

# HD74LS279

## Quadruple $\overline{S}$ - $\overline{R}$ Latches

REJ03D0474-0400  
 Rev.4.00  
 May 10, 2006

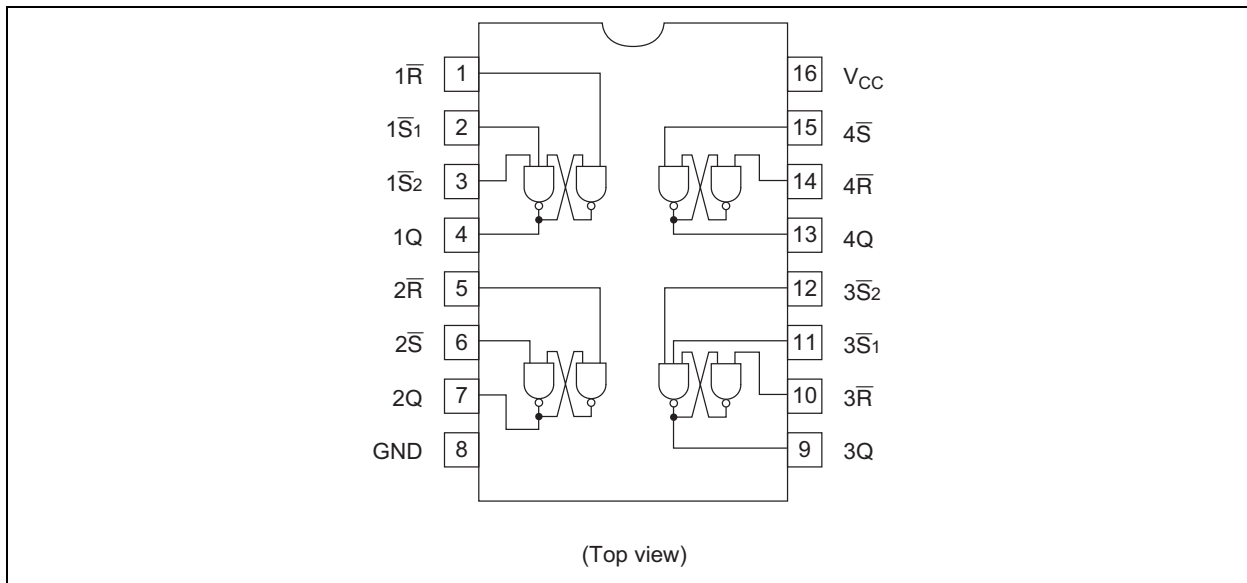
### Features

- Ordering Information

Part Name	Package Type	Package Code (Previous Code)	Package Abbreviation	Taping Abbreviation (Quantity)
HD74LS279P	DILP-16 pin	PRDP0016AE-B (DP-16FV)	P	—
HD74LS279FPEL	SOP-16 pin (JEITA)	PRSP0016DH-B (FP-16DAV)	FP	EL (2,000 pcs/reel)

Note: Please consult the sales office for the above package availability.

### Pin Arrangement

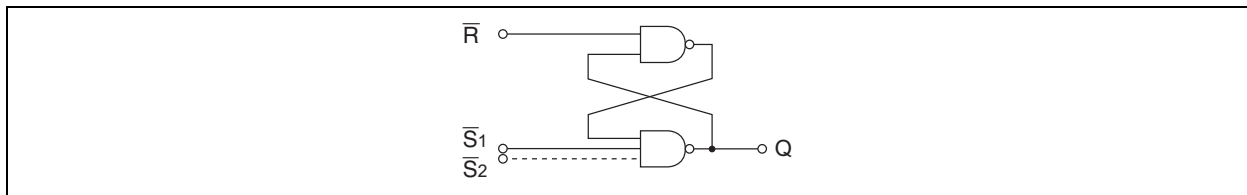


## Function Table

Inputs		Output
$\overline{S}^{**}$	$\overline{R}$	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  $\overline{S}$  and  $\overline{R}$  inputs return to their inactive (high) level.
  4. \*\*; For latches with double  $\overline{S}$  inputs; H; both  $\overline{S}$  inputs high, L; one or both  $\overline{S}$  inputs low.

## Block Diagram (1/4)



## Absolute Maximum Ratings

Item	Symbol	Ratings	Unit
Supply voltage	$V_{CC}$	7	V
Input voltage	$V_{IN}$	7	V
Power dissipation	$P_T$	400	mW
Storage temperature	$T_{stg}$	-65 to +150	°C

Note: Voltage value, unless otherwise noted, are with respect to network ground terminal.

## Recommended Operating Conditions

Item	Symbol	Min	Typ	Max	Unit
Supply voltage	$V_{CC}$	4.75	5.00	5.25	V
Output current	$I_{OH}$	—	—	-400	$\mu A$
	$I_{OL}$	—	—	8	mA
Operating temperature	$T_{opr}$	-20	25	75	°C

## Electrical Characteristics

(Ta = -20 to +75 °C)

Item	Symbol	min.	typ.*	max.	Unit	Condition
Input voltage	V <sub>IH</sub>	2.0	—	—	V	
	V <sub>IL</sub>	—	—	0.8	V	
Output voltage	V <sub>OH</sub>	2.7	—	—	V	V <sub>CC</sub> = 4.75 V, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = 0.8 V, I <sub>OH</sub> = -400 μA
	V <sub>OL</sub>	—	—	0.4	V	I <sub>OL</sub> = 4 mA
—		—	0.5	I <sub>OL</sub> = 8 mA		V <sub>CC</sub> = 4.75 V, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = 0.8 V
Input current	I <sub>IH</sub>	—	—	20	μA	V <sub>CC</sub> = 5.25 V, V <sub>I</sub> = 2.7 V
	I <sub>IL</sub>	—	—	-0.4	mA	V <sub>CC</sub> = 5.25 V, V <sub>I</sub> = 0.4 V
	I <sub>I</sub>	—	—	0.1	mA	V <sub>CC</sub> = 5.25 V, V <sub>I</sub> = 7 V
Short-circuit output current	I <sub>OS</sub>	-20	—	-100	mA	V <sub>CC</sub> = 5.25 V
Supply current**	I <sub>CC</sub>	—	3.8	7	mA	V <sub>CC</sub> = 5.25 V
Input clamp voltage	V <sub>IK</sub>	—	—	-1.5	V	V <sub>CC</sub> = 4.75 V, I <sub>IN</sub> = -18 mA

Notes: \* V<sub>CC</sub> = 5 V, Ta = 25°C\*\* I<sub>CC</sub> is measured with all  $\bar{R}$  inputs grounded, all  $\bar{S}$  inputs at 4.5 V, and all outputs open.

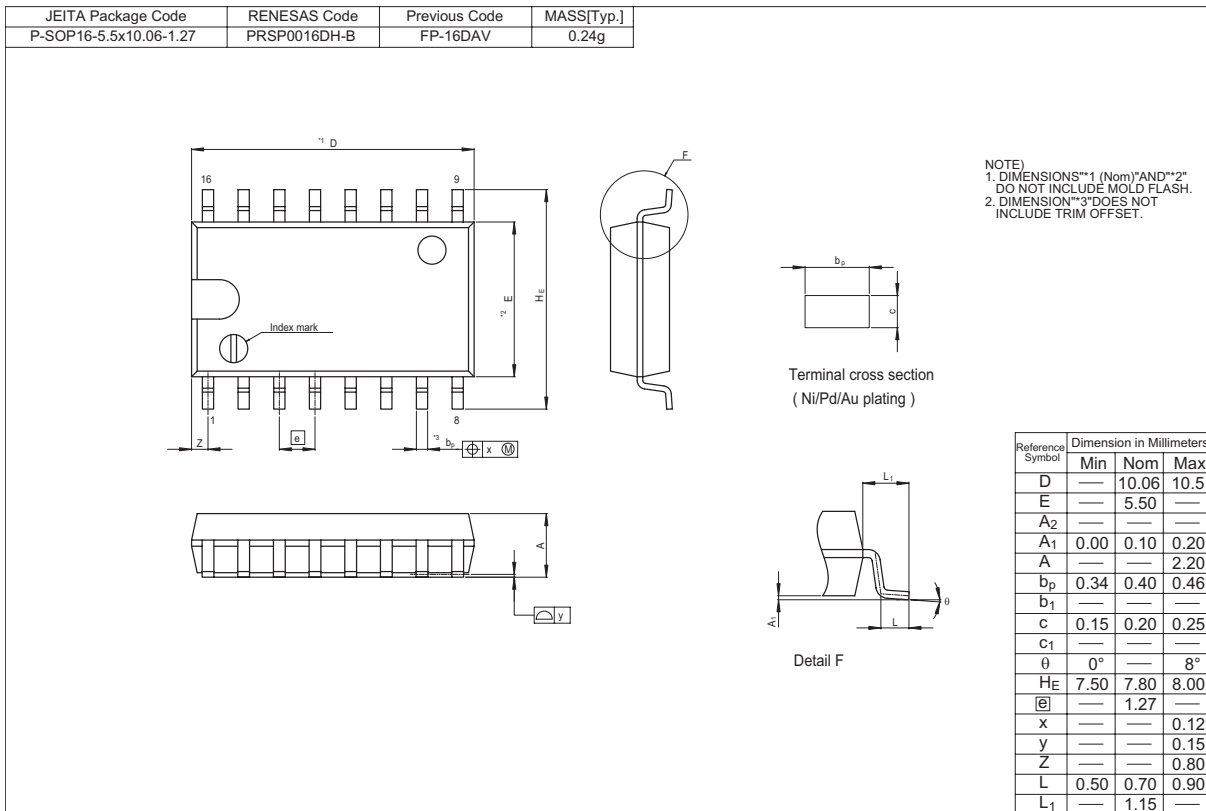
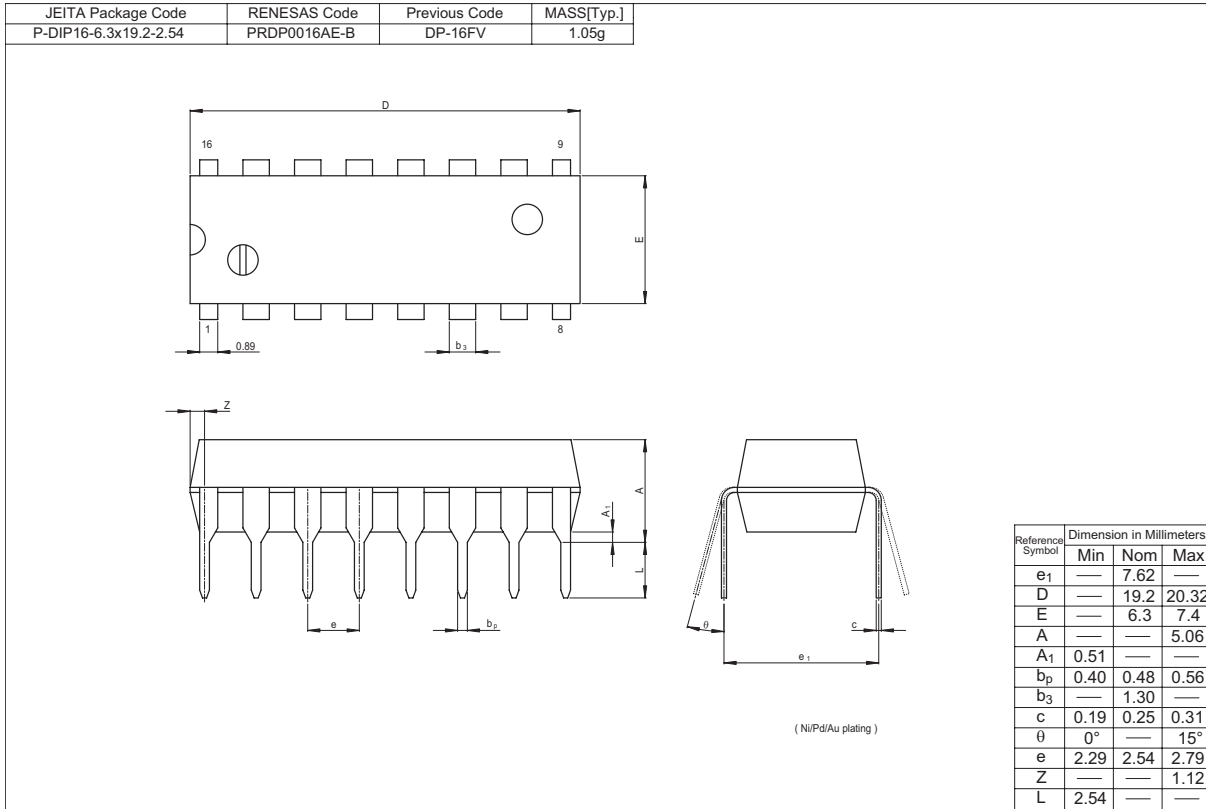
## Switching Characteristics

(V<sub>CC</sub> = 5 V, Ta = 25°C)

Item	Symbol	Inputs	Output	min.	typ.	max.	Unit	Condition
Propagation delay time	t <sub>PLH</sub>	$\bar{S}$	Q	—	12	22	ns	C <sub>L</sub> = 15 pF, R <sub>L</sub> = 2 kΩ
	t <sub>PHL</sub>			—	13	21		
	t <sub>PHL</sub>	$\bar{R}$		—	15	27		

Note: Refer to Test Circuit and Waveform of the Common Item "TTL Common Matter (Document No.: REJ27D0005-0100)".

Package Dimensions



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