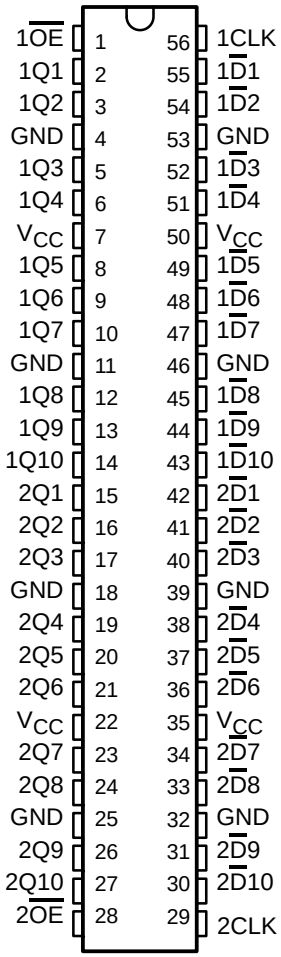
- **Members of Texas Instruments Widebus™ Family**
- **Packaged in Shrink Small-Outline 300-mil Packages (SSOP) and 380-mil Fine-Pitch Ceramic Flat Packages Using 25-mil Center-to-Center Pin Spacings**
- **Inputs are TTL- or CMOS-Voltage Compatible**
- **3-State Outputs Drive Bus Lines Directly**
- **Flow-Through Architecture Optimizes PCB Layout**
- **Distributed $V_{CC}$ and GND Pin Configuration Minimizes High-Speed Switching Noise**
- **EPIC™ (Enhanced-Performance Implanted CMOS) 1-μm Process**
- **500-mA Typical Latch-Up Immunity at 125°C**

l6822, 74ACT16822 . . . DL PACKAGE
l6822, 54ACT16822 . . . WD PACKAGE

(T0P VIEW)




## description

The ’AC16822 and ’ACT16822 are inverting 20-bit D-type flip-flops composed of two 10-bit sections with separate control signals. For either 10-bit flip-flop section, the inverse of the data present at the corresponding D inputs is stored in the flip-flops on the rising edge of the clock input (1CLK or 2CLK) and appears on the appropriate Q outputs if the output enable $1\overline{OE}$ (or $2\overline{OE}$) is low. If $1\overline{OE}$ (or $2\overline{OE}$) is high, the outputs are in the high-impedance state. $1\overline{OE}$ (or $2\overline{OE}$) does not affect the operation of the flip-flops. Previously stored data can be retained or new data can be entered while the outputs are in the high-impedance state.

**FUNCTION TABLE, EACH SECTION**

| INPUTS | | FLIP-FLOP DATA | Q OUTPUTS |
|---|---|---|---|
| CLK | $\overline{OE}$ | | |
| ↑ | H | Current $\overline{D}$ Data | Z |
| L | H | Previous $\overline{D}$ Data | Z |
| ↑ | L | Current $\overline{D}$ Data | Inverse of Current $\overline{D}$ Data |
| L | L | Previous $\overline{D}$ Data | Inverse of Previous $\overline{D}$ Data |

PRODUCT PREVIEW

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The 74AC16822 and 74ACT16822 are packaged in TI's shrink small-outline package (SSOP) with 25-mil center-to-center pin spacings. This package provides twice the I/O pin count and functionality of a standard small-outline package in the same printed-circuit-board area.

The 'AC16822 has CMOS-compatible input thresholds. The 'ACT16822 has TTL-compatible input thresholds.

The 54AC16822 and 54ACT16822 are characterized over the full military temperature range of –55°C to 125°C. The 74AC16822 and 74ACT16822 are characterized for operation from –40°C to 85°C.

**logic diagram (positive logic)**

PRODUCT PREVIEW

## IMPORTANT NOTICE

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