

TO-263-2L Plastic-Encapsulate Voltage Regulators

CJ7812 Three-terminal positive voltage regulator

FEATURES

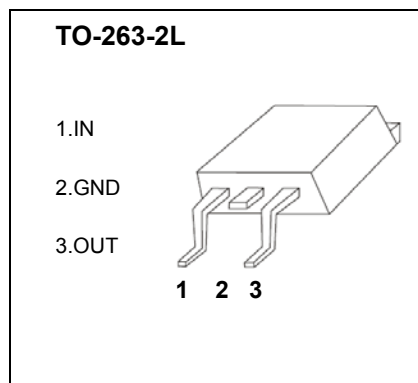
Maximum Output current I_{OM} : 1.5 A

Output voltage V_o : 12 V

Continuous total dissipation

P_D : 1.5 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 to Junction to Air	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Thermal Resistance to Junction to Case	$R_{\theta JC}$	8.33	$^\circ\text{C/W}$
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°C	11.5	12.0	12.5	V
		$I_o = 5.0\text{mA} - 1.0\text{A}$, $P \leq 15\text{W}$ $14.5\text{V} \leq V_i \leq 27\text{V}$	0-125 $^\circ\text{C}$	11.4	12	12.6
Load Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}$	25 $^\circ\text{C}$	10	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$	25 $^\circ\text{C}$	3	120	mV
Line Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25 $^\circ\text{C}$	12	240	mV
		$I_o = 250\text{mA} - 750\text{mA}$	25 $^\circ\text{C}$	4	120	mV
Quiescent Current	I_q		25 $^\circ\text{C}$	4.3	8	mA
Quiescent Current Change	ΔI_q	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$	0-125 $^\circ\text{C}$		0.5	mA
		$14.5\text{V} \leq V_i \leq 30\text{V}$	0-125 $^\circ\text{C}$		1.0	mA
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	0-125 $^\circ\text{C}$	-1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$f = 10\text{Hz} \text{ to } 100\text{KHz}$	25 $^\circ\text{C}$	75		μV
Ripple Rejection	RR	$f = 120\text{Hz}$, $15\text{V} \leq V_i \leq 25\text{V}$	0-125 $^\circ\text{C}$	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 $^\circ\text{C}$	18		$\text{m}\Omega$
Short Circuit Current	I_{sc}		25 $^\circ\text{C}$	350		mA
Peak Current	I_{pk}		25 $^\circ\text{C}$	2.2		A

TYPICAL APPLICATION

