

0.2 $\mu\text{V}/^\circ\text{C}$ Offset Drift, 105 MHz Low Power, Low Noise, Rail-to-Rail Amplifier

Manufacturers	Analog Devices, Inc
Package/Case	6-Lead SC70
Product Type	Amplifier ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADA4805-1AKSZ-R2 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADA4805-1 is a high speed voltage feedback rail-to-rail output amplifier with an exceptionally low quiescent current of 495 μA , making it ideal for low power, high resolution data conversion systems. Despite being low power, this amplifier provides excellent overall performance. It offers a high bandwidth of 105 MHz at a gain of 1, high slew rate of 160 $\text{V}/\mu\text{s}$, and a low input offset voltage of 125 μV maximum.

A shutdown pin allows further reduction of the quiescent supply current to 3 μA . For power sensitive applications, the shutdown mode offers very fast turn-on time of 3 μs from shutdown to fully on (output settled to 16 bits). This allows the user to dynamically manage the power of the amplifier by turning the amplifier off between ADC samples.

The Analog Devices, Inc., proprietary extra fast complementary bipolar (XFCB) process allows for both low voltage and low current noise (5.9 $\text{nV}/\sqrt{\text{Hz}}$, 0.6 $\text{pA}/\sqrt{\text{Hz}}$). The ADA4805-1 operates over a wide range of supply voltages from $\pm 1.5\text{ V}$ to $\pm 5\text{ V}$, as well as from single 3 V and 5 V supplies, making it ideal for high speed, low power instruments.

The ADA4805-1 amplifier is available in both a 6-lead SOT-23 and a 6-lead SC70 package. These amplifiers are rated to work over the industrial temperature range of -40°C to $+125^\circ\text{C}$.

Features

Low input offset voltage: 125 μ V (maximum)

Low input offset voltage drift: 0.2 μ V/ $^{\circ}$ C (typical) 1.5 μ V/ $^{\circ}$ C (maximum)

Ultralow supply current: 495 μ A/amplifier

Wide supply voltage range: 3 V to 10 V

High speed performance—3 dB bandwidth: 105 MHz Slew rate: 160 V/ μ s 0.1% settling time: 35 ns

Rail-to-rail outputs

Input common-mode range: $-V_S - 0.1$ V to $+V_S - 1$ V

Low noise: 5.9 nV/ $\sqrt{\text{Hz}}$ at 100 kHz; 0.6 pA/ $\sqrt{\text{Hz}}$ at 100 kHz

Low distortion: -102 dBc/ -116 dBc HD2/HD3 at 100 kHz

Low input bias current: 470 nA (typical)

Dynamic power scaling High speed turn-on time: 3 μ s (maximum) fully settled

Small packaging 6-lead SC70, 6-lead SOT-23

Application

High resolution, high precision ADC drivers

Battery-powered instrumentation

Micropower active filters

Portable point of sales terminals

Active RFID readers

Photo multipliers

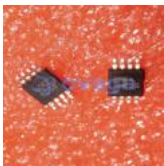
ADC reference buffers

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