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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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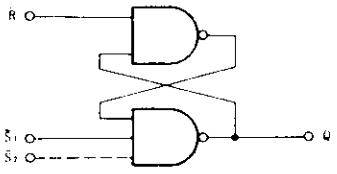
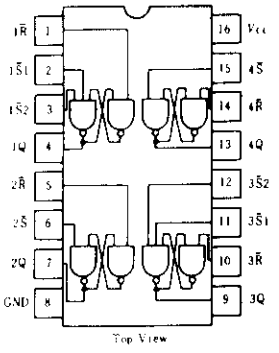
HD74LS279 ●Quadruple S̄-R̄ Latches

■BLOCK DIAGRAM(¼)



■PIN ARRANGEMENT



■FUNCTION TABLE

Inputs		Outputs
S̄**	R̄	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 S̄ and R̄ inputs return to their inactive (high) level.
4. **; For latches with double S̄ inputs: H; both S̄ inputs high, L; one or both S̄ inputs low.

■ELECTRICAL CHARACTERISTICS ($Ta=-20\sim+75℃$)

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

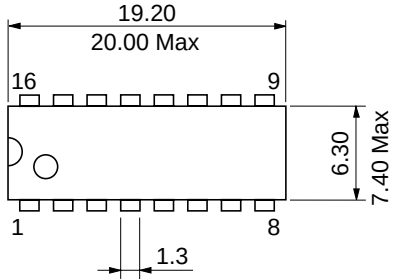
* V_{CC}=5V, Ta=25°C
** I_{CC} is measured with all R̄ inputs grounded, all S̄ inputs at 4.5V, and all outputs open.

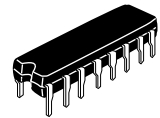
■SWITCHING CHARACTERISTICS ($V_{CC}=5V$, $Ta=25℃$)

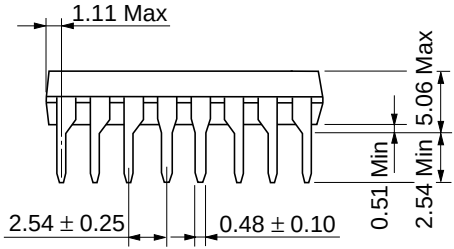
Item	Symbol	Inputs	Output	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	S̄	Q	$C_L=15pF$, $R_L=2k\Omega$	—	12	22	ns
	t_{PHL}				—	13	21	ns
	t_{PHL}	R̄			—	15	27	ns

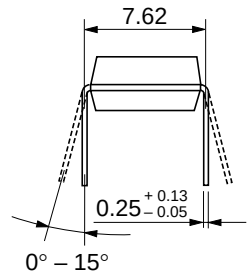
Note) Refer to Test Circuit and Waveform of the Common Item

Unit: mm



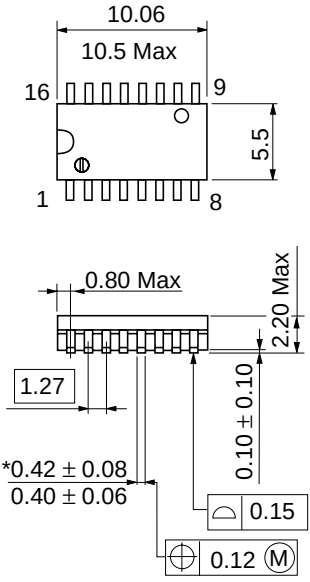


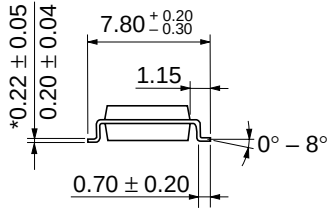


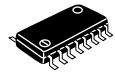


Hitachi Code	DP-16
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	1.07 g

Unit: mm



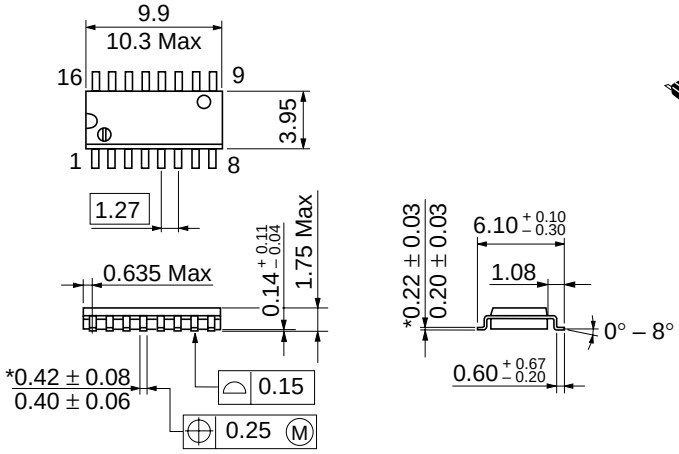




Hitachi Code	FP-16DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.24 g

*Dimension including the plating thickness
Base material dimension

Unit: mm



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

*Dimension including the plating thickness
Base material dimension

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