

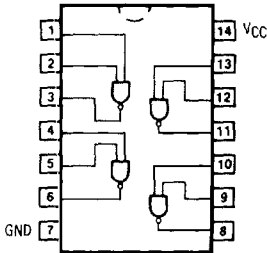


MOTOROLA

Product Preview

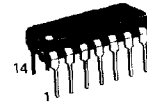
Quad 2-Input NAND Gate

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

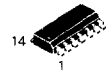


**MC74AC00
MC74ACT00**

**QUAD 2-INPUT
NAND GATE**



**N SUFFIX
CASE 646-06
PLASTIC**



**D SUFFIX
CASE 751A-02
PLASTIC**

DC CHARACTERISTICS (unless otherwise specified)

Symbol	Parameter	Value	Units	Test Conditions
I_{CC}	Maximum Quiescent Supply Current	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	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)	1.5	mA	$V_{IN} = V_{CC} - 2.1 V$ $V_{CC} = 5.5 V, T_A = \text{Worst Case}$

AC CHARACTERISTICS (For Figures and Waveforms — See Section 3)

Symbol	Parameter	V_{CC}^* (V)	74AC			74ACT		Units	Fig. No.
			$T_A = +25^\circ C$ $C_L = 50 pF$			$T_A = -40^\circ C$ to $+85^\circ C$ $C_L = 50 pF$			
			Min	Typ	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	10 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	8.5 7.0	ns	3-5

*Voltage Range 3.3 is $3.3 V \pm 0.3 V$
Voltage Range 5.0 is $5.0 V \pm 0.5 V$

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MC74AC00 • MC74ACT00

AC CHARACTERISTICS (For Figures and Waveforms — See Section 3)

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

*Voltage Range 5.0 is 5.0 V ± 0.5 V

CAPACITANCE

Symbol	Parameter	Value Typ	Units	Test Conditions
C _{IN}	Inpt. Capacitance	4.5	pF	V _{CC} = 5.0 V
C _{PD}	Power Dissipation Capacitance	30	pF	V _{CC} = 5.0 V