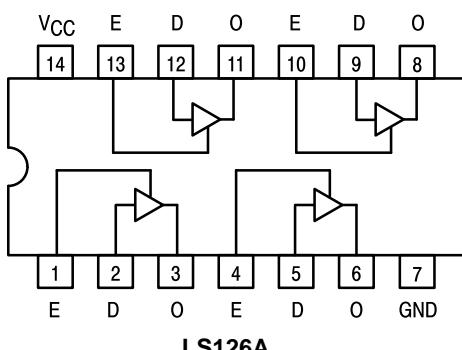
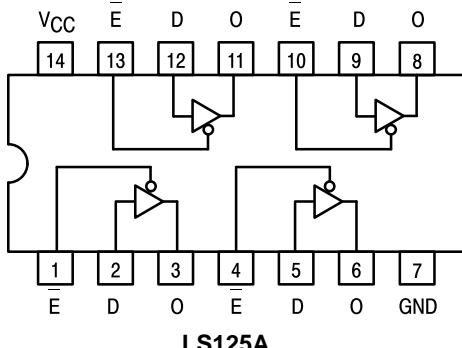




QUAD 3-STATE BUFFERS



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

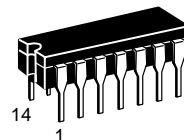
H = HIGH Voltage Level

X = Don't Care

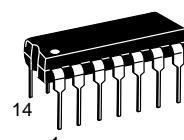
(Z) = High Impedance (off)

**SN54/74LS125A
SN54/74LS126A**

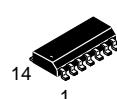
**QUAD 3-STATE BUFFERS
LOW POWER SCHOTTKY**



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

GUARANTEED OPERATING RANGES

Symbol	Parameter	54	Min	Typ	Max	Unit
V _{CC}	Supply Voltage	74	4.5	5.0	5.5	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	V	I _{OL} = 12 mA
		74		0.35	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 1)	-40		-225	mA	V _{CC} = MAX
I _{CC}	Power Supply Current	LS125A		20	mA	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	ns	Figure 2 V _{CC} = 5.0 V C _L = 45 pF R _L = 667 Ω
t _{PLH}		LS126A		9.0		
t _{PHL}		LS125A		7.0		
t _{PHL}		LS126A		8.0		
t _{PZH}	Output Enable Time to HIGH Level	LS125A		12	ns	Figures 4, 5 V _{CC} = 5.0 V C _L = 45 pF R _L = 667 Ω
		LS126A		16		
t _{PZL}	Output Enable Time to LOW Level	LS125A		15	ns	Figures 3, 5 V _{CC} = 5.0 V C _L = 45 pF R _L = 667 Ω
		LS126A		21		
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 V _{CC} = 5.0 V C _L = 5.0 pF R _L = 667 Ω
		LS126A		25		

SN54/74LS125A • SN54/74LS126A

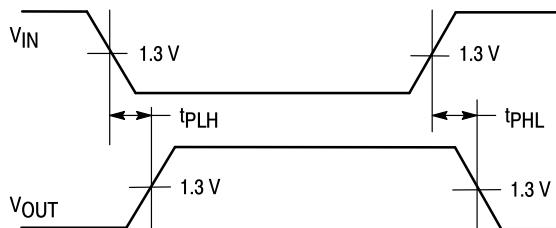


Figure 1

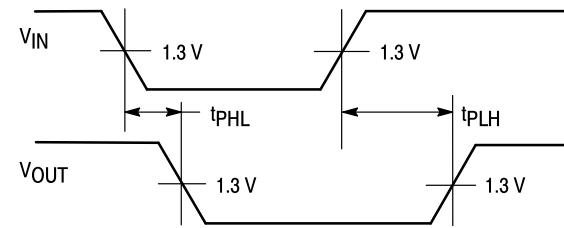


Figure 2

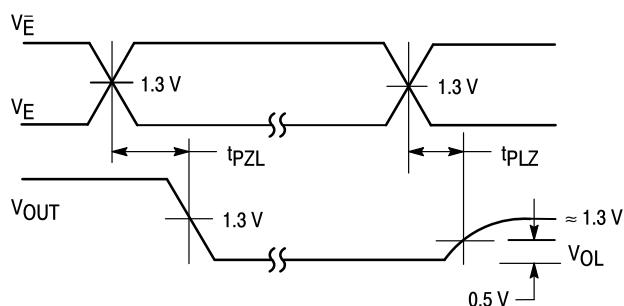


Figure 3

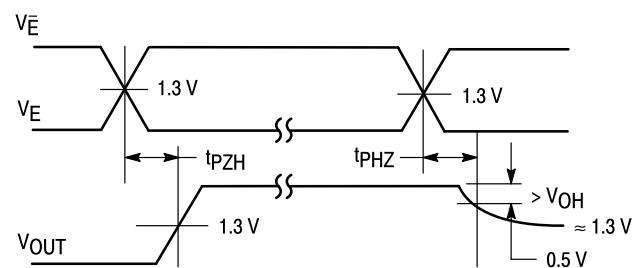


Figure 4

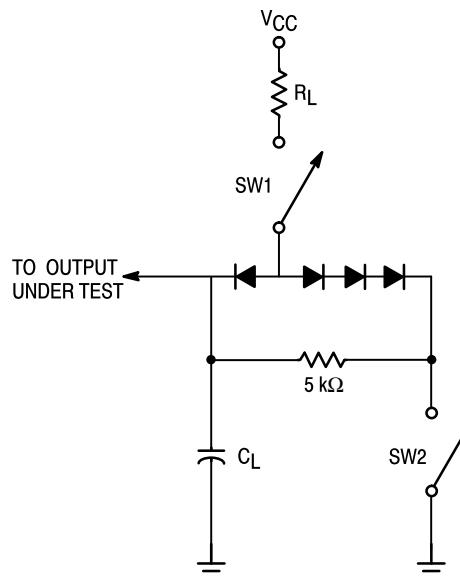
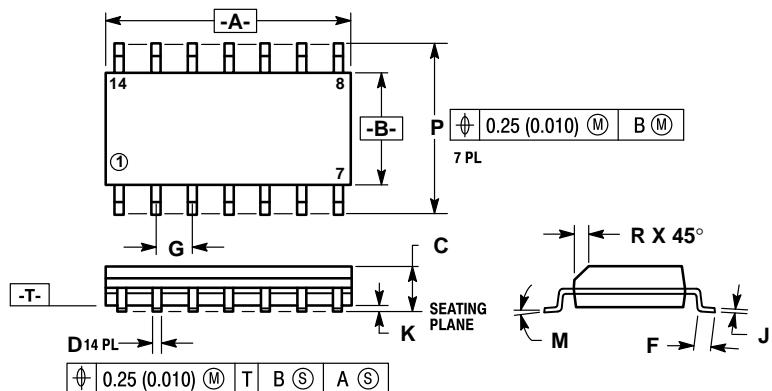


Figure 5

SWITCH POSITIONS

SYMBOL	SW1	SW2
tPZH	Open	Closed
tPZL	Closed	Open
tPLZ	Closed	Closed
tPHZ	Closed	Closed

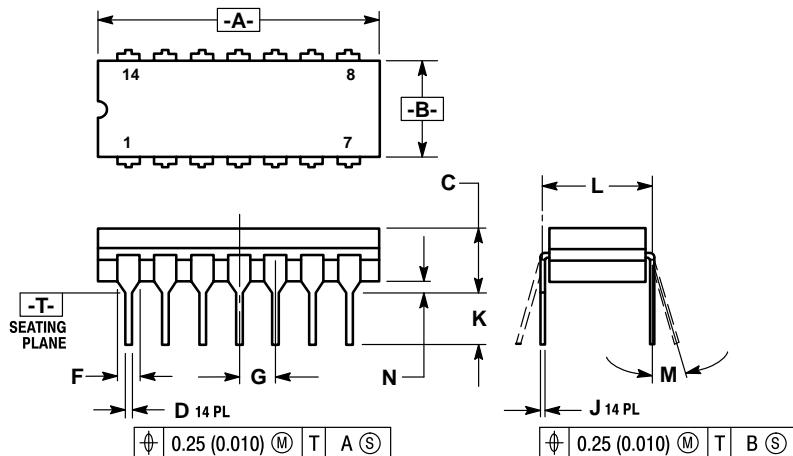
Case 751A-02 D Suffix
14-Pin Plastic
SO-14



NOTES:
 1. DIMENSIONS "A" AND "B" ARE DATUMS AND
 "T" IS A DATUM SURFACE.
 2. DIMENSIONING AND TOLERANCING PER ANSI
 Y14.5M, 1982.
 3. CONTROLLING DIMENSION: MILLIMETER.
 4. DIMENSION A AND B DO NOT INCLUDE MOLD
 PROTRUSION.
 5. MAXIMUM MOLD PROTRUSION 0.15 (0.006)
 PER SIDE.
 6. 751A-01 IS OBSOLETE, NEW STANDARD
 751A-02.

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	0.229	0.244
R	0.25	0.50	0.010	0.019

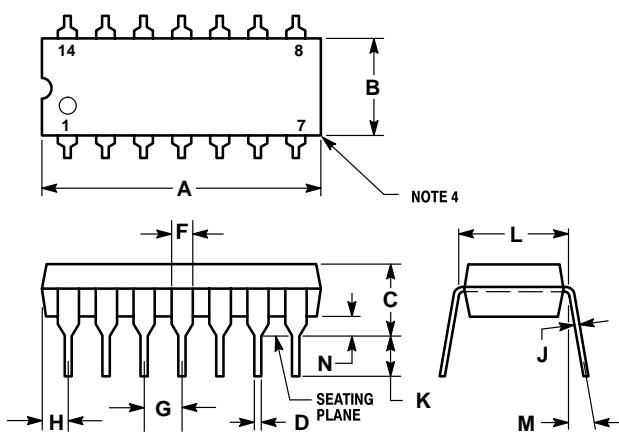
Case 632-08 J Suffix
14-Pin Ceramic Dual In-Line



NOTES:
 1. DIMENSIONING AND TOLERANCING PER ANSI
 Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. DIMENSION L TO CENTER OF LEAD WHEN
 FORMED PARALLEL.
 4. DIM F MAY NARROW TO 0.76 (0.030) WHERE
 THE LEAD ENTERS THE CERAMIC BODY.
 5. 632-01 THRU -07 OBSOLETE, NEW STANDARD
 632-08.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.05	19.94	0.750	0.785
B	6.23	7.11	0.245	0.280
C	3.94	5.08	0.155	0.200
D	0.39	0.50	0.015	0.020
F	1.40	1.65	0.055	0.065
G	2.54 BSC		0.100 BSC	
J	0.21	0.38	0.008	0.015
K	3.18	4.31	0.125	0.170
L	7.62 BSC		0.300 BSC	
M	0°	15°	0°	15°
N	0.51	1.01	0.020	0.040

Case 646-06 N Suffix
14-Pin Plastic



NOTES:
 1. LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE
 POSITION AT SEATING PLANE AT MAXIMUM
 MATERIAL CONDITION.
 2. DIMENSION "L" TO CENTER OF LEADS WHEN
 FORMED PARALLEL.
 3. DIMENSION "B" DOES NOT INCLUDE MOLD
 FLASH.
 4. ROUNDED CORNERS OPTIONAL.
 5. 646-05 OBSOLETE, NEW STANDARD 646-06.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	18.16	19.56	0.715	0.770
B	6.10	6.60	0.240	0.260
C	3.69	4.69	0.145	0.185
D	0.38	0.53	0.015	0.021
F	1.02	1.78	0.040	0.070
G	2.54 BSC		0.100 BSC	
H	1.32	2.41	0.052	0.095
J	0.20	0.38	0.008	0.015
K	2.92	3.43	0.115	0.135
L	7.62 BSC		0.300 BSC	
M	0°	10°	0°	10°
N	0.39	1.01	0.015	0.039

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