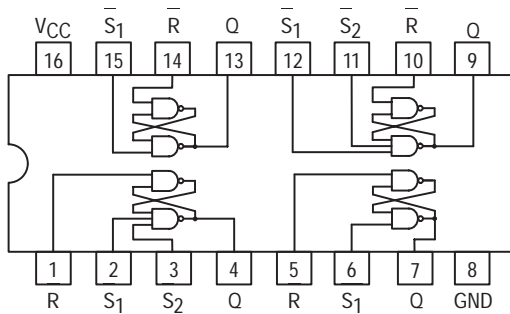




# QUAD SET-RESET LATCH



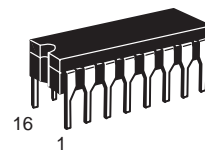
**TRUTH TABLE**

INPUT			OUTPUT (Q)
S <sub>1</sub>	S <sub>2</sub>	R	
L	L	L	h
L	X	H	H
X	L	H	H
H	H	L	L
H	H	H	No Change

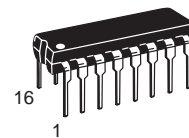
L = LOW Voltage Level  
H = HIGH Voltage Level  
X = Don't Care  
h = The output is HIGH as long as S<sub>1</sub> or S<sub>2</sub> is LOW. If all inputs go HIGH simultaneously, the output state is indeterminate; otherwise, it follows the Truth Table

**SN54/74LS279**

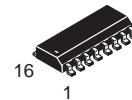
**QUAD SET-RESET LATCH  
LOW POWER SCHOTTKY**



**J SUFFIX  
CERAMIC  
CASE 620-09**



**N SUFFIX  
PLASTIC  
CASE 648-08**



**D SUFFIX  
SOIC  
CASE 751B-03**

**ORDERING INFORMATION**

SN54LSXXXJ Ceramic  
SN74LSXXXN Plastic  
SN74LSXXXD SOIC

**GUARANTEED OPERATING RANGES**

Symbol	Parameter		Min	Typ	Max	Unit
V <sub>CC</sub>	Supply Voltage	54 74	4.5 4.75	5.0 5.0	5.5 5.25	V
T <sub>A</sub>	Operating Ambient Temperature Range	54 74	-55 0	25 25	125 70	°C
I <sub>OH</sub>	Output Current — High	54, 74			-0.4	mA
I <sub>OL</sub>	Output Current — Low	54 74			4.0 8.0	mA

# SN54/74LS279

## DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

Symbol	Parameter	Limits			Unit	Test Conditions	
		Min	Typ	Max			
$V_{IH}$	Input HIGH Voltage	2.0			V	Guaranteed Input HIGH Voltage for All Inputs	
$V_{IL}$	Input LOW Voltage	54		0.7	V	Guaranteed Input LOW Voltage for All Inputs	
		74		0.8			
$V_{IK}$	Input Clamp Diode Voltage		-0.65	-1.5	V	$V_{CC} = \text{MIN}$ , $I_{IN} = -18 \text{ mA}$	
$V_{OH}$	Output HIGH Voltage	54	2.5	3.5	V	$V_{CC} = \text{MIN}$ , $I_{OH} = \text{MAX}$ , $V_{IN} = V_{IH}$ or $V_{IL}$ per Truth Table	
		74	2.7	3.5	V		
$V_{OL}$	Output LOW Voltage	54, 74		0.25	0.4	V	$I_{OL} = 4.0 \text{ mA}$ $V_{CC} = V_{CC} \text{ MIN}$ , $V_{IN} = V_{IL}$ or $V_{IH}$ per Truth Table
		74		0.35	0.5	V	
$I_{IH}$	Input HIGH Current			20	$\mu\text{A}$	$V_{CC} = \text{MAX}$ , $V_{IN} = 2.7 \text{ V}$	
				0.1	mA	$V_{CC} = \text{MAX}$ , $V_{IN} = 7.0 \text{ V}$	
$I_{IL}$	Input LOW Current			-0.4	mA	$V_{CC} = \text{MAX}$ , $V_{IN} = 0.4 \text{ V}$	
$I_{OS}$	Short Circuit Current (Note 1)	-20		-100	mA	$V_{CC} = \text{MAX}$	
$I_{CC}$	Power Supply Current			7.0	mA	$V_{CC} = \text{MAX}$	

Note 1: Not more than one output should be shorted at a time, nor for more than 1 second.

## AC CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Limits			Unit	Test Conditions
		Min	Typ	Max		
$t_{PLH}$ $t_{PHL}$	Propagation Delay, $\bar{S}$ to Output			22 21*	ns	$V_{CC} = 5.0 \text{ V}$ $C_L = 15 \text{ pF}$
$t_{PHL}$	Propagation Delay, R to Output			27	ns	

\* Add 0.6 ns to spec limit for each 1.0 ns input rise time less than 15 ns.