

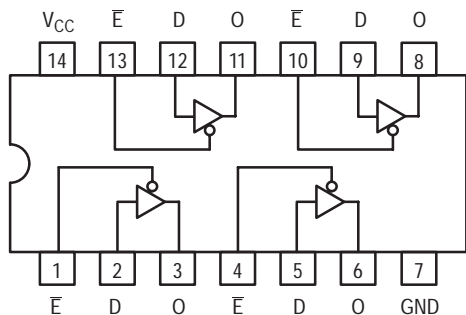
SN74LS125A SN74LS126A

Quad 3-State Buffers

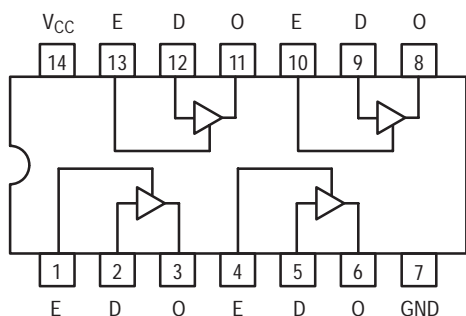


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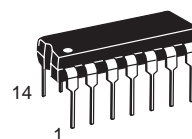
**LOW
POWER
SCHOTTKY**



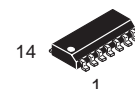
LS125A



LS126A



**PLASTIC
N SUFFIX
CASE 646**



**SOIC
D SUFFIX
CASE 751A**

TRUTH TABLES

LS125A

INPUTS		OUTPUT
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)

GUARANTEED OPERATING RANGES

Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply Voltage	4.75	5.0	5.25	V
T _A	Operating Ambient Temperature Range	0	25	70	°C
I _{OH}	Output Current – High			-2.6	mA
I _{OL}	Output Current – Low			24	mA

ORDERING INFORMATION

Device	Package	Shipping
SN74LS125AN	14 Pin DIP	2000 Units/Box
SN74LS125AD	14 Pin	2500/Tape & Reel
SN74LS126AN	14 Pin DIP	2000 Units/Box
SN74LS126AD	14 Pin	2500/Tape & Reel

SN74LS125A SN74LS126A

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			0.8	V	Guaranteed Input LOW Voltage for All Inputs	
V _{IK}	Input Clamp Diode Voltage		-0.65	-1.5	V	V _{CC} = MIN, I _{IN} = -18 mA	
V _{OH}	Output HIGH Voltage	2.4			V	V _{CC} = MIN, I _{OH} = MAX, V _{IN} = V _{IH} or V _{IL} per Truth Table	
V _{OL}	Output LOW Voltage		0.25	0.4	V	V _{CC} = V _{CC} MIN, V _{IN} = V _{IL} or V _{IH} per Truth Table	
			0.35	0.5	V		I _{OL} = 12 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	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 (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
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		

SN74LS125A SN74LS126A

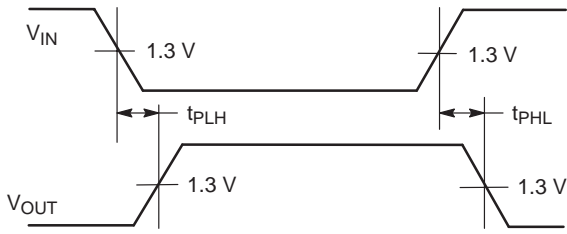


Figure 1.

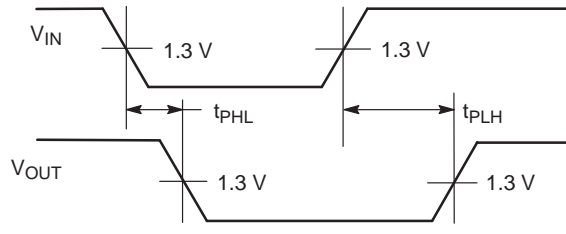


Figure 2.

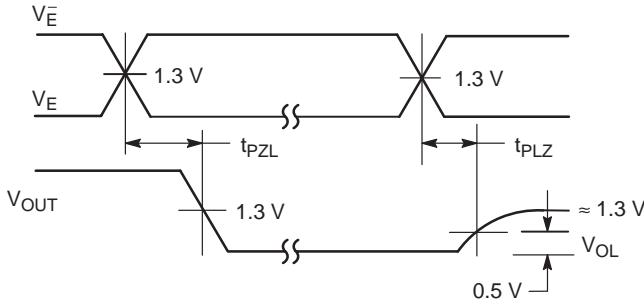


Figure 3.

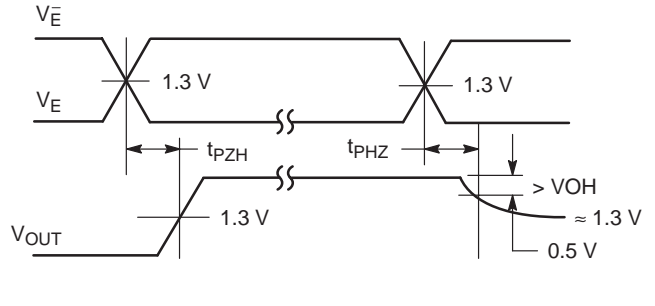


Figure 4.

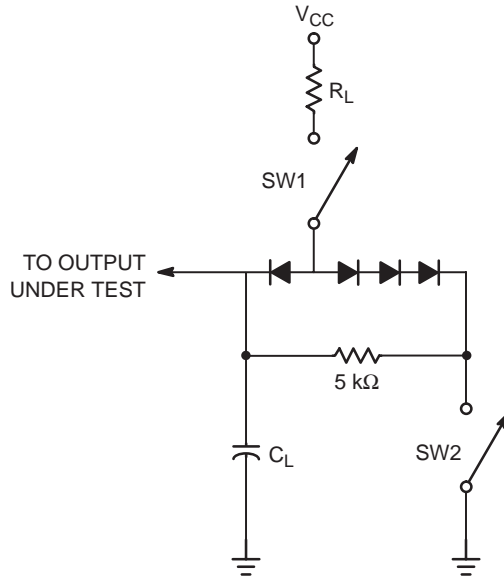


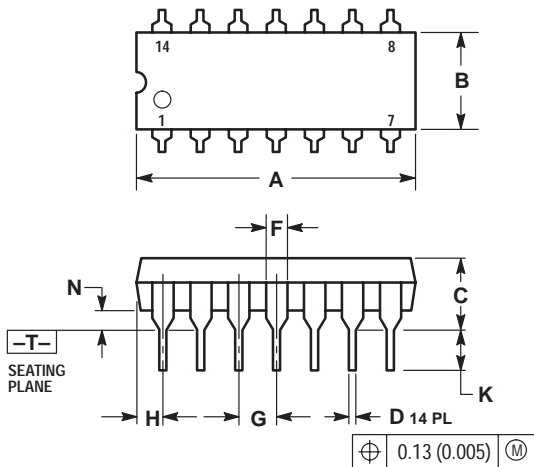
Figure 5.

SWITCH POSITIONS

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

SN74LS125A SN74LS126A

PACKAGE DIMENSIONS

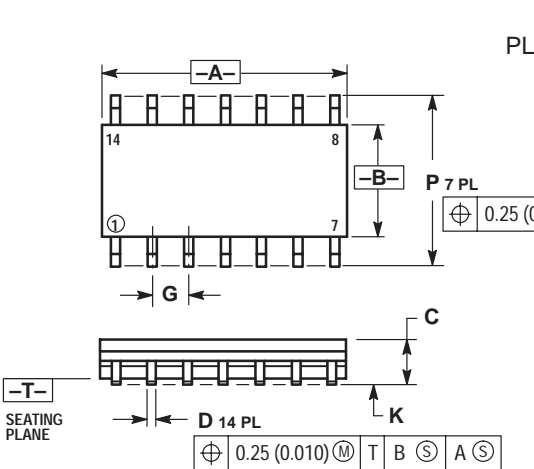


N SUFFIX
PLASTIC PACKAGE
CASE 646-06
ISSUE M

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION L TO CENTER OF LEADS WHEN FORMED PARALLEL.
4. DIMENSION B DOES NOT INCLUDE MOLD FLASH.
5. ROUNDED CORNERS OPTIONAL.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.715	0.770	18.16	18.80
B	0.240	0.260	6.10	6.60
C	0.145	0.185	3.69	4.69
D	0.015	0.021	0.38	0.53
F	0.040	0.070	1.02	1.78
G	0.100 BSC		2.54 BSC	
H	0.052	0.095	1.32	2.41
J	0.008	0.015	0.20	0.38
K	0.115	0.135	2.92	3.43
L	0.290	0.310	7.37	7.87
M	— 10°		— 10°	
N	0.015	0.039	0.38	1.01




D SUFFIX
PLASTIC SOIC PACKAGE
CASE 751A-03
ISSUE F

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS A AND B DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (0.005) TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.55	8.75	0.337	0.344
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27 BSC		0.050 BSC	
J	0.19	0.25	0.008	0.009
K	0.10	0.25	0.004	0.009
M	0° 7°		0° 7°	
P	5.80	6.20	0.228	0.244
R	0.25	0.50	0.010	0.019

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