

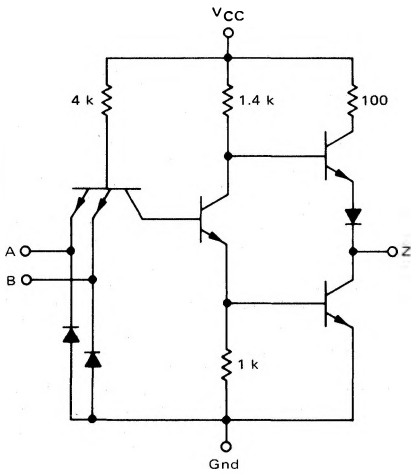
QUAD 2-INPUT "NAND" GATE

MC5400/7400 series

MC5400 • MC7400

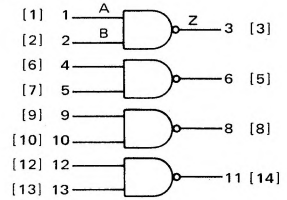
Add Suffix F for TO-86 ceramic package (Case 607).
 Suffix L for TO-116 ceramic package (Case 632).
 Suffix P for TO-116 plastic package (Case 605) MC7400 only.

CIRCUIT SCHEMATIC
 1/4 OF CIRCUIT SHOWN



V_{CC} = Pin 14 [4]
 Gnd = Pin 7 [11]

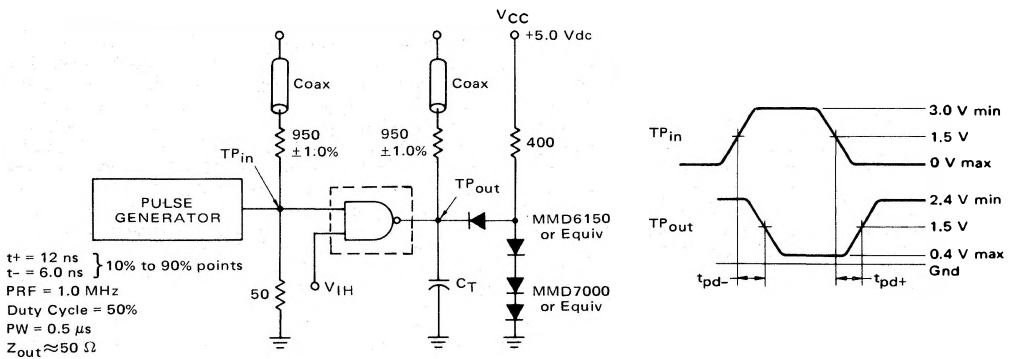
[FLAT Pkg Pin] DIL Pkg Pin



Positive Logic: $Z = \overline{A \cdot B}$
 Negative Logic: $Z = \overline{A + B}$

Input Loading Factor = 1
 Output Loading Factor = 10
 Total Power Dissipation = 40 mW typ/pkg
 Propagation Delay Time = 10 ns typ

SWITCHING TIME TEST CIRCUIT AND WAVEFORMS



$t_f = 12$ ns } 10% to 90% points
 $t_r = 6.0$ ns }
 PRF = 1.0 MHz
 Duty Cycle = 50%
 PW = 0.5 μ s
 $Z_{out} \approx 50 \Omega$

$C_T = 15$ pF = total parasitic capacitance, which includes probe, wiring, and load capacitances.

The coax delays from input to scope and output to scope must be matched. The scope must be terminated in 50-ohm impedance. The 950-ohm resistor and the scope termination impedance constitute a 20:1 attenuator probe. Coax shall be CT-070-50 or equivalent.

