

TO-220 Plastic-Encapsulate Voltage Regulators

L7909 C V Three-terminal negative voltage regulator

FEATURES

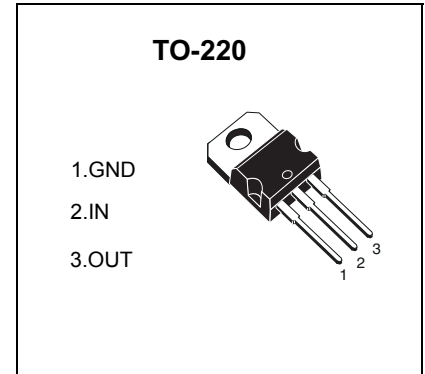
Maximum Output current I_{OM} : 1.5 A

Output voltage V_o : - 9 V

Continuous total dissipation

P_D : 2 W ($T_J = 25^\circ\text{C}$)

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 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~+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($V_i = -15\text{V}$, $I_o = 500\text{mA}$, $0^\circ\text{C} < T_J < 125^\circ\text{C}$, $C_i = 0.33\mu\text{F}$, $C_o = 0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_J = 25^\circ\text{C}$	-8.64	-9	-9.36	V
		$-11.5\text{V} \leq V_i \leq -24\text{V}$, $I_o = 5\text{mA} - 1\text{A}$, $P \leq 15\text{W}$	-8.55	-9	-9.45	V
Load Regulation	ΔV_o	$T_J = 25^\circ\text{C}$, $I_o = 5\text{mA} - 1.5\text{A}$			180	mV
		$T_J = 25^\circ\text{C}$, $I_o = 250\text{mA} - 750\text{mA}$			80	mV
Line regulation	ΔV_o	$-11.5\text{V} \leq V_i \leq -26\text{V}$, $T_J = 25^\circ\text{C}$			140	mV
		$-13\text{V} \leq V_i \leq -19\text{V}$, $T_J = 25^\circ\text{C}$			70	mV
Quiescent Current	I_q	$T_J = 25^\circ\text{C}$		1.6	2.6	mA
Quiescent Current Change	ΔI_q	$-11.5\text{V} \leq V_i \leq -26\text{V}$			1	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 1\text{A}$			0.5	mA
Ripple Rejection	RR	$-12.5\text{V} \leq V_i \leq -22.5\text{V}$, $f = 120\text{Hz}$	54	60		dB
Dropout Voltage	V_d	$T_J = 25^\circ\text{C}$, $I_o = 1\text{A}$		1.1		V
Peak output Current	I_{pk}	$T_J = 25^\circ\text{C}$		2.1		A

TYPICAL APPLICATION

