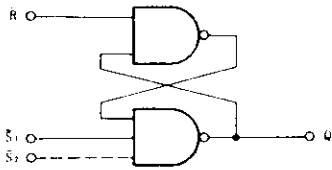
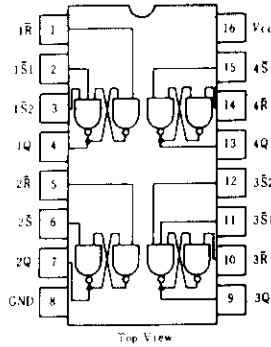


# HD74LS279 ● Quadruple S-R Latches

## ■ BLOCK DIAGRAM (1/4)



## ■ PIN ARRANGEMENT



## ■ FUNCTION TABLE

Inputs		Outputs
$\bar{S}^{**}$	R	Q
H	H	$Q_0$
L	H	H
H	L	L
L	L	$H^*$

- Notes) 1. H: high level, L: low level  
 2.  $Q_0$ : The level of Q before the indicated input conditions were established.  
 3. \*: This output level is psodo stable; that is, it may not persist when  $\bar{S}$  and  $\bar{R}$  inputs return to their inactive (high) level.  
 4. \*\*: For latches with double  $\bar{S}$  inputs: H: both  $\bar{S}$  inputs high, L: one or both  $\bar{S}$  inputs low.

## ■ ELECTRICAL CHARACTERISTICS ( $T_a = -20 \sim +75^\circ\text{C}$ )

Item	Symbol	Test Conditions	min	typ*	max	Unit	
Input voltage	$V_{IH}$		2.0	—	—	V	
	$V_{IL}$		—	—	0.8	V	
Output voltage	$V_{OH}$	$V_{CC} = 4.75\text{V}$ , $V_{IH} = 2\text{V}$ , $V_{IL} = 0.8\text{V}$ , $I_{OH} = -400\mu\text{A}$	2.7	—	—	V	
	$V_{OL}$	$V_{CC} = 4.75\text{V}$ , $V_{IH} = 2\text{V}$ , $V_{IL} = 0.8\text{V}$	$I_{OL} = 4\text{mA}$	—	—	0.4	V
			$I_{OL} = 8\text{mA}$	—	—	0.5	
Input current	$I_{IH}$	$V_{CC} = 5.25\text{V}$ , $V_I = 2.7\text{V}$	—	—	20	$\mu\text{A}$	
	$I_{IL}$	$V_{CC} = 5.25\text{V}$ , $V_I = 0.4\text{V}$	—	—	-0.6	mA	
	$I_I$	$V_{CC} = 5.25\text{V}$ , $V_I = 7\text{V}$	—	—	0.1	mA	
Short-circuit output current	$I_{OS}$	$V_{CC} = 5.25\text{V}$	-20	—	-100	mA	
Supply current**	$I_{CC}$	$V_{CC} = 5.25\text{V}$	—	3.8	7	mA	
Input clamp voltage	$V_{IK}$	$V_{CC} = 4.75\text{V}$ , $I_{IK} = 18\text{mA}$	—	—	1.5	V	

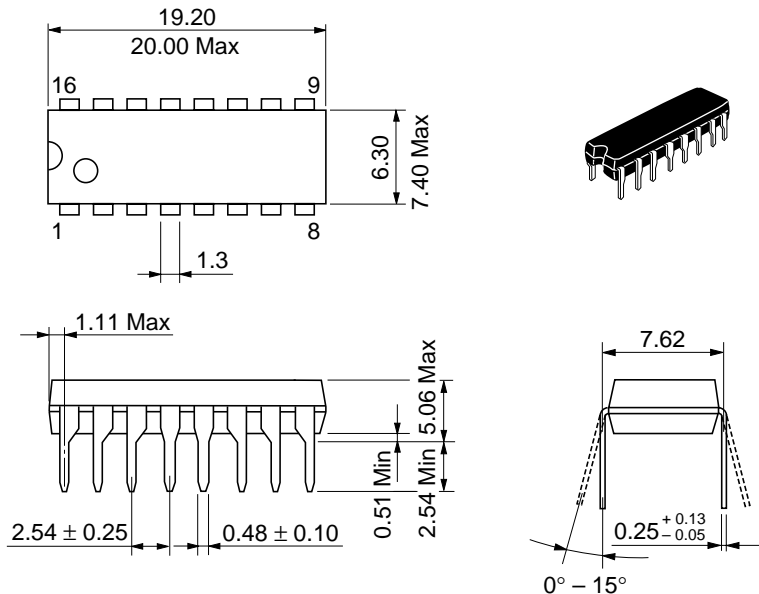
\*  $V_{CC} = 5\text{V}$ ,  $T_a = 25^\circ\text{C}$

\*\*  $I_{CC}$  is measured with all  $\bar{R}$  inputs grounded, all  $\bar{S}$  inputs at 4.5V, and all outputs open.

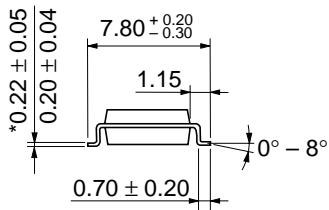
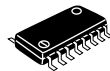
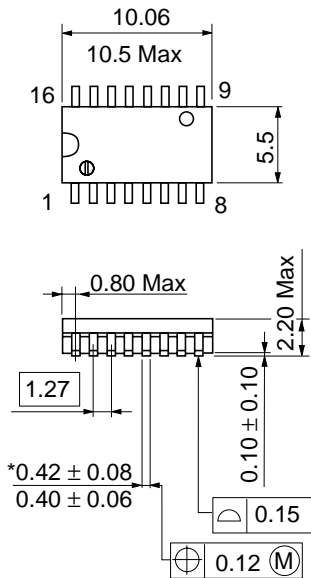
## ■ SWITCHING CHARACTERISTICS ( $V_{CC} = 5\text{V}$ , $T_a = 25^\circ\text{C}$ )

Item	Symbol	Inputs	Output	Test Conditions	min	typ	max	Unit
Propagation delay time	$t_{PLH}$	$\bar{S}$	Q	$C_L = 15\text{pF}$ , $R_L = 2\text{k}\Omega$	—	12	22	ns
	$t_{PHL}$				—	13	21	ns
	$t_{PHL}$	$\bar{R}$			—	15	27	ns

Note) Refer to Test Circuit and Waveform of the Common Item

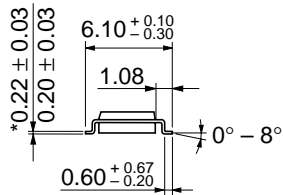
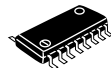
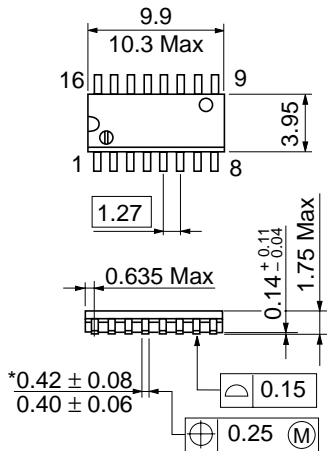


Hitachi Code	DP-16
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	1.07 g



\*Dimension including the plating thickness  
Base material dimension

Hitachi Code	FP-16DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.24 g



\*Dimension including the plating thickness  
Base material dimension

Hitachi Code	FP-16DN
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.15 g

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