



SOT-89 Encapsulate Three-terminal Voltage Regulator

CJ78L15 Three-terminal positive voltage regulator

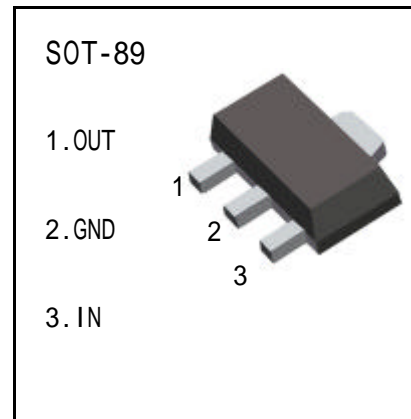
FEATURES

Maximum Output current

$I_{OM}: 0.1 A$

Output voltage

$V_O: 15 V$



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

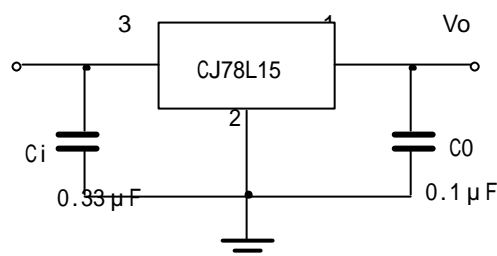
Parameter	Symbol	Value	Units
Input Voltage	V_i	30	V
Operating Junction Temperature Range	T_{OPR}	0-+150	
Storage Temperature Range	T_{STG}	-55-+150	

ELECTRICAL CHARACTERISTICS

($V_{is}=23V, I_o=40mA, 0 < T_j < 125$, $C_1=0.33 \mu F, C_o=0.1 \mu F$, unless otherwise specified)

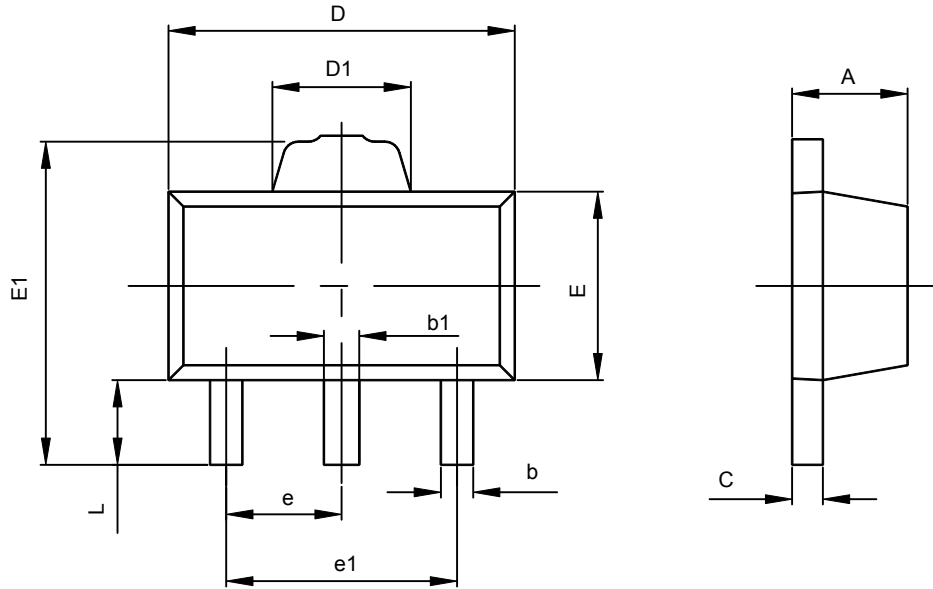
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25$	14.4	15	15.6	V
		$17.5V \quad V_i \quad 30V, I_o=1mA-40mA$	14.25	15	15.75	V
		$V_i=23V, I_o=1mA-70mA$	14.25	15	15.75	V (note)
Load Regulation	V_o	$T_j=25$, $I_o=1mA-100mA, V_i=23V$		25	150	mV
		$T_j=25$, $I_o=1mA-40mA, V_i=23V$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

SOT-89-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.360	0.560	0.014	0.022
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.400	1.800	0.055	0.071
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	2.900	3.100	0.114	0.122
L	0.900	1.100	0.035	0.043