CD54HC273/3A
CD54HCT273/3A

Burn-In Test-Circuit Connections

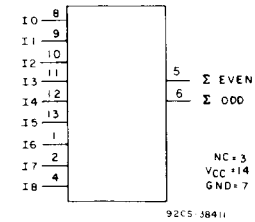
Static	STATIC BURN-IN I			STATIC BURN-IN II		
	OPEN	GROUND	V_{CC} (6V)	OPEN	GROUND	V_{CC} (6V)
CD54HC/HCT273	2,5,6,9,12, 15,16,19	1,3,4,7,8,10,11,13, 14,17,18	20	2,5,6,9,12, 15,16,19	10	1,3,4,7,8,11,13,14, 17,18,20
Dynamic	**OPEN**	**GROUND**	**1/2 V_{CC} (3V)**	**V_{CC} (6V)**	**OSCILLATOR**	
					50 kHz	**25 kHz**
CD54HC/HCT273	—	10	2,5,6,9,12,15, 16,19	1,20	11	3,4,7,8,13,14, 17,18

NOTE: Each pin except V_{CC} and Gnd will have a resistor of 2k-47k ohms.

CD54HC280/3A
CD54HCT280/3A

9-Bit Odd/Even Parity Generator/Checker

The RCA CD54HC280 and CD54HCT280 are 9-bit odd/even parity, generator checker devices. Both even and odd parity outputs are available for checking or generating parity for words up to nine bits long. Even parity is indicated (ΣE output is high) when an even number of data inputs is high. Odd parity is indicated (ΣO output is high) when an odd number of data inputs is high. Parity checking for words larger than 9 bits can be accomplished by tying the ΣE output to any input of an additional HC/HCT280 parity checker.



FUNCTIONAL DIAGRAM

Package Specifications

See Section 11, Fig. 10

Static Electrical Characteristics (Limits with black dots (•) are tested 100%)

CHARACTERISTICS		TEST CONDITIONS HC/HCT V_{DD}	V_O	I_O	V_{CC} or GND	V_{IN} HC V_{IL} or V_{IH}	V_{IN} HCT V_{IL} or V_{IH}	LIMITS MIN.	LIMITS MAX.	UNITS
Quiescent	25°C	6	—	—	6, 0	—	—	—	8•	μA
Device Current	-55°C / +125°C	6	—	—	6, 0	—	—	—	160•	μA
I_{CC}										

The complete static electrical test specification consists of the above by-type static tests combined with the standard static tests in the beginning of this section.

HCT INPUT LOADING TABLE

INPUT	UNIT LOAD*
All	1

*Unit load is ΔI_{CC} limit specified in Static Characteristics Chart, e.g., 360 μA max. @ 25°C.

CD54HC280/3A
CD54HCT280/3A

Switching Speed (Limits with black dots (•) are tested 100%.)

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

CHARACTERISTIC	SYMBOL	V_{CC}	25°C				-55°C to +125°C				UNITS
			HC		HCT		54HC		54HCT		
		V	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Propagation Delay Any Input to ΣO	t_{PLH}	2	—	200	—	—	—	300	—	—	ns
		4.5	—	40•	—	45•	—	60•	—	68•	
		6	—	34	—	—	—	51	—	—	
Any Input to ΣE	t_{PHL}	2	—	200	—	—	—	300	—	—	
		4.5	—	40•	—	42•	—	60•	—	63•	
		6	—	34	—	—	—	51	—	—	
Output Transition Time	t_{TLH} t_{THL}	2	—	75	—	—	—	110	—	—	
		4.5	—	15	—	15	—	22	—	22	
		6	—	13	—	—	—	19	—	—	
Input Capacitance	C_I	—	—	10	—	10	—	10	—	10	pF

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Burn-In Test-Circuit Connections (Use Static II for /3A burn-in and Dynamic for Life Test.)

Static	STATIC BURN-IN I			STATIC BURN-IN II		
	OPEN	GROUND	V_{CC} (6V)	OPEN	GROUND	V_{CC} (6V)
CD54HC/HCT280	3,5,6	1,2,4,7-13	14	3,5,6	7	1,2,4,8-14
Dynamic	**OPEN**	**GROUND**	**1/2 V_{CC} (3V)**	**V_{CC} (6V)**	**OSCILLATOR**	
					50 kHz	25 kHz
CD54HC/HCT280	3	7	5,6	14	1,2,4,8-13	—

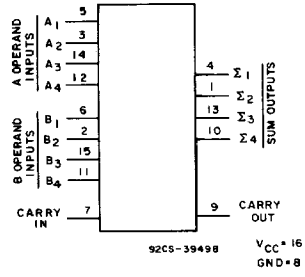
NOTE: Each pin except V_{CC} and Gnd will have a resistor of 2k-47k ohms.

4-Bit Full Adder w/Fast Carry

CD54HC283/3A
CD54HCT283/3A

The RCA CD54HC283 and CD54HCT283 are binary-full adders that add two 4-bit binary numbers and generate a carry-out bit if the sum exceeds 15.

Because of the symmetry of the add function, this device can be used with either all active-High operands (positive logic) or with all active-Low operands (negative logic). When using positive logic the carry-in input must be tied low if there is no carry-in.



FUNCTIONAL DIAGRAM

Package Specifications

See Section 11, Fig. 11