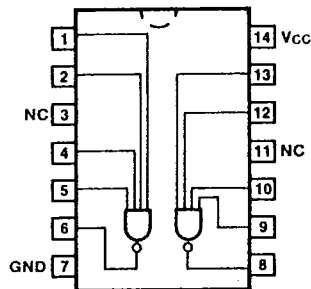


**54/7422**  
**54H/74H22**  
**54S/74S22**  
**54LS/74LS22**  
 DUAL 4-INPUT NAND GATE  
 (With Open-Collector Output)

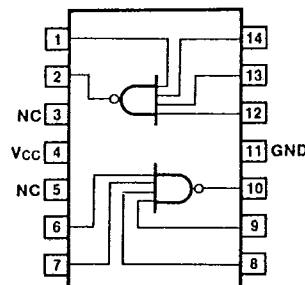
**CONNECTION DIAGRAMS**  
**PINOUT A**



**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	7422PC, 74H22PC 74S22PC, 74LS22PC		9A
Ceramic DIP (D)	A	7422DC, 74H22DC 74S22DC, 74LS22DC	5422DM, 54H22DM 54S22DM, 54LS22DM	6A
Flatpak (F)	A	7422FC, 74S22FC 74LS22FC	5422FM, 54S22FM 54LS22FM	3I
	B	74H22FC	54H22FM	

**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	OC**/10	OC**/12.5	OC**/12.5	OC**/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			
$I_{CCH}$	Power Supply	4.0	5.0	6.6	0.8	mA	$V_{IN} = \text{Gnd}$	$V_{CC} = \text{Max}$
$I_{CCL}$	Current	11	20	18	2.2		$V_{IN} = \text{Open}$	
$t_{PLH}$ $t_{PHL}$	Propagation Delay	45 15	15 12	2.0 7.5 2.0 7.0	22 18	ns	Figs. 3-2, 3-4	

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