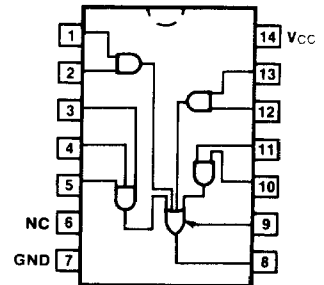


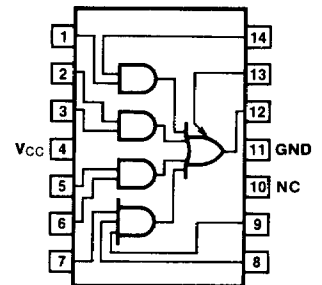
✓ 54H/74H52 011596

EXPANDABLE 2-2-2-3-INPUT AND-OR GATE

CONNECTION DIAGRAMS
PINOUT A



PINOUT B



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	74H52PC		9A
Ceramic DIP (D)	A	74H52DC	54H52DM	6A
Flatpak (F)	B	74H52FC	54H52FM	3I

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

PINS	54/74H (U.L.) HIGH/LOW
Inputs	1.25/1.25
Outputs	12.5/12.5

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE: Expander Pins Open

SYMBOL	PARAMETER	54/74H		UNITS	CONDITIONS	
		Min	Max		$V_{IN} = \text{Open}$ $V_{IN} = \text{Gnd}$	$V_{CC} = \text{Max}$
I_{CCH} I_{CCL}	Power Supply Current		31 24	mA		

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE: Using Expander Pins

SYMBOL	PARAMETER	54/74H		UNITS	CONDITIONS	
		Min	Max			
V _{OH}	Output HIGH Voltage	XM	2.4	V	T _A = -55°C T _A = 0°C	V _{CC} = Min, V _X = 1.0 V I _{OH} = -500 μA
		XC	2.4			
V _{OL}	Output LOW Voltage	XM	0.4	V	T _A = +125°C T _A = +70°C	V _{CC} = Min, I _{INX} = -300 μA I _{OL} = 20 mA
		XC	0.4			
I _{INX}	Expander-Node Input Current	XM	-2.7	mA	T _A = -55°C T _A = 0°C	V _{CC} = Min, V _X = 1.0 V, I _{OH} = -500 μA
		XC	-2.9			

AC CHARACTERISTICS: V_{CC} = +5.0 V, T_A = +25°C (See Section 3 for waveforms and load configurations)

SYMBOL	PARAMETER	54/74H		UNITS	CONDITIONS
		Min	Max		
t _{PLH} t _{PHL}	Propagation Delay		15	ns	Expander Pins Open Figs. 3-1, 3-5
			15		
t _{PLH} t _{PHL}	Propagation Delay		14.8*	ns	C _x = 15 pF
			9.8*		

*Typical Value

ADDED PROPAGATION DELAY TIME vs EXPANDER-NODE CAPACITANCE

