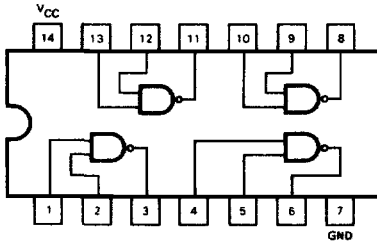




SN54/74LS00



J Suffix — Case 632-08 (Ceramic)
N Suffix — Case 646-06 (Plastic)

QUAD 2-INPUT NAND GATE

LOW POWER SCHOTTKY

GUARANTEED OPERATING RANGES

SYMBOL	PARAMETER		MIN	TYP	MAX	UNIT
V _{CC}	Supply Voltage	54	4.5	5.0	5.5	V
		74	4.75	5.0	5.25	
T _A	Operating Ambient Temperature Range	54	-55	25	125	°C
		74	0	25	70	
I _{OH}	Output Current — High	54, 74			-0.4	mA
I _{OL}	Output Current — Low	54			4.0	mA
		74			8.0	

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

SYMBOL	PARAMETER	LIMITS			UNITS	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} = MIN, I _{IN} = -18 mA
V _{OH}	Output HIGH Voltage	54	2.5	3.5	V	V _{CC} = MIN, I _{OH} = 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	V	I _{OL} = 4.0 mA V _{CC} = V _{CC} MIN, V _{IN} = V _{IL} or V _{IH} per Truth Table
		74		0.35	V	
I _{IH}	Input HIGH Current			20	μA	V _{CC} = MAX, V _{IN} = 2.7 V
				0.1	mA	V _{CC} = MAX, V _{IN} = 7.0 V
I _{IL}	Input LOW Current			-0.4	mA	V _{CC} = MAX, V _{IN} = 0.4 V
I _{OS}	Short Circuit Current	-20		-100	mA	V _{CC} = MAX
I _{CC}	Power Supply Current Total, Output HIGH Total, Output LOW			1.6	mA	V _{CC} = MAX
				4.4		

AC CHARACTERISTICS: T_A = 25°C

SYMBOL	PARAMETER	LIMITS			UNITS	TEST CONDITIONS
		MIN	TYP	MAX		
t _{PLH}	Turn Off Delay, Input to Output		9.0	15	ns	V _{CC} = 5.0 V C _L = 15 pF
t _{PHL}	Turn On Delay, Input to Output		10	15	ns	