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L7905 Three-terminal negative voltage regulator

TO-220 Encapsulate Three Terminal Voltage Regulator

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客户确认：

公司签章：

部门	工程部	品保部	采购部
签名			
日期			

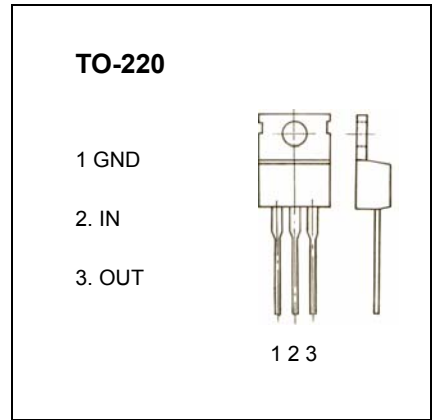


TO-220 Plastic-Encapsulate Voltage Regulator

L7905 Three-terminal negative voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5 A
- Output voltage V_o : -5V
- Continuous total dissipation
 - P_D : 1.5 W ($T_a = 25^\circ\text{C}$)
 - 15 W ($T_c = 25^\circ\text{C}$)



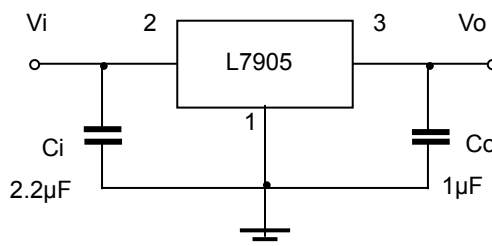
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

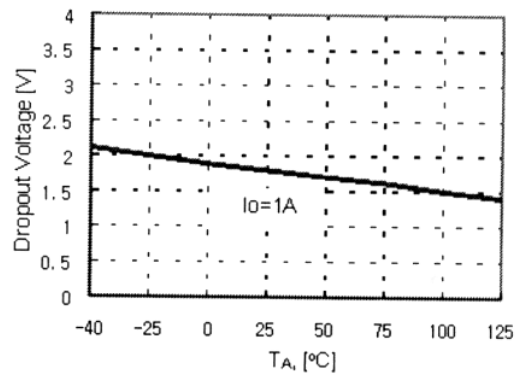
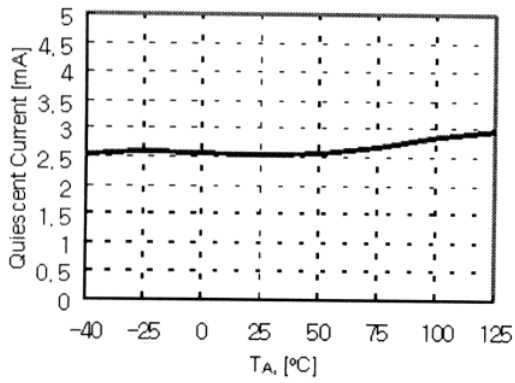
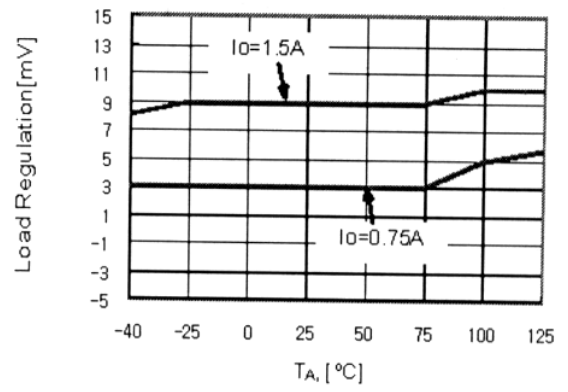
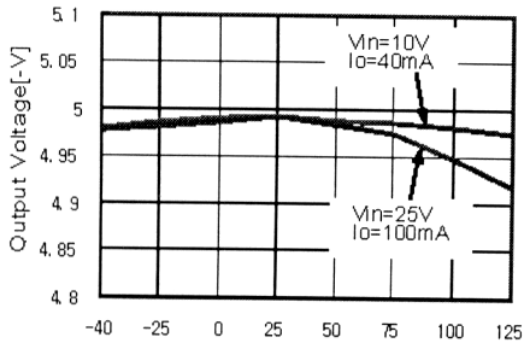
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -10\text{V}, I_o = 500\text{mA}, C_i = 2.2\mu\text{F}, C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	-4.8	-5	-5.2	V
		$-7\text{V} \leq V_i \leq -20\text{V}, I_o = 5\text{mA} - 1\text{A}, P \leq 15\text{W}$	0-125 $^\circ\text{C}$	-4.75	-5	-5.25
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	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	10Hz $\leq f \leq$ 100KHz	25°C	125		μV
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	0-125 $^\circ\text{C}$	-0.4		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		2.1		A

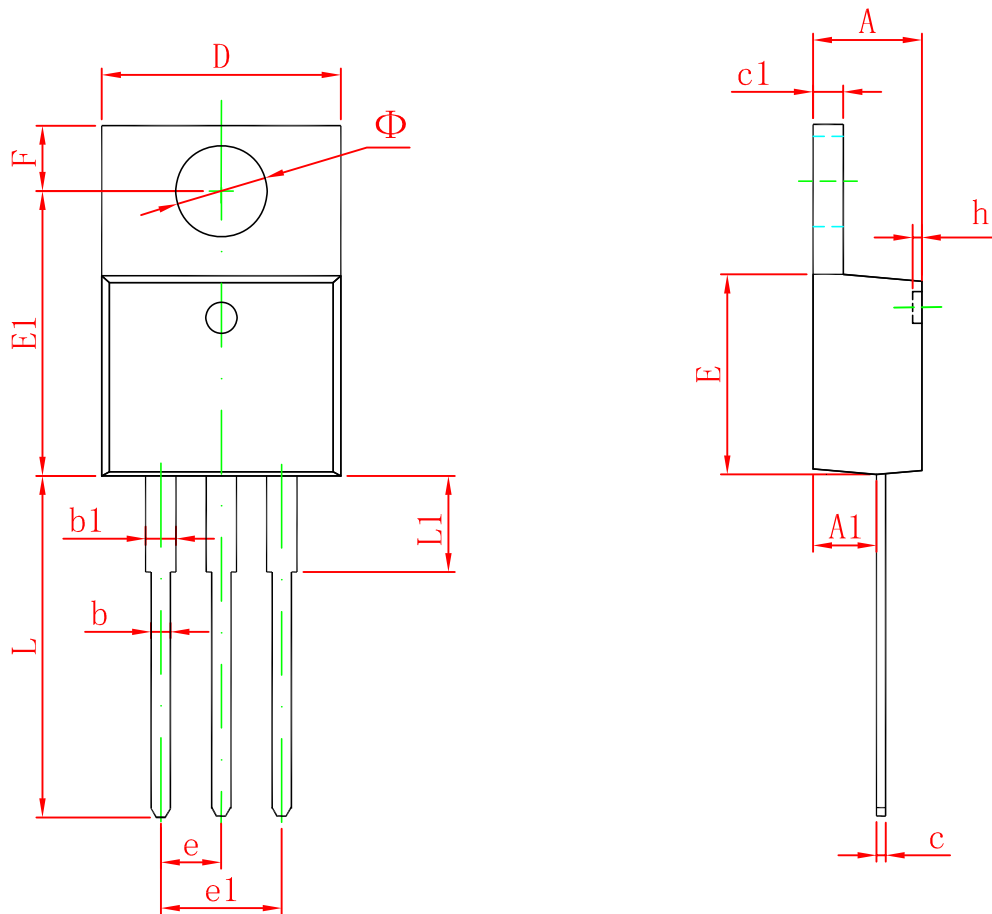
TYPICAL APPLICATION



Typical Characteristics



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