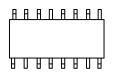
# onsemi

\*\*







| А      | = Assembly Location |
|--------|---------------------|
| WL, L  | = Wafer Lot         |
| Y      | = Year              |
| WW, W  | = Work Week         |
| G or ■ | = Pb-Free Package   |





Figure 1. Pinout: 16–Lead Plastic Package (Top View)

Figure 2. Logic Diagram

## MC74LCX257

## **MAXIMUM RATINGS**

| Symbol           | Parameter                        | Value                                     | Condition                            | Units |
|------------------|----------------------------------|---|--------------------------------------|-------|
| V <sub>CC</sub>  | DC Supply Voltage                | -0.5 to +7.0                              |                                      | V     |
| VI               | DC Input Voltage                 | -0.5 VI +7.0                              | -                                    | V     |
| Vo               | DC Output Voltage                | -0.5 V <sub>I</sub> +7.0                  | Output in 3-State                    | V     |
|                  |                                  | –0.5 V <sub>O</sub> V <sub>CC</sub> + 0.5 | Output in HIGH or LOW State (Note 1) | V     |
| I <sub>IK</sub>  | DC Input Diode Current           | -50                                       | V <sub>I</sub> < GND                 | mA    |
| I <sub>OK</sub>  | DC Output Diode Current          | -50                                       | V <sub>O</sub> < GND                 | mA    |
|                  |                                  | +50                                       | V <sub>O</sub> > V <sub>CC</sub>     | mA    |
| Ι <sub>Ο</sub>   | DC Output Source/Sink Current    | 50  |                                      | mA    |
| I <sub>CC</sub>  | DC Supply Current Per Supply Pin | 100                                       |                                      | mA    |
| I <sub>GND</sub> | DC Ground Current Per Ground Pin | 100                                       |                                      | mA    |
| T <sub>STG</sub> | Storage Temperature Range        | -65 to +150                               |                                      | С     |
| MSL              | Moisture Sensitivity             |   | Level 1                              |       |

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

1. I<sub>O</sub> absolute maximum rating must be observed.

## **RECOMMENDED OPERATING CONDITIONS**

| Symbol          | Parameter                   | Min        | Туре                 | Max | Units |
|-----------------|-----------------------------|------------|----------------------|-----|-------|
| V <sub>CC</sub> | Supply Voltage<br>Operating |            |                      | ,   | -     |
|                 | Operating                   | 2.0<br>1.5 | 2.5, 3.3<br>2.5, 3.3 |     |       |
|                 |                             | 1.5        | 2.5, 3.3             |     |       |
|                 |                             |            | 1                    |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |
|                 |                             |            |                      |     |       |

# MC74LCX257

## DC ELECTRICAL CHARACTERISTICS

|   |        |                                   |                             | T <sub>A</sub> = -40 C to +85 C |     |       |
|---|--------|-----------------------------------|-----------------------------|---------------------------------|-----|-------|
|   | Symbol | Characteristic                    | Condition                   | Min                             | Max | Units |
| Ī | VIH    | HIGH Level Input Voltage (Note 2) | 2.3 V V <sub>CC</sub> 2.7 V | 1.7                             |     | V     |
|   |        |                                   |                             |                                 |     |       |

# MC74LCX257

## DYNAMIC SWITCHING CHARACTERISTICS

|        |                |           | T <sub>A</sub> = +25 C |     |     |       |
|--------|----------------|-----------|------------------------|-----|-----|-------|
| Symbol | Characteristic | Condition | Min                    | Тур | Max | Units |
| Volb   |                |           | •                      |     | •   | •     |

VOLP



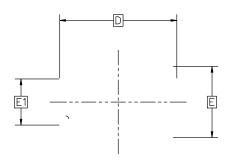
#### SOIC-16 9.90x3.90x1.37 1.27P CASE 751B ISSUE M

DATE 18 OCT 2024

- DIMENSIONS D AND E1 DO NOT INCLUDE MOLD PROTRUSION.
  MAXIMUM MOLD PROTRUSION 0.1<sup>r</sup>

**b** DIMENSION AT MAXIMUM MATE

nm TOTAL IN EXCESS OF THE



<u>top view</u>

### SOIC-16 9.90x3.90x1.37 1.27P CASE 751B ISSUE M

#### DATE 18 OCT 2024

## GENERIC MARKING DIAGRAM\*

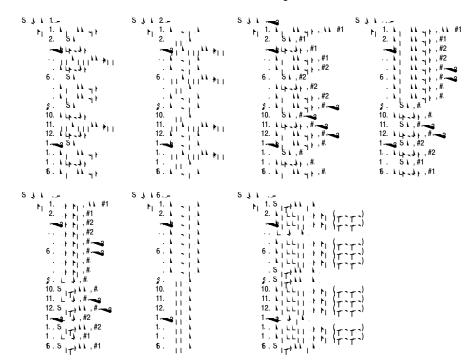
| 16 | A | - A | - A | - A | - A | A   | A.  | E |
|----|---|-----|-----|-----|-----|-----|-----|---|
|    |   | XX) | (X) | XX  | XX) | XX) | (X( | G |
|    |   | XXX | XX  | XX  | XX) | XX  | XX  | X |
|    | 0 |     | A١  | NĽ  | ΥW  | /W  |     |   |
| 1  | Ŧ | H   | H   | H   | H   | Н   | H   | Ъ |

XXXXX = Specific Device Code

A = Assembly Location

- WL = Wafer Lot
- Y = Year
- WW = Work Week
- G = Pb Free Package

\*This information is generic. Please refer to device data sheet for actual part marking. Pb Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.



| DOCUMENT NUMBER: | 98ASB42566B Electronic versions are uncontrolled except when accessed directly from the Document Repository.<br>Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |             |  |  |
|------------------|---|-------------|--|--|
| DESCRIPTION:     | SOIC-16 9.90X3.90X1.37 1  | PAGE 2 OF 2 |  |  |
|                  |   |             |  |  |

onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi 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. onsemi does not convey any license under its patent rights of others.



SCALE 2:1

TSSOP-16 WB CASE 948F ISSUE B

DATE 19 OCT 2006

onsemi, , and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "onsemi" or its affiliates and/or subsidiaries in the United States and/or other countries. onsemi owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of onsemi's product/patent coverage may be accessed at <a href="http://www.onsemi.com/site/pdf/Patent-Marking.pdf">www.onsemi.com/site/pdf/Patent-Marking.pdf</a>. Onsemi reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and onsemi makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or incruit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using onsemi