

CMOS OR GATES

**4071B - Quad 2-Input OR
4072B - Dual 4-Input OR
4075B - Triple 3-Input OR**

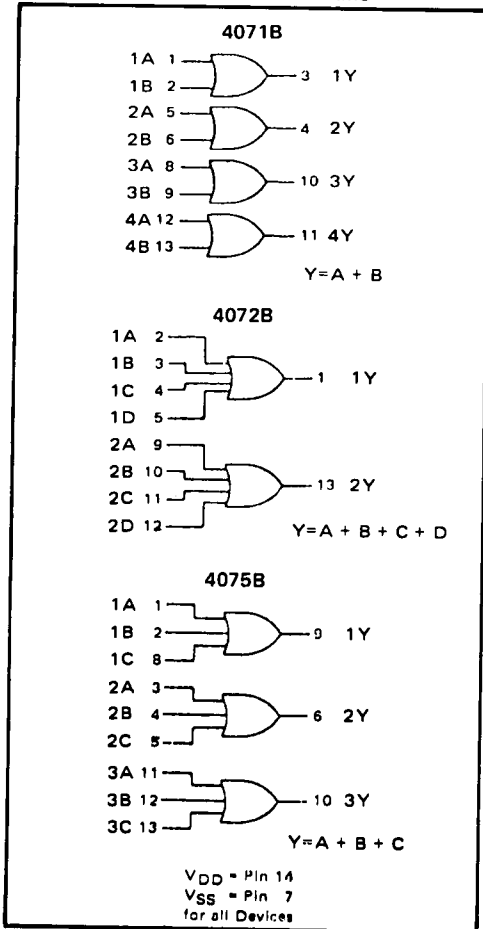
FEATURES

- ◆ Buffered Outputs
- ◆ Diode Protection on all Inputs
- ◆ Fully "B"-Series Compatible

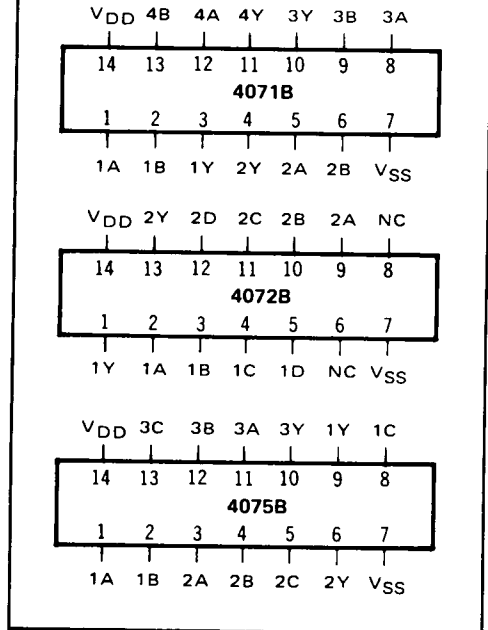
TRUTH TABLE

| Inputs | Output |
|------------------------|--------|
| 00 . . . 0 | 0 |
| All other combinations | 1 |

FUNCTION DIAGRAMS



**CONNECTION DIAGRAMS
(all packages)**



RECOMMENDED OPERATING CONDITIONS

For maximum reliability:

| | | | |
|-----------------------|-----------------------------------|-------------|-----------------|
| DC Supply Voltage | V _{DD} - V _{SS} | 3 to 15 | V _{dc} |
| Operating Temperature | T _A | -55 to +125 | °C |
| C, D, F, H Device | | -40 to +85 | °C |
| E Device | | | |

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS¹

| PARAMETER | V _{DD} (Vdc) | CONDITIONS | T _{LOW} ² | | +25°C | | | T _{HIGH} ² | | Units |
|--------------------------|-----------------------|---|-------------------------------|------|-------|--------|------|--------------------------------|------|------------------|
| | | | Min. | Max. | Min. | Typ. | Max. | Min. | Max. | |
| QUIESCENT DEVICE CURRENT | I _{DD} | V _{IN} =V _{SS} or V _{DD} All valid input combinations | - | 0.05 | - | 0.0005 | 0.05 | - | 1.5 | μA _{dc} |
| | | | - | 0.10 | - | 0.001 | 0.10 | - | 3.0 | |
| | | | - | 0.20 | - | 0.002 | 0.20 | - | 6.0 | |

NOTES: ¹ Remaining Static Electrical Characteristics are listed under "4000B Series Family Specifications".

² T_{LOW} = -55°C for C, D, F, H device.

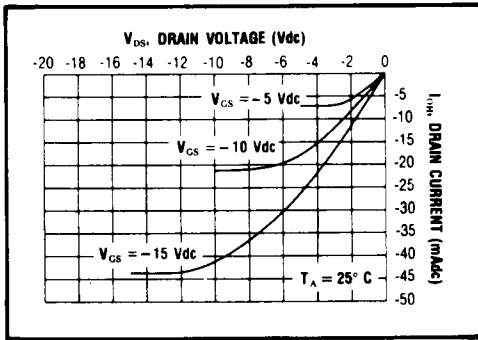
= -40°C for E device.

T_{HIGH} = +125°C for C, D, F, H device.

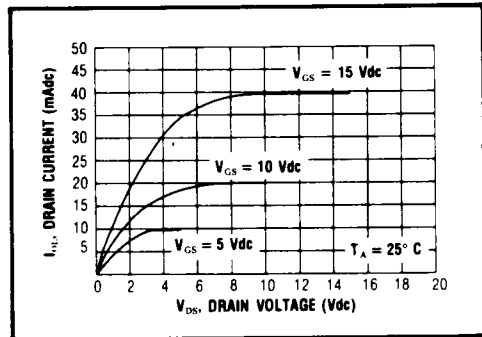
= + 85°C for E device.

DYNAMIC CHARACTERISTICS (C_L = 50pF, T_A = 25°C)

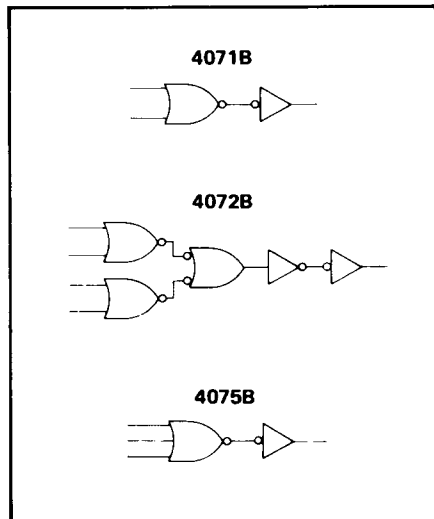
| PARAMETER | | V _{DD} (Vdc) | Min. | Typ. | Max. | Units |
|------------------------|-------------------------------------|-----------------------|------|------|------|-------|
| PROPAGATION DELAY TIME | t _{PLH} , t _{PHL} | 5 | - | 100 | 200 | ns |
| | | 10 | - | 50 | 100 | |
| | | 15 | - | 40 | 80 | |
| OUTPUT TRANSITION TIME | t _{TLH} , t _{THL} | 5 | - | 90 | 180 | ns |
| | | 10 | - | 45 | 90 | |
| | | 15 | - | 40 | 80 | |



Typical P-Channel Source Current Characteristics
LOGIC DIAGRAMS



Typical N-Channel Sink Current Characteristics



SCHEMATIC DIAGRAM 4072B (1 of 2 gates)

