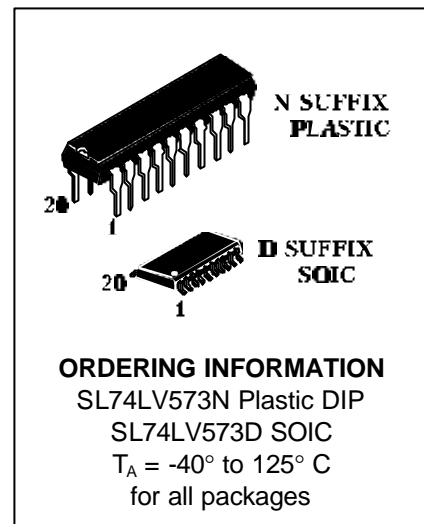


## OCTAL D-TYPE TRANSPARENT LATCH (3-State)

By pinning SL74LV573 are compatible with SL74HC573 and SL74HCT573 series. Input voltage levels are compatible with standard CMOS levels.

- Output voltage levels are compatible with input levels of CMOS, NMOS and TTL ICs
- Voltage supply range from 1.2 to 5.5 V
- LOW input current: 1.0  $\mu\text{A}$ ; 0.1  $\mu\text{A}$  at  $\dot{O} = 25^\circ\text{N}$
- Output current 8 mA
- Latch current: not less than 150 mA at  $\dot{O} = 125^\circ\text{N}$
- ESD acceptable value: not less than 2000 V as per HBM and not less than 200 V as per MM



### FUNCTION TABLE

Inputs			Outputs
$\overline{\text{OE}}$	LE	D	Q
L	H	H	H
L	H	L	L
L	L	X	no change
H	X	X	Z

H - HIGH voltage level  
 L - LOW voltage level  
 X - don't care  
 Z - High impedance state

### PIN ASSIGNMENT

OE	1	20	$V_{CC}$
D0	2	19	Q0
D1	3	18	Q1
D2	4	17	Q2
D3	5	16	Q3
D4	6	15	Q4
D5	7	14	Q5
D6	8	13	Q6
D7	9	12	Q7
GND	10	11	LE

# SL74LV573

## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Rating	Unit	Conditions
V <sub>CC</sub>	Supply voltage	-0.5 to +7.0	V	
I <sub>IK</sub>	Input diode current	±20	mA	V <sub>I</sub> < -0.5 V or V <sub>I</sub> > V <sub>CC</sub> + 0.5 V
I <sub>OK</sub>	Output diode current	±50	mA	V <sub>O</sub> < -0.5 V or V <sub>I</sub> > V <sub>CC</sub> + 0.5 V
I <sub>O</sub>	Output current bus drivers	±35	mA	-0.5 V < V <sub>O</sub> < V <sub>CC</sub> + 0.5 V
I <sub>CC</sub>	DC V <sub>CC</sub> or GND current for types bus driver outputs	±70	mA	
I <sub>GND</sub>	GND current	±50	mA	
T <sub>stg</sub>	Storage temperature range	-65 to +150	°C	
P <sub>D</sub>	Power dissipation per package: DIP SO	750 500	mW	

Notes:  
Power dissipation value decreases for:  
DIP - 12 mW/°C the range from 70 to 125°C  
SO - 8 mW/°C the range from 70 to 125°C

## RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Max	Unit	Conditions
V <sub>CC</sub>	Supply voltage	1.0	5.5	V	
V <sub>I</sub>	Input voltage	0	V <sub>CC</sub>	V	
V <sub>O</sub>	Output voltage	0	V <sub>CC</sub>	V	
T	Operating temperature range	-40	+125	°C	
t <sub>r</sub> , t <sub>f</sub>	Input rise and fall times		500 200 100 50	ns/V	V <sub>CC</sub> = 1.0 ÷ 2.0 V V <sub>CC</sub> = 2.0 ÷ 2.7 V V <sub>CC</sub> = 2.7 ÷ 3.6 V V <sub>CC</sub> = 3.6 ÷ 5.5 V

Note - The IC function down to V<sub>IL</sub> = 1.0 V (input levels - V<sub>IL</sub> = 0 V, V<sub>IH</sub> = V<sub>CC</sub>); DC characteristics are guaranteed at V<sub>CC</sub> = 1.2 ÷ 5.5 V.

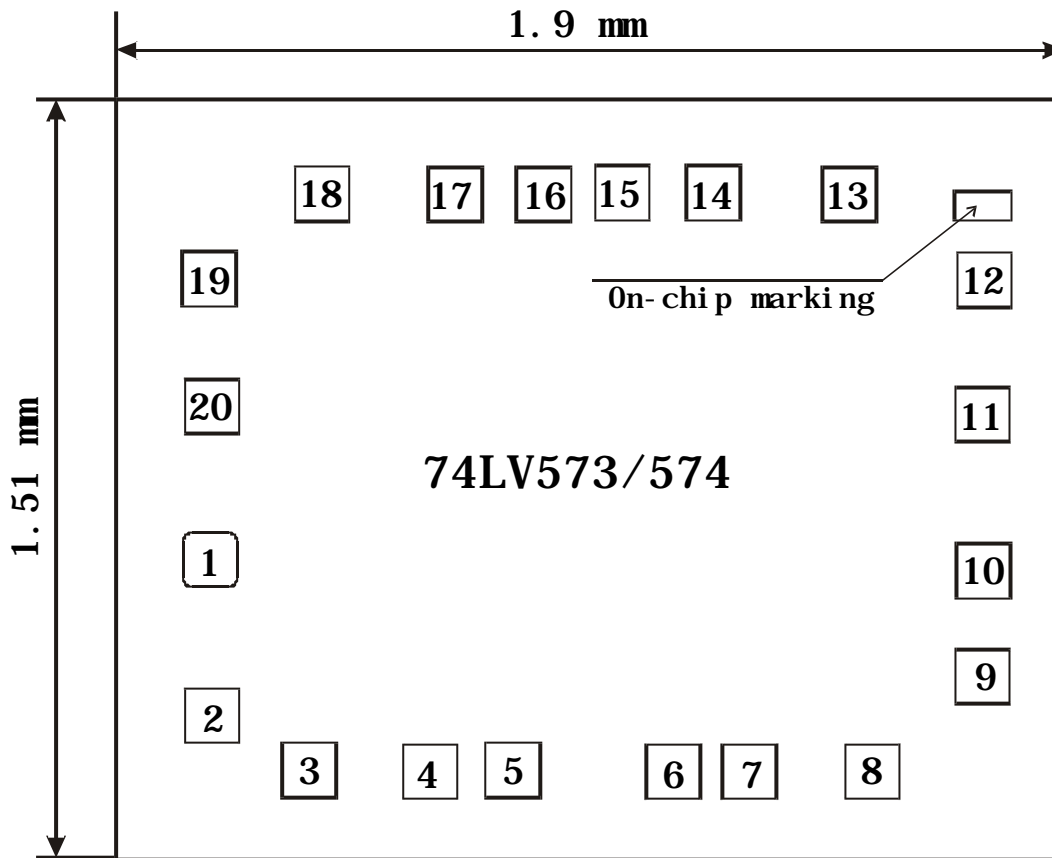
DC CHARACTERISTICS

Sym bol	Parameter	Conditions			Limits						Unit
		V <sub>cc</sub> (V)	V <sub>I</sub>		-40 to +25°C		+85 <sup>1</sup> °C		+125 <sup>1</sup> °C		
					Min	Max	Min	Max	Min	Max	
V <sub>IH</sub>	HIGH level input voltage	1.2 2.0 2.7 to 3.6 4.5 to 5.5			0.9 1.4 2.0 0.7 V <sub>cc</sub>	- - - -	0.9 1.4 2.0 0.7 V <sub>cc</sub>	- - - -	0.9 1.4 2.0 0.7 V <sub>cc</sub>	- - - -	V
V <sub>IL</sub>	LOW level output voltage	1.2 2.0 2.7 to 3.6 4.5 to 5.5			- - - -	0.3 0.6 0.8 0.3 V <sub>cc</sub>	- - - -	0.3 0.6 0.8 0.3 V <sub>cc</sub>	- - - -	0.3 0.6 0.8 0.3 V <sub>cc</sub>	V
V <sub>OH</sub>	HIGH level output voltage	1.2 2.0 2.7 3.6 5.5	V <sub>IH</sub> or V <sub>IL</sub>	I <sub>O</sub> = -100 μA	1.05 1.85 2.55 3.45 5.35	- - - - -	1.0 1.8 2.5 3.4 5.3	- - - - -	1.0 1.8 2.5 3.4 5.3	- - - - -	V
V <sub>OH</sub>	HIGH level output voltage; BUS driver outputs	3.0 4.5	V <sub>IH</sub> or V <sub>IL</sub>	I <sub>O</sub> = -8 mA I <sub>O</sub> = -16 mA	2.48 3.70	- -	2.40 3.60	- -	2.20 3.50	- -	V
V <sub>OL</sub>	LOW level output voltage	1.2 2.0 2.7 3.6 5.5	V <sub>IH</sub> or V <sub>IL</sub>	I <sub>O</sub> = 100 μA	- - - - -	0.15 0.15 0.15 0.15 0.15	- - - - -	0.2 0.2 0.2 0.2 0.2	- - - - -	0.2 0.2 0.2 0.2 0.2	V
V <sub>OL</sub>	LOW level voltage; BUS driver outputs	3.0 4.5	V <sub>IH</sub> or V <sub>IL</sub>	I <sub>O</sub> = 8 mA I <sub>O</sub> = 16 mA	- -	0.33 0.40	- -	0.40 0.55	- -	0.50 0.65	V
I <sub>I</sub>	Input leakage current	5.5	V <sub>IH</sub> or GD		-	±1.0		±1.0	-	±1.0	μA
I <sub>OZ</sub>	OFF-state current	5.5	V <sub>IH</sub> or V <sub>IL</sub>		-	±0.5		±5.0	-	±10.0	μA
I <sub>CC</sub>	Supply current	5.5	V <sub>IH</sub> or GD	I <sub>O</sub> = 0		8.0		80		160	μA
I <sub>CC</sub>	Additional supply current per input	2.7 to 3.6	V <sub>I</sub> = V <sub>cc</sub> - 0.6V		-	0.2		0.5	-	0.85	mA

# SL74LV573

## AC CHARACTERISTICS (C<sub>L</sub>=50 pF, R<sub>L</sub>=1 KΩ, t<sub>LH</sub> = t<sub>HL</sub> = 2.5 ns)

Sym bol	Parameter	Conditions		Limits						Unit
				-40 to +25° C		+85° C		+125° C		
		Vcc		Min	Max	Min	Max	Min	Max	
t <sub>PHL/PLH</sub>	Propagation delay Dn to Qn	1.2	V <sub>I</sub> = Vcc or GND	-	150	-	160	-	170	ns
		2.0		-	30	-	39	-	49	
		2.7		-	23	-	29	-	36	
		3.0		-	18	-	23	-	29	
		4.5		-	15	-	19	-	24	
t <sub>PHL/PLH</sub>	Propagation delay LE to Qn	1.2	V <sub>I</sub> = Vcc or GND	-	160	-	180	-	190	ns
		2.0		-	34	-	43	-	53	
		2.7		-	28	-	31	-	34	
		3.0		-	20	-	25	-	31	
		4.5		-	17	-	21	-	26	
t <sub>PZH/PZL</sub>	3-state output enable time OE to Qn	1.2	V <sub>I</sub> = Vcc or GND	-	140	-	160	-	170	ns
		2.0		-	28	-	37	-	48	
		2.7		-	22	-	28	-	35	
		3.0		-	17	-	22	-	28	
		4.5		-	14	-	18	-	23	
t <sub>PHZ/PLZ</sub>	3-state output disable time OE to Qn	1.2	V <sub>I</sub> = Vcc or GND	-	160	-	160	-	170	ns
		2.0		-	31	-	39	-	48	
		2.7		-	23	-	29	-	36	
		3.0		-	20	-	24	-	29	
		4.5		-	17	-	20	-	24	
t <sub>w</sub>	LE pulse width HIGH	1.2		100	-	125	-	150	-	ns
		2.0		29	-	34	-	41	-	
		2.7		21	-	25	-	30	-	
		3.0		17	-	20	-	24	-	
		4.5		15	-	18	-	21	-	
t <sub>su</sub>	Setup time Dn to LE	1.2		50	-	75	-	100	-	ns
		2.0		15	-	17	-	20	-	
		2.7		11	-	13	-	15	-	
		3.0		8	-	10	-	12	-	
		4.5		6	-	8	-	10	-	
t <sub>h</sub>	Hold time Dn to LE	1.2		40	-	40	-	40	-	ns
		2.0		8	-	8	-	8	-	
		2.7		8	-	8	-	8	-	
		3.0		8	-	8	-	8	-	
		4.5		8	-	8	-	8	-	
C <sub>I</sub>	Input capacitance	5.0	0 = +25 °C		7.0				-	ns
C <sub>PD</sub>	Power dissipation capacitance per package	5.5	0 = +25 °C V <sub>I</sub> = Vcc or GND		52				-	ns



Drawing of the chip

Pads allocation Table

Pad number	coordinates (counted from lower left corner), mm		Pad size, mm
	X	Y	
01	0.128	0.545	0.108 x 0.108
02	0.128	0.229	0.108 x 0.108
03	0.330	0.120	0.108 x 0.108
04	0.576	0.120	0.108 x 0.108
05	0.738	0.120	0.108 x 0.108
06	1.054	0.120	0.108 x 0.108
07	1.216	0.120	0.108 x 0.108
08	1.466	0.120	0.108 x 0.108
09	1.682	0.314	0.108 x 0.108
10	1.682	0.533	0.108 x 0.108
11	1.682	0.839	0.108 x 0.108
12	1.682	1.108	0.108 x 0.108
13	1.422	1.274	0.108 x 0.108
14	1.149	1.274	0.108 x 0.108
15	0.971	1.274	0.108 x 0.108
16	0.811	1.274	0.108 x 0.108
17	0.633	1.274	0.108 x 0.108

# SL74LV573

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18	0.360	1.274	0.108 x 0.108
19	0.128	1.108	0.108 x 0.108
20	0.128	0.854	0.108 x 0.108