

CMOS AND GATES

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

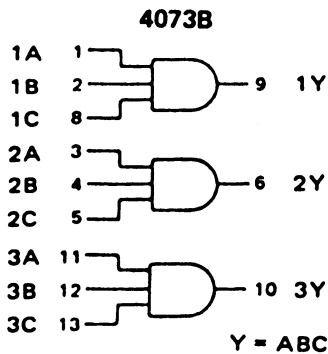
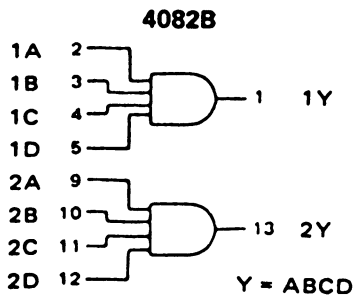
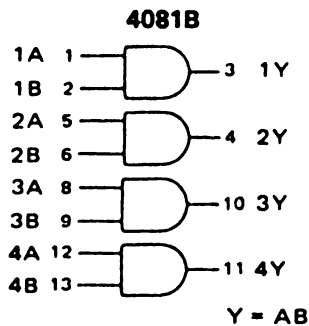
FEATURES

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

TRUTH TABLE

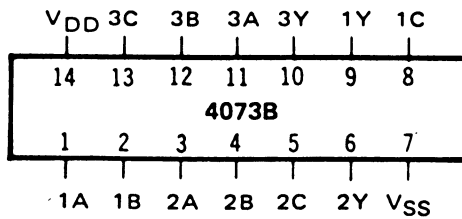
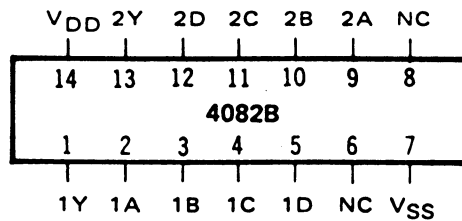
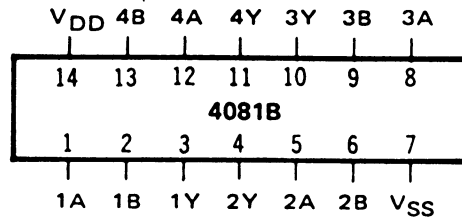
Inputs	Output
1 1 ... 1	1
All other combinations	0

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 Vdc

Operating Temperature T_A

C -55 to +125 °C
E -40 to +85 °C

ELECTRICAL CHARACTERISTICS

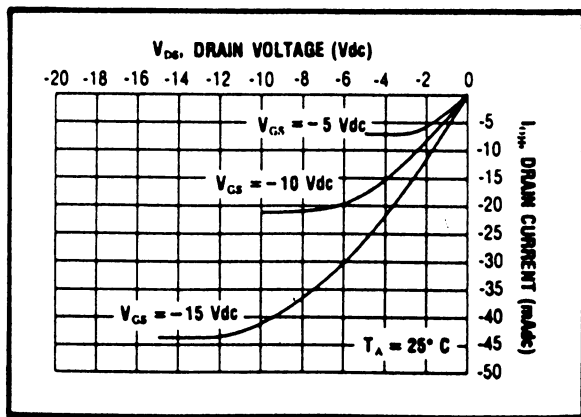
STATIC CHARACTERISTICS

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 _{ES} or V _{DD} All valid input combinations	-	0.05	-	0.0005	0.05	-	1.5	μAdc
			-	0.10	-	0.001	0.10	-	3.0	
			-	0.20	-	0.002	0.20	-	6.0	

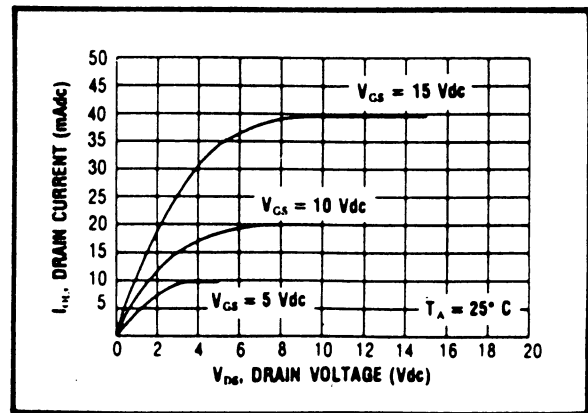
NOTES: ¹ Remaining Static Electrical Characteristics are listed under "4000B Series Family Specifications".
² T_{LOW} = -55°C for C
 = -40°C for E
 T_{HIGH} = +125°C for C
 = + 85°C for E

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)

