## MC74HC125A, MC74HC126A

## Quad 3-State Noninverting Buffers

## High-Performance Silicon-Gate CMOS

The MC74HC125A and MC74HC126A are identical in pinout to the LS125 and LS126. The device inputs are compatible with standard CMOS outputs; with pullup resistors, they are compatible with LSTTL outputs.
The HC125A and HC126A noninverting buffers are designed to be used with 3-state memory address drivers, clock drivers, and other bus-oriented systems. The devices have four separate output enables that are active-low (HC125A) or active-high (HC126A).

## Features

- Output Drive Capability: 15 LSTTL Loads
- Outputs Directly Interface to CMOS, NMOS, and TTL
- Operating Voltage Range: 2.0 to 6.0 V
- Low Input Current: $1.0 \mu \mathrm{~A}$
- High Noise Immunity Characteristic of CMOS Devices
- In Compliance with the JEDEC Standard No. 7 A Requirements
- Chip Complexity: 72 FETs or 18 Equivalent Gates
- NLV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable
- These Devices are $\mathrm{Pb}-$ Free, Halogen Free/BFR Free and are RoHS Compliant


## LOGIC DIAGRAM

HC125A

## Active-Low Output Enables



HC126A
Active-High Output Enables


PIN $14=V_{C C}$
PIN $7=$ GND


## MC74HC125A, MC74HC126A

MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit |
| :---: | :--- | :---: | :---: |
| $\mathrm{V}_{\mathrm{CC}}$ | DC Supply Voltage (Referenced to GND) | -0.5 to +7.0 | V |
| $\mathrm{~V}_{\text {in }}$ | DC Input Voltage (Referenced to GND) | -0.5 to $\mathrm{V}_{\mathrm{CC}}+0.5$ | V |
| $\mathrm{~V}_{\text {out }}$ | DC Output Voltage (Referenced to GND) | -0.5 to $\mathrm{V}_{\mathrm{CC}}+0.5$ | V |
| $\mathrm{I}_{\text {in }}$ | DC Input Current, per Pin | $\pm 20$ | mA |
| $\mathrm{I}_{\text {out }}$ | DC Output Current, per Pin | $\pm 35$ | mA |
| $\mathrm{I}_{\mathrm{CC}}$ | DC Supply Current, $\mathrm{V}_{\mathrm{CC}}$ and GND Pins | $\pm 75$ | mA |
| $\mathrm{P}_{\mathrm{D}}$ | Power Dissipation in Still Air $\begin{array}{r}\text { SOIC Package } \dagger \\ \text { TSSOP Package } \dagger\end{array}$ | 500 | mW |
| $\mathrm{~T}_{\text {stg }}$ | Storage Temperature | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{T}_{\mathrm{L}}$ | Lead Temperature, 1 mm from Case for 10 Seconds |  |  |
| (SOIC or TSSOP Package) |  |  |  |$]$

This device contains protection circuitry to guard against damage due to high static voltages or electric fields. However, precautions must be taken to avoid applications of any voltage higher than maximum rated voltages to this high-impedance circuit. For proper operation, $\mathrm{V}_{\text {in }}$ and $V_{\text {out }}$ should be constrained to the range GND $\leq\left(\mathrm{V}_{\text {in }}\right.$ or $\left.\mathrm{V}_{\text {out }}\right) \leq \mathrm{V}_{\mathrm{Cc}}$.
Unused inputs must always be tied to an appropriate logic voltage level (e.g., either GND or $\mathrm{V}_{\mathrm{CC}}$ ). Unused outputs must be left open.

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
$\dagger$ Derating: SOIC Package: $-7 \mathrm{~mW} /{ }^{\circ} \mathrm{C}$ from $65^{\circ}$ to $125^{\circ} \mathrm{C}$
TSSOP Package: $-6.1 \mathrm{~mW} /{ }^{\circ} \mathrm{C}$ from $65^{\circ}$ to $125^{\circ} \mathrm{C}$

## RECOMMENDED OPERATING CONDITIONS

| Symbol | Parameter | Min | Max | Unit |
| :---: | :--- | :---: | :---: | :---: |
| $\mathrm{V}_{\mathrm{CC}}$ | DC Supply Voltage (Referenced to GND) | 2.0 | 6.0 | V |
| $\mathrm{~V}_{\text {in }}, \mathrm{V}_{\text {out }}$ | DC Input Voltage, Output Voltage | 0 | $\mathrm{~V}_{\mathrm{CC}}$ | V |
|  | (Referenced to GND) |  | -55 | +125 |
| $\mathrm{~T}_{\mathrm{A}}$ | Operating Temperature, All Package Types | $\mathrm{V}_{\mathrm{CC}}=2.0 \mathrm{~V}$ | 0 | 1000 |
| $\mathrm{t}_{\mathrm{r}}, \mathrm{t}_{\mathrm{f}}$ | Input Rise and Fall Time | ${ }^{\circ} \mathrm{C}$ |  |  |
|  | (Figure 1) | $\mathrm{V}_{\mathrm{CC}}=4.5 \mathrm{~V}$ | 0 | 500 |
|  |  | $\mathrm{~V}_{\mathrm{CC}}=6.0 \mathrm{~V}$ | 0 | 400 |

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.

DC ELECTRICAL CHARACTERISTICS (Voltages Referenced to GND)

| Symbol | Parameter | Test Conditions | $\mathrm{V}_{\mathrm{cc}}$ <br> V | Guaranteed Limit |  |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} -55 \text { to } \\ 25^{\circ} \mathrm{C} \end{gathered}$ | $\leq 85^{\circ} \mathrm{C}$ | $\leq 125^{\circ} \mathrm{C}$ |  |
| $\mathrm{V}_{\mathrm{IH}}$ | Minimum High-Level Input Voltage | $\begin{aligned} & \mathrm{V}_{\text {out }}=\mathrm{V}_{\mathrm{CC}}-0.1 \mathrm{~V} \\ & \mathrm{l}_{\text {out }} \leq 20 \mu \mathrm{~A} \end{aligned}$ | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{gathered} \hline 1.5 \\ 2.1 \\ 3.15 \\ 4.2 \end{gathered}$ | $\begin{gathered} \hline 1.5 \\ 2.1 \\ 3.15 \\ 4.2 \end{gathered}$ | $\begin{gathered} \hline 1.5 \\ 2.1 \\ 3.15 \\ 4.2 \end{gathered}$ | V |
| $\mathrm{V}_{\mathrm{IL}}$ | Maximum Low-Level Input Voltage | $\begin{array}{\|l} \hline V_{\text {out }}=0.1 \mathrm{~V} \\ \left.\right\|_{\text {out }} \leq 20 \mu \mathrm{~A} \end{array}$ | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{gathered} \hline 0.5 \\ 0.9 \\ 1.35 \\ 1.8 \end{gathered}$ | $\begin{gathered} \hline 0.5 \\ 0.9 \\ 1.35 \\ 1.8 \end{gathered}$ | $\begin{gathered} \hline 0.5 \\ 0.9 \\ 1.35 \\ 1.8 \end{gathered}$ | V |
| $\mathrm{V}_{\mathrm{OH}}$ | Minimum High-Level Output Voltage | $\begin{array}{\|l} \hline V_{\text {in }}=V_{\text {IH }} \\ \left.\right\|_{\text {out }} \leq 20 \mu \mathrm{~A} \end{array}$ | $\begin{aligned} & 2.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 1.9 \\ & 4.4 \\ & 5.9 \end{aligned}$ | $\begin{aligned} & 1.9 \\ & 4.4 \\ & 5.9 \end{aligned}$ | $\begin{aligned} & 1.9 \\ & 4.4 \\ & 5.9 \end{aligned}$ | V |
|  |  | $\mathrm{V}_{\text {in }}=\mathrm{V}_{\mathrm{IH}}$ $\mid \\|_{\text {out }} \leq 3.6 \mathrm{~mA}$ <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br> $\\|_{\text {out }} \mid \leq 60.0 \mathrm{~mA}$$\leq 7.8 \mathrm{~mA}$ | $\begin{aligned} & \hline 3.0 \\ & 4.5 \\ & 6.0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.48 \\ & 3.98 \\ & 5.48 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.34 \\ & 3.84 \\ & 5.34 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.2 \\ & 3.7 \\ & 5.2 \\ & \hline \end{aligned}$ |  |
| $\mathrm{V}_{\text {OL }}$ | Maximum Low-Level Output Voltage | $\begin{aligned} & \mathrm{V}_{\text {in }}=\mathrm{V}_{\mathrm{IL}} \\ & \mathrm{I}_{\text {out }} \leq 20 \mu \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 2.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 0.1 \\ & 0.1 \\ & 0.1 \end{aligned}$ | $\begin{aligned} & \hline 0.1 \\ & 0.1 \\ & 0.1 \end{aligned}$ | $\begin{aligned} & \hline 0.1 \\ & 0.1 \\ & 0.1 \end{aligned}$ | V |
|  |  | $\mathrm{V}_{\text {in }}=\mathrm{V}_{\mathrm{IL}}$  <br>  $\\|_{\text {out }} \leq 3.6 \mathrm{~mA}$ <br>  $\\|_{\text {out }} \leq 6.0 \mathrm{~mA}$ <br>  $\\|_{\text {out }} \leq 7.8 \mathrm{~mA}$ | $\begin{aligned} & \hline 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 0.26 \\ & 0.26 \\ & 0.26 \end{aligned}$ | $\begin{aligned} & 0.33 \\ & 0.33 \\ & 0.33 \end{aligned}$ | $\begin{aligned} & \hline 0.4 \\ & 0.4 \\ & 0.4 \end{aligned}$ |  |
| $\mathrm{l}_{\text {in }}$ | Maximum Input Leakage Current | $\mathrm{V}_{\text {in }}=\mathrm{V}_{\text {cc }}$ or GND | 6.0 | $\pm 0.1$ | $\pm 1.0$ | $\pm 1.0$ | $\mu \mathrm{A}$ |
| loz | Maximum Three-State Leakage Current | Output in High-Impedance State $V_{\text {in }}=V_{\text {IL }}$ or $V_{I H}$ <br> $V_{\text {out }}=V_{C C}$ or $G N D$ | 6.0 | $\pm 0.5$ | $\pm 5.0$ | $\pm 10$ | $\mu \mathrm{A}$ |
| $I_{\text {cc }}$ | Maximum Quiescent Supply Current (per Package) | $\begin{aligned} & \mathrm{V}_{\text {in }}=\mathrm{V}_{\mathrm{CC}} \text { or } \mathrm{GND} \\ & \mathrm{I}_{\text {out }}=0 \mu \mathrm{~A} \\ & \hline \end{aligned}$ | 6.0 | 4.0 | 40 | 160 | $\mu \mathrm{A}$ |

AC ELECTRICAL CHARACTERISTICS $\left(\mathrm{C}_{\mathrm{L}}=50 \mathrm{pF}\right.$, Input $\left.\mathrm{t}_{\mathrm{r}}=\mathrm{t}_{\mathrm{f}}=6.0 \mathrm{~ns}\right)$

|  | Parameter | $\underset{\mathrm{VC}}{\mathrm{v}_{\mathrm{cc}}}$ | Guaranteed Limit |  |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol |  |  | $\begin{gathered} -55 \text { to } \\ 25^{\circ} \mathrm{C} \end{gathered}$ | $\leq 85^{\circ} \mathrm{C}$ | $\leq 125^{\circ} \mathrm{C}$ |  |
| $\begin{aligned} & \hline \mathrm{tPLH}^{\prime}, \\ & \mathrm{t}_{\text {PHL }} \end{aligned}$ | Maximum Propagation Delay, Input A to Output $Y$ <br> (Figures 1 and 3 ) | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 90 \\ & 36 \\ & 18 \\ & 15 \end{aligned}$ | $\begin{aligned} & \hline 115 \\ & 45 \\ & 23 \\ & 20 \end{aligned}$ | $\begin{aligned} & 135 \\ & 60 \\ & 27 \\ & 23 \end{aligned}$ | ns |
| $\begin{aligned} & \hline \mathrm{t}_{\mathrm{PLZ}}, \\ & \mathrm{t}_{\mathrm{PHZ}} \end{aligned}$ | Maximum Propagation Delay, Output Enable to Y (Figures 2 and 4) | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{gathered} \hline 120 \\ 45 \\ 24 \\ 20 \end{gathered}$ | $\begin{aligned} & 150 \\ & 60 \\ & 30 \\ & 26 \end{aligned}$ | $\begin{gathered} \hline 180 \\ 80 \\ 36 \\ 31 \end{gathered}$ | ns |
| $\begin{aligned} & \hline \text { tpZL, } \\ & \mathrm{t}_{\mathrm{PzH}} \end{aligned}$ | Maximum Propagation Delay, Output Enable to Y (Figures 2 and 4) | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 90 \\ & 36 \\ & 18 \\ & 15 \end{aligned}$ | $\begin{aligned} & 115 \\ & 45 \\ & 23 \\ & 20 \end{aligned}$ | $\begin{aligned} & \hline 135 \\ & 60 \\ & 27 \\ & 23 \end{aligned}$ | ns |
| $\begin{aligned} & \mathrm{t}_{\mathrm{tLLH}}, \\ & \mathrm{t}_{\mathrm{TH}} \end{aligned}$ | Maximum Output Transition Time, Any Output (Figures 1 and 3) | $\begin{aligned} & \hline 2.0 \\ & 3.0 \\ & 4.5 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 60 \\ & 22 \\ & 12 \\ & 10 \end{aligned}$ | $\begin{aligned} & 75 \\ & 28 \\ & 15 \\ & 13 \end{aligned}$ | $\begin{aligned} & 90 \\ & 34 \\ & 18 \\ & 15 \end{aligned}$ | ns |
| $\mathrm{C}_{\text {in }}$ | Maximum Input Capacitance | - | 10 | 10 | 10 | pF |
| $\mathrm{C}_{\text {out }}$ | Maximum 3-State Output Capacitance (Output in High-Impedance State) | - | 15 | 15 | 15 | pF |
|  | Power Dissipation Capacitance (Per Buffer)* |  | Typical @ $25^{\circ} \mathrm{C}, \mathrm{V}_{\mathrm{cc}}=5.0 \mathrm{~V}$ |  |  | pF |
| $\mathrm{C}_{\text {PD }}$ |  |  | 30 |  |  |  |

*Used to determine the no-load dynamic power consumption: $P_{D}=C_{P D} V_{C C}{ }^{2} f+I_{C C} V_{C C}$.

## MC74HC125A, MC74HC126A

## SWITCHING WAVEFORMS



Figure 1.
*Includes all probe and jig capacitance
Figure 3. Test Circuit


Figure 2.

*Includes all probe and jig capacitance
Figure 4. Test Circuit

(1/4 OF THE DEVICE)


## MC74HC125A, MC74HC126A

ORDERING INFORMATION

| Device | Package | Shipping ${ }^{\dagger}$ |
| :---: | :---: | :---: |
| MC74HC125ADG | SOIC-14 NB (Pb-Free) | 55 Units / Rail |
| MC74HC125ADR2G | SOIC-14 NB ( $\mathrm{Pb}-\mathrm{Free}$ ) | 2500 / Tape \& Reel |
| MC74HC125ADTG | $\begin{aligned} & \hline \text { TSSOP-14 } \\ & \text { (Pb-Free) } \end{aligned}$ | 96 Units / Rail |
| MC74HC125ADTR2G | TSSOP-14 ( $\mathrm{Pb}-\mathrm{Free}$ ) | 2500 / Tape \& Reel |
| MC74HC126ADG | $\begin{gathered} \hline \text { SOIC-14 NB } \\ \text { (Pb-Free) } \end{gathered}$ | 55 Units / Rail |
| MC74HC126ADR2G | $\begin{gathered} \hline \text { SOIC-14 NB } \\ (\text { Pb-Free }) \end{gathered}$ | 2500 / Tape \& Reel |
| MC74HC126ADTR2G | $\begin{aligned} & \hline \text { TSSOP-14 } \\ & \text { (Pb-Free) } \end{aligned}$ | 2500 / Tape \& Reel |
| NLV74HC125ADG* | SOIC-14 NB ( Pb -Free) | 55 Units / Rail |
| NLV74HC125ADR2G* | $\begin{gathered} \hline \text { SOIC-14 NB } \\ (\text { Pb-Free }) \end{gathered}$ | 2500 / Tape \& Reel |
| NLV74HC125ADTG* | TSSOP-14 ( $\mathrm{Pb}-\mathrm{Free}$ ) | 55 Units / Rail |
| NLV74HC125ADTR2G* | $\begin{aligned} & \hline \text { TSSOP-14 } \\ & \text { (Pb-Free) } \end{aligned}$ | 2500 / Tape \& Reel |
| NLV74HC126ADR2G* | SOIC-14 NB ( $\mathrm{Pb}-\mathrm{Free}$ ) | 2500 / Tape \& Reel |
| NLV74HC126ADTR2G* | $\begin{aligned} & \hline \text { TSSOP-14 } \\ & \text { (Pb-Free) } \end{aligned}$ | 2500 / Tape \& Reel |

$\dagger$ For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.
*NLV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable


SOIC-14 NB
CASE 751A-03
ISSUE L
SCALE 1:1


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSION b DOES NOT INCLUDE DAMBAR

PROTRUSION. ALLOWABLE PROTRUSION SHALL BE 0.13 TOTAL IN EXCESS OF AT MAXIMUM MATERIAL CONDITION.
4. DIMENSIONS D AND E DO NOT INCLUDE

MOLD PROTRUSIONS.
5. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.

| DIM | MILLIMETERS |  | INCHES |  |
| :---: | :---: | :---: | :---: | :---: |
|  | MIN | MAX | MIN | MAX |
|  | 1.35 | 1.75 | 0.054 | 0.068 |
| A1 | 0.10 | 0.25 | 0.004 | 0.010 |
| A3 | 0.19 | 0.25 | 0.008 | 0.010 |
| b | 0.35 | 0.49 | 0.014 | 0.019 |
| D | 8.55 | 8.75 | 0.337 | 0.344 |
| E | 3.80 | 4.00 | 0.150 | 0.157 |
| e | 1.27 | BSC | 0.050 | BSC |
| H | 5.80 | 6.20 | 0.228 | 0.244 |
| h | 0.25 | 0.50 | 0.010 | 0.019 |
| L | 0.40 | 1.25 | 0.016 | 0.049 |
| M | $0^{\circ}$ | $7^{\circ}$ | $0^{\circ}$ | $7^{\circ}$ |

## SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS
*For additional information on our $\mathrm{Pb}-$ Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

## STYLES ON PAGE 2

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| DESCRIPTION: | SOIC-14 NB | PAGE 1 OF 2 |

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STYLE 1:
PIN 1. COMMON CATHODE
2. ANODE/CATHODE
3. ANODE/CATHODE
4. NO CONNECTION
5. ANODE/CATHODE
6. NO CONNECTION
7. ANODE/CATHODE
8. ANODE/CATHODE
9. ANODE/CATHODE
10. NO CONNECTION
11. ANODE/CATHODE
12. ANODE/CATHODE
13. NO CONNECTION
4. COMMON ANODE
STYLE $5:$

PIN 1. COMMON CATHODE
2. ANODE/CATHODE
3. ANODE/CATHOD
4. ANODE/CATHOD
4. ANODE/CATHODE
5. ANODE/CATHODE
6. NO CONNECTION
7. COMMON ANODE
8. COMMON CATHOD
9. ANODE/CATHODE
10. ANODE/CATHODE
11. ANODE/CATHODE
12. ANODE/CATHODE
13. NO CONNECTION
14. COMMON ANODE

STYLE 2 :
CANCELLED

STYLE 3:
PIN 1. NO CONNECTION 2. ANODE 3. ANODE
4. NO CONNECTION 5. ANODE
6. NO CONNECTION
7. ANODE
8. ANODE
9. ANODE
10. NO CONNECTION
11. ANODE
12. ANODE
13. NO CONNECTION
14. COMMON CATHODE

## STYLE 6

PIN 1. CATHODE
2. CATHODE
3. CATHODE
4. CATHODE
5. CATHODE
5. CATHODE
6. CATHODE
7. CATHOD
8. ANODE
10. ANODE
11. ANODE
12. ANODE
13. ANODE
14. ANODE

STYLE 7:
PIN 1. ANODE/CATHODE
2. COMMON ANODE
3. COMMON CATHODE
4. ANODE/CATHODE
4. ANODE/CATHODE
5. ANODE/CATHODE
6. ANODE/CATHODE
7. ANODE/CATHODE
8. ANODE/CATHODE
9. ANODE/CATHODE
10. ANODE/CATHODE
11. COMMON CATHODE
11. COMMON CATHOD
13. ANODE/CATHODE
14. ANODE/CATHODE

STYLE 4:
PIN 1. NO CONNECTION 2. CATHODE
3. CATHODE
4. NO CONNECTION
5. CATHODE
6. NO CONNECTION
7. CATHODE
. CATHODE
9. CATHODE
10. NO CONNECTION
11. CATHODE
12. CATHODE
13. NO CONNECTION
14. COMMON ANODE

STYLE 8:
PIN 1. COMMON CATHODE
2. ANODE/CATHODE
3. ANODE/CATHODE
4. NO CONNECTION
4. NO CONNECTION
5. ANODE/CATHODE
6. ANODE/CATHODE
7. COMMON ANODE
8. COMMON ANODE
9. ANODE/CATHODE
10. ANODE/CATHODE
11. NO CONNECTION
11. NO CONNECTION
12. ANODE/CATHODE
12. ANODE/CATHODE
13. ANODE/CATHODE
13. ANODE/CATHODE
14. COMMON CATHODE

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| DESCRIPTION: | SOIC-14 NB |  |

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSION A DOES NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS MOLD FLASH OR GATE BURRS SHALL NOT MOLD FLASH OR GATE BURRS
4. DIMENSION B DOES NOT INCLUDE

INTERLEAD FLASH OR PROTRUSION. INTERLEAD FLASH OR PROTRUSION SHALL NOT EXCEED 0.25 (0.010) PER SIDE.
5. DIMENSION K DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR
PROTRUSION SHALL BE 0.08 (0.003) TOTAL IN EXCESS OF THE K DIMENSION AT MAXIMUM MATERIAL CONDITION.
6. TERMINAL NUMBERS ARE SHOWN FOR REFERENCE ONLY.
7. DIMENSION A AND B ARE TO BE DETERMINED AT DATUM PLANE -W-.

| DIM | MILLIMETERS |  | INCHES |  |
| :---: | :---: | :---: | :---: | :---: |
|  | MIN | MAX | MIN | MAX |
| A | 4.90 | 5.10 | 0.193 | 0.200 |
| B | 4.30 | 4.50 | 0.169 | 0.177 |
| C | --- | 1.20 | --- | 0.047 |
| D | 0.05 | 0.15 | 0.002 | 0.006 |
| F | 0.50 | 0.75 | 0.020 | 0.030 |
| G | 0.65 | BSC | 0.026 |  |
| BSC |  |  |  |  |
| H | 0.50 | 0.60 | 0.020 | 0.024 |
| J | 0.09 | 0.20 | 0.004 | 0.008 |
| J1 | 0.09 | 0.16 | 0.004 | 0.006 |
| K | 0.19 | 0.30 | 0.007 | 0.012 |
| K1 | 0.19 | 0.25 | 0.007 | 0.010 |
| L | 6.40 | BSC | 0.252 | BSC |
| M | $0{ }^{\circ}$ | $8^{\circ}$ | $0^{\circ}$ | $8^{\circ}$ |

GENERIC MARKING DIAGRAM*



| A | $=$ Assembly Location |
| :--- | :--- |
| L | $=$ Wafer Lot |
| Y | $=$ Year |
| W | $=$ Work Week |
| - | $=$ Pb-Free Package |

(Note: Microdot may be in either location)
*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot " $\bullet$ ", may or may not be present.

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| ---: | :--- | :--- | :--- |
| DESCRIPTION: | TSSOP-14 WB | PAGE 1 OF 1 |

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