

HEX INVERTED BUFFERS WITH OPEN-COLLECTOR OUTPUTS**Features**

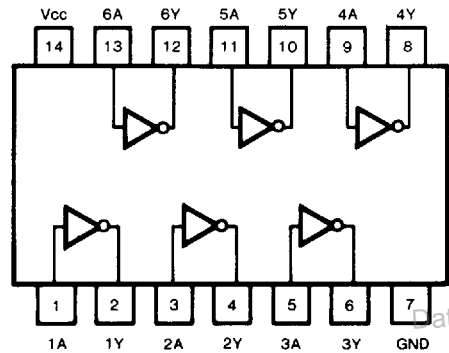
- High Output Voltage(30V)
- High Speed($t_{PD}=8.5nS$ typical)
- Low Power Dissipation($P_D=18mW$ per Gate)

Description

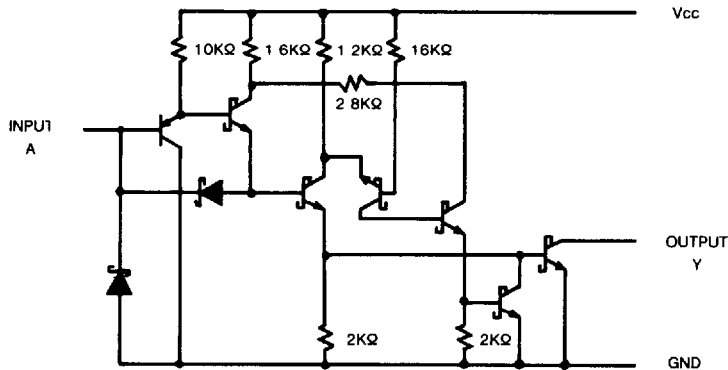
This device contains hex inverted buffers with open-collector. It performs the Boolean function $Y=\bar{A}$ in positive Logic.

Function Table(each inverter)

INPUT	OUTPUT
A	Y
H	L
L	H

Pin Configuration

Suffix-Blank. Plastic Dual In Line Package
 Suffix-J : Ceramic Dual In Line Package

Circuit Schematic (each inverter)**Absolute Maximum Ratings**

- Supply voltage, V_{CC} www.DataSheet4U.com
- Input voltage 5.5V
- Output voltage 30V
- Operating free-air temperature range 54LS -55°C to 125°C
- 74LS 0°C to 70°C
- Storage temperature range -65°C to 150°C

Recommended Operating Conditions

SYMBOL	PARAMETER		MIN	NOM	MAX	UNIT
V_{CC}	Supply voltage	54	4.5	5	5.5	V
		74	4.75	5	5.25	
V_{OH}	High-level output voltage	54, 74			30	V
I_{OL}	Low-level output current	54			30	mA
		74			40	
T_A	Operating free-air temperature	54	-55		125	°C
		74	0		70	

Electrical Characteristics over recommended operating free-air temperature range (unless otherwise noted)

SYMBOL	PARAMETER		TEST CONDITIONS		MIN	TYP (Note 1)	MAX	UNIT
V_{IH}	High-level input voltage				2			V
V_{IL}	Low-level input voltage		54				0.8	V
			74				0.8	
V_{IK}	Input clamp voltage		$V_{CC} = \text{Min}, I_I = \pm 12 \text{mA}$				-1.5	V
I_{OH}	High-level output current		$V_{CC} = \text{Min}, V_{IL} = \text{Max}, V_{OH} = \text{Max}$				250	μA
V_{OL}	Low-level output voltage		$V_{CC} = \text{Min}$ $V_{IH} = \text{Min}$		$I_{OL} = 16 \text{mA}$ $I_{OL} = \text{Max}$		0.4	V
							0.7	
I_I	Input current at maximum input voltage		$V_{CC} = \text{Max}, V_I = 5.5 \text{V}$				1	mA
I_{IH}	High-level input current		$V_{CC} = \text{Max}, V_I = 2.7 \text{V}$				20	μA
I_{IL}	Low-level input current		$V_{CC} = \text{Max}, V_I = 0.4 \text{V}$				-0.2	mA
I_{CCH}	Supply current		Total with outputs high		$V_{CC} = \text{Max}$		9	mA
			Total with outputs low		$V_{CC} = \text{Max}$		35	
I_{CCL}	Supply current		Total with outputs low		$V_{CC} = \text{Max}$		60	mA

Note 1 All typical values are at $V_{CC} = 5 \text{V}$, $T_A = 25^\circ\text{C}$ Switching Characteristics, $V_{CC} = 5 \text{V}$, $T_A = 25^\circ\text{C}$

SYMBOL	PARAMETER	TEST CONDITION#	MIN	TYP	MAX	UNIT
t_{PLH}	Propagation delay time, low-to-high-level output	$C_L = 15 \text{pF}, R_L = 110\Omega$				ns
t_{PHL}	Propagation delay time, high-to-low-level output		10	20		

#For load circuit and voltage waveforms, see page 3-11