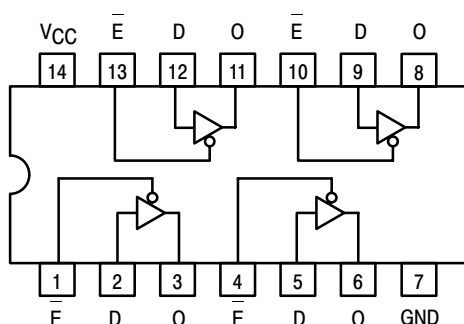
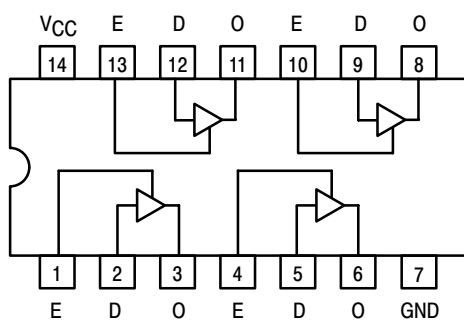


SN74LS125A, SN74LS126A

Quad 3-State Buffers



LS125A



LS126A

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

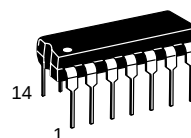
Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply Voltage	4.75	5.0	5.25	V
T _A	Operating Ambient Temperature Range	0	25	70	°C
I _{OH}	Output Current – High			–2.6	mA
I _{OL}	Output Current – Low			24	mA



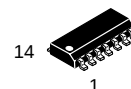
ON Semiconductor™

<http://onsemi.com>

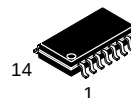
LOW
POWER
SCHOTTKY



PLASTIC
N SUFFIX
CASE 646



SOIC
D SUFFIX
CASE 751A



SOEIAJ
M SUFFIX
CASE 965

ORDERING INFORMATION

Device	Package	Shipping
SN74LS125AN	14 Pin DIP	2000 Units/Box
SN74LS125AD	SOIC–14	55 Units/Rail
SN74LS125ADR2	SOIC–14	2500/Tape & Reel
SN74LS125AM	SOEIAJ–14	See Note 1
SN74LS125AMEL	SOEIAJ–14	See Note 1
SN74LS126AN	14 Pin DIP	2000 Units/Box
SN74LS126AD	SOIC–14	55 Units/Rail
SN74LS126ADR2	SOIC–14	2500/Tape & Reel
SN74LS126AM	SOEIAJ–14	See Note 1
SN74LS126AMEL	SOEIAJ–14	See Note 1

- For ordering information on the EIAJ version of the SOIC package, please contact your local ON Semiconductor representative.

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	I _{OL} = 12 mA	V _{CC} = V _{CC} MIN, V _{IN} = V _{IL} or V _{IH} per Truth Table
				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	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 2)		−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

2. 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	V _{CC} = 5.0 V C _L = 5.0 pF R _L = 667 Ω
		LS126A			25			
t _{PLZ}	Output Disable Time from LOW Level	LS125A			20	ns	Figures 3, 5	
		LS126A			25			

SN74LS125A, SN74LS126A

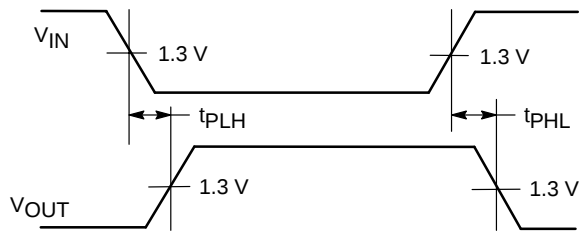


Figure 1.

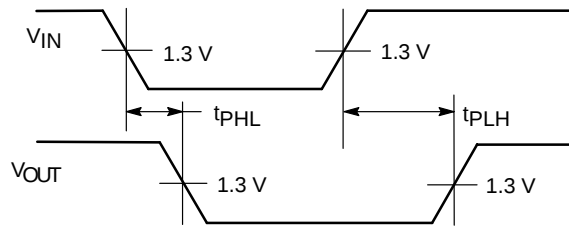


Figure 2.

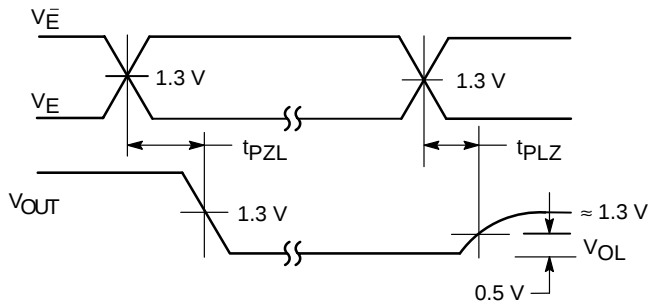


Figure 3.

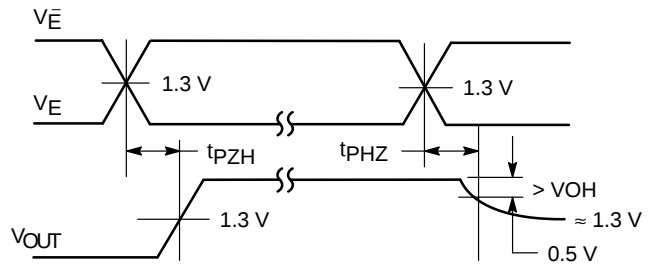


Figure 4.

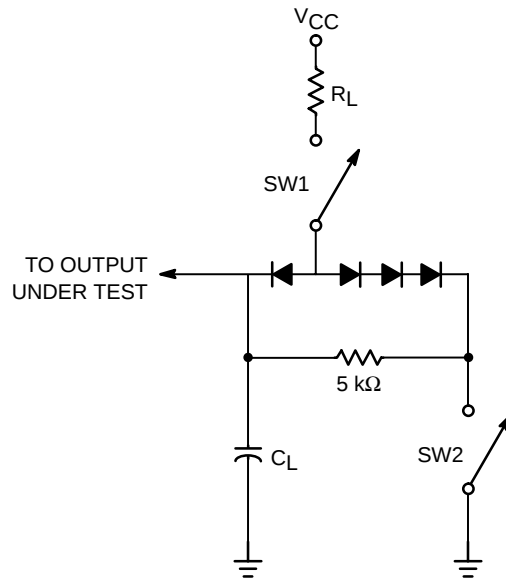


Figure 5.

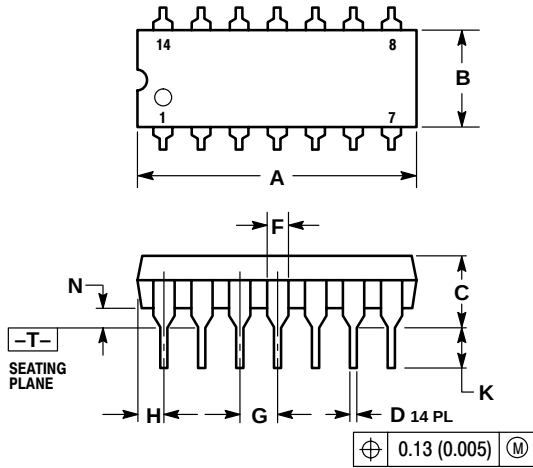
SWITCH POSITIONS

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:

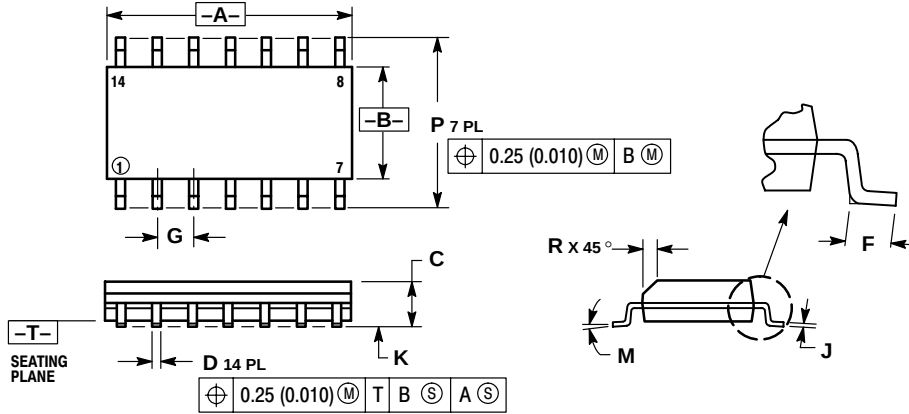
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION L TO CENTER OF LEADS WHEN FORMED PARALLEL.
4. DIMENSION B DOES NOT INCLUDE MOLD FLASH.
5. ROUNDED CORNERS OPTIONAL.

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

SN74LS125A, SN74LS126A

PACKAGE DIMENSIONS

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



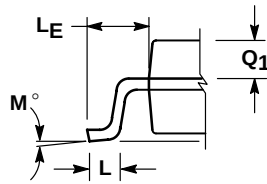
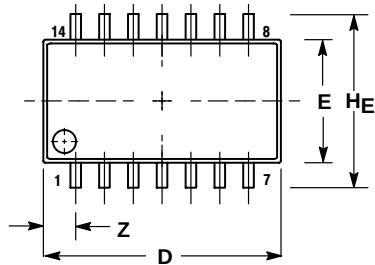
- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: MILLIMETER.
 3. DIMENSIONS A AND B DO NOT INCLUDE MOLD PROTRUSION.
 4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
 5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (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

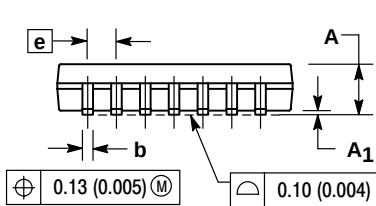
SN74LS125A, SN74LS126A

PACKAGE DIMENSIONS

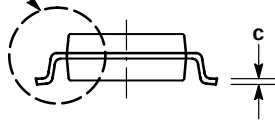
M SUFFIX
SOEIAJ PACKAGE
CASE 965-01
ISSUE O



DETAIL P



VIEW P



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH OR PROTRUSIONS AND ARE MEASURED AT THE PARTING LINE. MOLD FLASH OR PROTRUSIONS SHALL NOT EXCEED 0.15 (0.006) PER SIDE.
4. TERMINAL NUMBERS ARE SHOWN FOR REFERENCE ONLY.
5. THE LEAD WIDTH DIMENSION (b) DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 (0.003) TOTAL IN EXCESS OF THE LEAD WIDTH DIMENSION AT MAXIMUM MATERIAL CONDITION. DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OR THE FOOT. MINIMUM SPACE BETWEEN PROTRUSIONS AND ADJACENT LEAD TO BE 0.46 (0.018).

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	---	2.05	---	0.081
A ₁	0.05	0.20	0.002	0.008
b	0.35	0.50	0.014	0.020
c	0.18	0.27	0.007	0.011
D	9.90	10.50	0.390	0.413
E	5.10	5.45	0.201	0.215
e	1.27 BSC		0.050 BSC	
HE	7.40	8.20	0.291	0.323
0.50	0.50	0.85	0.020	0.033
LE	1.10	1.50	0.043	0.059
M	0°	10°	0°	10°
Q ₁	0.70	0.90	0.028	0.035
Z	---	1.42	---	0.056

Notes

SN74LS125A, SN74LS126A

ON Semiconductor and  are trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer.

PUBLICATION ORDERING INFORMATION

Literature Fulfillment:

Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: ONlit@hibbertco.com

N. American Technical Support: 800-282-9855 Toll Free USA/Canada

JAPAN: ON Semiconductor, Japan Customer Focus Center
4-32-1 Nishi-Gotanda, Shinagawa-ku, Tokyo, Japan 141-0031
Phone: 81-3-5740-2700
Email: r14525@onsemi.com

ON Semiconductor Website: <http://onsemi.com>

For additional information, please contact your local Sales Representative.