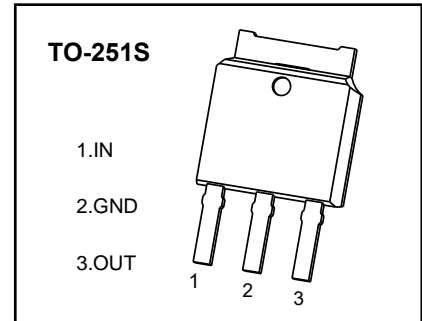


TO-251S Plastic-Encapsulate Voltage Regulators

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 ($T_a = 25\text{ }^\circ\text{C}$)



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

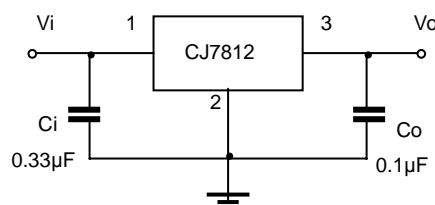
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J=25\text{ }^\circ\text{C}$	11.64	12.0	12.36	V
		$I_o=5\text{mA}-1\text{A}$, $14.5\text{V} \leq V_i \leq 27\text{V}$	11.4	12.0	12.6	V
Load Regulation	ΔV_o	$I_o=5\text{mA}-1.5\text{A}$, $T_J=25\text{ }^\circ\text{C}$		10	240	mV
		$I_o=250\text{mA}-750\text{mA}$, $T_J=25\text{ }^\circ\text{C}$		3	120	mV
Line Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}$, $T_J=25\text{ }^\circ\text{C}$		12	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$, $T_J=25\text{ }^\circ\text{C}$		4	120	mV
Quiescent Current	I_q	$T_J=25\text{ }^\circ\text{C}$		4.3	8	mA
Quiescent Current Change	ΔI_q	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$			0.5	mA
		$14.5\text{V} \leq V_i \leq 30\text{V}$			1.0	mA
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		-1		$\text{mV}/^\circ\text{C}$
Output Noise Voltage	V_N	$f=10\text{Hz}$ to 100KHz , $T_J=25\text{ }^\circ\text{C}$		75		$\mu\text{V}/V_o$
Ripple Rejection	RR	$f=120\text{Hz}$, $15\text{V} \leq V_i \leq 25\text{V}$	55	71		dB
Dropout Voltage	V_d	$I_o=1.0\text{A}$		2		V
Output Resistance	R_o	$f=1\text{KHz}$		18		$\text{m}\Omega$
Short Circuit Current	I_{sc}	$T_J=25\text{ }^\circ\text{C}$		350		mA
Peak Current	I_{pk}	$T_J=25\text{ }^\circ\text{C}$		2.2		A

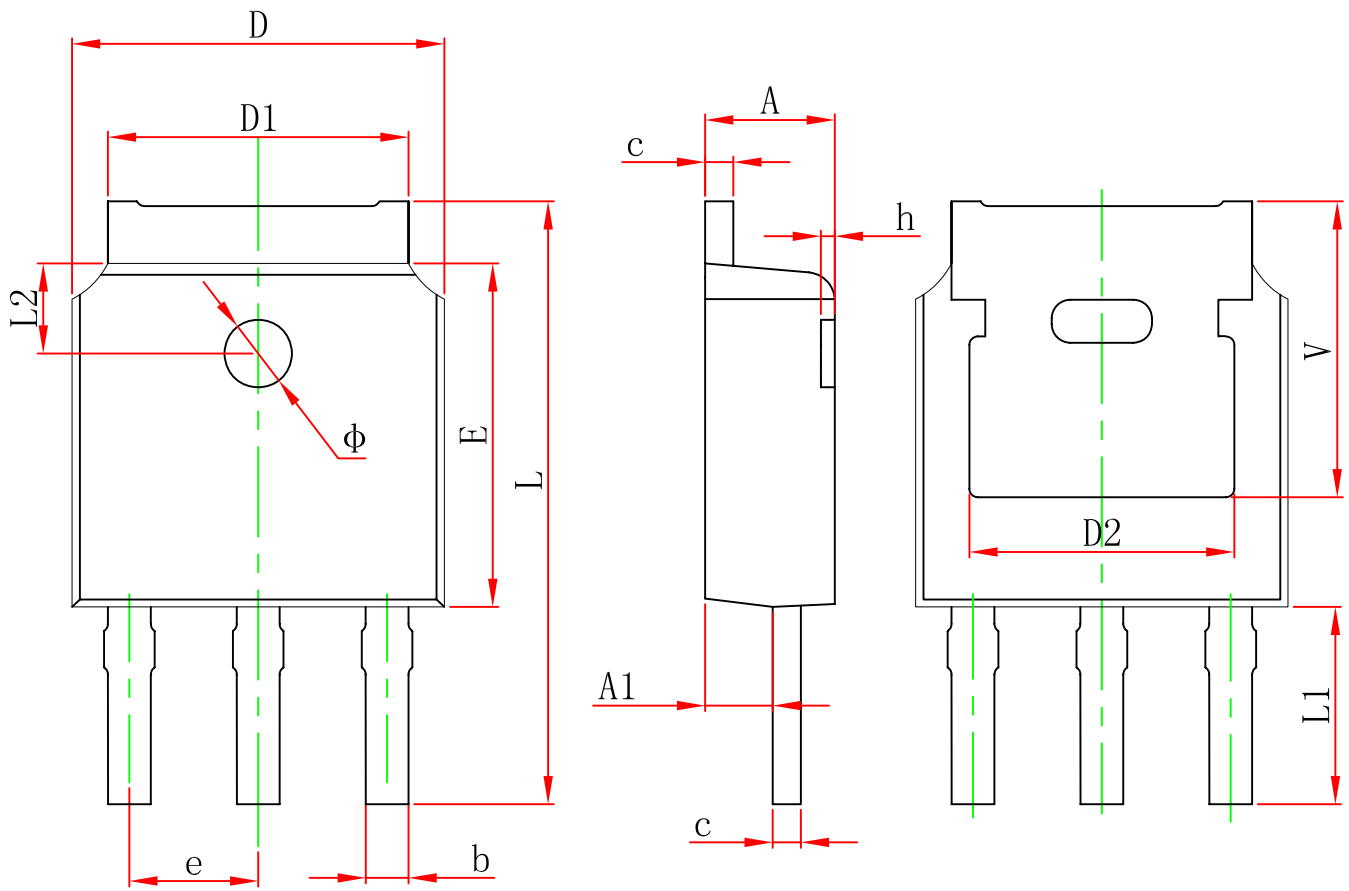
* Pulse test.

TYPICAL APPLICATION



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

TO-251S Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.860	1.160	0.034	0.046
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	10.400	11.000	0.409	0.433
L1	3.300	3.700	0.130	0.146
L2	1.600 REF.		0.063 REF.	
φ	1.100	1.300	0.043	0.051
h	0.000	0.300	0.000	0.012
V	5.350 REF.		0.211 REF.	