



U74AHC3G34

CMOS IC

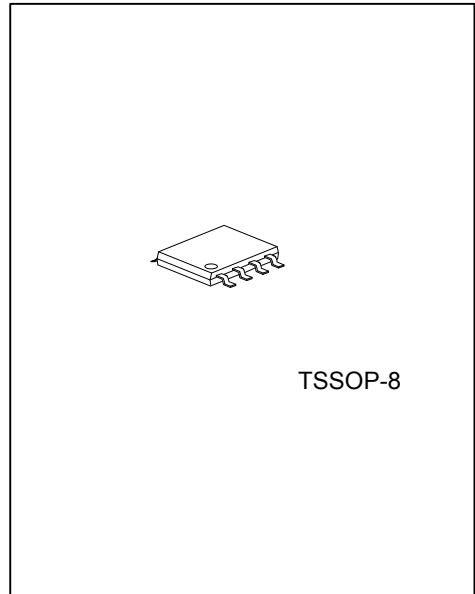
TRIPLE BUFFER GATE

DESCRIPTION

The **UTC U74AHC3G34** are high-speed Si-gate CMOS devices, which provide three buffers with the function Y=A.

FEATURES

- * Low Power Dissipation
- * Symmetrical Output Impedance
- * Balanced Propagation Delays
- * High Noise Immunity

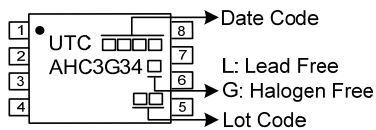


ORDERING INFORMATION

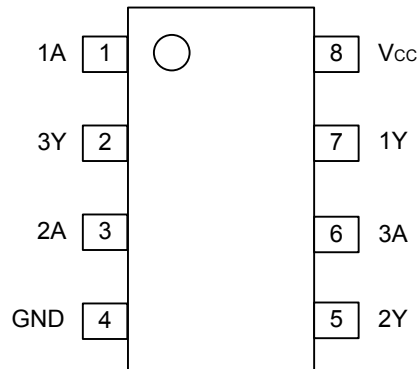
Ordering Number		Package	Packing
Lead Free	Halogen Free		
U74AHC3G34L-P08-R	U74AHC3G34G-P08-R	TSSOP-8	Tape Reel

<p>U74AHC3G34G-P08-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) P08: TSSOP-8 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



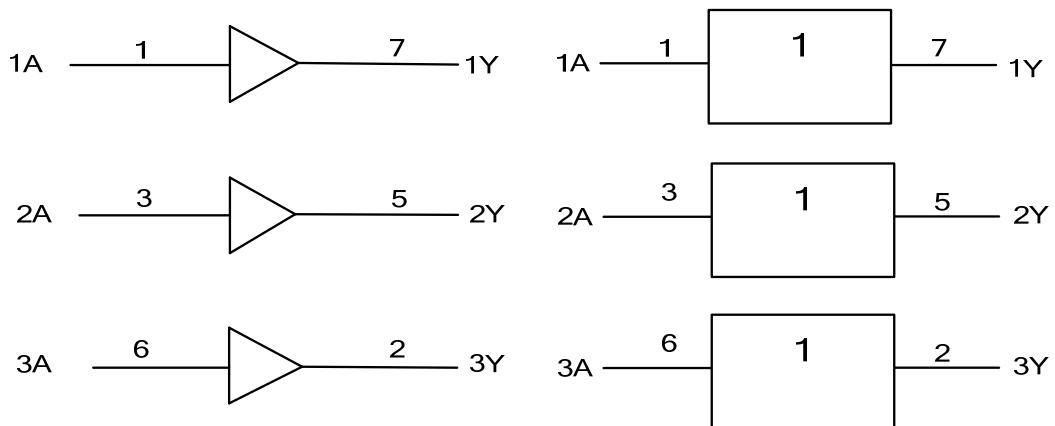
■ PIN CONFIGURATION



■ FUNCTION TABLE (each gate)

INPUT(A)	OUTPUT(Y)
L	L
H	H

■ LOGIC DIAGRAM (positive logic)



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■ ABSOLUTE MAXIMUM RATING(unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-0.5 ~ 7.0	V
Input Voltage	V_{IN}	-0.5 ~ 7.0	V
Output Voltage	V_{OUT}	-0.5 ~ $V_{CC} + 0.5$	V
V_{CC} or GND Current	I_{CC}	±75	mA
Output Current	I_{OUT}	±25	mA
Input Clamp Current	I_{IK}	-20	mA
Output Clamp Current	I_{OK}	±20	mA
Operating Temperature	T_{OPR}	-40 ~ + 85	°C
Storage Temperature	T_{STG}	-65 ~ + 150	°C

Note: 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.

■ RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_{CC}		2.0	5.0	5.5	V
Input Voltage	V_{IN}		0		5.5	V
Output Voltage	V_{OUT}		0		V_{CC}	V
Input Rise or Fall Times	t_r, t_f	$V_{CC} = 3.3 \pm 0.3V$			100	ns/V
		$V_{CC} = 5.0 \pm 0.5V$			20	

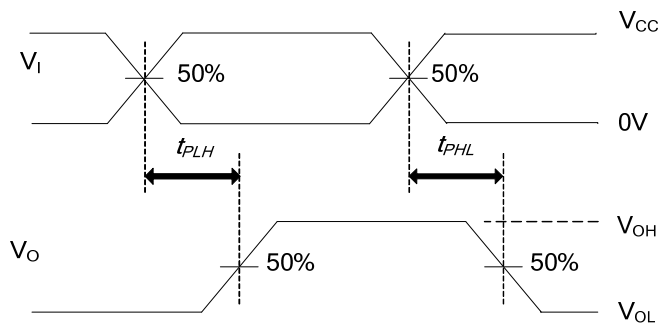
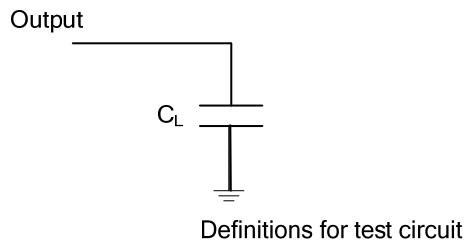
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
High-Level input voltage	V_{IH}	$V_{CC} = 2V$	1.5			V
		$V_{CC} = 3V$	2.1			
		$V_{CC} = 5.5V$	3.85			
Low-Level input voltage	V_{IL}	$V_{CC} = 2V$			0.5	V
		$V_{CC} = 3V$			0.9	
		$V_{CC} = 5.5V$			1.65	
High-Level Output Voltage	V_{OH}	$V_I = V_{IH}$ or $V_{IL}, I_{OH} = -50\mu A, V_{CC} = 2V$	1.9	2.0		V
		$V_I = V_{IH}$ or $V_{IL}, I_{OH} = -50\mu A, V_{CC} = 3V$	2.9	3.0		
		$V_I = V_{IH}$ or $V_{IL}, I_{OH} = -50\mu A, V_{CC} = 4.5V$	4.4	4.5		
		$V_I = V_{IH}$ or $V_{IL}, I_{OH} = -4.0mA, V_{CC} = 3V$	2.58			
		$V_I = V_{IH}$ or $V_{IL}, I_{OH} = -8.0mA, V_{CC} = 4.5V$	3.94			
Low-Level Output Voltage	V_{OL}	$V_I = V_{IH}$ or $V_{IL}, I_{OL} = 50\mu A, V_{CC} = 2V$			0.1	V
		$V_I = V_{IH}$ or $V_{IL}, I_{OL} = 50\mu A, V_{CC} = 3V$			0.1	
		$V_I = V_{IH}$ or $V_{IL}, I_{OL} = 50\mu A, V_{CC} = 4.5V$			0.1	
		$V_I = V_{IH}$ or $V_{IL}, I_{OL} = 4.0mA, V_{CC} = 3V$			0.36	
		$V_I = V_{IH}$ or $V_{IL}, I_{OL} = 8.0mA, V_{CC} = 4.5V$			0.36	
Input Leakage Current	$I_{I(LEAK)}$	$V_{IN} = V_{CC}$ or GND, $V_{CC} = 5.5V$			0.1	μA
Quiescent Supply Current	I_{CC}	$V_{IN} = V_{CC}$ or GND, $I_{OUT} = 0, V_{CC} = 5.5V$			10	μA
Input Capacitance	C_{IN}	$V_{IN} = V_{CC}$ or GND		1.5	10	pF

■ SWITCHING CHARACTERISTICS ($T_A=25^\circ C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Propagation delay from input (A) to output(Y)	t_{PLH}	$C_L = 15 pF$	$V_{CC} = 3.0$ to $3.6 V$	4.3	7.1	ns
			$V_{CC} = 4.5$ to $5.5 V$	3.1	5.5	
	t_{PHL}	$C_L = 50 pF$	$V_{CC} = 3.0$ to $3.6 V$	6.1	10.6	ns
			$V_{CC} = 4.5$ to $5.5 V$	4.5	7.5	

■ TEST CIRCUIT AND WAVEFORMS



Propagation Delay Times

Note: C_L includes probe and jig capacitance.
 $P_{RR} \leq 1\text{MHz}$, $Z_O = 50\Omega$, $t_R \leq 3\text{ns}$, $t_F \leq 3\text{ns}$.

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