

Single-Supply, Rail-to-Rail, Low Power FET-Input Op Amp

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOIC-8
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD820ARZ-REEL7 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

Offset voltage of 800  $\mu\text{V}$  maximum, offset voltage drift of 2  $\mu\text{V}/^\circ\text{C}$ , typical input bias currents below 25 pA, and low input voltage noise provide dc precision with source impedances up to 1 G $\Omega$ . 1.8 MHz unity gain bandwidth, -93 dB THD at 10 kHz, and 3 V/ $\mu\text{s}$  slew rate are provided for a low supply current of 800  $\mu\text{A}$ . The AD820 drives up to 350 pF of direct capacitive load and provides a minimum output current of 15 mA. This allows the amplifier to handle a wide range of load conditions. This combination of ac and dc performance, plus the outstanding load drive capability, results in an exceptionally versatile amplifier for the single-supply user.

The AD820 is available in two performance grades. The A and B grades are rated over the industrial temperature range of -40°C to +85°C. The AD820 is offered in three 8-lead package options: plastic DIP (PDIP), surface mount (SOIC) and (MSOP).

## Features

True single-supply operation  
Output swings rail-to-rail  
Input voltage range extends below ground  
Single-supply capability from 5 V to 36 V  
Dual-supply capability from  $\pm 2.5$  V to  $\pm 18$  V

Excellent load drive  
Capacitive load drive up to 350 pF  
Minimum output current of 15 mA

Excellent ac performance for low power  
800  $\mu$ A maximum quiescent current  
Unity-gain bandwidth: 1.8 MHz  
Slew rate of 3 V/ $\mu$ s

Excellent dc performance  
800  $\mu$ V maximum input offset voltage  
2  $\mu$ V/ $^{\circ}$ C typical offset voltage drift  
25 pA maximum input bias current

Low noise: 13 nV/ $\sqrt{\text{Hz}}$  @ 10 kHz

## Application

Battery-powered precision instrumentation

Photodiode preamps

Active filters

12-bit to 14-bit data acquisition systems

Medical instrumentation

Low power references and regulators

Data Sheet, Rev. F, 11/08

CAUTION  
SENSITIVE ELECTRONIC DEVICES  
DO NOT OPEN EXCEPT AT  
APPROVED FIELD SERVICE  
PROTECTIVE WORK STATION

ANALOG  
DEVICES



COUNTRY OF ASSEMBLY: CHINA  
COUNTRY OF DIFFUSION: USA  
(Q)QTY: 750  
(9D)DATE CODE: 2144  
(1P)MFG NO: AD820ARZ - REEL7

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MSL 1  
PPBT = 260'C  
e3 BOX 5 OF 8



## Related Products



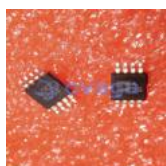
### [AD8418BRMZ-RL](#)

Analog Devices, Inc  
MSOP-8



### [ADA4528-2ARMZ-R7](#)

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MSOP-8



### [ADA4084-2ARMZ](#)

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### [AD8062ARMZ](#)

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