

Recommended Operating Conditions

| SYMBOL | PARAMETER | | MIN | NOM | MAX | UNIT |
|----------|--------------------------------|--------|------|-----|------|------|
| V_{CC} | Supply voltage | 54 | 4.5 | 5 | 5.5 | V |
| | | 74 | 4.75 | 5 | 5.25 | |
| V_{OH} | High-level output voltage | 54, 74 | | | 30 | V |
| I_{OL} | Low-level output current | 54 | | | 30 | mA |
| | | 74 | | | 40 | |
| T_A | Operating free-air temperature | 54 | -55 | | 125 | °C |
| | | 74 | 0 | | 70 | |

Electrical Characteristics over recommended operating free-air temperature range (unless otherwise noted)

| SYMBOL | PARAMETER | TEST CONDITIONS | MIN | TYP (Note 1) | MAX | UNIT |
|-----------|--|---|------------------------|-----------------|------|---------------|
| V_{IH} | High-level input voltage | | 2 | | | V |
| V_{IL} | Low-level input voltage | 54 | | | 0.8 | V |
| | | 74 | | | 0.8 | |
| V_{IK} | Input clamp voltage | $V_{CC} = \text{Min}, I_i = 12\text{mA}$ | | | -1.5 | V |
| I_{OH} | High-level output current | $V_{CC} = \text{Min}, V_{IH} = \text{Min}, V_{OH} = \text{Max}$ | | | 250 | μA |
| V_{OL} | Low-level output voltage | $V_{CC} = \text{Min}$ $V_{IL} = \text{Max}$ | $I_{OL} = 16\text{mA}$ | | 0.4 | V |
| | | | $I_{OL} = \text{Max}$ | | 0.7 | |
| I_i | Input current at maximum input voltage | $V_{CC} = \text{Max}, V_i = 5.5\text{V}$ | | | 1 | mA |
| I_{IH} | High-level input current | $V_{CC} = \text{Max}, V_i = 2.7\text{V}$ | | | 20 | μA |
| I_{IL} | Low-level input current | $V_{CC} = \text{Max}, V_i = 0.4\text{V}$ | | | -0.2 | mA |
| I_{CCH} | Supply current | Total with outputs high | $V_{CC} = \text{Max}$ | 7 | 14 | mA |
| I_{CCL} | | Total with outputs low | $V_{CC} = \text{Max}$ | 25 | 45 | mA |

Note 1. All typical values are at $V_{CC} = 5\text{V}$, $T_A = 25^\circ\text{C}$

Switching Characteristics, $V_{CC} = 5\text{V}$, $T_A = 25^\circ\text{C}$

| SYMBOL | PARAMETER | TEST CONDITION# | MIN | TYP | MAX | UNIT |
|-----------|--|--------------------------------------|-----|-----|-----|------|
| t_{PLH} | Propagation delay time, low-to-high-level output | $C_L = 15\text{pF}, R_L = 110\Omega$ | | | | ns |
| t_{PHL} | Propagation delay time, high-to-low-level output | | 18 | 30 | | |

*For load circuit and voltage waveforms, see page 3-11