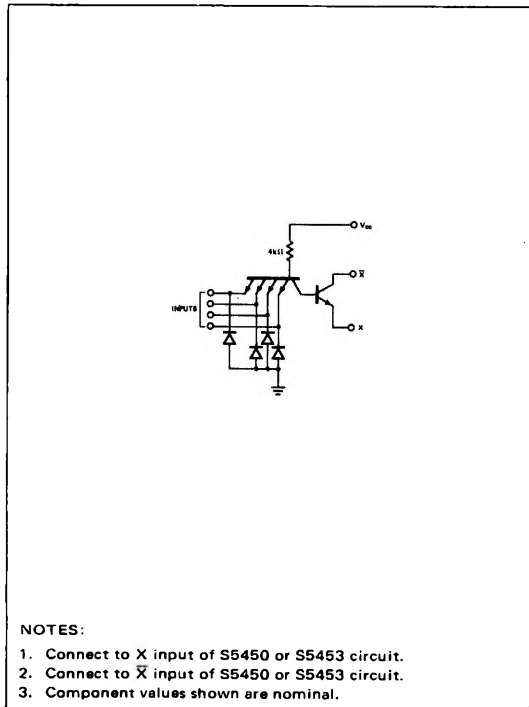


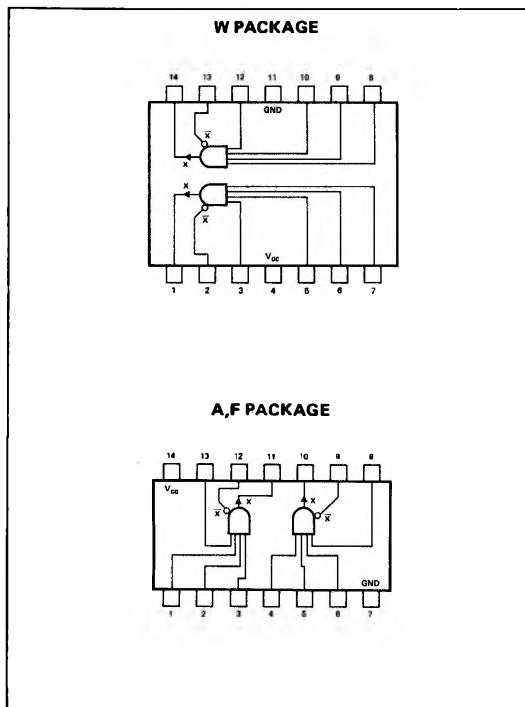
S5460-A,F,W

DIGITAL 54/74 TTL SERIES

SCHEMATIC (each expander)



PIN CONFIGURATIONS



RECOMMENDED OPERATING CONDITIONS

Supply Voltage V_{CC}	4.5V to 5.5V
Maximum number of expanders that may be fanned-in to one S5450 or one S5453 circuit	4

ELECTRICAL CHARACTERISTICS (unless otherwise noted $T_A = -55^\circ\text{C}$ to 125°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 $V_{CC} = 4.5\text{V}$	2			V
$V_{in(0)}$	Logical 0 input voltage required at any input terminal to ensure output is in the off state $V_{CC} = 4.5\text{V}$			0.8	V
V_{on}	On-state output voltage $V_{CC} = 4.5\text{V}$, $R = 1.1\text{ k}\Omega$, $T_A = -55^\circ\text{C}$			0.4	V
I_{off}	Off-state output current $V_{CC} = 4.5\text{V}$, $R = 1.2\text{ k}\Omega$, $T_A = -55^\circ\text{C}$			150	μA
I_{on}	On-state output current $V_{CC} = 4.5\text{V}$, $T_A = -55^\circ\text{C}$			-0.3	mA
$I_{in(0)}$	Logical 0 level input current (each input) $V_{CC} = 5.5\text{V}$, $V_{in} = 0.4\text{V}$			-1.6	mA

ELECTRICAL CHARACTERISTICS (Cont'd)

PARAMETER		TEST CONDITIONS			MIN	TYP	MAX	UNIT
$I_{in(1)}$	Logical 1 level input current (each input)	$V_{CC} = 5.5V,$	$V_{in} = 2.4V$				40	μA
		$V_{CC} = 5.5V,$	$V_{in} = 5.5V$				1	mA
$I_{CC(on)}$	On-state supply current	$V_{CC} = 5.5V,$	$V_{in} = 5V,$	$V_1 = 0.85V$		1.2	2.5	mA
$I_{CC(off)}$	Off-state supply current	$V_{CC} = 5.5V,$	$V_{in} = 0,$	$V_1 = 0.85V$		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 S5450 or S5453 circuit)	$C_L = 15pF,$	$R_L = 400\Omega$			10	20	ns
t_{pd1}	Propagation delay time to logical 1 level (through S5450 or S5453 circuit)	$C_L = 15pF,$	$R_L = 400\Omega$			15	30	ns

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