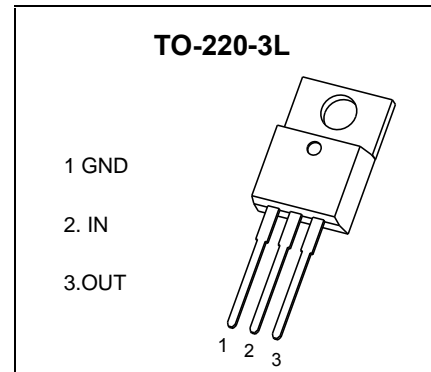


## TO-220-3L Encapsulate Voltage Regulators

### 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 ( $T_a = 25^\circ\text{C}$ )



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

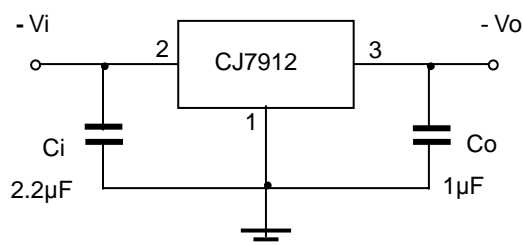
Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	-35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	83.3	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

#### 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)

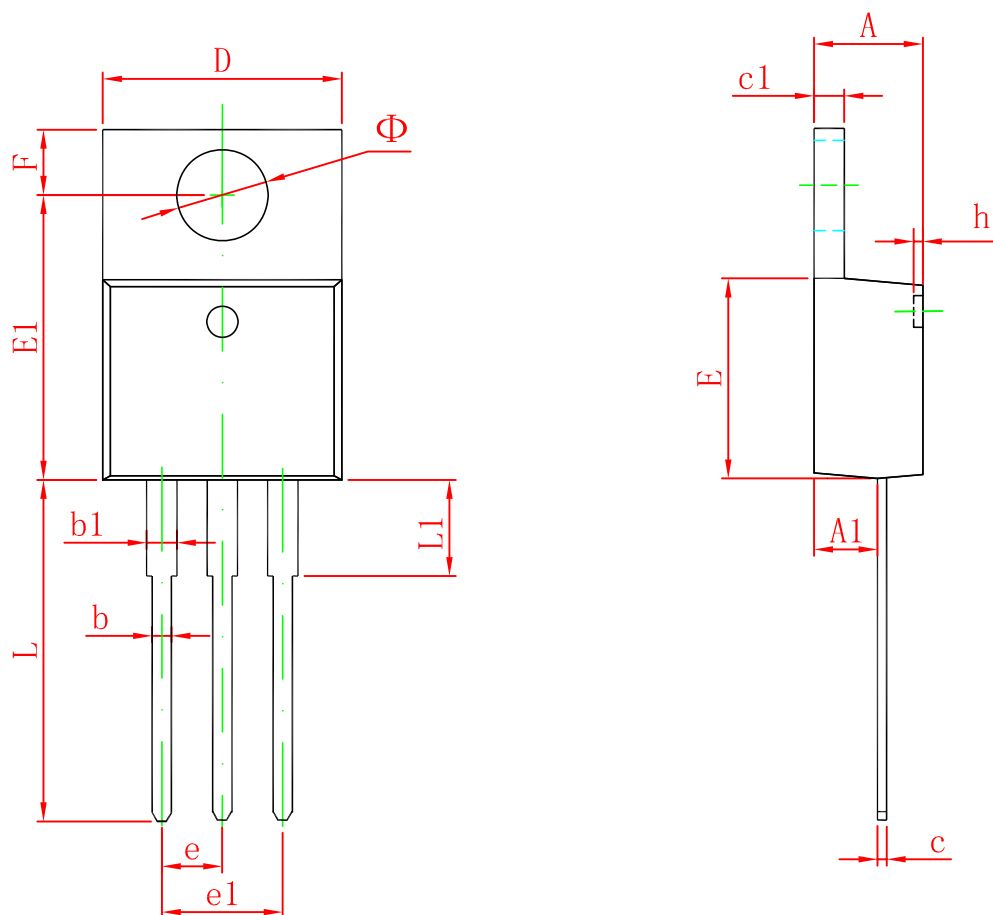
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$25^\circ\text{C}$	-11.52	-12	-12.48	V
		$-14.5\text{V} \leq V_i \leq -27\text{V}$ , $I_o = 5\text{mA} - 1\text{A}$	0-125 $^\circ\text{C}$	-11.4	-12.6	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{mA} - 1.5\text{A}$	$25^\circ\text{C}$	15	200	mV
		$I_o = 250\text{mA} - 750\text{mA}$	$25^\circ\text{C}$	5	75	mV
Line Regulation	$\Delta V_o$	$-14.5\text{V} \leq V_i \leq -30\text{V}$	$25^\circ\text{C}$	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	$\Delta I_q$	$-14.5\text{V} \leq V_i \leq -30\text{V}$	0-125 $^\circ\text{C}$		0.5	mA
	$\Delta I_q$	$5\text{mA} \leq I_o \leq 1\text{A}$	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		$\mu\text{V}/V_o$
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

\* Pulse test.

#### 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
$\Phi$	3.735	3.935	0.147	0.155