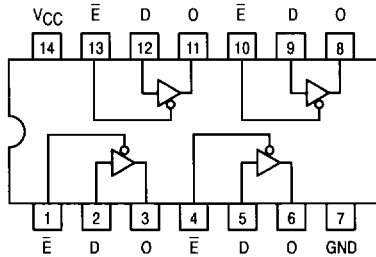




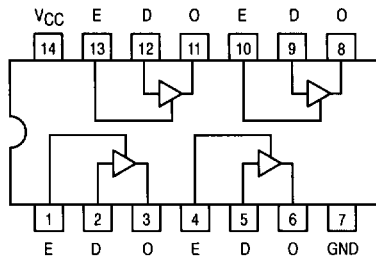
QUAD 3-STATE BUFFERS

SN54/74LS125A
SN54/74LS126A

QUAD 3-STATE BUFFERS
LOW POWER SCHOTTKY



LS125A



LS126A

TRUTH TABLES

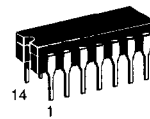
LS125A

INPUTS		OUTPUT
\bar{E}	D	
L	L	L
L	H	H
H	X	(Z)

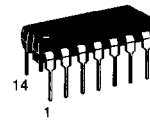
LS126A

INPUTS		OUTPUT
E	D	
H	L	L
H	H	H
L	X	(Z)

L = LOW Voltage Level
H = HIGH Voltage Level
X = Don't Care
(Z) = High Impedance (off)



J SUFFIX
CERAMIC
CASE 632-08



N SUFFIX
PLASTIC
CASE 646-06



D SUFFIX
SOIC
CASE 751A-02

ORDERING INFORMATION

SN54LSXXXJ Ceramic
SN74LSXXXN Plastic
SN74LSXXXD SOIC

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GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
V_{CC}	Supply Voltage	54 74	4.5 4.75	5.0 5.0	5.5 5.25	V
T_A	Operating Ambient Temperature Range	54 74	-55 0	25 25	125 70	°C
I_{OH}	Output Current — High	54 74			-1.0 -2.6	mA
I_{OL}	Output Current — Low	54 74			12 24	mA

SN54/74LS125A • SN54/74LS126A

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} = MIN, I _{IN} = -18 mA	
V _{OH}	Output HIGH Voltage	54	2.4			V	V _{CC} = MIN, I _{OH} = MAX, V _{IN} = V _{IH} or V _{IL} per Truth Table	
		74	2.4			V		
V _{OL}	Output LOW Voltage	54, 74		0.25	0.4	V	I _{OL} = 12 mA	V _{CC} = V _{CC} MIN, V _{IN} = V _{IL} or V _{IH} per Truth Table
		74		0.35	0.5	V	I _{OL} = 24 mA	
I _{OZH}	Output Off Current HIGH				20	μA	V _{CC} = MAX, V _{OUT} = 2.4 V	
I _{OZL}	Output Off Current LOW				-20	μA	V _{CC} = MAX, V _{OUT} = 0.4 V	
I _{IH}	Input HIGH Current				20	μA	V _{CC} = MAX, V _{IN} = 2.7 V	
					0.1		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 (Note 1)		-40		-225	mA	V _{CC} = MAX	
I _{CC}	Power Supply Current	LS125A			20	mA	V _{CC} = MAX	V _{IN} = 0 V, V _E = 4.5 V
		LS126A			22			V _{IN} = 0 V, V _E = 0 V

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

AC CHARACTERISTICS (T_A = 25°C)

Symbol	Parameter		Limits			Unit	Test Conditions	
			Min	Typ	Max			
t _{PLH}	Propagation Delay, Data to Output	LS125A		9.0	15	ns	Figure 2	V _{CC} = 5.0 V C _L = 45 pF R _L = 667 Ω
t _{PLH}		LS126A		9.0	15			
t _{PHL}		LS125A		7.0	18			
t _{PHL}		LS126A		8.0	18			
t _{PZH}	Output Enable Time to HIGH Level	LS125A		12	20	ns	Figures 4, 5	
		LS126A		16	25			
t _{PZL}	Output Enable Time to LOW Level	LS125A		15	25	ns	Figures 3, 5	
		LS126A		21	35			
t _{PHZ}	Output Disable Time from HIGH Level	LS125A			20	ns	Figures 4, 5	
		LS126A			25			
t _{PLZ}	Output Disable Time from LOW Level	LS125A			20	ns	Figures 3, 5	
		LS126A			25			

5

SN54/74LS125A • SN54/74LS126A

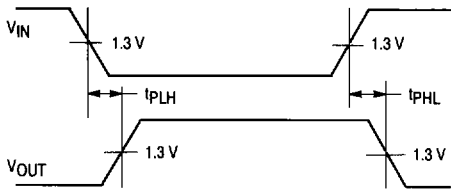


Figure 1

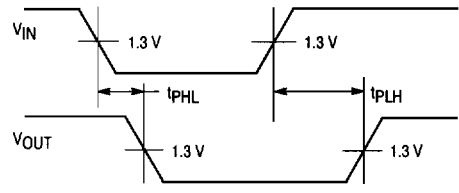


Figure 2

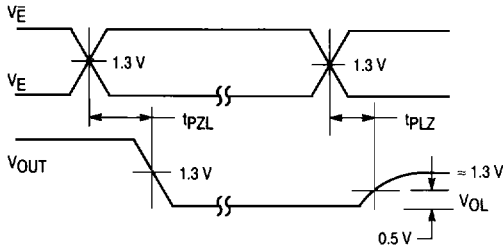


Figure 3

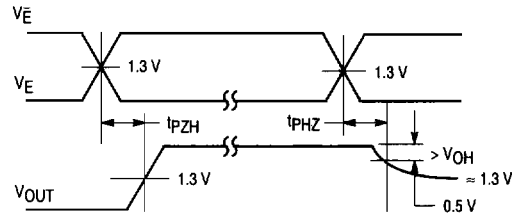


Figure 4

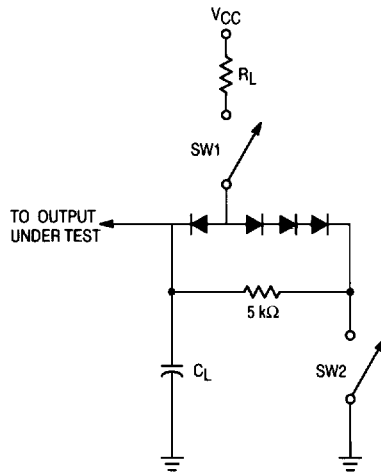


Figure 5

SWITCH POSITIONS

SYMBOL	SW1	SW2
t_{PZH}	Open	Closed
t_{PZL}	Closed	Open
t_{PLZ}	Closed	Closed
t_{PHZ}	Closed	Closed