

CMOS AND GATES

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

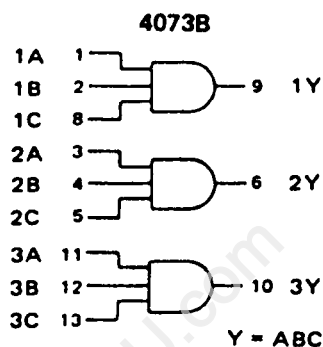
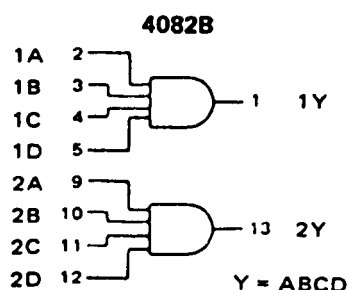
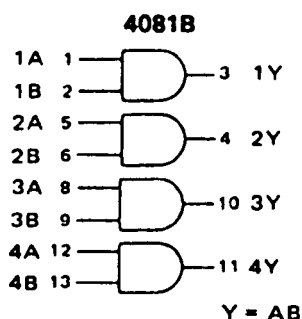
FEATURES

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

TRUTH TABLE

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

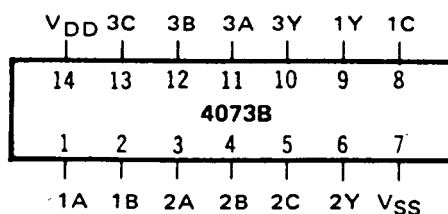
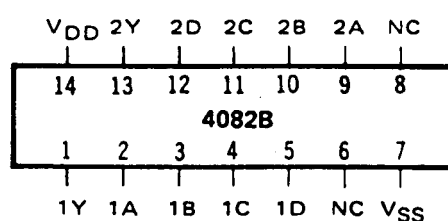
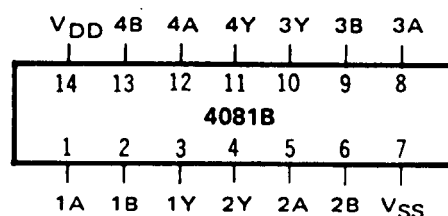
FUNCTION DIAGRAMS



V_{DD} = Pin 14
V_{SS} = Pin 7
for all Devices

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

C -55 to +125 °C
E -40 to +85 °C

ELECTRICAL CHARACTERISTICS

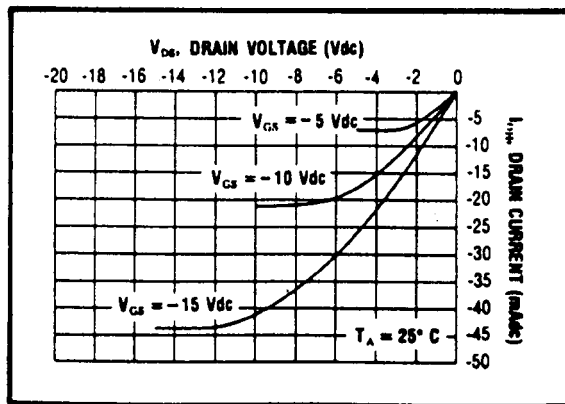
STATIC CHARACTERISTICS¹

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	
			—	—	—	—	—	—	—	

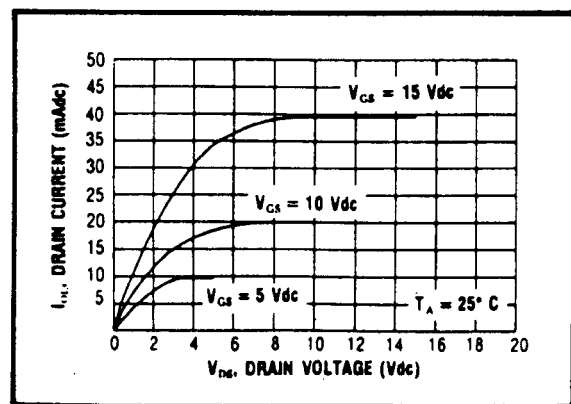
NOTES: ¹ Remaining Static Electrical Characteristics are listed under "4000B Series Family Specifications".
² T_{LOW} = -55°C for C
= -40°C for E
T_{HIGH} = +125°C for C
= + 85°C for E

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	—	120	240	ns
		10	—	60	120	
		15	—	45	90	
OUTPUT TRANSITION TIME	t _{TLH} , t _{THL}	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)

