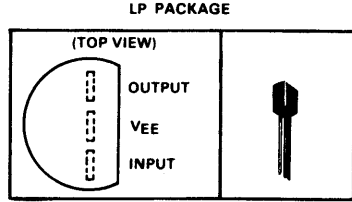


- Standard TO-92 Package
- Supply Current 300 μ A Max
- Wide Input/Output Voltage Range
- Low Input Bias Current
- Output Short-Circuit Protection
- High-Impedance Input . . . JFET Input Stage
- Internal Frequency Compensation
- Latch-Up-Free Operation

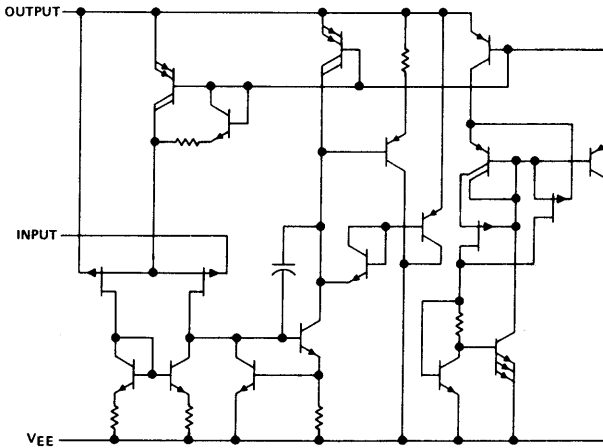


description

The TL068C is a JFET-input unity-gain amplifier featuring high input impedance, wide bandwidth, and low input bias current. A current-sourcing load such as a pull-up resistor is required for circuit operation.

The TL068C is characterized for operation over the commercial temperature range of 0°C to 70°C.

schematic



absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

Voltage from output to V_{EE}	36 V
Voltage from input to V_{EE}	36 V
Voltage from input to output	30 V
Duration of short circuit (see Note 1)	Unlimited
Continuous total dissipation at (or below) 25°C free-air temperature (see Note 2)	775 mW
Operating free-air temperature range	0°C to 70°C
Storage temperature range	-65°C to 150°C
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds	260°C

- NOTES: 1. The output may be shorted to any point as long as the voltage from output to V_{EE} does not exceed 36 V. Temperature and/or V_{EE} must be limited to ensure that the dissipation rating is not exceeded.
2. For operation above 25°C free-air temperature, refer to Dissipation Derating Curves in Section 2.

ADVANCE INFORMATION

This document contains information on a new product. Specifications are subject to change without notice.

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Operational Amplifiers

TL068

TYPE TL068C

3-PIN VOLTAGE FOLLOWER WITH JFET INPUT

electrical characteristics, $V_{EE} = -15\text{ V}$, $V_{+} = +15\text{ V}$, $T_A = 25^{\circ}\text{C}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{IO}	Input offset voltage $I_O = 2\text{ mA}$		3	15	mV
I_B	Input bias current		$T_A = 25^{\circ}\text{C}$		pA
			$T_A = 0^{\circ}\text{C to } 70^{\circ}\text{C}$		
V_{IR}	Input voltage range	$V_{EE} = -15\text{ V}$, $V_{+} = 15\text{ V}$, $R_L = 10\text{ k}\Omega$	12	13.5	V
			-11.5	-12	
A_V	Large-signal voltage amplification	$V_{EE} = -15\text{ V}$, $V_{+} = 15\text{ V}$, $R_L = 10\text{ k}\Omega$	0.999	0.9997	V/V
k_{SVR}	Supply voltage rejection ratio	$V_{EE} = -15\text{ V to } +10\text{ V}$	70	78	dB
k_{LCS}	Load-circuit sensitivity ($\Delta V_{IO}/\Delta I_O$)	$I_O = 0.5\text{ mA to } 5\text{ mA}$	2	4	mV/mA
I_{OS}	Short circuit output current		25		mA
I_{EE}	Supply current		-125	-300	μA

operating characteristics, $V_{EE} = -15\text{ V}$, $V_{+} = 15\text{ V}$, $T_A = 25^{\circ}\text{C}$, $R_L = 10\text{ k}\Omega$, $C_L = 100\text{ pF}$

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Bandwidth			1		MHz
Slew rate	$V_O = \pm 10\text{ V}$	Positive-going edge	7		V/ μs
		Negative-going edge	100		
Rise time	$V_O = 100\text{ mV}$		130		ns
Overshoot			20%		

PARAMETER MEASUREMENT INFORMATION

