5462/7462 4-Wide AND-OR Expander

	Schottky TTL					High-Speed TTL					Low-Power Schottky TTL					Standard TTL					Low-Power TTL				
	Device Type	Package				Device Type	Package				Device Type	Package				Device Type	Package				Device Type	Package			
		C	P	M	CF		C	P	M	CF		C	P	M	CF		C	P	M	CF		C	P	M	CF
T.I.						SN54H62	J①			W②															
						SN74H62	J①	N①																	
FAIRCHILD						FM54H62/FM9H62	D①			F②															
						FC74H62/FC9H62	D①	P①		F②															
MOTOROLA						MC3118	L①			F①															
						MC3018	L①	P①		F①															
N.S.C.						DM54H62	J①	N①																	
						DM74H62	J①	N①																	
PHILIPS						N74H62		①																	
SIGNETICS						S54H62	F①	A①		W②															
						N74H62	F①	A①																	
SIEMENS																									
FUJITSU																									
HITACHI																									
MITSUBISHI																									
NEC																									
TOSHIBA																									

Electrical Characteristics SN54H62/SN74H62

absolute maximum ratings over operating free-air temperature range

Supply voltage, V_{CC}	7V	Operating free-air temperature range	SN54'	−55°C to 125°C
Input voltage	5.5V		SN74'	0°C to 70°C
Interemitter voltage	5.5V	Storage temperature range		−65°C to 150°C

recommended operating conditions

	SN54H62			SN74H62			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
Supply voltage, V_{CC}	4.5	5	5.5	4.75	5	5.25	V
Operating free-air temperature, T_A	−55		125	0		70	°C

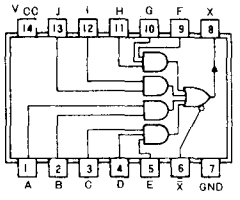
electrical characteristics over recommended operating free-air temperature range

PARAMETER			TEST CONDITIONS†		MIN	TYP‡	MAX	UNIT
V_{IH}	High-level input voltage				2			V
V_{IL}	Low-level input voltage						0.8	V
$V_{\bar{X}X}$ (on)	*On-state voltage between* expander outputs	SN54'	V_{CC} = MIN, T_A = MIN, V_X = 1 V, V_{IH} = 2 V	$I_{\bar{X}}$ = 5.85mA			0.4	V
		SN74'		$I_{\bar{X}}$ = 6.3mA				
		SN54'	V_{CC} = MAX, T_A = MAX, V_X = 1V, V_{IH} = 2 V	$I_{\bar{X}}$ = 7.85mA			0.4	
		SN74'		$I_{\bar{X}}$ = 7.4mA				
I_X (on)	On-state expander current	SN54'	V_{CC} = MIN, V_X = 1V, T_A = MIN	V_{IH} = 2V, $I_{\bar{X}}$ = 0,	−470			μA
		SN74'			−600			
$I_{\bar{X}}$ (off)	Off-state expander current	SN54'	V_{CC} = MIN, $V_{\bar{X}}$ = 4.5V, T_A = MIN	V_{IL} = 0.8V, R_X = 575Ω,			320	μA
		SN74'					570	
I_I	Input current at maximum input voltage		V_{CC} = MAX,	V_I = 5.5V			1	μA
I_{IH}	High-level input current		V_{CC} = MAX,	V_I = 2.4V			50	μA
I_{IL}	Low-level input current		V_{CC} = MAX,	V_I = 0.4V			−2	mA
I_{CC} (on)	Supply current, expander on		V_{CC} = MAX, V_X = 0.85V,	V_I = 4.5V, $I_{\bar{X}}$ = 0		3.8	7	mA
I_{CC} (off)	Supply current, expander off		V_{CC} = MAX, V_X = 0.85V,	V_I = 0, $I_{\bar{X}}$ = 0		6	9	mA
$C_{\bar{X}}$	Expander output capacitance		V_{CC}, inputs, and X open, f = 1 MHz			6.0		pF

Pin Assignments (Top View)

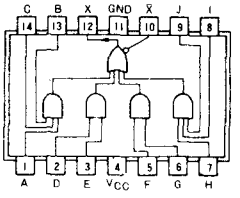
'H62 (J, N) (2-3-3-2 INPUT)

positive logic: (①)
X = AB + CDE + FGH + IJ when connected to X and $\bar{X}$ inputs of SN54H50/SN74H50, SN54H53/SN74H53, or SN54H55/SN74H55



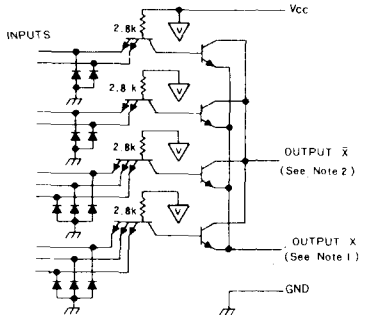
'H62 (W) (3-2-2-3 INPUT)

positive logic: (②)
X = ABC + DE + FG + HIJ when connected to X and $\bar{X}$ inputs of SN54H50/SN74H50, SN54H53/SN74H53, or SN54H55/SN74H55



Schematic (each gate)

Resistor values shown are nominal and in ohms.



'H62 CIRCUIT

NOTES: 1. Connect to X input of 'H50, 'H53, or 'H55 circuit.
2. Connect to $\bar{X}$ input of 'H50, 'H53, or 'H55 circuit.

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.
‡ All typical values are at V_{CC} = 5 V (except $C_{\bar{X}}$), T_A = 25°C.
The 'H50, 'H53, and 'H55 are designed for use with to one 'H62 expander.