

## 9XXX Series

# 9009

## NAND BUFFER

ORDERING CODE: See Section 9

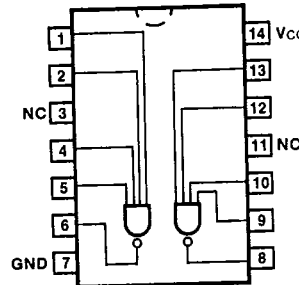
| PKGS               | PIN<br>OUT | COMMERCIAL GRADE                                                                      | MILITARY GRADE                                                                           | PKG<br>TYPE |
|--------------------|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------|
|                    |            | $V_{CC} = +5.0 \text{ V}, \pm 5\%$<br>$T_A = 0^\circ \text{C to } +75^\circ \text{C}$ | $V_{CC} = +5.0 \text{ V} \pm 10\%$<br>$T_A = -55^\circ \text{C to } +125^\circ \text{C}$ |             |
| Ceramic<br>DIP (D) | A          | 9009DC                                                                                | 9009DM                                                                                   | 6A          |
| Flatpak<br>(F)     | A          | 9009FC                                                                                | 9009FM                                                                                   | 3I          |

INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

| PINS    | 9XXX (U.L.)<br>HIGH/LOW |
|---------|-------------------------|
| Inputs  | 3.0/2.0                 |
| Outputs | 90/26<br>(99)/(25.5)    |

CONNECTION DIAGRAM  
PINOUT A

T-43-15



$V_{CC} = \text{Pin } 14$   
 $\text{GND} = \text{Pin } 7$

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DC AND AC CHARACTERISTICS OVER COMMERCIAL TEMPERATURE RANGE:  $V_{CC} = +5.0 \text{ V} \pm 5\%$ 

| SYMBOL                 | PARAMETER                           | 0°C       |             | 25°C        |             | 75°C        |     | UNITS         | CONDITIONS                                                                                                                                                                  |
|------------------------|-------------------------------------|-----------|-------------|-------------|-------------|-------------|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                     | Min       | Max         | Min         | Max         | Min         | Max |               |                                                                                                                                                                             |
| $V_{IH}$               | Input HIGH Voltage                  | 1.9       |             | 1.8         |             | 1.6         |     | V             | Guaranteed Input<br>HIGH Threshold                                                                                                                                          |
| $V_{IL}$               | Input LOW Voltage                   | 0.85      |             | 0.85        |             | 0.85        |     | V             | Guaranteed Input<br>LOW Threshold                                                                                                                                           |
| $V_{OL}$               | Output LOW Voltage                  | 0.45      |             | 0.45        |             | 0.45        |     | V             | $V_{CC} = 5.25 \text{ V}$ ,<br>$I_{OL} = 48 \text{ mA}$ ,<br>$V_{IN} = 5.25 \text{ V}$<br>$V_{CC} = 4.75 \text{ V}$ ,<br>$I_{OL} = 42.3 \text{ mA}$ ,<br>Inputs at $V_{IH}$ |
| $I_{IH}$               | Input HIGH Current                  |           |             | 120         |             | 120         |     | $\mu\text{A}$ | $V_{CC} = 5.25 \text{ V}$ , $V_{IN} = 4.5 \text{ V}$<br>Gnd on Other Inputs                                                                                                 |
| $I_{IL}$               | Input LOW Current                   | -3.2      |             | -3.2        |             | -3.2        |     | mA            | $V_{CC} = 5.25 \text{ V}$ , $V_{IN} = .45 \text{ V}$<br>5.25 V on Other Inputs<br>$V_{CC} = 4.75 \text{ V}$ , $V_{IN} = .45 \text{ V}$<br>5.25 V on Other Inputs            |
| $I_{CCH}$<br>$I_{CCL}$ | Power Supply<br>Current (each gate) | ON<br>OFF | 14.6<br>3.4 | 14.6<br>3.4 | 14.6<br>3.4 | 14.6<br>3.4 |     | mA            | $V_{IN} = \text{Open}$<br>$V_{IN} = \text{Gnd}$                                                                                                                             |
| $t_{PLH}$<br>$t_{PHL}$ | Propagation Delay                   |           | 3.0<br>2.0  | 17<br>13    |             |             |     | ns            | Figs. 3-1, 3-4<br>$C_L = 15 \text{ pF}$                                                                                                                                     |

## 9XXX Series

T-43-15

DC AND AC CHARACTERISTICS OVER MILITARY TEMPERATURE RANGE:  $V_{CC} = +5.0 \text{ V} \pm 10\%$ 

| SYMBOL                 | PARAMETER                           | -55°C |     | 25°C       |          | 125°C |     | UNITS         | CONDITIONS                                                                           |
|------------------------|-------------------------------------|-------|-----|------------|----------|-------|-----|---------------|--------------------------------------------------------------------------------------|
|                        |                                     | Min   | Max | Min        | Max      | Min   | Max |               |                                                                                      |
| $V_{IH}$               | Input HIGH Voltage                  | 2.0   |     | 1.7        |          | 1.4   |     | V             | Guaranteed Input HIGH Threshold                                                      |
| $V_{IL}$               | Input LOW Voltage                   |       | 0.8 |            | 0.9      |       | 0.8 | V             | Guaranteed Input LOW Threshold                                                       |
| $V_{OL}$               | Output LOW Voltage                  | 0.4   | 0.4 | 0.4        | 0.4      | V     |     |               | $V_{CC} = 5.5 \text{ V}$ ,<br>$I_{OL} = 52.8 \text{ mA}$<br>$V_{IN} = 5.5 \text{ V}$ |
|                        |                                     |       |     |            |          |       |     |               | $V_{CC} = 4.5 \text{ V}$ ,<br>$I_{OL} = 40.8 \text{ mA}$ ,<br>Inputs at $V_{IH}$     |
| $I_{IH}$               | Input HIGH Current                  |       |     | 120        |          | 120   |     | $\mu\text{A}$ | $V_{CC} = 5.5 \text{ V}$ , $V_{IN} = 4.5 \text{ V}$<br>Gnd on Other Inputs           |
| $I_{IL}$               | Input LOW Current                   | -3.2  |     | -3.2       |          | -3.2  |     | mA            | $V_{CC} = 5.5 \text{ V}$ $V_{IN} = 0.4 \text{ V}$<br>5.5 V on Other Inputs           |
|                        |                                     | -2.48 |     | -2.48      |          | -2.48 |     |               | $V_{CC} = 4.5 \text{ V}$ $V_{IN} = 0.4 \text{ V}$<br>5.5 V on Other Inputs           |
| $I_{CCH}$              | Power Supply<br>Current (each gate) | ON    |     | 12.9       |          | 12.9  |     | mA            | $V_{IN} = \text{Open}$                                                               |
| $I_{CCL}$              |                                     | OFF   |     | 3.2        |          | 3.2   |     |               | $V_{IN} = \text{Gnd}$                                                                |
| $t_{PLH}$<br>$t_{PHL}$ | Propagation Delay                   |       |     | 4.0<br>3.0 | 15<br>10 |       |     | ns            | Figs. 3-1, 3-4<br>$C_L = 15 \text{ pF}$                                              |