

TLE2227, TLE2227Y, TLE2237, TLE2237Y EXCALIBUR LOW-NOISE HIGH-SPEED PRECISION DUAL OPERATIONAL AMPLIFIERS

SLOS184 – FEBRUARY 1997

- **Outstanding Combination of DC Precision and AC Performance:**
 Unity-Gain Bandwidth . . . 15 MHz Typ
 V_n . . . 3.3 nV/ $\sqrt{\text{Hz}}$ at $f = 10$ Hz Typ,
 2.5 nV/ $\sqrt{\text{Hz}}$ at $f = 1$ kHz Typ
 V_{IO} . . . 100 μV Typ
 A_{VD} . . . 45 V/ μV Typ With $R_L = 2$ k Ω
 38 V/ μV Typ With $R_L = 1$ k Ω
- Available in 16-Pin Small-Outline Wide-Body Package
- Macromodels and Statistical Information Included
- Output Features Saturation Recovery Circuitry

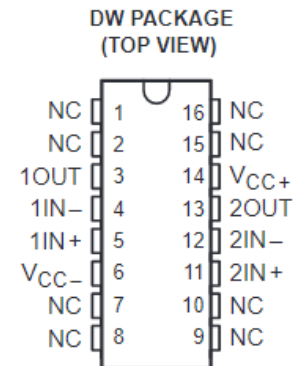
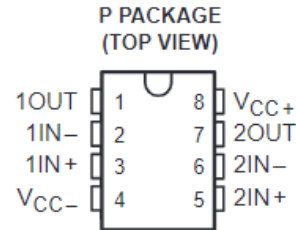
description

The TLE22x7C combines innovative circuit design expertise and high-quality process control techniques to produce a level of ac performance and dc precision previously unavailable in dual operational amplifiers. This device allows upgrades to systems that use lower-precision devices and is manufactured using Texas Instruments state-of-the-art Excalibur process.

In the area of dc precision, the TLE22x7C offers a typical offset voltage of 100 μV , a common-mode rejection ratio of 115 dB (typ), a supply voltage rejection ratio of 120 dB (typ), and a dc gain of 45 V/ μV (typ).

The ac performance is highlighted by a typical unity-gain bandwidth specification of 15 MHz, 55° of phase margin, and noise voltage specifications of 3.3 nV/ $\sqrt{\text{Hz}}$ and 2.5 nV/ $\sqrt{\text{Hz}}$ at frequencies of 10 Hz and 1 kHz, respectively.

The TLE22x7C is available in a wide variety of packages, including the industry standard 16-pin small-outline wide-body version for high-density system applications. This device is characterized for operation from 0°C to 70°C.



NC – No internal connection

AVAILABLE OPTIONS

T _A	V _{IO} typ AT 25°C	PACKAGED DEVICES		CHIP FORM† (Y)
		SMALL OUTLINE† (DW)	PLASTIC DIP (P)	
0°C to 70°C	100 μV	TLE2227CDW	TLE2227CP	TLE2227Y
	100 μV	TLE2237CDW	TLE2237CP	TLE2237Y

† The DW package is available taped and reeled. Add R suffix to device type (e.g., TLE2227CDWR).

‡ Chip forms are tested at 25°C only.



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PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

**TEXAS
INSTRUMENTS**

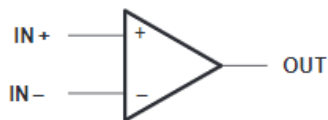
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symbol (each amplifier)



TLE2227Y chip information

This chip, properly assembled, displays characteristics similar to the TLE2227C. Thermal compression or ultrasonic bonding may be used on the doped-aluminum bonding pads. Chips may be mounted with conductive epoxy or a gold-silicon preform.

