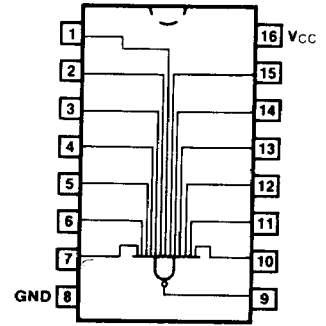


✓ **54S/74S133** 010125  
 ✓ **54LS/74LS133** 010124  
**13-INPUT NAND GATE**

**CONNECTION DIAGRAM**  
 PINOUT A



**ORDERING CODE:** See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		V <sub>CC</sub> = +5.0 V ±5%, T <sub>A</sub> = 0°C to +70°C	V <sub>CC</sub> = +5.0 V ±10%, T <sub>A</sub> = -55°C to +125°C	
Plastic DIP (P)	A	74S133PC, 74LS133PC		9B
Ceramic DIP (D)	A	74S133DC, 74LS133DC	54S133DM, 54LS133DM	6B
Flatpak (F)	A	74S133FC, 74LS133FC	54S133FM, 54LS133FM	4L

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

PINS	54/74S (U.L.)	54/74LS (U.L.)
	HIGH/LOW	HIGH/LOW
Inputs	1.25/1.25	0.5/0.25
Outputs	25/12.5	10/5.0 (2.5)

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

SYMBOL	PARAMETER	54/74S		54/74LS		UNITS	CONDITIONS	
		Min	Max	Min	Max		V <sub>IN</sub> = Gnd	V <sub>CC</sub> = Max
I <sub>CC</sub> H	Power Supply Current	5.0		0.5		mA		
I <sub>CC</sub> L		10		1.1			V <sub>IN</sub> = Open	
t <sub>PLH</sub>	Propagation Delay	6.0		15		ns	Figs. 3-1, 3-4	
t <sub>PHL</sub>		7.0		38				

\*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.