

## SOT-89-3L Encapsulate Three-terminal Voltage Regulators

### CJ78L18 Three-terminal positive voltage regulator

#### FEATURES

Maximum output current

$I_{OM}$ : 0.1 A

Output voltage

$V_O$ : 18 V

Continuous total dissipation

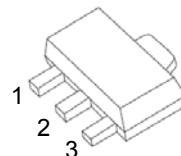
$P_D$ : 0.5 W

#### SOT-89-3L

1.OUT

2.GND

3.IN



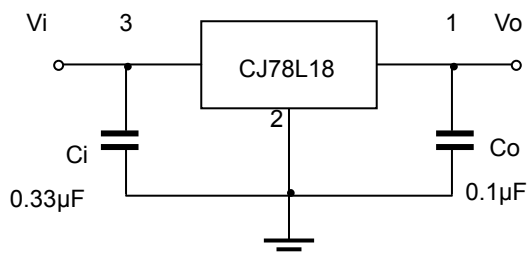
#### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0~+150	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

#### ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=26V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	$V_o$	$25^\circ C$	17.3	18	18.7	V	
		$20.5V \leq V_i \leq 33V, I_o=1mA-40mA$	0-125°C	17.1	18	18.9	V
		$V_i=26V, I_o=1mA-70mA$		17.1	18	18.9	V
Load Regulation	$\Delta V_o$	$I_o=1mA-100mA, V_i=26V$	25°C	27	180	mV	
		$I_o=1mA-40mA, V_i=26V$	25°C	19	90	mV	
Line regulation	$\Delta V_o$	$20.5V \leq V_i \leq 33V, I_o=40mA$	25°C	70	360	mV	
		$22V \leq V_i \leq 33V, I_o=40mA$	25°C	64	300	mV	
Quiescent Current	$I_q$		25°C	4.7	6.5	mA	
Quiescent Current Change	$\Delta I_q$	$22V \leq V_i \leq 33V, I_o=40mA$	0-125°C		1.5	mA	
	$\Delta I_q$	$1mA \leq I_o \leq 40mA, V_i=26V$	0-125°C		0.1	mA	
Output Noise Voltage	$V_N$	10Hz ≤ f ≤ 100KHz	25°C	89		μV	
Ripple Rejection	RR	$21.5V \leq V_i \leq 31.5V, f=120Hz$	0-125°C	32	36	dB	
Dropout Voltage	$V_d$	$T_j=25^\circ C$	25°C	1.7		V	

#### TYPICAL APPLICATION



Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.