

HD74HC279

Quad. \bar{S} - \bar{R} Latches

HITACHI

Description

The latch is ideally suited for use as temporary stage for binary information processing and input/output units. When either \bar{S} or \bar{R} is low, output is dependent on \bar{R} input. When both inputs are high, Output is stored before the indicated steady-state input conditions were established. And when both inputs are low, output is high, but this high level are uncontinuance, if either of input goes high.

Features

- High Speed Operation: $t_{pd}(\bar{S} \text{ to } Q) = 10 \text{ ns typ } (C_L = 50 \text{ pF})$
- High Output Current: Fanout of 10 LSTTL Loads
- Wide Operating Voltage: $V_{CC} = 2 \text{ to } 6 \text{ V}$
- Low Input Current: $1 \mu\text{A max}$
- Low Quiescent Supply Current: $I_{CC}(\text{static}) = 2 \mu\text{A max } (T_a = 25^\circ\text{C})$

Function Table

Input		Output
\bar{S}^{*2}	\bar{R}	Q
H	H	Q_0
L	H	H
H	L	L
L	L	H^{*1}

H : High level

L : Low level

Q_0 : The level of Q respectively, before the indicated steady-state input conditions were established.

Notes: 1. It is unpredictable, if \bar{S} or \bar{R} goes High.

2. As to latches which has two \bar{S} inputs.

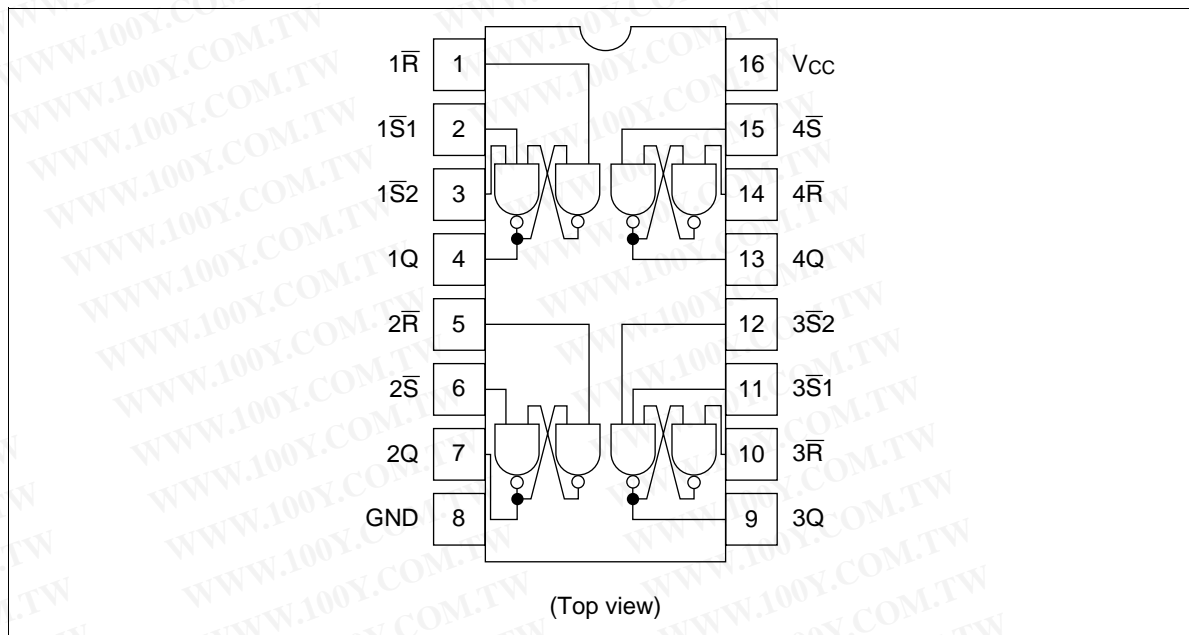
H: Both of \bar{S} inputs are high.

L: Either or both of \bar{S} inputs are low.

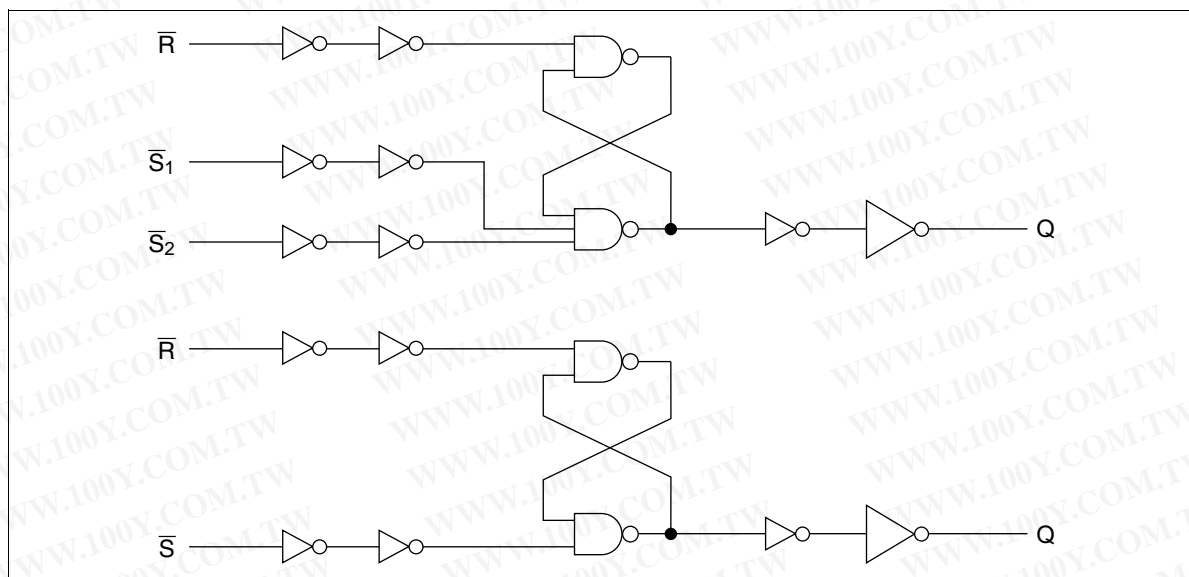
勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
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Pin Arrangement



Logic Diagram (1/2)



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DC Characteristics

Item	Symbol	V _{CC} (V)	Ta = 25°C		Ta = -40 to +85°C		Unit	Test Conditions		
			Min	Typ	Max	Min			Max	
Input voltage	V _{IH}	2.0	1.5	—	—	1.5	—	V		
		4.5	3.15	—	—	3.15	—			
		6.0	4.2	—	—	4.2	—			
	V _{IL}	2.0	—	—	0.5	—	0.5		V	
		4.5	—	—	1.35	—	1.35			
		6.0	—	—	1.8	—	1.8			
Output voltage	V _{OH}	2.0	1.9	2.0	—	1.9	—	V		Vin = V _{IH} or V _{IL} I _{OH} = -20 μA
		4.5	4.4	4.5	—	4.4	—			
		6.0	5.9	6.0	—	5.9	—			
		4.5	4.18	—	—	4.13	—		I _{OH} = -4 mA	
		6.0	5.68	—	—	5.63	—		I _{OH} = -5.2 mA	
		6.0	—	0.0	0.1	—	0.1		V	
	V _{OL}	4.5	—	0.0	0.1	—	0.1			
		6.0	—	0.0	0.1	—	0.1			
		4.5	—	—	0.26	—	0.33	I _{OL} = 4 mA		
		6.0	—	—	0.26	—	0.33	I _{OL} = 5.2 mA		
		6.0	—	—	±0.1	—	±1.0	μA		Vin = V _{CC} or GND
		6.0	—	—	2.0	—	20		μA	

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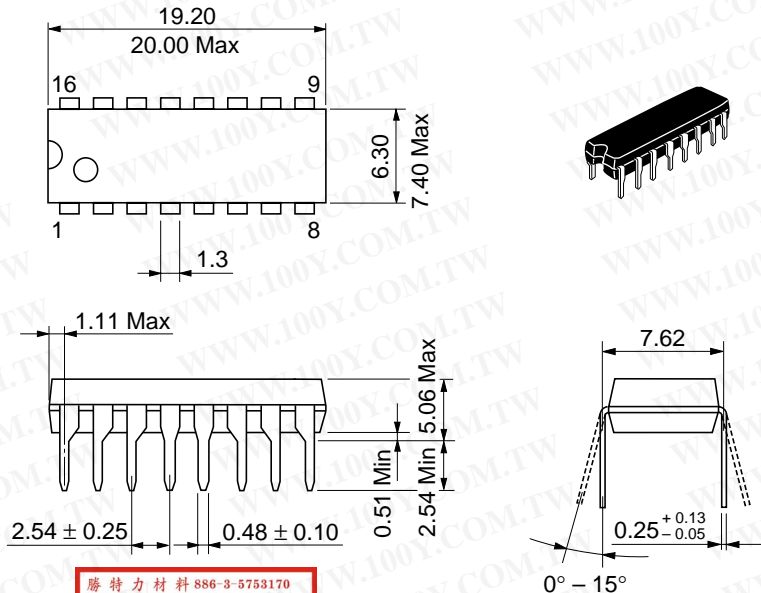
AC Characteristics ($C_L = 50$ pF, Input $t_r = t_f = 6$ ns)

Item	Symbol	V_{CC} (V)	$T_a = 25^\circ\text{C}$			$T_a = -40$ to $+85^\circ\text{C}$		Unit	Test Conditions
			Min	Typ	Max	Min	Max		
Propagation delay time	t_{PLH}	2.0	—	—	130	—	165	ns	\bar{S} to Q
	t_{PHL}	4.5	—	10	26	—	33	ns	\bar{R} to Q
		6.0	—	—	22	—	28		
Output rise/fall time	t_{TLH}	2.0	—	—	75	—	95	ns	
	t_{THL}	4.5	—	5	15	—	19		
		6.0	—	—	13	—	16		
Input capacitance	C_{in}	—	—	5	10	—	10	pF	

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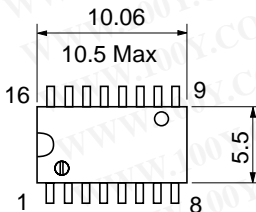
Unit: mm



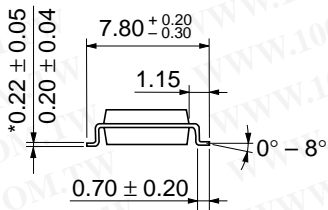
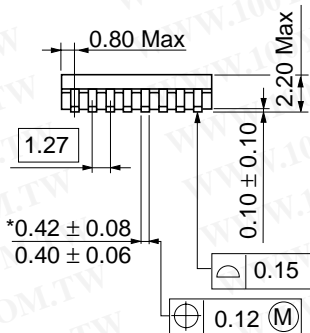
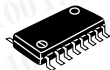
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Hitachi Code	DP-16
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	1.07 g

Unit: mm



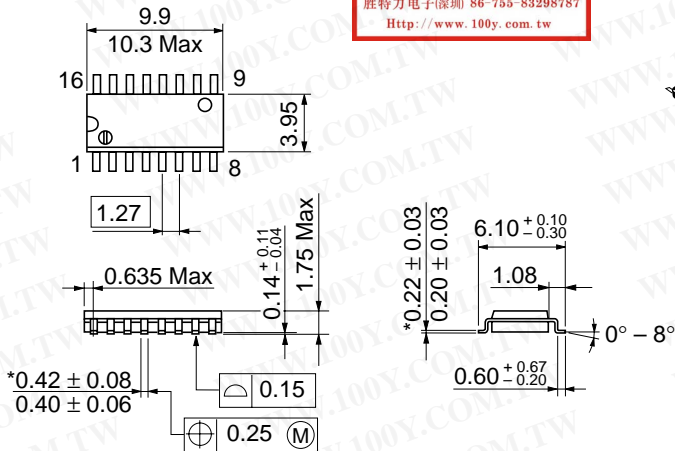
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Hitachi Code	FP-16DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.24 g

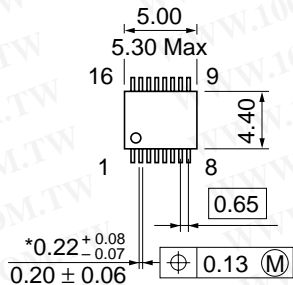
*Dimension including the plating thickness
 Base material dimension

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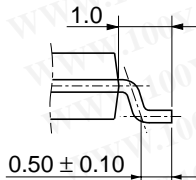
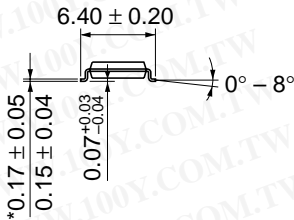
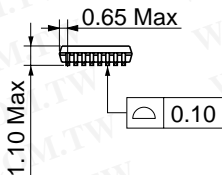


*Dimension including the plating thickness
 Base material dimension

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



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Hitachi Code	TTP-16DA
JEDEC	—
EIAJ	—
Weight (reference value)	0.05 g

*Dimension including the plating thickness
 Base material dimension