

54F/74F533

Octal Transparent Latch With 3-State Outputs

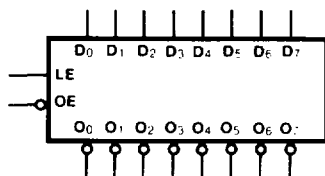
Description

The 'F533 consists of eight latches with 3-state outputs for bus organized system applications. The flip-flops appear transparent to the data when Latch Enable (LE) is HIGH. When LE is LOW, the data that meets the setup times is latched. Data appears on the bus when the Output Enable (\overline{OE}) is LOW. When \overline{OE} is HIGH the bus output is in the high impedance state. The 'F533 is the same as the 'F373, except that the outputs are inverted. For description and logic diagram please see the 'F373 data sheet.

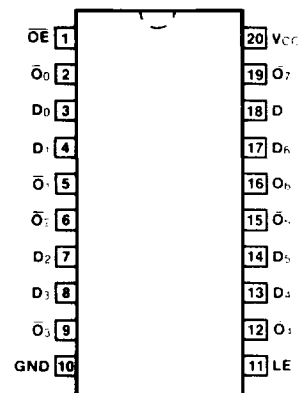
- Eight Latches in a Single Package
- 3-State Outputs for Bus Interfacing

Ordering Code: See Section 5

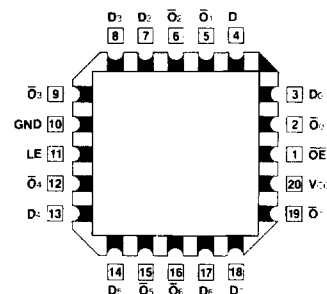
Logic Symbol



Connection Diagrams



**Pin Assignment
for DIP and SOIC**



**Pin Assignment
for LCC and PCC**

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

Pin Names	Description	54F/74F(U.L.) HIGH/LOW
D ₀ -D ₇	Data Inputs	0.5/0.375
LE	Latch Enable Input (Active HIGH)	0.5/0.375
\overline{OE}	Output Enable Input (Active LOW)	0.5/0.375
\overline{O}_0 - \overline{O}_7	Complementary 3-State Outputs	75/15 (12.5)

DC Characteristics over Operating Temperature Range (unless otherwise specified)

Symbol	Parameter	54F/74F			Units	Conditions
		Min	Typ	Max		
I _{CCZ}	Power Supply Current		41	61	mA	V _{CC} = Max, \overline{OE} = HIGH D _n , LE = Gnd

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 D _n to \overline{O}_n	4.0	6.9	9.0	4.0	12.0	4.0	10.0	ns	3-1 3-3
t _{PLH} t _{PHL}	Propagation Delay LE to \overline{O}_n	5.0	8.5	11.0	5.0	14.0	5.0	13.0	ns	3-1 3-7
t _{PZH} t _{PZL}	Output Enable Time	2.0	7.7	10.0	2.0	12.5	2.0	11.0	ns	3-1, 3-12 3-13
t _{PHZ} t _{PLZ}	Output Disable Time	2.0	4.7	6.0	2.0	8.5	2.0	7.0	ns	3-1, 3-12 3-13

AC Operating Requirements: See Section 3 for waveforms

Symbol	Parameter	54F/74F			54F		74F		Units	Fig. No.
		T _A = +25°C V _{CC} = +5.0 V			T _A , V _{CC} = Mil		T _A , V _{CC} = Com			
		Min	Typ	Max	Min	Max	Min	Max		
t _{s(H)} t _{s(L)}	Setup Time, HIGH or LOW D _n to LE	2.0			2.0		2.0		ns	3-15
t _{h(H)} t _{h(L)}	Hold Time, HIGH or LOW D _n to LE	3.0			3.0		3.0		ns	3-15
t _{w(H)}	LE Pulse Width, HIGH	6.0			6.0		6.0		ns	3-7