

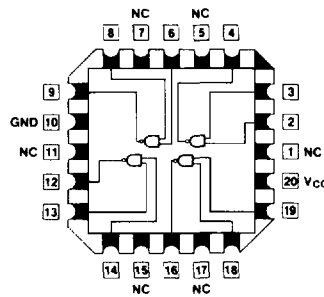
54AC/74AC00 • 54ACT/74ACT00

Quad 2-Input NAND Gate

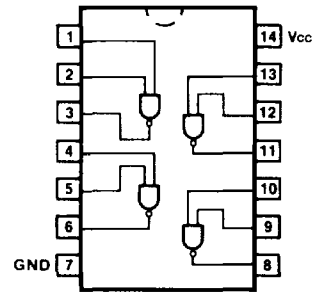
- Outputs Source/Sink 24 mA
- ACT00 has TTL-Compatible Inputs

Ordering Code: See Section 6

Connection Diagrams



Pin Assignment
for LCC



Pin Assignment
for DIP, Flatpak and SOIC

DC Characteristics (unless otherwise specified)

Symbol	Parameter	54AC/ACT	74AC/ACT	Units	Conditions
I _{CC}	Maximum Quiescent Supply Current	80	40	μA	V _{IN} = V _{CC} or Ground, V _{CC} = 5.5 V, T _A = Worst Case
I _{CC}	Maximum Quiescent Supply Current	4.0	4.0	μA	V _{IN} = V _{CC} or Ground, V _{CC} = 5.5 V, T _A = 25°C
I _{CC(T)}	Maximum Additional I _{CC} /Input (*ACT00)	1.6	1.5	mA	V _{IN} = V _{CC} - 2.1 V, V _{CC} = 5.5 V, T _A = Worst Case

5

AC Characteristics

Symbol	Parameter	V _{CC} * (V)	74AC			54AC		74AC		Units	Fig. No.
			T _A = +25°C C _L = 50 pF			T _A = -55°C to +125°C C _L = 50 pF		T _A = -40°C to +85°C C _L = 50 pF			
			Min	Typ	Max	Min	Max	Min	Max		
t _{PLH}	Propagation Delay	3.3 5.0	1.0 1.0	7.0 6.0	9.5 8.0	1.0 1.0	11.0 8.5	1.0 1.0	10.0 8.5	ns	3-5
t _{PHL}	Propagation Delay	3.3 5.0	1.0 1.0	5.5 4.5	8.0 6.5	1.0 1.0	9.0 7.0	1.0 1.0	8.5 7.0	ns	3-5

*Voltage Range 3.3 is 3.3 V ± 0.3 V
Voltage Range 5.0 is 5.0 V ± 0.5 V

Military parameters given herein are for general references only. For current military specifications and subgroup testing information please request Fairchild's Table I data sheet from your Fairchild sales engineer or account representative.

AC Characteristics

Symbol	Parameter	V _{CC} * (V)	74ACT			54ACT		74ACT		Units	Fig. No.
			T _A = + 25°C C _L = 50 pF			T _A = - 55°C to + 125°C C _L = 50 pF		T _A = - 40°C to + 85°C C _L = 50 pF			
			Min	Typ	Max	Min	Max	Min	Max		
t _{PLH}	Propagation Delay	5.0	1.0	5.5	9.0	1.0	9.5	1.0	9.5	ns	3-5
t _{PHL}	Propagation Delay	5.0	1.0	4.0	7.0	1.0	8.0	1.0	8.0	ns	3-5

*Voltage Range 5.0 is 5.0 V ± 0.5 V

Military parameters given herein are for general references only. For current military specifications and subgroup testing information please request Fairchild's Table I data sheet from your Fairchild sales engineer or account representative.

Capacitance

Symbol	Parameter	54/74AC/ACT	Units	Conditions
		Typ		
C _{IN}	Input Capacitance	4.5	pF	V _{CC} = 5.5 V
C _{PD}	Power Dissipation Capacitance	30.0	pF	V _{CC} = 5.5 V