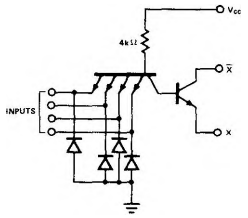
DUAL 4-INPUT EXPANDER | S5460

S5460–A,F,W

DIGITAL 54/74 TTL SERIES

SCHEMATIC (each expander)

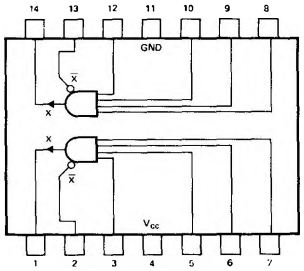


NOTES:

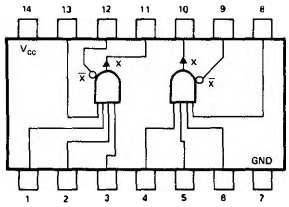
1. Connect to X input of S5450 or S5453 circuit.
2. Connect to $\overline{X}$ input of S5450 or S5453 circuit.
3. Component values shown are nominal.

PIN CONFIGURATIONS

W PACKAGE



A,F PACKAGE



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°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} = 4.5V			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, R = 1.1 kΩ,	V_{in} = 2V, T_A = –55°C	V_1 = 1V,			0.4	V
I_{off}	Off-state output current	V_{CC} = 4.5V, R = 1.2 kΩ,	V_{in} = 0.8V, T_A = –55°C	V_1 = 4.5V,			150	μA
I_{on}	On-state output current	V_{CC} = 4.5V, T_A = –55°C	V_{in} = 2V,	V_1 = 1V,	–0.3			mA
$I_{in(0)}$	Logical 0 level input current (each input)	V_{CC} = 5.5V,	V_{in} = 0.4V				–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°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 = 400Ω		10	20	ns
t_{pd1}	Propagation delay time to logical 1 level (through S5450 or S5453 circuit)	C_L = 15pF,	R_L = 400Ω		15	30	ns

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