



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

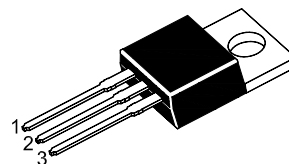
TEL: 852-2790 0314 FAX: 852-2790 0206

ST 7812

3-terminal 1 A positive voltage regulator

Features

- Output Current up to 1 A
- Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe Operating Area Protection



1.Input 2.Common 3.Output
TO-220 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

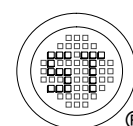
Parameter	Symbol	Value	Units
Input Voltage	V _I	35	V
Thermal Resistance Junction-Cases	R _{θJC}	5	°C/W
Thermal Resistance Junction-Air	R _{θJA}	65	°C/W
Operating Temperature Range	T _{OPR}	0 to + 125	°C
Storage Temperature Range	T _S	- 65 to + 150	°C

Electrical Characteristics

(0 °C < T_J < 125 °C, I_o = 500 mA, V_I = 19 V, C_I = 0.33 μF, C_O = 0.1 μF, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Output Voltage	V _O	T _J = + 25 °C	11.5	12	12.5	V	
		5 mA ≤ I _o ≤ 1 A, P _o ≤ 15 W V _I = 14.5 V to 27 V	11.4	12	12.6		
Line Regulation ¹⁾	Regline	T _J = + 25 °C	V _I = 14.5 V to 30 V	-	-	240	mV
			V _I = 16 V to 22 V	-	-	120	
Load Regulation ¹⁾	Regload	T _J = + 25 °C	I _o = 5 mA to 1.5 A	-	-	240	mV
			I _o = 250 mA to 750 mA	-	-	120	
Quiescent Current	I _Q	T _J = + 25 °C	-	-	8	mA	
Quiescent Current Change	ΔI _Q	I _o = 5 mA to 1 A	-	-	0.5	mA	
		V _I = 14.5 V to 30 V	-	-	1		
Output Voltage Drift	ΔV _O /ΔT	I _o = 5 mA	-	-1	-	mV/°C	
Output Noise Voltage	V _N	f = 10 Hz to 100 KHz, T _A = + 25 °C	-	76	-	μV	
Ripple Rejection	RR	f = 120 Hz, V _I = 15 V to 25 V	55	-	-	dB	
Dropout Voltage	V _{Drop}	I _o = 1 A, T _J = + 25 °C	-	2	-	V	
Output Resistance	R _O	f = 1 KHz	-	18	-	mΩ	
Short Circuit Current	I _{SC}	V _I = 35 V, T _A = + 25 °C	-	230	-	mA	
Peak Current	I _{PK}	T _J = + 25 °C	-	2.2	-	A	

¹⁾ Load and line regulation are specified at constant junction temperature. Changes in V_o due to heating effects must be taken into account separately. Pulse testing with low duty is used.



Dated : 21/06/2006



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Typical Performance Characteristics

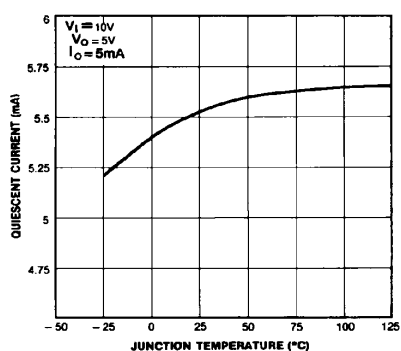


Figure 1. Quiescent Current

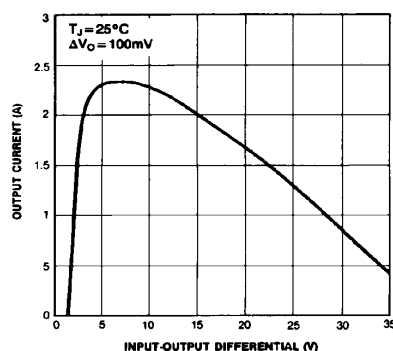


Figure 2. Peak Output Current

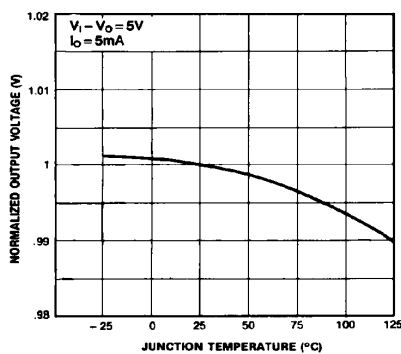


Figure 3. Output Voltage

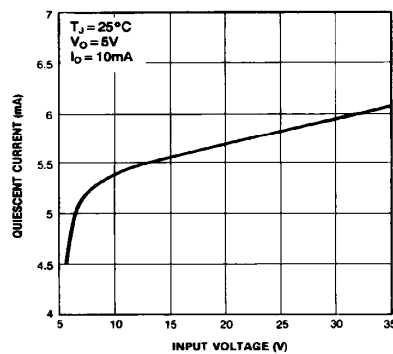
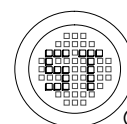


Figure 4. Quiescent Current





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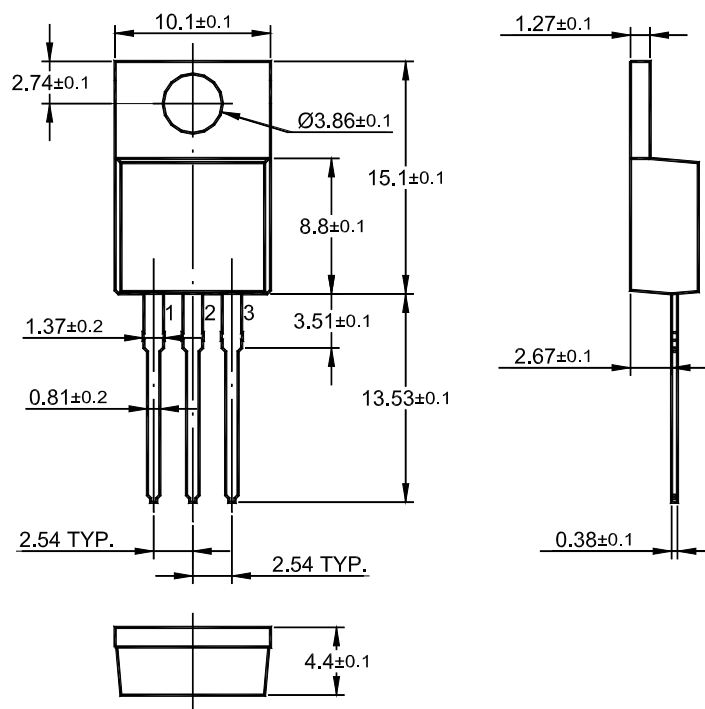
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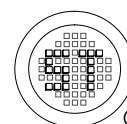
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TO-220 PACKAGE OUTLINE



Dimensions in mm



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