

CD54HC123/3A CD54HCT123/3A

Burn-In Test-Circuit Connections

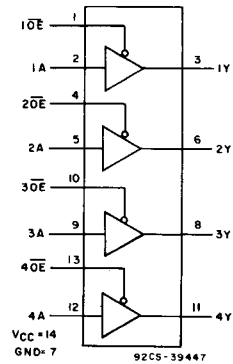
Static	STATIC BURN-IN I			STATIC BURN-IN II		
	OPEN	GROUND	V _{CC} (6V)	OPEN	GROUND	V _{CC} (6V)
CD54HC/HCT123	4-7,12-15	1-3,8-11	16	4-7,12-15	8	1-3,9-11,16
Dynamic	OPEN	GROUND	1/2 V _{CC} (3V)	V _{CC} (6V)	OSCILLATOR	
CD54HC/HCT123	—	1,6,8,9,14	4,5,12,13	7,15,16	50 kHz	25 kHz
					2,3,10,11	—

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

CD54HC125/3A CD54HCT125/3A

Quad 3-State Buffer

The RCA-CD54HC125 and CD54HCT125 contain four independent three-state buffers, each having its own output enable input, which when "HIGH" puts the output in the high-impedance state.



FUNCTIONAL DIAGRAM

Package Specifications

See Section 11, Fig. 10

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

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

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*
nA, nOE	1

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

CD54HC125/3A

CD54HCT125/3A

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

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

CHARACTERISTIC	SYMBOL	TEST CONDITIONS V_{CC} V	LIMITS								UNITS			
			25°C				-55°C to +125°C							
			HC		HCT		54HC		54HCT					
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.				
Propagation Delay Time nA to nY	t_{PLH} t_{PHL}	2	—	100	—	—	—	—	150	—	—	ns		
		4.5	—	20•	—	25•	—	30•	—	38•				
		6	—	17	—	—	—	26	—	—				
Enable Delay Time	t_{PZH} t_{PZL}	2	—	125	—	—	—	190	—	—	ns			
		4.5	—	25•	—	25•	—	38•	—	38•				
		6	—	21	—	—	—	32	—	—				
Disable Delay Time	t_{PHZ} t_{PLZ}	2	—	125	—	—	—	190	—	—			ns	
		4.5	—	25•	—	28•	—	38•	—	42•				
		6	—	21	—	—	—	32	—	—				
Output Transition Time	t_{TLH} t_{THL}	2	—	60	—	—	—	90	—	—				ns
		4.5	—	12	—	12	—	18	—	18				
		6	—	10	—	—	—	15	—	—				
Input Capacitance	C_i	—	—	10	—	10	—	10	—	10		pF		
3-State Output Capacitance	C_o	—	—	20	—	20	—	20	—	20				

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/HCT125	3,6,8,11	1,2,4,5,7,9,10,12,13	14	3,6,8,11	7	1,2,4,5,9,10,12-14
Dynamic	OPEN	GROUND	$1/2 V_{CC}$ (3V)	V_{CC} (6V)	OSCILLATOR 50 kHz 25 kHz	
CD54HC/HCT125	—	7	3,6,8,11	14	1,2,4,5,9,10, 12,13	—

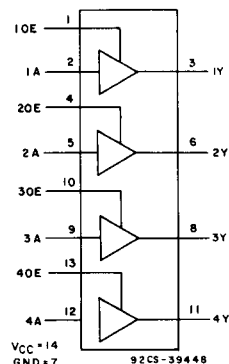
NOTE: Each pin except V_{CC} and Gnd will have a resistor of 2k-47k ohms.

Quad 3-State Buffer

The RCA-CD54HC126 and CD54HCT126 contain four independent three-state buffers, each having its own output enable input, which when "LOW" puts the output in the high-impedance state.

CD54HC126/3A

CD54HCT126/3A



FUNCTIONAL DIAGRAM

Package Specifications

See Section 11, Fig. 10