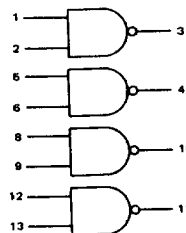
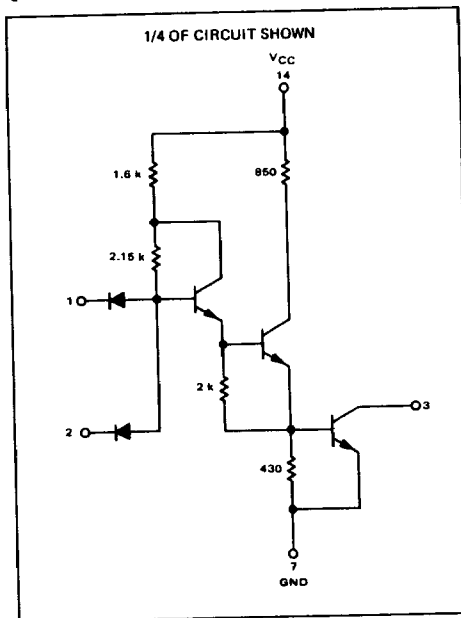


QUAD 2-INPUT "NAND"
POWER GATE

MDTL MC930/830 series

MC958F · MC858F,P

The MC958/MC858 is a quad NAND power gate with an output transistor capable of sinking more current than standard gate elements. It is useful as a high fan-out gate (with an external pull-up resistor), and as a line, relay, or lamp driver. Each output of the MC958/MC858 is capable of sinking up to 100 mA individually (60 mA if all outputs are conducting simultaneously) provided that temperature extremes are limited to 0°C to +100°C for MC958, and +15°C to +55°C for MC858. The typical breakdown voltage of the output transistor is greater than 12 V.



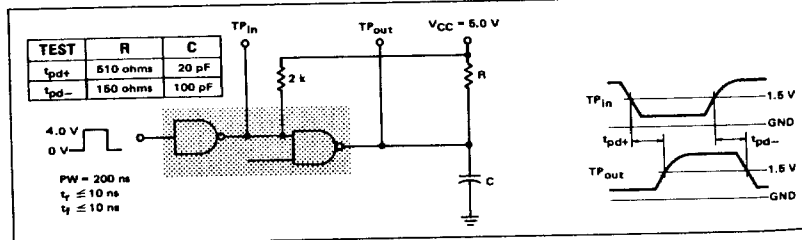
Positive Logic: $3 = \overline{1 \cdot 2}$
Negative Logic: $3 = \overline{1 + 2}$

Input Loading Factor = 1
Output Loading Factor = 27
Total Power Dissipation = 130 mW typ/pkg
Propagation Delay Time = 30 ns typ

OPERATING RULES

- The outputs of the Quad Power Gate may be tied together to perform the wired-collector OR function.
- An external load resistor should be utilized with the Quad Power Gate. At $V_{CC} = 5.0 \pm 0.5$ V, subtract the following output loads:
 - R
2 kΩ - 2 loads
1 kΩ - 4 loads
510 Ω - 8 loads
- For increased current capability, the inputs and outputs of $\frac{1}{2}$ MC858 and $\frac{1}{2}$ MC958 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

