

54S/74S280

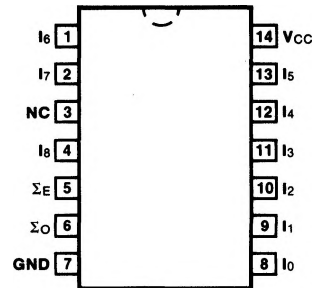
9-BIT PARITY GENERATOR/CHECKER

DESCRIPTION — The '280 is a high speed parity generator/checker that accepts nine bits of input data and detects whether an even or an odd number or these inputs are HIGH. If an even number of inputs are HIGH, the Sum Even output is HIGH. If an odd number are HIGH, the Sum Even output is LOW. The Sum Odd output is the complement of the Sum Even output.

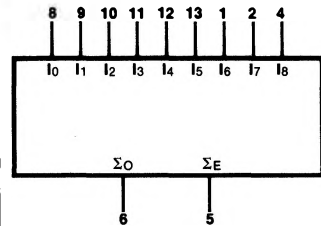
ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		$V_{CC} = +5.0\text{ V} \pm 5\%$, $T_A = 0^\circ\text{C to } +70^\circ\text{C}$	$V_{CC} = +5.0\text{ V} \pm 10\%$, $T_A = -55^\circ\text{C to } +70^\circ\text{C}$	
Plastic DIP (P)	A	74S280PC		9A
Ceramic DIP (D)	A	74S280DC	54S280DM	6A
Flatpak (F)	A	74S280FC	54S280FM	3I

CONNECTION DIAGRAM PINOUT A



LOGIC SYMBOL



$V_{CC} = \text{Pin } 14$
 $GND = \text{Pin } 7$

INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

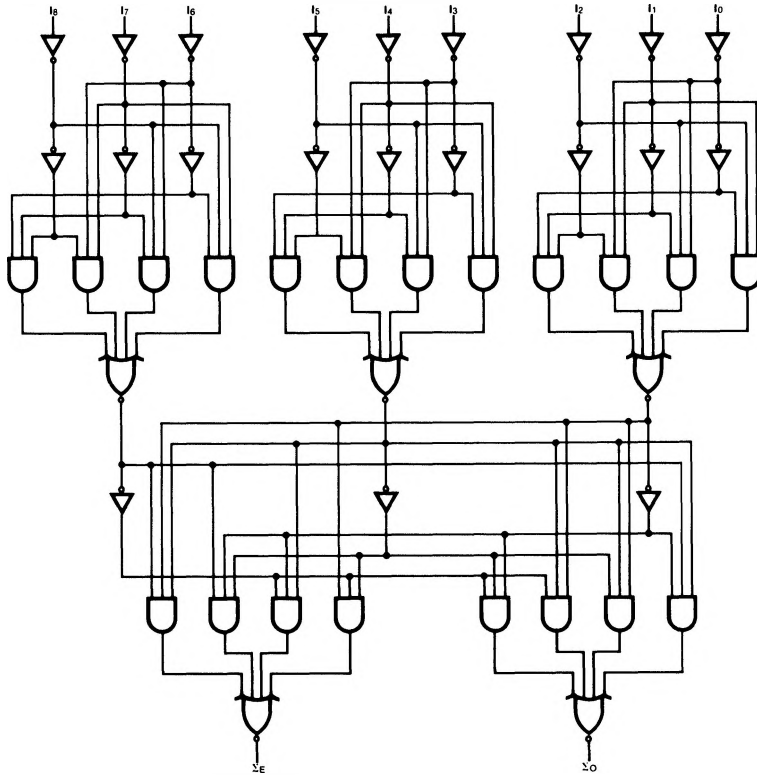
PIN NAMES	DESCRIPTION	54/74S (U.L.) HIGH/LOW
$I_0 - I_8$	Data Inputs	1.25/1.25
ΣO	Odd Parity Output	25/12.5
ΣE	Even Parity Output	25/12.5

TRUTH TABLE

NUMBER OF INPUTS $I_0 - I_8$ THAT ARE HIGH	OUTPUTS	
	Σ EVEN	Σ ODD
0, 2, 4, 6, 8	H	L
1, 3, 5, 7, 9	L	H

H = HIGH Voltage Level
L = LOW Voltage Level

LOGIC DIAGRAM



DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

SYMBOL	PARAMETER	54/74S		UNITS	CONDITIONS
		Min	Max		
I _{CC}	Power Supply Current	XM	99	mA	V _{CC} = Max, T _A = 25°C All Inputs = Gnd
		XC	105		
		XM	94	mA	V _{CC} = Max, T _A = 125°C All Inputs = Gnd

AC CHARACTERISTICS: V_{CC} = +5.0 V, T_A = +25°C (See Section 3 for waveforms and load configurations)

SYMBOL	PARAMETER	54/74S		UNITS	CONDITIONS
		C _L = 15 pF R _L = 280 Ω			
		Min	Max		
t _{PLH} t _{PHL}	Propagation Delay I _n to ΣE		21 18	ns	Figs. 3-1, 3-20
t _{PLH} t _{PHL}	Propagation Delay I _n to ΣO		21 18		