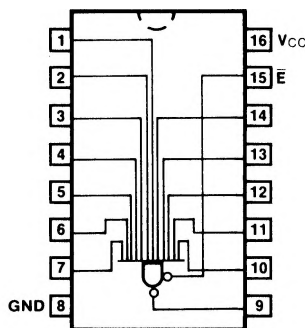


# 54S/74S134

12-INPUT NAND GATE  
(With 3-State Outputs)

## 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	74S134PC		9B
Ceramic DIP (D)	A	74S134DC	54S134DM	6B
Flatpak (F)	A	74S134FC	54S134FM	4L

## TRUTH TABLE

INPUTS		OUTPUTS	
A	L	Enable	Y
H	H	L	L
Any In LOW		L	H
X	X	H	Z

H = HIGH Voltage Level  
L = LOW Voltage Level  
X = Immaterial  
Z = High Impedance

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

PINS	54/74S (U.L.) HIGH/LOW
Inputs	1.25/1.25
Outputs	50/12.5

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

SYMBOL	PARAMETER		54/74S		UNITS	CONDITIONS	
			Min	Max			
V <sub>OH</sub>	Output HIGH Voltage	XM	2.4		V	I <sub>OH</sub> = -2.0 mA	V <sub>CC</sub> = Min V <sub>IN</sub> = 0.8 V
		XC	2.4			I <sub>OH</sub> = -6.5 mA	
I <sub>CC</sub>	Power Supply Current	Outputs HIGH		13	mA	V <sub>IN</sub> = 0 V, V <sub>E</sub> = 0 V	V <sub>CC</sub> = Max
		Outputs LOW		16		V <sub>IN</sub> = 5.0 V, V <sub>E</sub> = 0 V	
		Outputs OFF		25		V <sub>IN</sub> = 5.0 V, V <sub>E</sub> = 5.0 V	
t <sub>PLH</sub>	Propagation Delay		2.0	6.0	ns	Figs. 3-3, 3-4	
t <sub>PHL</sub>	Data to Output		2.0	7.5			
t <sub>PZH</sub>	Output Enable Time			19.5	ns	Figs. 3-3, 3-11, 3-12	
t <sub>PZL</sub>				21			
t <sub>PHZ</sub>	Output Disable Time			8.5	ns	Figs. 3-3, 3-11, 3-12	
t <sub>P LZ</sub>				14			

\*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.