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NTE9936
Integrated Circuit
DTL, Hex Inverter

Description:

The NTE9936 is a Diode Transistor Logic (DTL) Hex Inverter integrated circuit in a 14–Lead DIP type package. This device provides an excellent balance of speed, power dissipation, and noise immunity for general purpose digital application.

Absolute Maximum Ratings:

Supply Voltage
- Operating . . . . . 4.5 to 5.5V
- Continuous 8.0V
- Pulsed (Less Than 1sec) 12V

Output Current (Into Outputs with Outputs Low)
- Continuous 30mA
- Pulsed (Less Than 30ms) 90mA

Input Forward Current
- Continuous . . . . . –10mA
- Pulsed (Less Than 30ms) . . . . . –30mA

Negative Voltage at Input
- Continuous . . . . . –0.5V
- Pulsed (Less Than 30ms) . . . . . –1.58V

Input Reverse Current 1.0mA

Total Power Dissipation 66mW

Positive Voltage at Diode Input 5.5V

Maximum Junction Temperature . . . . . +150°C

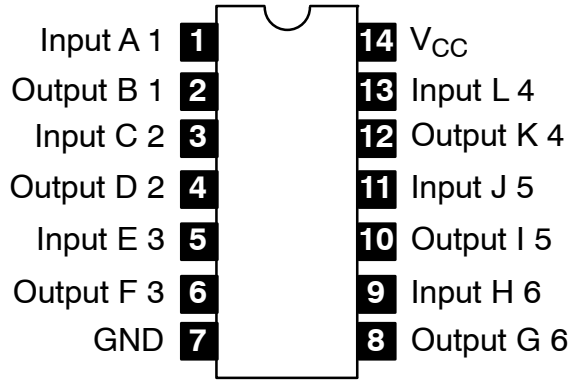
Operating Temperature Range . . . . . 0° to +75°C

Storage Temperature Range . . . . . –55° to +125°C

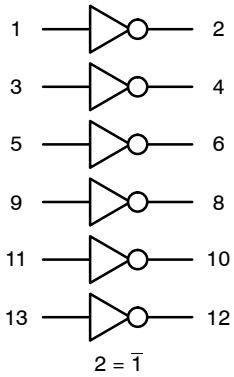
Electrical Chracteristics: (V_{CC} = 5V, T_A = +25°C unless otherwise spcified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_{OL}	I_{OL} = 12mA, V_{IH} = 1.9V	–	–	0.45	V
	V_{OH}	I_{OH} = −120mA, V_{IL} = 1.1V	2.6	–	–	V
Short−Circuit Current	I_{SC}		–	–	−1.3	mA
Reverse Current	I_R	V_R = 4V	–	–	5	μA
Output Leakage Current	I_{CEX}	V_{CEX} = 5V	–	–	100	μA
Forward Current	I_F	V_F = 450mV	–	–	−1.4	mA
Power Drain Current (Total Device)	I_{PDH}		–	–	24	mA
Switching Times	$t_{pd(+)}$	I_{OL} = 12mA (Pulse In), I_{OH} = −120mA (Pulse Out)	25	–	80	ns
	$t_{pd(-)}$		10	–	30	ns

Pin Connection Diagram



Logic Diagram



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Input Loading Factor = 1
Output Loading factor = 8
Total Power Dissipation:
Inputs Low = 36mW
Inputs High = 78mW
50% Duty Cycle = 57mW
Propagation Delay Time = 30ns Typ