PRODUCT PREVIE

T-52-31

54AC16473, 54ACT16473 74AC16473, 74ACT16473

18-BIT LATCHED BUS TRANSCEIVERS WITH 3-STATE OUTPUTS

TI0249-- D3572, JUNE 1990

- 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

description

The 'AC16473 and 'ACT16473 are inverting 18-bit latched bus transceivers composed of two 9-bit sections with separate control signals. For either 9-bit transceiver section, data flow in the A-to-B mode is controlled by output enable (10EAB or 20EAB) and latch enable (11EAB or 21EAB) inputs. When 10EAB (or 20EAB) is low, the corresponding B outputs are active (high or low logic levels). When 10EAB (or 20EAB) is high, the corresponding B outputs are in the high-impedance state. The latches are in the high-impedance state. The latches retain their prior states when 11EAB (or 21EAB) is high and reflect the states of the corresponding A inputs when 11EAB (or 21EAB) is low.

FUNCTION TABLE, EACH SECTION

INPUTS				
LEAB	OEAB	LATCH DATA	B OUTPUTS	
L	L	Current A Data	Inverse of Current A Data	
Н	L	Previous A Data	Inverse of Previous A Data	
L	Н	Current A Data	Z	
Н	H	Previous A Data	Ż	

† A-to-B data flow is shown. B-to-A data flow is controlled analogously by OEBA and LEBA.

54AC16473, 54ACT16473 ... WD PACKAGE 74AC16473, 74ACT16473 ... DL PACKAGE (TOP VIEW)

10EAB	, U	56	10EBA
1 LEAB	2 .	55	1 LEBA
1A1 [3	54]1B1 ·
GND [4	53	GND
1A2 [5	52	1B2
1A3 [6	51	183
V _{CC}	7	50	V _{CC}
1A4 [8	49	1B4
1A5 [9	48]1B5
1A6 [10	47]1B6
GND [11	46] GND
1A7 [12	45]187
1A8 [13	44]1B8
1A9 🗀	14	43] 1B9
2A1 [15	42	2B1
2A2 [16	41	2B2
2A3 🗌	17	40	2B3
GND [18	39	GND
2A4 [19	38	2B4
2A5 [•	37	2B5
2A6 [21	36	2B6
V _{CC}	22	35]V _{cc}
2A7 🗌	23	34	2B7
2A8 🗌	24	33	288
GND [25	32] GND
2A9 [~ 'F	2B9
2LEAB	27		2LEBA
20EAB	28	29	20EBA

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Data flow from B to A is similar, but uses 10EBA and/or 20EBA and 1LEBA and/or 2LEBA.

The 74AC16473 and 74ACT16473 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 'AC16473 has CMOS-compatible input thresholds. The 'ACT16473 has TTL-compatible input thresholds,

The 54AC16473 and 54ACT16473 are characterized over the full military temperature range of -55° C to 125°C. The 74AC16473 and 74ACT16473 are characterized for operation from -40° C to 85°C.

