

Op Amp Quad Low Power Amplifier R-R I/O $\pm 2.75\text{V}/5.5\text{V}$ Automotive 14-Pin TSSOP T/R

Manufacturer:	Texas Instruments, Inc	<input type="text" value="TLV4314QPWRQ1 Image"/>
Package/Case:	TSSOP-14	Images are for reference only
Product Type:	Amplifier ICs	Inquiry
RoHS:	RoHS Compliant/Lead free 	
Lifecycle:	Active	

General Description

The TLVx314-Q1 family of single-, dual-, and quad-channel operational amplifiers represents a new generation of low-power, general-purpose operational amplifiers. Rail-to-rail input and output swings (RRIO), low quiescent current (150 μA typically at 5 V) combine with a wide bandwidth of 3 MHz to make this family very attractive for a variety of battery-powered applications that require a good balance between cost and performance. The TLVx314-Q1 family achieves a low-input bias current of 1 pA, making it an excellent choice for high impedance sensors.

The robust design of the TLVx314-Q1 devices provides ease-of-use to the circuit designer: unity-gain stability, RRIO, capacitive loads of up to 300-pF, an integrated RF and EMI rejection filter, no phase reversal in overdrive conditions, and high electrostatic discharge (ESD) protection (4-kV HBM).

These devices are optimized for low-voltage operation as low as 1.8 V (± 0.9 V) and up to 5.5 V (± 2.75 V), and are specified over the extended industrial temperature range of -40°C to $+125^\circ\text{C}$.

The TLV314-Q1 (single) is available in both 5-pin SC70 and SOT-23 packages. The TLV2314-Q1 (dual) is offered in 8-pin SOIC and VSSOP packages. The quad-channel TLV4314-Q1 is offered in a 14-pin TSSOP package.

Key Features

Qualified for Automotive Applications

AEC-Q100 Qualified With the Following Results:

Device Temperature Grade 1: -40°C to $+125^{\circ}\text{C}$ Ambient Operating Temperature Range

Device HBM ESD Classification Level 3A

Device CDM ESD Classification Level C6

Low Offset Voltage: 0.75 mV (Typical)

Low Input Bias Current: 1 pA (Typical)

Wide Supply Range: 1.8 V to 5.5 V

Rail-to-Rail Input and Output

Gain Bandwidth: 3 MHz

Low IQ: 250 $\mu\text{A}/\text{Ch}$ (Maximum)

Low Noise: 16 $\text{nV}/\sqrt{\text{Hz}}$ at 1 kHz

Internal RF and EMI Filter

Number of Channels:

TLV314-Q1: 1

TLV2314-Q1: 2

TLV4314-Q1: 4

Extended Temperature Range: -40°C to $+125^{\circ}\text{C}$

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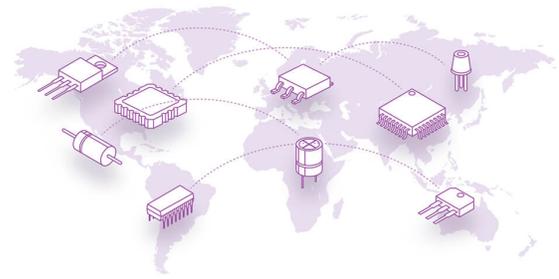
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Recommended For You

TLC27M2CP

Texas Instruments, Inc

DIP8

TLV3501AIDR

Texas Instruments, Inc

SOP8

TL071ACP

Texas Instruments, Inc

DIP-8

TL062CDR

Texas Instruments, Inc

SOP8

TLE2142IP

Texas Instruments, Inc

DIP8

TLC272AID

Texas Instruments, Inc

SOP-8

TLV3502AQDCNRQ1

Texas Instruments, Inc

SOT23-8

TL084CD

Texas Instruments, Inc

SOP14

TLV2711DBVR

Texas Instruments, Inc

SOT23-5

TLC074CD

Texas Instruments, Inc

SOP14

TLC2272ACD

Texas Instruments, Inc

SOP-8

TLC2272AIDR

Texas Instruments, Inc

SOP8

TLV2462ID

Texas Instruments, Inc

SOP-8

TLV2471QDBVRQ1

Texas Instruments, Inc

SOT23-5

TLV23811DBVR

Texas Instruments, Inc

SOT23-5