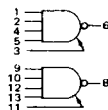
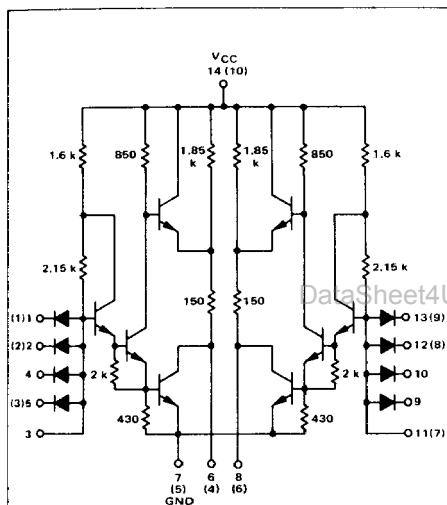
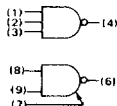


EXPANDABLE DUAL  
4-INPUT BUFFER**MC932F • MC832F, P**EXPANDABLE DUAL  
3-2 INPUT BUFFER**MC932G • MC832G**

## MDTL MC930/830 series

This buffer element, in the 14-pin flat and dual in-line packages, consists of two expandable 4-input inverting drivers. Since the metal can (G suffix) has only 10 pins, this circuit consists of one 3-input and one 2-input expandable inverting driver. These units are designed especially for driving large capacitive loads at high speeds. An output emitter follower in series with a 150-ohm resistor drives the output to the high voltage level. A low saturation resistance transistor is turned on, pulling the output down to the low voltage level, and providing rapid discharge of capacitive loads.

**MC932F/MC832F, P**Positive Logic:  $6 = \overline{1 \cdot 2 \cdot 4 \cdot 3}$ Negative Logic:  $6 = \overline{1 + 2 + 4 + 3}$ **MC932G/MC832G**Positive Logic:  $4 = \overline{1 \cdot 2 \cdot 3}$ Negative Logic:  $4 = \overline{1 + 2 + 3}$ Input Loading Factor = 1  
Output Loading Factor = 25

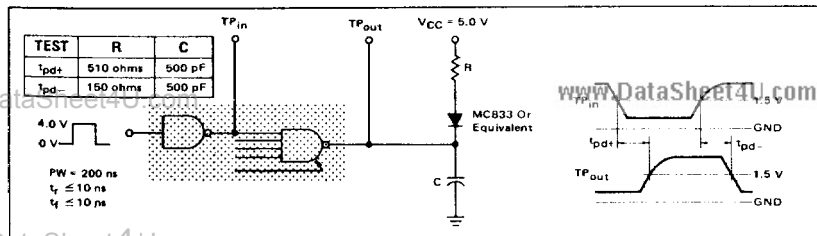
|                          |                |
|--------------------------|----------------|
| Total Power Dissipation: | MC932<br>MC832 |
| Inputs Low               | 12 mW          |
| Inputs High              | 88 mW          |
| 50% Duty Cycle           | 50 mW          |

Propagation Delay Time = 35 ns typ

## OPERATING RULES

- The outputs of the Dual Buffer may not be tied together.
- For increased current capability, the inputs and outputs of  $\frac{1}{2}$ MC932 and  $\frac{1}{2}$ MC944 can be paralleled (up to and including 4 common outputs). The combined output will equal 100 loads while each combined input will equal 4 loads.

## SWITCHING TIME TEST CIRCUIT AND WAVEFORMS





## PRODUCT DOCUMENTATION

The three documents listed in the following table are required for a complete description of the DSP56301 and are necessary to design properly with the part. Documentation is available from one of the following locations (see back cover for detailed information):

- A local Motorola distributor
- A Motorola semiconductor sales office
- A Motorola Literature Distribution Center
- The World Wide Web (WWW)

See the **Additional Support** section of the *DSP56300 Family Manual* for detailed information on the multiple support options available to you.

**Table 1** DSP56301 Documentation

| Name                    | Description                                                                                               | Order Number  |
|-------------------------|-----------------------------------------------------------------------------------------------------------|---------------|
| DSP56300 Family Manual  | Detailed description of the DSP56300 family processor core and instruction set                            | DSP56300FM/AD |
| DSP56301 User's Manual  | Detailed functional description of the DSP56301 memory configuration, operation, and register programming | DSP56301UM/AD |
| DSP56301 Technical Data | DSP56301 features list and physical, electrical, timing, and package specifications                       | DSP56301/D    |

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