



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Voltage Regulator

CJ7810 Three-terminal positive voltage regulator

FEATURES

Maximum Output current I_{OM} : 1.5 A

Output voltage V_o : 10 V

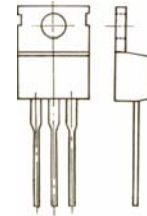
Continuous total dissipation

P_D : 1.5 W ($T_a = 25^\circ\text{C}$)

15 W ($T_c = 25^\circ\text{C}$)

TO-220

1. IN
2. GND
3. OUT



1 2 3

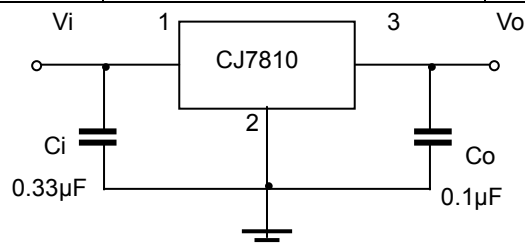
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=17\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

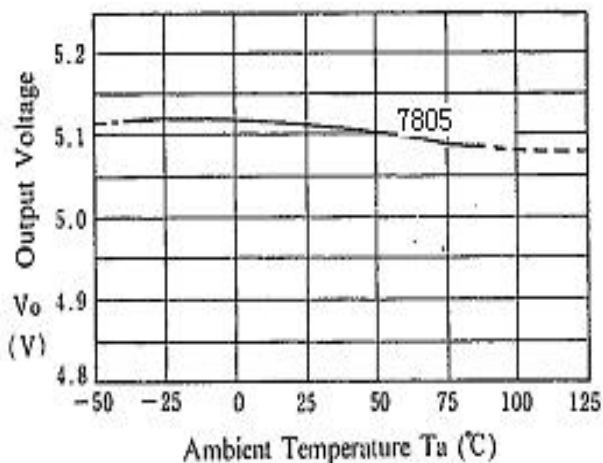
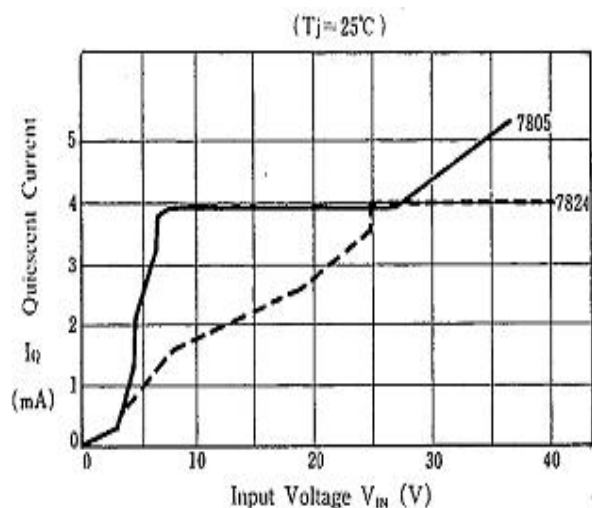
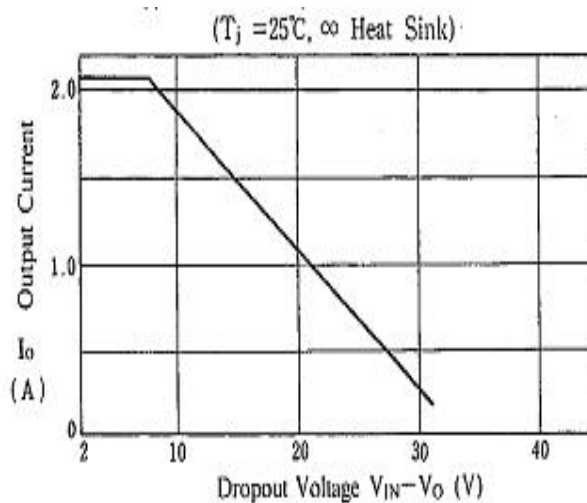
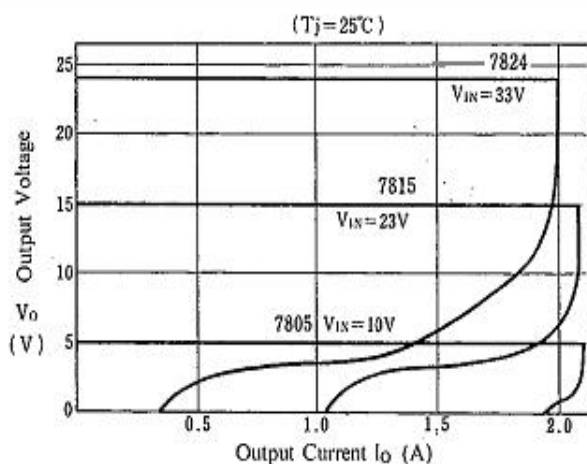
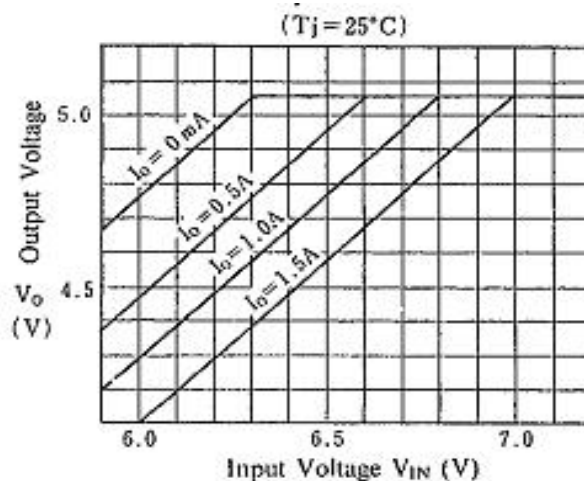
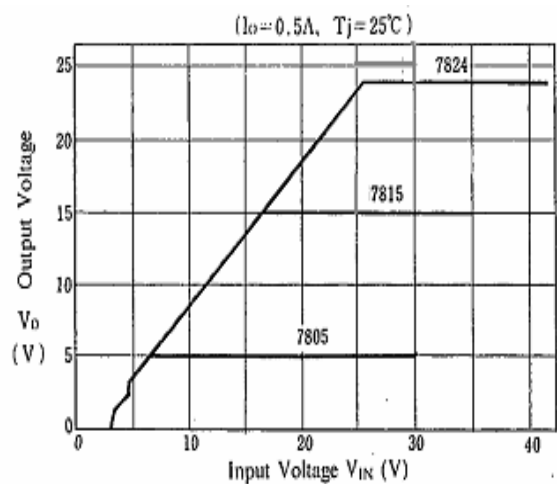
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25°C	9.6	10	10.4	V
		12.5V≤V _i ≤25V, I _o =5mA-1A, P≤15W	0-125°C	9.5	10	10.5	V
Load Regulation	ΔVo	I _o =5mA-1.5A	25°C		12	200	mV
		I _o =250mA-750mA	25°C		4	100	mV
Line regulation	ΔVo	12.5V≤V _i ≤28V	25°C		7	200	mV
		14V≤V _i ≤20V	25°C		2	100	mV
Quiescent Current	I _q		25°C		4.3	8	mA
Quiescent Current Change	ΔI _q	12.5V≤V _i ≤28V	0-125°C			1	mA
	ΔI _q	5mA≤I _o ≤1A	0-125°C			0.5	mA
Output voltage drift	ΔVo/ΔT	I _o =5mA	0-125°C		-1		mV/°C
Output Noise Voltage	V _N	10Hz≤f≤100KHz	25°C		70		μV
Ripple Rejection	RR	13V≤V _i ≤23V,f=120Hz	0-125°C	55	71		dB
Dropout Voltage	V _d	I _o =1A	25°C		2		V
Output resistance	R _O	f=1KHz	25°C		18		mΩ
Short Circuit Current	I _{sc}		25°C		400		mA
Peak Current	I _{pk}		25°C		2.2		A

TYPICAL APPLICATION



Typical Characteristics

CJ78XX



PD-TA

