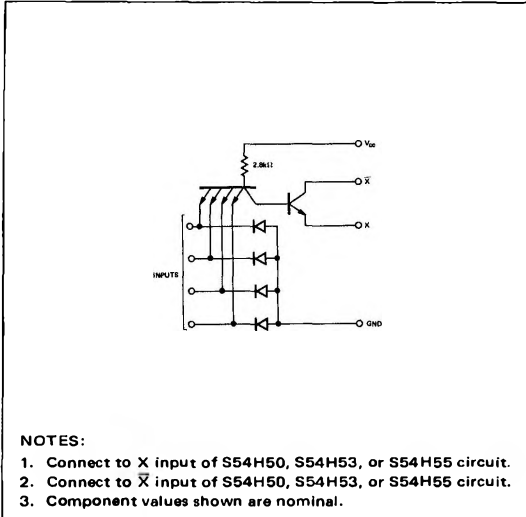


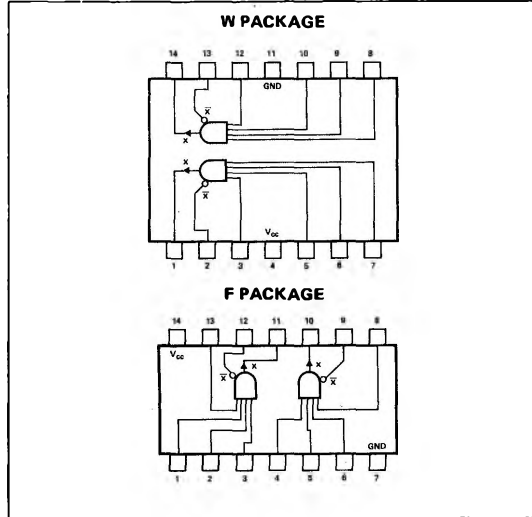
S54H60-A, F, W

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 S54H50, S54H53, or S54H55 circuit	4

**ELECTRICAL CHARACTERISTICS (unless otherwise noted  $T_A = -55^\circ\text{C}$  to  $125^\circ\text{C}$ )**

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 $V_{CC} = 4.5V$	2			V
$V_{in(0)}$	Logical 0 input voltage required at any input terminal to ensure output is in the off state $V_{CC} = 4.5V$			0.8	V
$V_{on}$	On-state output voltage $V_{CC} = 4.5V, I_{on} = 5.85mA, T_A = -55^\circ\text{C}$ $V_{CC} = 5.5V, I_{on} = 7.85mA, T_A = 125^\circ\text{C}$		$V_1 = 1V,$ $V_1 = 0.6V,$	0.4	V
$I_{off}$	Off-state output current $V_{CC} = 4.5V, R = 575\Omega, T_A = -55^\circ\text{C}$		$V_1 = 4.5V,$	320	$\mu A$
$I_{on}$	On-state output current $V_{CC} = 4.5V, T_A = -55^\circ\text{C}$		$V_1 = 1V,$	-470	$\mu A$
$I_{in(0)}$	Logical 0 level input current (each input) $V_{CC} = 5.5V$		$V_{in} = 0.4V$	-2	mA
$I_{in(1)}$	Logical 1 level input current (each input) $V_{CC} = 5.5V, V_{CC} = 5.5V,$		$V_{in} = 2.4V, V_{in} = 5.5V,$	50 1	$\mu A$ mA
$I_{CC(on)}$	On-state supply current $V_{CC} = 5.5V, V_1 = 0.85V,$		$V_{in} = 4.5V,$	1.9 3.5	mA
$I_{CC(off)}$	Off-state supply current $V_{CC} = 5.5V, V_1 = 0.85V,$		$V_{in} = 0,$	3 4.5	mA

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

**DIGITAL 54/74 TTL SERIES ■ S54H60**OUTPUT CAPACITANCE  $V_{CC}$  and GND terminals open,  $T_A = 25^\circ\text{C}$ .

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
$C_X$	Effective capacitance of output transistor $Q_1$	$f = 1\text{ MHz}$		1.3		pF