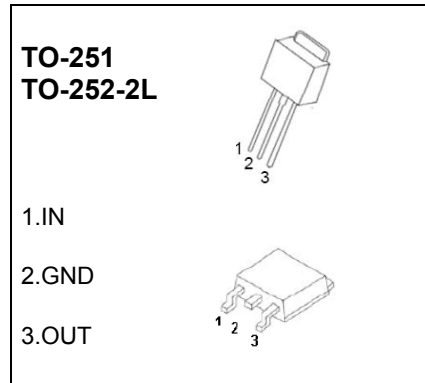


TO-251/TO-252-2L Plastic-Encapsulate Voltage Regulators

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 ($T_a = 25\text{ }^\circ\text{C}$)
 - 10 W ($T_c = 25\text{ }^\circ\text{C}$)



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 Air	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	12.5	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	0-150	$^\circ\text{C}$
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	$25\text{ }^\circ\text{C}$	11.5	12.0	12.5	V
		$I_o = 5.0\text{mA} - 1.0\text{A}$, $P \leq 10\text{W}$ $14.5\text{V} \leq V_i \leq 27\text{V}$	11.4	12	12.6	V
Load Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}$		10	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$		3	120	mV
Line Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$		12	240	mV
		$I_o = 250\text{mA} - 750\text{mA}$		4	120	mV
Quiescent Current	I_q	$25\text{ }^\circ\text{C}$		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	$f = 10\text{Hz to } 100\text{KHz}$		75		μV
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}	$25\text{ }^\circ\text{C}$		350		mA
Peak Current	I_{pk}	$25\text{ }^\circ\text{C}$		2.2		A

TYPICAL APPLICATION

