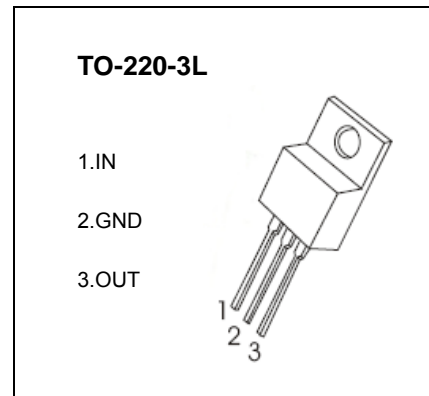


TO-220-3L Plastic-Encapsulate Voltage Regulator

CJ7815 Three-terminal positive voltage regulator

FEATURES

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



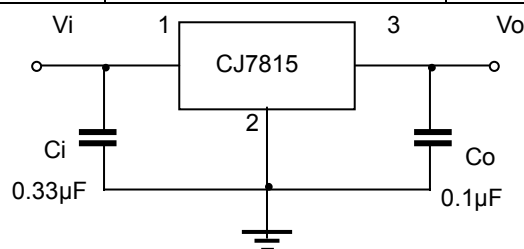
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

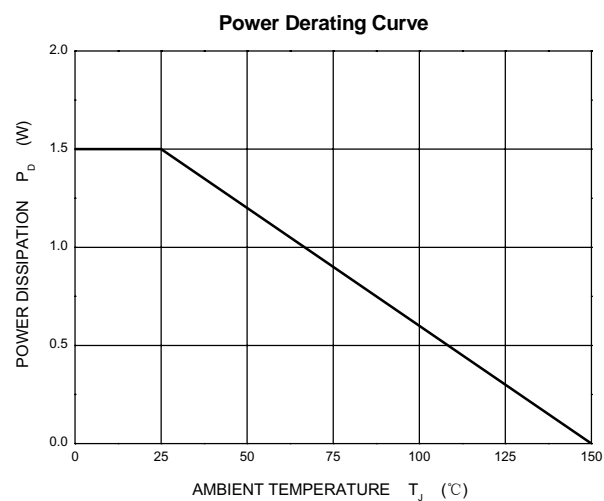
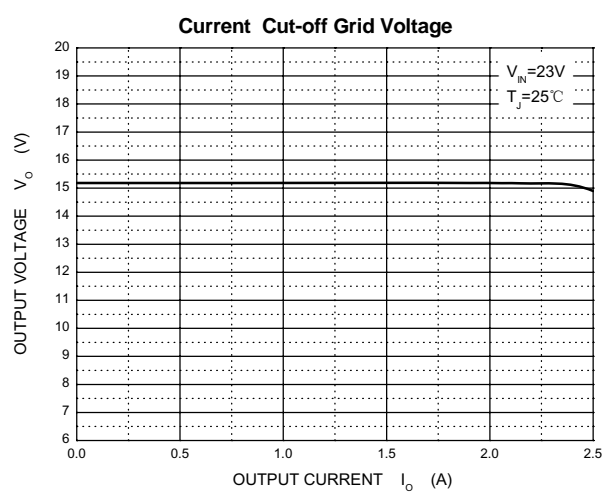
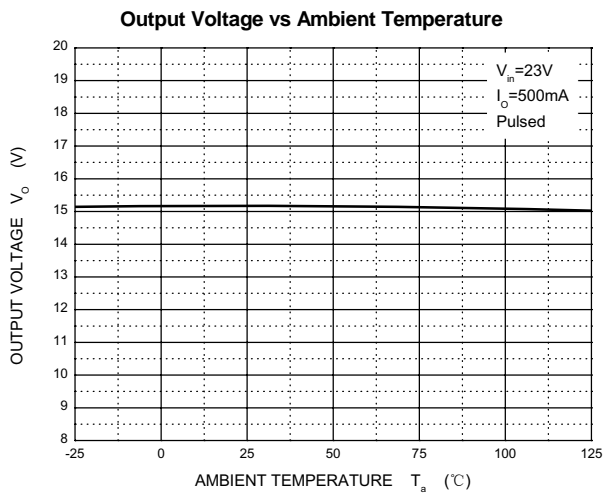
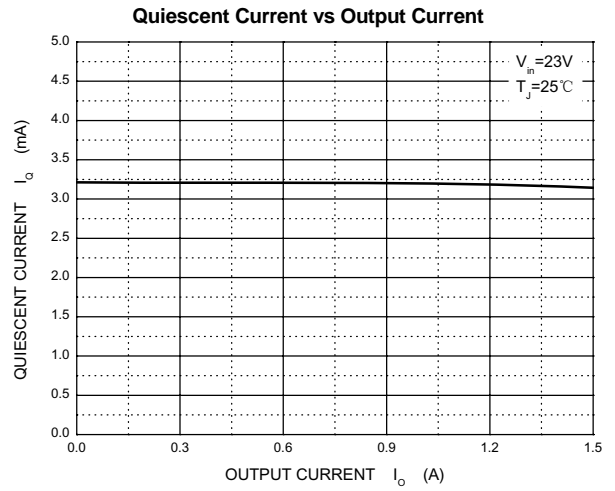
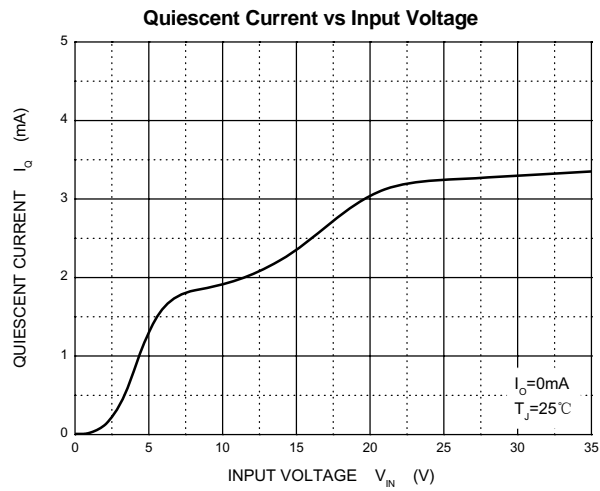
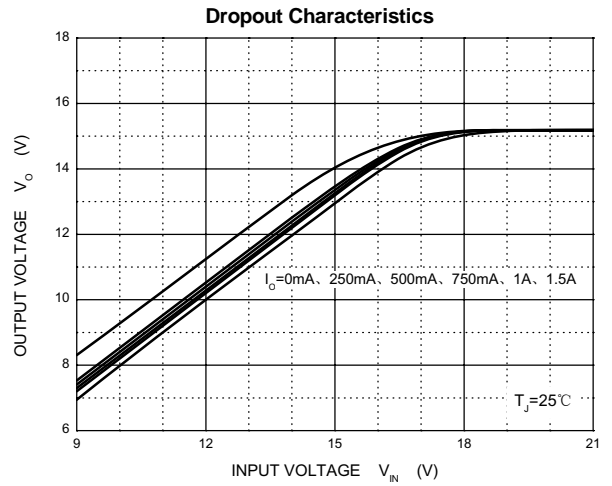
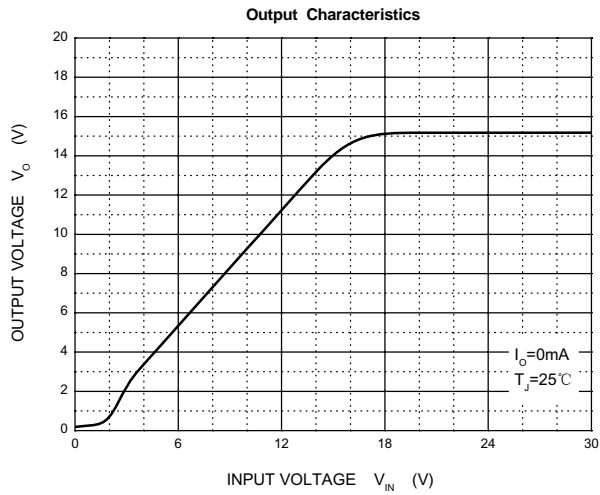
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=23V, I_o=500mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	14.4	15	15.6	V
		$17.5V \leq V_i \leq 30V, I_o=5mA-1A, P \leq 15W$	14.25	15	15.75	V
Load Regulation	ΔV_o	$I_o=5mA-1.5A, 25^\circ\text{C}$		12	300	mV
		$I_o=250mA-750mA, 25^\circ\text{C}$		4	150	mV
Line regulation	ΔV_o	$17.5V \leq V_i \leq 30V, 25^\circ\text{C}$		12	300	mV
		$20V \leq V_i \leq 26V, 25^\circ\text{C}$		3	150	mV
Quiescent Current	I_q	25°C		4.3	8	mA
Quiescent Current Change	ΔI_q	$17.5V \leq V_i \leq 30V, 0-125^\circ\text{C}$			1	mA
		$5mA \leq I_o \leq 1A, 0-125^\circ\text{C}$			0.5	mA
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5mA, 0-125^\circ\text{C}$		-1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz, 25^\circ\text{C}$		90		μV
Ripple Rejection	RR	$18.5V \leq V_i \leq 28.5V, f=120Hz, 0-125^\circ\text{C}$	54	70		dB
Dropout Voltage	V_d	$I_o=1A, 25^\circ\text{C}$		2		V
Output resistance	R_o	$f=1KHz, 25^\circ\text{C}$		19		m Ω
Short Circuit Current	I_{sc}	25°C		230		mA
Peak Current	I_{pk}	25°C		2.1		A

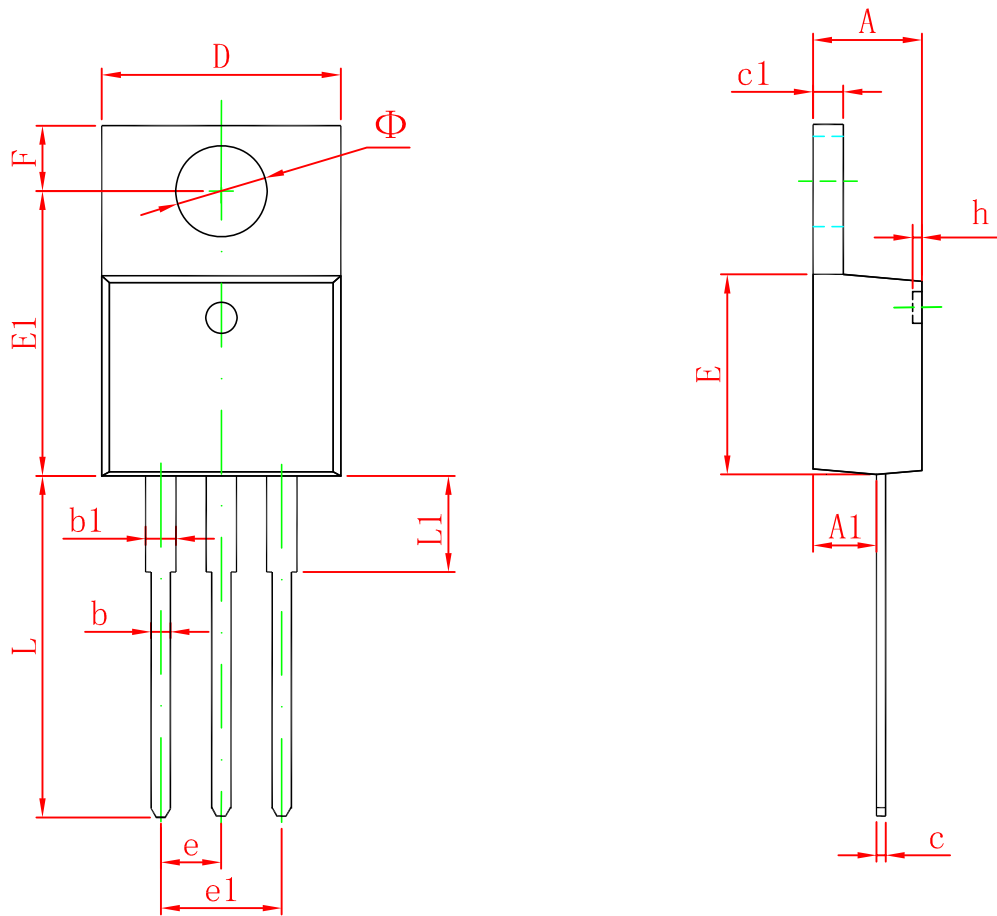
TYPICAL APPLICATION



Typical Characteristics



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