



**TO-92 Encapsulate Three-terminal Voltage Regulator**

**CJ78L15** Three-terminal positive voltage regulator

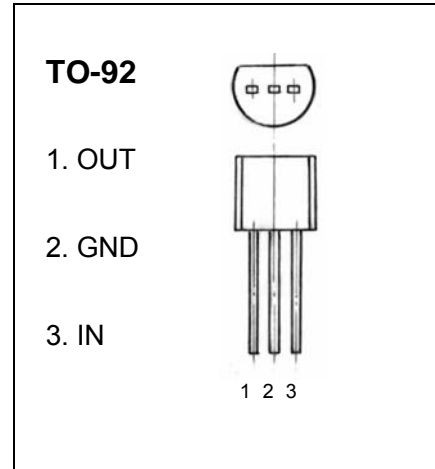
**FEATURES**

Maximum Output current

$I_{OM}$ : 0.1 A

Output voltage

$V_O$ : 15 V



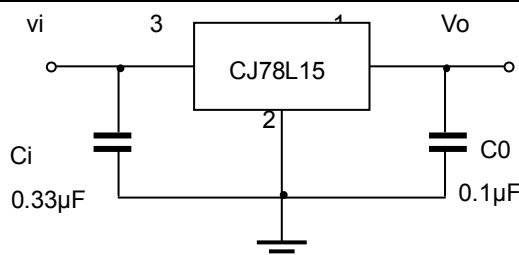
**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

Parameter	Symbol	Value	Units
Input Voltage	$V_i$	30	V
Operating Junction Temperature Range	$T_{OPR}$	0~+150	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

**ELECTRICAL CHARACTERISTICS ( $V_i=23V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified )**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25^\circ C$	14.4	15	15.6	V
		$17.5V \leq V_i \leq 30V, I_o=1mA \sim 40mA$	14.25	15	15.75	V
		$V_i=23V, I_o=1mA \sim 70mA$	14.25	15	15.75	V (note)
Load Regulation	$\Delta V_o$	$T_j=25^\circ C, I_o=1mA \sim 100mA, V_i=23V$		25	150	mV
		$T_j=25^\circ C, I_o=1mA \sim 40mA, V_i=23V$		15	75	mV
Line regulation	$\Delta V_o$	$17.5V \leq V_i \leq 30V, T_j=25^\circ C, I_o=40mA$		65	300	mV
		$19V \leq V_i \leq 30V, T_j=25^\circ C, I_o=40mA$		58	250	mV
Quiescent Current	$I_q$			4.6	6.5	mA
Quiescent Current Change	$\Delta I_q$	$19V \leq V_i \leq 30V, I_o=40mA$			1.5	mA
	$\Delta I_q$	$1mA \leq I_o \leq 40mA, V_i=23V$			0.1	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz, T_s=25^\circ C$		82		$\mu V$
Ripple Rejection	RR	$18.5V \leq V_i \leq 28.5V, f=120Hz, 25^\circ C \leq T_j \leq 125^\circ C$	34	39		dB
Dropout Voltage	$V_d$	$T_j=25^\circ C$		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.