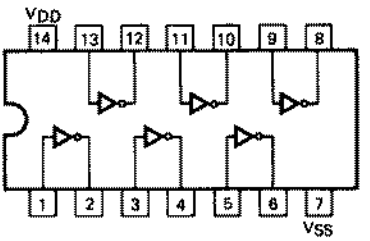
GD4069UB
HEX INVERTER

DESCRIPTION — The 4069UB is a general purpose Hex Inverter which has standard 6s 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 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		MAX	
	Supply Current	XM			0.25			0.5			1	µA	MIN, 25°C	
					7.5			15			30		MAX	

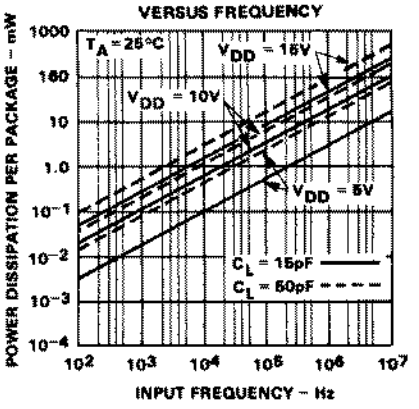
AC CHARACTERISTICS AND SET-UP REQUIREMENTS: V_{DD} as shown, V_{SS} = 0 V, T_A = 25°C (See Note 2)

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		32	64		16	32		13	26	ns	C_L = 50 pF,
t_{PHL}			32	64		16	32		13	26		R_L = 200 kΩ
t_{TLH}	Output Transition Time		45	135		23	70		18	45	ns	Input Transition
t_{THL}			45	135		23	70		18	45		Times ≤ 20 ns

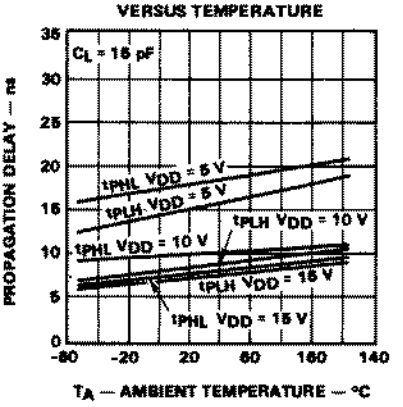
NOTES:
1. Additional DC Characteristics are listed in this section under 4000B Series CMOS Family Characteristics.
2. Propagation Delays and Output Transition Times are graphically described in this section under 4000B Series CMOS Family Characteristics.

TYPICAL ELECTRICAL CHARACTERISTICS

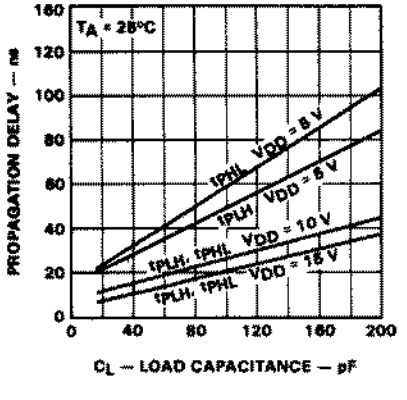
TYPICAL POWER DISSIPATION VERSUS FREQUENCY



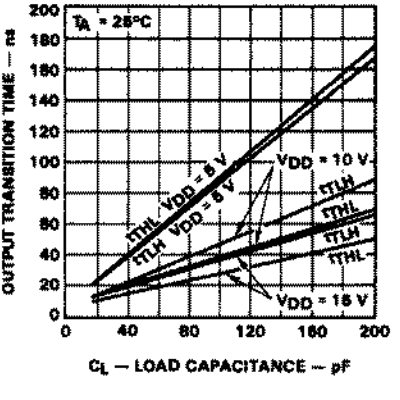
PROPAGATION DELAY VERSUS TEMPERATURE



PROPAGATION DELAY VERSUS LOAD CAPACITANCE



OUTPUT TRANSITION TIME VERSUS LOAD CAPACITANCE



TYPICAL VOLTAGE TRANSFER CHARACTERISTICS