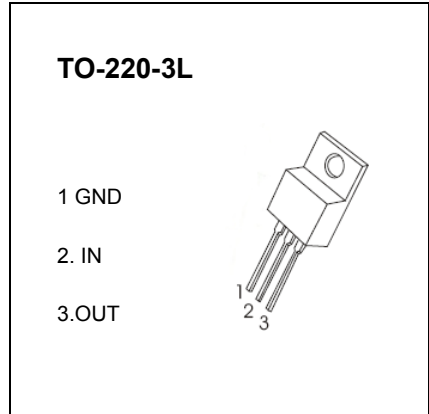




TO-220-3L Encapsulate Voltage Regulators

CJ7912 Three-terminal negative voltage regulator



FEATURES

- Maximum output current I_{OM} : 1.5 A
- Output voltage V_o : - 12 V
- Continuous total dissipation
 - P_D : 1.5 W ($T_a = 25\text{ }^\circ\text{C}$)
 - 15 W ($T_c = 25\text{ }^\circ\text{C}$)

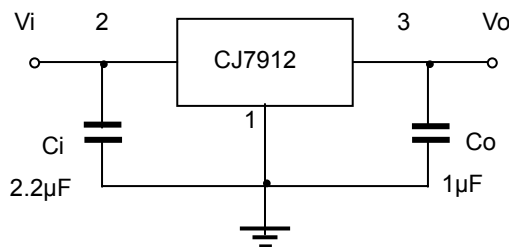
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.33	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	0~+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

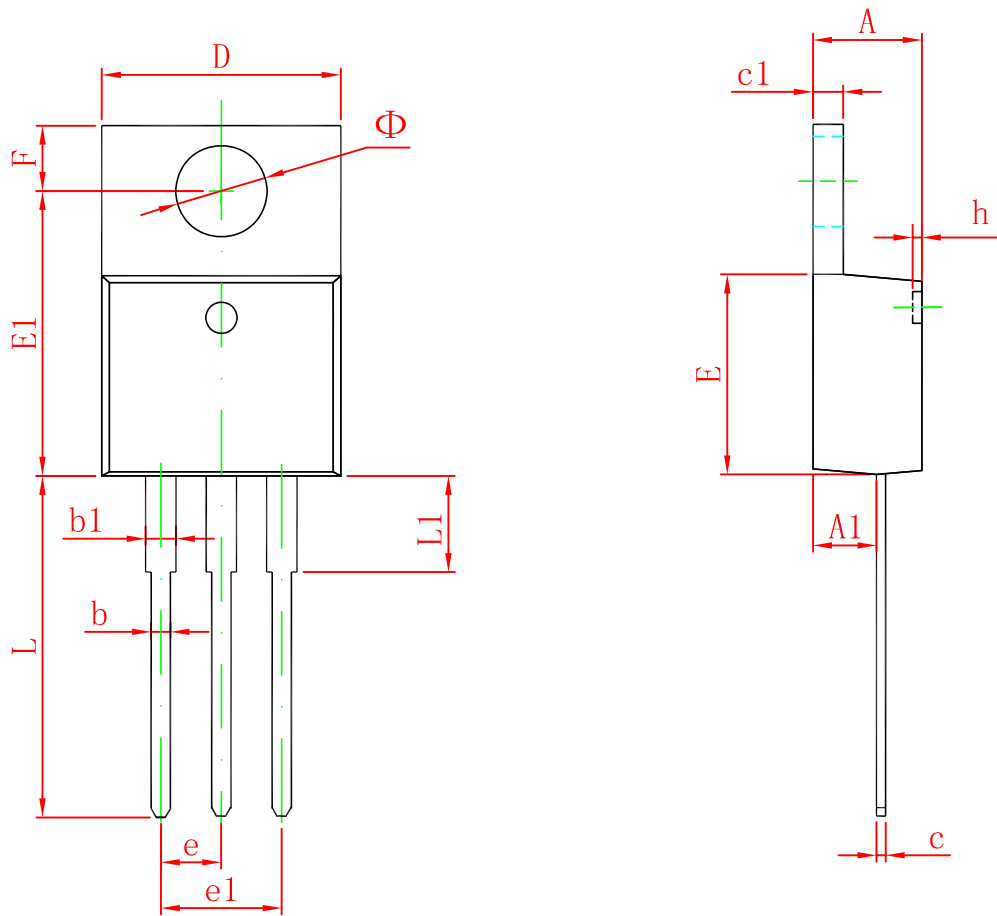
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -19\text{V}, I_o = 500\text{mA}, C_i = 2.2\mu\text{F}, C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output Voltage	V_o	$-14.5\text{V} \leq V_i \leq -27\text{V}, I_o = 5\text{mA} - 1\text{A}$ $P \leq 15\text{W}$	25 $^\circ\text{C}$	-11.5	-12	-12.5	V
			0-125 $^\circ\text{C}$	-11.4	-12	-12.6	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25 $^\circ\text{C}$	15	200	mV	
		$I_o = 250\text{mA} - 750\text{mA}$	25 $^\circ\text{C}$	5	75	mV	
Line Regulation	ΔV_o	$-14.5\text{V} \leq V_i \leq -30\text{V}$	25 $^\circ\text{C}$	5	80	mV	
		$-16\text{V} \leq V_i \leq -22\text{V}$	25 $^\circ\text{C}$	3	30	mV	
Quiescent Current	I_q		25 $^\circ\text{C}$	2	3	mA	
Quiescent Current Change	ΔI_q	$-14.5\text{V} \leq V_i \leq -30\text{V}$	0-125 $^\circ\text{C}$		0.5	mA	
		$5\text{mA} \leq I_o \leq 1\text{A}$	0-125 $^\circ\text{C}$		0.5	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25 $^\circ\text{C}$	300		μV	
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	0-125 $^\circ\text{C}$	-0.8		mV/ $^\circ\text{C}$	
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -25\text{V}, f = 120\text{Hz}$	0-125 $^\circ\text{C}$	54	60	dB	
Dropout Voltage	V_d	$I_o = 1\text{A}$	25 $^\circ\text{C}$	1.1		V	
Peak Current	I_{pk}		25 $^\circ\text{C}$	2.1		A	

TYPICAL APPLICATION



TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155