

TO-220-3L Plastic-Encapsulate Voltage Regulators

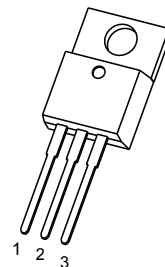
CJ7808 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 1.5\text{ A}$
- Output voltage
 $V_O: 8\text{ V}$
- Continuous total dissipation
 $P_D: 1.5\text{ W}$ ($T_a = 25^\circ\text{C}$)

TO-220-3L

- IN
- GND
- OUT



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

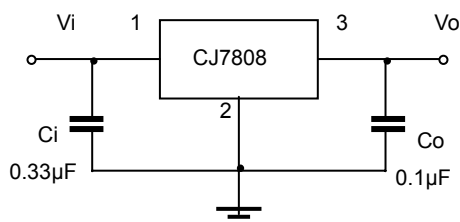
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=14\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

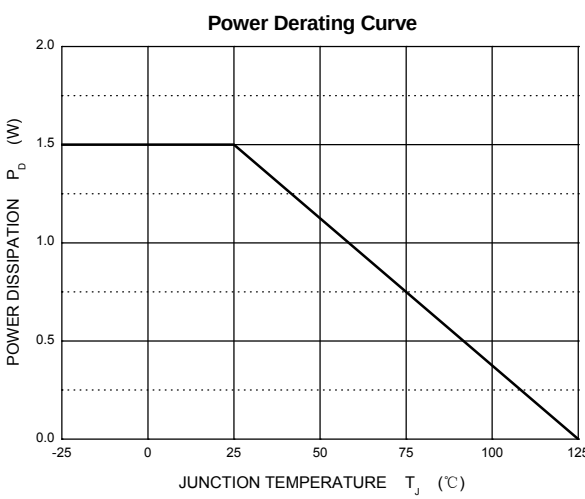
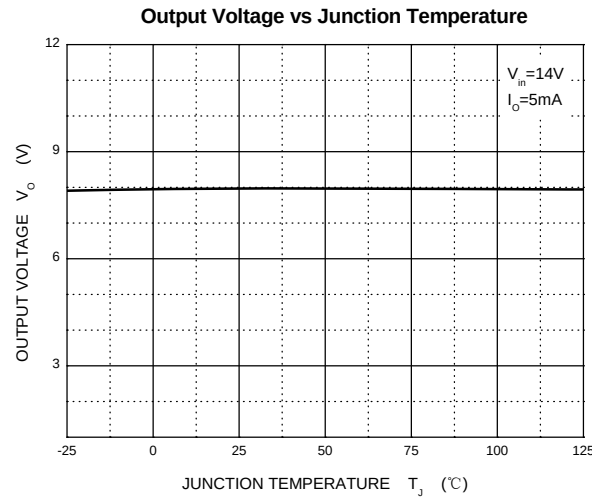
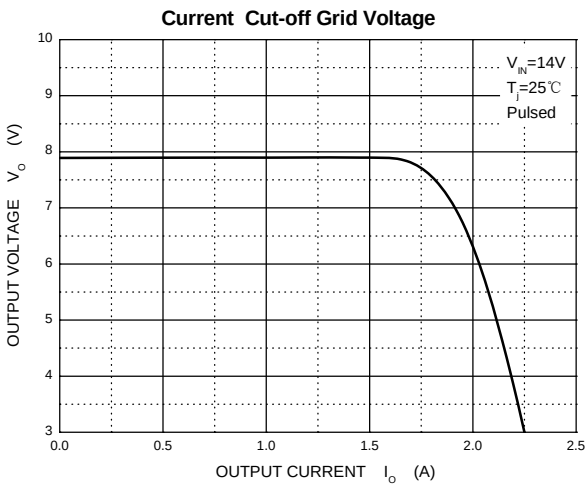
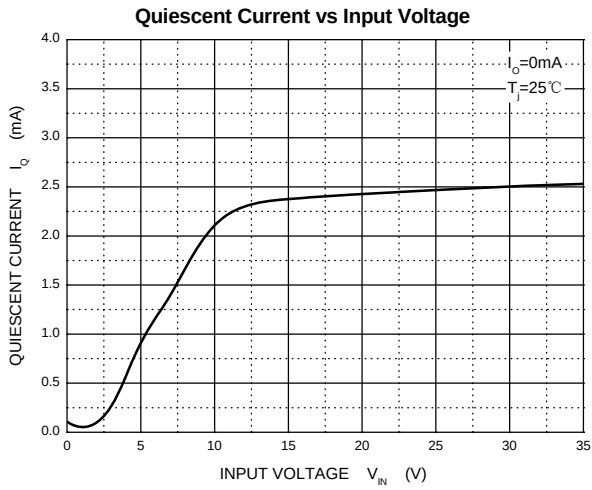
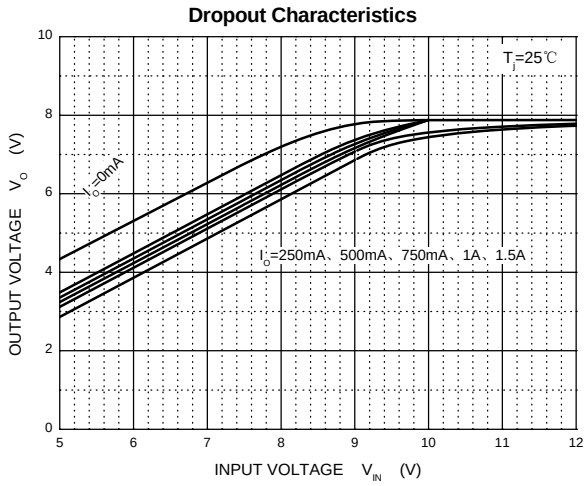
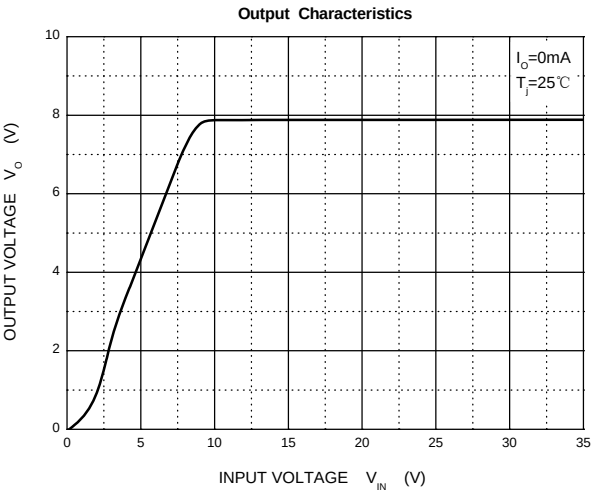
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output Voltage	Vo		25℃	7.7	8	8.3	V
		10.5V≤Vi≤23V, Io=5mA-1A	-25-125℃	7.6	8	8.4	V
Load Regulation	ΔVo	Io=5mA-1.5A	25℃		12	160	mV
		Io=250mA-750mA	25℃		4	80	mV
Line Regulation	ΔVo	10.5V≤Vi≤25V	25℃		6	160	mV
		11V≤Vi≤17V	25℃		2	80	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	ΔIq	10.5V≤Vi≤25V	-25-125℃			1	mA
		5mA≤Io≤1A	-25-125℃			0.5	mA
Output Voltage Drift	ΔVo/ΔT	Io=5mA	-25-125℃		-0.8		mV/℃
Output Noise Voltage	VN	10Hz≤f≤100KHz	25℃		52		μV/Vo
Ripple Rejection	RR	11.5V≤Vi≤21.5V,f=120Hz	-25-125℃	55	72		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output Resistance	RO	f=1KHz	25℃		10		mΩ
Short Circuit Current	Isc		25℃		450		mA
Peak Current	Ipk		25℃		2.2		A

* Pulse test.

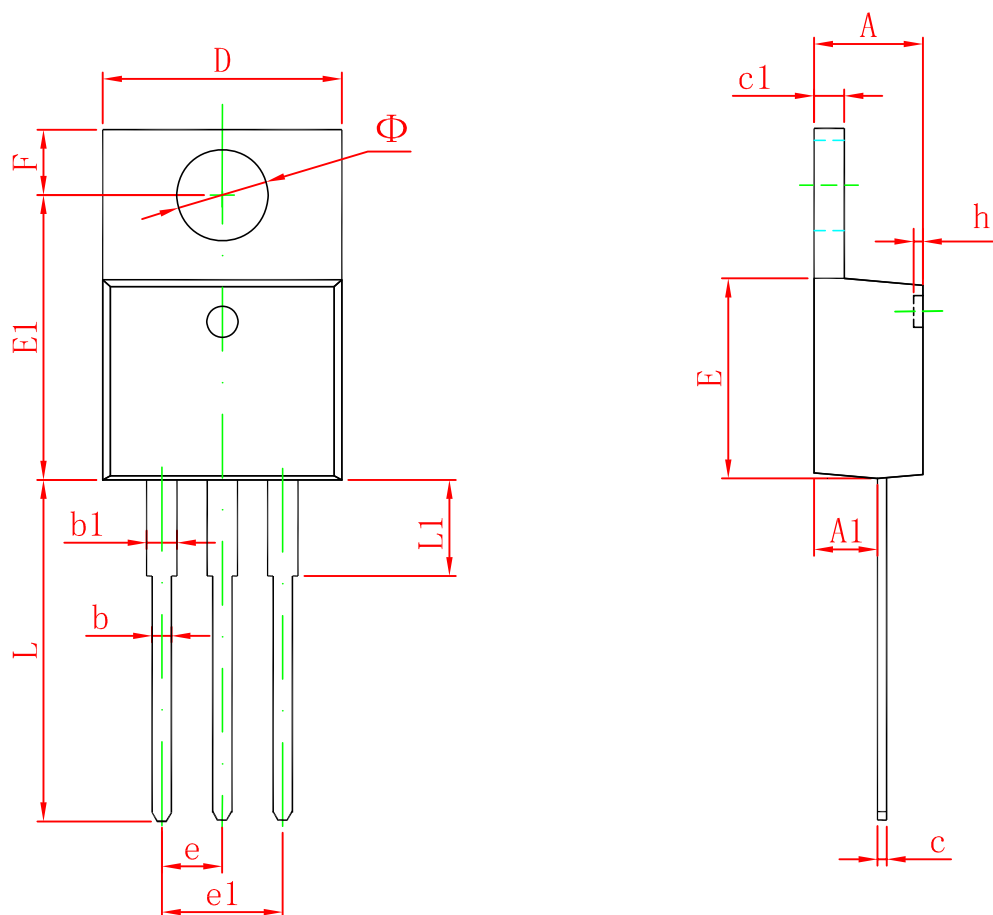
TYPICAL APPLICATION



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



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