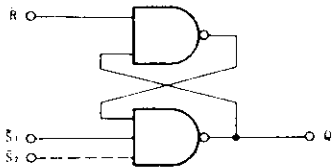
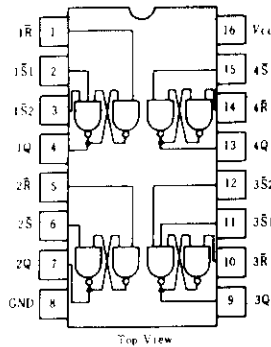


HD74LS279 ● Quadruple S-R Latches

■ 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 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.

■ 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} | $V_{CC} = 4.75\text{V}$, $V_{IH} = 2\text{V}$, $V_{IL} = 0.8\text{V}$, $I_{OH} = -400\mu\text{A}$ | 2.7 | — | — | V | |
| | V_{OL} | $V_{CC} = 4.75\text{V}$, $V_{IH} = 2\text{V}$, $V_{IL} = 0.8\text{V}$ | $I_{OL} = 4\text{mA}$ | — | — | 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 | |

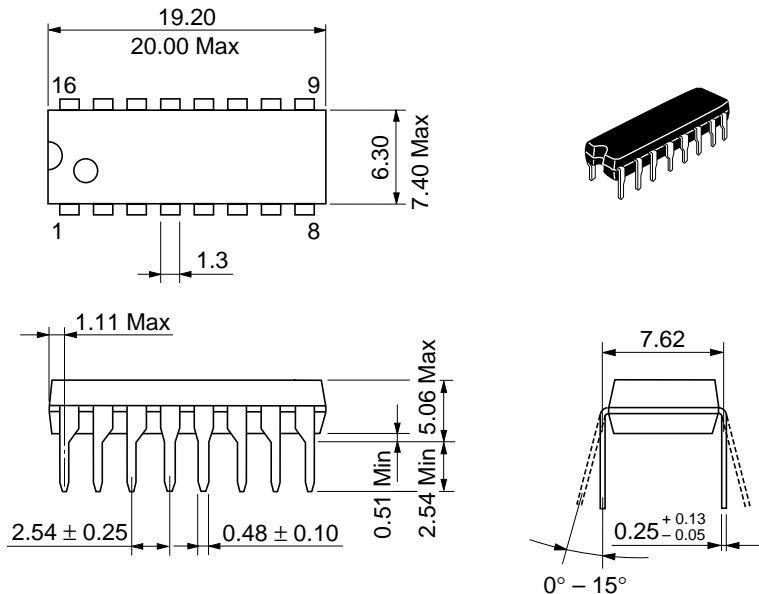
* $V_{CC} = 5\text{V}$, $T_a = 25^\circ\text{C}$

** I_{CC} is measured with all \bar{R} inputs grounded, all \bar{S} inputs at 4.5V, and all outputs open.

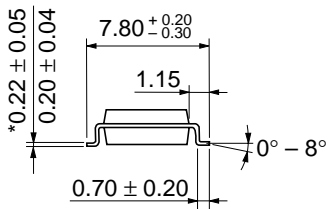
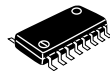
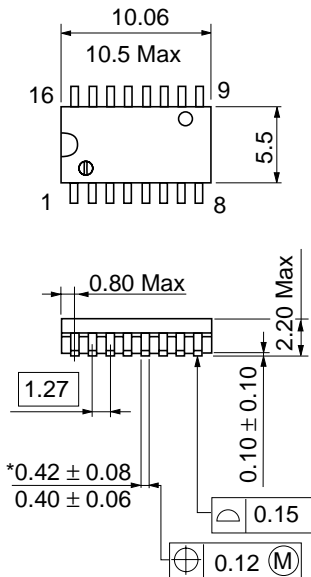
■ SWITCHING CHARACTERISTICS ($V_{CC} = 5\text{V}$, $T_a = 25^\circ\text{C}$)

| 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

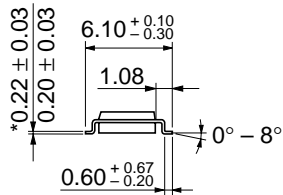
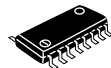
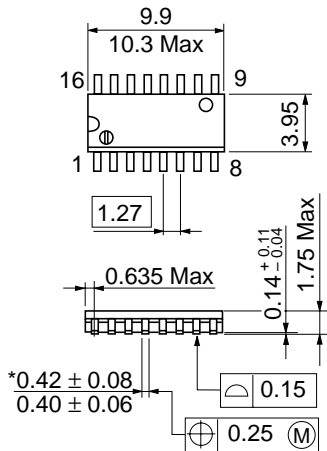


| | |
|--------------------------|----------|
| Hitachi Code | DP-16 |
| JEDEC | Conforms |
| EIAJ | Conforms |
| Weight (reference value) | 1.07 g |



*Dimension including the plating thickness
 Base material dimension

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



*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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