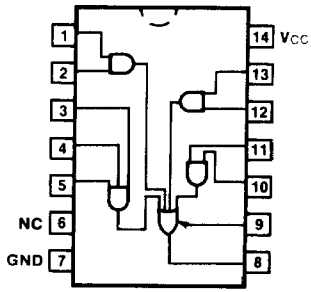
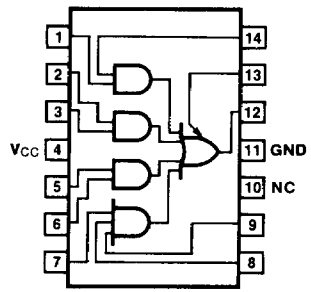
54H/74H52

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 V_{CC} = +5.0 V ±5%, T_A = 0°C to +70°C	MILITARY GRADE V_{CC} = +5.0 V ±10%, T_A = -55°C to +125°C	PKG TYPE
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 Min	54/74H Max	UNITS	CONDITIONS	
I_{CCH} I_{CCL}	Power Supply Current		31 24	mA	V_{IN} = Open V_{IN} = Gnd	V_{CC} = Max

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE: Using Expander Pins

SYMBOL	PARAMETER		54/74H Min	54/74H Max	UNITS	CONDITIONS	
V_{OH}	Output HIGH Voltage	XM	2.4		V	T_A = -55°C	V_{CC} = Min, V_X = 1.0 V I_{OH} = -500 μA
		XC	2.4			T_A = 0 °C	
V_{OL}	Output LOW Voltage	XM		0.4	V	T_A = +125°C	V_{CC} = Min, I_{INX} = -300 μA I_{OL} = 20 mA
		XC		0.4		T_A = +70°C	
I_{INX}	Expander-Node Input Current	XM	-2.7	-4.5	mA	T_A = -55°C	V_{CC} = Min, V_X = 1.0 V, I_{OH} = -500 μA
		XC	-2.9	-5.35		T_A = 0°C	

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

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

*Typical Value

ADDED PROPAGATION DELAY TIME vs EXPANDER-NODE CAPACITANCE