

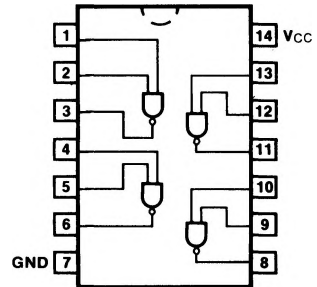
# 54/7437 54LS/74LS37

## QUAD 2-INPUT NAND BUFFER

### CONNECTION DIAGRAM PINOUT A

**ORDERING CODE:** See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		$V_{CC} = +5.0\text{ V} \pm 5\%$ , $T_A = 0^\circ\text{C to } +70^\circ\text{C}$	$V_{CC} = +5.0\text{ V} \pm 10\%$ , $T_A = -55^\circ\text{C to } +125^\circ\text{C}$	
Plastic DIP (P)	A	7437PC, 74LS37PC		9A
Ceramic DIP (D)	A	7437DC, 74LS37DC	5437DM, 54LS37DM	6A
Flatpak (F)	A	7437FC, 74LS37FC	5437FM, 54LS37FM	3I



**INPUT LOADING/FAN-OUT:** See Section 3 for U.L. definitions

PINS	54/74 (U.L.) HIGH/LOW	54/74LS (U.L.) HIGH/LOW
Inputs Outputs	1.0/1.0 30/30	0.5/0.25 30/15 (7.5)

**DC AND AC CHARACTERISTICS:** See Section 3\*

SYMBOL	PARAMETER	54/74		54/74LS		UNITS	CONDITIONS	
		Min	Max	Min	Max			
V <sub>OH</sub>	Output HIGH Voltage	X <sub>M</sub>	2.4	2.5		V	V <sub>CC</sub> = Max, I <sub>OH</sub> = -1.2 mA V <sub>IN</sub> = V <sub>IL</sub>	
		X <sub>C</sub>	2.4	2.7				
V <sub>OL</sub>	Output LOW Voltage	X <sub>M</sub> , X <sub>C</sub>	0.4			V	I <sub>OL</sub> = 48 mA	V <sub>CC</sub> = Min V <sub>IN</sub> = 2.0 V
		X <sub>M</sub>		0.4			I <sub>OL</sub> = 12 mA	
		X <sub>C</sub>		0.5			I <sub>OL</sub> = 24 mA	
I <sub>OS</sub>	Output Short Circuit Current	X <sub>M</sub>	-20 -70	-30 -130		mA	V <sub>CC</sub> = Min, V <sub>OUT</sub> = 0 V	
		X <sub>C</sub>	-18 -70	-30 -130				
I <sub>CCH</sub> I <sub>CCL</sub>	Power Supply Current		15.5 54	2.0 12		mA	V <sub>IN</sub> = Gnd	V <sub>CC</sub> = Max
							V <sub>IN</sub> = Open	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay		22 15	20 20		ns	Figs. 3-1, 3-4	

\*DC limits apply over operating temperature range; AC limits apply at T<sub>A</sub> = +25°C and V<sub>CC</sub> = +5.0 V.