

54F/74F540 • 54F/74F541

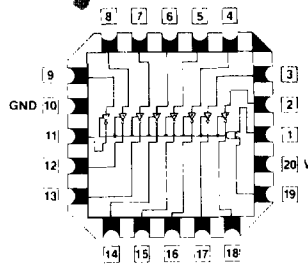
Octal Buffer/Line Driver
With 3-State Outputs

Description

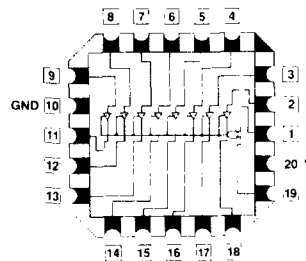
The 'F540 and 'F541 are similar in function to the 'F240 and 'F244 respectively, except that the inputs and outputs are on opposite sides of the package (see Connection Diagrams). This pinout arrangement makes these devices especially useful as output ports for microprocessors, allowing ease of layout and greater PCB board density.

- 3-State Outputs Drive Bus Lines
- Inputs and Outputs Opposite Side of Package, Allowing Easier Interface to Microprocessors

Ordering Code: See Section 5

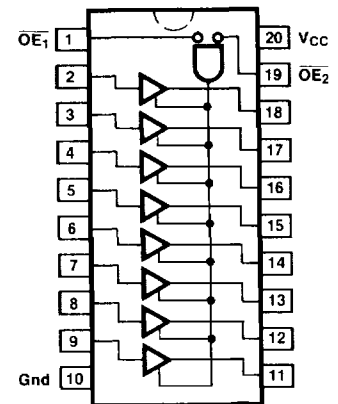
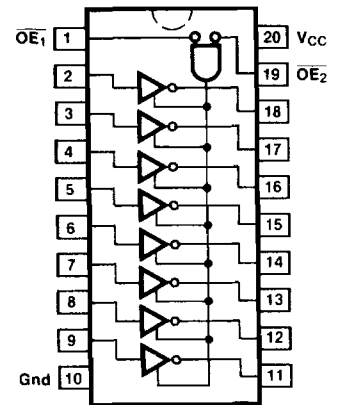


'F540



Pin Assignment
for LCC and PCC

Connection Diagrams



Pin Assignment
for DIP and SOIC

Truth Table

Inputs			Outputs	
OE ₁	OE ₂	D	'F540	'F541
L	L	H	L	H
H	X	X	Z	Z
X	H	X	Z	Z
L	L	L	H	L

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

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

Pin Names	Description	54F/74F(U.L.) HIGH/LOW
$\overline{OE}_1, \overline{OE}_2$	3-State Output Enable Input (Active LOW)	0.5/0.375
OE_2	3-State Output Enable Input (Active HIGH)	0.5/0.375
	Inputs	0.5/0.375
	Outputs	75/40 (30)

DC Characteristics over Operating Temperature Range (unless otherwise specified)

Symbol	Parameter	54F/74F			Units	Conditions	
		Min	Typ	Max			
I_{CCH}	Power Supply Current	'F540	20	30	mA	Outputs HIGH	$V_{CC} = \text{Max}$
		'F541	40	60			
I_{CCL}		'F540	50	75	mA	Outputs LOW	
		'F541	60	90			
I_{CCZ}		'F540	40	60	mA	Outputs OFF	
		'F541	60	90			

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AC Characteristics: See Section 3 for waveforms and load configurations

Symbol	Parameter	54F/74F			54F		74F		Units	Fig. No.
		$T_A = +25^\circ\text{C}$ $V_{CC} = +5.0\text{ V}$ $C_L = 50\text{ pF}$			$T_A, V_{CC} = \text{Mil}$ $C_L = 50\text{ pF}$		$T_A, V_{CC} = \text{Com}$ $C_L = 50\text{ pF}$			
		Min	Typ	Max	Min	Max	Min	Max		
t_{PLH} t_{PHL}	Propagation Delay Data to Output ('F540)		5.0					ns	3-1 3-3	
t_{PZH} t_{PZL}	Output Enable Time ('F540)		7.0 8.0					ns	3-1 3-12 3-13	
t_{PHZ} t_{PLZ}	Output Disable Time ('F540)		7.0 8.0							
t_{PLH} t_{PHL}	Propagation Delay Data to Output ('F541)		6.0 5.0					ns	3-1 3-4	
t_{PZH} t_{PZL}	Output Enable Time ('F541)		7.0 8.0					ns	3-1 3-12 3-13	
t_{PHZ} t_{PLZ}	Output Disable Time ('F541)		7.0 8.0							