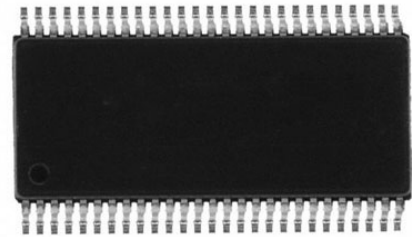


Instrumentation Amplifiers Ultra low input bias current 16V prec

Manufacturers	Analog Devices, Inc
Package/Case	8-SOIC (0.154, 3.90mm Width)
Product Type	Amplifier ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for ADA4530-1ARZ-R7 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADA4530-1 is a femtoampere (10–15 A) level input bias current operational amplifier suitable for use as an electrometer that also includes an integrated guard buffer. It has an operating voltage range of 4.5 V to 16 V, enabling it to operate in conventional 5 V and 10 V single supply systems as well as ± 2.5 V and ± 5 V dual supply systems.

It provides ultralow input bias currents that are production tested at 25°C and at 125°C to ensure the device meets its performance goals in user systems. The integrated guard buffer isolates the input pins from leakage in the printed circuit board (PCB), minimizes board component count, and enables easy system design. The ADA4530-1 is available in an industry-standard surface-mount 8-lead SOIC package with a unique pinout optimized to prevent signals from coupling between the sensitive input pins, the power supplies, and the output pin while enabling easy routing of the guard ring traces.

The ADA4530-1 also offers low offset voltage, low offset drift, and low voltage and current noise needed for the types of applications that require such low leakages.

To maximize the dynamic range of the system, the ADA4530-1 has a rail-to-rail output stage that can typically drive to within 30 mV of the supply rails under a 10 k Ω load.

The ADA4530-1 operates over the -40°C to $+125^{\circ}\text{C}$ industrial temperature range and is available in an 8-lead SOIC package.

Features

Low input bias current

Low offset voltage: 50 μV maximum over specified CMRR range

Offset voltage drift: $\pm 0.13 \mu\text{V}/^\circ\text{C}$ typical, $\pm 0.5 \mu\text{V}/^\circ\text{C}$ maximum

Integrated guard buffer with 100 μV maximum offset

Low voltage noise density: 14 $\text{nV}/\sqrt{\text{Hz}}$ at 10 kHz

Wide bandwidth: 2 MHz unity-gain crossover

Supply voltage: 4.5 V to 16 V ($\pm 2.25 \text{ V}$ to $\pm 8 \text{ V}$)

Operating temperature: -40°C to $+125^\circ\text{C}$

Long-term offset voltage drift (10,000 hours): 0.5 μV typical

Temperature hysteresis: 1.5 μV typical

Application

Laboratory and analytical instrumentation: spectrophotometers, chromatographs, mass spectrometers, and potentiostatic and amperostatic coulometry

Instrumentation: picoammeters and coulombmeters

Transimpedance amplifier (TIA) for photodiodes, ion chambers, and working electrode measurements

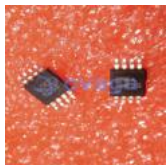
High impedance buffering for chemical sensors and capacitive sensors

Related Products



[AD8418BRMZ-RL](#)

Analog Devices, Inc
MSOP-8



[ADA4084-2ARMZ](#)

Analog Devices, Inc
MSOP-8



[AD8567ARUZ](#)

Analog Devices, Inc
TSSOP-14



[AD8022ARMZ](#)

Analog Devices, Inc
MSOP-8



[ADA4528-2ARMZ-R7](#)

Analog Devices, Inc
MSOP-8



[AD8062ARMZ](#)

Analog Devices, Inc
MSOP8



[AD8628AUJZ](#)

Analog Devices, Inc
SOP23



[AD8041AR](#)

Analog Devices, Inc
SOP-8