

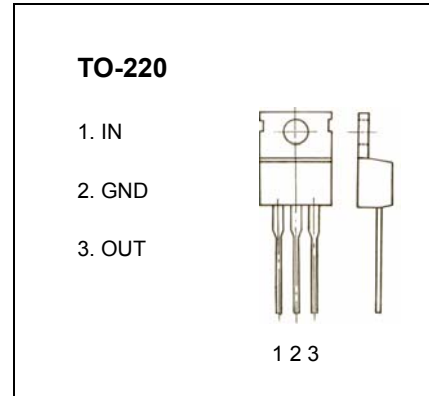


TO-220 Plastic-Encapsulate Voltage Regulator

L7806 Three-terminal positive voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5 A
- Output voltage V_o : 6 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	$^\circ\text{C/W}$
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 ($V_i=11V, I_o=500mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	5.75	6	6.25	V
		$8V \leq V_i \leq 21V, I_o=5mA-1A, P \leq 15W$ $0-125^\circ\text{C}$	5.7	6	6.3	V
Load Regulation	ΔV_o	$I_o=5mA-1.5A$ 25°C		14	120	mV
		$I_o=250mA-750mA$ 25°C		4	60	mV
Line regulation	ΔV_o	$8V \leq V_i \leq 25V$ 25°C		5	120	mV
		$9V \leq V_i \leq 13V$ 25°C		1.5	60	mV
Quiescent Current	I_q	25°C		4.3	8	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V$ $0-125^\circ\text{C}$			1.3	mA
		$5mA \leq I_o \leq 1A$ $0-125^\circ\text{C}$			0.5	mA
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5mA$ $0-125^\circ\text{C}$		-0.8		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$ 25°C		45		μV
Ripple Rejection	RR	$9V \leq V_i \leq 19V, f=120\text{Hz}$ $0-125^\circ\text{C}$	59	75		dB
Dropout Voltage	V_d	$I_o=1A$ 25°C		2		V
Output resistance	R_o	$f=1\text{KHz}$ 25°C		10		m Ω
Short Circuit Current	I_{sc}	25°C		550		mA
Peak Current	I_{pk}	25°C		2.2		A

TYPICAL APPLICATION

