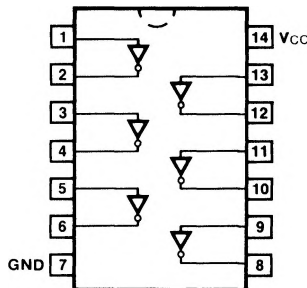


**54/7404**  
**54H/74H04**  
**54S/74S04**  
**54LS/74LS04**  
**HEX INVERTER**

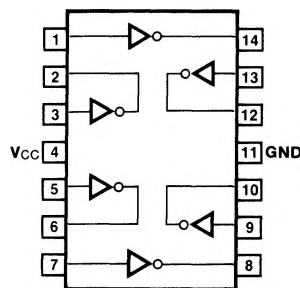
**CONNECTION DIAGRAMS**  
**PINOUT A**



**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	7404PC, 74H04PC 74S04PC, 74LS04PC		9A
Ceramic DIP (D)	A	7404DC, 74H04DC 74S04DC, 74LS04DC	5404DM, 54H04DM 54S04DM, 54LS04DM	6A
Flatpak (F)	A	74S04FC, 74LS04FC	54S04FM, 54LS04FM	3I
	B	7404FC, 74H04FC	5404FM, 54H04FM	

**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	12	26	24	2.4	mA	$V_{IN} = \text{Gnd}$ $V_{CC} = \text{Max}$
$I_{CCL}$	Current	33	58	54	6.6		$V_{IN} = \text{Open}$
$t_{PLH}$ $t_{PHL}$	Propagation Delay	22 15	10 10	2.0 4.5 2.0 5.0	10 10	ns	Fig. 3-1, 3-4
$t_{PLH}$ $t_{PHL}$	Propagation Delay (54/74S04A only)			1.0 3.5 1.0 4.0		ns	Fig. 3-1, 3-4

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