

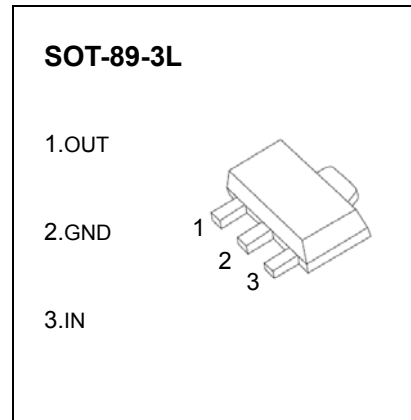


SOT-89-3L Encapsulate Three-terminal Voltage Regulators

CJ78L15 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 0.1\text{ A}$
- Output voltage
 $V_O: 15\text{ V}$
- Continuous total dissipation
 $P_D: 0.5\text{ W}$



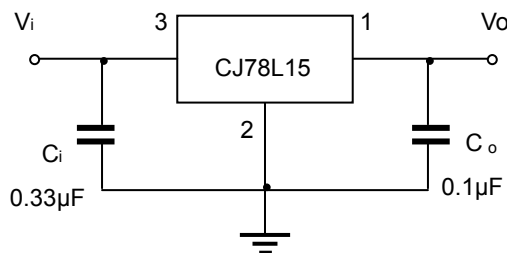
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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 ($V_i=23\text{V}, I_o=40\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	14.4	15	15.6	V	
		$17.5\text{V} \leq V_i \leq 30\text{V}, I_o=1\text{mA}-40\text{mA}$	0-125°C	14.25	15	15.75	V
		$V_i=23\text{V}, I_o=1\text{mA}-70\text{mA}$		14.25	15	15.75	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}, V_i=23\text{V}$	25°C	25	150	mV	
		$I_o=1\text{mA}-40\text{mA}, V_i=23\text{V}$	25°C	15	75	mV	
Line regulation	ΔV_o	$17.5\text{V} \leq V_i \leq 30\text{V}, I_o=40\text{mA}$	25°C	65	300	mV	
		$19\text{V} \leq V_i \leq 30\text{V}, I_o=40\text{mA}$	25°C	58	250	mV	
Quiescent Current	I_q		25°C	4.6	6.5	mA	
Quiescent Current Change	ΔI_q	$19\text{V} \leq V_i \leq 30\text{V}, I_o=40\text{mA}$	0-125°C		1.5	mA	
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}, V_i=23\text{V}$	0-125°C		0.1	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	82		µV	
Ripple Rejection	RR	$18.5\text{V} \leq V_i \leq 28.5\text{V}, f=120\text{Hz}$	0-125°C	34	39	dB	
Dropout Voltage	V_d		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.

Typical Characteristics

CJ78L15

