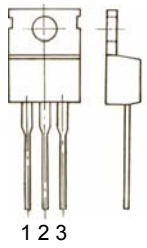
TO-220 Plastic-Encapsulate Voltage Regulator

H7812 Three-terminal positive voltage regulator

TO-220

1.IN
2.GND
3.OUT



FEATURES

Maximum Output current I_{OM}: 1.5 A
Output voltage V_o: 12 V
Continuous total dissipation
P_D: 1.5 W (T_a = 25℃)
15 W (T_C= 25℃)

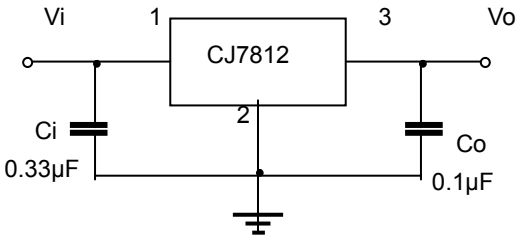
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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=19V, Io=500mA,Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	11.5	12.0	12.5	V
		Io= 5.0mA-1.0A, P≤15W 14.5V≤ V_i ≤27V	0-125℃	11.4	12	12.6	V
Load Regulation	ΔVo	14.5V≤ Vi ≤30V	25℃		10	240	mV
		16V≤V_i≤22V	25℃		3	120	mV
Line regulation	ΔVo	I_O=5mA - 1.5A	25℃		12	240	mV
		I_O=250mA - 750mA	25℃		4	120	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	ΔIq	5.0mA≤ I_O ≤1.0A	0-125℃			0.5	mA
		14.5V ≤V_i≤ 30V	0-125℃			1.0	mA
Output voltage drift	△Vo/△T	I_O=5mA	0-125℃		-1		mV/℃
Output Noise Voltage	V_N	f =10Hz to 100KHz	25℃		75		μV
Ripple Rejection	RR	f =120Hz, 15V≤ V_i ≤25V	0-125℃	55	71		dB
Dropout Voltage	V_d	I_O=1.0A	25℃		2		V
Output resistance	R_O	f = 1KHz	25℃		18		mΩ
Short Circuit Current	Isc		25℃		350		mA
Peak Current	Ipk		25℃		2.2		A

TYPICAL APPLICATION



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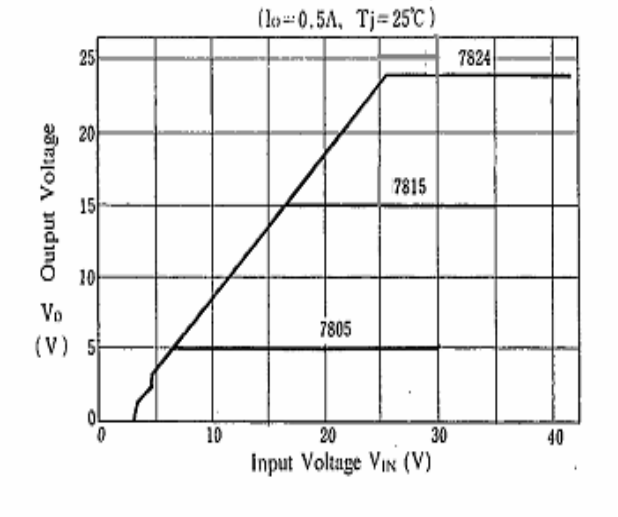
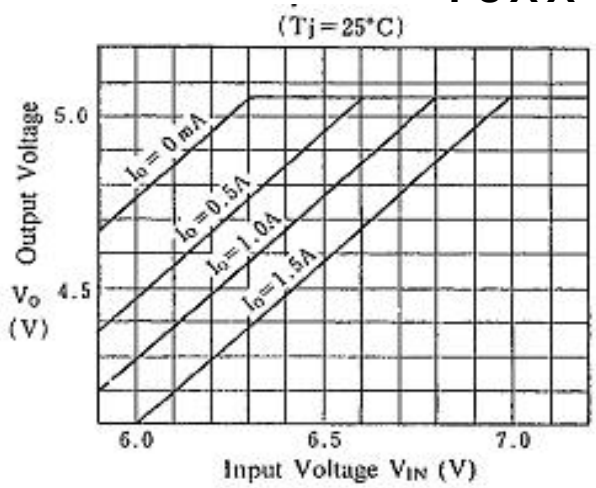
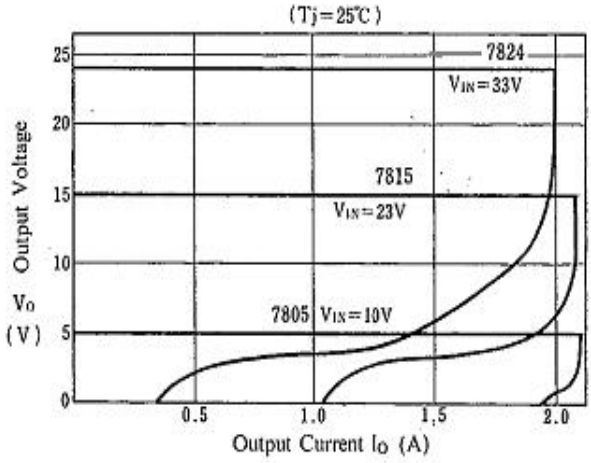
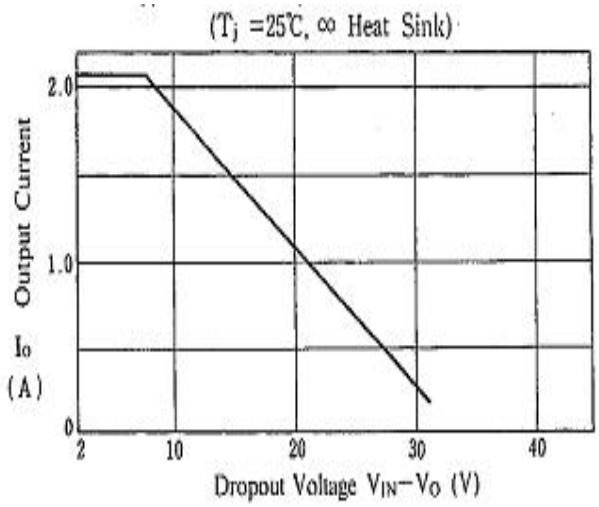
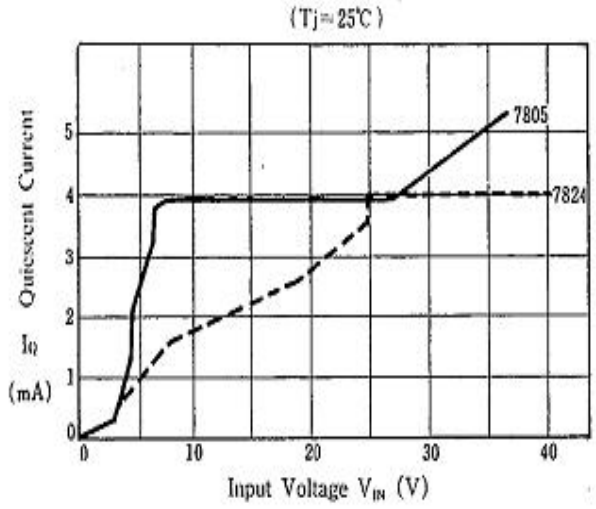
Typical Characteristics 78XX

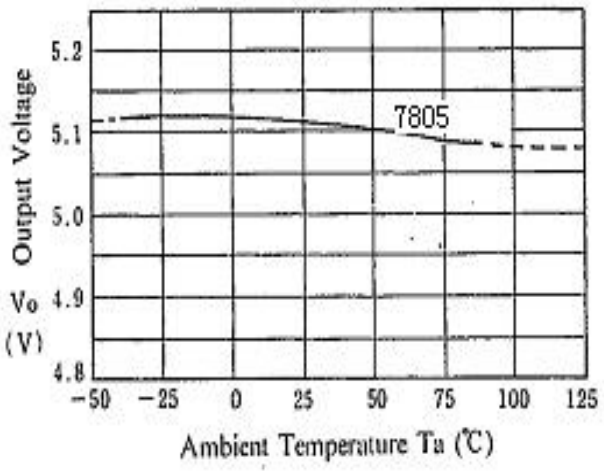












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