## V-Ref Precision 2.5V 20mA 8-Pin SOIC T/R

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| **Manufacturer:** | Texas Instruments, Inc |
| **Package/Case:** | SOP-8 |
| **Product Type:** | Power Management ICs |
| **RoHS:** | RoHS Compliant/Lead free |
| **Lifecycle:** | Active |

Images are for reference only

Inquiry

## General Description

In signal-conditioning applications using a single power source, a reference voltage is required for termination of all signal grounds. To accomplish this, engineers have typically used solutions consisting of resistors, capacitors, operational amplifiers, and voltage references. Texas Instruments has eliminated all of those components with one easy-to-use 3-terminal device. That device is the TLE2425 precision virtual ground.

Use of the TLE2425 over other typical circuit solutions gives the designer increased dynamic signal range, improved signal-to-noise ratio, lower distortion, improved signal accuracy, and easier interfacing to ADCs and DACs. These benefits are the result of combining a precision micropower voltage reference and a high-performance precision operational amplifier in a single silicon chip. It is the precision and performance of these two circuit functions together that yield such dramatic system-level performance.

The TLE2425 improves input regulation as well as output regulation and, in addition, reduces output impedance and power dissipation in a majority of virtual-ground-generation circuits. Both input regulation and load regulation exceed 12 bits of accuracy on a single 5-V system. Signal-conditioning front ends of data acquisition systems that push 12 bits and beyond can use the TLE2425 to eliminate a major source of system error.

## Key Features

2.5-V Virtual Ground for 5-V/GND Analog Systems

High Output-Current Capability Sink or Source . . . 20 mA Typ

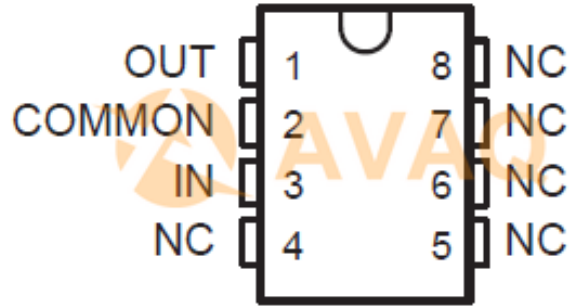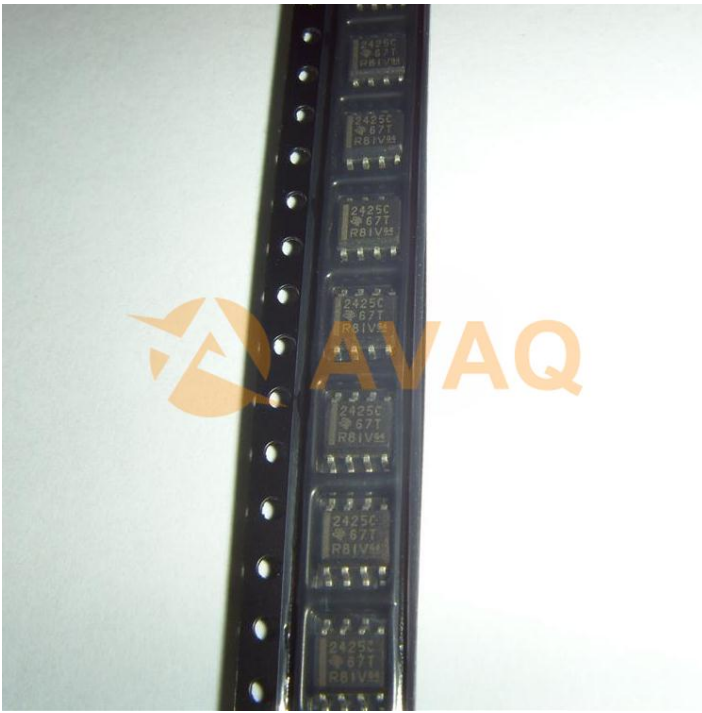Micropower Operation . . . 170 uA Typ

Excellent Regulation Characteristics
Output Regulation –45 uV Typ at IO = 0 to –10 mA +15 uV Typ at IO = 0 to +10 mA

Input Regulation = 1.5 uV/V Typ

Low-Impedance Output . . . 0.0075Typ

Macromodel Included

OUT 1
COMMON 2
IN 3
NC 4
8 NC
7 NC
6 NC
5 NC

## Recommended For You

**TL2843P**

Texas Instruments, Inc

DIP8

**TL431CP**

Texas Instruments, Inc

DIP8

**TL7705ACDR**

Texas Instruments, Inc

SOP8

**TL3843P**

Texas Instruments, Inc

DIP8

**TL497ACN**

Texas Instruments, Inc

DIP14

**TL3845P**

Texas Instruments, Inc

DIP8

**TL494CD**

Texas Instruments, Inc

SOP-16

**TL431IDBVR**

Texas Instruments, Inc

SOT23-5

**TL494CN**

Texas Instruments, Inc

DIP

**TL431CDBVR**

Texas Instruments, Inc

SOT23-5

**TL7705ACP**

Texas Instruments, Inc

DIP8

**TL3842P**

Texas Instruments, Inc

DIP8

**TLV73325PDBVT**

Texas Instruments, Inc

SOT23-5

**TLV73333PDBVR**

Texas Instruments, Inc

SOT23-5

**TL431BIDBZT**

Texas Instruments, Inc

SOT23-3