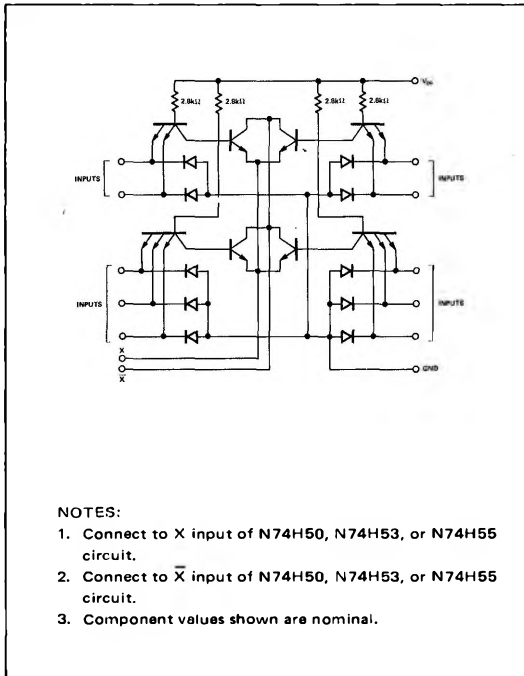# signetics 3-2-2-3-INPUT AND-OR EXPANDER (FOR USE WITH N74H50, N74H53, N74H55 CIRCUITS) | N74H62
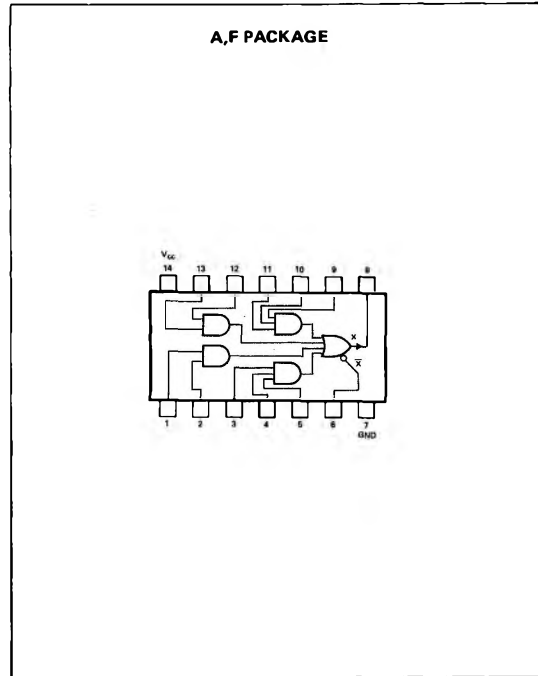
N74H62—A,F

DIGITAL 54/74 TTL SERIES

SCHEMATIC (each gate)

NOTES:
1. Connect to X input of N74H50, N74H53, or N74H55 circuit.
2. Connect to $\overline{X}$ input of N74H50, N74H53, or N74H55 circuit.
3. Component values shown are nominal.

PIN CONFIGURATIONS

A,F PACKAGE

RECOMMENDED OPERATING CONDITIONS

Supply Voltage V_{CC}	4.75V to 5.25V
Maximum number of expanders that may be fanned-in to one N74H50, N74H53, or N74H55 circuit	1

ELECTRICAL CHARACTERISTICS (unless otherwise noted $T_A = 0°C$ to $70°C$)

	PARAMETER	TEST CONDITIONS			MIN	TYP†	MAX	UNIT
$V_{in(1)}$	Logical 1 input voltage required at all input terminals of one AND section to ensure output is in the on state	$V_{CC} = 4.75V$			2			V
$V_{in(0)}$	Logical 0 input voltage required at one input terminal of each AND section to ensure output is in the off state	$V_{CC} = 4.75V$					0.8	V
V_{on}	On-state output voltage	$V_{CC} = 4.75V$, $I_{on} = 6.3mA$,	$V_{in} = 2V$, $T_A = 0°C$	$V_1 = 1V$,			0.4	V
		$V_{CC} = 5.25V$, $I_{on} = 7.4mA$,	$V_{in} = 2V$, $T_A = 70°C$	$V_1 = 0.8V$,			0.4	V
I_{off}	Off-state output current	$V_{CC} = 4.75V$, $R = 675\Omega$,	$V_{in} = 0.8V$, $T_A = 0°C$	$V_1 = 4.5V$,			570	μA
I_{on}	On-state output current	$V_{CC} = 4.75V$, $T_A = 0°C$	$V_{in} = 2V$,	$V_1 = 1V$,	−600			μA

ELECTRICAL CHARACTERISTICS (Cont'd)

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
$I_{in(0)}$	Logical 0 level input current (each input)	$V_{CC} = 5.25V,$ $V_{in} = 0.4V$			-2	mA
$I_{in(1)}$	Logical 1 level input current (each input)	$V_{CC} = 5.25V,$ $V_{in} = 2.4V$ $V_{CC} = 5.25V,$ $V_{in} = 5.5V$			50 1	μA mA
$I_{CC(on)}$	On-state supply current	$V_{CC} = 5.25V,$ $V_{in} = 4.5V,$ $V_1 = 0.85V$		3.8	7	mA
$I_{CC(off)}$	Off-state supply current	$V_{CC} = 5.25V,$ $V_{in} = 0,$ $V_1 = 0.85V$		6	9	mA

OUTPUT CAPACITANCE V_{CC} and GND terminals open, $T_A = 25°C$

	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Cx	Effective capacitance of output transistor Q_1	f = 1 MHz		1.3		pF

†All typical values are at $V_{CC} = 5V$, $T_A = 25°C$.