

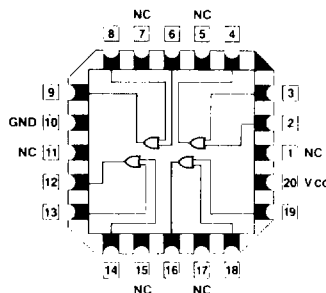
54AC/74AC32 • 54ACT/74ACT32

Quad 2-Input OR Gate

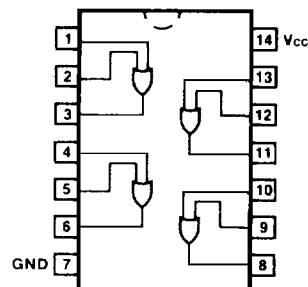
Connection Diagrams

- Outputs Source/Sink 24 mA
- *ACT32 has TTL-Compatible Inputs

Ordering Code: See Section 6



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 (*ACT32) | 1.6 | 1.5 | mA | $V_{IN} = V_{CC} - 2.1 V$ $V_{CC} = 5.5 V$, $T_A = \text{Worst Case}$ |

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 5.5 | 9.0 7.5 | 1.0 1.0 | 12.0 9.0 | 1.0 1.0 | 10.0 8.5 | ns | 3-5 |
| t_{PHL} | Propagation Delay | 3.3 5.0 | 1.0 1.0 | 7.0 5.0 | 8.5 7.0 | 1.0 1.0 | 11.5 8.5 | 1.0 1.0 | 9.0 7.5 | 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 | 7.2 | | | | | | | ns | 3-5 |
| t _{PHL} | Propagation Delay | 5.0 | 6.6 | | | | | | | 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 | 20.0 | pF | V _{cc} = 5.5 V |