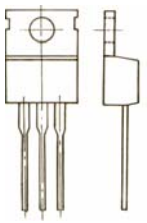
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Voltage Regulator

7806 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: 1.5 W (T_a= 25℃)
15 W (T_c= 25℃)

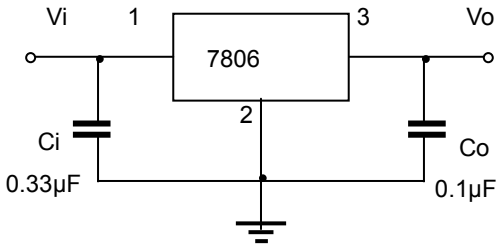
ABSOLUTE MAXIMUM RATINGS (operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal resistance junction-air	$R_{\theta JA}$	65	℃/W
Thermal resistance junction-cases	$R_{\theta JC}$	5	℃/W
Operating Junction Temperature Range	T_{OPR}	0-125	℃
Storage Temperature Range	T_{STG}	-65-150	℃

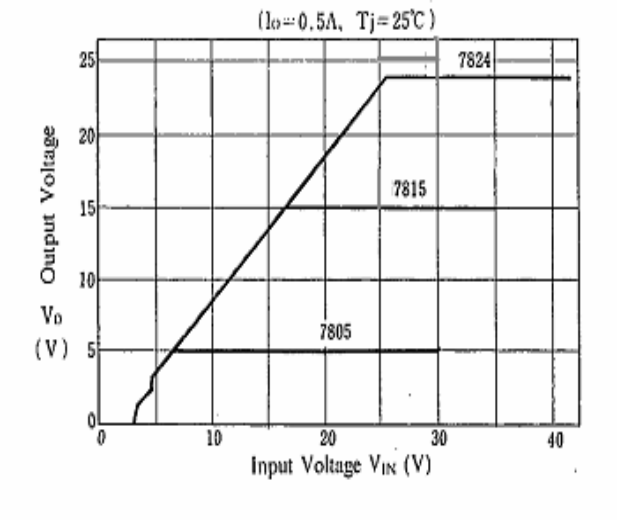
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=11V,Io=500mA,Ci=0.33μF, Co=0.1μF, unless otherwise specified)

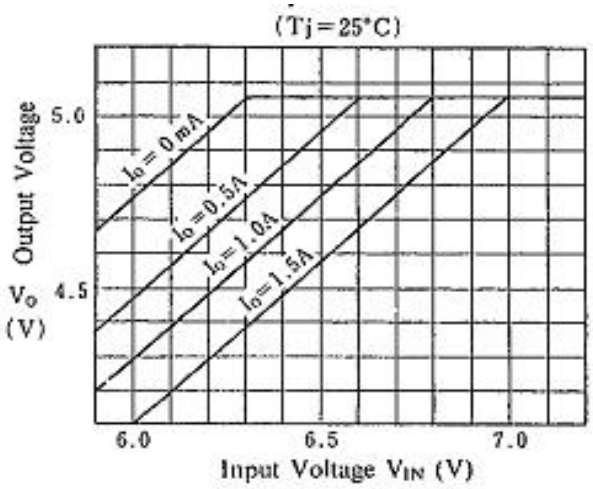
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	5.75	6	6.25	V
		8V≤V_i≤21V, Io=5mA-1A, P≤15W	0-125℃	5.7	6	6.3	V
Load Regulation	△Vo	Io=5mA-1.5A	25℃		14	120	mV
		Io=250mA-750mA	25℃		4	60	mV
Line regulation	△Vo	8V≤V_i≤25V	25℃		5	120	mV
		9V≤V_i≤13V	25℃		1.5	60	mV
Quiescent Current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

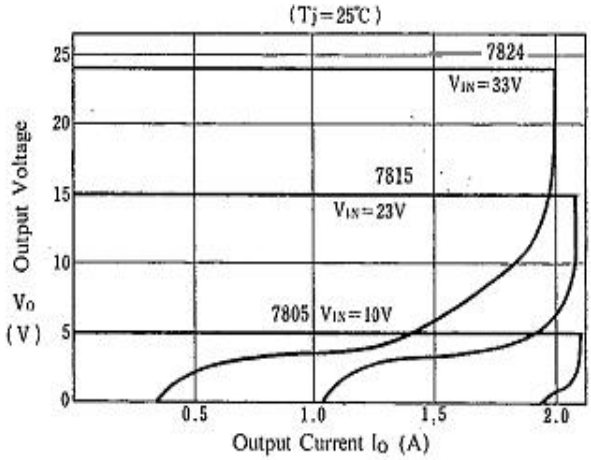
TYPICAL APPLICATION

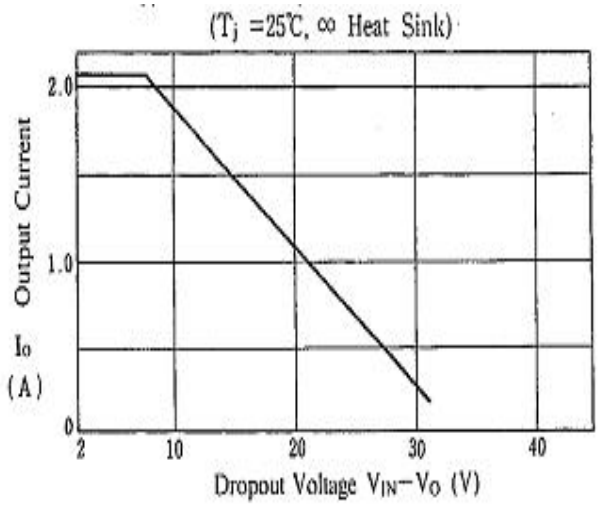


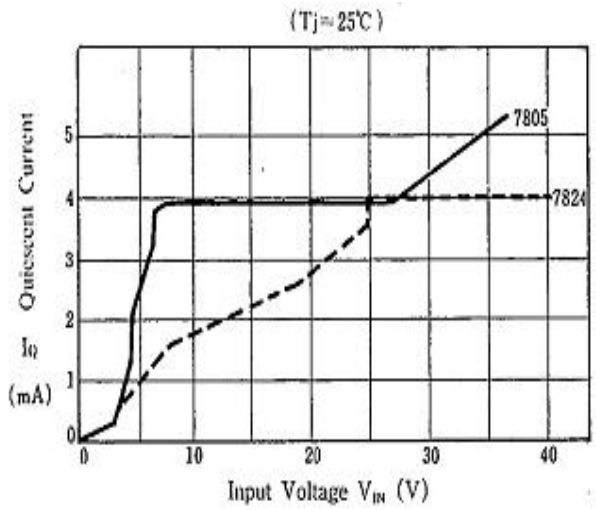
Typical Characteristics 78XX

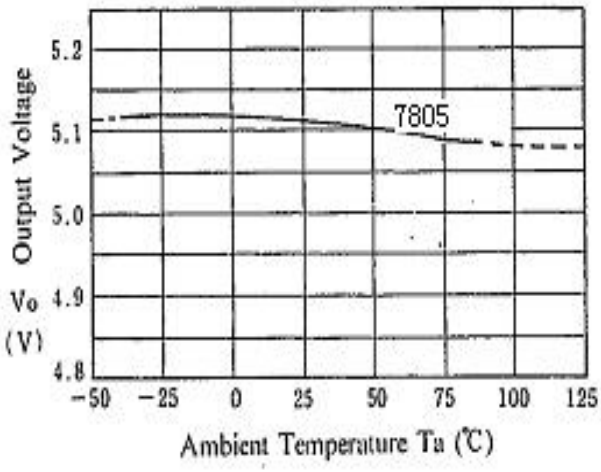












PD-TA