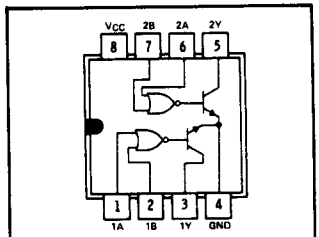
## logic

FUNCTION TABLE
(EACH DRIVER)

| A | B | Y |
|---|---|---|
| L | L | L (on state) |
| L | H | H (off state) |
| H | L | H (off state) |
| H | H | H (off state) |

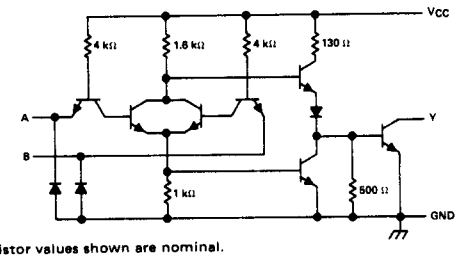
H = high level, L = low level

JG OR P
DUAL-IN-LINE PACKAGE (TOP VIEW)




positive logic: Y = A + B

## schematic (each driver)




Resistor values shown are nominal.

## electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

| PARAMETER | | TEST CONDITIONS | MIN | TYP‡ | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{IH}$ | High-level input voltage | | 2 | | | V |
| $V_{IL}$ | Low-level input voltage | | | | 0.8 | V |
| $V_{IK}$ | Input clamp voltage | $V_{CC}$ = 4.75 V, $I_I$ = −12 mA | | | −1.5 V | |
| $I_{OH}$ | High-level output current | $V_{CC}$ = 4.75 V, $V_{IH}$ = 2 V, $V_{OH}$ = 15 V | | | 100 | μA |
| $V_{OL}$ | Low-level output voltage | $V_{CC}$ = 4.75 V, $V_{IL}$ = 0.8 V, $I_{OL}$ = 100 mA | | 0.25 | 0.4 | V |
| | | $V_{CC}$ = 4.75 V, $V_{IL}$ = 0.8 V, $I_{OL}$ = 300 mA | | 0.5 | 0.7 | |
| $I_I$ | Input current at maximum input voltage | $V_{CC}$ = 5.25 V, $V_I$ = 5.5 V | | | 1 | mA |
| $I_{IH}$ | High-level input current | $V_{CC}$ = 5.25 V, $V_I$ = 2.4 V | | | 40 | μA |
| $I_{IL}$ | Low-level input current | $V_{CC}$ = 5.25 V, $V_I$ = 0.4 V | | −1 | −1.6 | mA |
| $I_{CCH}$ | Supply current, outputs high | $V_{CC}$ = 5.25 V, $V_I$ = 5 V | | 8 | 11 | mA |
| $I_{CCL}$ | Supply current, outputs low | $V_{CC}$ = 5.25 V, $V_I$ = 0 | | 54 | 68 | mA |

‡All typical values are at $V_{CC}$ = 5 V, $T_A$ = 25°C.

## switching characteristics, $V_{CC}$ = 5 V, $T_A$ = 25°C

| PARAMETER | | TEST FIGURE | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|---|
| $t_{PLH}$ | Propagation delay time, low-to-high-level output | 3 | $I_O$ ≈ 100 mA, $C_L$ = 15 pF, $R_L$ = 50 Ω | | 10 | 20 | ns |
| $t_{PHL}$ | Propagation delay time, high-to-low-level output | | | | 15 | 25 | ns |
| $t_{TLH}$ | Transition time, low-to-high-level output | | | | 3 | 8 | ns |
| $t_{THL}$ | Transition time, high-to-low-level output | | | | 9 | 12 | ns |
| $V_{OH}$ | High-level output voltage after switching | 4 | $V_S$ = 15 V, $I_O$ ≈ 150 mA | $V_S$−10 | | | mV |