

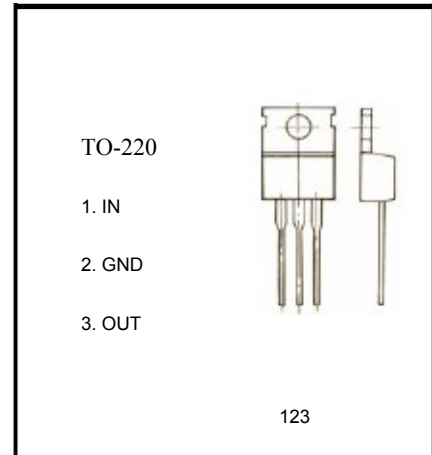


TO-220 Plastic-Encapsulate Voltage Regulator

7909 Three-terminal positive voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5 A
- Output voltage V_o : /9 V
- Continuous total dissipation
 P_D : 2 W ($T_J = 25$)



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

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

ELECTRICAL CHARACTERISTICS ($V_i=16V, I_o=500mA, 0 < T_J < 125$, $C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_J=25$	5.65	5.9	6.35	V
		$11.5V \leq V_i \leq 24V, I_o = 5mA-1A, P \leq 15W$	5.55	5.9	6.45	V
Load Regulation	ΔV_o	$T_J=25, I_o=5mA-1.5A$		12	180	mV
		$T_J=25, I_o=250mA-750mA$		4	90	mV
Line regulation	ΔV_o	$11.5V \leq V_i \leq 27V, T_J=25$		7	180	mV
		$13V \leq V_i \leq 19V, T_J=25$		2	90	mV
Quiescent Current	I_q	$T_J=25$		4.3	8	mA
Quiescent Current Change	ΔI_q	$11.5V \leq V_i \leq 27V$			1	mA
		$5mA \leq I_o \leq 1A$			0.5	mA
Output voltage drift	V_o / T	$I_o=5mA$		-1		mV/
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		60		uV
Ripple Rejection	RR	$12V \leq V_i \leq 22V, f=120Hz, T_J=25$	55	70		dB
Dropout Voltage	V_d	$T_J=25, I_o=1A$		2		V
Output resistance	R_o	$f=1KHz$		18		m Ω
Short Circuit Current	I_{sc}	$T_J=25$		400		mA
Peak Current	I_{pk}	$T_J=25$		2.2		A

TYPICAL APPLICATION

