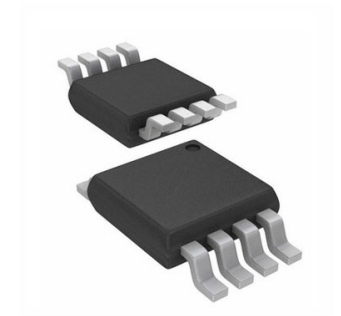


**Op Amp Dual Low Noise Amplifier R-R O/P  $\pm 18V/36V$  Automotive  
8-Pin VSSOP T/R**



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** VSSOP-8

**Product Type:** Amplifier ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

## 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 ( $\pm 1.35$  V) to 36 V ( $\pm 18$  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  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

## Key Features

Qualified for automotive applications

AEC-Q100 test guidance with the following results:

Temperature grade 1:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  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  $\pm 1.35$  V to  $\pm 18$  V

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

Low offset drift:  $\pm 0.3$   $\mu\text{V}/^{\circ}\text{C}$  (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  $\mu\text{A}$  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

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### 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