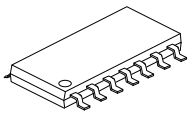
U74HCT34

CMOS IC

HEX BUFFER



SOP-14U

■ DESCRIPTION

The **U74HCT34** devices contain six independent buffer and they perform function Y=A.

The **U74HCT34** is characterized for operation from -40°C to 125°C.

■ FEATURES

* Enhanced-Performance Implanted CMOS Process
* Inputs are TTL-Voltage compatible
* Package Options Include Plastic

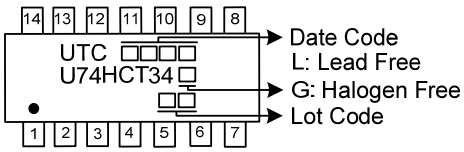
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
U74HCT34L-UEA-R	U74HCT34G-UEA-R	SOP-14U	Tape Reel

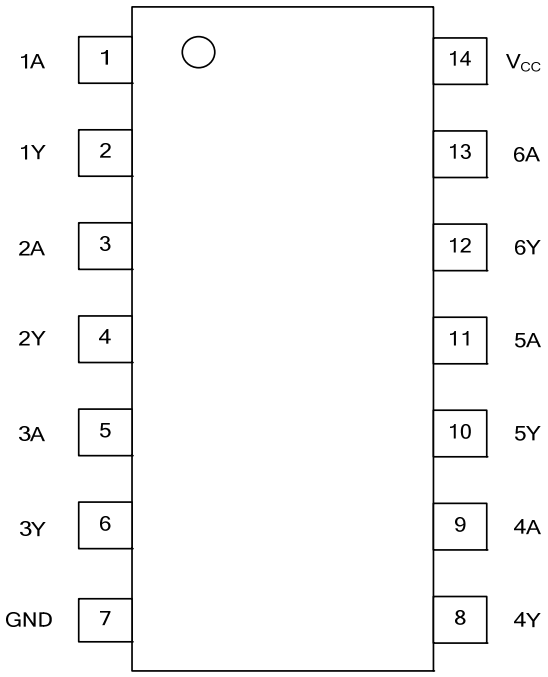
U74HCT34G-UEA-R
(1)Packing Type
(2)Package Type
(3)Green Package

(1) R: Tape Reel
(2) UEA: SOP-14U
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



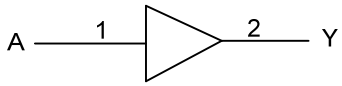
■ PIN CONFIGURATION



■ FUNCTION TABLE (each gate)

INPUT	OUTPUT
A	Y
L	L
H	H

■ LOGIC DIAGRAM (positive logic)



IEC logic symbol

■ ABSOLUTE MAXIMUM RATING (Unless otherwise specified) (Note 2)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-0.5 ~ 7	V
Input Voltage	V_{IN}	-0.5 ~ 7	V
Output Voltage(active mode)	V_{OUT}	-0.5 ~ V_{CC}+0.5	V
Input Clamp Current(V_I<0)	I_{IK}	-20	mA
Output Clamp Current(V_O<0)	I_{OK}	±20	mA
Output Current	I_{OUT}	±25	mA
V_{CC} or GND Current	I_{CC}	±50	mA
Storage Temperature	T_{STG}	-65 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. The input and output voltage ratings may be exceeded if the input and output current ratings are observed.

■ RECOMMENDED OPERATING COMDITIONS (Unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_{CC}	Operating	4.5		5.5	V
Input Voltage	V_{IN}		0		5.5	V
Output Voltage	V_{OUT}		0		V_{CC}	V
Operating Temperature	T_A		-40		+125	°C

■ STATIC CHARACTERISTICS (Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Positive-Going Input Threshold Voltage	V_{IH}	V_{CC}=4.5V	2			V
		V_{CC}=5.5V	2			
Negative-Going Input Threshold Voltage	V_{IL}	V_{CC}=4.5V			0.8	V
		V_{CC}=5.5V			0.8	
High-Level Output Voltage	V_{OH}	V_{CC}=4.5V, I_{OH}=-20μA	4.4			V
		V_{CC}=4.5V, I_{OH}=-4mA	3.98			
Low-Level Output Voltage	V_{OL}	V_{CC}=4.5V, I_{OL}=20μA			0.1	V
		V_{CC}=4.5V, I_{OL}=4mA			0.26	
Input Leakage Current	I_I	V_{CC}=0V ~ 5.5V, V_I=V_{CC} or GND			±0.1	μA
Quiescent Supply Current	I_{CC}	V_{CC}=5.5V, V_I=5.5V or GND, I_O=0			2	μA
Additional Quiescent Supply Current	ΔI_{CC}	V_{CC}=5.5V, One input at 3.4V, other inputs at V_{CC} or GND			2.4	mA
Input Capacitance	C_I	V_{CC} =4.5~5.5V, V_I=V_{CC} or GND		4	10	pF

■ DYNAMIC CHARACTERISTICS (Input: t_R, t_F≤3ns; PRR≤1MHz, unless otherwise specified)

See Fig. 1 and Fig. 2 for test circuit and waveforms.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Propagation delay from Input (A) to output (Y)	t_{PLH}/t_{PHL}	V_{CC}=4.5V, C_L =50pF		12.7	26	ns
		V_{CC}=5.5V, C_L =50pF		10.5	22	

■ OPERATING CHARACTERISTICS (Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Power Dissipation Capacitance	C_{PD}	No load, f=1MHz, V_{CC}=5V		14		pF

■ TEST CIRCUIT AND WAVEFORMS

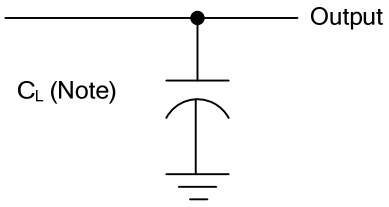


Fig. 1 Load circuitry for switching times.

Note: C_L includes probe and jig capacitance.

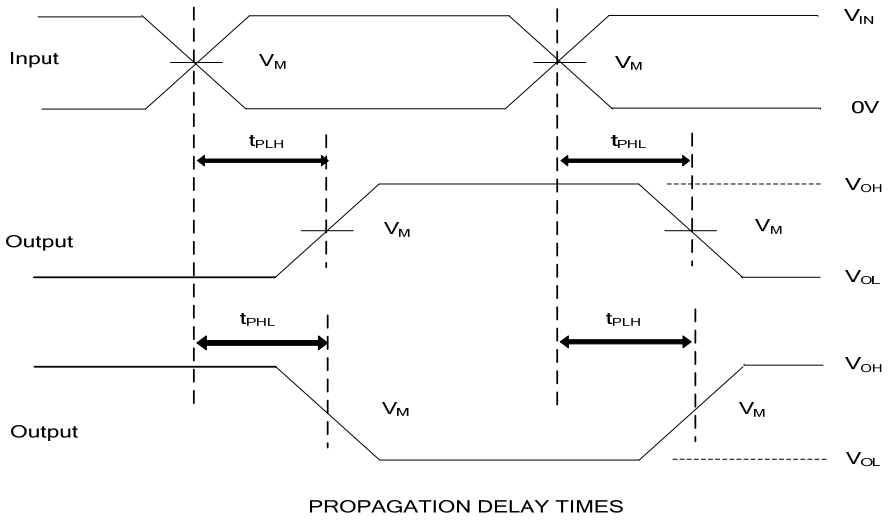


Fig. 2 Propagation delay from input(A) to output(Y) and Output transition time.