

4085B

DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE

OBSOLETE

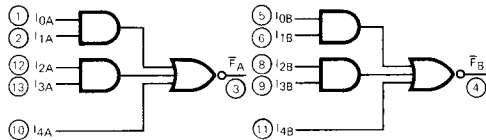
DESCRIPTION — The 4085B is a Dual 2-Wide 2-Input AND-OR-Invert (AOI) Gate, each with an additional input (I_{4A} or I_{4B}) which can be used as either an Expander Input or an Inhibit Input by connecting it to any standard CMOS output. A HIGH on this Input (I_4) forces the Output (\bar{F}) LOW independent of the other four inputs (I_0 - I_3). The Outputs (\bar{F}_A and \bar{F}_B) are fully buffered for highest noise immunity and pattern insensitivity of output impedance.

PIN NAMES

I_{0A} - I_{4A} , I_{0B} - I_{4B} Gate Inputs
 \bar{F}_A , \bar{F}_B Outputs (Active LOW)

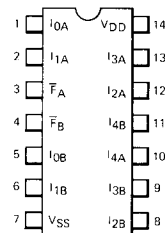
CONNECTION DIAGRAM DIP (TOP VIEW)

LOGIC DIAGRAM



$$\bar{F} = I_0 \cdot I_1 + I_2 \cdot I_3 + I_4$$

$V_{DD} = \text{Pin } 14$
 $V_{SS} = \text{Pin } 7$



NOTE:
 The Flatpak version has the same pinouts (Connection Diagram) as the Dual In-line Package

DC CHARACTERISTICS: V_{DD} as shown, $V_{SS} = 0$ V (See Note 1)

SYMBOL	PARAMETER	LIMITS									UNITS	TEMP	TEST CONDITIONS			
		$V_{DD} = 5$ V			$V_{DD} = 10$ V			$V_{DD} = 15$ V								
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX						
I_{DD}	Quiescent Power	XC			1			2			4	μA	MIN, 25°C	All inputs at 0 V or V_{DD}		
					7.5			15			30					
	Supply Current	XM			0.25			0.5			1				μA	MIN, 25°C
					7.5			15			30					

AC CHARACTERISTICS: V_{DD} as shown, $V_{SS} = 0$ V, $T_A = 25^\circ\text{C}$ (See Note 2)

SYMBOL	PARAMETER	LIMITS									UNITS	TEST CONDITIONS
		$V_{DD} = 5$ V			$V_{DD} = 10$ V			$V_{DD} = 15$ V				
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
t_{PLH}	Propagation Delay, Any I to \bar{F}		56	115		25	55		17	44	ns	$C_L = 50$ pF, $R_L = 200$ k Ω Input Transition Times ≤ 20 ns
t_{PHL}			74	135		30	65		20	52	ns	
t_{TLH}	Output Transition		45	100		22	50		15	35	ns	
t_{THL}	Time		45	100		22	50		15	35	ns	

NOTES:

- Additional DC Characteristics are listed in this section under 4000B Series CMOS Family Characteristics.
- Propagation Delays and Output Transition Times are graphically described in this section under 4000B Series CMOS Family Characteristics.

TYPICAL ELECTRICAL CHARACTERISTICS

