



MOTOROLA

Product Preview

Octal Buffer/Line Driver with 3-State Outputs

The MC74AC244/74ACT244 is an octal buffer and line driver designed to be employed as a memory address driver, clock driver and bus oriented transmitter/receiver which provides improved PC board density.

- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers
- Outputs Source/Sink 24 mA
- 'ACT244 Has TTL Compatible Inputs

TRUTH TABLES

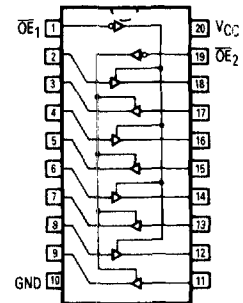
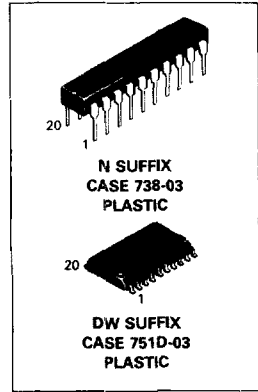
Inputs		Outputs (Pins 12, 14, 16, 18)
\overline{OE}_1	D	
L	L	L
L	H	H
H	X	Z

Inputs		Outputs (Pins 3, 5, 7, 9)
\overline{OE}_2	D	
L	L	L
L	H	H
H	X	Z

H = HIGH Voltage Level
 L = LOW Voltage Level
 X = Immaterial
 Z = High Impedance

**MC74AC244
MC74ACT244**

**OCTAL BUFFER/LINE
DRIVER WITH
3-STATE OUTPUTS**



5

This document contains information on a product under development. Motorola reserves the right to change or discontinue this product without notice.

MC74AC244 • MC74ACT244

DC CHARACTERISTICS (unless otherwise specified)

Symbol	Parameter	Value	Units	Test Conditions
I _{CC}	Maximum Quiescent Supply Current	80	μA	V _{IN} = V _{CC} or Ground, V _{CC} = 5.5 V, T _A = Worst Case
I _{CC}	Maximum Quiescent Supply Current	8.0	μA	V _{IN} = V _{CC} or Ground, V _{CC} = 5.5 V, T _A = 25°C
I _{CCT}	Maximum Additional I _{CC} (Input (ACT244))	1.5	mA	V _{IN} = V _{CC} - 2.1 V, V _{CC} = 5.5 V, T _A = Worst Case

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

Symbol	Parameter	V _{CC} * (V)	74AC			74AC		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 Data to Output	3.3 5.0	1.0 1.0	6.5 5.0	9.0 7.0	1.0 1.0	10 7.5	ns	3-5
t _{PHL}	Propagation Delay Data to Output	3.3 5.0	1.0 1.0	6.5 5.0	9.0 7.0	1.0 1.0	10 7.5	ns	3-5
t _{PZH}	Output Enable Time	3.3 5.0	1.0 1.0	6.0 5.0	10.5 7.0	1.0 1.0	11 8.0	ns	3-7
t _{PZL}	Output Enable Time	3.3 5.0	1.0 1.0	7.5 5.5	10 8.0	1.0 1.0	11 8.5	ns	3-8
t _{PHZ}	Output Disable Time	3.3 5.0	1.0 1.0	7.0 6.5	10 9	1.0 1.0	10.5 9.5	ns	3-7
t _{PLZ}	Output Disable Time	3.3 5.0	1.0 1.0	7.5 6.5	10.5 9.0	1.0 1.0	11.5 9.5	ns	3-8

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

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 Data to Output	5.0	1.0	6.5	9.0	1.0	10	ns	3-5
t _{PHL}	Propagation Delay Data to Output	5.0	1.0	7.0	9.0	1.0	10	ns	3-5
t _{PZH}	Output Enable Time	5.0	1.0	6.0	8.5	1.0	9.5	ns	3-7
t _{PZL}	Output Enable Time	5.0	1.0	7.0	9.5	1.0	10.5	ns	3-8
t _{PHZ}	Output Disable Time	5.0	1.0	7.0	9.5	1.0	10.5	ns	3-7
t _{PLZ}	Output Disable Time	5.0	1.0	7.5	10	1.0	10.5	ns	3-8

*Voltage Range 5.0 is 5.0 V ± 0.5 V

CAPACITANCE

Symbol	Parameter	Value Typ	Units	Test Conditions
C _{IN}	Input Capacitance	4.5	pF	V _{CC} = 5.0 V
C _{PD}	Power Dissipation Capacitance	45	pF	V _{CC} = 5.0 V