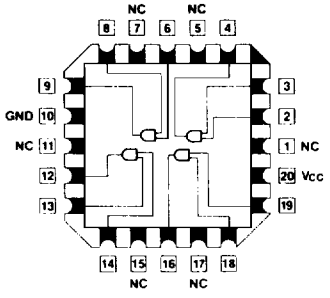
54AC/74AC08 • 54ACT/74ACT08

Quad 2-Input AND Gate

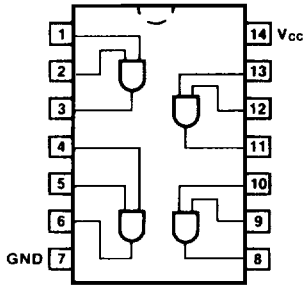
- **Outputs Source/Sink 24 mA**
- **'ACT08 has TTL-Compatible Inputs**

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_{CCT}	Maximum Additional Icc/Input ('ACT08)	1.6	1.5	mA	$V_{IN} = V_{CC} - 2.1$ V, $V_{CC} = 5.5$ V, T_A = Worst Case

AC Characteristics

Symbol	Parameter	V_{CC}* (V)	74AC $T_A = +25°C$, $C_L = 50$ pF			54AC $T_A = -55°C$ to $+125°C$, $C_L = 50$ pF		74AC $T_A = -40°C$ to $+85°C$, $C_L = 50$ pF		Units	Fig. No.
			Min	Typ	Max	Min	Max	Min	Max		
t_{PLH}	Propagation Delay	3.3	1.0	7.5	9.5	1.0	12.0	1.0	10.0	ns	3-5
		5.0	1.0	5.5	7.5	1.0	9.0	1.0	8.5		
t_{PHL}	Propagation Delay	3.3	1.0	7.0	8.5	1.0	11.5	1.0	9.0	ns	3-5
		5.0	1.0	5.5	7.0	1.0	8.5	1.0	7.5		

*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	Vcc* (V)	74ACT $T_A = +25°C$, $C_L = 50$ pF		54ACT $T_A = -55°C$ to $+125°C$, $C_L = 50$ pF		74ACT $T_A = -40°C$ to $+85°C$, $C_L = 50$ pF		Units	Fig. No.
			Min	Max	Min	Max	Min	Max		
t_{PLH}	Propagation Delay	5.0		6.5					ns	3-5
t_{PHL}	Propagation Delay	5.0		6.7					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 Typ	Units	Conditions
C_{IN}	Input Capacitance	4.5	pF	$V_{CC} = 5.5$ V
C_{PD}	Power Dissipation Capacitance	20.0	pF	$V_{CC} = 5.5$ V