OP413ESZ

Data Sheet

Operational Amplifiers - Op Amps QUAD LO-NOISE LO-DRIFT IC

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-16
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for OP413ESZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The OPx13 family of single-supply operational amplifiers features both low noise and drift. It has been designed for systems with internal calibration. Often these processor-based systems are capable of calibrating corrections for offset and gain, but they cannot correct for temperature drifts and noise. Optimized for these parameters, the OPx13 family can be used to take advantage of superior analog performance combined with digital correction. Many systems using internal calibration operate from unipolar supplies, usually either 5 V or 12 V. The OPx13 family is designed to operate from single supplies from 4 V to 36 V and to maintain its low noise and precision performance.

The OPx13 family is unity gain stable and has a typical gain bandwidth product of 3.4 MHz. Slew rate is in excess of 1 V/µs. Noise density is a very low 4.7 nV/√Hz, and noise in the 0.1 Hz to 10 Hz band is 120 nV p-p. Input offset voltage is guaranteed and offset drift is guaranteed to be less than 0.8 µV/°C. Input common-mode range includes the negative supply and to within 1 V of the positive supply over the full supply range. Phase reversal protection is designed into the OPx13 family for cases where input voltage range is exceeded. Output voltage swings also include the negative supply and go to within 1 V of the positive rail. The output is capable of sinking and sourcing current throughout its range and is specified with 600 Ω loads.

Digital scales and other strain gage applications benefit from the very low noise and low drift of the OPx13 family. Other applications include use as a buffer or amplifier for both analog-to-digital (ADC) and digital-to-analog (DAC) sigma-delta converters. Often these converters have high resolutions requiring the lowest noise amplifier to utilize their full potential. Many of these converters operate in either single-supply or low-supply voltage systems, and attaining the greater signal swing possible increases system performance.

The OPx13 family is specified for single 5 V and dual ±15 V operation over the XIND—extended industrial temperature range (–40°C to +85°C). They are available in PDIP and SOIC surface-mount packages.

Features

Single- or dual-supply operation

Low noise: 4.7 nV/√Hz @ 1 kHz

Wide bandwidth: 3.4 MHz

Low offset voltage: 100 µV

Very low drift: 0.2 µV/°C

Unity gain stable

No phase reversal

Application

Digital scales

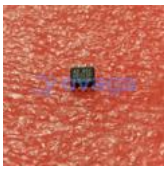
Multimedia

Strain gages

Battery-powered instrumentation

Temperature transducer amplifier

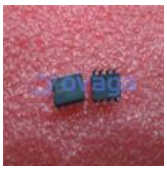
Related Products



OP213F

Analog Devices, Inc

SMD/DIP-8/SOP-8



OP42AZ

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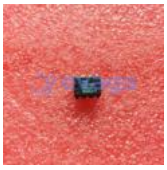
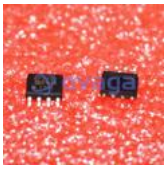
CDIP-8



OP27GP

Analog Devices, Inc

PDIP-8



OP37GS

Analog Devices, Inc

SOIC-8

OP462GSZ

Analog Devices, Inc

SOIC-14

OP2177ARM

Analog Devices, Inc

MSOP8

OP467GPZ

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PDIP-14

OP400GPZ

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PDIP-14