

L7909 Three-terminal negative voltage regulator

FEATURES

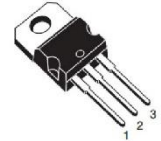
- Maximum Output Current I_{OM} : 1.5A

TO-220

1.IN

2.GND

3.OUT



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

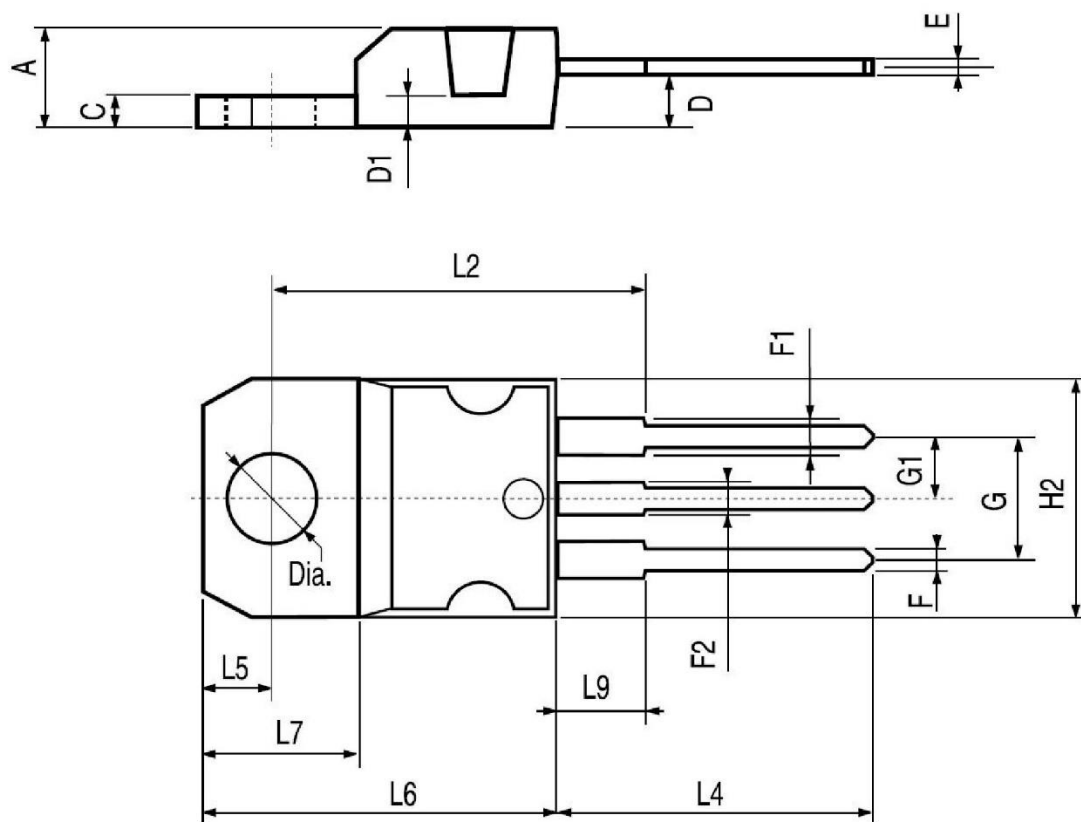
Parameter	Symbol	Value	UNIT
Input Voltage	V_i	-35	V
Operating Junction Temperature Range	T_{OPR}	-20 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

($V_i=-16\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, $T_A=-20\sim 125^\circ\text{C}$)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_A=25^\circ\text{C}$	-8.60	-9.0	-9.40	V
		$11.8\text{V}\leq V_i\leq 25\text{V}$, $I_o=5\text{mA}-1\text{A}$, $P_o\leq 15\text{W}$	-8.50	-9.0	-9.50	
Load Regulation	ΔV_o	$I_o=5\text{mA}-1.5\text{A}$		12	98	mV
		$I_o=250\text{mA}-750\text{mA}$				
Line Regulation	ΔV_o	$11.8\text{V}\leq V_i\leq 26\text{V}$		8	98	mV
		$12\text{V}\leq V_i\leq 20\text{V}$				
		$11.5\text{V}\leq V_i\leq 25\text{V}$				
		$12\text{V}\leq V_i\leq 20\text{V}$				
Quiescent Current	I_Q	$T_A=25^\circ\text{C}$		2.5	5	mA
Quiescent Current Change	ΔI_Q	$12\text{V}\leq V_i\leq 26\text{V}$			0.8	mA
		$11.8\text{V}\leq V_i\leq 25\text{V}$, $T_A=25^\circ\text{C}$			0.8	
		$5\text{mA}\leq I_o\leq 1\text{A}$			0.5	
Output Noise Voltage	V_N	$10\text{Hz}\leq F\leq 100\text{kHz}$, $T_A=25^\circ\text{C}$		190		μV
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		-1		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$13\text{V}\leq V_i\leq 24\text{V}$, $F=120\text{Hz}$		60		dB
Dropout Voltage	V_D	$I_o=1\text{A}$, $T_A=25^\circ\text{C}$		1.5		V
Output Resistance	R_o	$F=1\text{KHz}$		17		$\text{m}\Omega$
Short Circuit Current	I_{SC}	$V_i=35\text{V}$, $T_A=25^\circ\text{C}$		10		mA
Peak Current	I_{PK}	$T_A=25^\circ\text{C}$		1.8		A

TO-220-3L Package Outline Dimensions



DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.