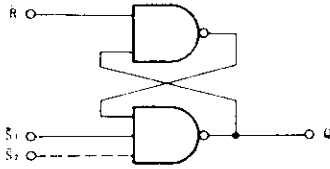
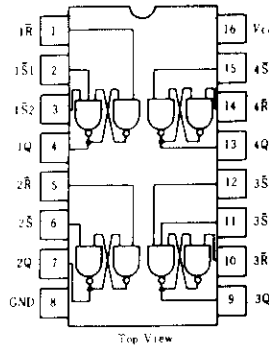


HD74LS279 • Quadruple S-R Latches

■ 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 pseudo stable; that is, it may not persist when \bar{S} and 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}	$V_{CC} = 4.75\text{V}, V_{IH} = 2\text{V}, V_{OL} = 0.8\text{V}, I_{OH} = -400\mu\text{A}$	2.7	—	—	V	
	V_{OL}	$V_{CC} = 4.75\text{V}, V_{IH} = 2\text{V}, V_{OL} = 0.8\text{V}$	$I_{OL} = 4\text{mA}$	—	—	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	μA	
	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 R inputs grounded, all \bar{S} inputs at 4.5V, and all outputs open.

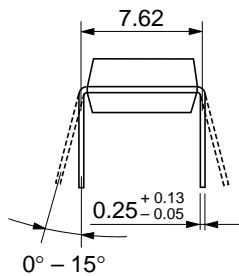
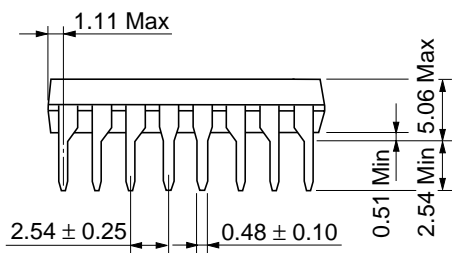
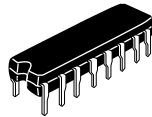
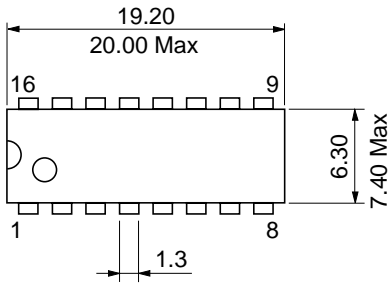
■ SWITCHING CHARACTERISTICS ($V_{CC} = 5\text{V}, T_a = 25^\circ\text{C}$)

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

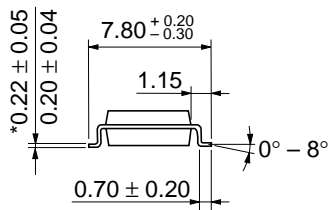
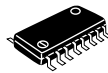
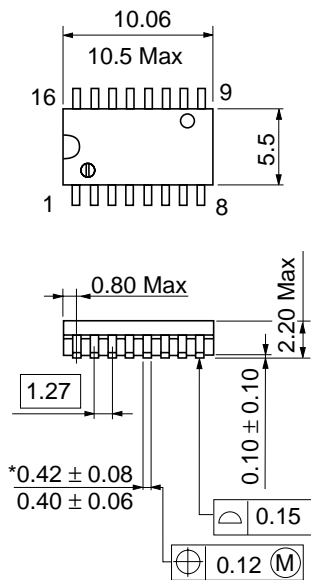
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Unit: mm



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

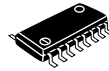
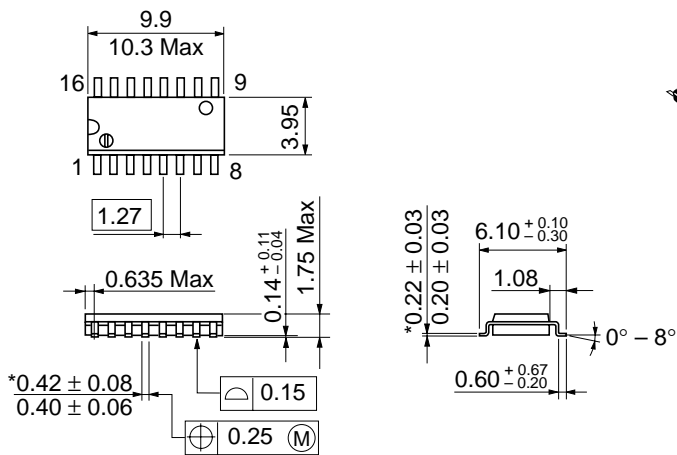
Unit: mm



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

*Dimension including the plating thickness
Base material dimension

Unit: mm



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

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