

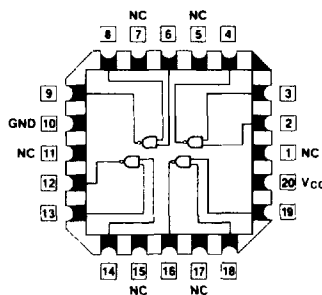
54AC/74AC00 • 54ACT/74ACT00

Quad 2-Input NAND Gate

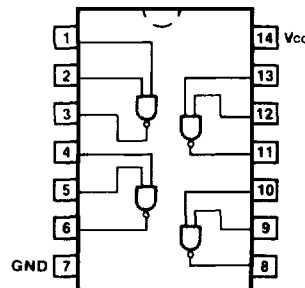
- Outputs Source/Sink 24 mA
- 'ACT00 has TTL-Compatible Inputs

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, $V_{CC} = 5.5 V$, $T_A = \text{Worst Case}$
I_{CC}	Maximum Quiescent Supply Current	4.0	4.0	μA	$V_{IN} = V_{CC}$ or Ground, $V_{CC} = 5.5 V$, $T_A = 25^\circ C$
I_{CCT}	Maximum Additional I_{CC}/Input ('ACT00)	1.6	1.5	mA	$V_{IN} = V_{CC} - 2.1 V$, $V_{CC} = 5.5 V$, $T_A = \text{Worst Case}$

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AC Characteristics

Symbol	Parameter	V_{CC}^* (V)	74AC			54AC		74AC		Units	Fig. No.
			$T_A = +25^\circ C$ $C_L = 50 pF$			$T_A = -55^\circ C$ to $+125^\circ C$ $C_L = 50 pF$		$T_A = -40^\circ C$ to $+85^\circ C$ $C_L = 50 pF$			
			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 $3.3 V \pm 0.3 V$
Voltage Range 5.0 is $5.0 V \pm 0.5 V$

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