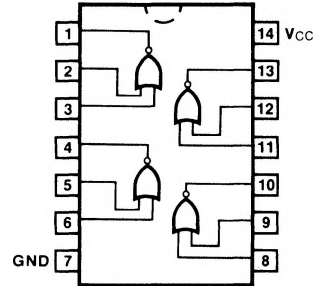


54LS/74LS33

QUAD 2-INPUT NOR BUFFER

(With Open-Collector Outputs)

CONNECTION DIAGRAM PINOUT A



ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		V _{CC} = +5.0 V ±5%, T _A = 0°C to +70°C	V _{CC} = +5.0 V ±10%, T _A = -55°C to +125°C	
Plastic DIP (P)	A	74LS33PC		9A
Ceramic DIP (D)	A	74LS33DC	54LS33DM	6A
Flatpak (F)	A	74LS33FC	54LS33FM	3I

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

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

DC AND AC CHARACTERISTICS: See Section 3*

SYMBOL	PARAMETER		54/74LS		UNITS	CONDITIONS	
			Min	Max			
V _{OL}	Output LOW Voltage	XM, XC		0.4	V	IoL = 12 mA	V _{CC} = Min
		XC		0.5		IoL = 24 mA	V _{IN} = 2.0 V
IoH	Output HIGH Current			250	μA	V _{OH} = 5.5 V, V _{CC} = Min, V _{IN} = V _{IL}	
I _{CC} H	Power Supply Current			3.6	mA	V _{IN} = Gnd	V _{CC} = Max
I _{CC} L				13.8		V _{IN} = Open	
t _{PLH} t _{PHL}	Propagation Delay			22 22	ns	Figs. 3-2, 3-4	

*DC limits apply over operating temperature range; AC limits apply at T_A = +25°C and V_{CC} = +5.0 V.
**OC — Open Collector