

Analog Devices Launches Industry's First Quad-Channel Protector and Multiplexers with Programmable Fault Detection

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) today introduced a quad-channel protector and two multiplexers offering +/-55-V overvoltage protection (OVP) for precision converters, amplifiers and other components that operate from a low voltage of 4.5 V up to 36 V. The [ADG5462F](http://www.analog.com/adg5462f) quad channel protector, [ADG5248F](http://www.analog.com/adg5248f) 8:1 multiplexer and [ADG5249F](http://www.analog.com/adg5249f) differential 4:1 multiplexer offer +/-55-V OVP in power-on and power-off stages and provide robust, precision protection against hot-swapping and operator miss-use events, thereby protecting downstream analog components. By providing on-chip fault diagnostics, the new devices are the first in the industry to detect and avoid defective channels, which simplifies fault detection algorithms and improves system uptime. The new products maximize design flexibility by enabling users to define fault-trigger levels independent of primary supplies. By also removing the need for multiple discrete protection components, the ADG5462F, ADG5248F and ADG5249F optimize PCB area and simplify the design process. The devices are optimized for precision instrumentation, process control and avionics applications.

This Smart News Release features multimedia. View the full release here:

<http://www.businesswire.com/news/home/20150709005754/en/>

- View ADG5462F product page, pricing and availability; download data sheet; order samples and evaluation boards: <http://www.analog.com/adg5462f.html>
- View ADG5248F and ADG5249F product page, pricing and availability; download data sheet; order samples and evaluation boards: <http://www.analog.com/adg5248f.html>
- Learn about ADI's fault protected, switches and muxes product portfolio: <http://www.analog.com/en/products/switches-multiplexers.html#fault-protected-switches-multiplexers>
- Connect with engineers and ADI product experts on EngineerZone®, an online technical support community: https://ez.analog.com/community/switches_multiplexers
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The [ADG5248F](http://www.analog.com/adg5248f) 8:1 multiplexer and [ADG5249F](http://www.analog.com/adg5249f) differential 4:1 multiplexer maximize throughput for small signal measurement such as thermocouples or resistance temperature detectors (RTDs) by offering best-in-class, low-fault leakage of 70 nA, which is 10 times lower than competing solutions, and on-leakage of 20 nA. These levels ensure that the user can take accurate measurements when other multiplexer I/O channels are in an over-voltage fault condition.

Key Features:

Over-voltage detection on source pins

- Minimum secondary supply level: 4.5-V single-supply
- Over-voltage protection up to +/-55 V
- 4-kV HBM (human body model) ESD (ADG5462F)

VSS to VDD analog signal range

- +/-5-V to +/-22-V dual-supply operation
- 8-V to 44-V single-supply operation
- Fully specified at +/-15 V, +/-20 V, +12 V, and +36 V

Operating Temperature Range -40°C to +125°

ADG5462F: Ultra-low on-resistance of 10 ohm and on-resistance flatness of 0.5 ohm minimizes system total harmonic distortion and enhances noise performance.

ADG5248F/49F: Ultra-low charge injection of 0.8 pC and on-capacitance of 19 pF enables higher accuracy, faster channel

switching in multiplexed systems.

Family Optimized for Low R_{ON}

Product	Configuration	Fault Trigger Threshold	Fault Mode Indicator	Fault Flag	Packaging
ADG5462F	Quad Channel Protector	Secondary Supplies	Selectable Secondary Supplies or Open Circuit	Indicator of Fault	16-lead TSSOP/LFCSP
ADG5412F/13F	Quad SPST	Primary Supplies	Open Circuit	Indicator of Fault	16-lead TSSOP/LFCSP
ADG5412BF/13BF	Quad SPST& Bidirectional OVP	Primary Supplies	Open Circuit	Indicator of Fault	16-lead TSSOP/LFCSP
ADG5404F	4:1 Multiplexer	Primary Supplies	Selectable Rails or Open Circuit	Indicator of Fault & Source of Fault	14-lead TSSOP 16-lead LFCSP
ADG5436F	Dual SPDT	Primary Supplies	Selectable Rails or Open Circuit	Indicator of Fault & Source of Fault	16-lead TSSOP/LFCSP

Family Optimized for Low Charge Injection

Product	Configuration	Fault Trigger Threshold	Fault Mode Indicator	Fault Flag	Packaging (Released)
ADG5248F	8:1 Multiplexer	Secondary Supplies	Secondary Supplies	Indicator of Fault & Source of Fault	20-lead TSSOP
ADG5249F	Differential 4:1 Multiplexer	Secondary Supplies	Secondary Supplies	Indicator of Fault & Source of Fault	20-lead TSSOP
ADG5208F	8:1 Multiplexer	Primary Supplies	Rails	None	16-lead TSSOP
ADG5209F	Differential 4:1 Multiplexer	Primary Supplies	Rails	None	16-lead TSSOP
ADG5243F (sampling)	Triple SPDT	Secondary Supplies	Secondary Supplies	Indicator of Fault & Source of Fault	20-lead TSSOP

About Analog Devices

Analog Devices (NASDAQ: ADI) designs and manufactures semiconductor products and solutions. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure and connect. Visit <http://www.analog.com>

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