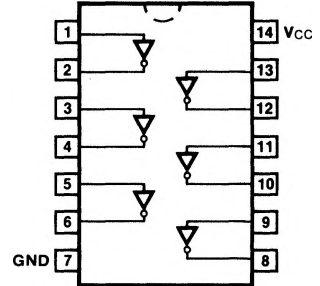


**54/7405**  
**54H/74H05**  
**54S/74S05**  
**54S/74S05A**  
**54LS/74LS05**

**HEX INVERTER**  
 (With Open-Collector Output)

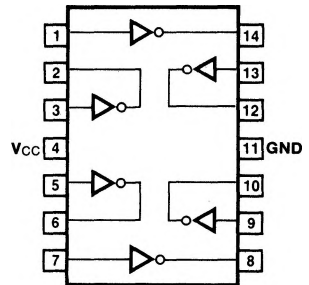
**CONNECTION DIAGRAMS**  
**PINOUT A**



**ORDERING CODE:** See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		V <sub>CC</sub> = +5.0 V ±5%, T <sub>A</sub> = 0° C to +70° C	V <sub>CC</sub> = +5.0 V, ±10%, T <sub>A</sub> = -55° C to +125° C	
Plastic DIP (P)	A	7405PC, 74H05PC 74S05PC, 74S05APC 74LS05PC		9A
Ceramic DIP (D)	A	7405DC, 74H05DC 74S05DC, 74S05ADC 74LS05DC	5405DM, 54H05DM 54S05DM, 54S05ADM 54LS05DM	6A
Flatpak (F)	A	74S05FC, 74S05AFC 74LS05FC	54S05FM, 54S05AFM 54LS05FM	3I
	B	7405FC, 74H05FC	5405FM, 54H05FM	

**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 <sub>CCH</sub>	Power Supply	12	26	19.8	2.4	mA	V <sub>IN</sub> = Gnd	V <sub>CC</sub> = Max
I <sub>CCL</sub>	Current	33	58	54	6.6		V <sub>IN</sub> = Open	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay	55 15	18 15	2.0 7.5 2.0 7.0	22 18	ns	Fig. 3-2, 3-4	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay (54S/74S05A only)			2.0 5.5 1.5 5.0			ns Fig. 3-2, 3-4	

\*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.

\*\*OC — Collector