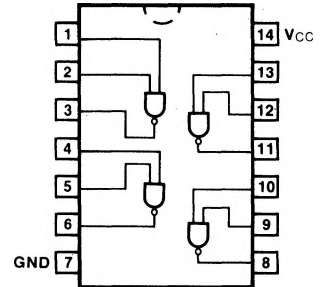


54/7438
54LS/74LS38
QUAD 2-INPUT NAND BUFFER
 (With Open-Collector Output)

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	7438PC, 74LS38PC		9A
Ceramic DIP (D)	A	7438DC, 74LS38DC	5438DM, 54LS38DM	6A
Flatpak (F)	A	7438FC, 74LS38FC	5438FM, 54LS38FM	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	1.0/1.0	0.5/0.25
Outputs	OC**/30	OC**/15 (7.5)

DC AND AC CHARACTERISTICS: See Section 3*

SYMBOL	PARAMETER	54/74		54/74LS		UNITS	CONDITIONS
		Min	Max	Min	Max		
V_{OL}	Output LOW Voltage	0.4				V	$V_{IN} = 2.0 \text{ V}$, $V_{CC} = \text{Min}$, $I_{OL} = 48 \text{ mA}$
I_{OH}	Output HIGH Current			250		μA	$V_{OH} = 5.5 \text{ V}$, $V_{CC} = \text{Min}$, $V_{IN} = V_{IL}$
I_{CCH}	Power Supply Current	8.5		2.0		mA	$V_{IN} = \text{Gnd}$
I_{CCL}		54		12			$V_{IN} = \text{Open}$
t_{PLH} t_{PHL}	Propagation Delay	22 18		22 22		ns	Figs. 3-2, 3-4

*DC limits apply over operating temperature range; AC limits apply at $T_A = +25^\circ \text{ C}$ and $V_{CC} = +5.0 \text{ V}$.

**OC — Open Collector