

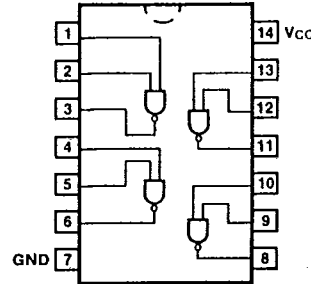
02E 63804 D

**54/74132**  
**54S/74S132**  
**54LS/74LS132**  
 QUAD 2-INPUT  
 SCHMITT TRIGGER NAND GATE

**CONNECTION DIAGRAM**  
 PINOUT A

ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		$V_{CC} = +5.0 V \pm 5\%$ , $T_A = 0^\circ C \text{ to } +70^\circ C$	$V_{CC} = +5.0 V \pm 10\%$ , $T_A = -55^\circ C \text{ to } +125^\circ C$	
Plastic DIP (P)	A	74132PC, 74S132PC 74LS132PC		9A
Ceramic DIP (D)	A	74132DC, 74S132DC 74LS132DC	54132DM, 54S132DM 54LS132DM	6A
Flatpak (F)	A	74132FC, 74S132FC 74LS132FC	54132FM, 54S132FM 54LS132FM	3I



4

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

PINS	54/74 (U.L.) HIGH/LOW	54/74S (U.L.) HIGH/LOW	54/74LS (U.L.) HIGH/LOW
Inputs	1.0/0.75	1.25/1.25	0.5/0.25
Outputs	20/10	25/12.5	10/5.0 (2.5)

DC AND AC CHARACTERISTICS: See Section 3\*

SYMBOL	PARAMETER	54/74		54/74S		54/74LS		UNITS	CONDITIONS
		Min	Max	Min	Max	Min	Max		
$V_{T+}$	Positive-going Threshold Voltage	1.5	2.0	1.6	1.9	1.4	1.9	V	$V_{CC} = +5.0 V$
$V_{T-}$	Negative-going Threshold Voltage	0.6	1.1	1.1	1.4	0.5	1.0	V	$V_{CC} = +5.0 V$
$V_{T+} - V_{T-}$	Hysteresis Voltage	0.4		0.2		0.4		V	$V_{CC} = +5.0 V$
$I_{T+}$	Input Current at Positive-going Threshold	-0.43	**	-0.9	**	-0.14	**	mA	$V_{CC} = +5.0 V, V_{IN} = V_{T+}$
$I_{T-}$	Input Current at Negative-going Threshold	-0.56	**	-1.1	**	-0.18	**	mA	$V_{CC} = +5.0 V, V_{IN} = V_{T-}$
$I_{OS}$	Output Short Circuit Current	-18	-55					mA	$V_{CC} = \text{Max}, V_{OUT} = 0 V$
$I_{CCH}$ $I_{CCL}$	Power Supply Current	24 40		44 68		11 14		mA	$V_{IN} = \text{Gnd}$ $V_{IN} = \text{Open}$ $V_{CC} = \text{Max}$
$t_{PLH}$ $t_{PHL}$	Propagation Delay	22 22		10.5 13		20 20		ns	Figs. 3-1, 3-4

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