



# TO-220 Encapsulate Voltage Regulator

**CJ7815** Three-terminal positive voltage regulator

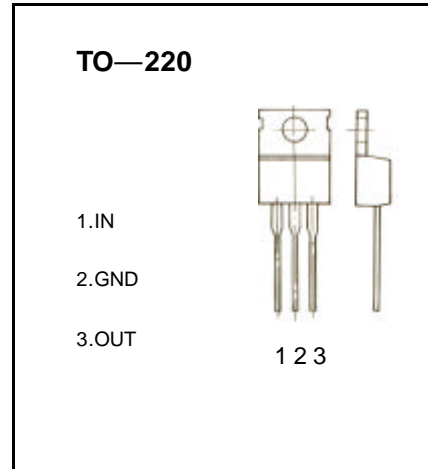
**FEATURES**

Maximum Output current

$I_{OM}$ : 1.5 A

Output voltage

$V_o$  : 15 V



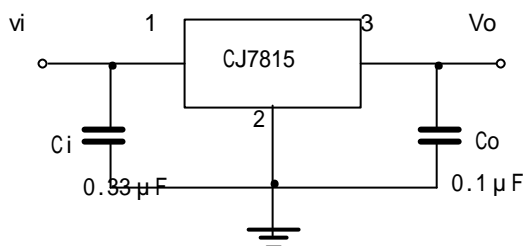
**ABSOLUTE MAXIMUM RATINGS ( Operating temperature range applies unless otherwise specified )**

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	-20-+125	
Storage Temperature Range	$T_{STG}$	-55-+150	

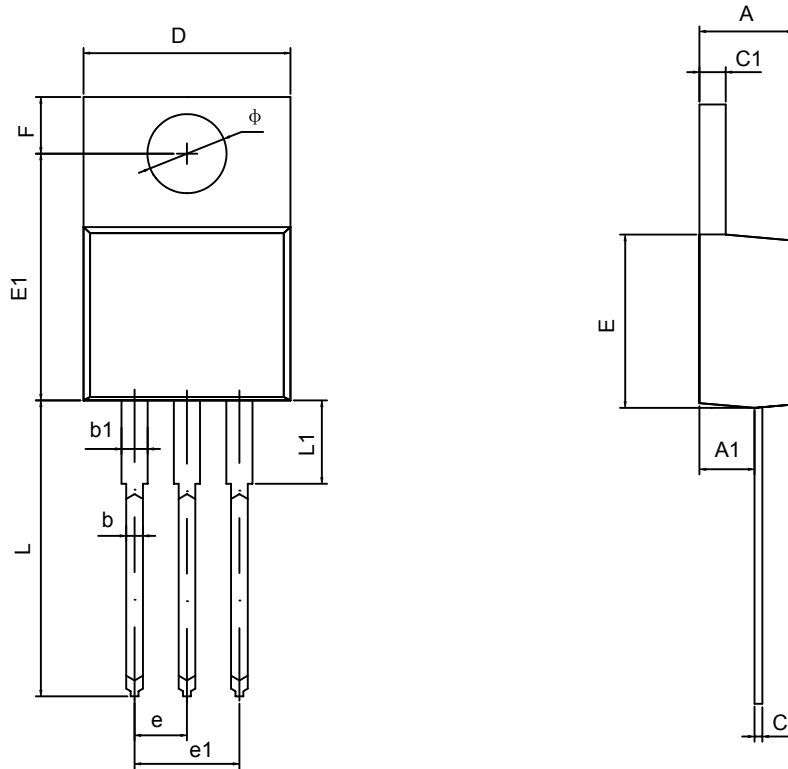
**ELECTRICAL CHARACTERISTICS**( $V_i=23V, I_o=500mA, 0 < T_j < 125$  , $C_i=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25$	14.4	15	15.6	V
		17.5V $V_i$ 30V, $I_o=5mA-1A$ $P_o < 15W$	14.25	15	15.75	V
Load Regulation	$V_o$	$T_j=25$ , $I_o=5mA-1.5A$		12	300	mV
		$T_j=25$ , $I_o=250mA-750mA$		3	150	mV
Line regulation	$V_o$	17.5V $V_i$ 30V, $T_j=25$		12	300	mV
		20V $V_i$ 26V, $T_j=25$		3	150	mV
Quiescent Current	$I_q$	$T_j=25$		4.3	8	mA
Quiescent Current Change	$I_q$	17.5V $V_i$ 30V			1	mA
	$I_q$	5mA $I_o$ 1A			0.5	mA
Output Noise Voltage	$V_n$	10Hz f 100KHz		90		$\mu V$
Ripple Rejection	RR	18.5V $V_i$ 28.5V, f=120Hz, $T_j=25$	54	70		dB
Dropout Voltage	$V_d$	$T_j=25$ , $I_o=1A$		2		V
Short Circuit Current	$I_{sc}$	$T_j=25$		230		mA
Peak Current	$I_{pk}$	$T_j=25$		2.1		A

**TYPICAL APPLICATION**



## TO-220-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	4.470	4.670	1.176	0.184
<b>A1</b>	2.520	2.820	0.099	0.111
<b>b</b>	0.710	0.910	0.028	0.036
<b>b1</b>	1.170	1.370	0.046	0.054
<b>c</b>	0.310	0.530	0.012	0.021
<b>c1</b>	1.710	1.370	0.046	0.054
<b>D</b>	10.010	10.310	0.394	0.406
<b>E</b>	8.500	8.900	0.335	0.350
<b>E1</b>	12.060	12.460	0.475	0.491
<b>e</b>	2.540TYP		0.100TYP	
<b>e1</b>	4.980	5.180	0.196	0.204
<b>F</b>	2.590	2.890	0.102	0.114
<b>L</b>	13.400	13.800	0.528	0.543
<b>L1</b>	3.560	3.960	0.140	0.156
$\phi$	3.790	3.890	0.149	0.153