



浩畅半导体
www.szhaochang.cn

L7908 Three-terminal negative voltage regulator

TO-220 Encapsulate Three Terminal Voltage Regulator

产
品
规
格
书

承
认
书

客户确认：

公司签章：

部门	工程部	品保部	采购部
签名			
日期			

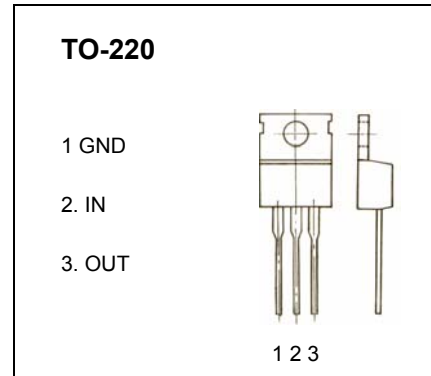


TO-220 Plastic-Encapsulate Voltage Regulator

L7908 Three-terminal negative voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5 A
- Output voltage V_o : - 8 V
- Continuous total dissipation
 - P_D : 1.5 W ($T_a = 25^\circ\text{C}$)
 - 15 W ($T_c = 25^\circ\text{C}$)



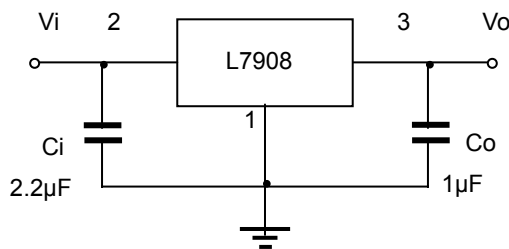
ABSOLUTE MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal resistance 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	$^\circ\text{C}$

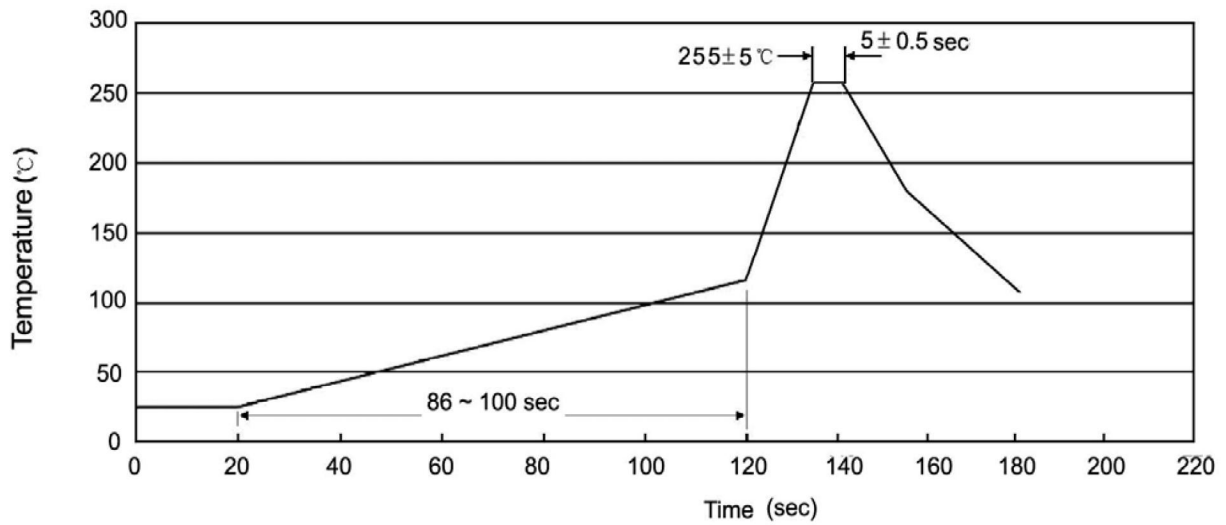
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -14\text{V}, I_o = 500\text{mA}, C_i = 2.2\mu\text{F}, C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	-7.7	-8	-8.3	V
		$-10.5\text{V} \leq V_i \leq -23\text{V}, I_o = 5\text{mA} - 1\text{A}, P \leq 15\text{W}$	0-125 $^\circ\text{C}$	-7.6	-8	-8.4
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25°C	15	160	mV
		$I_o = 250\text{mA} - 750\text{mA}$	25°C	5	80	mV
Line regulation	ΔV_o	$-10.5\text{V} \leq V_i \leq -25\text{V}$	25°C	12.5	160	mV
		$-11\text{V} \leq V_i \leq -17\text{V}$	25°C	4	80	mV
Quiescent Current	I_q	25°C		1.5	2	mA
Quiescent Current Change	ΔI_q	$-10.5\text{V} \leq V_i \leq -25\text{V}$	0-125 $^\circ\text{C}$		1	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°C	200		μV
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	0-125 $^\circ\text{C}$	-0.6		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-11.5\text{V} \leq V_i \leq -21.5\text{V}, f = 120\text{Hz}$	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	2.1		A

TYPICAL APPLICATION



波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

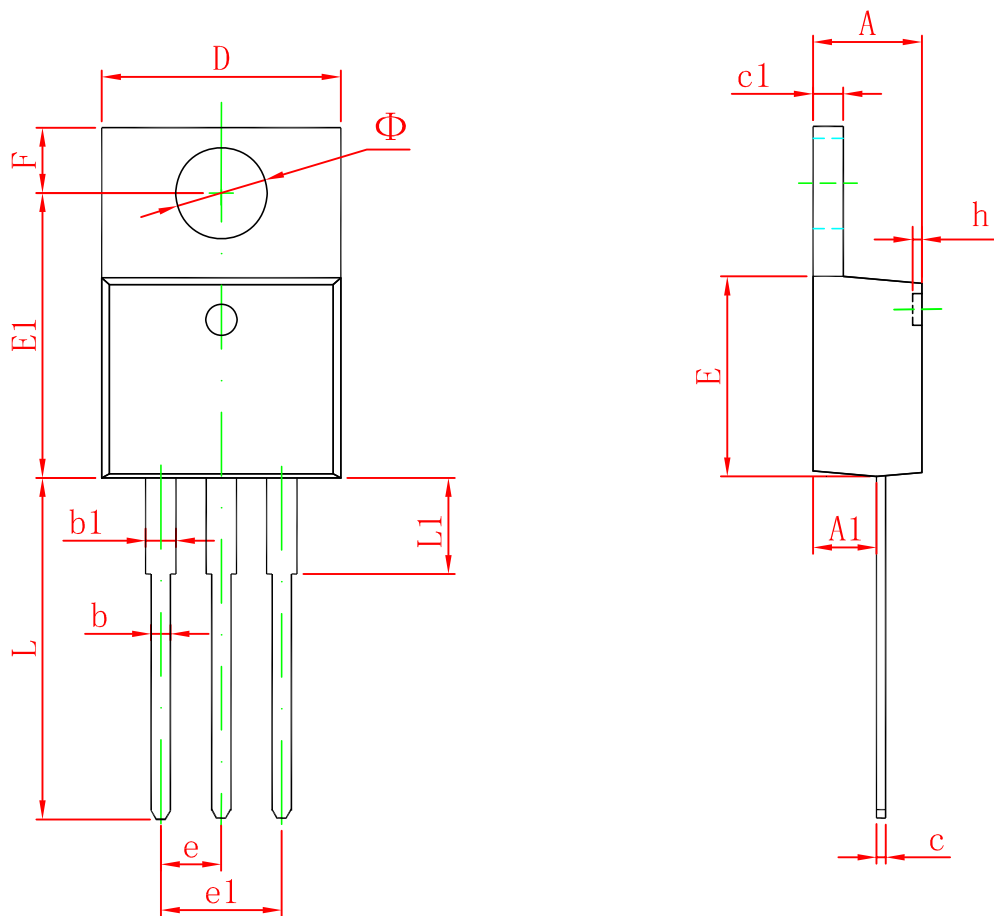
温度：270±5°C

时间：10±1 sec.

Temp:270±5°C

Time:10±1 sec

TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155