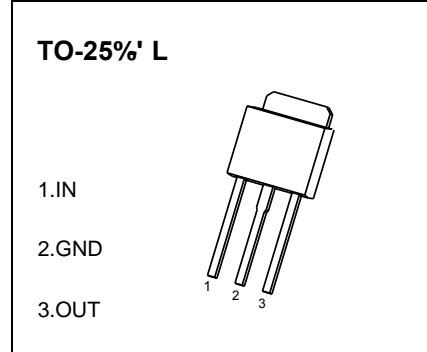


**TO-251-3L Plastic-Encapsulate Voltage Regulators**

**CJ7812** Three-terminal positive voltage regulator

**FEATURES**

- Maximum output current  
 $I_{OM}$ : 1.5 A
- Output voltage  
 $V_O$ : 12 V
- Continuous total dissipation  
 $P_D$ : 1.25 W ( $T_a=25^\circ\text{C}$ )



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

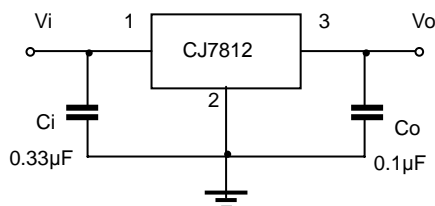
Parameter	Symbol		
Input Voltage	$V_i$	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_{OPR}$	-40~+125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=19\text{V}$ ,  $I_o=500\text{mA}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$25^\circ\text{C}$	11.64	12.0	12.36	V
		$I_o=5\text{mA}-1\text{A}$ , $14.5\text{V} \leq V_i \leq 27\text{V}$	-25-125 $^\circ\text{C}$	11.4	12.0	12.6
Load Regulation	$\Delta V_o$	$I_o=5\text{mA}-1.5\text{A}$	25 $^\circ\text{C}$	10	240	mV
		$I_o=250\text{mA}-750\text{mA}$	25 $^\circ\text{C}$	3	120	mV
Line Regulation	$\Delta V_o$	$14.5\text{V} \leq V_i \leq 30\text{V}$	25 $^\circ\text{C}$	12	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$	25 $^\circ\text{C}$	4	120	mV
Quiescent Current	$I_q$	25 $^\circ\text{C}$	4.3	8	mA	
Quiescent Current Change	$\Delta I_q$	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$	-25-125 $^\circ\text{C}$		0.5	mA
		$14.5\text{V} \leq V_i \leq 30\text{V}$	-25-125 $^\circ\text{C}$		1.0	mA
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$	-25-125 $^\circ\text{C}$	-1		mV/ $^\circ\text{C}$
Output Noise Voltage	$V_N$	$f=10\text{Hz}$ to 100KHz	25 $^\circ\text{C}$	75		$\mu\text{V}/V_o$
Ripple Rejection	RR	$f=120\text{Hz}$ , $15\text{V} \leq V_i \leq 25\text{V}$	-25-125 $^\circ\text{C}$	55	71	dB
Dropout Voltage	$V_d$	$I_o=1.0\text{A}$	25 $^\circ\text{C}$	2		V
Output Resistance	$R_o$	$f=1\text{KHz}$	-25-125 $^\circ\text{C}$	18		m $\Omega$
Short Circuit Current	$I_{sc}$	25 $^\circ\text{C}$		350		mA
Peak Current	$I_{pk}$	25 $^\circ\text{C}$		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.

# Typical Characteristics

