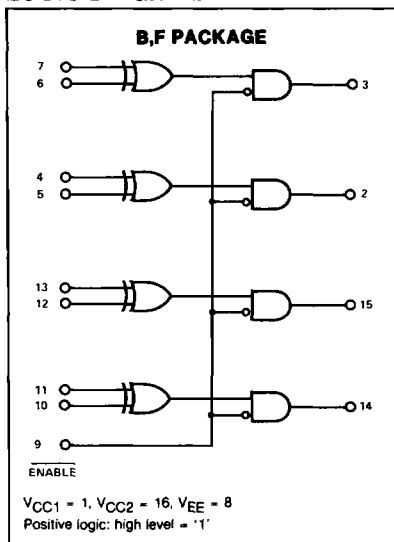


LOGIC DIAGRAM



FEATURES

- Performs 4-bit compare function (if outputs are wire-ORed together)
- High functional density — four exclusive OR gates/package
- Fast propagation delay for exclusive or: 2.5 ns TYP
- Low power dissipation: 165 mW/package TYP (no load)
- High fanout capability — can drive four 50 Ω lines
- High Z inputs — internal 50kΩ pulldowns
- High immunity from power supply variations: VEE = -5.2V ±5% recommended
- Open emitter logic and bussing capability
- Output enable gating makes powerful logic function

APPLICATIONS

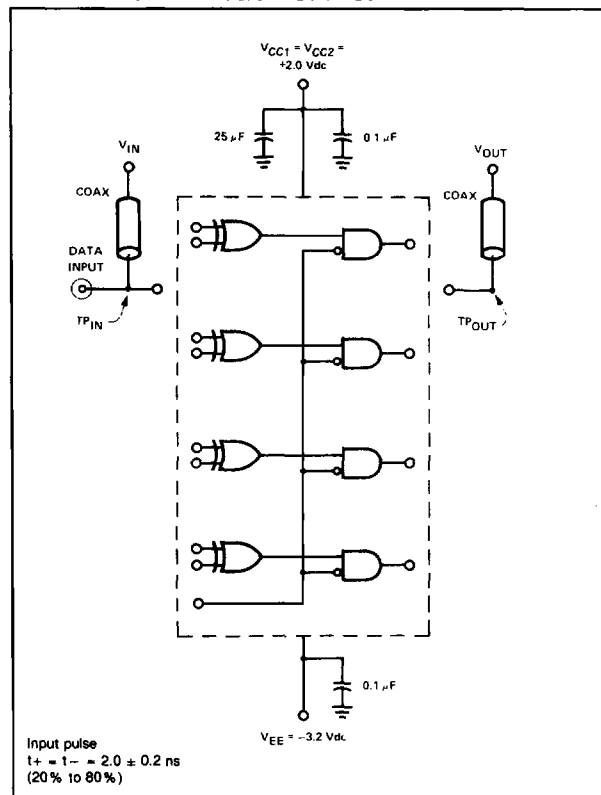
- QUAD EXCLUSIVE-OR (For parity, error correcting, and other logic functions).
- FOUR-BIT COMPARATOR (For logic, test equipment, error detection applications).
- GATED FOUR-BIT COMPARATOR (Enable input permits wire-ORing multiples of four bits)

TRUTH TABLE

$\overline{E9}$	IN 7	IN 6	OUT 3
L	L	L	L
L	L	H	H
L	H	L	H
L	H	H	L
H	φ	φ	L

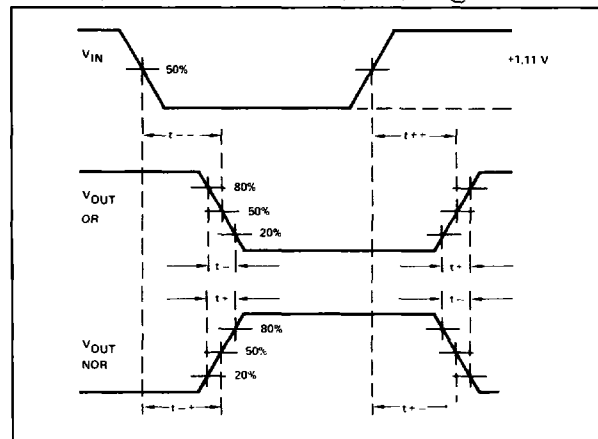
φ = Don't Care.

SWITCHING TIME TEST CIRCUIT



Input pulse
 $t_r = 2.0 \pm 0.2$ ns
 (20% to 80%)

PROPAGATION DELAY WAVEFORMS @ 25°C



NOTES:

1. Each ECL 10,000 series device has been designed to meet the DC specifications shown in the test table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a linear printed circuit board and transverse air flow greater than 500 fpm is maintained. Voltage levels will shift approximately 4 mV with an air flow of 200 linear fpm. Outputs are terminated through a 50-ohm resistor to -2.0 volts.
2. For AC tests, all input and output cables to the scope are equal lengths of 50 ohm coaxial cable. Wire length should be <1/4 inch from TP_{in} to input pin and TP_{out} to output pin. A 50-ohm termination to ground is located in each scope input. Unused outputs are connected to a 50-ohm resistor to ground.
3. Test procedures are shown for only one input or set of input conditions. Other inputs are tested in the same manner.
4. All voltage measurements are referenced to the ground terminal. Terminals not specifically referenced are left electrically open.

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