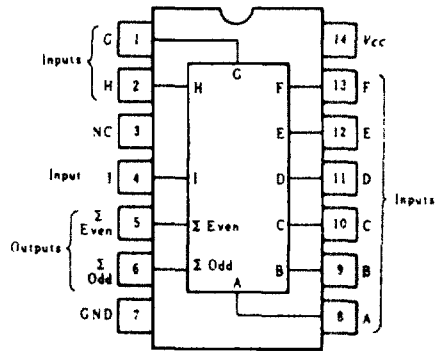
HD74HC280 ● 9-bit Odd/Even Parity Generator/Checker

This parity generator/checker features odd/even outputs to facilitate operation of either odd or even parity applications. The word length capability is easily expanded by cascading devices.

■ FEATURES

- High Speed Operation: t_{pd} (Data to Σ Even or Σ Odd)=22ns typ. (C_L=50pF)
- High Output Current: Fanout of 10 LSTTL Loads
- Wide Operating Voltage: Vcc=2~6V
- Low Input Current: 1μA max.
- Low Quiescent Supply Current: Icc (static)=4μA max. (Ta=25°C)

■ PIN ARRANGEMENT



(Top View)

■ FUNCTION TABLE

Number of inputs A through I that are high	Outputs	
	Σ Even	Σ Odd
0, 2, 4, 6, 8	H	L
1, 3, 5, 7, 9	L	H

■ DC CHARACTERISTICS

Item	Symbol	V_{CC}(V)	Test Conditions		Ta=25°C min	typ	max	Ta=−40~+85°C min	max	Unit
Input Voltage	V_{IH}	2.0			1.5	—	—	1.5	—	V
		4.5			3.15	—	—	3.15	—	
		6.0			4.2	—	—	4.2	—	
	V_{IL}	2.0			—	—	0.5	—	0.5	V
		4.5			—	—	1.35	—	1.35	
		6.0			—	—	1.8	—	1.8	
Output Voltage	V_{OH}	2.0	V_{in}=V_{IH} or V_{IL}	I_{OH}=−20μA	1.9	2.0	—	1.9	—	V
		4.5			4.4	4.5	—	4.4	—	
		6.0			5.9	6.0	—	5.9	—	
		4.5		I_{OH}=−4mA	4.18	—	—	4.13	—	
		6.0		I_{OH}=−5.2mA	5.68	—	—	5.63	—	
	V_{OL}	2.0	V_{in}=V_{IH} or V_{IL}	I_{OL}=20μA	—	0.0	0.1	—	0.1	V
		4.5			—	0.0	0.1	—	0.1	
		6.0			—	0.0	0.1	—	0.1	
		4.5		I_{OL}=4mA	—	—	0.26	—	0.33	
		6.0		I_{OL}=5.2mA	—	—	0.26	—	0.33	
Input Current	I_{in}	6.0	V_{in}=V_{CC} or GND		—	—	±0.1	—	±1.0	μA
Quiescent Supply Current	I_{CC}	6.0	V_{in}=V_{CC} or GND, I_{out}=0μA		—	—	4.0	—	40	μA

■ AC CHARACTERISTICS (C_L=50pF, Input t_r=t_f=6ns)

Item	Symbol	V_{CC}(V)	Test Conditions	Ta=25°C min	typ	max	Ta=−40~+85°C min	max	Unit
Propagation Delay Time	t_{PLH} t_{PHL}	2.0	Data to Σ Even or Σ Odd	—	—	205	—	255	ns
		4.5		—	22	41	—	51	
		6.0		—	—	35	—	43	
Output Rise/Fall Time	t_{TLH} t_{THL}	2.0		—	—	75	—	95	ns
		4.5		—	5	15	—	19	
		6.0		—	—	13	—	16	
Input Capacitance	C_{in}	—		—	5	10	—	10	pF