

## 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

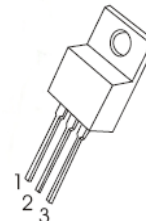
Continuous total dissipation

$P_D$ : 1.5 W ( $T_a = 25^\circ\text{C}$ )

15 W ( $T_c = 25^\circ\text{C}$ )

TO-220-3L

1.IN  
2.GND  
3.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	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.3	$^\circ\text{C/W}$
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 ( $V_i=10\text{V}$ , $I_o=500\text{mA}$ , $C_i=0.33\mu\text{F}$ , $C_o=0.1\mu\text{F}$ , unless otherwise specified)

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

#### TYPICAL APPLICATION

