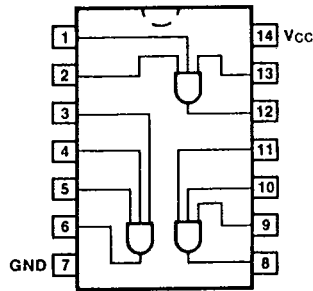


**54/7411**  
**54H/74H11**  
**54S/74S11**  
**54LS/74LS11**

TRIPLE 3-INPUT AND GATE

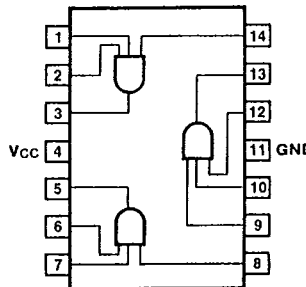
**CONNECTION DIAGRAMS**  
**PINOUT A**



ORDERING CODE: See Section 9

| PKGS            | PIN OUT | COMMERCIAL GRADE   | MILITARY GRADE   | PKG TYPE |
|-----------------|---------|--|--|----------|
|                 |         | V <sub>CC</sub> = +5.0 V ±5%,<br>T <sub>A</sub> = 0°C to +70°C | V <sub>CC</sub> = +5.0 V ±10%,<br>T <sub>A</sub> = -55°C to +125°C |          |
| Plastic DIP (P) | A       | 7411PC, 74H11PC<br>74S11PC, 74LS11PC                           |  | 9A       |
| Ceramic DIP (D) | A       | 7411DC, 74H11DC<br>74S11DC, 74LS11DC                           | 5411DM, 54H11DM<br>54S11DM, 54LS11DM                               | 6A       |
| Flatpak (F)     | A       | 74S11FC, 74LS11FC  | 54S11FM, 54LS11FM  | 3I       |
|                 | B       | 7411FC, 74H11FC  | 5411FM, 54H11FM  |          |

**PINOUT B**



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

| PINS    | 54/74 (U.L.) HIGH/LOW | 54/74H (U.L.) HIGH/LOW | 54/74S (U.L.) HIGH/LOW | 54/74LS (U.L.) HIGH/LOW |
|---------|-----------------------|------------------------|------------------------|-------------------------|
| Inputs  | 1.0/1.0               | 1.25/1.25              | 1.25/1.25              | 0.5/0.25                |
| Outputs | 20/10                 | 12.5/12.5              | 25/12.5                | 10/5.0 (2.5)            |

DC AND AC CHARACTERISTICS: See Section 3\*

| SYMBOL            | PARAMETER         | 54/74 |     | 54/74H |     | 54/74S |                        | 54/74LS |                       | UNITS | CONDITIONS |
|-------------------|-------------------|-------|-----|--------|-----|--------|------------------------|---------|-----------------------|-------|------------|
|                   |                   | Min   | Max | Min    | Max | Min    | Max                    | Min     | Max                   |       |            |
| I <sub>CC</sub> H | Power Supply      | 15    | 30  | 24     | 3.6 | mA     | V <sub>IN</sub> = Open |         | V <sub>CC</sub> = Max |       |            |
| I <sub>CC</sub> L | Current           | 24    | 48  | 42     | 6.6 |        | V <sub>IN</sub> = Gnd  |         |                       |       |            |
| t <sub>PLH</sub>  | Propagation Delay | 27    | 12  | 2.5    | 7.0 | 13     | ns                     |         | Figs. 3-1, 3-5        |       |            |
| t <sub>PHL</sub>  |                   | 19    | 12  | 2.5    | 7.5 | 11     |                        |         |                       |       |            |

\*DC limits apply over operating temperature range; AC limits apply at T<sub>A</sub> = +25°C and V<sub>CC</sub> = +5.0 V.