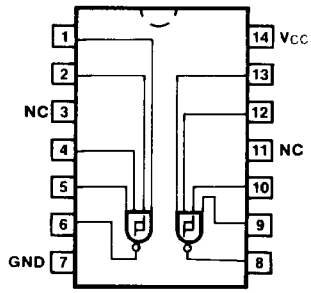
54/7413
54LS/74LS13

DUAL 4-INPUT SCHMITT TRIGGER

CONNECTION DIAGRAM
PINOUT A



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	7413PC, 74LS13PC		9A
Ceramic DIP (D)	A	7413DC, 74LS13DC	5413DM, 54LS13DM	6A
Flatpak (F)	A	7413FC, 74LS13FC	5413FM, 54LS13FM	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	54/74 Max	54/74LS Min	54/74LS 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	-0.65**		-0.14**		mA	V_{CC} = +5.0 V, V_{IN} = V_{T+}	
I_{T-}	Input Current at Negative-going Threshold	-0.85**		-0.18**		mA	V_{CC} = +5.0 V, V_{IN} = V_{T-}	
I_{OS}	Output Short Circuit Current	-18	-55	-20	-100	mA	V_{CC} = Max	
I_{CCH}	Power Supply Current		23		6.0	mA	V_{IN} = Gnd	V_{CC} = Max
I_{CCL}			32		7.0		V_{IN} = Open	
t_{PLH} t_{PHL}	Propagation Delay		27 22		22 27	ns	Fig. 3-1, 3-15	

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