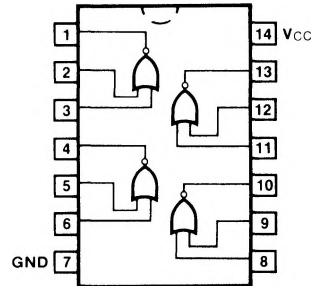


**54/7402**  
**54S/74S02**  
**54LS/74LS02**  
 QUAD 2-INPUT NOR GATE

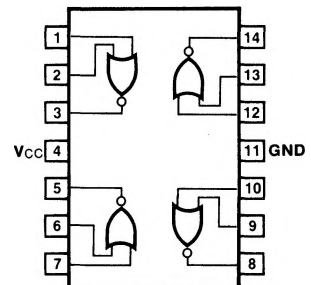
**CONNECTION DIAGRAMS**  
**PINOUT A**



**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	7402PC, 74LS02PC 74S02PC		9A
Ceramic DIP (D)	A	7402DC, 74LS02DC 74S02DC	5402DM, 54LS02DM 54S02DM	6A
Flatpak (F)	A	74LS02FC, 74S02FC	54LS02FM, 54S02FM	3I
	B	7402FC	5402FM	

**PINOUT B**



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

PINS	54/74 (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	0.5/0.25
Outputs	20/10	25/12.5	10/5.0 (2.5)

**DC AND AC CHARACTERISTICS:** See Section 3\*

SYMBOL	PARAMETER	54/74	54/74S	54/74LS	UNITS	CONDITIONS	
		Min Max	Min Max	Min Max			
$I_{CC}$	Power Supply Current	16	29	3.2	mA	$V_{IN} = \text{Gnd}$	$V_{CC} = \text{Max}$
$I_{CCL}$		27	45	5.4		$V_{IN} = \text{Open}$	
$t_{PLH}$ $t_{PHL}$	Propagation Delay	15	2.0 5.5	10	ns	Figs. 3-1, 3-4	
		15	2.0 5.5	10			

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