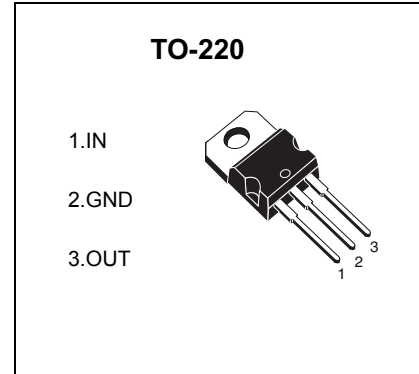


TO-220 Plastic-Encapsulate Voltage Regulators

L7806CV Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 1.5\text{ A}$
- Output voltage
 $V_O: 6\text{ V}$
- Continuous total dissipation
 $P_D: 1.5\text{ W}$ ($T_a = 25^\circ\text{ C}$)



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=11\text{ V}, I_o=500\text{ mA}, C_i=0.33\mu\text{ F}, C_o=0.1\mu\text{ F}$, unless otherwise specified)

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

* Pulse test.

TYPICAL APPLICATION

