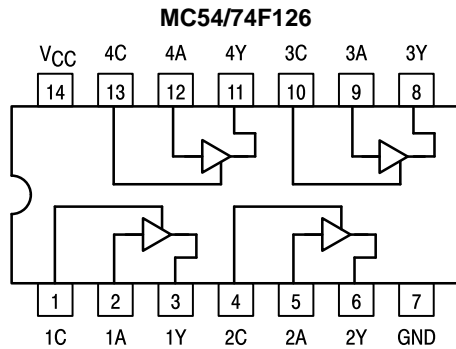
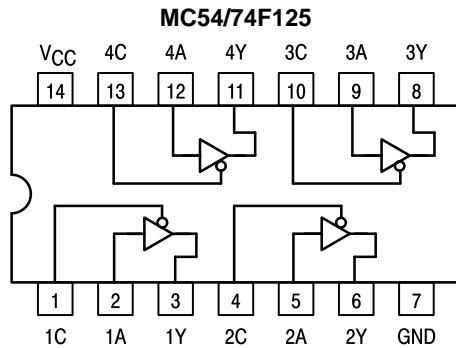




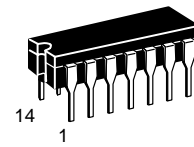
3-STATE QUAD BUFFERS

- High Impedance NPN Base Inputs for Reduced Loading

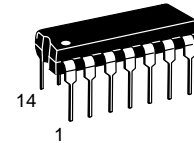


MC54/74F125
MC54/74F126

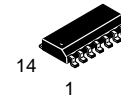
QUAD BUFFERS, 3-STATE
FAST™ SHOTTKY TTL



J SUFFIX
CERAMIC
CASE 632-08



N SUFFIX
PLASTIC
CASE 646-06



D SUFFIX
SOIC
CASE 751A-02

ORDERING INFORMATION

MC54FXXXJ Ceramic
MC74FXXXN Plastic
MC74FXXXD SOIC

GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
V _{CC}	Supply Voltage	54, 74	4.5	5.0	5.5	V
T _A	Operating Ambient Temperature Range	54	-55	25	125	°C
		74	0	25	70	
I _{OH}	Output Current — High	54			-12	mA
		74			-15	
I _{OL}	Output Current — Low	54			48	mA
		74			64	

MC54/74F125 • MC54/74F126

Function Table MC54/74F125

Inputs		Output
C	A	Y
L	L	L
L	H	H
H	X	Z

Function Table MC54/74F126

Inputs		Output
C	A	Y
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)

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	
V _{IL}	Input LOW Voltage			0.8	V	Guaranteed Input LOW Voltage	
V _{IK}	Input Clamp Diode Voltage			-1.2	V	I _{IN} = -18 mA	V _{CC} = MIN
V _{OH}	Output HIGH Voltage	54,74	2.4	3.4	V	I _{OH} = -3.0 mA	V _{CC} = 4.50 V
		74	2.7	3.4	V	I _{OH} = -3.0 mA	V _{CC} = 4.75 V
		54	2.0		V	I _{OH} = -12 mA	V _{CC} = 4.50 V
		74	2.0		V	I _{OH} = -15 mA	
V _{OL}	Output LOW Voltage	54		0.55	V	I _{OL} = 48 mA	V _{CC} = MAX
		74		0.55	V	I _{OL} = 64 mA	
I _{OZH}	Output Off Current HIGH			50	μA	V _{OUT} = 2.7 V	V _{CC} = MAX
I _{OZL}	Output Off Current LOW			-50	μA	V _{OUT} = 0.5 V	V _{CC} = MAX
I _{IH}	Input HIGH Current			20	μA	V _{IN} = 2.7 V	V _{CC} = MAX
				100		V _{IN} = 7.0 V	V _{CC} = 0 V
I _{IL}	Input LOW Current			-20	μA	V _{IN} = 0.5 V	V _{CC} = MAX
I _{OS}	Output Short Circuit Current Note 2	-100		-225	mA	V _{OUT} = GND	V _{CC} = MAX
I _{CC}	F125	I _{CC} H		24	mA	V _{CC} = MAX	
		I _{CC} L		40			
		I _{CC} Z		35			
	F126	I _{CC} H		30			
		I _{CC} L		48			
		I _{CC} Z		39			

NOTES:

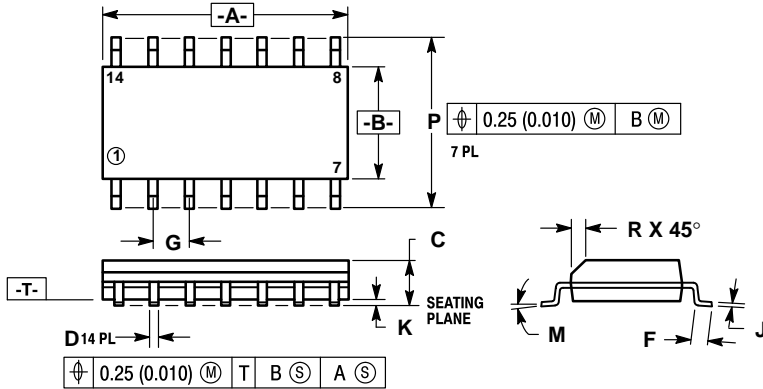
- For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions for the applicable device type.
- Not more than one output should be shorted at a time, nor for more than 1 second.

MC54/74F125 • MC54/74F126

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter		54/74F			54F		74F		Unit
			T _A = +25 °C V _{CC} = +5.0 V C _L = 50 pF			T _A = 0°C to 70°C V _{CC} = 5.0 V ± 10% C _L = 50 pF		T _A = 0°C to + 70°C V _{CC} = 5.0 V ± 10% C _L = 50 pF		
			Min	Typ	Max	Min	Max	Min	Max	
t _{PLH}	Propagation Delay, nA to nY	F125	1.5	4.0	6.0	1.5	7.5	1.5	6.5	ns
t _{PHL}			3.0	5.5	7.5	3.0	9.0	3.0	8.0	
t _{PZH}	Output Enable Time to HIGH and LOW level		3.0	5.5	7.5	3.0	9.5	3.0	8.5	ns
t _{PZL}			3.0	6.0	8.0	3.0	10	3.0	9.0	
t _{PHZ}	Output Disable Time from HIGH and LOW level		1.5	3.5	5.0	1.5	7.0	1.5	6.0	ns
t _{PLZ}			1.5	3.5	5.5	1.5	7.0	1.5	6.0	
t _{PLH}	Propagation Delay, nA to nY	F126	1.5	4.0	6.5	1.5	8.0	1.5	7.0	ns
t _{PHL}			3.0	5.5	8.0	3.0	9.5	3.0	8.5	
t _{PZH}	Output Enable Time to HIGH and LOW level		3.0	6.0	7.5	3.0	9.5	3.0	8.5	ns
t _{PZL}			3.0	6.0	8.0	3.0	9.5	3.0	8.5	
t _{PHZ}	Output Disable Time from HIGH and LOW level		2.0	4.5	6.5	2.0	8.5	2.0	7.5	ns
t _{PLZ}			3.0	5.5	7.5	3.0	9.0	3.0	8.0	

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

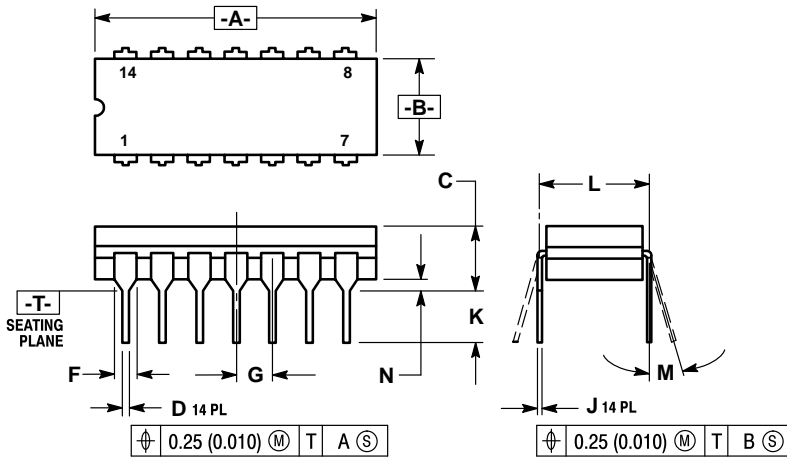


NOTES:

- DIMENSIONS "A" AND "B" ARE DATUMS AND "T" IS A DATUM SURFACE.
- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: MILLIMETER.
- DIMENSION A AND B DO NOT INCLUDE MOLD PROTRUSION.
- MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
- 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**

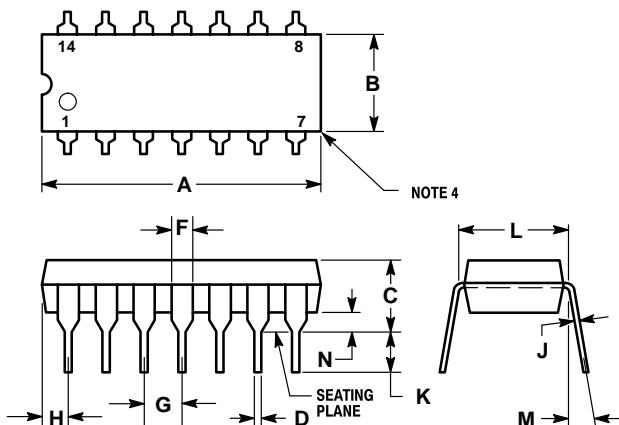


NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.
- DIMENSION L TO CENTER OF LEAD WHEN FORMED PARALLEL.
- DIM F MAY NARROW TO 0.76 (0.030) WHERE THE LEAD ENTERS THE CERAMIC BODY.
- 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:

- LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
- DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL.
- DIMENSION "B" DOES NOT INCLUDE MOLD FLASH.
- ROUNDED CORNERS OPTIONAL.
- 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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