

54/74125
54LS/74LS125A
QUAD BUS BUFFER GATE
 (With 3-State Outputs)

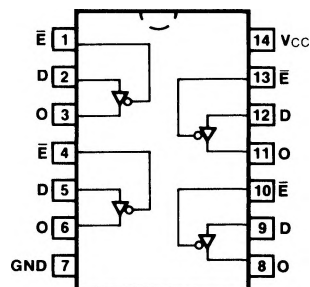
ORDERING CODE: See Section 9

| PKGS | PIN OUT | COMMERCIAL GRADE | MILITARY GRADE | PKG TYPE |
|-----------------|---------|---|---|----------|
| | | $V_{CC} = +5.0\text{ V} \pm 5\%$, $T_A = 0^\circ\text{C to } +70^\circ\text{C}$ | $V_{CC} = +5.0\text{ V} \pm 10\%$, $T_A = -55^\circ\text{C to } +125^\circ\text{C}$ | |
| Plastic DIP (P) | A | 74125PC, 74LS125APC | | 9A |
| Ceramic DIP (D) | A | 74125DC, 74LS125ADC | 54125DM, 54LS125ADM | 6A |
| Flatpak (F) | A | 74125FC, 74LS125AFC | 54125FM, 54LS125AFM | 3I |

INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

| PINS | 54/74 (U.L.) HIGH/LOW | 54/74LS (U.L.) HIGH/LOW |
|---------|-----------------------|-------------------------|
| Inputs | 1.0/1.0 | 0.5/0.25 |
| Outputs | 130/10 (50) | 65/15 (25)/(7.5) |

CONNECTION DIAGRAM
PINOUT A



TRUTH TABLE

| INPUTS | | OUTPUT |
|--------|---|--------|
| E-bar | D | |
| L | L | L |
| L | H | H |
| H | X | Z |

H = HIGH Voltage Level
 L = LOW Voltage Level
 X = Immaterial
 Z = High Impedance

DC AND AC CHARACTERISTICS: See Section 3*

| SYMBOL | PARAMETER | 54/74 | | 54/74LS | | UNITS | CONDITIONS |
|------------------|------------------------------|-------|---------|----------|-----|-------|---|
| | | Min | Max | Min | Max | | |
| V _{OH} | Output HIGH Voltage | XM | 2.4 | | | V | V _{CC} = Min, V _{IN} = V _{IH} or V _{IL} |
| | | XC | 2.4 | | | | |
| | | XM | | 2.4 | | | |
| | | XC | | 2.4 | | | |
| I _{OS} | Output Short Circuit Current | XM | -30 -70 | -30 -130 | | mA | V _{CC} = Max |
| | | XC | -28 -70 | -30 -130 | | | |
| I _{CC} | Power Supply Current | | 54 | 20 | | mA | Outputs OFF, V _{IN} = Gnd V _E = 4.5 V, V _{CC} = Max |
| t _{PLH} | Propagation Delay | | 13 | 15 | | ns | Figs. 3-3, 3-5 |
| t _{PHL} | Data to Output | | 18 | 18 | | | |
| t _{PZH} | Output Enable Time | | 17 | 16 | | ns | Figs. 3-3, 3-11, 3-12 |
| t _{PZL} | | | 25 | 25 | | | |
| t _{PLZ} | Output Disable Time | | 8.0 | 25 | | ns | Figs. 3-3, 3-11, 3-12 |
| t _{PHZ} | | | 12 | 25 | | | |

*DC limits apply over operating temperature range; AC limits apply at T_A = +25°C and V_{CC} = +5.0 V.