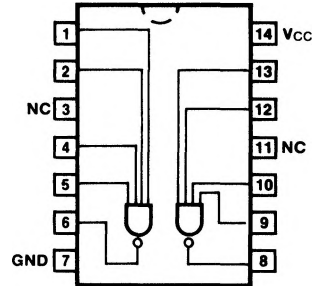


**54/7420**  
**54H/74H20**  
**54S/74S20**  
**54LS/74LS20**  
 DUAL 4-INPUT NAND GATE

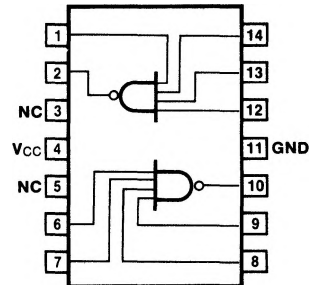
**CONNECTION DIAGRAMS**  
**PINOUT A**



**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	7420PC, 74H20PC 74S20PC, 74LS20PC		9A
Ceramic DIP (D)	A	7420DC, 74H20DC 74S20DC, 74LS20DC	5420DM, 54H20DM 54S20DM, 54LS20DM	6A
Flatpak (F)	A	74S20FC, 74LS20FC	54S20FM, 54LS20FM	3I
	B	7420FC, 74H20FC	5420FM, 54H20FM	

**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			
$I_{CCH}$	Power Supply	4.0	8.4	8.0	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	22 15	10 10	2.0 2.0	4.5 5.0	ns	Figs. 3-1, 3-4	

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