

## CMOS AND GATES

4081B - Quad 2-Input AND  
4082B - Dual 4-Input AND  
4073B - Triple 3-Input AND

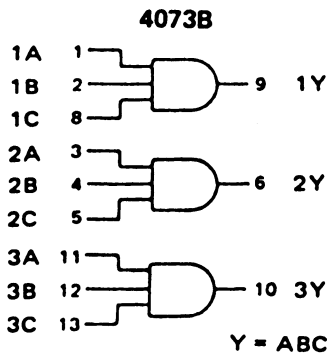
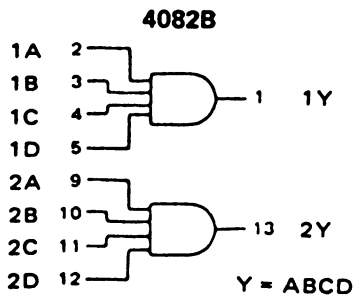
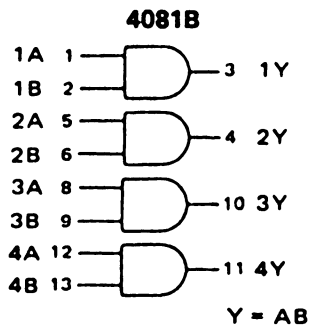
### FEATURES

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

### TRUTH TABLE

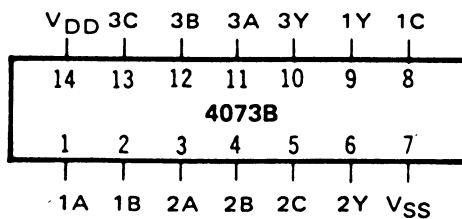
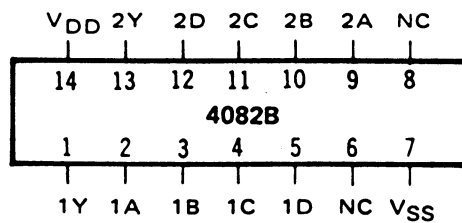
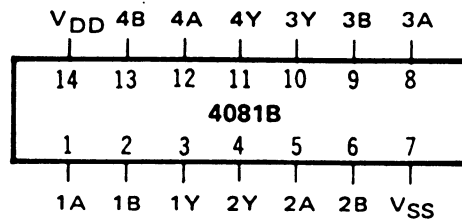
Inputs	Output
1 1 ... 1	1
All other combinations	0

### FUNCTION DIAGRAMS



V<sub>DD</sub> = Pin 14  
V<sub>SS</sub> = Pin 7  
for all Devices

### CONNECTION DIAGRAMS (all packages)



### RECOMMENDED OPERATING CONDITIONS

For maximum reliability:

DC Supply Voltage V<sub>DD</sub> - V<sub>SS</sub> 3 to 15 V<sub>dc</sub>

Operating Temperature T<sub>A</sub>

C -55 to +125 °C  
E -40 to +85 °C

## ELECTRICAL CHARACTERISTICS

### STATIC CHARACTERISTICS

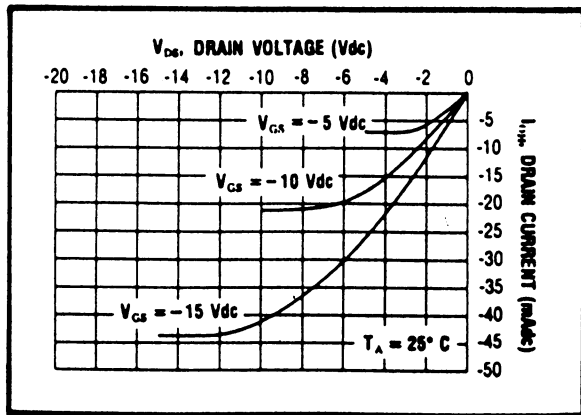
PARAMETER	V <sub>DD</sub> (Vdc)	CONDITIONS	T <sub>LOW</sub> <sup>2</sup>		+25°C			T <sub>HIGH</sub> <sup>2</sup>		Units
			Min.	Max.	Min.	Typ.	Max.	Min.	Max.	
QUIESCENT DEVICE CURRENT I <sub>DD</sub>	5	V <sub>IN</sub> = V <sub>ES</sub> or V <sub>DD</sub> All valid input combinations	-	0.05	-	0.0005	0.05	-	1.5	μAdc
	10		-	0.10	-	0.001	0.10	-	3.0	
	15		-	0.20	-	0.002	0.20	-	6.0	

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

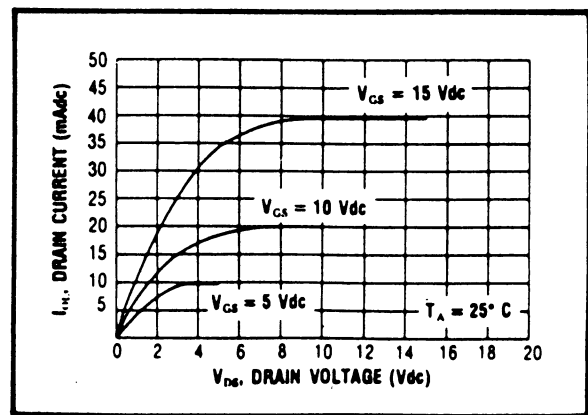
<sup>2</sup> T<sub>LOW</sub> = -55°C for C  
 = -40°C for E  
 T<sub>HIGH</sub> = +125°C for C  
 = + 85°C for E

### DYNAMIC CHARACTERISTICS (C<sub>L</sub> = 50pF, T<sub>A</sub> = 25°C)

PARAMETER		V <sub>DD</sub> (Vdc)	Min.	Typ.	Max.	Units
PROPAGATION DELAY TIME	t <sub>PLH</sub> , t <sub>PHL</sub>	5	-	120	240	ns
		10	-	60	120	
		15	-	45	90	
OUTPUT TRANSITION TIME	t <sub>TLH</sub> , t <sub>THL</sub>	5	-	100	200	ns
		10	-	50	100	
		15	-	40	80	



Typical P-Channel  
Source Current Characteristics  
LOGIC DIAGRAMS



Typical N-Channel  
Sink Current Characteristics  
SCHEMATIC DIAGRAM - 4082B (1 of 2 gates)

