

10124 B,F: -30 to 85°C

ADVANCED INFORMATION

DIGITAL 10,000 SERIES ECL

DESCRIPTION

The 10124 is a Quad Differential Line Driver or TTL to ECL translator. The 10124 inputs are compatible with standard and Schottky TTL levels. The outputs are standard ECL 10,000 levels. Complementary open emitter outputs provide for inverting, non-inverting or differential applications. A common strobe input when at a TTL logical "0" forces all true outputs to an ECL logical "0" and all inverting outputs to an ECL logical "1".

FEATURES

- FAST PROPAGATION DELAY = 5.0 ns TYP.
- POWER DISSIPATION = 340mW/PACKAGE TYP.
- VERY HIGH FANOUT CAPABILITY
 - CAN DRIVE EIGHT 50Ω LINES
 - DC OUTPUT LOADING FACTOR OF 90X8
- COMPLEMENTARY OUTPUTS
- STANDARD ECL 10,000 SERIES OUTPUT LEVELS
- OPEN EMITTER OUTPUTS FOR BUSSING AND LOGIC CAPABILITY
- TTL COMPATIBLE INPUT STROBE
- INPUT-CLAMP DIODES
- FOUR TRANSLATORS PER PACKAGE

TEMPERATURE RANGE

- -30 to +85°C Operating Ambient

RECOMMENDED OPERATING VOLTAGE

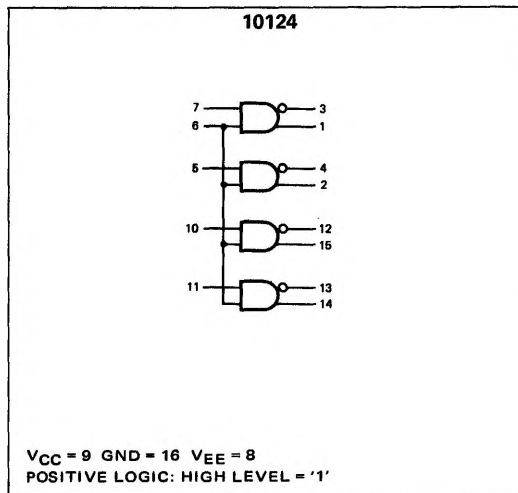
- $V_{CC} = +5.0V \pm 5\%$, $V_{EE} = -5.2V \pm 5\%$

PACKAGE TYPES

- B: 16 Pin Silicone Dip
- F: 16 Pin Cerdip

5-58

LOGIC DIAGRAM



ELECTRICAL CHARACTERISTICS

Conditions: $T_A = 25^\circ C$, $V_{CC} = +5.0V \pm 1\%$,
 $V_{EE} = -5.2V \pm 1\%$

1. $I_{EE} = 66mA$ max.
 $I_{CCH} = 14.5mA$ max.
 $I_{CCL} = 24mA$ max.
2. $I_{inL} = -3.2mA$ max. (pins 5, 7, 10, 11)
 $I_{inL} = -12.8mA$ max. (pin 6)
 $I_{inH} = 265\mu A$ max. (pin 6)
3. $V_{in} = -1.2V$ min. ($I_{in} = -18mA$)

Conditions: $T_A = 25^\circ C$, $V_{CC} = +5.0V \pm 1\%$
 $V_{EE} = -5.2V \pm 1\%$, $R_L = 50\Omega$ to $-2.0V$
 $V_{in} = +2.0V$ min. or
 $V_{in} = +0.8V$ max.

4. $V_{OH} = -.81V$ max.
 $= -.96V$ min.
5. $V_{OL} = -1.65V$ max.
 $= -1.85V$ min.
6. $t_{pd} = 5.0$ ns typ.
 $= 8.0$ ns max.
7. $t_r, t_f = 2.5$ ns typ. (20 to 80%)