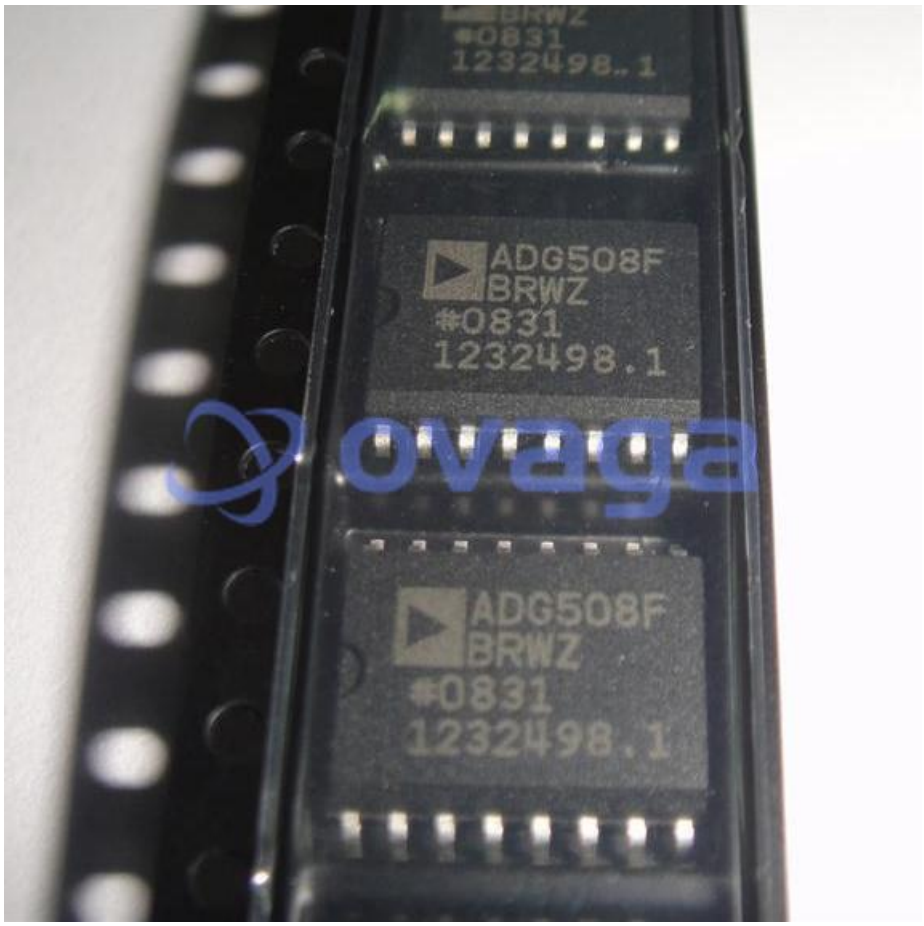
TTL and CMOS compatible inputs

Application

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

New designs requiring multiplexer functions





Related Products

[ADV7181CBSTZ](#)

Analog Devices, Inc

LQFP-64

[AD8170AR](#)

Analog Devices, Inc

SOP8

[AD724JR](#)

Analog Devices, Inc

SOIC-16

[ADV7393BCPZ](#)

Analog Devices, Inc

LFCSP-VQ-40

[ADV7391WBCPZ](#)

Analog Devices, Inc

LFSCP-3

[ADV7390BCPZ](#)

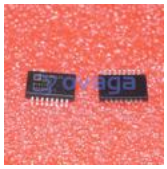
Analog Devices, Inc

QFN32

[ADV7341BSTZ](#)

Analog Devices, Inc

LQFP-64



[ADUM4160BRIZ](#)

Analog Devices, Inc

SOIC-16