L7806

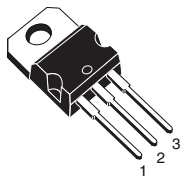
Three-terminal positive voltage regulator

FEATURES

- Maximum output current
  I_{OM}:1.5 A
- Output voltage
  V_O: 6V
- Continuous total dissipation
  P_D: 1.5W (T_a= 25 ℃)

TO-220

1.IN
2.GND
3.OUT



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

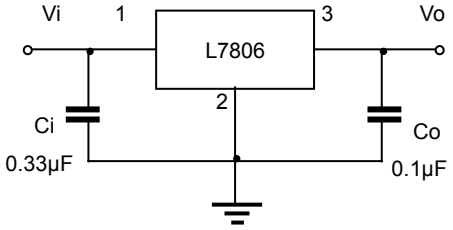
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=11V,Io=500mA,Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Pa rameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	5.75	6	6.25	V
		8V≤V_i≤21V, Io=5mA-1A	-25-125℃	5.7	6	6.3	V
Load Regulation	△Vo	Io=5mA-1.5A	25℃		14	120	mV
		Io=250mA-750mA	25℃		4	60	mV
Line regulation	△Vo	8V≤V_i≤25V	25℃		5	120	mV
		9V≤V_i≤13V	25℃		1.5	60	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	△Iq	8V≤V_i≤25V	-25-125℃			1.3	mA
		5mA≤I_O≤1A	-25-125℃			0.5	mA
Output voltage drift	△Vo/△T	I_O=5mA	0-125℃		-0.8		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		45		μV/Vo
Ripple Rejection	RR	9V≤V_i≤19V,f=120Hz	-25-125℃	59	75		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH_Z	25℃		10		mΩ
Short Circuit Current	Isc		25℃		550		mA
Peak Current	Ipk		25℃		2.2		A

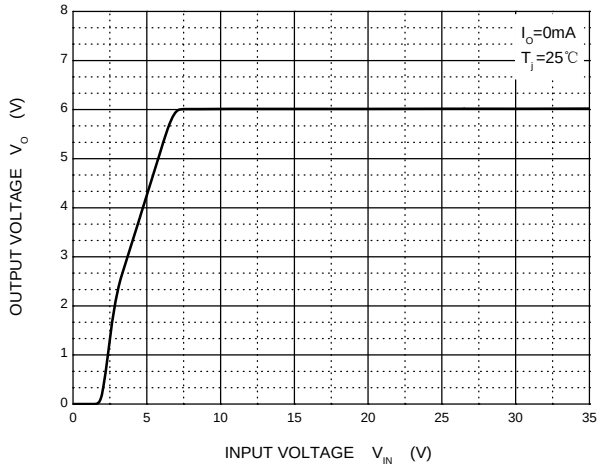
* Pulse test.

TYPICAL APPLICATION

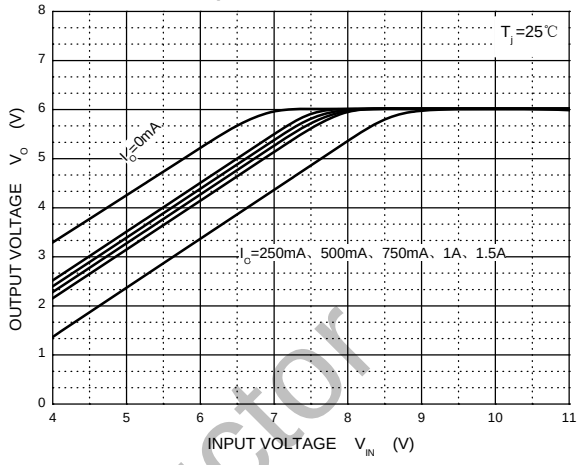


Typical Characteristics

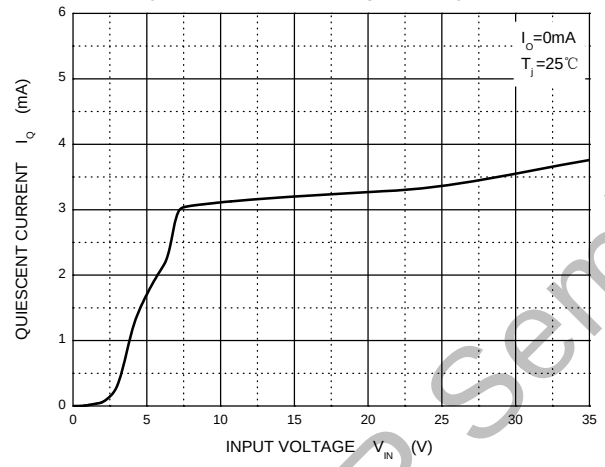
Output Characteristics



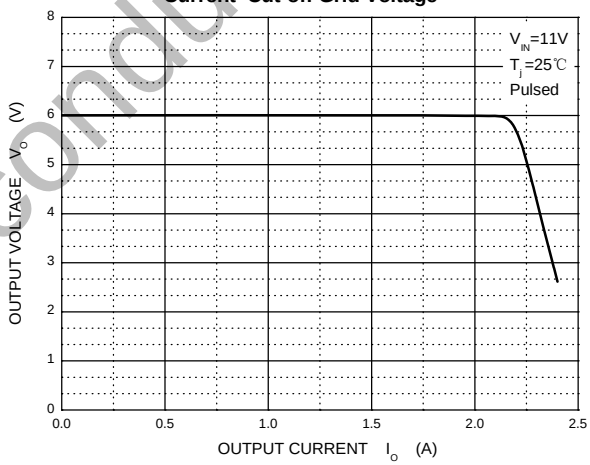
Dropout Characteristics



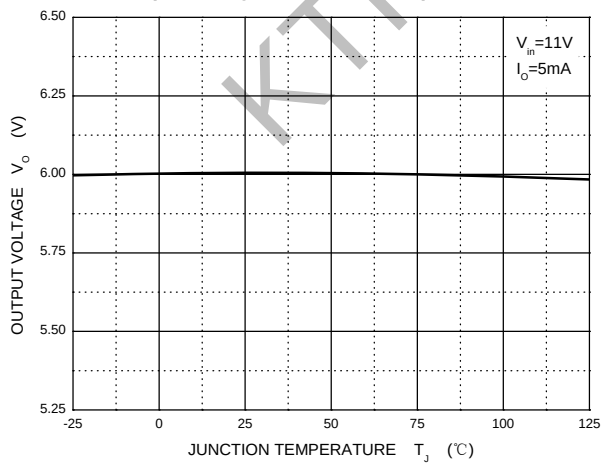
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Ambient Temperature



Power Derating Curve