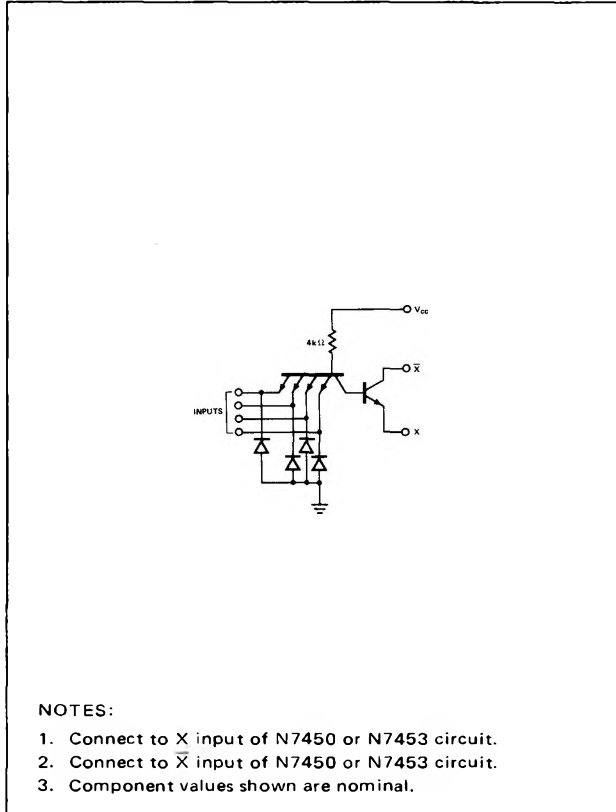


DUAL 4-INPUT EXPANDER | N7460

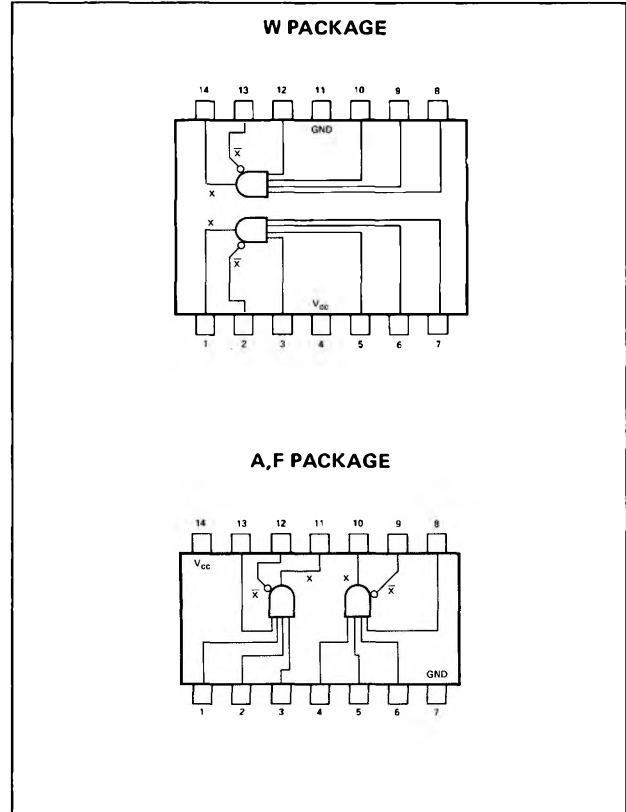
N7460-A,F

DIGITAL 54/74 TTL SERIES

SCHEMATIC (each expander)



PIN CONFIGURATIONS



RECOMMENDED OPERATING CONDITIONS

Supply Voltage V_{CC}	4.75 to 5.25V
Maximum number of expanders that may be fanned-in to one N7450 or one N7453 circuit	4

ELECTRICAL CHARACTERISTICS (unless otherwise noted $T_A = 0^\circ\text{C}$ to 70°C)

PARAMETER	TEST CONDITIONS	MIN	TYP**	MAX	UNIT	
$V_{in(1)}$	Logical 1 input voltage required at all input terminals to ensure output is in the on state	$V_{CC} = 4.75V$			2	V
$V_{in(0)}$	Logical 0 input voltage required at any input terminal to ensure output is in the off state	$V_{CC} = 4.75V$			0.8	V
V_{on}	On-state output voltage	$V_{CC} = 4.75V,$ $R = 1.1 k\Omega,$	$V_{in} = 2V,$ $T_A = 0^\circ\text{C}$	$V_1 = 1V,$	0.4	V
I_{off}	Off-state output current	$V_{CC} = 4.75V,$ $R = 1.2 k\Omega,$	$V_{in} = 0.8V,$ $T_A = 0^\circ\text{C}$	$V_1 = 4.5V,$	270	μA
I_{on}	On-state output current	$V_{CC} = 4.75V,$	$V_{in} = 2V,$	$V_1 = 1V$	-0.43	mA
$I_{in(0)}$	Logical 0 level input current (each input)	$V_{CC} = 5.25V,$	$V_{in} = 0.4V$		-1.6	mA
$I_{in(1)}$	Logical 1 level input current (each input)	$V_{CC} = 5.25V,$ $V_{CC} = 5.25V,$	$V_{in} = 2.4V$ $V_{in} = 5.5V$		40 1	μA mA

SIGNETICS DIGITAL 54/74 TTL SERIES- N7460

ELECTRICAL CHARACTERISTICS (Cont'd)

PARAMETER		TEST CONDITIONS			MIN	TYP	MAX	UNIT
$I_{CC(on)}$	On-state supply current	$V_{CC} = 5.25V,$	$V_{in} = 5V,$	$V_1 = 0.85V$		1.2	2.5	mA
$I_{CC(off)}$	Off-state supply current	$V_{CC} = 5.25V,$	$V_{in} = 0$	$V_1 = 0.85V$		2	4	mA

SWITCHING CHARACTERISTICS, $V_{CC} = 5V, T_A = 25^\circ C, N = 10$

PARAMETER		TEST CONDITIONS			MIN	TYP	MAX	UNIT
t_{pd0}	Propagation delay time to logical 0 level (through N7450 or N7453)	$C_L = 15pF,$	$R_L = 400\Omega$			10	20	ns
t_{pd1}	Propagation delay time to logical 1 level (through N7450 or N7453)	$C_L = 15pF,$	$R_L = 400\Omega$			15	30	ns

** All typical values are at $V_{CC} = 5V, T_A = 25^\circ C.$