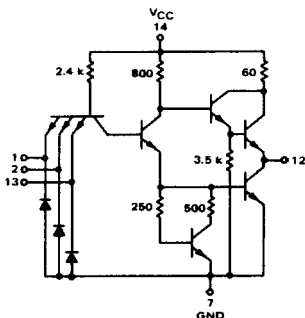
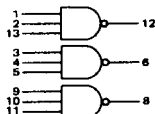


MC3105F • MC3005F
MC3105L • MC3005L,P
(54H10J) (74H10J,N)

1/3 OF CIRCUIT SHOWN



This package consists of three 3-input NAND gates. Each gate may be used as an inverter, or two gates may be cross-coupled to form bistable circuits.

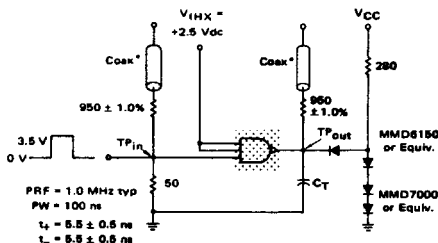


Ppositive Logic: $12 = 1 \cdot 2 \cdot 13$
Negative Logic: $12 = 1 \uparrow 2 \uparrow 13$

Input Loading Factor = 1
Output Loading Factor = 10

Total Power Dissipation = 66 mW typ/pkg
Propagation Delay Time = 6.0 ns typ

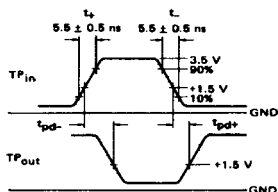
SWITCHING TIME TEST CIRCUIT



*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 constitutes a 20:1 attenuator probe. Coax shall be CT-070-50 or equivalent.

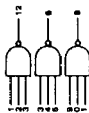
$C_T = 25$ pF = total parasitic capacitance, which includes probe, wiring, and load capacitances.

VOLTAGE WAVEFORMS AND DEFINITIONS



ELECTRICAL CHARACTERISTICS

Test procedures are shown for only one gate. The other gates are tested in the same manner. Further, test procedures are shown for only one input of the gate under test. To complete testing, sequence through remaining inputs.



TEST CURRENT/VOLTAGE VALUES

mA

Volts

V_{DD}V_{SS}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}V_{OL}V_{OH}V_{IL}V_{IH}

@ Test Temperature

-55°C

+25°C

+125°C

0°C

+25°C

+75°C

+25°C

+75°C

+25°C

+75°C

+25°C

+75°C

+25°C

+75°C

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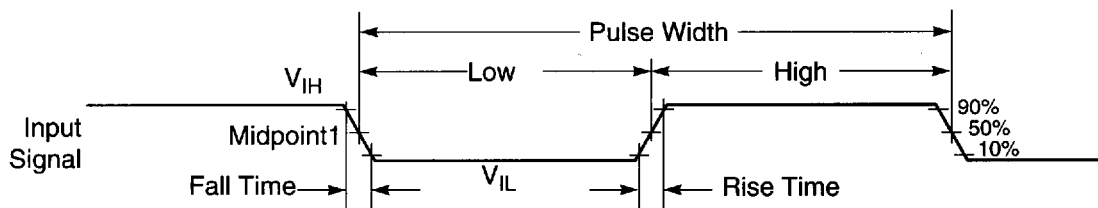
MC3005

MC3105

MC3

AC ELECTRICAL CHARACTERISTICS

The timing waveforms in the AC Electrical Characteristics are tested with a V_{IL} maximum of 0.5 V and a V_{IH} minimum of 2.4 V for all pins, except EXTAL, RESET, MODA, MODB, and MODC. These pins are tested using the input levels set forth in the DC Electrical Characteristics. AC timing specifications that are referenced to a device input signal are measured in production with respect to the 50% point of the respective input signal's transition. DSP56002 output levels are measured with the production test machine V_{OL} and V_{OH} reference levels set at 0.8 V and 2.0 V, respectively.



Note: The midpoint is $V_{IL} + (V_{IH} - V_{IL})/2$.

AA0179

Figure 2-1 Signal Measurement Reference