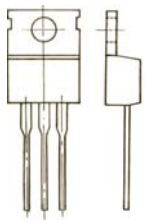
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Voltage Regulator

CJ7806 Three-terminal positive voltage regulator

TO-220

1. IN
2. GND
3. OUT



1 2 3

FEATURES

Maximum Output current I_{OM}: 1.5 A

Output voltage V_o: 6 V

Continuous total dissipation

P_D: 2 W (T_J= 25℃)

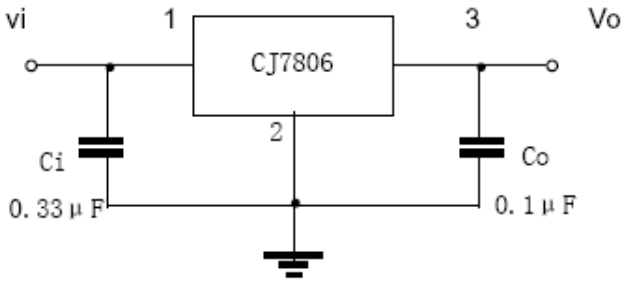
ABSOLUTE MAXIMUM RATINGS(operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal resistance junction-air	Rθ JA	65	℃/W
Thermal resistance junction-cases	Rθ JC	5	℃/W
Operating Junction Temperature Range	T_{OPR}	0-150	℃
Storage Temperature Range	T_{STG}	-65-150	℃

ELECTRICAL CHARACTERISTICS(Vi=10V,Io=500mA,0℃<T_J<125℃,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	Vo	T_J=25℃	5.75	6	6.25	V
		8V≤V_i≤21V, Io=5mA-1A,P≤15W	5.7	6	6.3	V
Load Regulation	△Vo	T_J=25℃, Io=5mA-1.5A		14	120	mV
		T_J=25℃, Io=250mA-750mA		4	60	mV
Line regulation	△Vo	8V≤V_i≤25V, T_J=25℃		5	120	mV
		9V≤V_i≤13V, T_J=25℃		1.5	60	mV
Quiescent Current	Iq	T_J=25℃		4.3	8	mA
Quiescent Current Change	△Iq	8V≤V_i≤25V			1.3	mA
		5mA≤I_O≤1A			0.5	mA
Output voltage drift	△Vo/△T	I_O=5mA		-0.8		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz		45		μV
Ripple Rejection	RR	9V≤V_i≤19V,f=120Hz,Tj=0-125℃	59	75		dB
Dropout Voltage	Vd	T_J=25℃, Io=1A		2		V
Output resistance	R_O	f=1KH_Z		19		mΩ
Short Circuit Current	Isc	Vi=35V, T_J=25℃		550		mA
Peak Current	Ipk	T_J=25℃		2.2		A

TYPICAL APPLICATION



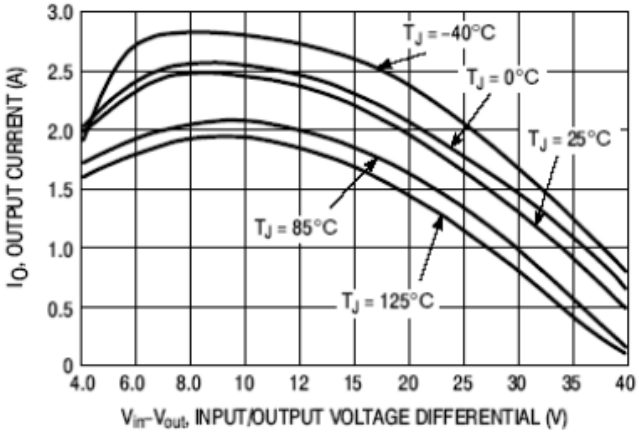


Figure 1 Peak Output Current as a Function of Input/Output Differential Voltage

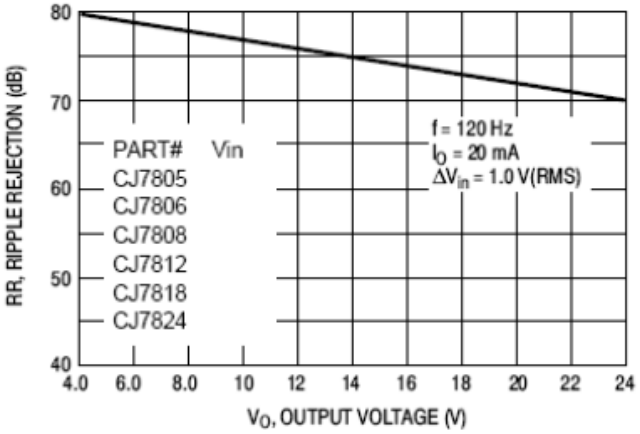


Figure 2 Ripple Rejection as a Function of Output Voltages

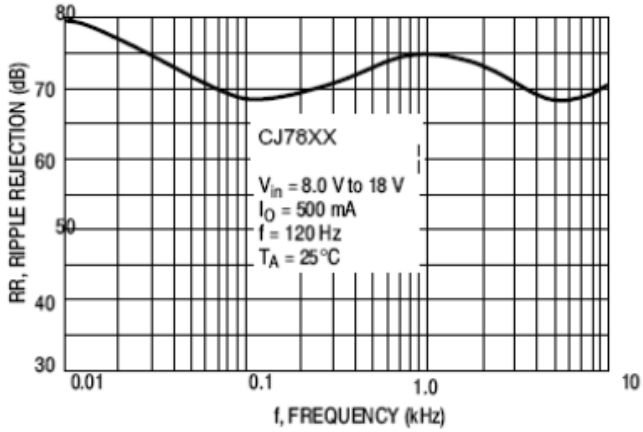


Figure 3 Ripple Rejection as a Function of Frequency

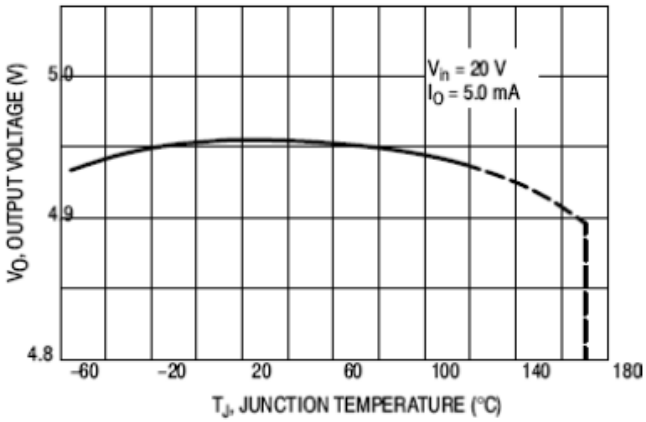


Figure 4 Output Voltage as a Function of Junction Temperature

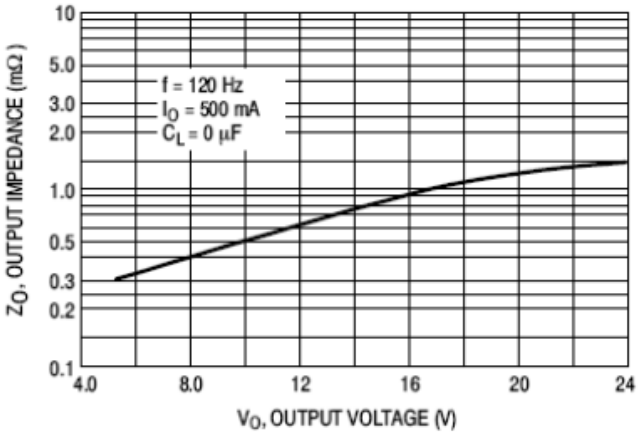


Figure 5 Output Impedance as a Function of Output Voltage

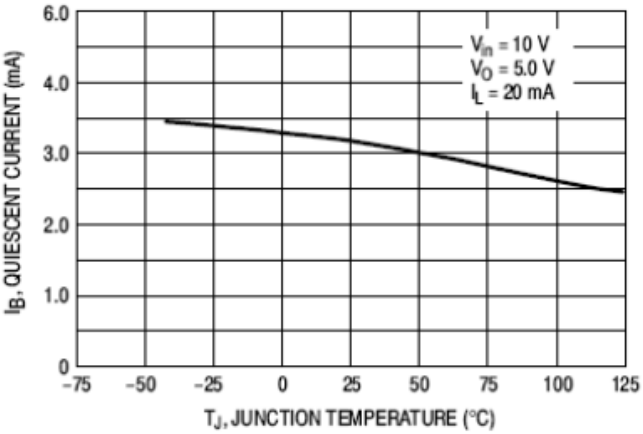


Figure 6 Quiescent Current as a Function of Temperature