JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

SOT-89 Encapsulate Three-terminal Voltage Regulator

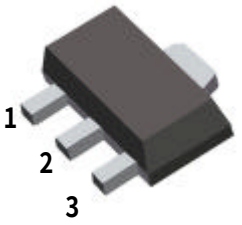
CJ78L15 Three-terminal positive voltage regulator

SOT-89

1.OUT

2.GND

3.IN



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)

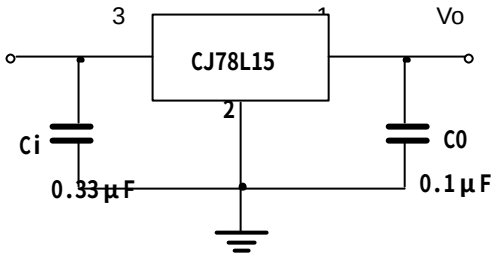
Parameter	Symbol	Value	Unlts
Input Voltage	V_i	30	V
Operating Junction Temperature Range	T_{OPR}	0-+150	℃
Storage Temperature Range	T_{STG}	-55-+150	℃

ELECTRICAL CHARACTERISTICS

(Vis=23V,Io=40mA,0℃<Tj<125℃,C1=0.33μF,Co=0.1μF, unless otherwise specified)

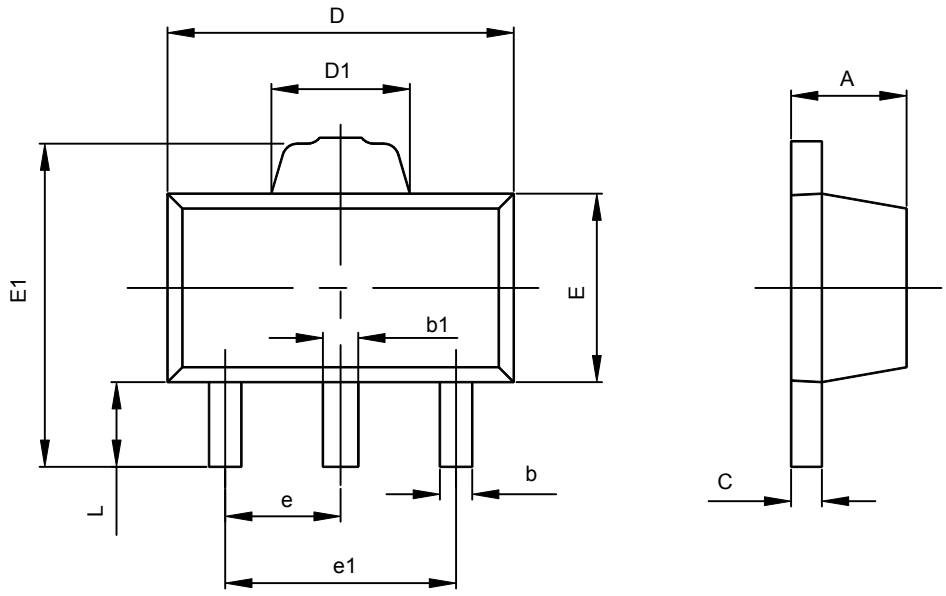
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	Vo	Tj=25℃	14.4	15	15.6	V
		17.5V≤V_i≤30V, Io=1mA-40mA	14.25	15	15.75	V
		V_i=23V, Io=1mA-70mA	14.25	15	15.75	V (note)
Load Regulation	△Vo	Tj=25℃, Io=1mA-100mA, V_i=23V		25	150	mV
		Tj=25℃, Io=1mA-40mA, V_i=23V		15	75	mV
Line regulation	△Vo	17.5V ≤ Vi ≤ 30V, Tj=25℃ ,Io=40mA		65	300	mV
		19V≤Vi≤30V, Tj=25℃,Io=40mA		58	250	mV
Quiescent Current	Iq			4.6	6.5	mA
Quiescent Current Change	△Iq	19V≤Vi≤30V, Io=40mA			1.5	mA
	△Iq	1mA≤I_o≤40mA, Vi=23V			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz, Ts=25℃		82		μV
Ripple Rejection	RR	18.5V≤Vi≤28.5V,f=120Hz, 25℃≤Tj≤125℃	34	39		dB
Dropout Voltage	Vd	Tj=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