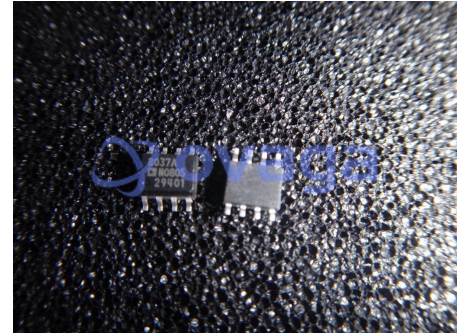


Operational Amplifier, Single, 1 Amplifier, 270 MHz, 1.5 kV/ μ s, ± 3 V to ± 6 V, SOIC, 8 Pins

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-8
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD8037ARZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD8036 and AD8037 are wide bandwidth, low distortion clamping amplifiers. The AD8036 is unity gain stable. The AD8037 is stable at a gain of two or greater. These devices allow the designer to specify a high (VCH) and low (VCL) output clamp voltage. The output signal will clamp at these specified levels. Utilizing a unique patent pending CLAMPIN™ input clamp architecture, the AD8036 and AD8037 offer a 10 \times improvement in clamp performance compared to traditional out-V put clamping devices. In particular, clamp error is typically 3 mV or less and distortion in the clamp region is minimized. This product can be used as a classical op amp or a clamp amplifier where a high and low output voltage are specified.

The AD8036 and AD8037, which utilize a voltage feedback architecture, meet the requirements of many applications which previously depended on current feedback amplifiers. The AD8036 and AD8037 exhibit an exceptionally fast and accurate pulse response (16 ns to 0.01%), extremely wide small-signal and large-signal bandwidths and ultralow distortion. The AD8036 achieves -66 dBc at 20 MHz, and 240 MHz small-signal and 195 MHz large-signal bandwidths. The AD8036 and AD8037's recover from 2 \times clamp overdrive within 1.5 ns. These characteristics position the AD8036/AD8037 ideally for driving as well as buffering flash and high resolution ADCs.

In addition to traditional output clamp amplifier applications, the input clamp architecture supports the clamp levels as additional inputs to the amplifier. As such, in addition to static dc clamp levels, signals with speeds up to 240 MHz can be applied to the clamp pins. The clamp values can also be set to any value within the output voltage range provided that VH is greater than VL. Due to these clamp characteristics, the AD8036 and AD8037 can be used in nontraditional applications such as a full-wave rectifier, a pulse generator, or an amplitude modulator. These novel applications are only examples of some of the diverse applications which can be designed with input clamps.

The AD8036 is offered in chips, industrial (-40°C to +85°C) and military (-55°C to +125°C) package temperature ranges and the AD8037 in industrial. Industrial versions are available in plastic DIP and SOIC; MIL versions are packaged in cerdip.

Features

Superb clamping characteristics

3 mV clamp error

1.5 ns overdrive recovery

Minimized nonlinear clamping region

240 MHz clamp input bandwidth

Wide bandwidth

Small signal: 270 MHz

Large signal (4 V p-p): 190 MHz

Good DC characteristics

2 mV offset

10 $\mu\text{V}/^\circ\text{C}$ drift

See data sheet for additional features

AD8037-EP supports defense and aerospace applications (AQEC standard)

Download

Extended industrial temperature range: -55°C to $+105^\circ\text{C}$

Controlled manufacturing baseline

One assembly/test site

One fabrication site

Product change notification

Qualification data available on request

V62/16612 DSCC Drawing Number

Application

ADC buffer

IF/RF signal processing

High quality imaging broadcast

Video systems

Video amplifier

Full wave rectifier



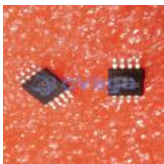


Related Products



[AD8418BRMZ-RL](#)

Analog Devices, Inc
MSOP-8



[ADA4084-2ARMZ](#)

Analog Devices, Inc
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[AD8567ARUZ](#)

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