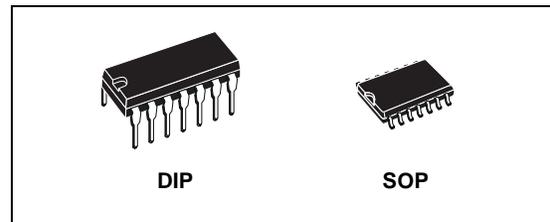




HCF4069UB

HEX INVERTER

- MEDIUM-SPEED OPERATION
 $t_{PD} = 30\text{ns}$ (Typ.) at 10V
- STANDARDIZED SYMMETRICAL OUTPUT CHARACTERISTICS
- QUIESCENT CURRENT SPECIFIED UP TO 20V
- 5V, 10V AND 15V PARAMETRIC RATINGS
- INPUT LEAKAGE CURRENT
 $I_I = 100\text{nA}$ (MAX) AT $V_{DD} = 18\text{V}$ $T_A = 25^\circ\text{C}$
- 100% TESTED FOR QUIESCENT CURRENT
- MEETS ALL REQUIREMENTS OF JEDEC JESD13B "STANDARD SPECIFICATIONS FOR DESCRIPTION OF B SERIES CMOS DEVICES"



ORDER CODES

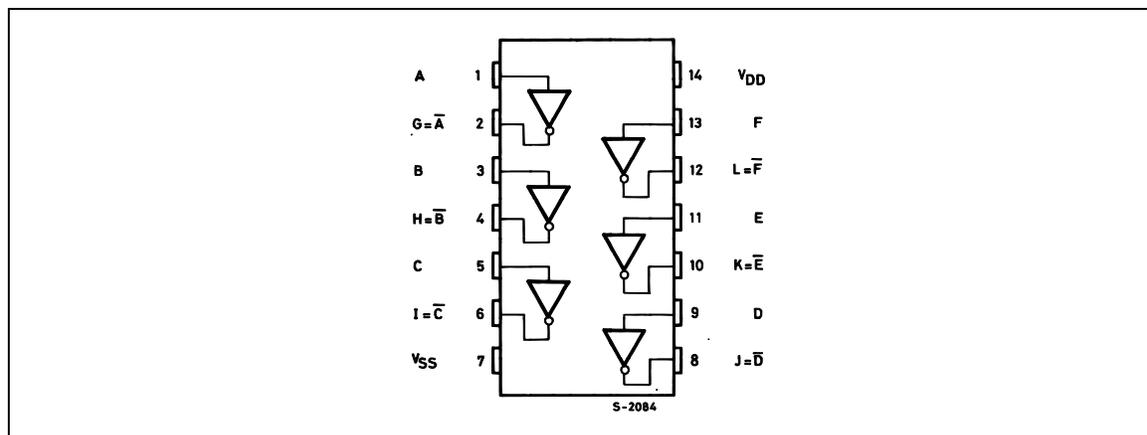
PACKAGE	TUBE	T & R
DIP	HCF4069UBEY	
SOP	HCF4069UBM1	HCF4069UM013TR

DESCRIPTION

The HCF4069UB is a monolithic integrated circuit fabricated in Metal Oxide Semiconductor technology available in DIP and SOP packages. The HCF4069UB consists of six CMOS inverter circuits. This device is intended for all

general purpose inverter applications where the medium power TTL-drive and logic level conversion capabilities of circuits such as HCF4049B HEX INVERTER/BUFFERS are not required.

PIN CONNECTION



DC SPECIFICATIONS

Symbol	Parameter	Test Condition				Value						Unit	
		V _I (V)	V _O (V)	I _{ol} (μ A)	V _{DD} (V)	T _A = 25°C			-40 to 85°C		-55 to 125°C		
						Min.	Typ.	Max.	Min.	Max.	Min.		Max.
I _L	Quiescent Current	0/5			5		0.01	0.25		7.5		7.5	μ A
		0/10			10		0.01	0.5		15		15	
		0/15			15		0.01	1		30		30	
		0/20			20		0.02	5		150		150	
V _{OH}	High Level Output Voltage	0/5		<1	5	4.95			4.95		4.95		V
		0/10		<1	10	9.95			9.95		9.95		
		0/15		<1	15	14.95			14.95		14.95		
V _{OL}	Low Level Output Voltage	5/0		<1	5		0.05			0.05		0.05	V
		10/0		<1	10		0.05			0.05		0.05	
		15/0		<1	15		0.05			0.05		0.05	
V _{IH}	High Level Input Voltage		0.5/4.5	<1	5	4			4		4		V
			1/9	<1	10	8			8		8		
			1.5/13.5	<1	15	12.5			12.5		12.5		
V _{IL}	Low Level Input Voltage		4.5/0.5	<1	5			1		1		1	V
			9/1	<1	10			2		2		2	
			13.5/1.5	<1	15			2.5		2.5		2.5	
I _{OH}	Output Drive Current	0/5	2.5	<1	5	-1.36	-3.2		-1.15		-1.1		mA
		0/5	4.6	<1	5	-0.44	-1		-0.36		-0.36		
		0/10	9.5	<1	10	-1.1	-2.6		-0.9		-0.9		
		0/15	13.5	<1	15	-3.0	-6.8		-2.4		-2.4		
I _{OL}	Output Sink Current	0/5	0.4	<1	5	0.44	1		0.36		0.36		mA
		0/10	0.5	<1	10	1.1	2.6		0.9		0.9		
		0/15	1.5	<1	15	3.0	6.8		2.4		2.4		
I _I	Input Leakage Current	0/18	Any Input		18		$\pm 10^{-5}$	± 0.1		± 1		± 1	μ A
C _I	Input Capacitance		Any Input				5	7.5					pF

The Noise Margin for both "1" and "0" level is: 1V min. with V_{DD}=5V, 2V min. with V_{DD}=10V, 2.5V min. with V_{DD}=15V

DYNAMIC ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C, C_L = 50pF, R_L = 200K Ω , t_r = t_f = 20 ns)

Symbol	Parameter	Test Condition		Value (*)			Unit
		V _{DD} (V)		Min.	Typ.	Max.	
t _{PLH} t _{PHL}	Propagation Delay Time	5			55	110	ns
		10			30	60	
		15			25	50	
t _{TLH} t _{THL}	Output Transition Time	5			100	200	ns
		10			50	100	
		15			40	80	

(*) Typical temperature coefficient for all V_{DD} value is 0.3 %/°C.

Plastic DIP-14 MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
a1	0.51			0.020		
B	1.39		1.65	0.055		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		15.24			0.600	
F			7.1			0.280
I			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

