

# 54S/74S135

## QUAD EXCLUSIVE-OR/NOR GATE

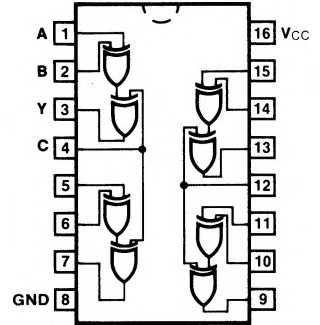
**ORDERING CODE:** See Section 9

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	74S135PC		9B
Ceramic DIP (D)	A	74S135DC	54S135DM	6B
Flatpak (F)	A	74S135FC	54S135FM	4L

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

<b>PINS</b>	<b>54/74S (U.L.)</b> HIGH/LOW
Inputs	1.25/1.25
Outputs	25/12.5

**CONNECTION DIAGRAM**  
PINOUT A



**TRUTH TABLE**

INPUTS			OUTPUT
A	B	C	Y
L	L	L	L
L	H	L	H
H	L	L	H
H	H	L	L
L	L	H	H
L	H	H	L
H	L	H	L
H	H	H	H

H = HIGH Voltage Level  
L = LOW Voltage Level

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

SYMBOL	PARAMETER	54/74S		UNITS	CONDITIONS
		Min	Max		
$I_{CC}$	Power Supply Current		99	mA	$V_{CC} = \text{Max}, V_{IN} = \text{Gnd}$
$t_{PLH}$ $t_{PHL}$	Propagation Delay from A or B to Y		13 10	ns	A or B = L, C = L Fig. 3-1, 3-5
$t_{PLH}$ $t_{PHL}$	Propagation Delay from A or B to Y		12 13.5	ns	A or B = H, C = L Fig. 3-1, 3-4
$t_{PLH}$ $t_{PHL}$	Propagation Delay from A or B to Y		13 10	ns	A or B = L, C = H Fig. 3-1, 3-4
$t_{PLH}$ $t_{PHL}$	Propagation Delay from A or B to Y		12 13	ns	A or B = H, C = H Fig. 3-1, 3-5
$t_{PLH}$ $t_{PHL}$	Propagation Delay from C to Y		12 12	ns	A = B, Fig. 3-1, 3-5
$t_{PLH}$ $t_{PHL}$	Propagation Delay from C to Y		11.5 12	ns	A $\neq$ B, Fig. 3-1, 3-4

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