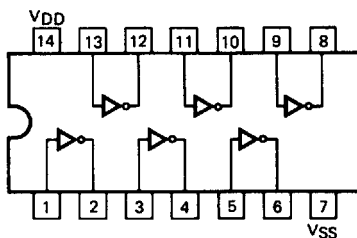


GD4069UB

HEX INVERTER

DESCRIPTION — The 4069UB is a general purpose Hex Inverter which has standard GS input and output characteristics. A single-stage design has been used since the output impedance of a single-input gate is not pattern sensitive. The 4069UB is a Direct Replacement for the 74C04/54C04.

LOGIC AND CONNECTION DIAGRAM
DIP (TOP VIEW)



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

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

SYMBOL	PARAMETER		LIMITS									UNITS	TEMP	TEST CONDITIONS
			$V_{DD} = 5\text{ V}$			$V_{DD} = 10\text{ V}$			$V_{DD} = 15\text{ V}$					
			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		MAX	
	Supply Current	XM			0.25			0.5			1	μA	MIN, 25°C	
					7.5			15			30		MAX	

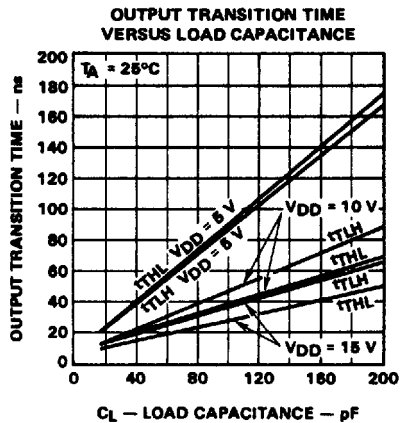
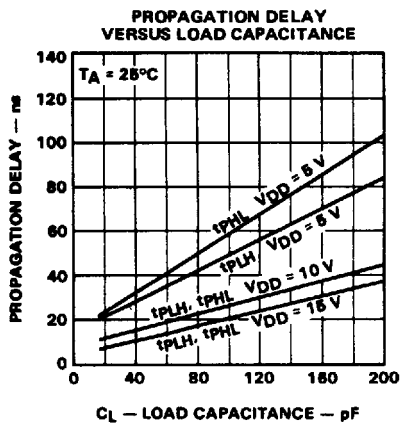
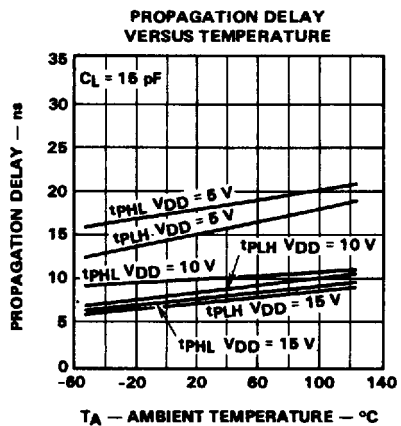
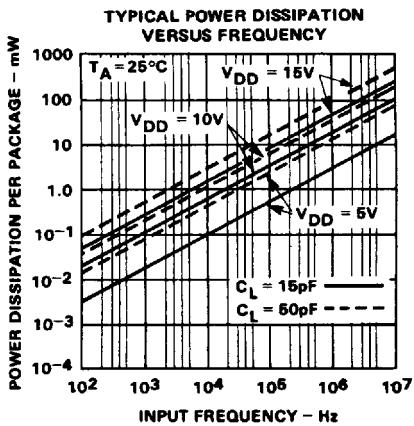
AC CHARACTERISTICS AND SET-UP REQUIREMENTS: V_{DD} as shown, $V_{SS} = 0\text{ V}$, $T_A = 25^\circ\text{C}$ (See Note 2)

SYMBOL	PARAMETER		LIMITS									UNITS	TEST CONDITIONS
			$V_{DD} = 5\text{ V}$			$V_{DD} = 10\text{ V}$			$V_{DD} = 15\text{ V}$				
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
t_{PLH}	Propagation Delay		32	64		16	32		13	26	ns	$C_L = 50\text{ pF}$, $R_L = 200\text{ k}\Omega$	
t_{PHL}			32	64		16	32		13	26			
t_{TLH}	Output Transition Time		45	135		23	70		18	45	ns	Input Transition Times < 20 ns	
t_{THL}			45	135		23	70		18	45			

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



TYPICAL VOLTAGE TRANSFER CHARACTERISTICS

