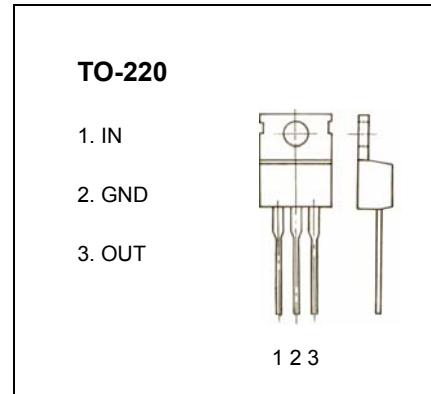


TO-220 Plastic-Encapsulate Voltage Regulator

HM7806 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 : 2 W ($T_a = 25^\circ\text{C}$)
 15 W ($T_c = 25^\circ\text{C}$)



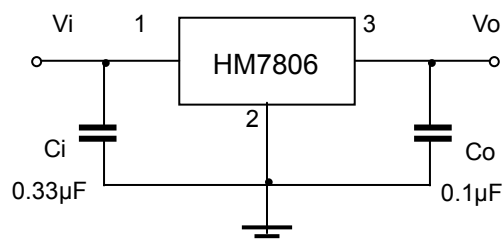
ABSOLUTE MAXIMUM RATINGS (operating temperature range applies unless otherwise specified)

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 ($V_i=11\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	5.75	6	6.25	V
		$8\text{V} \leq V_i \leq 21\text{V}$, $I_o=5\text{mA}-1\text{A}$, $P \leq 15\text{W}$	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	$8\text{V} \leq V_i \leq 25\text{V}$, $0-125^\circ\text{C}$			1.3	mA
		$5\text{mA} \leq I_o \leq 1\text{A}$, $0-125^\circ\text{C}$			0.5	mA
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5\text{mA}$, $0-125^\circ\text{C}$		-0.8		$\text{mV}/^\circ\text{C}$
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		45		μV
Ripple Rejection	RR	$9\text{V} \leq V_i \leq 19\text{V}$, $f=120\text{Hz}$, $0-125^\circ\text{C}$	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		$\text{m}\Omega$
Short Circuit Current	I_{sc}	25°C		550		mA
Peak Current	I_{pk}	25°C		2.2		A

TYPICAL APPLICATION



Typical Characteristics

HM7806

