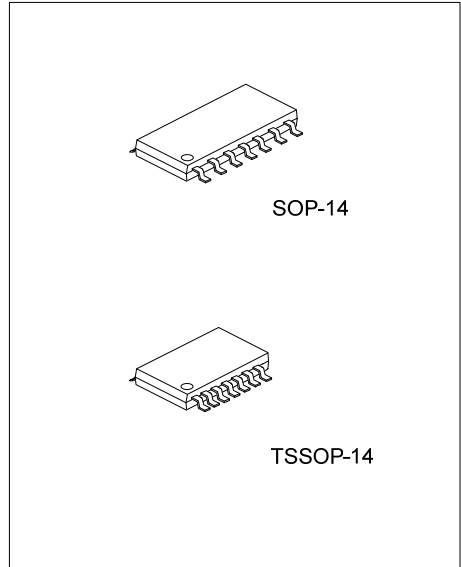




U74AHC126

CMOS IC

QUADRUPLE BUS BUFFER GATES WITH 3-STATE OUTPUTS



DESCRIPTION

The **U74HC126** is a quadruple bus buffer gate with 3-state outputs and 4 channels.

FEATURES

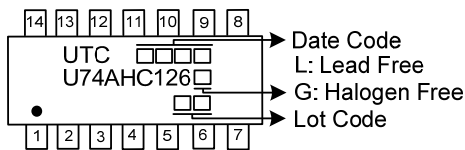
- * Operate from 2V to 5.5V
- * Max t_{pd} of 5.5ns at 5 V(CL=15pF)
- * Typical $V_{IH} < 2.1V$ at $V_{CC}=3V, T_a=25^\circ C$
- * Typical $V_{IL} > 0.9V$ at $V_{CC}=3V, T_a=25^\circ C$

ORDERING INFORMATION

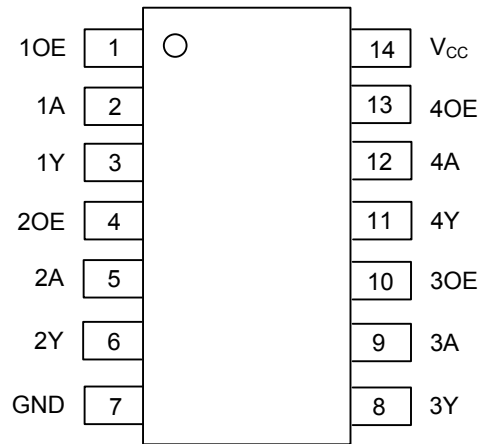
Ordering Number		Package	Packing
Lead Free	Halogen Free		
U74AHC126L-S14-R	U74AHC126G-S14-R	SOP-14	Tape Reel
U74AHC126L-P14-R	U74AHC126G-P14-R	TSSOP-14	Tape Reel

<p>U74AHC126G-S14-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel (2) S14: SOP-14, P14: TSSOP-14 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
---	--

MARKING



■ PIN CONFIGURATION

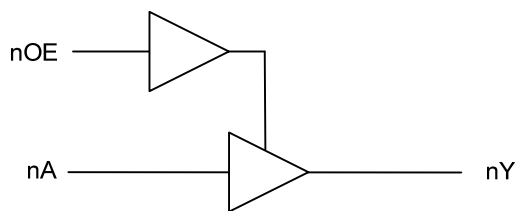


■ FUNCTION TABLE

INPUTS(OE)	INPUTS(A)	OUTPUT(Y)
H	L	L
H	H	H
L	X	Z

Note: H: HIGH voltage level L: LOW voltage level Z: high impedance X: don't care

■ LOGIC DIAGRAM



FLYING 汎翔國際有限公司
www.flying1688.com

■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	-0.5 ~ 7	V
Input Voltage	V _{IN}	-0.5 ~ 7	V
Output Voltage	V _{OUT}	-0.5 ~ V _{CC} +0.5	V
V _{CC} or GND Current	I _{CC}	±50	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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	SOP-14	76	°C/W
	TSSOP-14	113	°C/W

■ RECOMMENDED OPERATING CONDITIONS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V _{CC}		2		5.5	V
High-Level Input Voltage	V _{IH}	V _{CC} =2V	1.5			V
		V _{CC} =3V	2.1			V
		V _{CC} =5.5V	3.85			V
Low-Level Input Voltage	V _{IL}	V _{CC} =2V			0.5	V
		V _{CC} =3V			0.9	V
		V _{CC} =5.5V			1.65	V
Input Voltage	V _{IN}		0		5.5	V
Output Voltage	V _{OUT}		0		V _{CC}	V
High-Level Input Current	I _{OH}	V _{CC} =2V			-50	μA
		V _{CC} =3.3V±0.3V			-4	mA
		V _{CC} =5V±0.5V			-8	mA
Low-Level Input Current	I _{OL}	V _{CC} =2V			50	μA
		V _{CC} =3.3V±0.3V			4	mA
		V _{CC} =5V±0.5V			8	mA
Input Transition Rise or Fall rate	t _R , t _F	V _{CC} =3.3V±0.3V			100	ns/V
		V _{CC} =5V±0.5V			20	ns/V

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage High-Level	V _{OH}	V _{CC} =2V, I _{OH} =-50μA	1.9	2		V
		V _{CC} =3V, I _{OH} =-50μA	2.9	3		V
		V _{CC} =4.5V, I _{OH} =-50μA	4.4	4.5		V
		V _{CC} =3V, I _{OH} =-4mA	2.58			V
		V _{CC} =4.5V, I _{OH} =-8mA	3.94			V
Output Voltage Low-Level	V _{OL}	V _{CC} =2V, I _{OL} =50μA			0.1	V
		V _{CC} =3V, I _{OL} =50μA			0.1	V
		V _{CC} =4.5V, I _{OL} =50μA			0.1	V
		V _{CC} =3V, I _{OL} =4mA			0.36	V
		V _{CC} =4.5V, I _{OL} =8mA			0.36	V
Input Leakage Current	I _{I(LEAK)}	V _{CC} =0V~5.5V, V _{IN} = V _{CC} or GND			±100	nA
Output Off-State Current	I _{OZ}	V _{CC} =5.5V, V _{OUT} = V _{CC} or GND			±250	nA
Quiescent Supply Current	I _Q	V _{CC} =5.5V, V _{IN} =V _{CC} or GND, I _{OUT} =0			4	μA
Input Capacitance	C _I	V _{CC} =5V		4	10	pF

■ SWITCHING CHARACTERISTICS (C_L=15pF, T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Propagation Delay From Input A to Output Y	t _{PLH} /t _{PHL}	V _{CC} =3.3V±0.3V	1		9.5	ns
		V _{CC} =5V±0.5V	1		6.5	ns
Propagation Delay From Input OE to Output Y	t _{PZH} /t _{PZL}	V _{CC} =3.3V±0.3V	1		9.5	ns
		V _{CC} =5V±0.5V	1		6	ns
Propagation Delay From Input OE to Output Y	t _{PHZ} /t _{PLZ}	V _{CC} =3.3V±0.3V	1		11.5	ns
		V _{CC} =5V±0.5V	1		8	ns

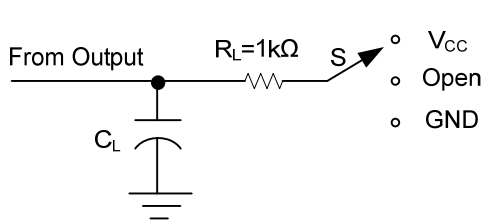
■ SWITCHING CHARACTERISTICS (C_L=50pF, T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Propagation Delay From Input A to Output Y	t _{PLH} /t _{PHL}	V _{CC} =3.3V±0.3V	1		13	ns
		V _{CC} =5V±0.5V	1		8.5	ns
Propagation Delay From Input OE to Output Y	t _{PZH} /t _{PZL}	V _{CC} =3.3V±0.3V	1		13	ns
		V _{CC} =5V±0.5V	1		8	ns
Propagation Delay From Input OE to Output Y	t _{PHZ} /t _{PLZ}	V _{CC} =3.3V±0.3V	1		15	ns
		V _{CC} =5V±0.5V	1		10	ns

■ OPERATING CHARACTERISTICS (T_A=25°C, unless otherwise specified)

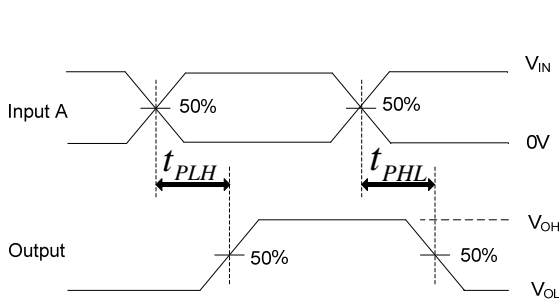
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Power Dissipation Capacitance	C _{PD}	No Load, f=1MHz		14		pF

TEST CIRCUIT AND WAVEFORMS

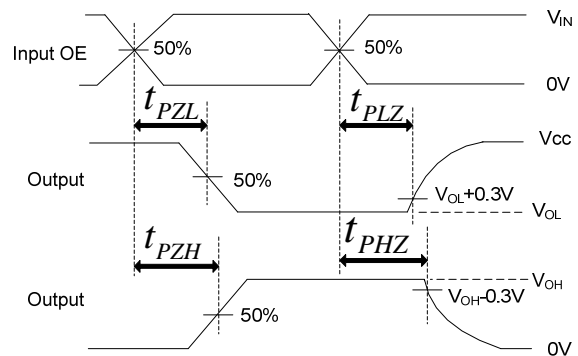


TEST CIRCUIT

TEST	S
t_{PLH}/t_{PHL}	Open
t_{PHZ}/t_{PZH}	GND
t_{PLZ}/t_{PZL}	V_{CC}



PROPAGATION DELAY TIMES



ENABLE AND DISABLE TIMES

Note: C_L includes probe and jig capacitance.

All input pulses are supplied by generators having the following characteristics: PRR ≤ 1 MHz, $Z_o = 50\Omega$, $t_r \leq 3$ ns, $t_f \leq 3$ ns.

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.