

54/7451
54H/74H51
54S/74S51
54LS/74LS51

ORDERING CODE (See Section 9 for further Package and Ordering Information)

PACKAGES	PIN CONF.	COMMERCIAL RANGES		MILITARY RANGES	
		$V_{CC}=5V \pm 5\%$; $T_A=0^\circ C$ to $+70^\circ C$		$V_{CC}=5V \pm 10\%$; $T_A=-55^\circ C$ to $+125^\circ C$	
Plastic DIP	Fig. A Fig. A	N7451N N74S51N	• N74H51N • N74LS51N		
Ceramic DIP	Fig. A Fig. A	N7451F N74S51F	• N74H51F • N74LS51F	S5451F S54S51F	• S54H51F • S54LS51F
Flatpak	Fig. B Fig. A			S5451W S54S51W	• S54H51W • S54LS51W

INPUT AND OUTPUT LOADING AND FAN-OUT TABLE (a)

PINS		54/74	54H/74H	54S/74S	54LS/74LS
Inputs	I_{IH} (μA)	40	50	50	20
	I_{IL} (mA)	-1.6	-2.0	-2.0	-0.36
Outputs	I_{OH} (μA)	-400	-500	-1000	-400
	I_{OL} (mA)	16	20	20	4/8(a)

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (b)

PARAMETER	TEST CONDITIONS	54/74		54H/74H		54S/74S		54LS/74LS		UNIT
		Min	Max	Min	Max	Min	Max	Min	Max	
I_{CCH} Supply current	$V_{CC} = \text{Max}$, $V_{IN} = 0V$		8.0		12.8		17.8		1.6	mA
I_{CCL} Supply current	$V_{CC} = \text{Max}$, $V_{IN} \geq 4.5V$		14		24		22		2.8	mA

AC CHARACTERISTICS: $T_A=25^\circ C$ (See Section 4 for Waveforms and Conditions)

PARAMETER	TEST CONDITIONS	54/74		54H/74H		54S/74S		54LS/74LS		UNIT
		$C_L = 15pF$ $R_L = 400\Omega$		$C_L = 25pF$ $R_L = 280\Omega$		$C_L = 15pF$ $R_L = 280\Omega$		$C_L = 15pF$ $R_L = 2k\Omega$		
		Min	Max	Min	Max	Min	Max	Min	Max	
t_{PLH} t_{PHL} Propagation delay	Waveform 1		22 15		11 11		5.5 5.5		20 20	ns ns

NOTES

- a. The slashed numbers indicate different values for Military/Commercial temperature ranges respectively.
- b. For family dc characteristics see inside front cover for 54/74 and 54H/74H, and see inside back cover for 54S/74S and 54LS/74LS specification.
- c. Make no external connection to these pins on the 54/7451, 54H/74H51 & 54S/74S51.

PIN CONFIGURATIONS

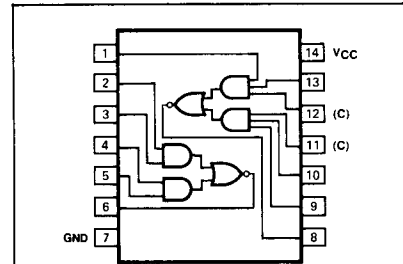


Figure A

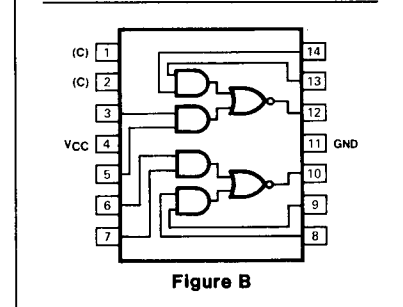


Figure B

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