

深圳市晶泰源电子有限公司

CJ7912 Three-terminal negative 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 ($T_a = 25^\circ\text{C}$)

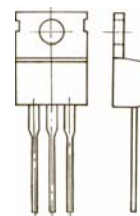
15 W ($T_c = 25^\circ\text{C}$)

TO-220

1 GND

2. IN

3. OUT



1 2 3

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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal resistance junction-air	$R_{\theta JA}$	65	$^\circ\text{C}/\text{W}$
Thermal resistance junction-cases	$R_{\theta JC}$	5	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	0-125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -19\text{V}, I_o = 500\text{mA}, C_i = 2.2\mu\text{F}, C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	-11.5	-12	-12.5	V
		$-14.5\text{V} \leq V_i \leq -27\text{V}, I_o = 5\text{mA} - 1\text{A}$ $P \leq 15\text{W}$	0-125 $^\circ\text{C}$	-11.4	-12	-12.6
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25 $^\circ\text{C}$	15	200	mV
		$I_o = 250\text{mA} - 750\text{mA}$	25 $^\circ\text{C}$	5	75	mV
Line regulation	ΔV_o	$-14.5\text{V} \leq V_i \leq -30\text{V}$	25 $^\circ\text{C}$	5	80	mV
		$-16\text{V} \leq V_i \leq -22\text{V}$	25 $^\circ\text{C}$	3	30	mV
Quiescent Current	I_q		25 $^\circ\text{C}$	2	3	mA
Quiescent Current Change	ΔI_q	$-14.5\text{V} \leq V_i \leq -30\text{V}$	0-125 $^\circ\text{C}$		0.5	mA
		$5\text{mA} \leq I_o \leq 1\text{A}$	0-125 $^\circ\text{C}$		0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25 $^\circ\text{C}$	300		μV
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	0-125 $^\circ\text{C}$	-0.8		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -25\text{V}, f = 120\text{Hz}$	0-125 $^\circ\text{C}$	54	60	dB
Dropout Voltage	V_d	$I_o = 1\text{A}$	25 $^\circ\text{C}$	1.1		V
Peak Current	I_{pk}		25 $^\circ\text{C}$	2.1		A

TYPICAL APPLICATION

