

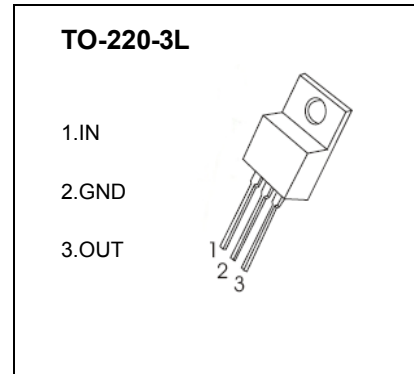


TO-220-3L Plastic-Encapsulate Voltage Regulators

CJ7805 Three-terminal positive voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5 A
- Output voltage V_o : 5V
- Continuous total dissipation
 - P_D : 1.5 W ($T_a = 25^\circ\text{C}$)
 - 15 W ($T_c = 25^\circ\text{C}$)



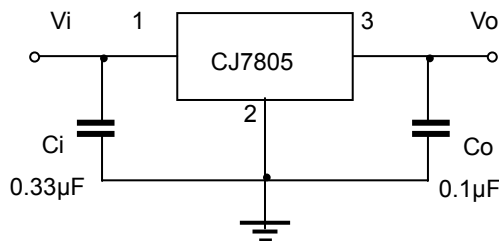
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	6.67	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

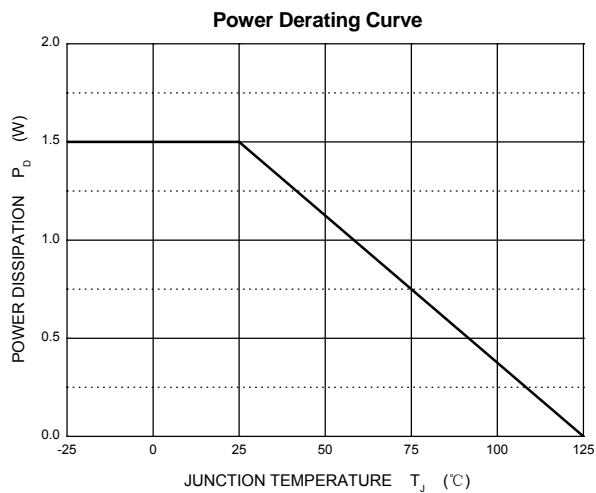
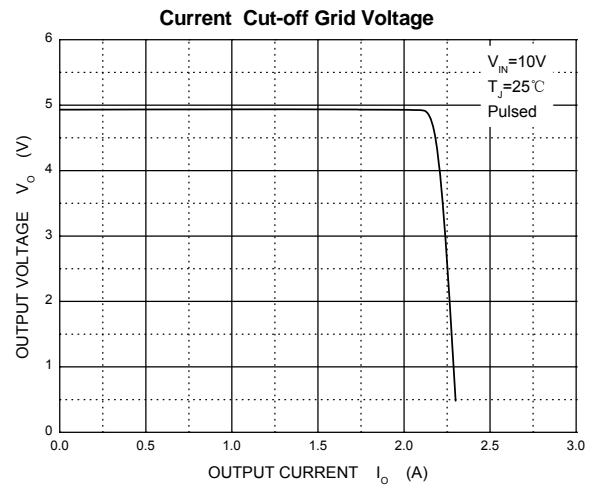
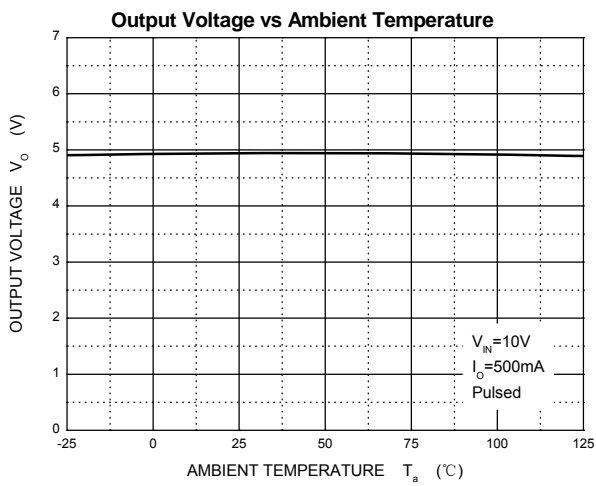
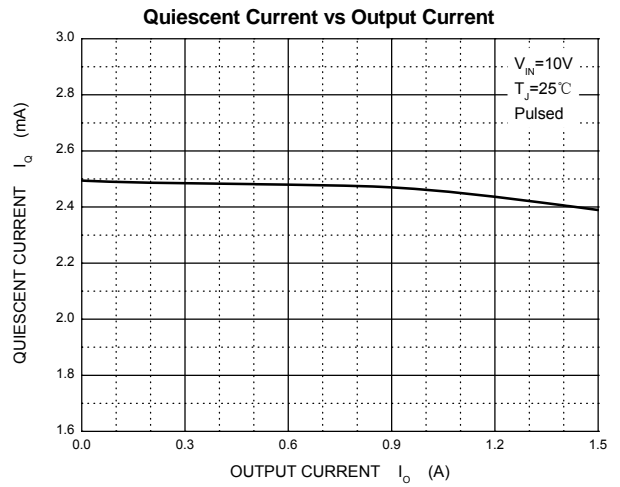
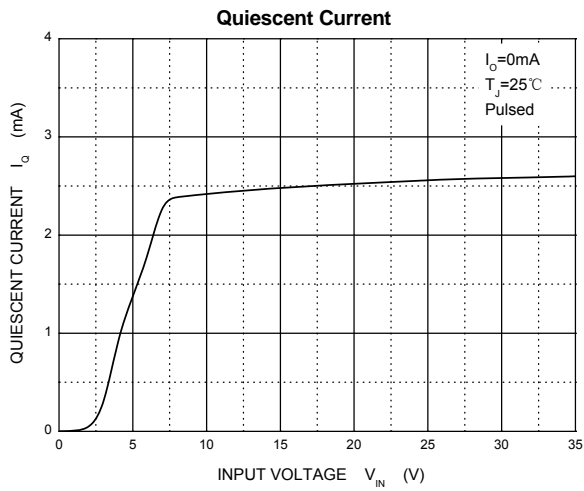
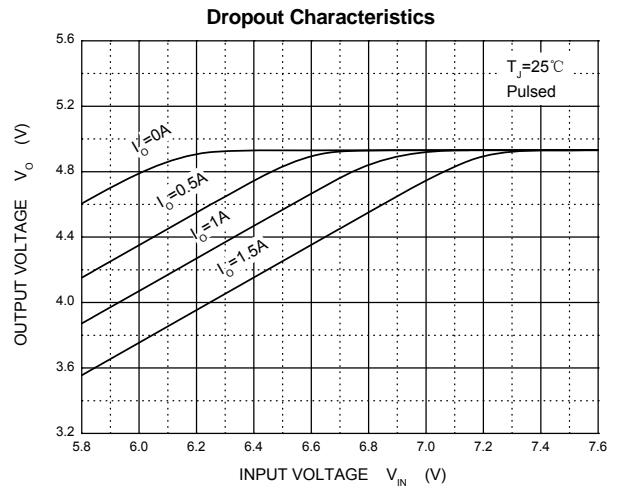
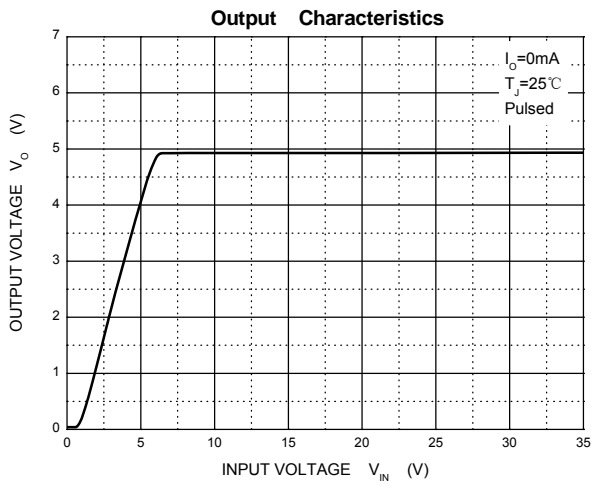
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=10\text{V}, I_o=500\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	25°C	4.8	5.0	5.2	V
		$7\text{V} \leq V_i \leq 20\text{V}, I_o=5\text{mA}-1\text{A}, P \leq 15\text{W}$ $0-125^\circ\text{C}$	4.75	5.00	5.25	V
Load Regulation	ΔV_o	$I_o=5\text{mA}-1.5\text{A}$ 25°C		9	100	mV
		$I_o=250\text{mA}-750\text{mA}$ 25°C		4	50	mV
Line regulation	ΔV_o	$7\text{V} \leq V_i \leq 25\text{V}$ 25°C		4	100	mV
		$8\text{V} \leq V_i \leq 12\text{V}$ 25°C		1.6	50	mV
Quiescent Current	I_q	25°C		5	8	mA
Quiescent Current Change	ΔI_q	$7\text{V} \leq V_i \leq 25\text{V}$ $0-125^\circ\text{C}$		0.3	1.3	mA
		$5\text{mA} \leq I_o \leq 1\text{A}$ $0-125^\circ\text{C}$		0.03	0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$ 25°C		42		μV
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5\text{mA}$ $0-125^\circ\text{C}$		-1.1		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 18\text{V}, f=120\text{Hz}$ $0-125^\circ\text{C}$	62	73		dB
Dropout Voltage	V_d	$I_o=1\text{A}$ 25°C		2		V
Output resistance	R_o	$f=1\text{KHz}$ 25°C		10		$\text{m}\Omega$
Short Circuit Current	I_{sc}	25°C		230		mA
Peak Current	I_{pk}	25°C		2.2		A

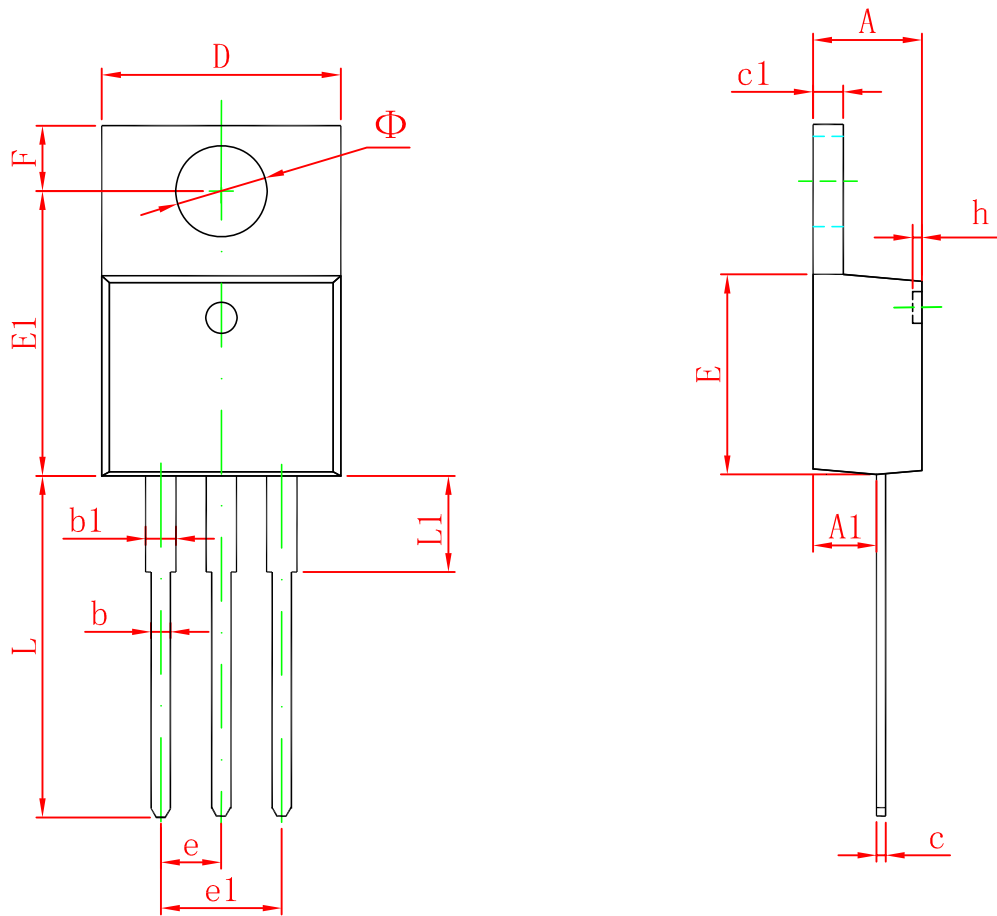
TYPICAL APPLICATION



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