

NTE1434 Integrated Circuit Voltage Comparator

Description:

The NTE1434 is an integrated circuit in a 5-Lead SIP type package designed for use as a voltage comparator that operates from a single power supply.

Features:

- Low Input Current
- Wide Operating Voltage Range
- Low Power Dissipation
- High Output Breakdown Voltage
- Capable of Directly Driving a Relay or a Lamp

Applications:

- Voltage Comparator
- Electric Shutter
- CR Timer
- Time Delay Circuit
- Oscillator (Square Wave)

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}	28V
Input Voltage, V_{IN}	V_{CC}
Output Drive Current (Output Saturated), I_{OL}	50mA
Output Drive Voltage, V_{OH}	30V
Power Dissipation, P_D	180mW
Derate Above 25°C	1.8mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-20° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+125^\circ\text{C}$

Recommended Operating Conditions:

Supply Voltage Range	2.5V to 28V
Rated Voltage	12V

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage Range	V_{CC}		2.5	–	28	V
Circuit Current	I_{CC}		–	1.8	2.5	mA
Inverting Input Voltage	$V_{IN(1)}$		1.4	–	$V_{CC}-0.2$	V
Non-Inverting Input Voltage	$V_{IN(2)}$		1.4	–	$V_{CC}-0.2$	V
Inverting Input Current	$I_{IN(1)}$		–	20	75	nA
Non-Inverting Input Current	$I_{IN(2)}$		–	20	75	nA
Input Offset Voltage	V_{IO}	Reference Voltage at Pin1	–7	+2	+12	mV
Output Saturation Voltage	V_{OL}	$V_{CC} = 6\text{V}$, $R_L = 100\Omega$	–	0.3	0.6	V
		$V_{CC} = 12\text{V}$, $R_L = 200\Omega$	–	0.3	0.6	V
		$V_{CC} = 24\text{V}$, $R_L = 400\Omega$	–	0.3	0.6	V
Propagation Delay Time	t_{PLH}		–	1	–	μs
	t_{PHL}		–	10	–	μs

Pin Connection Diagram
(Front View)

