

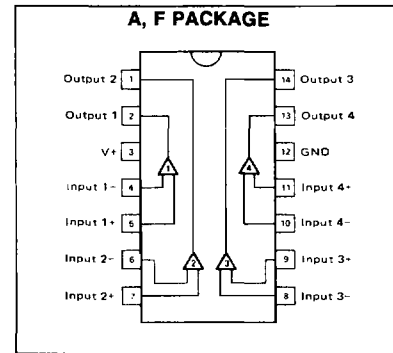
FEATURES

- WIDE SINGLE SUPPLY VOLTAGE RANGE $2 V_{DC}$ TO $36 V_{DC}$ OR DUAL SUPPLIES $\pm 1 V_{DC}$ TO $\pm 18 V_{DC}$
- VERY LOW SUPPLY CURRENT DRAIN (0.8mA)—INDEPENDENT OF SUPPLY VOLTAGE (2mW/COMPARATOR AT $+5 V_{DC}$)
- LOW INPUT BIASING CURRENT — 35nA
- LOW INPUT OFFSET CURRENT — 3.0nA AND MAXIMUM OFFSET VOLTAGE — 2mV
- INPUT COMMON-MODE VOLTAGE RANGE INCLUDES GROUND
- DIFFERENTIAL INPUT VOLTAGE RANGE EQUAL TO THE POWER SUPPLY VOLTAGE
- LOW OUTPUT SATURATION VOLTAGE — 1mV AT $5\mu A$, 70mV AT 1mA
- OUTPUT VOLTAGE COMPATIBLE WITH TTL, DTL, ECL, MOS AND CMOS LOGIC SYSTEMS

ABSOLUTE MAXIMUM RATINGS

Supply Voltage V_{+}	$36V_{DC}$ or $\pm 18 V_{DC}$
Differential Input Voltage	36 VDC
Input Voltage	$-0.3 V_{DC}$ to $+36 V_{DC}$
Power Dissipation	
Molded DIP (LM 139AA, LM 239AA, LM 339AA) Cerdip (LM 139AF, LM 239AF, LM 339AF)	570 mW
Output Short-Circuit to GND	900 mW
Operating Temperature Range	Continuous
LM339A	$0^{\circ}C$ to $+70^{\circ}C$
LM239A	$-25^{\circ}C$ to $+85^{\circ}C$
LM139A	$-55^{\circ}C$ to $+125^{\circ}C$
Storage Temperature Range	$-65^{\circ}C$ to $+150^{\circ}C$
Lead Temperature (Soldering, 10 sec)	$300^{\circ}C$

PIN CONFIGURATION



ELECTRICAL CHARACTERISTICS

$V_{RL} = 5V$, $R_L = 5.1K\Omega$, $V_{+} = 5V$

PARAMETER	TEST CONDITIONS	LIMITS			UNIT
		MIN	TYP	MAX	
Large Signal Response Time	$V_{IN} = \text{TTL Logic Swing}$, $V_{REF} = +1.4V_{DC}$, $T_A = 25^{\circ}C$		300		ns
Response Time 1			1.3	μs	

NOTE 1

The response time specified is for a 100mV input step with 5mV overdrive. For larger overdrive signals 300ns can be obtained, see typical performance characteristics section

SCHEMATIC DIAGRAM

