

54F/74F240 • 54F/74F241 • 54F/74F244

Octal Buffers/Line Drivers With 3-State Outputs

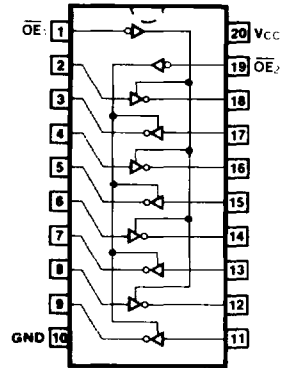
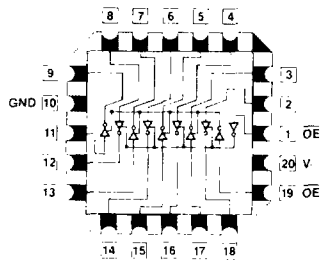
Description

The 'F240, 'F241 and 'F244 are octal buffers and line drivers designed to be employed as memory and address drivers, clock drivers and bus-oriented transmitters/receivers which provide improved PC and board density.

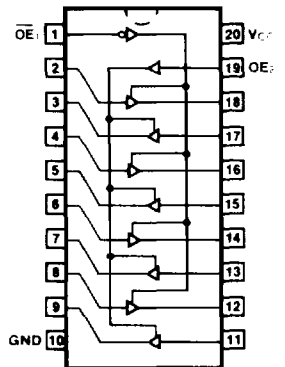
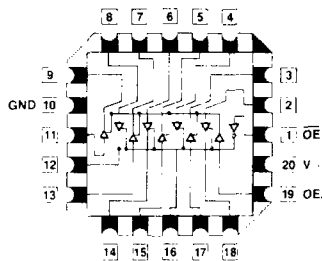
- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers
- Outputs Sink 64 mA
- 15 mA Source Current
- Input Clamp Diodes Limit High-Speed Termination Effects

Ordering Code: See Section 5

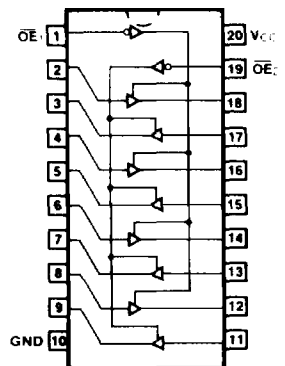
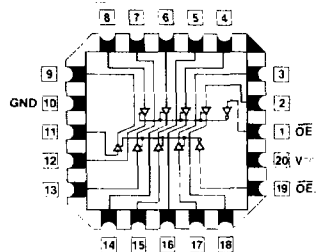
Connection Diagrams



'F240



'F241



'F244

Pin Assignment for LCC and PCC

Pin Assignment for DIP and SOIC

Input Loading/Fan-Out: See Section 3 for U.L. definitions

Pin Names	Description	54F/74F(U.L.) HIGH/LOW
$\overline{OE}_1, \overline{OE}_2$ OE ₂	3-State Output Enable Input (Active LOW) 3-State Output Enable Input (Active HIGH) Inputs ('F240) Inputs ('F241, 'F244) Outputs	0.5/0.625 0.5/0.625 0.5/0.625* 0.5/1.0* 75/40 (30)

*Worst-case 'F240 enabled; 'F241, 'F244 disabled

Truth Tables

'F240

Inputs			Output
$\overline{OE}_1, \overline{OE}_2$	D		
L	L		H
L	H		L
H	X		Z

'F244

Inputs			Output
$\overline{OE}_1, \overline{OE}_2$	D		
L	L		L
L	H		H
H	X		Z

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

'F241

Inputs			Output
\overline{OE}_1	OE ₂	D	
L	H	L	L
L	H	H	H
H	L	X	Z

DC Characteristics over Operating Temperature Range (unless otherwise specified)

Symbol	Parameter	54F/74F			Units	Conditions	
		Min	Typ	Max			
I _{CCH} I _{CCL} I _{CCZ}	Power Supply Current ('F240)		19 50 42	29 75 63	mA	Outputs HIGH Outputs LOW Outputs OFF	V _{CC} = Max
I _{CCH} I _{CCL} I _{CCZ}	Power Supply Current ('F241, 'F244)		40 60 60	60 90 90	mA	Outputs HIGH Outputs LOW Outputs OFF	

AC Characteristics: See Section 3 for waveforms and load configurations

Symbol	Parameter	54F/74F			54F		74F		Units	Fig. No.
		T _A = +25°C V _{CC} = +5.0 V C _L = 50 pF			T _A , V _{CC} = Mil C _L = 50 pF		T _A , V _{CC} = Com C _L = 50 pF			
		Min	Typ	Max	Min	Max	Min	Max		
t _{PLH} t _{PHL}	Propagation Delay Data to Output ('F240)	3.0 2.0	5.1 3.5	7.0 4.7	3.0 2.0	9.0 6.0	3.0 2.0	8.0 5.7	ns	3-1 3-3
t _{PZH} t _{PZL}	Output Enable Time ('F240)	2.0 4.0	3.5 6.9	4.7 9.0	2.0 4.0	6.5 10.5	2.0 4.0	5.7 10.0	ns	3-1 3-12 3-13
t _{PHZ} t _{PLZ}	Output Disable Time ('F240)	2.0 2.0	4.0 6.0	5.3 8.0	2.0 2.0	6.5 12.5	2.0 2.0	6.3 9.5		
t _{PLH} t _{PHL}	Propagation Delay Data to Output ('F241, 'F244)	2.5 2.5	4.0 4.0	5.2 5.2	2.0 2.0	6.5 7.0	2.5 2.5	6.2 6.5	ns	3-1 3-4
t _{PZH} t _{PZL}	Output Enable Time ('F241, 'F244)	2.0 2.0	4.3 5.4	5.7 7.0	2.0 2.0	7.0 8.5	2.0 2.0	6.7 8.0	ns	3-1 3-12 3-13
t _{PHZ} t _{PLZ}	Output Disable Time ('F241, 'F244)	2.0 2.0	4.5 4.5	6.0 6.0	2.0 2.0	7.0 7.5	2.0 2.0	7.0 7.0		