

# Am73/8307 • Am73/8308

## Octal Three-State Bidirectional Bus Transceivers

### DISTINCTIVE CHARACTERISTICS

- 8-bit bidirectional data flow reduces system package count
- 3-state inputs/outputs for interfacing with bus-oriented systems
- PNP inputs reduce input loading
- $V_{CC} - 1.15V$   $V_{OH}$  interfaces with TTL, MOS, and CMOS
- 48mA, 300pF bus drive capability
- Am73/8307 has inverting transceivers
- Am73/8308 has noninverting transceivers
- Separate  $\overline{\text{TRANSMIT}}$  and  $\overline{\text{RECEIVE}}$  Enables
- 20 pin ceramic and molded DIP package
- Low power – 8mA per bidirectional bit
- Advanced Schottky processing
- Bus port stays in hi-impedance state during power up/down
- 100% product assurance screening to MIL-STD-883 requirements

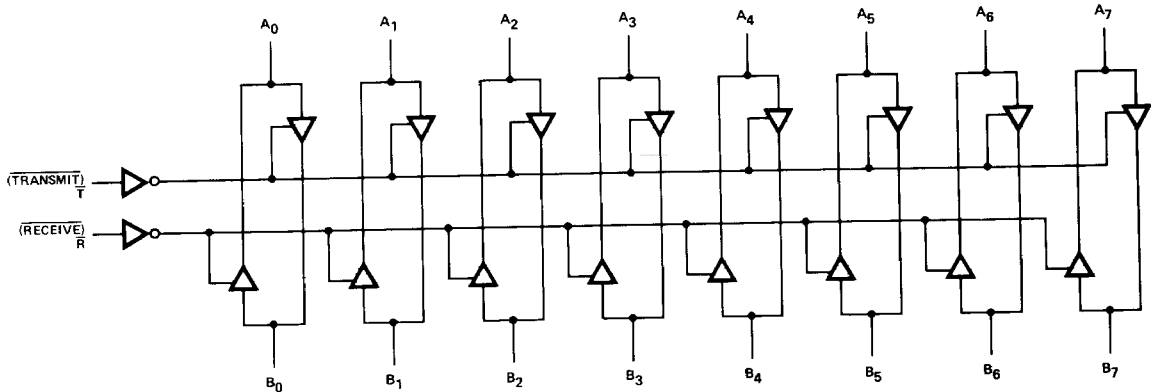
### GENERAL DESCRIPTION

The Am73/8307 and Am73/8308 are 8-bit, 3-state Schottky transceivers. They provide bidirectional drive for bus-oriented microprocessor and digital communications systems. Straight through bidirectional transceivers are featured, with 16mA drive capability on the A ports and 48mA bus drive capability on the B ports. PNP inputs are incorporated to reduce input loading.

Separate  $\overline{\text{TRANSMIT}}$  and  $\overline{\text{RECEIVE}}$  Enables are provided for microprocessor system with separated read and write control bus lines.

The output high voltage ( $V_{OH}$ ) is specified at  $V_{CC} - 1.15V$  minimum to allow interfacing with MOS, CMOS, TTL, ROM RAM, or microprocessors.

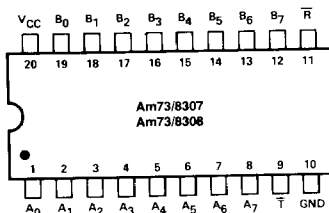
### Am73/8308 LOGIC DIAGRAM



Am73/8307 has inverting transceivers

BLI-177

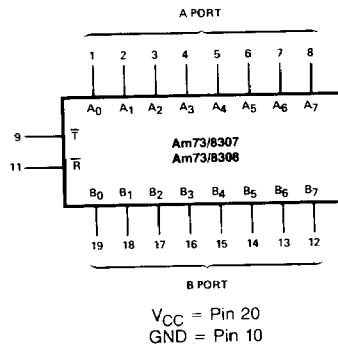
### CONNECTION DIAGRAM Top View



Note: Pin 1 is marked for orientation.  
Am73/8307 is inverting from  $A_i$  to  $B_i$

BLI-178

### LOGIC SYMBOL



BLI-179

12

**ABSOLUTE MAXIMUM RATINGS** (Above which the useful life may be impaired)

|  |               |
|--|---------------|
| Storage Temperature                      | -65 to +150°C |
| Supply Voltage                           | 7.0V          |
| Input Voltage                            | 5.5V          |
| Output Voltage                           | 5.5V          |
| Lead Temperature (Soldering, 10 seconds) | 300°C         |

**ELECTRICAL CHARACTERISTICS**

The Following Conditions Apply Unless Otherwise Noted:

|       |                                     |                                    |                                    |
|-------|-------------------------------------|------------------------------------|------------------------------------|
| MIL   | $T_A = -55$ to $+125^\circ\text{C}$ | $V_{CC\text{ MIN}} = 4.5\text{V}$  | $V_{CC\text{ MAX}} = 5.5\text{V}$  |
| COM'L | $T_A = 0$ to $+70^\circ\text{C}$    | $V_{CC\text{ MIN}} = 4.75\text{V}$ | $V_{CC\text{ MAX}} = 5.25\text{V}$ |

**DC ELECTRICAL CHARACTERISTICS** over operating temperature range

| Parameters  | Description                            | Test Conditions   | Min   | Typ<br>(Note 1)        | Max                   | Units |       |       |
|---|--|---|---|------------------------|-----------------------|-------|-------|-------|
| <b>A PORT (A<sub>0</sub>-A<sub>7</sub>)</b>         |  |   |   |                        |                       |       |       |       |
| V <sub>IH</sub>                                     | Logical "1" Input Voltage              | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}$  | 2.0   |                        |                       | Volts |       |       |
| V <sub>IL</sub>                                     | Logical "0" Input Voltage              | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}$  |   | COM'L                  |                       | 0.8   | Volts |       |
|   |  |   |   | MIL                    |                       | 0.7   |       |       |
| V <sub>OH</sub>                                     | Logical "1" Output Voltage             | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}$  | I <sub>OH</sub> = -0.4mA<br>I <sub>OH</sub> = -3.0mA                            | V <sub>CC</sub> - 1.15 | V <sub>CC</sub> - 0.7 |       | Volts |       |
|   |  |   |   | 2.7                    | 3.95                  |       |       |       |
| V <sub>OL</sub>                                     | Logical "0" Output Voltage             | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}$  | I <sub>OL</sub> = 8mA<br>I <sub>OL</sub> = 16mA                                 | COM'L                  |                       | 0.3   | 0.4   | Volts |
|   |  |   |   |                        |                       | 0.35  | 0.50  |       |
| I <sub>OS</sub>                                     | Output Short Circuit Current           | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}, V_O = 0\text{V}, V_{CC} = \text{MAX}, \text{Note 2}$ | -10   | -38                    | -75                   | mA    |       |       |
| I <sub>IH</sub>                                     | Logical "1" Input Current              | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}, V_I = 2.7\text{V}$                                   |   | 0.1                    | 80                    | μA    |       |       |
| I <sub>I</sub>                                      | Input Current at Maximum Input Voltage | $\bar{T} = \bar{R} = 2.0\text{V}, V_{CC} = \text{MAX}, V_I = V_{CC\text{ MAX}}$                     |   |                        | 1                     | mA    |       |       |
| I <sub>IL</sub>                                     | Logical "0" Input Current              | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}, V_I = 0.4\text{V}$                                   |   | -70                    | -200                  | μA    |       |       |
| V <sub>C</sub>                                      | Input Clamp Voltage                    | $\bar{T} = \bar{R} = 2.0\text{V}, I_{IN} = -12\text{mA}$  |   | -0.7                   | -1.5                  | Volts |       |       |
| I <sub>OD</sub>                                     | Output/Input 3-State Current           | $\bar{T} = \bar{R} = 2.0\text{V}$   | V <sub>O</sub> = 0.4V<br>V <sub>O</sub> = 4.0V                                  |                        |                       | -200  | μA    |       |
|   |  |   |   |                        |                       | 80    |       |       |
| <b>B PORT (B<sub>0</sub>-B<sub>7</sub>)</b>         |  |   |   |                        |                       |       |       |       |
| V <sub>IH</sub>                                     | Logical "1" Input Voltage              | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}$  | 2.0   |                        |                       | Volts |       |       |
| V <sub>IL</sub>                                     | Logical "0" Input Voltage              | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}$  |   | COM'L                  |                       | 0.8   | Volts |       |
|   |  |   |   | MIL                    |                       | 0.7   |       |       |
| V <sub>OH</sub>                                     | Logical "1" Output Voltage             | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}$  | I <sub>OH</sub> = -0.4mA<br>I <sub>OH</sub> = -5.0mA<br>I <sub>OH</sub> = -10mA | V <sub>CC</sub> - 1.15 | V <sub>CC</sub> - 0.8 |       | Volts |       |
|   |  |   |   | 2.7                    | 3.9                   |       |       |       |
|   |  |   |   | 2.4                    | 3.6                   |       |       |       |
| V <sub>OL</sub>                                     | Logical "0" Output Voltage             | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}$  | I <sub>OL</sub> = 20mA<br>I <sub>OL</sub> = 48mA                                |                        |                       | 0.3   | 0.4   | Volts |
|   |  |   |   |                        |                       | 0.4   | 0.5   |       |
| I <sub>OS</sub>                                     | Output Short Circuit Current           | $\bar{T} = 0.8\text{V}, \bar{R} = 2.0\text{V}, V_O = 0\text{V}, V_{CC} = \text{MAX}, \text{Note 2}$ | -25   | -50                    | -150                  | mA    |       |       |
| I <sub>IH</sub>                                     | Logical "1" Input Current              | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}, V_I = 2.7\text{V}$                                   |   | 0.1                    | 80                    | μA    |       |       |
| I <sub>I</sub>                                      | Input Current at Maximum Input Voltage | $\bar{T} = \bar{R} = 2.0\text{V}, V_{CC} = \text{MAX}, V_I = V_{CC\text{ MAX}}$                     |   |                        | 1                     | mA    |       |       |
| I <sub>IL</sub>                                     | Logical "0" Input Current              | $\bar{T} = 2.0\text{V}, \bar{R} = 0.8\text{V}, V_I = 0.4\text{V}$                                   |   | -70                    | -200                  | μA    |       |       |
| V <sub>C</sub>                                      | Input Clamp Voltage                    | $\bar{T} = \bar{R} = 2.0\text{V}, I_{IN} = -12\text{mA}$  |   | -0.7                   | -1.5                  | Volts |       |       |
| I <sub>OD</sub>                                     | Output/Input 3-State Current           | $\bar{T} = \bar{R} = 2.0\text{V}$   | V <sub>O</sub> = 0.4V<br>V <sub>O</sub> = 4.0V                                  |                        |                       | -200  | μA    |       |
|   |  |   |   |                        |                       | 200   |       |       |
| <b>CONTROL INPUTS <math>\bar{T}, \bar{R}</math></b> |  |   |   |                        |                       |       |       |       |
| V <sub>IH</sub>                                     | Logical "1" Input Voltage              |   | 2.0   |                        |                       | Volts |       |       |
| V <sub>IL</sub>                                     | Logical "0" Input Voltage              |   |   | COM'L                  |                       | 0.8   | Volts |       |
|   |  |   |   | MIL                    |                       | 0.7   |       |       |
| I <sub>IH</sub>                                     | Logical "1" Input Current              | V <sub>I</sub> = 2.7V   |   | 0.5                    | 20                    | μA    |       |       |
| I <sub>I</sub>                                      | Input Current at Maximum Input Voltage | V <sub>CC</sub> = MAX, V <sub>I</sub> = V <sub>CC</sub> MAX   |   |                        | 1.0                   | mA    |       |       |
| I <sub>IL</sub>                                     | Logical "0" Input Current              | V <sub>I</sub> = 0.4V   | $\bar{R}$   |                        | -0.1                  | -0.25 | mA    |       |
|   |  |   | $\bar{T}$   |                        | -0.25                 | -0.5  |       |       |
| V <sub>C</sub>                                      | Input Clamp Voltage                    | I <sub>IN</sub> = -12mA   |   | -0.8                   | -1.5                  | Volts |       |       |
| <b>POWER SUPPLY CURRENT</b>                         |  |   |   |                        |                       |       |       |       |
| I <sub>CC</sub>                                     | Power Supply Current                   | Am73/8307   | $\bar{T} = \bar{R} = 2.0\text{V}, V_I = 2.0\text{V}, V_{CC} = \text{MAX}$       | 70                     | 100                   | mA    |       |       |
|   |  |   | $\bar{T} = 0.4\text{V}, V_{INA} = \bar{R} = 2.0\text{V}, V_{CC} = \text{MAX}$   | 100                    | 150                   |       |       |       |
|   |  | Am73/8308   | $\bar{T} = \bar{R} = 2.0\text{V}, V_I = 0.4\text{V}, V_{CC} = \text{MAX}$       | 70                     | 100                   | mA    |       |       |
|   |  |   | $\bar{T} = V_{INA} = 0.4\text{V}, \bar{R} = 2.0\text{V}, V_{CC} = \text{MAX}$   | 90                     | 140                   |       |       |       |

**AC ELECTRICAL CHARACTERISTICS** ( $V_{CC} = 5.0V$ ,  $T_A = 25^\circ C$ )

| Parameter                              | Description  | Test Conditions  | Typ | Max | Units |
|--|--|--|-----|-----|-------|
| <b>A PORT DATA/MODE SPECIFICATIONS</b> |  |  |     |     |       |
| $t_{PDHLA}$                            | Propagation Delay to a Logical "0" from B Port to A Port                 | $\bar{T} = 2.4V$ , $\bar{R} = 0.4V$ (Figure A)<br>$R_1 = 1k$ , $R_2 = 5k$ , $C_1 = 30pF$             | 8   | 12  | ns    |
| $t_{PDLHA}$                            | Propagation Delay to a Logical "1" from B Port to A Port                 | $\bar{T} = 2.4V$ , $\bar{R} = 0.4V$ (Figure A)<br>$R_1 = 1k$ , $R_2 = 5k$ , $C_1 = 30pF$             | 11  | 16  | ns    |
| $t_{PLZA}$                             | Propagation Delay from a Logical "0" to 3-State from $\bar{R}$ to A Port | $B_0$ to $B_7 = 2.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 15pF$         | 10  | 15  | ns    |
| $t_{PHZA}$                             | Propagation Delay from a Logical "1" to 3-State from $\bar{R}$ to A Port | $B_0$ to $B_7 = 0.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 15pF$         | 8   | 15  | ns    |
| $t_{PZLA}$                             | Propagation Delay from 3-State to a Logical "0" from $\bar{R}$ to A Port | $B_0$ to $B_7 = 2.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 30pF$         | 25  | 35  | ns    |
| $t_{PZHA}$                             | Propagation Delay from 3-State to a Logical "1" from $\bar{R}$ to A Port | $B_0$ to $B_7 = 0.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 5k$ , $C_4 = 30pF$         | 24  | 35  | ns    |
| <b>B PORT DATA/MODE SPECIFICATIONS</b> |  |  |     |     |       |
| $t_{PDHLB}$                            | Propagation Delay to a Logical "0" from A Port to B Port                 | $\bar{T} = 0.4V$ , $\bar{R} = 2.4V$ (Figure A)<br>$R_1 = 100\Omega$ , $R_2 = 1k$ , $C_1 = 300pF$     | 12  | 18  | ns    |
|  |  | $R_1 = 667\Omega$ , $R_2 = 5k$ , $C_1 = 45pF$  | 8   | 12  | ns    |
| $t_{PDLHB}$                            | Propagation Delay to a Logical "1" from A Port to B Port                 | $\bar{T} = 0.4V$ , $\bar{R} = 2.4V$ (Figure A)<br>$R_1 = 100\Omega$ , $R_2 = 1k$ , $C_1 = 300pF$     | 15  | 23  | ns    |
|  |  | $R_1 = 667\Omega$ , $R_2 = 5k$ , $C_1 = 45pF$  | 9   | 14  | ns    |
| $t_{PLZB}$                             | Propagation Delay from a Logical "0" to 3-State from $\bar{T}$ to B Port | $A_0$ to $A_7 = 2.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 15pF$         | 13  | 18  | ns    |
| $t_{PHZB}$                             | Propagation Delay from a Logical "1" to 3-State from $\bar{T}$ to B Port | $A_0$ to $A_7 = 0.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 15pF$         | 8   | 15  | ns    |
| $t_{PZLB}$                             | Propagation Delay from 3-State to a Logical "0" from $\bar{T}$ to B Port | $A_0$ to $A_7 = 2.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 100\Omega$ , $C_4 = 300pF$ | 32  | 40  | ns    |
|  |  | $S_3 = 1$ , $R_5 = 667\Omega$ , $C_4 = 45pF$   | 18  | 25  | ns    |
| $t_{PZHB}$                             | Propagation Delay from 3-State to a Logical "1" from $\bar{T}$ to B Port | $A_0$ to $A_7 = 0.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 300pF$        | 25  | 35  | ns    |
|  |  | $S_3 = 0$ , $R_5 = 5k$ , $C_4 = 45pF$  | 16  | 25  | ns    |

**FUNCTION TABLE**

| Control Inputs     |                   | Resulting Conditions |         |
|--------------------|-------------------|----------------------|---------|
| $\bar{T}$ Transmit | $\bar{R}$ Receive | A Port               | B Port  |
| 1                  | 0                 | Out                  | In      |
| 0                  | 1                 | In                   | Out     |
| 1                  | 1                 | 3-State              | 3-State |
| 0                  | 0                 | Both Active*         |         |

\*This is not an intended logic condition and may cause oscillations.

**AC ELECTRICAL CHARACTERISTICS** ( $V_{CC} = 5.0V$ ,  $T_A = 25^\circ C$ )

| Parameter                              | Description  | Test Conditions  | Typ | Max | Units |
|--|--|--|-----|-----|-------|
| <b>A PORT DATA/MODE SPECIFICATIONS</b> |  |  |     |     |       |
| $t_{PDHLA}$                            | Propagation Delay to a Logical "0" from B Port to A Port                 | $\bar{T} = 2.4V$ , $\bar{R} = 0.4V$ (Figure A)<br>$R_1 = 1k$ , $R_2 = 5k$ , $C_1 = 30pF$             | 14  | 18  | ns    |
| $t_{PDLHA}$                            | Propagation Delay to a Logical "1" from B Port to A Port                 | $\bar{T} = 2.4V$ , $\bar{R} = 0.4V$ (Figure A)<br>$R_1 = 1k$ , $R_2 = 5k$ , $C_1 = 30pF$             | 13  | 18  | ns    |
| $t_{PLZA}$                             | Propagation Delay from a Logical "0" to 3-State from $\bar{R}$ to A Port | $B_0$ to $B_7 = 0.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 15pF$         | 11  | 15  | ns    |
| $t_{PHZA}$                             | Propagation Delay from a Logical "1" to 3-State from $\bar{R}$ to A Port | $B_0$ to $B_7 = 2.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 15pF$         | 8   | 15  | ns    |
| $t_{PZLA}$                             | Propagation Delay from 3-State to a Logical "0" from $\bar{R}$ to A Port | $B_0$ to $B_7 = 0.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 30pF$         | 24  | 35  | ns    |
| $t_{PZHA}$                             | Propagation Delay from 3-State to a Logical "1" from $\bar{R}$ to A Port | $B_0$ to $B_7 = 2.4V$ , $\bar{T} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 5k$ , $C_4 = 30pF$         | 21  | 30  | ns    |
| <b>B PORT DATA/MODE SPECIFICATIONS</b> |  |  |     |     |       |
| $t_{PDHLB}$                            | Propagation Delay to a Logical "0" from A Port to B Port                 | $\bar{T} = 0.4V$ , $\bar{R} = 2.4V$ (Figure A)<br>$R_1 = 100\Omega$ , $R_2 = 1k$ , $C_1 = 300pF$     | 18  | 23  | ns    |
|  |  | $R_1 = 667\Omega$ , $R_2 = 5k$ , $C_1 = 45pF$  | 11  | 18  | ns    |
| $t_{PDLHB}$                            | Propagation Delay to a Logical "1" from A Port to B Port                 | $\bar{T} = 0.4V$ , $\bar{R} = 2.4V$ (Figure A)<br>$R_1 = 100\Omega$ , $R_2 = 1k$ , $C_1 = 300pF$     | 16  | 23  | ns    |
|  |  | $R_1 = 667\Omega$ , $R_2 = 5k$ , $C_1 = 45pF$  | 11  | 18  | ns    |
| $t_{PLZB}$                             | Propagation Delay from a Logical "0" to 3-State from $\bar{T}$ to B Port | $A_0$ to $A_7 = 0.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 1k$ , $C_4 = 15pF$         | 13  | 18  | ns    |
| $t_{PHZB}$                             | Propagation Delay from a Logical "1" to 3-State from $\bar{T}$ to B Port | $A_0$ to $A_7 = 2.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 15pF$         | 8   | 15  | ns    |
| $t_{PZLB}$                             | Propagation Delay from 3-State to a Logical "0" from $\bar{T}$ to B Port | $A_0$ to $A_7 = 0.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 1$ , $R_5 = 100\Omega$ , $C_4 = 300pF$ | 25  | 35  | ns    |
|  |  | $S_3 = 1$ , $R_5 = 667\Omega$ , $C_4 = 45pF$   | 17  | 25  | ns    |
| $t_{PZHB}$                             | Propagation Delay from 3-State to a Logical "1" from $\bar{T}$ to B Port | $A_0$ to $A_7 = 2.4V$ , $\bar{R} = 2.4V$ (Figure B)<br>$S_3 = 0$ , $R_5 = 1k$ , $C_4 = 300pF$        | 24  | 35  | ns    |
|  |  | $S_3 = 0$ , $R_5 = 5k$ , $C_4 = 45pF$  | 17  | 25  | ns    |

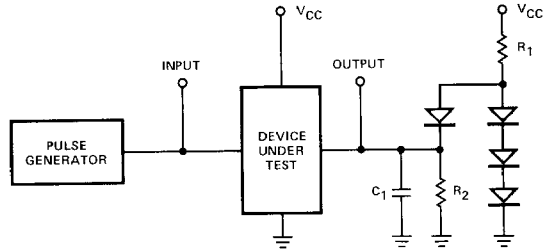
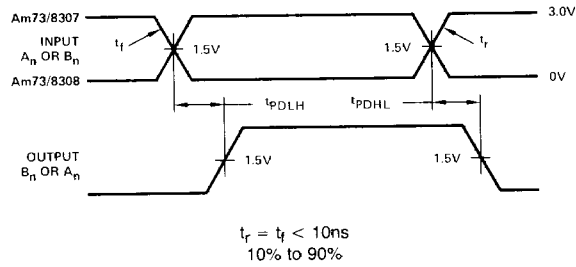
**DEFINITION OF FUNCTIONAL TERMS**

**A<sub>0</sub>-A<sub>7</sub>** A port inputs/outputs are receiver output drivers when Receive is LOW and Transmit is HIGH, and are transmit inputs when Receive is HIGH and Transmit is LOW.

**B<sub>0</sub>-B<sub>7</sub>** B port inputs/outputs are transmit output drivers when Transmit is LOW and Receive is HIGH, and are receiver inputs when Transmit is HIGH and Receive is LOW.

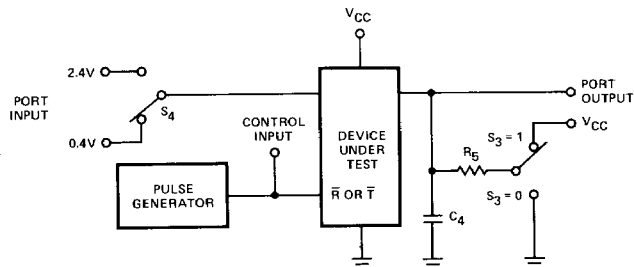
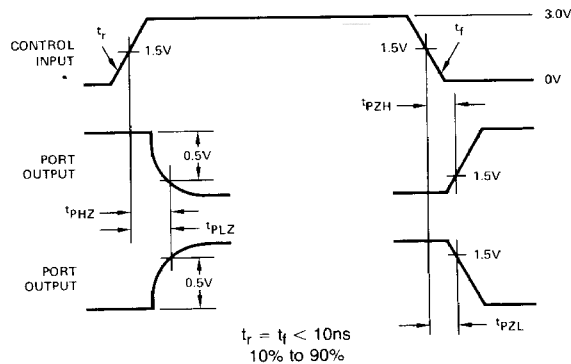
**Transmit, Receive** These controls determine whether A port and B port drivers are in 3-state. With both Transmit and Receive HIGH both ports are in 3-state. Transmit and Receive both LOW activate both drivers and may cause oscillations. This is not an intended logic condition. With Transmit HIGH and Receive LOW A port is the output and B port is the input. With Transmit LOW and Receive HIGH B port is the output and A port is the input.

### SWITCHING TIME WAVEFORMS AND AC TEST CIRCUITS



Note: C<sub>1</sub> includes test fixture capacitance.

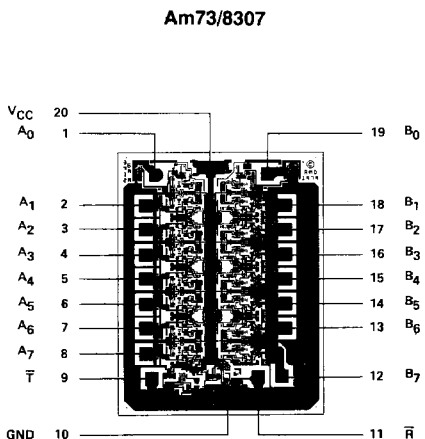
Figure A. Propagation Delay from A Port to B Port or from B Port to A Port



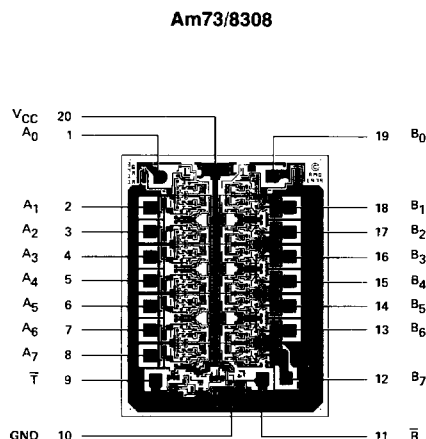
Note: C<sub>4</sub> includes test fixture capacitance. Port input is in a fixed logical condition. See AC table.

Figure B. Propagation Delay to/from Three-State from  $\bar{R}$  to A Port and  $\bar{T}$  to B Port

**Metallization and Pad Layouts**



DIE SIZE .069" X .089"



DIE SIZE .069" X .089"

**ORDERING INFORMATION**

Order the part number according to the table below to obtain the desired package, temperature range and screening level.

| Am73/8307<br>Order Number | Am73/8308<br>Order Number | Package<br>Type<br>(Note 1) | Operating<br>Range<br>(Note 2) | Screening<br>Level<br>(Note 3)                      |
|---------------------------|---------------------------|-----------------------------|--------------------------------|---|
| DP7307J                   | DP7308J                   | D-20                        | M                              | C-3   |
| DP7307JB                  | DP7308JB                  | D-20                        | M                              | B-3   |
| DP8307J                   | DP8308J                   | D-20                        | C                              | C-1   |
| DP8307JB                  | DP8308JB                  | D-20                        | C                              | B-1   |
| DP8307N                   | DP8308N                   | P-20                        | C                              | C-1   |
| DP8307NB                  | DP8308NB                  | P-20                        | C                              | B-1   |
| AM7307X                   | AM7308X                   | Dice                        | M                              | Visual Inspection<br>to MIL-STD-883<br>Method 20103 |
| AM8307X                   | AM8308X                   | Dice                        | C                              |   |

- Notes: 1. P = Molded DIP, D = Hermetic DIP, F = Flatpack. Number following letter is number of leads.  
 2. C = 0 to 70°C, V<sub>CC</sub> = 4.75 to 5.25V, M = -55 to +125°C, V<sub>CC</sub> = 4.50 to 5.50V.  
 3. Levels C-1 and C-3 conform to MIL-STD-883, Class C. Level B-3 conforms to MIL-STD-883, Class B.