54/7414
54LS/74LS14

HEX SCHMITT TRIGGER INVERTER

ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE $V_{CC} = +5.0$ V ±5%, $T_A = 0°C$ to $+70°C$	MILITARY GRADE $V_{CC} = +5.0$ V ±10%, $T_A = -55°C$ to $+125°C$	PKG TYPE
Plastic DIP (P)	A	7414PC, 74LS14PC		9A
Ceramic DIP (D)	A	7414DC, 74LS14DC	5414DM, 54LS14DM	6A
Flatpak (F)	A	7414FC, 74LS14FC	5414FM, 54LS14FM	3I
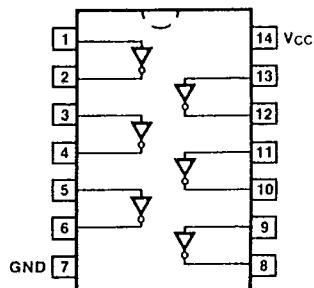
INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

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

DC AND AC CHARACTERISTICS: See Section 3*

SYMBOL	PARAMETER	54/74 Min Max	54/74LS Min Max	UNITS	CONDITIONS
V_{T+}	Positive-going Threshold Voltage	1.5 2.0	1.5 2.0	V	$V_{CC} = +5.0$ V
V_{T-}	Negative-going Threshold Voltage	0.6 1.1	0.6 1.1	V	$V_{CC} = +5.0$ V
$V_{T+} - V_{T-}$	Hysteresis Voltage	0.4	0.4	V	$V_{CC} = +5.0$ V
I_{T+}	Input Current at Positive-going Threshold	-0.43**	-0.14**	mA	$V_{CC} = +5.0$ V, $V_{IN} = V_{T+}$
I_{T-}	Input Current at Negative-going Threshold	-0.56**	-0.18**	mA	$V_{CC} = +5.0$ V, $V_{IN} = V_{T-}$
I_{IL}	Input LOW Current	-1.2	-0.4	mA	V_{CC} = Max, V_{IN} = 0.4 V
I_{OS}	Output Short Circuit Current	-18 -55	-20 -100	mA	V_{CC} = Max, V_{OUT} = 0 V
I_{CCH}	Power Supply Current	36	16	mA	V_{IN} = Gnd V_{CC} = Max
I_{CCL}		60	21		V_{IN} = Open
t_{PLH}	Propagation Delay	22	22	ns	Figs. 3-1, 3-15
t_{PHL}		22	22		

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