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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HD74LS279

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

REJ03D0474-0400
 Rev.4.00
 May 10, 2006

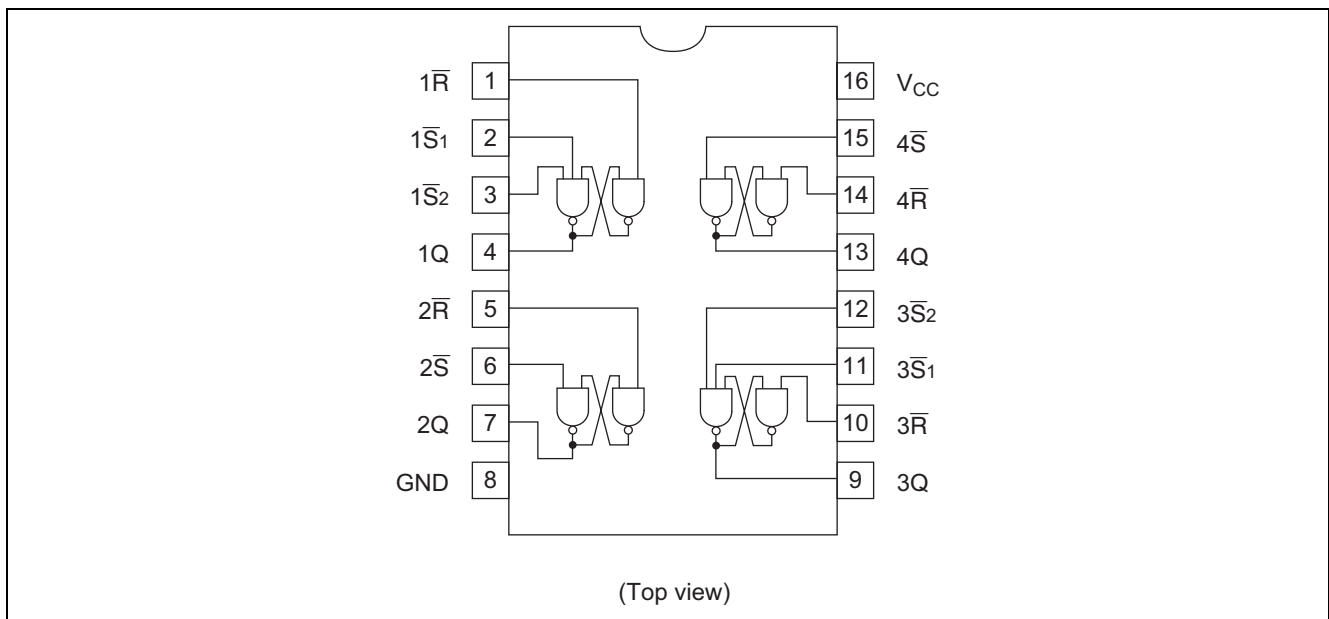
Features

- 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

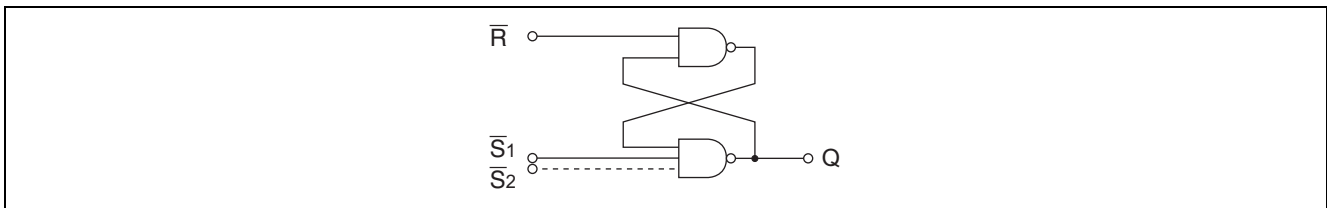


Function Table

Inputs		Output
\bar{S}^{**}	\bar{R}	Q
H	H	Q ₀
L	H	H
H	L	L
L	L	H*

- Notes: 1. H; high level, L; low level
 2. Q₀; 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.

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	μA
	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 _{IH}	2.0	—	—	V	
	V _{IL}	—	—	0.8	V	
Output voltage	V _{OH}	2.7	—	—	V	V _{CC} = 4.75 V, V _{IH} = 2 V, V _{IL} = 0.8 V, I _{OH} = -400 μA
	V _{OL}	—	—	0.4	V	V _{CC} = 4.75 V, V _{IH} = 2 V, V _{IL} = 0.8 V
—		—	0.5			
Input current	I _{IH}	—	—	20	μA	V _{CC} = 5.25 V, V _I = 2.7 V
	I _{IL}	—	—	-0.4	mA	V _{CC} = 5.25 V, V _I = 0.4 V
	I _I	—	—	0.1	mA	V _{CC} = 5.25 V, V _I = 7 V
Short-circuit output current	I _{OS}	-20	—	-100	mA	V _{CC} = 5.25 V
Supply current**	I _{CC}	—	3.8	7	mA	V _{CC} = 5.25 V
Input clamp voltage	V _{IK}	—	—	-1.5	V	V _{CC} = 4.75 V, I _{IN} = -18 mA

Notes: * V_{CC} = 5 V, Ta = 25°C** I_{CC} is measured with all \bar{R} inputs grounded, all \bar{S} inputs at 4.5 V, and all outputs open.

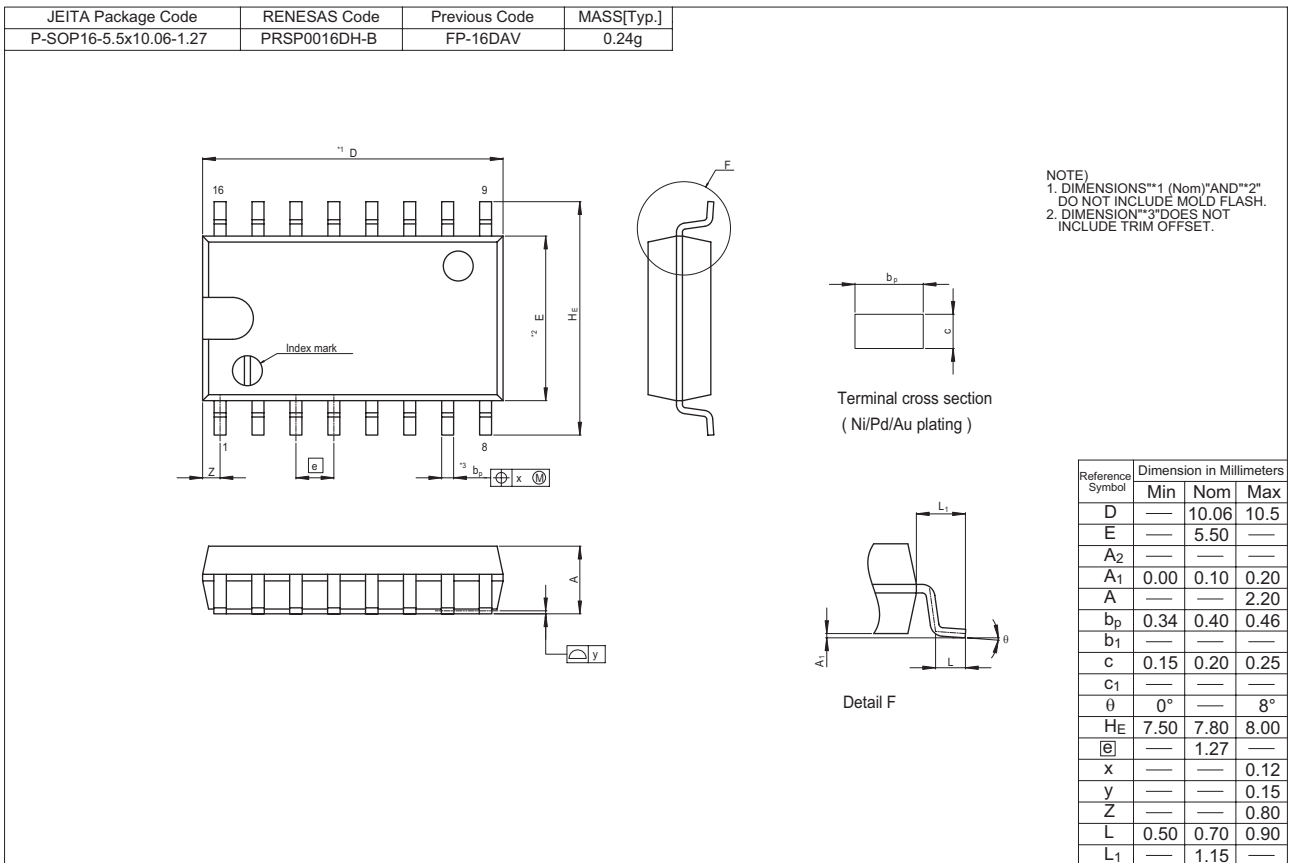
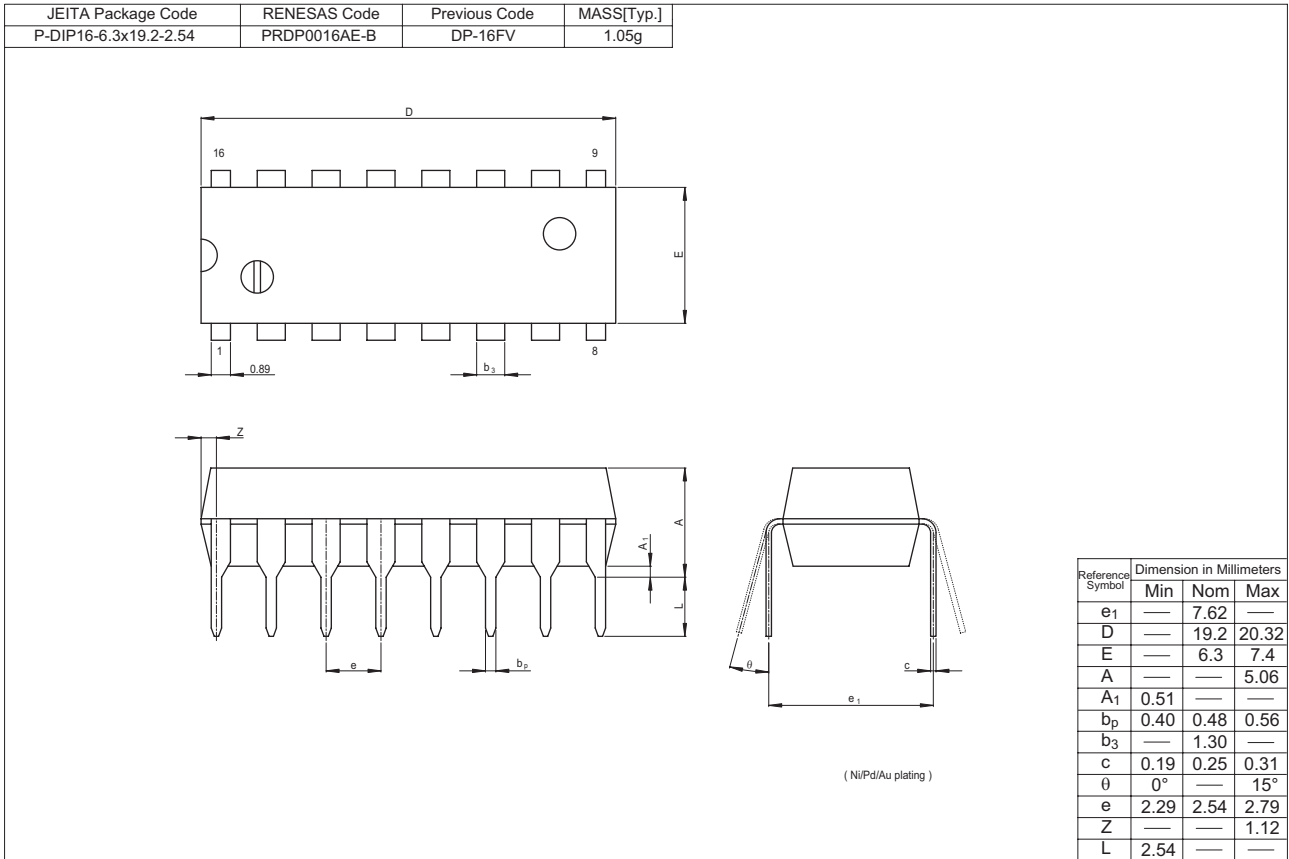
Switching Characteristics

(V_{CC} = 5 V, Ta = 25°C)

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