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L 7815 Three-terminal positive voltage regulator

TO-220 Encapsulate Three Terminal Voltage Regulator

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客户确认：

公司签章：

部门	工程部	品保部	采购部
签名			
日期			

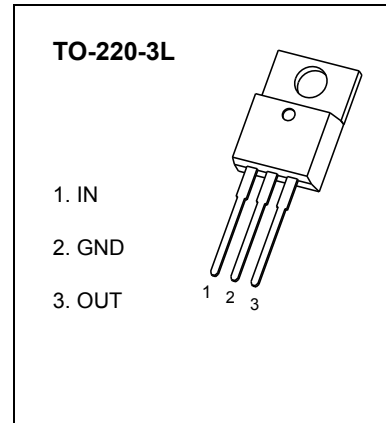


TO-220 Plastic-Encapsulate Voltage Regulator

L 7815 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: 1.5W (T_a= 25 °C)



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

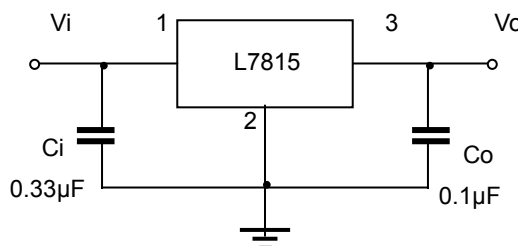
Parameter	Symbol	Value	Unit
Input Voltage	V _i	35	V
Thermal Resistance from Junction to Ambient	R _{θJA}	66.7	°C/W
Operating Junction Temperature Range	T _{OPR}	-25~+125	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V_i=23V, I_o=500mA, C_i=0.33μF, C_o=0.1μF, 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 ≤ V _i ≤ 30V, I _o =5mA-1A	-25-125°C	14.25	15	15.75
Load Regulation	ΔV _o	I _o =5mA-1.5A	25°C	12	300	mV
		I _o =250mA-750mA	25°C	4	150	mV
Line regulation	ΔV _o	17.5V ≤ V _i ≤ 30V	25°C	12	300	mV
		20V ≤ V _i ≤ 26V	25°C	3	150	mV
Quiescent Current	I _q	25°C		4.3	8	mA
Quiescent Current Change	ΔI _q	17.5V ≤ V _i ≤ 30V	-25-125°C		1	mA
	ΔI _q	5mA ≤ I _o ≤ 1A			0.5	mA
Output voltage drift	ΔV _o /ΔT	I _o =5mA	-25-125°C	-1		mV/°C
Output Noise Voltage	V _N	10Hz ≤ f ≤ 100KHz	25°C	90		μV/V _o
Ripple Rejection	RR	18.5V ≤ V _i ≤ 28.5V, f=120Hz	-25-125°C	54	70	dB
Dropout Voltage	V _d	I _o =1A	25°C	2		V
Output resistance	R _o	f=1KHz	25°C	19		mΩ
Short Circuit Current	I _{sc}		25°C	230		mA
Peak Current	I _{pk}		25°C	2.1		A

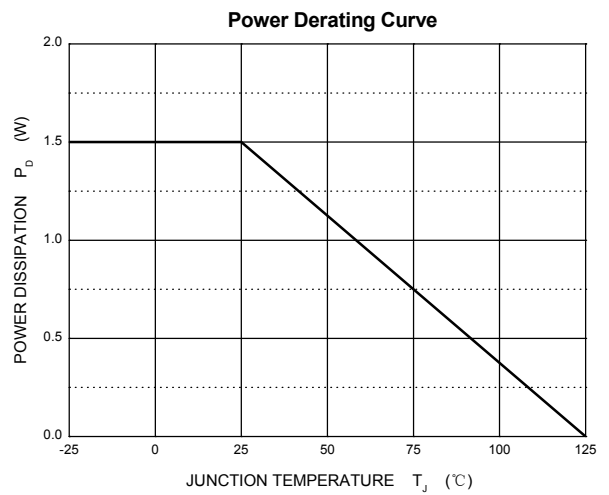
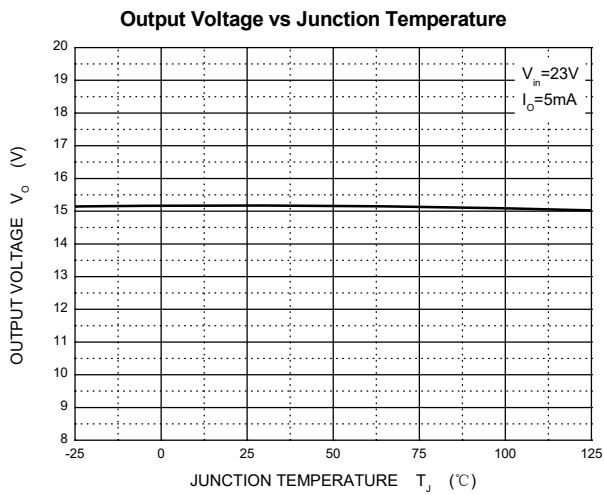
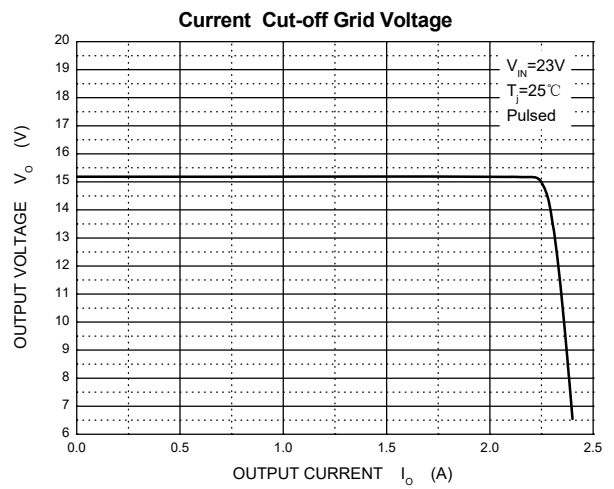
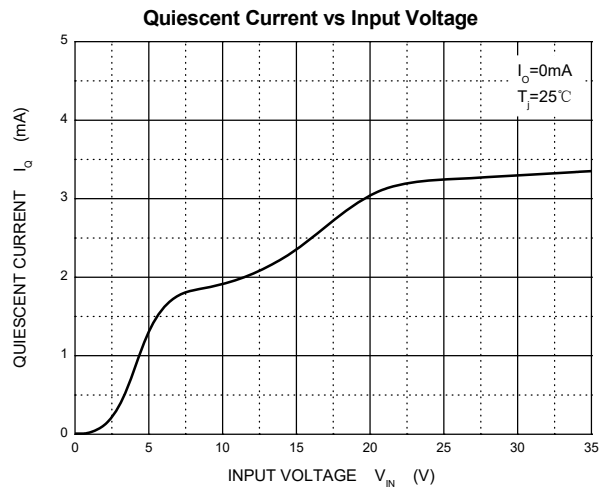
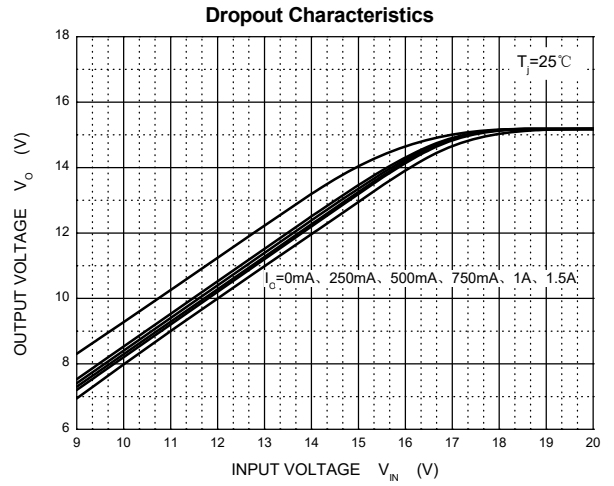
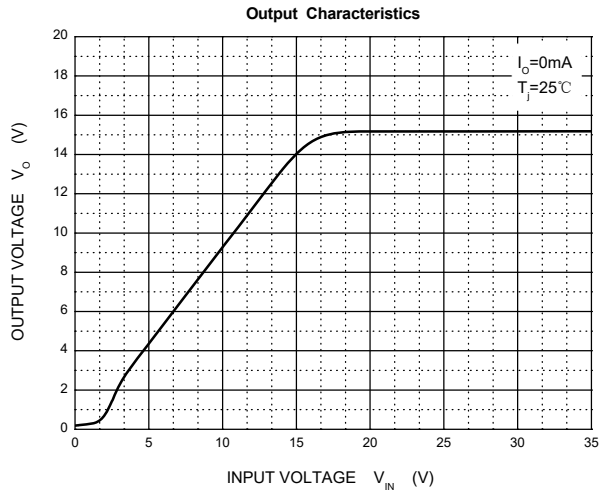
* Pulse test.

TYPICAL APPLICATION

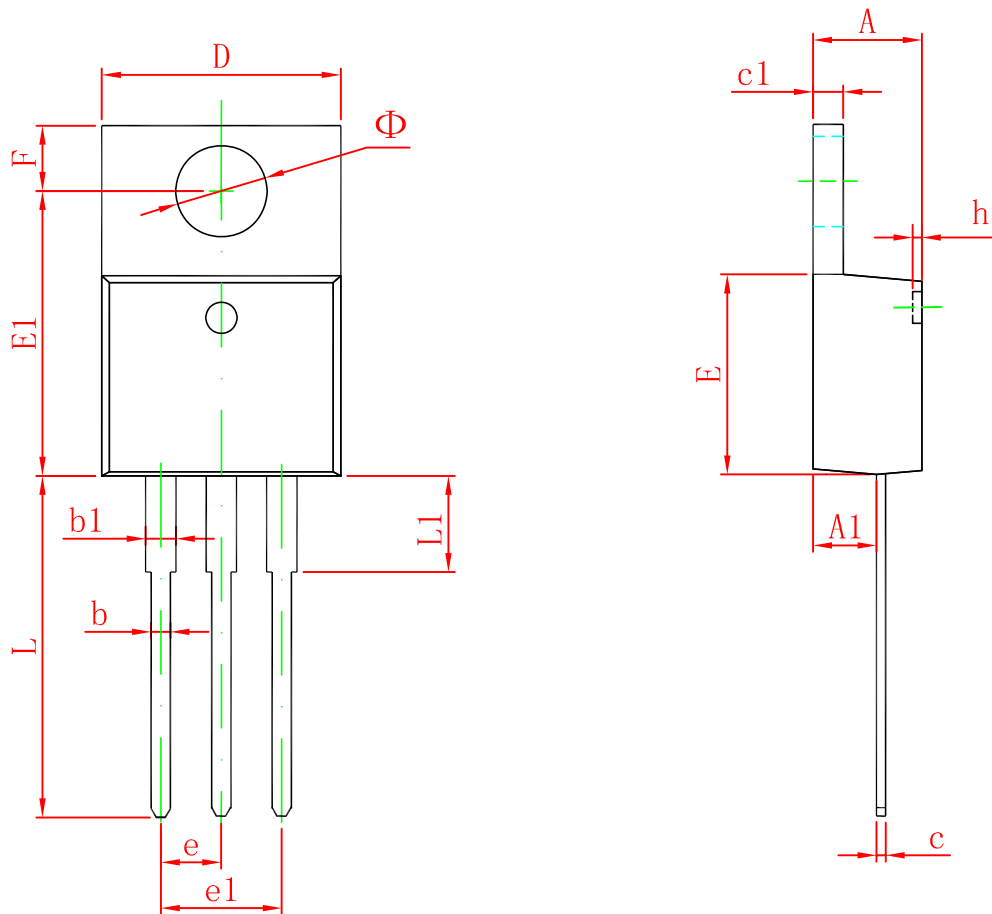


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

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