

TO-220-3L Plastic-Encapsulate Voltage Regulators

L7905 Three-terminal negative voltage regulator

FEATURES

Maximum output current I_{OM} : 1.2 A

Output voltage V_o : - 5V

Continuous total dissipation

P_D : 1.5 W ($T_a = 25^\circ\text{C}$)

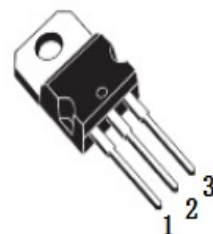
15 W ($T_c = 25^\circ\text{C}$)

TO-220-3L

1 GND

2. IN

3. OUT



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	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Thermal Resistance from 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}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -10\text{V}$, $I_o = 500\text{mA}$, $C_i = 2.2\mu\text{F}$, $C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	25°C	-4.8	-5	-5.2	V
		$-7\text{V} \leq V_i \leq -20\text{V}$, $I_o = 5\text{mA} - 1\text{A}$, $P \leq 15\text{W}$	-4.75	-5	-5.25	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.2\text{A}$, 25°C		15	100	mV
		$I_o = 250\text{mA} - 750\text{mA}$, 25°C		5	50	mV
Line Regulation	ΔV_o	$-7\text{V} \leq V_i \leq -25\text{V}$, 25°C		12.5	50	mV
		$-8\text{V} \leq V_i \leq -12\text{V}$, 25°C		4	15	mV
Quiescent Current	I_q	25°C		1.5	2	mA
Quiescent Current Change	ΔI_q	$-7\text{V} \leq V_i \leq -25\text{V}$, $0 - 125^\circ\text{C}$			0.5	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 1\text{A}$, $0 - 125^\circ\text{C}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		125		μV
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$, $0 - 125^\circ\text{C}$		-0.4		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-8\text{V} \leq V_i \leq -18\text{V}$, $f = 120\text{Hz}$, $0 - 125^\circ\text{C}$	54	60		dB
Dropout Voltage	V_d	$I_o = 1\text{A}$, 25°C		1.1		V
Peak Current	I_{pk}	25°C		2.0		A

TYPICAL APPLICATION

