

54/7454
54H/74H54
54LS/74LS54

4-WIDE, 2-INPUT AND-OR-INVERT GATE

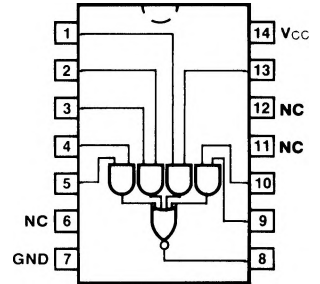
ORDERING CODE: See Section 9

| 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 | 7454PC | | 9A |
| | B | 74H54PC | | |
| | C | 74LS54PC | | |
| Ceramic DIP (D) | A | 7454DC | 5454DM | 6A |
| | B | 74H54DC | 54H54DM | |
| | C | 74LS54DC | 54LS54DM | |
| Flatpak (F) | C | 74LS54FC | 54LS54FM | 3I |
| | D | 74H54FC | 54H54FM | |
| | E | 7454FC | 5454FM | |

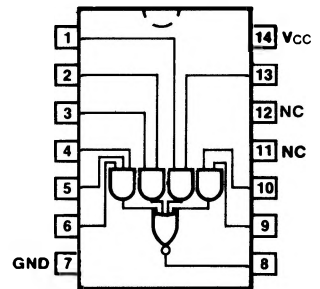
INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

| PINS | 54/74 (U.L.) HIGH/LOW | 54/74H (U.L.) HIGH/LOW | 54/74LS (U.L.) HIGH/LOW |
|---------|-----------------------|------------------------|-------------------------|
| Inputs | 1.0/1.0 | 1.25/1.25 | 0.5/0.25 |
| Outputs | 20/10 | 12.5/12.5 | 10/5.0 (2.5) |

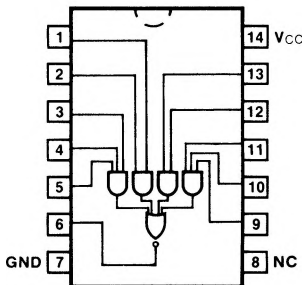
CONNECTION DIAGRAMS
PINOUT A



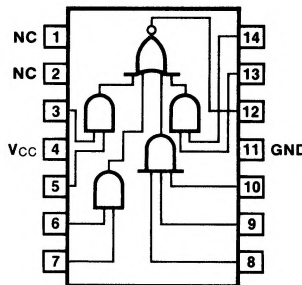
PINOUT B



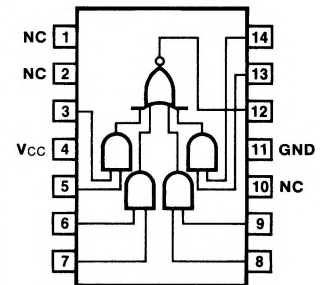
PINOUT C



PINOUT D



PINOUT E



DC AND AC CHARACTERISTICS: See Section 3*

| SYMBOL | PARAMETER | 54/74 | | 54/74H | | 54/74LS | | UNITS | CONDITIONS | |
|--|----------------------|-------|-----|--------|-----|---------|-----|-------|------------------------|--|
| | | Min | Max | Min | max | Min | Max | | | |
| I _{CC} H I _{CC} L | Power Supply Current | 8.0 | | 11 | | 1.6 | | mA | V _{IN} = Gnd | |
| | | 9.5 | | 14 | | 2.0 | | | V _{IN} = Open | |
| t _{PLH} t _{PHL} | Propagation Delay | 22 | | 11 | | 15 | | ns | Figs. 3-1, 3-4 | |
| | | 15 | | 11 | | 15 | | | | |

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