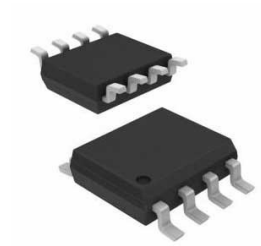


Op Amp Dual Low Noise Amplifier R-R O/P $\pm 18V/36V$ Automotive 8-Pin SOIC T/R



Images are for reference only

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: SOP8

Product Type: Amplifier ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

[Inquiry](#)

General Description

The OPA171-Q1 family of devices is a 36-V, single-supply, low-noise operational amplifier (op amp) with the ability to operate on supplies ranging from 2.7 V (± 1.35 V) to 36 V (± 18 V). This series is available in multiple packages and offers low offset, drift, and low quiescent current. The single, dual, and quad versions all have identical specifications for maximum design flexibility.

Unlike most op amps, which are specified at only one supply voltage, the OPAX171-Q1 family of devices is specified from 2.7 V to 36 V. Input signals beyond the supply rails do not cause phase reversal. The OPAX171-Q1 family of devices is stable with capacitive loads up to 300 pF. The input can operate 100 mV below the negative rail and within 2 V of the top rail during normal operation. The device can operate with full rail-to-rail input 100 mV beyond the top rail, but with reduced performance within 2 V of the top rail.

The OPAX171-Q1 op amp family is specified from -40°C to $+125^{\circ}\text{C}$.

Key Features

Qualified for automotive applications

AEC-Q100 test guidance with the following results:

Temperature grade 1: -40°C to +125°C ambient operating temperature

Device HBM ESD classification level:

Level 3A for OPA171-Q1

Level 2 for OPA4171-Q1

Device CDM ESD classification level

Level C4A for OPA171-Q1/TLV171-Q1

Level C6 for OPA2171-Q1

Level C6 for OPA4171-Q1

Supply range:

Single-supply: 2.7 V to 36 V

Dual-supply ± 1.35 V to ± 18 V

Low noise: 14 nV/ $\sqrt{\text{Hz}}$ at 1 kHz

Low offset drift: ± 0.3 $\mu\text{V}/^\circ\text{C}$ (typical)

Input range includes negative supply

Input range operates to positive supply with reduced performance

Rail-to-rail output

Gain bandwidth: 3 MHz

Low quiescent current: 475 μA per amplifier

High Common-mode rejection: 120 dB (typical)

Low input bias current: 10 pA

Industry-Standard Package:

5-Pin Small-Outline Transistor SOT-23 (DBV) Package

Recommended For You

OPA445BM

Texas Instruments, Inc

CAN

OPA1611AIDR

Texas Instruments, Inc

SOP8

OPA388QDBVRQ1

Texas Instruments, Inc

SOT23-5

OPA2365AQDRQ1

Texas Instruments, Inc

SOP8

OPA334AIDBVR

Texas Instruments, Inc

SOT23-6

OPA2835IDGSR

Texas Instruments, Inc

MSOP10

OPA656U

Texas Instruments, Inc
SOP8

OPA360AIDCKR

Texas Instruments, Inc
SC70-6

LMI11H/NOPB

Texas Instruments, Inc
CAN8

OPA353UA

Texas Instruments, Inc
SOP8

LMI3700MX/NOPB

Texas Instruments, Inc
SOP16

OPA633KP

Texas Instruments, Inc
DIP8

OPA453FAKTWT

Texas Instruments, Inc
TO263-7

OPA4251UA

Texas Instruments, Inc
SOP14

LMV321M5X/NOPB

Texas Instruments, Inc
SOT23-5