AD8331ARQZ

Data Sheet

Programmable/Variable Amplifier, 1 Channels, 2 Amplifier, 120 MHz, -40 °C, 85 °C, 4.5V to 5.5V

Manufacturers	Analog Devices, Inc
Package/Case	QSOP-20
Product Type	Amplifier ICs
RoHS	Pb-free Halide free
Lifecycle	

Images are for reference only

Please submit RFQ for AD8331ARQZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD8331 is a single channel, ultralow noise, linear-in-dB, variable gain amplifier (VGA). Optimized for ultrasound systems, it is usable as a low noise variable gain element at frequencies up to 120 MHz.

Included is an ultralow noise preamplifier (LNA), an X-AMP® VGA with 48 dB of gain range, and a selectable gain postamplifier with adjustable output limiting. The LNA gain is 19 dB with a single-ended input and differential outputs. Using a single resistor, the LNA input impedance can be adjusted to match a signal source without compromising noise performance.

The 48 dB gain range of the VGA makes these devices suitable for a variety of applications. Excellent bandwidth uniformity is maintained across the entire range. The gain control interface provides precise linear-in-dB scaling of 50 dB/V for control voltages between 40 mV and 1 V. Factory trim ensures excellent part-to-part and channel-to-channel gain matching. Differential signal paths result in superb second- and third-order distortion performance and low crosstalk.

The operating temperature range is -40°C to +85°C. The AD8331 is available in a 20-lead QSOP package.

The AD8331 is a single version of the dual AD8332 and quad AD8334.

For information on specs, see the AD8331/AD8332/AD8334 datasheet.

Features

Ultralow noise preamplifier (preamp)

Voltage>

Current>

3 dB bandwidth: 120 MHz

Low power: 125 mW/channel

Wide gain range with programmable postamp

7.5 dB to 55.5 dB in HI gain mode

Low output-referred noise: 48 nV/√Hz typical

Active input impedance matching

Optimized for 10-bit/12-bit ADCs

Selectable output clamping level

Single 5 V supply operation

Download(pdf)

Military Temperature Range: −55°C to +105°C

Controlled manufacturing baseline

1 assembly/test site

1 fabrication site

Product change notification

Qualification data available on request

Application

Ultrasound and sonar time-gain controls

High performance automatic gain control (AGC) systems

I/Q signal processing

High speed, dual ADC drivers

Related Products

AD8418BRMZ-RL

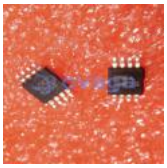
Analog Devices, Inc

MSOP-8

ADA4528-2ARMZ-R7

Analog Devices, Inc

MSOP-8



ADA4084-2ARMZ

Analog Devices, Inc

MSOP-8

AD8062ARMZ

Analog Devices, Inc

MSOP8

[AD8567ARUZ]

Analog Devices, Inc

TSSOP-14

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[AD8022ARMZ]

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SOP-8