



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE74279 Integrated Circuit TTL – Quad Set–Reset Latch

Description:

The NTE74279 offers 4 basic \overline{S} – \overline{R} flip–flop latches in a 16–Lead plastic DIP type package. Under conventional operation, the \overline{S} – \overline{R} inputs are normally held high. When the \overline{S} input is pulsed low, the Q output will be set high. When \overline{R} is pulsed low, the Q output will be reset low. Normally, the \overline{S} – \overline{R} inputs should not be taken low simultaneously. The Q output will be unpredictable in this condition.

Absolute Maximum Ratings: (Note 1)

Supply Voltage, V_{CC} 7V
 Input Voltage, V_{IN} 5.5V
 Operating Temperature Range, T_A 0°C to +70°C
 Storage Temperature Range, T_{stg} –65°C to +150°C

Note 1. Unless otherwise specified, all voltages are referenced to GND.

Recommended Operating Conditions:

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{CC}	4.75	5.0	5.25	V
High–Level Output Voltage	V_{OH}	2	–	–	V
Low–Level Output Voltage	V_{OL}	–	–	0.8	V
High–Level Output Current	I_{OH}	–	–	–0.8	mA
Low–Level Output Current	I_{OL}	–	–	16	mA
Pulse Duration, Low	t_w	20	–	–	ns
Operating Temperature Range	T_A	0	–	+70	°C

Electrical Characteristics: (Note 2, Note 3)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Clamp Voltage	V_{IK}	$V_{CC} = \text{MIN}, I_I = -12\text{mA}$	-	-	-1.5	V
High Level Output Voltage	V_{OH}	$V_{CC} = \text{MIN}, V_{IL} = 0.8\text{V}, I_{OH} = -0.8\text{mA}$	2.4	3.4	-	V
Low Level Output Voltage	V_{OL}	$V_{CC} = \text{MIN}, V_{IH} = 2\text{V}, I_{OL} = 16\text{mA}$	-	0.2	0.4	V
Input Current	I_I	$V_{CC} = \text{MAX}, V_I = 5.5\text{V}$	-	-	1	mA
High Level Input Current	I_{IH}	$V_{CC} = \text{MAX}, V_I = 2.4\text{V}$	-	-	40	μA
Low Level Input Current	I_{IL}	$V_{CC} = \text{MAX}, V_I = 0.4\text{V}$	-	-	-1.6	mA
Short-Circuit Output Current	I_{OS}	$V_{CC} = \text{MAX}, \text{Note 4}$	-18	-	-57	mA
Supply Current	I_{CC}	$V_{CC} = \text{MAX}, \text{Note 5}$	-	18	30	mA

Note 2. .For conditions shown as MIN or MAX, use the appropriate value specified under “Recommended Operation Conditions”.

Note 3. All typical values are at $V_{CC} = 5\text{V}, T_A = +25^\circ\text{C}$.

Note 4. Not more than one output should be shorted at a time.

Note 5. I_{CC} is measured with all R inputs grounded, all S inputs at 4.5V and all outputs open.

Switching Characteristics: ($V_{CC} = 5\text{V}, R_L = 667\Omega, T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Propagation Delay Time (From \bar{S} Input to Q Output)	t_{PLH}	$R_L = 400\Omega, C_L = 15\text{pF}$	-	12	22	ns
	t_{PHL}		-	9	15	ns
Propagation Delay Time (From \bar{R} Input to Q Output)	t_{PHL}		-	15	27	ns

Function Table:

Inputs		Output
\bar{S} †	\bar{R}	Q
H	H	Q_0
L	H	H
H	L	L
L	L	H *

H = HIGH Level

L = LOW Level

Q_0 = The level of Q before the indicated input conditions were established.

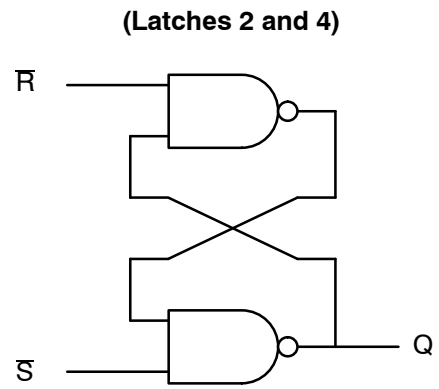
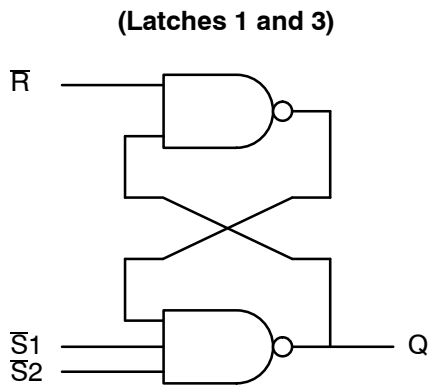
* This configuration is nonstable; that is, it may not persist when the \bar{S} and \bar{R} inputs return to their inactive (high) level.

† For latches with double S inputs:

H = Both \bar{S} inputs high

L = One or both \bar{S} inputs low

Logic Diagram



Pin Connection Diagram

